

Review of IDC XSEL for Sept 1, 2019

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Ensco, Inc.

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U.S. DEPARTMENT OF
ENERGY



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Overview:

This short report documents the review of the XSEL for September 1st, 2019.

The XSEL process created 318 events overall. Seventy-two of those events were matched in the Standard Event List (SEL) and eleven of the events were matched in the Reviewed Event Bulletin (REB). There an addition 235 events, purported to be “NEW” events, not appearing in either SEL or REB.

The NEW events were the major focus of this review, along with confirmation of the events listed in SEL and REB.

Data:

Waveform data for the IMS network was obtained via the Sandia National Labs repository. For this date, KURK and NVAR data weren’t available through Sandia, nor were they available for download from IRIS.

Analysis Method:

For each arrival in an event, the arrival was sent to XfkDisplay for F-K analysis. If a result consistent with the predicted azimuth and slowness could be realized, the analyst clicked on the theoretical azimuth/slowness for the event and created an optimal beam for the station.

For events that were mislocated or had one or two valid arrivals consistent with an event – local stations for the solution were retrieved from IRIS (or other available data sources e.g. GEOFON) in an attempt to confirm the existence of an event in order to give credit to the algorithm. These make up the bulk of the events in Table 2.

Results:

Table 1: Summation of Results

Event Category	XSEL Events	Confirmed	Not Confirmed	Information
TOTAL	318	94	224	29% valid
NEW	235	14	221	5.9% *See table 2
SEL	72	69	3	96% split events
REB	11	11	0	100%

Table 2: Disposition of 14 “NEW” events that were retained

Date	OriginTime	Lat	Lon	Category	Remarks
09/01/2019	00:18:10	43.659547	12.948815	NEW	Good event.
09/01/2019	02:20:39	64.954973	-135.711370	NEW	ILAR/YKA lead to event. Moved
09/01/2019	04:50:15	-21.573696	165.866390	NEW	used 3 of 6 arrivals moved
09/01/2019	08:03:50	-23.804605	175.680620	NEW	- used ASAR and added the rest
09/01/2019	08:17:31	42.113012	71.597051	NEW	- used one arrival – moved ~15 deg
09/01/2019	09:12:26	21.226646	102.910410	NEW	CMAR good - moved ~10 deg.
09/01/2019	11:29:47	37.269959	-105.413610	NEW	- invalid moved ~10 deg.
09/01/2019	13:11:20	-27.254560	-175.561770	NEW	Saved WRA/ASAR good partial cred
09/01/2019	15:17:12	-8.441347	147.863210	NEW	Saved WRA/ASAR good partial cred
09/01/2019	16:25:01	-3.472566	134.880100	NEW	Saved WRA/ASAR good partial cred
09/01/2019	17:08:58	-4.884927	146.639240	NEW	Saved WRA/ASAR good Add ZALV
09/01/2019	18:04:45	-7.797431	129.815440	NEW	Saved WRA/ASAR good partial cred

09/01/2019	19:54:12	-5.402864	149.911900	NEW	Saved WRA/ASAR good partial cred
09/01/2019	22:54:03	-4.342417	152.492580	NEW	Saved WRA/ASAR good partial cred

The waveform displays in this document are all about 150 seconds worth of data.

Event-by-event disposition of the bulletin results for DATA DAY 2019244:

```

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
  1 13508627 0: 2: 38.20 2.44 43.160 12.990 0.0 4.17 0.35 17 SEL 17815028 -0.852
0.245 11 31 23.6 67.7

```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
AKASG	13.52	48.90	0: 5: 49.37	0.749	190.85	17.5	0.0	3.963	0.280	4.5	1 2.436
BRTR	15.72	94.48	0: 6: 28.92	4.846	230.15	5.4	0.0	3.793	0.280	5.0	1 -5.618
NOA	18.27	357.02	0: 6: 47.37	-1.514	248.60	4.6	0.0	4.363	0.120	5.3	1 6.488
FINES	20.18	18.17	0: 7: 13.74	2.744	275.65	6.6	0.0	4.043	0.220	7.4	1 0.575
KBZ	21.64	77.42	0: 7: 28.24	-3.633	289.10	7.6	5.2	4.013	0.200	3.0	1 3.450
ZALV	46.92	50.21	0:11: 8.41	-1.102	510.25	4.8	0.0	4.693	0.050	4.5	1 1.979
MKAR	47.77	60.13	0:11: 15.00	-3.034	516.08	17.3	0.0	3.933	0.300	7.6	1 3.000
SONM	61.81	49.75	0:13: 0.47	1.096	621.42	6.3	0.0	3.683	0.370	3.1	1 -0.160
YKA	66.99	336.49	0:13: 34.75	3.660	656.68	4.9	0.0	4.073	0.200	3.2	1 -2.373
ILAR	71.59	351.12	0:13: 58.48	-1.475	680.40	6.0	0.0	4.003	0.080	3.0	1 2.550
CMAR	74.68	78.97	0:14: 16.93	-3.061	697.85	6.2	0.0	4.193	0.110	3.0	0 -99.000
USRK	77.56	40.17	0:14: 36.71	1.581	718.65	4.6	0.0	4.343	0.130	3.0	0 -99.000
PETK	79.68	20.81	0:14: 43.30	-3.042	724.00	6.0	0.0	4.163	0.120	3.0	0 -99.000
PDAR	80.46	321.07	0:14: 49.89	-1.158	731.20	7.1	0.0	5.243	0.130	3.0	0 -99.000
KSRS	80.50	47.13	0:14: 53.85	0.822	735.05	6.1	0.0	4.103	0.170	3.0	0 -99.000
MJAR	86.52	41.31	0:15: 22.85	1.660	764.18	4.6	0.0	4.093	0.160	3.0	0 -99.000
TXAR	87.67	308.74	0:15: 30.76	0.862	771.50	4.8	0.0	4.173	0.150	3.0	1 0.233

Good event.

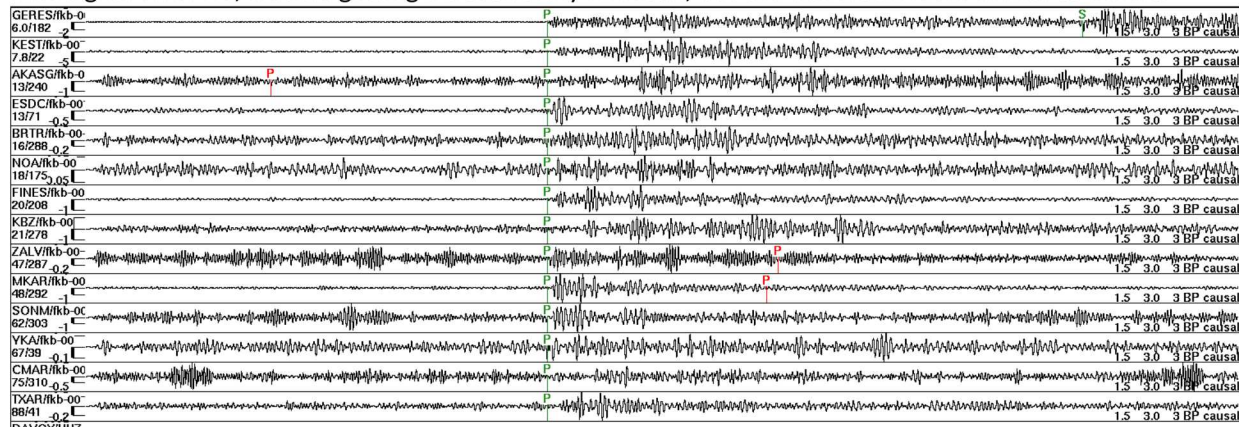
PDAR signal was contributed to by local noise on PD08 mostly.

ILAR not real clear

MJAR questionable

Found clear signals on: GERES, KEST, ESDC

Nice signal on SPITS, trouble getting a trustworthy FK result, but the waveform looks similar to others.

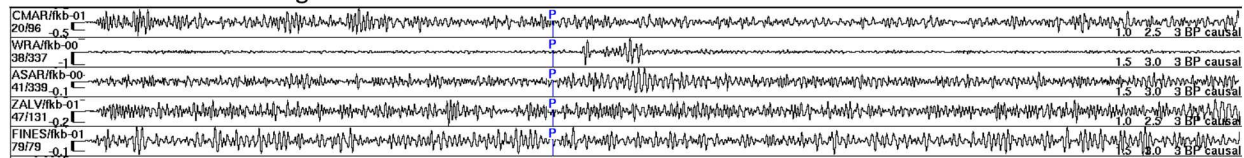


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
2 10977729 0:6: 5.19 1.61 14.890 119.120 74.1 3.72 0.41 6 NEW 0 0.000 -
1.000 0 22 27.0 31.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	21.47	285.82	0:10: 32.81	-0.590		266.91	4.7	0.0	3.448	0.030	3.2	0 -99.000
WRA	35.94	157.82	0:13: 13.65	-0.457		428.24	9.0	0.0	3.248	0.090	9.6	0 -99.000
ASAR	39.23	160.69	0:13: 40.02	0.772		453.86	4.6	0.0	3.128	0.050	9.2	0 -99.000
ZALV	49.14	332.72	0:14: 35.39	3.478		509.38	4.7	0.0	3.768	0.170	3.2	0 -99.000
FINES	80.36	330.94	0:17: 55.78	-2.038		709.99	4.6	0.0	4.228	0.310	3.0	0 -99.000
ILAR	78.82	25.88	0:17: 55.78	-0.667		710.51	5.0	0.0	4.148	0.040	3.0	0 -99.000

False event.

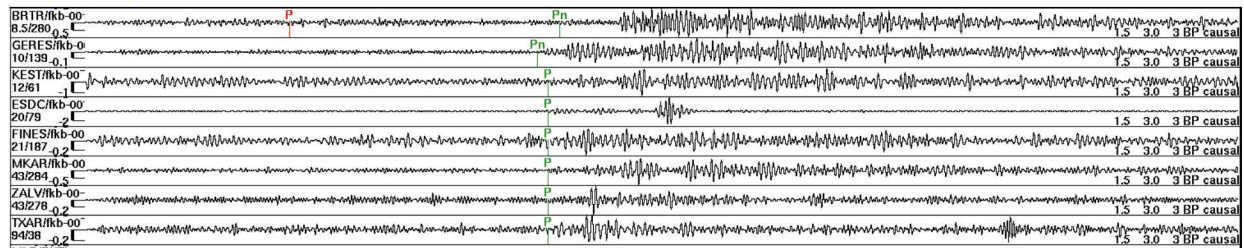
Can't find any solid signals other than the ASAR and WRA. No corroborating events in the ISC bulletin.
ASAR/WRA together locate to 15 N x 124 E – downloaded data from station SZP from the RM network, 17n x 120E and didn't see a signal.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
3 13683608 0:11: 20.27 2.16 39.170 22.340 16.0 4.02 0.39 13 SEL 17815113 -6.065
1.580 5 31 23.0 48.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
BRTR	9.99	86.07	0:13: 28.15	-1.314		127.64	11.4	0.0	3.666	0.200	5.4	1 9.050
KURK	41.21	54.95	0:18: 59.06	0.919		457.94	5.1	0.0	3.966	0.180	3.0	0 -99.000
ZALV	44.56	49.30	0:19: 24.11	-1.459		483.97	5.2	0.0	3.786	0.230	4.6	1 4.200
MKAR	44.39	59.78	0:19: 25.43	1.973		484.39	6.8	0.0	3.106	0.210	7.7	1 2.987
SONM	59.37	51.33	0:21: 17.49	0.498		597.50	4.6	0.0	3.536	0.230	3.2	0 -99.000
CMAR	69.56	82.66	0:22: 18.13	0.303		657.84	4.4	0.0	4.326	0.080	3.0	0 -99.000
YKA	71.94	339.90	0:22: 48.46	0.376		688.54	5.1	0.0	4.206	0.150	3.3	0 -99.000
ILAR	75.35	354.52	0:23: 4.28	-2.282		704.19	4.3	0.0	4.256	0.130	3.0	1 2.374
KSRS	78.22	50.95	0:23: 18.78	2.763		717.64	4.3	0.0	4.316	0.100	3.0	0 -99.000
PETK	80.32	24.64	0:23: 29.33	-1.253		728.72	4.7	0.0	4.156	0.230	3.0	0 -99.000
PDAR	86.31	325.71	0:24: 6.24	-2.637		765.19	5.3	0.0	4.586	0.150	3.0	0 -99.000
TXAR	93.96	313.72	0:24: 48.43	4.810		807.29	5.2	0.0	4.056	0.280	3.0	1 -1.300
ASAR	122.21	95.24	0:30: 8.79	-2.696		1128.24	4.3	0.0	4.346	0.150	3.0	0 -99.000

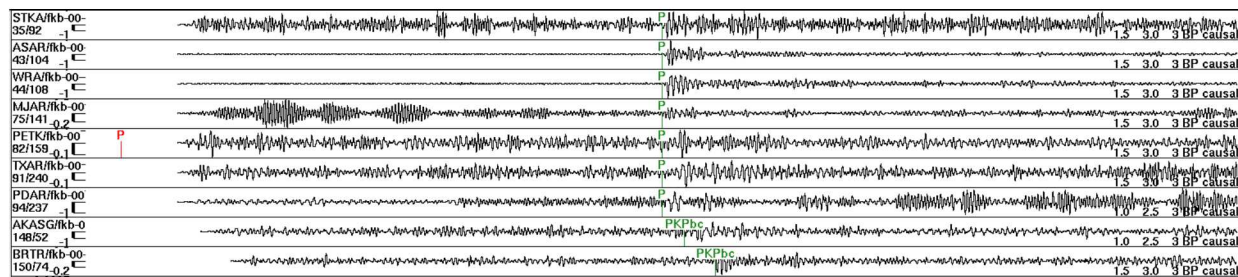
Good event



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
4 8650458 0:14: 11.66 1.44 -26.950 -178.460 112.0 4.05 0.30 12 SEL 17815209 -20.866
0.232 10 12 25.0 53.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
STKA	35.54	254.10	0:20: 51.12	-3.459		398.48	5.3	3.8	4.113	0.380	6.1	1 8.675
ASAR	43.84	264.58	0:21: 59.68	0.117		468.20	9.1	0.0	4.073	0.150	9.5	1 3.800
WRA	44.65	269.79	0:22: 7.59	1.936		475.36	13.3	0.0	4.033	0.100	9.8	1 1.650
VNDA	50.12	185.78	0:23: 8.23	1.089		535.75	6.1	3.8	4.143	0.340	3.0	1 3.150
MJAR	76.93	324.63	0:25: 42.48	-0.400		690.09	5.4	0.0	3.343	0.140	3.0	1 0.323
PETK	84.05	345.17	0:26: 20.71	1.679		729.20	4.8	0.0	3.933	0.190	3.0	0 -99.000
NVAR	86.39	42.43	0:26: 40.49	0.646		748.40	5.5	0.0	3.803	0.130	3.6	1 0.575
TXAR	90.82	56.93	0:27: 2.90	-1.090		770.40	4.6	0.0	4.233	0.100	3.4	1 1.725
PDAR	94.29	43.12	0:27: 17.40	-0.651		784.86	5.5	0.0	4.393	0.330	3.0	1 0.700
ZALV	116.93	318.94	0:32: 39.08	1.199		1107.58	4.4	0.0	4.633	0.120	3.0	0 -99.000
AKASG	150.04	325.30	0:33: 42.36	-1.219		1170.58	5.4	0.0	3.943	0.140	3.0	1 -0.025
BRTR	152.11	301.97	0:33: 50.27	0.154		1178.00	4.6	0.0	3.943	0.100	3.4	1 -0.650

Good event!



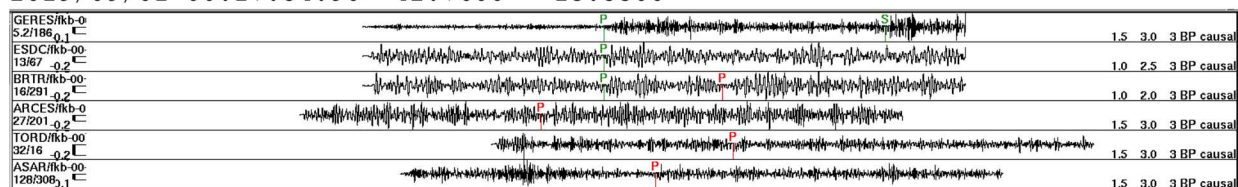
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
5 8713945 0:18: 19.51 2.14 46.950 10.750 12.2 4.03 0.62 6 NEW 0 0.000 -
1.000 0 36 29.0 25.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ESDC	12.31	250.72	0:21: 21.45	-1.922		181.88	4.5	0.0	3.718	0.050	4.4	0 -99.000
BRTR	17.38	99.06	0:22: 27.36	-2.023		247.93	5.1	0.0	3.868	0.130	4.4	0 -99.000
ARCES	25.86	11.53	0:23: 35.92	1.937		316.88	4.5	0.0	3.208	0.050	5.2	0 -99.000
TORD	32.55	197.30	0:25: 9.52	3.763		410.93	4.6	0.0	4.958	0.190	5.6	0 -99.000
KURK	44.30	57.34	0:26: 19.39	-1.216		480.03	4.4	0.0	3.708	0.120	3.0	0 -99.000
ASAR	129.31	85.25	0:37: 27.80	-0.540		1148.23	4.8	0.0	4.748	0.060	3.0	0 -99.000

Good event - found a GERES arrival. Couldn't verify ARCES, TORD, or ASAR.

ISC bulletin had the same event, but located at:

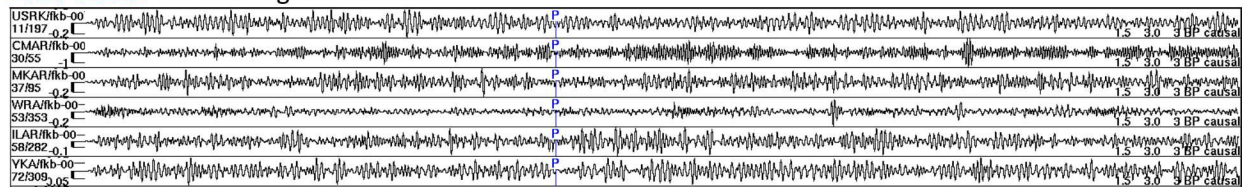
2019/09/01 00:17:54.90 42.7600 13.5300



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
6 13093771 0:18: 45.88 2.82 33.320 127.890 0.0 3.66 0.38 6 NEW 0 0.000 -
1.000 0 20 23.0 32.7

USRK	11.50	4.53	0:21:	33.31	-0.189	166.55	4.4	0.0	3.110	0.170	3.3	0 -99.000
CMAR	31.86	251.35	0:24:	58.97	1.440	372.75	5.1	0.0	3.830	0.050	3.0	0 -99.000
MKAR	39.19	305.54	0:25:	54.35	-1.151	428.70	4.2	0.0	3.280	0.300	7.8	0 -99.000
WRA	52.48	175.72	0:28:	6.18	-0.537	559.48	5.3	0.0	4.170	0.130	9.1	0 -99.000
ILAR	57.72	30.16	0:28:	47.05	4.901	600.50	4.6	0.0	3.580	0.120	5.4	0 -99.000
YKA	71.75	26.38	0:30:	7.47	-4.464	681.70	4.9	0.0	3.980	0.130	4.2	0 -99.000

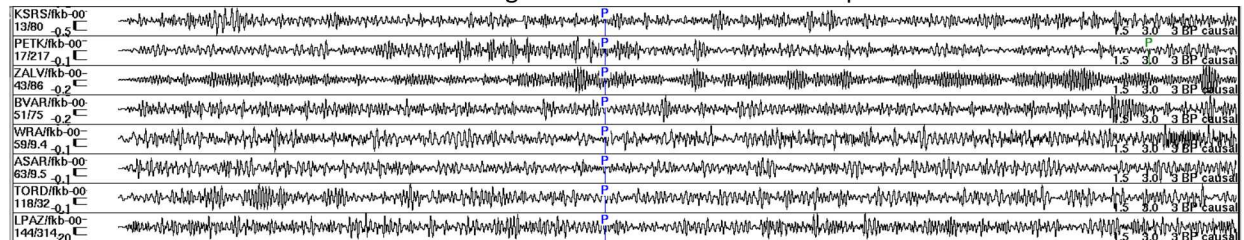
False event. No clear signals evident.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
7 7253253 0:21: 16.17 2.95 38.670 144.820 0.0 4.00 0.99 8 NEW 0 0.000 -
1.000 0 19 23.0 35.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KSRS	11.94	269.83	0:24: 29.97	-0.298	194.04	4.8	0.0	3.353	0.030	4.0	0 -99.000	
PETK	17.85	30.03	0:25: 13.48	-0.496	236.82	4.8	0.0	4.263	0.140	3.0	0 -99.000	
ZALV	41.88	311.24	0:29: 16.05	0.541	480.09	5.2	0.0	3.823	0.080	4.1	0 -99.000	
BVAR	50.53	311.71	0:30: 19.34	-3.815	543.19	4.3	0.0	2.303	0.200	3.0	0 -99.000	
WRA	58.64	189.50	0:31: 21.30	4.116	604.64	4.6	0.0	4.083	0.070	8.4	0 -99.000	
ASAR	62.37	189.37	0:31: 38.44	-4.991	621.54	4.5	0.0	3.843	0.050	6.8	0 -99.000	
TORD	117.17	316.75	0:40: 9.96	2.910	1133.47	4.3	0.0	6.073	0.140	3.0	0 -99.000	
LPAZ	144.92	59.64	0:40: 56.10	2.032	1179.97	6.4	6.4	4.263	0.070	3.0	0 -99.000	

False event. Can't confirm arrivals. Nothing on MJAR elements near the predicted time.

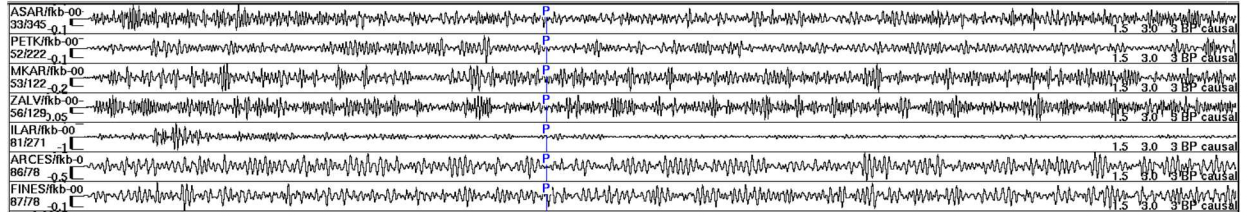


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
8 13683112 0:48: 34.89 1.71 8.150 125.100 63.0 4.02 0.33 7 NEW 0 0.000 -
1.000 0 22 28.8 33.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	33.64	344.87	0:55: 2.49	-0.049	387.47	4.9	0.0	-0.772	0.009	9.4	0 -99.000	
PETK	50.97	222.66	0:57: 31.46	-2.994	536.67	6.9	0.0	-0.715	0.009	3.0	0 -99.000	

MKAR	52.45	121.52	0:57:	47.29	0.802	552.32	9.3	0.0	0.000	0.008	8.8	0	-99.000
ZALV	55.24	128.44	0:58:	5.74	-0.336	571.05	4.6	0.0	-0.623	0.004	3.0	0	-99.000
ILAR	80.78	271.79	1: 0:	49.22	2.652	734.17	5.0	0.0	-0.746	0.014	3.0	0	-99.000
ARCES	84.96	77.49	1: 1:	7.68	1.337	753.60	9.8	0.0	-1.216	0.006	3.0	0	-99.000
FINES	86.50	77.41	1: 1:	11.63	-1.412	757.45	9.8	0.0	-0.679	0.008	3.0	0	-99.000

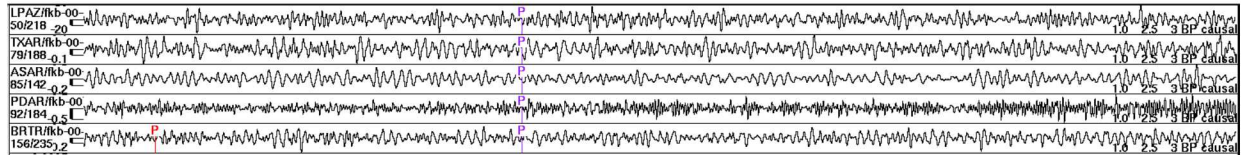
False event. Can't confirm arrivals.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
9	10114292	0:54:	41.40	0.79	-49.680	-115.120	0.0	4.04	0.38	6	NEW	0	0.000
1.000	0	43	16.2	28.3									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
LPAZ	49.91	217.21	1: 3:	41.92	0.401	540.91	11.0	0.0	0.000	0.036	5.4	0 -99.000
TXAR	79.57	186.76	1: 6:	49.13	1.337	728.01	10.1	0.0	-0.446	0.006	5.1	0 -99.000
ASAR	85.24	143.18	1: 7:	16.82	0.435	755.98	7.6	0.0	-0.808	0.003	5.0	0 -99.000
NVAR	88.19	177.23	1: 7:	30.00	-0.763	768.88	4.9	0.0	-1.067	0.013	4.7	0 -99.000
PDAR	92.53	182.87	1: 7:	52.41	-0.871	791.08	5.5	0.0	-0.039	0.003	4.5	0 -99.000
BRTR	155.04	234.82	1:15:	3.52	-0.539	1221.53	7.1	0.0	-0.419	0.005	3.6	0 -99.000

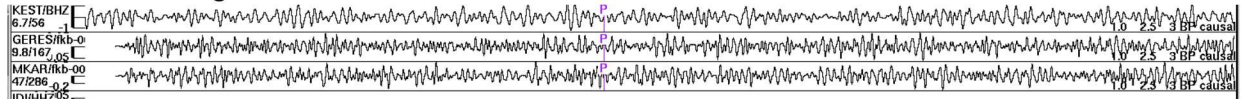
False event. No signals observed at the noted arrival times.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	REBdelttime	REBdist
#MATCH	10	5042245	0:58:	30.79	0.00	39.260	16.470	0.0	2.11	1.05	3	NEW	0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KEST	7.11	58.37	1: 0:	13.62	-0.001	103.47	5.8	0.0	-3.205	0.028	7.7	0 -99.000
GERES	9.94	164.32	1: 0:	53.17	-0.005	142.69	4.2	0.0	-1.470	0.066	7.0	0 -99.000
MKAR	47.01	285.50	1: 7:	6.27	0.007	515.29	4.3	0.0	-0.706	0.105	7.7	0 -99.000

False event. No signals observed at the noted arrival times.

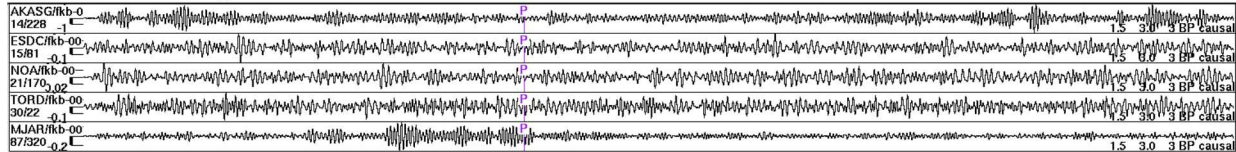


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
#MATCH	11	5109888	0:58:	58.48	1.95	40.360	15.690	274.7	3.64	1.00	5	NEW	0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
AKASG	15.00	35.97	1: 2:	1.73	-2.412	183.91	4.3	0.0	3.154	0.050	4.7	0 -99.000

ESDC	14.95	277.62	1: 2:	17.55	-0.618	199.19	4.9	0.0	3.394	0.050	4.7	0 -99.000
NOA	21.93	354.55	1: 3:	19.51	0.511	261.51	4.6	0.0	2.544	0.140	5.3	0 -99.000
TORD	28.72	208.69	1: 4:	38.61	-0.912	340.16	4.4	0.0	5.504	0.120	6.2	0 -99.000
MJAR	88.02	42.61	1:11:	15.44	3.431	737.85	4.3	0.0	3.584	0.170	3.0	0 -99.000

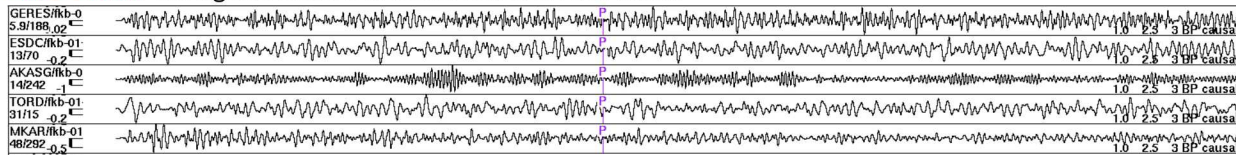
False event. No signals observed at the noted arrival times.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
#MATCH													
12	8713946	1: 2:	38.64	2.27	43.920	11.950	12.0	3.93	1.00	5	NEW	0	0.000
1.000	0	36	21.3	28.9									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
GERES	4.41	204.89	1: 4:	9.61	-1.841	91.17	6.0	0.0	-2.675	0.033	7.7	0 -99.000
ESDC	12.28	60.38	1: 5:	39.26	2.490	180.30	4.9	0.0	-0.475	0.001	4.4	0 -99.000
AKASG	13.53	251.21	1: 5:	51.12	2.973	192.90	4.7	0.0	-0.883	0.001	4.2	0 -99.000
TORD	32.57	12.47	1: 8:	59.65	-2.391	381.12	5.1	0.0	0.370	0.012	5.6	0 -99.000
MJAR	48.08	295.12	1:11:	15.44	-1.231	517.25	7.8	0.0	-0.702	0.025	7.1	0 -99.000

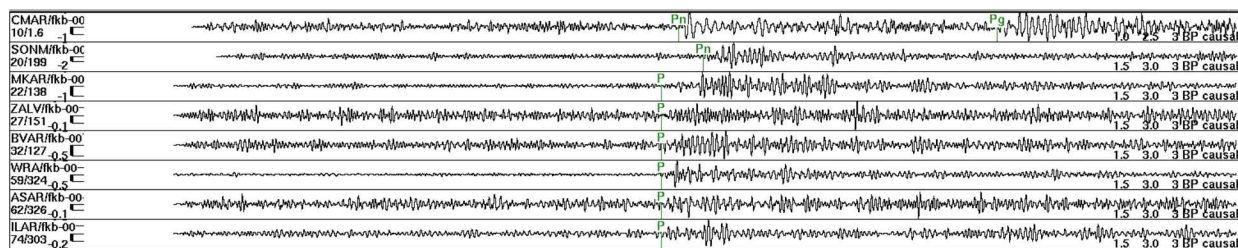
False event. No signals observed at the noted arrival times.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
13	9994983	1: 4:	50.48	2.26	28.680	99.050	0.0	3.89	0.60	12	SEL	17815214	-0.614
0.391	9	26	25.0	64.7									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	11.55	175.63	1: 7:	20.77	-0.046	150.81	11.9	9.4	4.349	0.080	6.6	1 1.750
SONM	18.92	17.61	1: 9:	26.02	-0.090	275.49	4.3	8.5	3.929	0.100	6.7	1 2.860
MJAR	20.73	328.24	1: 9:	49.75	-0.307	299.43	6.1	7.0	3.799	0.140	9.1	1 0.700
KURK	25.24	330.10	1:10:	33.25	-0.262	342.53	4.6	5.2	3.319	0.050	5.5	1 1.975
ZALV	25.75	341.90	1:10:	41.16	3.554	350.11	4.5	4.1	3.179	0.170	5.7	1 -1.543
BVAR	30.58	326.59	1:11:	20.71	-0.018	390.21	4.7	4.4	2.759	0.250	3.4	1 0.335
BRTR	52.69	299.04	1:14:	18.69	2.273	568.61	4.8	4.7	4.319	0.250	3.0	0 -99.000
WRA	60.75	140.31	1:14:	52.97	0.271	602.28	5.8	4.4	3.819	0.130	8.1	1 1.180
ASAR	63.54	143.11	1:15:	15.38	3.163	625.21	5.4	5.2	3.939	0.110	7.6	1 -3.617
ILAR	73.01	23.94	1:16:	22.62	-3.173	691.76	4.9	5.3	4.459	0.070	3.1	1 6.950
TORD	88.89	284.45	1:17:	50.95	-0.609	781.08	4.8	3.1	5.109	0.170	3.0	0 -99.000
BDFB	145.73	287.09	1:24:	31.73	-4.756	1181.12	5.1	3.7	3.699	0.360	3.0	0 -99.000

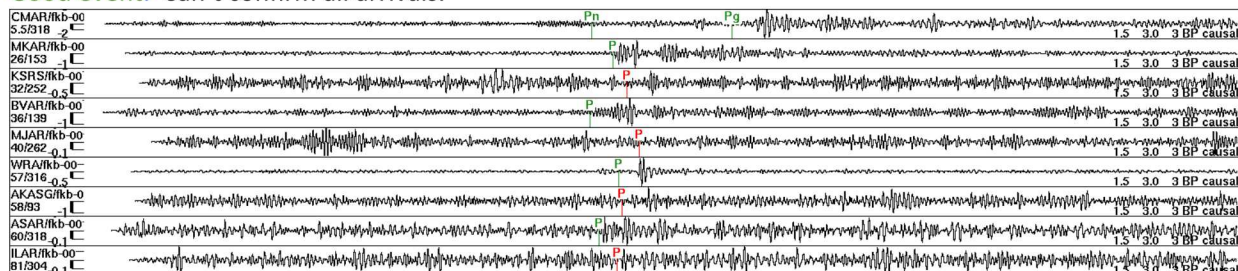
Good Event! BRTR not valid signal.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
14 9360422 1:12: 8.17 3.19 22.330 94.580 138.5 3.52 0.58 10 SEL 17809804 17.225
0.755 5 25 28.0 50.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	5.55	134.51	1:13: 31.23	3.231		83.88	5.9	18.3	3.635	0.120	6.9	1 1.700
MKAR	26.33	340.43	1:17: 33.81	2.544		326.50	8.2	9.2	3.085	0.190	7.9	1 -4.625
KURK	30.89	339.69	1:18: 6.77	-4.976		358.75	4.5	5.0	3.105	0.100	4.2	1 3.334
KSRS	32.17	54.74	1:18: 22.59	-0.249		375.23	5.2	4.1	4.495	0.070	3.0	0 -99.000
BVAR	35.78	334.75	1:18: 50.27	-2.411		403.30	4.3	5.9	2.595	0.090	3.3	1 1.975
MJAR	40.04	59.48	1:19: 31.14	0.349		443.45	4.4	4.4	3.725	0.110	3.0	0 -99.000
WRAJ	57.15	134.50	1:21: 37.71	-3.521		569.58	7.9	8.2	3.115	0.080	8.6	0 -99.000
AKASG	57.58	316.70	1:21: 45.62	4.899		578.50	5.6	3.7	4.165	0.090	3.0	0 -99.000
ASAR	59.55	137.84	1:21: 54.84	-2.897		587.13	7.8	3.8	3.125	0.090	7.9	1 1.752
ILAR	81.12	22.44	1:24: 9.32	3.033		722.08	4.6	4.1	4.115	0.060	3.0	0 -99.000

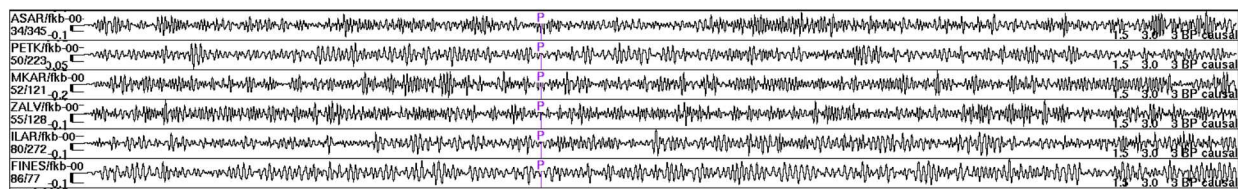
Good event. Can't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
15 14086036 1:48: 45.88 2.19 9.820 125.380 89.0 4.05 0.39 6 NEW 0 0.000 -
1.000 0 22 28.9 32.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	34.21	345.99	1:55: 22.71	0.310		396.59	4.6	0.0	0.000	0.004	9.2	0 -99.000
PETK	50.13	222.47	1:57: 30.59	-2.801		525.31	6.3	0.0	-0.802	0.007	3.0	0 -99.000
MKAR	52.18	120.51	1:57: 46.41	2.096		540.99	8.6	0.0	0.000	0.006	8.6	0 -99.000
ZALV	54.85	127.52	1:58: 4.86	0.771		558.76	4.7	0.0	-0.925	0.004	3.7	0 -99.000
ILAR	79.94	271.66	2: 0: 48.34	2.622		722.39	4.8	0.0	-0.803	0.003	3.5	0 -99.000
FINES	86.11	76.66	2: 1: 12.07	-2.998		746.31	10.8	0.0	-0.779	0.009	4.3	0 -99.000

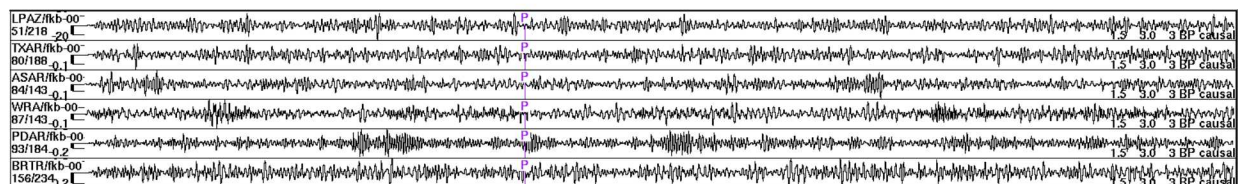
False event. Couldn't find any signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
16 10114292 1:54: 40.52 1.27 -50.170 -115.280 0.0 4.01 0.41 6 NEW 0 0.000 -
1.000 0 43 16.2 28.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	49.91	217.21	2: 3: 42.36	-0.618	542.10	8.9	0.0	0.000	0.028	5.4	0 -99.000
TXAR	79.57	186.76	2: 6: 49.57	-0.629	729.75	8.6	0.0	-0.517	0.004	5.1	0 -99.000
ASAR	85.24	143.18	2: 7: 11.98	-2.109	751.82	6.8	0.0	-1.121	0.002	5.0	0 -99.000
WRA	87.96	143.17	2: 7: 29.12	1.812	769.22	4.6	0.0	-0.844	0.002	5.3	0 -99.000
PDAR	92.53	182.87	2: 7: 56.81	0.831	796.02	5.4	0.0	0.025	0.002	4.5	0 -99.000
BRTR	155.04	234.82	2:15: 2.64	0.712	1222.72	6.8	0.0	-0.500	0.004	3.6	0 -99.000

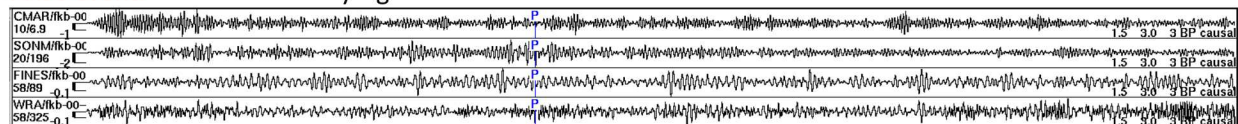
False event. Couldn't find any signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
17 10051233 2: 4: 58.83 1.92 28.250 100.100 16.0 3.54 0.77 5 NEW 0 0.000 -
1.000 0 26 28.6 32.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	9.67	2.83	2: 7: 21.21	-1.392	142.71	6.8	0.0	-1.926	0.005	6.8	0 -99.000
SONM	20.36	197.78	2: 9: 30.41	-1.455	272.20	6.7	0.0	-0.864	0.002	6.8	0 -99.000
KURK	27.48	136.83	2:10: 44.24	-1.702	345.59	4.9	0.0	-2.917	0.009	5.7	0 -99.000
FINES	57.79	89.70	2:14: 53.41	2.999	594.04	4.3	0.0	-1.059	0.005	5.2	0 -99.000
WRA	58.51	323.72	2:14: 54.73	1.550	595.61	4.9	0.0	-1.047	0.004	8.3	0 -99.000

False event. Couldn't find any signals

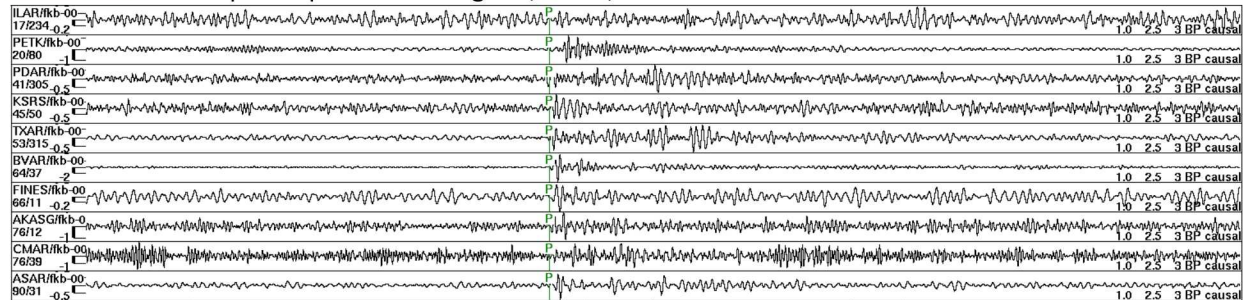


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
18 5350433 2: 6: 3.43 2.42 51.980 -170.580 55.5 3.95 0.79 12 SEL 17815284 7.886
0.588 9 1 23.0 54.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	18.50	37.10	2:10: 6.01	0.550	242.75	6.4	0.0	2.970	0.120	8.7	1 -7.969
PETK	17.49	284.29	2:10: 23.14	-2.043	260.75	4.6	0.0	4.600	0.170	4.7	1 3.800
PDAR	42.85	76.39	2:13: 51.45	2.210	467.85	6.4	0.0	3.090	0.230	6.7	0 -99.000
KSRS	42.98	273.88	2:14: 15.18	3.223	491.90	4.3	0.0	4.160	0.060	3.0	1 0.300
TXAR	55.23	85.73	2:15: 17.14	-3.312	554.63	5.5	0.0	3.400	0.140	7.4	1 -4.125

KURK	60.88	316.12	2:16: 19.10	0.210	615.78	4.4	0.0	3.980	0.110	3.0	1	2.111
BVAR	62.32	322.26	2:16: 27.01	-0.883	623.78	7.7	0.0	3.200	0.180	3.0	1	2.150
NOA	67.00	357.56	2:16: 54.70	3.354	651.20	4.7	0.0	3.740	0.120	4.2	1	-2.604
CMAR	74.21	279.74	2:17: 43.48	-1.270	700.65	5.2	0.0	4.120	0.090	3.5	0	-99.000
AKASG	75.65	345.37	2:17: 44.79	-0.187	701.43	4.2	0.0	4.210	0.060	3.5	1	1.113
ASAR	88.46	226.84	2:18: 55.99	2.536	773.45	11.6	0.0	3.850	0.160	4.2	1	-0.150
TORD	114.74	5.25	2:24: 32.17	-4.389	1109.20	4.5	0.0	6.020	0.130	3.0	0	-99.000

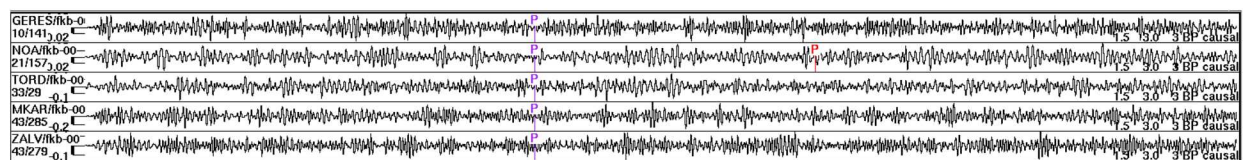
Good event! A couple of questionable signals, TORD, NOA



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
19	6792560	2:11: 38.29	1.33	40.710	22.130	47.0	2.72	0.68	5	NEW	0	0.000	-
1.000	0	30	26.8	32.1									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
GERES	10.37	144.97	2:14: 4.63	1.727	145.97	4.7	0.0	-2.228	0.003	6.5	0	-99.000
NOA	21.93	158.61	2:16: 19.10	-2.348	280.49	4.6	0.0	-1.709	0.005	5.0	0	-99.000
TORD	31.94	29.34	2:18: 7.21	-0.198	388.27	6.4	0.0	-0.166	0.009	6.8	0	-99.000
MKAR	43.73	284.14	2:19: 34.22	0.453	475.17	4.7	0.0	-1.484	0.005	8.6	0	-99.000
ZALV	43.92	278.42	2:19: 35.54	0.366	476.57	4.2	0.0	-1.306	0.018	5.2	0	-99.000

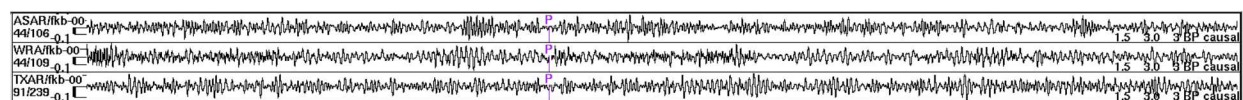
False event. Couldn't find corroborating signals at the listed times.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
20	8674470	2:14: 8.58	0.99	-27.550	-177.680	107.0	3.14	0.19	4	NEW	0	0.000	-
1.000	0	12	25.4	26.3									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	44.12	104.75	2:22: 0.56	-1.369	472.31	6.0	0.0	-1.457	0.002	9.5	0	-99.000
WRA	44.78	108.33	2:22: 9.79	1.302	480.76	8.9	0.0	-1.422	0.004	9.8	0	-99.000
NVAR	85.15	230.16	2:26: 40.05	-0.383	751.39	6.6	0.0	-1.017	0.004	3.7	0	-99.000
TXAR	89.88	238.97	2:27: 1.14	0.450	772.96	4.3	0.0	-1.129	0.002	3.4	0	-99.000

False event. Couldn't find corroborating signals at the listed times.

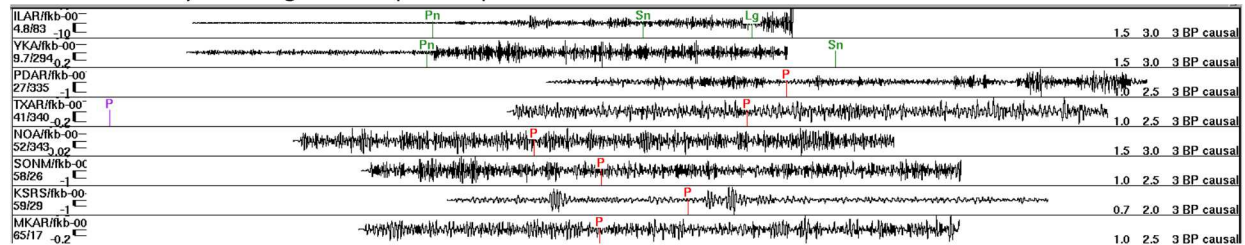


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
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21 9302265 2:21: 40.78 3.47 69.610 -131.400 0.0 4.07 0.37 6 NEW 0 0.000 -1.000 0 42 26.0 28.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	29.18	136.93	2:27: 47.29	2.912		365.77	4.3	8.9	3.734	0.270	5.6 0 -99.000
TXAR	43.40	136.54	2:29: 40.66	-4.349		479.17	4.4	4.0	3.514	0.240	5.7 0 -99.000
NOA	48.97	20.19	2:30: 13.62	0.045		512.14	5.2	5.2	4.374	0.160	3.0 0 -99.000
SONM	55.23	313.14	2:31: 12.95	-4.756		572.40	4.6	4.5	4.094	0.200	5.2 0 -99.000
KSRS	57.86	290.71	2:31: 45.91	4.381		604.87	4.3	11.6	4.604	0.070	3.0 0 -99.000
MKAR	61.75	330.79	2:31: 59.09	1.768		617.97	4.3	3.8	4.074	0.190	6.3 0 -99.000

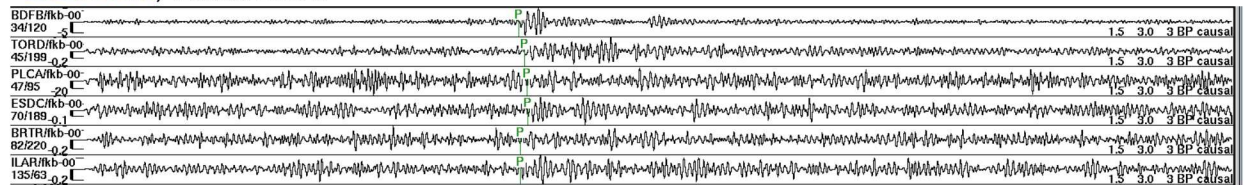
False Event. Close. ILAR and YKA are valid signals that locate to: 2019/09/01 02:20:35.08 66.7513 -135.8265 according to ISC catalog. However, they are not among the arrivals listed above. Couldn't find any other signals except for a possible ULM – does not meet LEB criteria.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
22 6531947 2:22: 4.51 2.79 -30.390 -14.700 0.0 4.59 0.60 6 SEL 17815301 -4.610
0.694 4 32 18.0 31.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TORD	44.32	20.90	2:30: 25.49	-3.504		501.38	4.8	3.2	5.787	0.080	8.3 1 4.175
ESDC	68.90	7.58	2:33: 19.51	-0.230		675.85	4.9	4.7	4.497	0.120	5.4 1 1.929
BRTR	81.08	34.67	2:34: 35.98	4.983		752.23	4.9	4.7	4.057	0.190	6.8 1 -3.650
CMAR	117.67	83.31	2:40: 54.35	-2.608		1130.43	4.7	4.6	4.817	0.100	3.0 0 -99.000
ILAR	134.10	334.46	2:41: 25.99	1.666		1161.38	5.9	4.1	4.357	0.100	5.1 0 -99.000
KSRS	146.53	65.21	2:41: 48.40	-0.307		1184.38	5.5	4.3	4.027	0.060	3.0 1 6.950

Good event, Added BOSA.

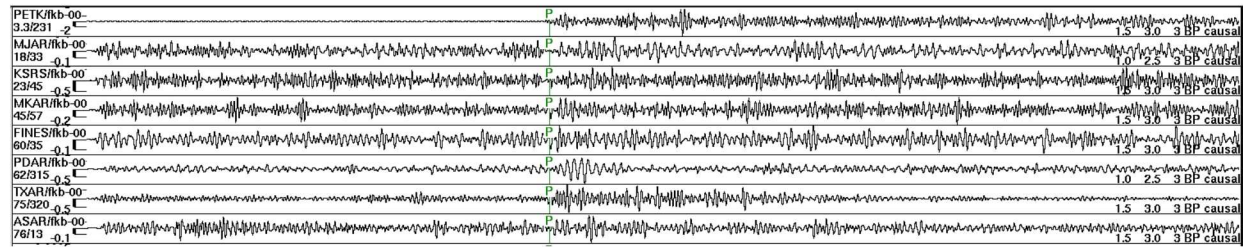


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
23 9233659 2:29: 20.89 3.00 50.790 154.210 0.0 4.06 0.42 11 SEL 17815394 -3.880
1.328 5 19 23.0 57.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PETK	4.08	19.08	2:30: 8.35	-4.608		47.96	5.3	0.0	3.950	0.110	3.7 1 4.549
MJAR	17.89	231.01	2:33: 30.06	-4.680		249.26	5.0	0.0	2.980	0.080	6.1 0 -99.000
KSRS	23.16	249.68	2:34: 26.75	-1.032		305.93	4.8	0.0	3.750	0.090	3.6 1 0.150
ZALV	42.47	304.29	2:37: 6.27	2.300		465.76	4.5	0.0	4.280	0.160	3.7 0 -99.000
MKAR	47.22	296.35	2:37: 44.50	0.831		503.91	5.8	0.0	3.770	0.280	7.9 1 1.725
FINES	62.42	335.24	2:39: 31.29	1.293		610.11	4.3	0.0	4.170	0.130	6.6 1 2.448
NVAR	59.88	64.96	2:39: 32.61	2.590		611.81	4.3	0.0	4.090	0.120	4.1 0 -99.000
PDAR	61.99	56.20	2:39: 45.79	2.448		624.58	7.1	0.0	4.510	0.080	5.1 0 -99.000
AKASG	70.31	327.01	2:40: 24.02	-0.770		662.53	4.2	0.0	4.310	0.080	4.1 0 -99.000

TXAR 74.89 62.66 2:41: 0.94 -3.235 699.88 6.2 0.0 4.470 0.060 6.1 1 -8.800
ASAR 75.12 200.42 2:41: 16.76 4.864 715.08 6.4 0.0 4.340 0.060 6.2 0 -99.000

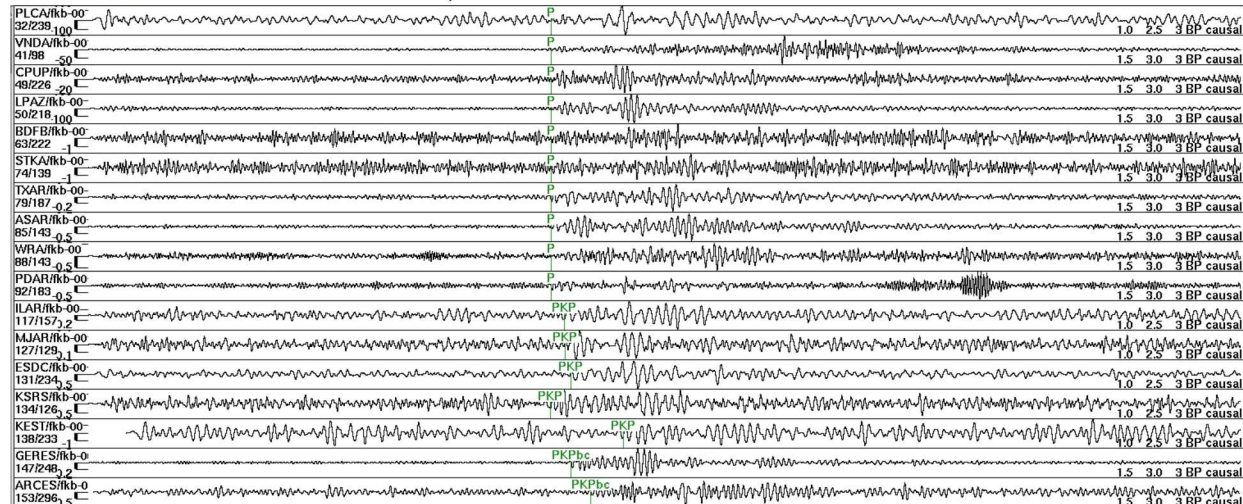
Good event! Couldn't confirm ALL signals listed. Namely, ZALV,AKASG – and neither were in the IDC solution.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
24 10867378 2:34: 46.52 1.39 -49.660 -114.410 0.0 4.20 0.32 16 SEL 17815504 -2.860
0.128 13 43 16.0 71.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPZA	50.49	65.50	2:43: 39.14	-1.058	533.46	8.1	7.1	4.307	0.330	6.4	1 6.975
TXAR	79.56	10.14	2:46: 51.62	0.458	725.49	17.9	12.4	4.167	0.230	6.7	1 5.375
ASAR	84.70	239.29	2:47: 23.26	0.398	757.44	25.2	13.9	4.377	0.250	8.8	1 1.350
WRA	87.40	241.86	2:47: 36.45	0.259	770.49	5.1	4.5	4.617	0.110	9.1	1 2.220
PDAR	92.44	4.09	2:47: 53.58	-0.478	787.94	14.1	11.6	4.107	0.350	3.0	1 6.118
ILAR	117.00	345.33	2:53: 33.72	1.071	1127.44	4.4	5.0	3.927	0.160	4.9	1 0.275
MJAR	126.96	285.01	2:53: 49.54	-2.792	1142.94	4.7	3.6	4.337	0.130	3.0	1 7.363
ESDC	131.70	74.58	2:54: 1.41	0.689	1155.27	4.5	4.4	4.447	0.220	3.0	1 2.874
KRSR	134.07	279.24	2:54: 5.36	0.403	1159.94	4.6	6.7	4.417	0.100	3.0	0 -99.000
KEST	137.83	87.91	2:54: 13.27	2.176	1167.21	5.4	5.6	4.357	0.340	3.0	0 -99.000
BRTR	155.76	102.92	2:54: 40.96	0.231	1195.59	6.6	8.8	4.307	0.210	3.0	1 2.328
AKASG	157.34	74.26	2:54: 43.59	1.194	1197.09	14.1	10.9	4.277	0.180	3.0	1 2.566
ARCES	152.88	29.31	2:54: 43.59	0.069	1198.19	7.3	5.8	3.157	0.180	3.0	1 1.150
KBZ	163.75	104.03	2:54: 47.55	-2.308	1200.94	5.9	5.8	4.297	0.350	3.0	0 -99.000
SONM	152.87	281.71	2:54: 52.82	-2.173	1206.74	9.3	9.1	4.037	0.170	5.7	1 -5.220
ZALV	167.07	295.76	2:55: 57.42	1.860	1271.69	5.1	4.2	4.087	0.300	3.0	1 2.309

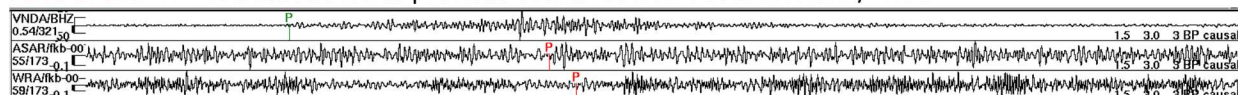
Good event – confirmed in ISC bulletin, IDC author.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
25 8922949 2:42: 54.32 1.23 -77.100 160.340 19.0 3.73 0.09 3 NEW 0 0.000 -
1.000 0 50 25.7 28.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
VNDA	1.28	21.33	2:43: 3.54	-0.131	9.30	5.7	0.0	-5.413	0.011	9.6	0 -99.000
ASAR	54.77	171.65	2:52: 22.53	-1.438	568.30	4.6	0.0	-0.863	0.025	9.6	0 -99.000
WRA	58.38	172.10	2:52: 51.53	1.569	596.35	4.7	0.0	-0.677	0.023	9.6	0 -99.000

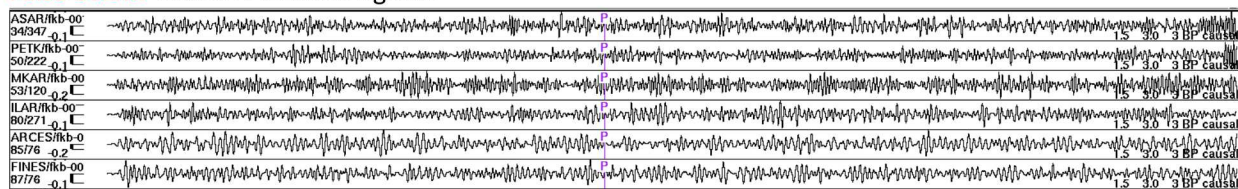
False event. VNDA is associated to previous event. Couldn't confirm ASAR/WRA.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
26 13683112 2:48: 37.09 1.47 9.500 126.570 63.0 3.91 0.45 6 NEW 0 0.000 -
1.000 0 22 28.8 30.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	33.64	344.87	2:55: 11.28	-0.061	394.37	5.0	0.0	-1.310	0.003	9.4	0 -99.000
PETK	50.97	222.66	2:57: 31.03	1.376	534.07	5.3	0.0	-0.754	0.005	3.0	0 -99.000
MKAR	52.45	121.52	2:57: 46.85	-0.404	549.46	7.8	0.0	0.000	0.005	8.8	0 -99.000
ILAR	80.78	271.79	3: 0: 38.23	-1.623	720.37	4.2	0.0	-0.580	0.002	3.0	0 -99.000
ARCES	84.96	77.49	3: 1: 8.55	2.362	750.74	8.8	0.0	-1.314	0.004	3.0	0 -99.000
FINES	86.50	77.41	3: 1: 12.51	-1.651	754.82	7.8	0.0	-0.771	0.004	3.0	0 -99.000

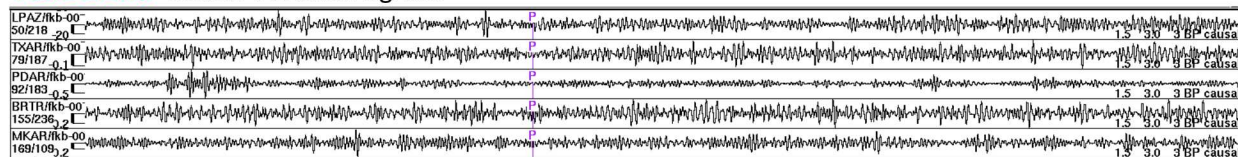
False event. Couldn't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
27 10114292 2:54: 47.55 1.83 -49.430 -114.210 0.0 4.09 0.37 5 NEW 0 0.000 -
1.000 0 43 16.2 24.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAR	49.91	217.21	3: 3: 42.80	-1.167	534.42	9.4	0.0	0.000	0.024	5.4	0 -99.000
TXAR	79.57	186.76	3: 6: 50.01	-1.990	722.07	7.9	0.0	-0.568	0.004	5.1	0 -99.000
PDAR	92.53	182.87	3: 8: 1.20	2.953	793.00	4.6	0.0	0.006	0.002	4.5	0 -99.000
BRTR	155.04	234.82	3:15: 8.35	1.251	1221.05	6.5	0.0	-0.534	0.004	3.6	0 -99.000
MKAR	168.69	112.75	3:16: 5.04	-1.047	1277.22	5.6	0.0	-0.947	0.003	5.5	0 -99.000

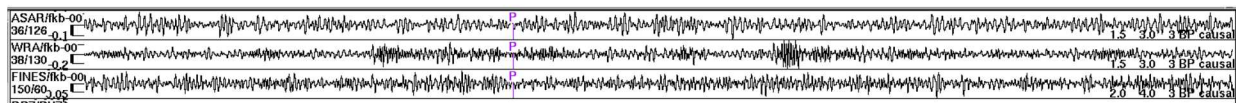
False event. Couldn't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
28 5064375 3:0: 29.00 0.00 -40.460 172.240 185.0 2.79 0.13 3 NEW 0 0.000 -
1.000 0 11 27.6 27.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	37.10	126.42	3:7: 15.06	0.003	406.24	5.6	0.0	-1.388	0.002	9.4	0 -99.000
WRA	39.08	130.29	3:7: 32.20	0.003	422.26	4.7	0.0	-1.124	0.001	9.9	0 -99.000
FINES	151.13	58.47	3:20: 3.66	-0.006	1174.99	4.6	0.0	-1.104	0.011	8.4	0 -99.000

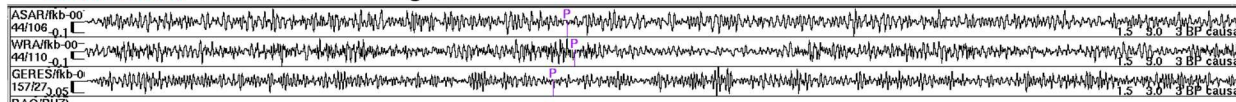
False event. Couldn't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
29 9786699 3:14: 16.93 0.69 -28.000 -177.740 180.0 3.29 0.32 4 NEW 0 0.000 -
1.000 0 12 25.4 25.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	43.35	105.04	3:22: 1.00	-1.006	464.55	5.4	0.0	-1.527	0.002	9.6	0 -99.000
WRA	44.04	108.72	3:22: 8.91	0.859	472.33	9.3	0.0	-1.551	0.003	9.8	0 -99.000
NVAR	85.86	230.51	3:26: 40.49	-0.165	743.65	5.8	0.0	-1.039	0.003	3.4	0 -99.000
GERES	156.49	27.01	3:33: 47.64	0.312	1171.78	3.9	0.0	-1.932	0.004	3.0	0 -99.000

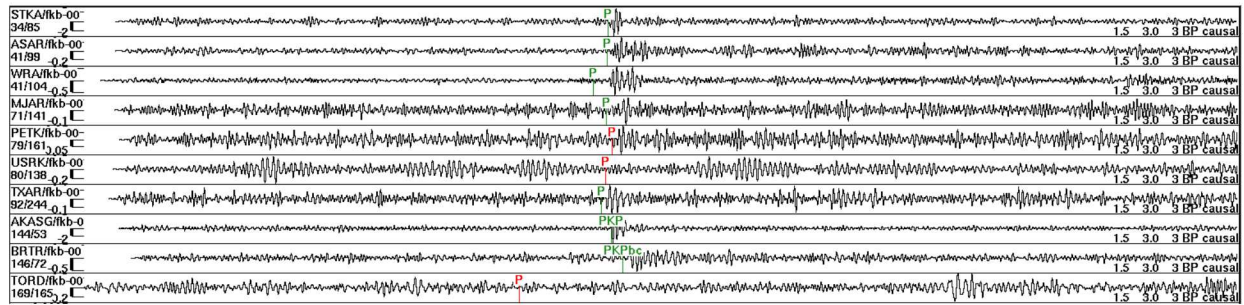
False event. Couldn't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
30 12380989 3:16: 31.41 2.20 -24.660 179.110 549.5 3.66 0.80 12 SEL 17815511 5.479
0.857 7 12 25.0 52.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
STKA	33.75	248.40	3:22: 30.00	2.094	358.64	5.9	3.4	3.664	0.280	6.3	1 0.200
ASAR	41.07	261.18	3:23: 29.33	1.088	417.79	11.9	0.0	3.104	0.220	9.5	1 0.550
WRA	41.46	266.80	3:23: 30.64	0.326	420.10	9.9	0.0	2.934	0.140	9.7	1 0.949
MJAR	71.58	326.36	3:26: 58.95	-0.626	627.56	5.8	0.0	3.154	0.170	3.0	1 0.165
PETK	79.16	347.13	3:27: 41.13	-1.366	669.60	4.9	0.0	3.244	0.200	3.0	0 -99.000
USRK	80.50	327.77	3:27: 47.72	-0.720	677.17	4.2	0.0	3.304	0.120	3.0	0 -99.000
TXAR	91.37	58.46	3:28: 43.10	2.842	732.17	6.3	0.0	3.544	0.270	3.2	0 -99.000
PDAR	93.54	44.39	3:28: 51.01	1.840	739.99	4.8	0.0	4.334	0.100	3.0	0 -99.000
ARCES	131.97	347.80	3:34: 43.01	2.145	1092.35	5.1	0.0	3.954	0.070	3.0	1 0.024
AKASG	144.70	326.34	3:35: 5.42	0.375	1113.99	9.2	0.0	3.344	0.170	3.0	1 2.000
BRTR	147.00	306.36	3:35: 9.38	-3.100	1118.64	6.4	0.0	3.284	0.090	3.1	1 4.800
TORD	168.72	193.65	3:35: 29.15	-4.898	1138.37	5.3	0.0	6.014	0.270	3.0	0 -99.000

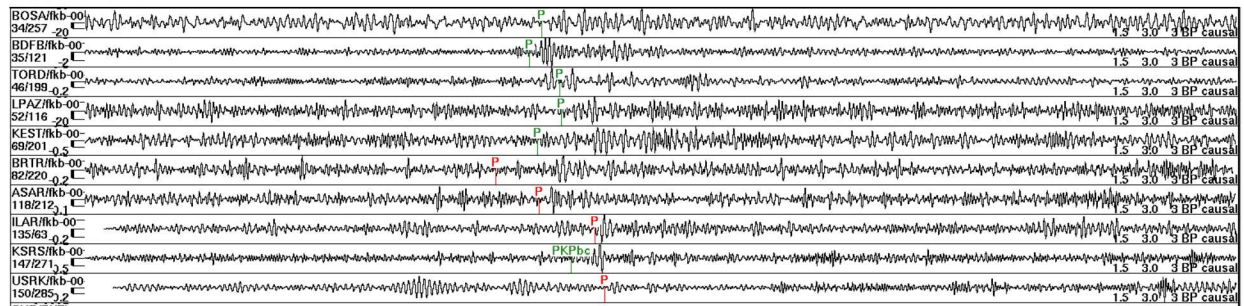
Good event, couldn't confirm all signals (PETK,USRK,TORD), but most are there and clear.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 31 5115186 3:17: 50.51 2.34 -30.640 -10.750 0.0 4.07 0.38 7 REB 17815522 4.784
 2.573 4 32 18.0 32.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TORD	46.31	20.70	3:26: 7.53	-0.215	497.37	4.4	2.6	4.912	0.130	8.0	1 -1.725
KEST	69.81	19.68	3:29: 0.23	2.571	669.37	5.2	5.8	4.132	0.260	3.3	1 -5.325
BRTR	82.91	34.74	3:30: 3.52	-4.469	733.59	6.8	5.0	3.812	0.230	6.3	1 6.499
ASAR	117.28	146.26	3:36: 33.75	-1.445	1123.49	4.3	3.9	4.102	0.100	3.0	0 -99.000
ILAR	135.75	333.48	3:37: 11.98	-0.564	1161.84	4.3	4.7	3.872	0.140	5.9	0 -99.000
KSRS	147.63	68.02	3:37: 33.08	2.638	1182.89	5.2	8.5	3.622	0.090	3.0	1 -2.785
USRK	149.92	54.36	3:37: 38.35	1.484	1187.64	4.7	4.1	4.032	0.170	3.0	0 -99.000

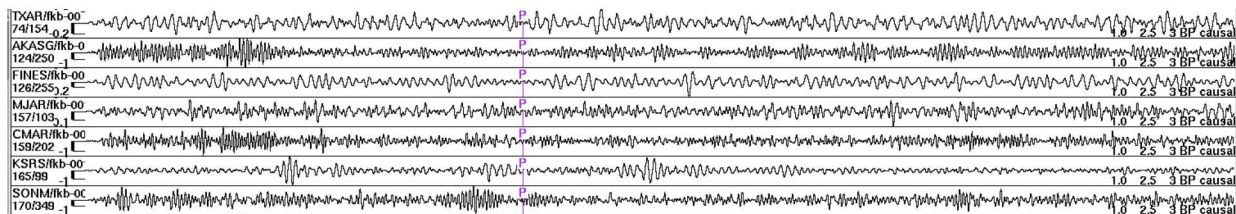
Good event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 32 7060686 3:28: 52.32 2.42 -38.170 -71.280 0.0 4.56 0.52 7 NEW 0 0.000 -
 1.000 0 8 23.0 25.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	73.16	332.51	3:40: 27.10	-0.614	695.11	4.6	0.0	3.778	0.190	7.5	0 -99.000
AKASG	125.86	50.00	3:47: 47.43	-4.025	1135.23	4.7	0.0	5.188	0.050	3.0	0 -99.000
FINES	127.17	36.51	3:47: 57.98	3.428	1145.86	4.2	0.0	4.718	0.310	3.0	0 -99.000
MJAR	154.98	275.46	3:48: 46.76	-1.344	1194.76	4.4	0.0	4.058	0.170	3.0	0 -99.000
CMAR	158.97	159.01	3:48: 49.39	-1.416	1197.26	4.7	0.0	4.828	0.070	3.0	0 -99.000
KSRS	163.28	273.16	3:48: 58.62	1.227	1206.51	5.4	0.0	5.158	0.040	3.0	0 -99.000
SONM	170.60	1.38	3:49: 2.58	2.744	1210.90	5.6	0.0	4.158	0.060	3.0	0 -99.000

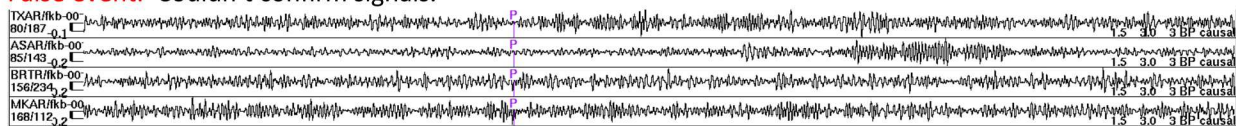
False event. Couldn't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
33 10114292 3:34: 52.24 1.75 -50.080 -114.910 0.0 3.75 0.19 5 NEW 0 0.000 -
1.000 0 43 16.2 23.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	3:46: 58.65	-2.646	726.76	8.1	0.0	-0.519	0.004	5.1	0 -99.000
ASAR	85.24	143.18	3:47: 26.34	-1.005	754.13	7.2	0.0	-0.891	0.002	5.0	0 -99.000
NVAR	88.19	177.23	3:47: 47.43	2.615	775.11	5.6	0.0	-0.857	0.014	4.7	0 -99.000
BRTR	155.04	234.82	3:55: 13.04	0.564	1221.68	5.2	0.0	-0.533	0.003	3.6	0 -99.000
MKAR	168.69	112.75	3:56: 8.41	0.473	1276.34	5.0	0.0	-0.965	0.002	5.5	0 -99.000

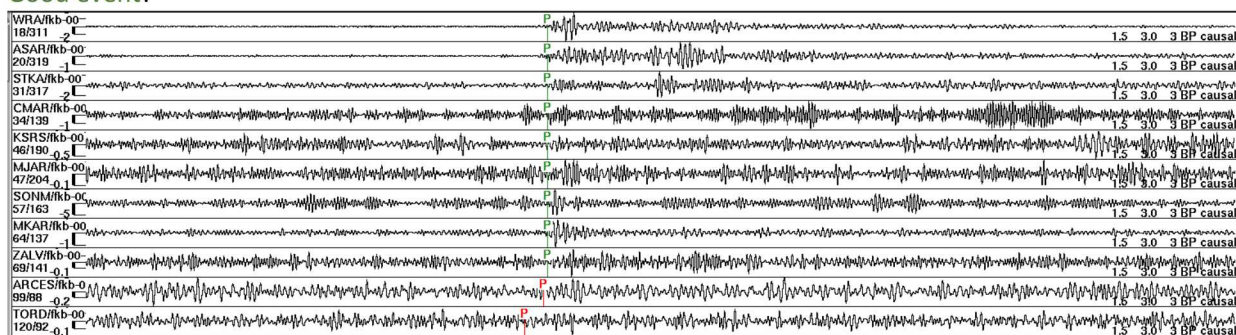
False event. Couldn't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
34 5484572 3:36: 40.34 2.27 -8.250 120.600 71.5 3.75 0.66 11 SEL 17815524 -0.739
0.106 7 24 27.0 52.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	18.09	128.48	3:40: 38.96	0.642	239.32	9.2	16.8	3.465	0.140	9.8	1 -0.018
ASAR	20.13	138.03	3:41: 2.70	-1.830	263.42	10.2	25.3	3.165	0.160	9.6	1 3.835
CMAR	33.94	323.62	3:43: 15.85	-1.972	396.42	4.6	4.1	3.845	0.020	3.0	0 -99.000
KSRS	46.91	9.29	3:44: 53.41	-3.061	494.22	5.4	4.2	3.965	0.090	3.0	0 -99.000
MJAR	48.67	20.32	3:45: 9.23	2.560	509.60	4.6	4.0	3.265	0.150	3.0	1 -0.058
SONM	57.77	349.70	3:46: 21.74	1.340	582.45	6.1	4.5	3.345	0.140	3.6	1 0.840
MKAR	64.65	332.72	3:47: 10.52	0.803	630.22	5.8	7.1	3.415	0.140	8.9	1 1.850
KURK	69.15	333.53	3:47: 32.93	-3.399	653.50	4.2	4.6	3.795	0.110	3.0	1 6.449
ZALV	69.19	338.99	3:47: 35.57	-1.087	655.42	4.7	5.2	3.485	0.130	3.0	1 2.100
ARCES	99.75	339.14	3:50: 16.41	2.860	816.72	4.4	3.4	3.825	0.120	3.0	0 -99.000
TORD	118.82	280.04	3:55: 24.90	3.142	1125.00	4.2	2.7	5.675	0.100	3.0	0 -99.000

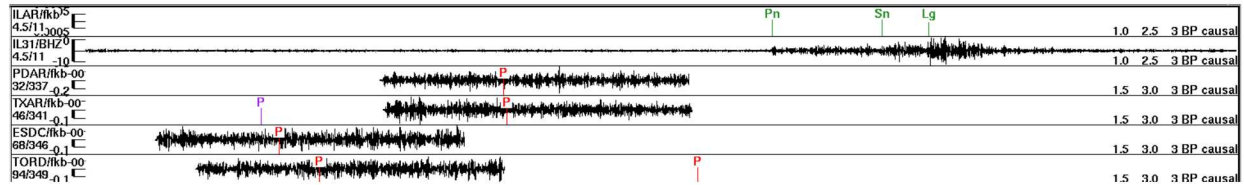
Good event!



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
35 4967437 3:39: 59.41 2.58 78.120 -116.190 0.0 3.98 0.72 5 NEW 0 0.000 -
1.000 0 40 21.0 27.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	17.44	228.48	3:43: 44.85	-0.396	225.34	7.2	0.0	4.157	0.060	8.1	0 -99.000
PDAR	37.25	172.99	3:46: 57.33	-3.405	417.29	4.7	0.0	3.287	0.040	6.4	0 -99.000
TXAR	50.83	166.86	3:48: 57.30	4.936	537.56	4.7	0.0	3.557	0.200	6.6	0 -99.000
ESDC	54.84	61.54	3:49: 38.17	-0.438	578.99	4.9	0.0	4.107	0.120	3.5	0 -99.000
TORD	81.73	61.28	3:52: 21.65	-1.643	742.61	4.5	0.0	5.407	0.100	3.2	0 -99.000

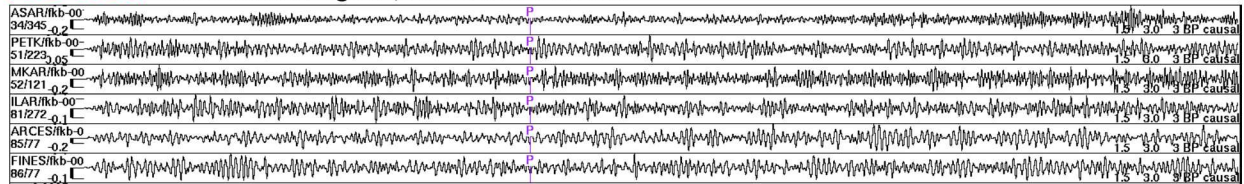
False event. ILAR is local and locates near 69N x 144W ISC has event at: 2019/09/01 03:42:34.22
69.5104 -144.2782



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
36 10911535 3:48: 30.94 2.37 9.350 125.450 0.0 4.04 0.46 6 NEW 0 0.000 -
1.000 0 22 28.7 30.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	33.61	346.54	3:55: 11.72	-2.301	400.64	4.8	0.0	-1.352	0.003	9.3	0 -99.000
PETK	50.43	221.69	3:57: 31.46	-2.982	540.34	5.2	0.0	-0.782	0.004	3.0	0 -99.000
MKAR	52.85	120.47	3:57: 47.29	2.637	555.74	7.5	0.0	0.000	0.004	8.8	0 -99.000
ILAR	80.22	271.04	4: 0: 47.90	2.893	737.19	5.9	0.0	-0.834	0.008	3.0	0 -99.000
ARCES	85.11	76.57	4: 1: 7.68	1.316	757.01	8.6	0.0	-1.374	0.003	3.0	0 -99.000
FINES	86.77	76.53	4: 1: 11.63	-1.563	761.09	7.0	0.0	-0.793	0.004	3.0	0 -99.000

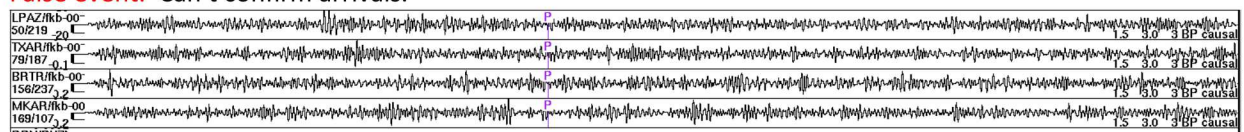
False event. Can't confirm signals, no reference in ISC.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
37 10114292 3:54: 47.99 0.51 -49.050 -114.420 0.0 3.97 0.34 4 NEW 0 0.000 -
1.000 0 43 16.2 19.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	49.91	217.21	4: 3: 41.92	-0.659	534.71	9.4	0.0	0.000	0.021	5.4	0 -99.000
TXAR	79.57	186.76	4: 6: 49.13	0.333	721.78	8.1	0.0	-0.613	0.003	5.1	0 -99.000
BRTR	155.04	234.82	4:15: 8.79	0.640	1221.33	7.9	0.0	-0.570	0.004	3.6	0 -99.000
MKAR	168.69	112.75	4:16: 5.48	-0.314	1277.51	5.6	0.0	-0.954	0.002	5.5	0 -99.000

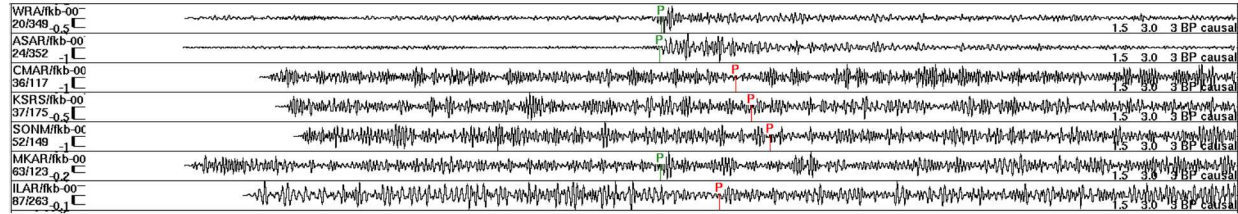
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
38 6682455 3:59: 31.44 1.24 -0.910 131.190 0.0 3.76 0.47 6 SEL 17815596 3.996
1.472 2 23 27.0 31.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	19.35	165.41	4: 3: 56.43	0.945		264.61	5.7	5.3	3.178	0.080	9.8 1 3.250
ASAR	22.85	168.96	4: 4: 34.66	-0.911		303.41	9.9	12.9	3.198	0.190	9.6 1 3.249
CMAR	35.60	304.62	4: 6: 41.22	-1.134		430.06	4.2	4.6	4.188	0.130	3.0 0 -99.000
KSRS	38.40	358.25	4: 6: 53.09	-0.152		441.56	4.3	4.7	3.878	0.120	3.0 0 -99.000
SONM	52.68	340.79	4: 8: 53.06	2.266		561.75	4.7	4.2	3.688	0.330	3.3 0 -99.000
ILAR	88.39	25.23	4:12: 20.04	-1.015		768.66	4.3	7.5	4.458	0.170	3.0 0 -99.000

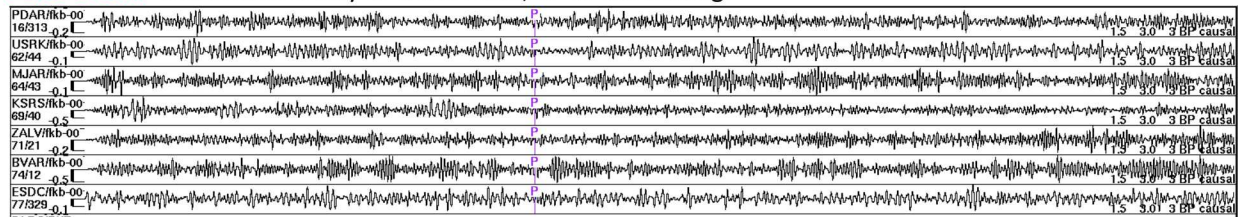
Good event, but can't confirm all arrivals. Kept ASAR/WRA, added MKAR. Rejected the rest.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
39 9205191 4: 4: 16.20 3.64 49.300 -131.140 0.0 3.81 0.77 7 NEW 0 0.000 -
1.000 0 2 25.0 35.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	14.71	108.47	4: 8: 0.32	-4.184		224.09	5.2	0.0	3.507	0.030	8.0 0 -99.000
USRK	63.44	307.49	4:14: 37.15	-0.396		620.97	4.2	0.0	3.837	0.170	3.0 0 -99.000
MJAR	65.27	297.68	4:14: 47.70	-0.443		631.69	4.4	0.0	3.427	0.210	3.0 0 -99.000
KSRS	70.44	304.77	4:15: 18.02	-4.429		662.44	4.5	0.0	4.757	0.050	3.0 0 -99.000
ZALV	73.47	340.12	4:15: 48.34	2.797		692.07	5.2	0.0	3.557	0.200	3.0 0 -99.000
BVAR	76.94	348.33	4:16: 6.80	-0.492		710.37	5.6	0.0	2.827	0.220	3.0 0 -99.000
ESDC	78.99	40.28	4:16: 22.62	-3.774		726.44	5.2	0.0	4.337	0.160	3.0 0 -99.000

False event. Can't confirm any of the arrivals, or in ISC catalog.

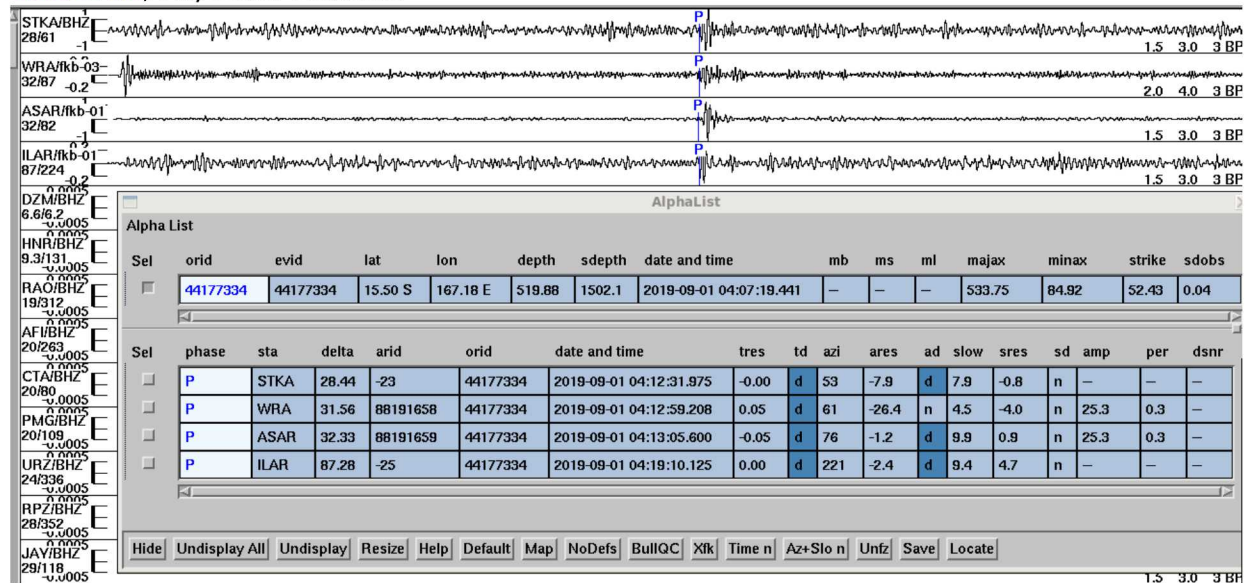


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
40 7082885 4: 6: 37.27 3.25 -20.880 167.760 0.0 4.00 0.44 8 SEL 17809587 2.448
5.483 2 14 25.0 38.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	32.00	263.00	4:12: 55.63	-1.903		378.24	4.4	0.0	4.170	0.090	9.6 1 4.032
ASAR	32.29	256.02	4:12: 56.95	-1.215		380.63	9.1	0.0	3.790	0.080	9.5 1 8.122
MJAR	62.35	332.88	4:17: 14.03	4.955		637.36	4.2	0.0	2.950	0.120	3.0 0 -99.000
USRK	71.37	333.27	4:18: 8.09	0.975		690.81	5.2	0.0	4.220	0.120	3.0 0 -99.000
PETK	72.65	353.31	4:18: 19.95	-0.328		702.46	4.4	0.0	4.190	0.140	3.0 0 -99.000
CMAR	77.73	294.61	4:18: 35.77	-2.471		718.79	4.7	0.0	4.370	0.060	3.3 0 -99.000
NVAR	89.46	48.81	4:19: 40.37	-4.892		783.49	4.3	0.0	3.980	0.310	3.9 0 -99.000

TXAR 97.53 61.67 4:20: 25.20 4.879 827.66 4.4 0.0 4.370 0.160 3.3 0 -99.000

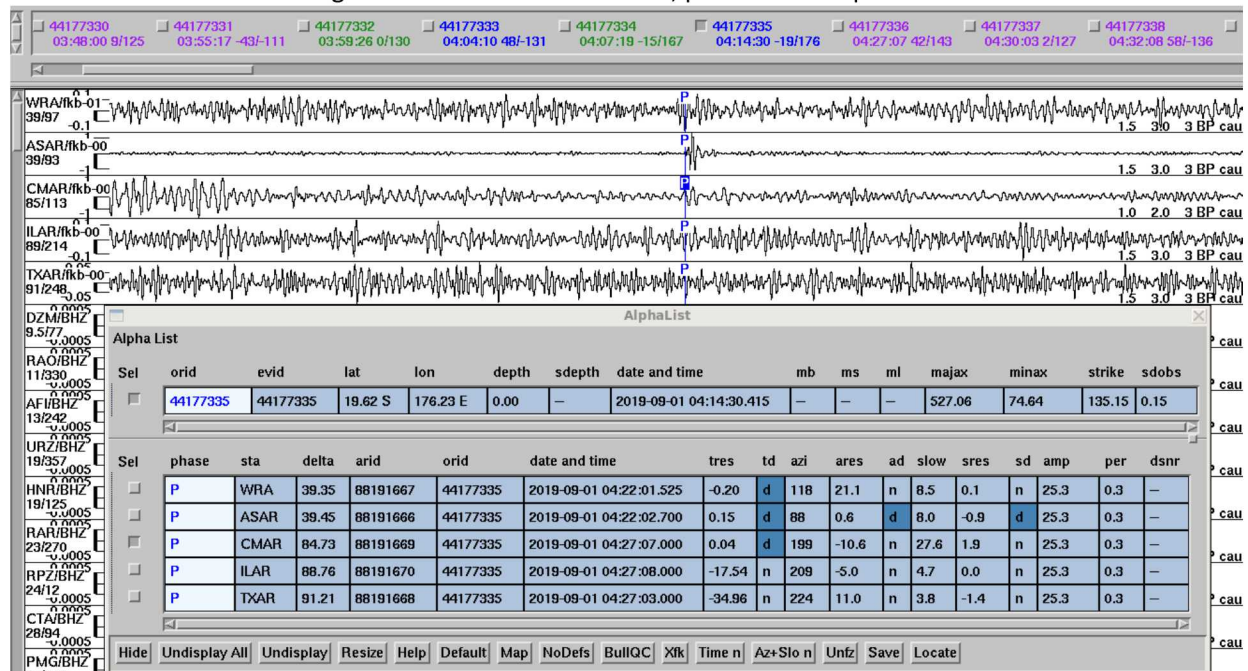
Good event, only found 4 stations:



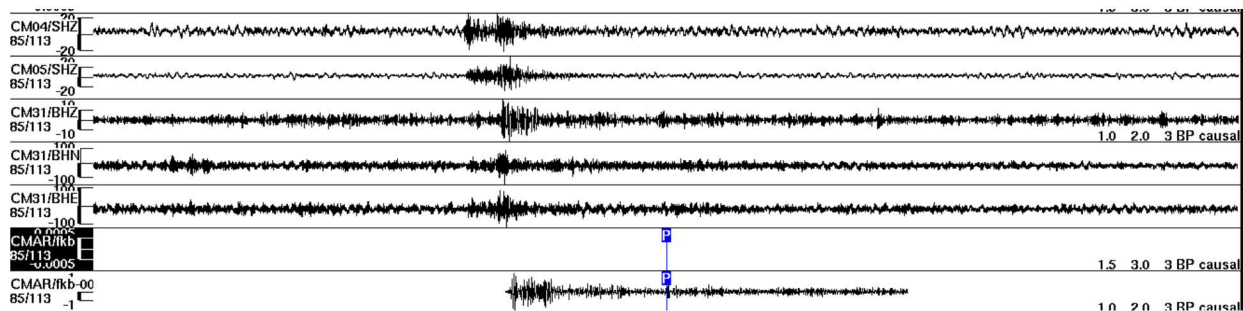
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
41 7647338 4:14: 42.42 3.29 -24.530 181.050 360.4 3.47 0.36 5 NEW 0 0.000 -
1.000 0 12 25.0 29.5

Sta Dist seaz ArrivTime Tres TT_EVENT CC SNR dRM CC wgt Match Tres
ASAR 43.08 260.63 4:22: 1.44 -4.936 439.45 8.2 0.0 2.999 0.140 9.5 0 -99.000
WRA 43.49 266.04 4:22: 13.30 4.754 451.95 4.8 0.0 3.049 0.080 9.8 0 -99.000
TXAR 89.65 57.56 4:27: 3.34 0.657 741.70 4.8 0.0 3.739 0.210 3.3 0 -99.000
CMAR 90.66 289.84 4:27: 7.29 1.577 745.95 4.6 0.0 3.739 0.090 3.0 0 -99.000
ILAR 92.06 13.10 4:27: 8.61 -2.052 747.20 4.4 0.0 3.809 0.150 4.0 0 -99.000

False event. ASAR and WRA good. CMAR won't FK to area, probable later phase to local event. ???able



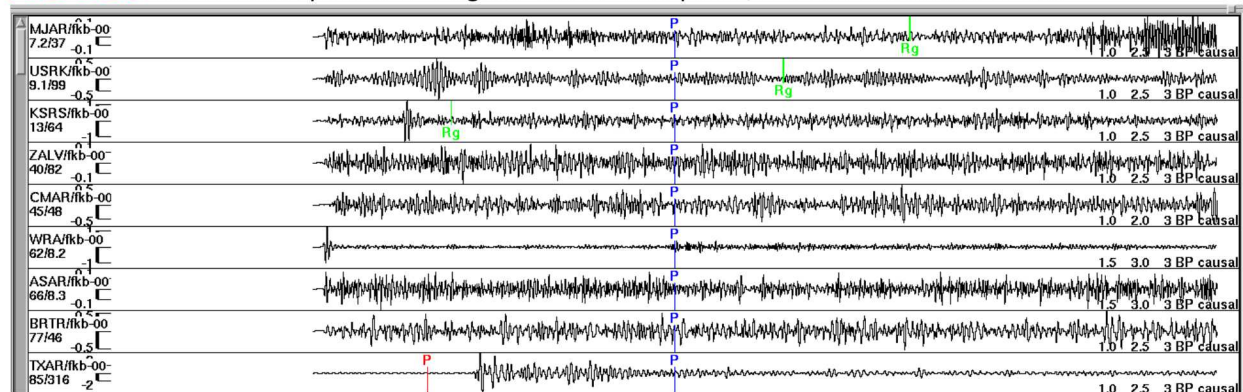
CMAR from above:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 42 7539875 4:27: 37.62 3.32 42.290 143.750 21.7 3.62 0.69 11 NEW 0 0.000 -
 1.000 0 19 23.0 52.2

Sta	Dist	seaz	ArrivTime		Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	5.76	230.38	4:29:	24.40	2.996	106.25	4.4	0.0	1.941	0.120	7.7	0-99.000	
USRK	9.53	297.73	4:29:	45.50	0.780	127.81	4.6	0.0	2.851	0.170	3.4	0-99.000	
KSRS	12.70	261.93	4:30:	40.87	-1.573	182.56	5.4	0.0	3.571	0.040	3.9	0-99.000	
ZALV	41.13	309.67	4:35:	5.86	-3.799	447.51	4.5	0.0	3.381	0.170	4.1	0-99.000	
CMAR	44.14	253.86	4:35:	53.32	4.223	495.61	5.1	0.0	4.041	0.060	3.0	0-99.000	
WRA	60.60	190.17	4:37:	57.25	-1.205	619.74	4.9	0.0	4.101	0.140	8.3	0-99.000	
ASAR	64.33	190.02	4:38:	18.34	-3.963	640.91	4.9	0.0	3.971	0.040	6.8	0-99.000	
NOA	71.84	337.83	4:38:	43.39	-4.817	665.29	4.8	0.0	3.381	0.150	4.3	0-99.000	
NVAR	71.57	55.08	4:38:	52.62	3.364	675.11	4.9	0.0	4.431	0.180	3.5	0-99.000	
BRTR	78.01	312.24	4:39:	33.49	4.944	715.21	4.4	0.0	3.791	0.260	3.0	0-99.000	
TXAR	86.68	53.86	4:40:	15.67	-0.950	757.44	11.7	0.0	4.331	0.170	4.3	0-99.000	

False event can't confirm presence of signal. WRA is later phase/coda for Halmahera event.

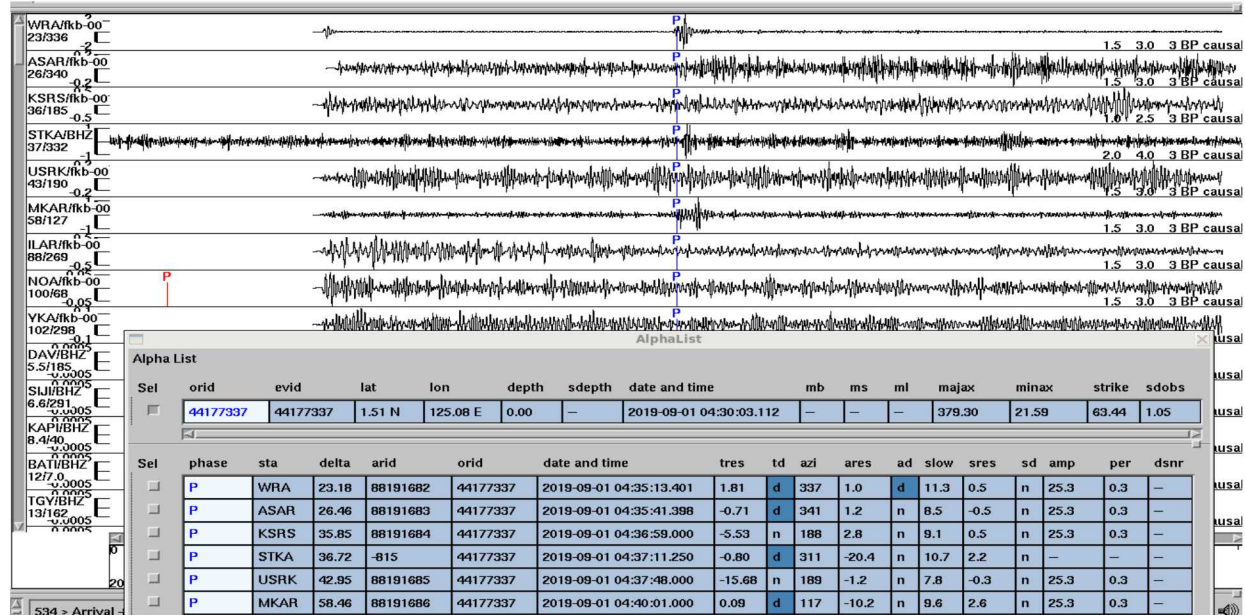


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 43 13082393 4:30: 3.96 2.76 2.390 127.150 28.9 4.28 0.90 9 SEL 17809814 0.672
 2.918 4 23 27.0 46.2

Sta	Dist	seaz	ArrivTime		Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	22.81	160.40	4:35:	7.18	-1.151		303.26	10.9	0.0	3.364	0.140	9.8	1 5.536
ASAR	26.18	164.23	4:35:	40.14	0.231		335.73	7.1	0.0	3.024	0.100	9.5	1 0.621
KSRS	35.67	2.04	4:36:	59.24	4.991		415.33	4.5	0.0	4.154	0.070	3.0	0-99.000
USRK	42.68	5.94	4:37:	48.02	-4.776		463.71	4.5	0.0	4.274	0.070	3.0	0-99.000
MJAR	59.09	326.13	4:40:	1.17	0.659		596.61	5.7	0.0	3.444	0.250	8.8	1 0.324
KURK	63.32	328.09	4:40:	28.86	0.184		624.28	4.3	0.0	3.554	0.060	3.0	1 1.047
ILAR	87.13	25.37	4:42:	40.69	0.611		757.18	5.1	0.0	5.574	0.090	3.0	0-99.000
NOA	100.50	333.39	4:43:	42.66	-2.577		818.91	4.2	0.0	5.104	0.120	3.0	0-99.000

YKA 101.54 24.49 4:43: 51.88 3.902 828.53 5.0 0.0 5.714 0.130 3.0 0-99.000

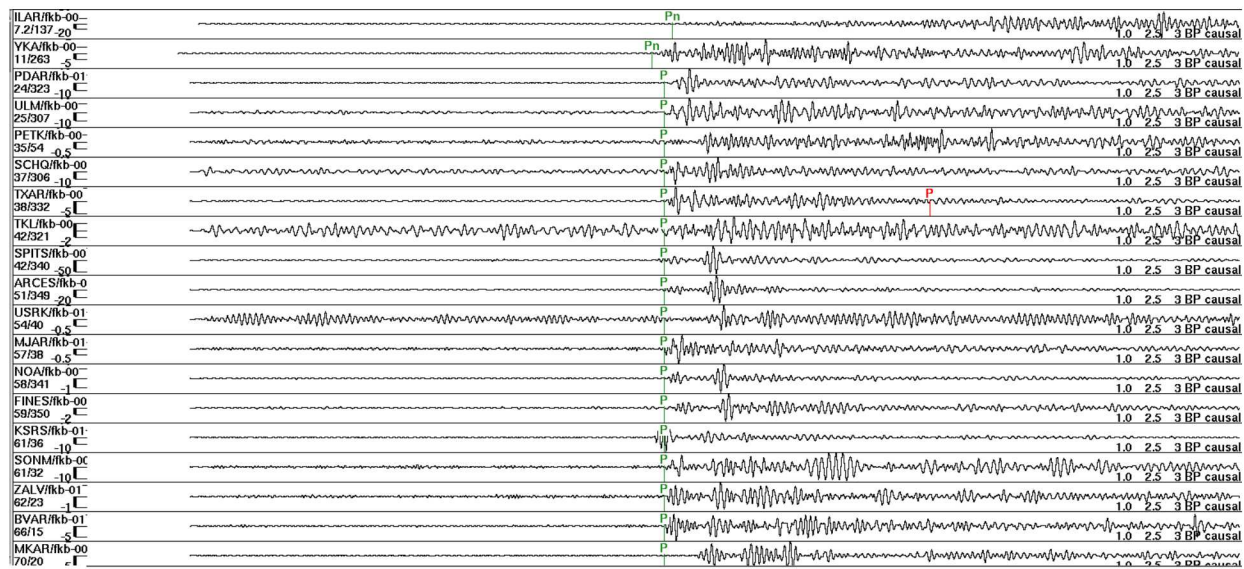
Good event with several false detections.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
44 14376385 4:32: 18.43 3.35 58.320 -136.340 0.0 4.58 0.28 22 SEL 17815791 -6.132
0.938 21 2 25.0 89.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ILAR	6.78	320.01	4:34: 18.40	1.263	118.87	11.5	0.0	4.301	0.220	9.0	1	-5.742
YKA	10.93	66.96	4:35: 3.22	1.364	163.92	10.9	0.0	4.251	0.180	8.8	1	4.432
NVAR	24.48	143.30	4:37: 33.52	3.448	313.99	29.1	0.0	4.111	0.260	5.7	1	8.944
ULM	24.89	94.60	4:37: 34.83	-4.987	315.59	7.8	4.2	4.151	0.330	3.0	0	-99.000
PETK	35.45	288.78	4:39: 16.35	-4.908	418.02	6.7	0.0	4.831	0.250	3.0	1	7.494
TXAR	37.84	129.14	4:39: 34.80	4.886	435.27	20.6	0.0	4.671	0.270	6.3	1	7.170
USRK	53.71	296.86	4:41: 45.32	-2.944	566.84	9.6	0.0	4.961	0.260	3.0	1	4.361
MJAR	56.85	286.55	4:42: 6.42	-1.887	587.95	10.8	0.0	4.741	0.380	3.0	1	5.218
NOA	56.83	18.00	4:42: 18.28	2.939	598.74	6.2	0.0	4.901	0.180	3.0	1	-1.901
FINES	58.22	9.64	4:42: 24.87	0.493	606.49	7.5	0.0	4.701	0.220	4.2	1	-0.525
SONM	61.00	316.62	4:42: 39.38	-3.650	620.42	9.5	0.0	4.521	0.180	4.5	1	3.642
ZALV	61.71	333.59	4:42: 43.33	-4.569	623.89	8.1	0.0	4.541	0.230	3.4	1	4.506
BVAR	65.31	342.39	4:43: 7.06	-4.509	648.32	7.9	0.0	4.521	0.150	3.0	1	4.657
KURK	66.17	336.33	4:43: 21.56	4.986	662.69	16.8	0.0	4.531	0.190	3.0	1	-4.971
MKAR	68.97	332.42	4:43: 30.79	-3.044	671.74	15.7	0.0	4.851	0.300	5.9	1	3.075
AKASG	69.13	9.54	4:43: 37.38	1.310	678.14	19.3	0.0	5.031	0.190	3.2	1	-0.623
ROSC	72.23	112.03	4:43: 43.97	1.682	684.52	6.2	3.9	4.821	0.270	3.0	1	8.557
ESDC	73.40	36.28	4:43: 57.16	-2.567	698.57	16.5	0.0	4.051	0.230	3.0	1	4.671
KEST	80.64	27.43	4:44: 41.98	0.409	742.92	5.7	2.8	4.611	0.230	3.0	1	1.740
BRTR	80.38	7.55	4:44: 43.30	2.104	743.67	19.3	0.0	4.381	0.270	3.0	1	-0.303
CMAR	89.88	308.42	4:45: 29.44	4.395	791.12	26.6	0.0	4.881	0.260	3.0	1	-2.580
BOSA	146.36	29.47	4:52: 7.59	3.788	1188.99	6.7	3.9	4.491	0.430	3.0	1	-0.258

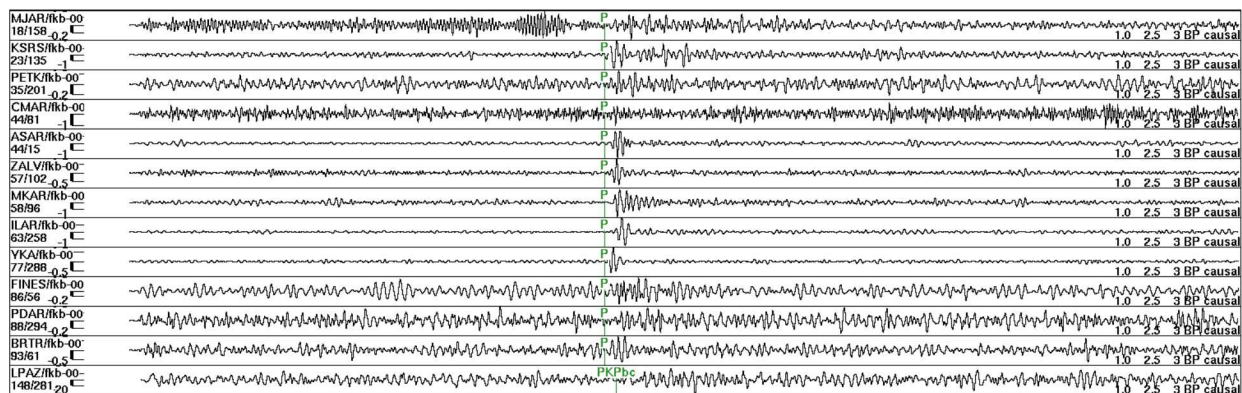
Good event, added several stations. Timing, as it has in general, seems a bit off, typically early.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 45 15019481 4:42: 32.78 1.18 19.480 145.140 237.4 3.55 0.26 18 SEL 17810129 6.910
 0.198 16 18 24.0 82.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	18.77	341.58	4:46: 24.81	0.337	233.03	4.2	0.0	3.152	0.110	5.3	1	-1.105
KSRS	24.13	323.91	4:47: 17.55	-2.066	285.08	11.4	0.0	3.702	0.180	3.3	1	1.630
PETK	35.53	12.67	4:49: 1.70	-1.580	388.83	6.6	0.0	3.372	0.320	3.0	1	-0.204
WRA	40.03	196.44	4:49: 49.16	-0.409	437.05	20.7	0.0	3.702	0.230	9.4	1	1.263
CMAR	44.02	277.35	4:50: 12.89	-2.870	460.53	6.0	0.0	3.972	0.130	3.3	1	4.018
ASAR	43.70	195.47	4:50: 19.48	-0.263	466.53	20.5	0.0	3.882	0.390	7.7	1	0.590
ZALV	57.81	322.49	4:51: 53.09	0.587	561.30	7.0	0.0	3.812	0.310	3.3	1	0.370
MKAR	58.25	313.84	4:51: 58.36	0.539	565.55	6.5	0.0	3.302	0.300	7.5	1	0.950
KURK	61.11	317.97	4:52: 16.82	0.742	584.58	11.0	0.0	3.572	0.340	3.0	1	1.061
ILAR	63.63	26.25	4:52: 33.96	-0.368	601.63	15.5	0.0	3.402	0.560	5.7	1	0.123
BVAR	66.27	320.38	4:52: 52.41	1.632	619.68	6.8	0.0	3.482	0.370	3.0	1	-0.230
YKA	77.98	27.88	4:54: 0.97	0.107	688.90	10.1	0.0	3.682	0.320	5.3	1	1.102
ARCES	82.33	342.10	4:54: 23.38	-0.142	711.28	5.8	0.0	3.582	0.110	3.4	1	0.544
NVAR	83.22	51.84	4:54: 32.61	0.121	720.86	13.3	0.0	3.112	0.610	4.4	1	0.005
FINES	86.71	335.21	4:54: 44.47	1.084	732.48	7.7	0.0	3.292	0.230	6.0	1	0.382
PDAR	87.88	45.40	4:54: 53.70	-0.412	741.83	4.6	0.0	3.722	0.120	3.0	1	0.712
BRTR	93.90	314.16	4:55: 20.07	1.478	767.78	4.8	0.0	3.922	0.160	3.0	0	-99.000
LPZ	147.87	90.84	5: 1: 48.98	1.483	1157.05	6.3	1.0	3.322	0.170	3.0	0	-99.000

Good event!

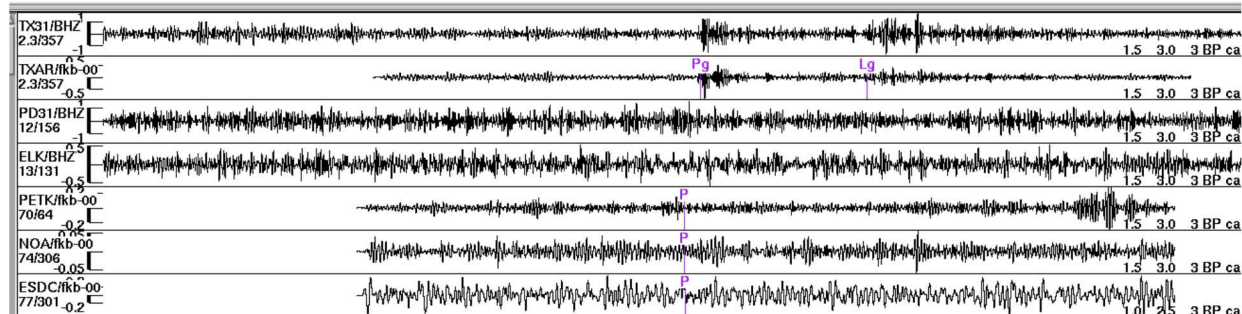


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num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
  46 8610481 4:42: 36.74 3.09 29.110 -112.020 0.0 4.08 0.67 7 NEW 0 0.000 -
1.000 0 4 28.0 26.5
Sta Dist seaz ArrivTime Tres TT_EVENT CC SNR dRM CC wgt Match Tres
NVAR 10.45 336.76 4:45: 14.94 -0.023 159.24 4.3 0.0 3.132 0.090 8.5 0 -99.000
PETK 67.00 319.09 4:53: 35.92 2.472 659.47 4.6 0.0 4.162 0.060 3.0 0 -99.000
NOA 79.66 24.13 4:54: 44.47 1.526 727.77 4.3 0.0 3.672 0.170 3.0 0 -99.000
ESDC 85.17 47.04 4:55: 10.84 1.002 755.24 4.3 0.0 5.012 0.040 3.0 0 -99.000
MJAR 86.64 310.15 4:55: 27.98 4.054 771.52 4.3 0.0 3.312 0.160 3.0 0 -99.000
KSRS 92.74 315.84 4:55: 47.75 -4.831 791.77 5.3 0.0 4.752 0.020 3.0 0 -99.000
KURK 100.17 352.52 4:56: 18.08 -4.200 822.32 5.1 0.0 4.492 0.280 3.0 0 -99.000

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False event. Found a TXAR local that locates to: 31N x 103W

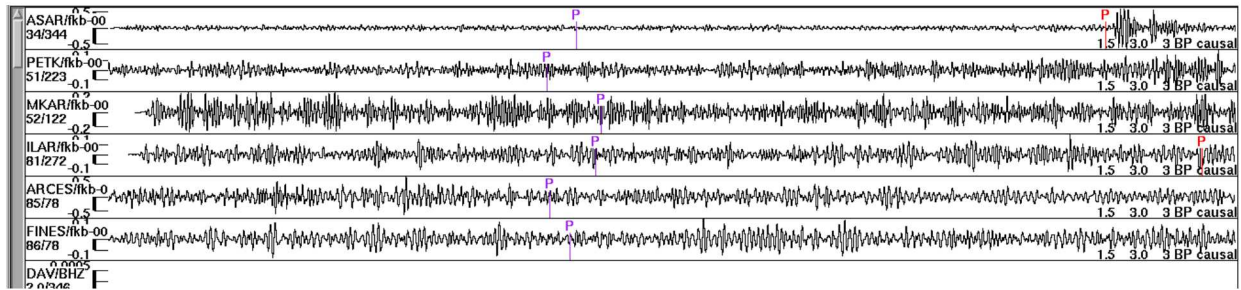


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num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
  47 13683112 4:48: 37.97 2.34 9.010 125.080 63.0 3.82 0.47 6 NEW 0 0.000 -
1.000 0 22 28.8 30.2
Sta Dist seaz ArrivTime Tres TT_EVENT CC SNR dRM CC wgt Match Tres
ASAR 33.64 344.87 4:55: 12.16 0.562 394.01 4.7 0.0 -1.390 0.002 9.4 0 -99.000
PETK 50.97 222.66 4:57: 31.90 -2.729 533.98 4.4 0.0 -0.800 0.003 3.0 0 -99.000
MKAR 52.45 121.52 4:57: 46.41 2.749 549.11 7.3 0.0 0.000 0.004 8.8 0 -99.000
ILAR 80.78 271.79 5: 0: 48.34 2.989 730.56 4.6 0.0 -0.878 0.006 3.0 0 -99.000
ARCES 84.96 77.49 5: 1: 2.84 -2.822 745.31 9.7 0.0 -1.415 0.004 3.0 0 -99.000
FINES 86.50 77.41 5: 1: 12.07 -0.749 754.46 7.2 0.0 -0.810 0.003 3.0 0 -99.000

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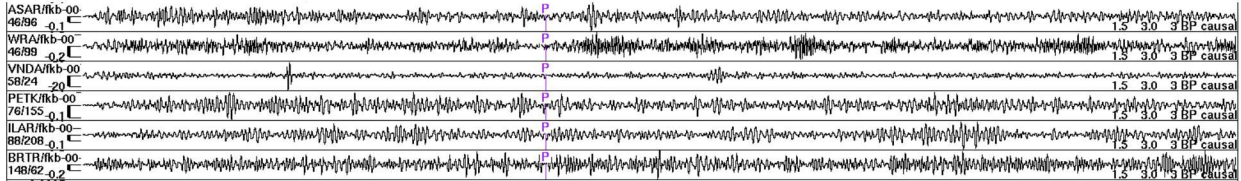
False event. Can't confirm signals:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 48 12042401 4:49: 12.25 2.20 -20.180 -176.310 0.0 4.07 0.36 7 NEW 0 0.000 -
 1.000 0 13 26.0 35.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	46.47	255.49	4:57: 38.50	1.052	505.99	4.5	0.0	3.593	0.060	9.5	0 -99.000
WRA	46.49	260.63	4:57: 39.81	0.971	506.49	4.9	0.0	4.013	0.080	9.8	0 -99.000
VNDA	59.14	185.45	4:59: 10.78	0.259	597.47	5.7	5.3	3.883	0.320	3.0	0 -99.000
PETK	75.70	344.08	5: 1: 4.16	-0.043	711.37	4.5	0.0	3.863	0.160	3.0	0 -99.000
ILAR	86.89	12.11	5: 2: 6.12	3.120	772.89	4.6	0.0	3.933	0.090	4.1	0 -99.000
KURK	114.44	317.56	5: 7: 55.49	-0.733	1122.59	4.2	0.0	4.703	0.150	3.0	0 -99.000
BRTR	147.37	314.73	5: 8: 53.50	-4.627	1180.59	4.5	0.0	4.513	0.090	3.3	0 -99.000

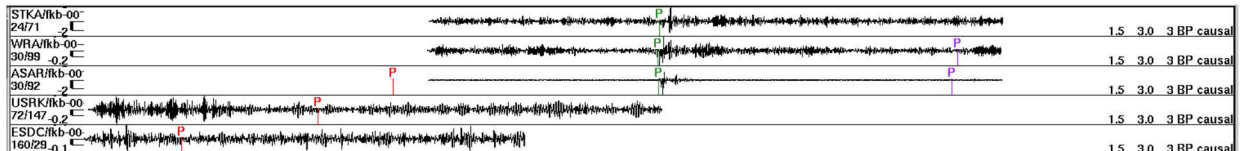
False event. Can't confirm detections. The pulse 5 seconds after ASAR will FK consistent with the event, none of the other arrivals present.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 49 8734826 4:49: 16.20 2.14 -20.350 180.020 589.2 3.63 0.76 6 NEW 0 0.000 -
 1.000 0 12 25.0 34.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
STKA	35.79	245.74	4:55: 31.93	2.156	376.57	5.0	3.9	3.146	0.270	6.3	0 -99.000
WRA	42.93	264.01	4:56: 19.39	-3.145	423.37	7.5	0.0	2.616	0.070	9.7	0 -99.000
ASAR	42.73	258.53	4:56: 20.71	-1.653	424.99	18.0	0.0	2.946	0.350	9.5	0 -99.000
USRK	79.41	326.82	5: 0: 14.06	-0.144	658.22	5.2	0.0	4.186	0.100	3.0	0 -99.000
KURK	114.15	316.91	5: 6: 44.30	-0.396	1048.27	5.0	0.0	4.146	0.160	3.0	0 -99.000
ESDC	162.03	10.97	5: 8: 11.31	3.183	1135.17	6.4	0.0	4.726	0.140	3.0	0 -99.000

Partial event. STKA,ASAR,WRA locate to 21S x 165E as a 3 station event. Other detections can't be confirmed.

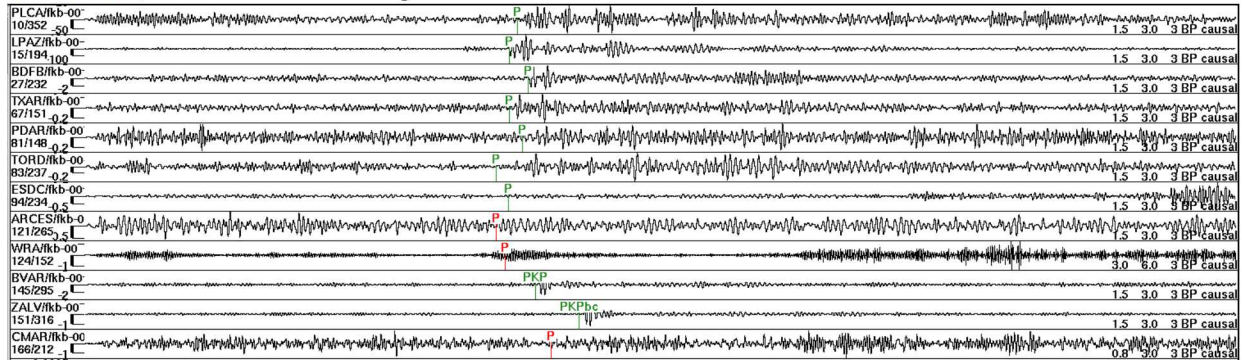


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 50 12433528 5: 0: 7.47 2.25 -30.010 -71.700 0.0 4.44 0.73 12 SEL 17815689 -0.179
 0.706 9 8 23.0 55.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
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LPAZ	15.28	10.61	5: 3:	27.86	-2.672	199.53	6.9	4.6	3.861	0.340	8.5	1	8.571
BDFB	26.21	58.51	5: 5:	47.61	3.932	339.44	8.1	2.8	3.961	0.360	5.2	1	2.636
TXAR	67.92	329.45	5:10:	58.74	2.806	651.40	7.7	4.7	3.871	0.270	5.9	1	-0.425
PDAR	81.85	332.39	5:12:	20.48	1.724	732.50	4.6	3.5	4.331	0.240	4.0	1	1.997
TORD	82.52	69.74	5:12:	33.66	1.504	746.35	4.5	2.9	5.701	0.080	7.7	1	2.537
ESDC	94.16	45.45	5:13:	22.44	-3.636	794.65	4.4	4.3	5.171	0.080	3.0	0	-99.000
ARCES	121.31	24.14	5:18:	57.30	-1.432	1129.58	4.7	5.8	5.401	0.110	3.0	0	-99.000
WRA	123.44	208.88	5:19:	5.21	-2.103	1137.80	4.6	4.1	4.711	0.050	4.9	1	1.124
BVAR	144.78	40.79	5:19:	44.77	-0.847	1176.63	6.1	7.7	3.261	0.200	3.0	1	1.255
ZALV	151.57	30.54	5:19:	53.99	-0.904	1186.03	15.4	21.1	3.861	0.540	4.3	1	8.423
KURK	150.38	40.76	5:19:	57.95	-0.249	1190.53	16.6	14.2	3.971	0.390	3.0	1	2.000
CMAR	164.24	142.51	5:20:	17.72	1.876	1210.55	4.7	4.4	5.121	0.090	3.0	0	-99.000

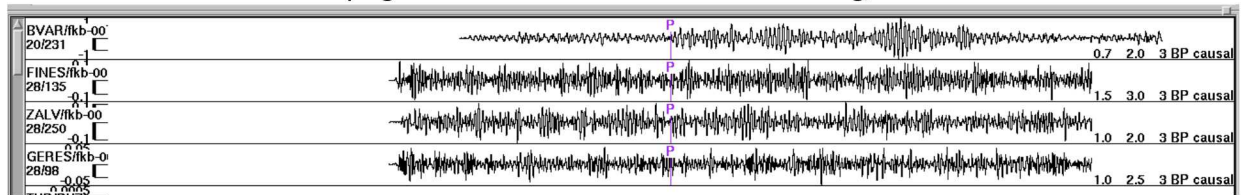
Good event, couldn't confirm all signals. Added a PLCA.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
51	8360730	5: 1:	18.66	0.89	37.170	50.340	0.0	2.74	0.40	4	NEW	0	0.000
1.000	0	29	23.2	24.6									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
BVAR	21.18	231.11	5: 6:	3.43	-1.034	285.15	4.1	0.0	-2.445	0.015	6.7	0 -99.000
FINES	28.15	137.54	5: 7:	17.26	0.955	358.45	5.5	0.0	-1.499	0.005	8.1	0 -99.000
GERES	28.33	100.06	5: 7:	18.57	-0.725	360.05	5.3	0.0	-1.604	0.006	4.2	0 -99.000
ZALV	29.15	250.02	5: 7:	21.21	0.805	361.78	4.6	0.0	-1.493	0.013	5.6	0 -99.000

False event. Can't confirm any signal other than BVAR – which FK like an Lg;

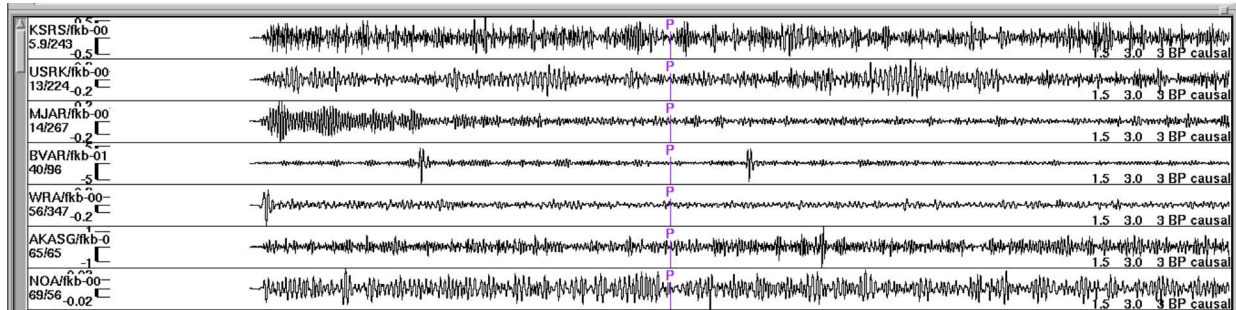


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
52	8883787	5: 4:	0.82	3.13	34.170	121.810	0.0	3.89	0.50	8	NEW	0	0.000
1.000	0	41	20.0	32.7									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KSRS	8.07	54.41	5: 5:	33.11	3.743	92.41	5.7	0.0	3.765	0.050	4.9	0 -99.000
USRK	14.75	37.17	5: 7:	4.07	-2.863	182.63	4.8	0.0	3.875	0.140	3.0	0 -99.000
MJAR	15.69	71.88	5: 7:	21.21	0.530	199.73	5.4	0.0	3.015	0.100	3.7	0 -99.000
BVAR	40.24	314.89	5:11:	44.88	1.930	464.48	4.9	0.0	3.345	0.170	3.0	0 -99.000
WRA	54.49	162.95	5:13:	34.31	-0.392	573.91	4.4	0.0	4.425	0.050	8.6	0 -99.000
AKASG	65.51	315.67	5:14:	42.86	-4.100	642.53	4.5	0.0	4.295	0.050	3.0	0 -99.000

NOA	69.86	330.54	5:15: 15.82	4.732	675.46	4.5	0.0	4.555	0.090	3.4	0 -99.000
NVAR	90.85	41.74	5:16: 56.02	-3.579	774.83	5.1	0.0	3.885	0.280	3.0	0 -99.000

False event: Can't confirm signals

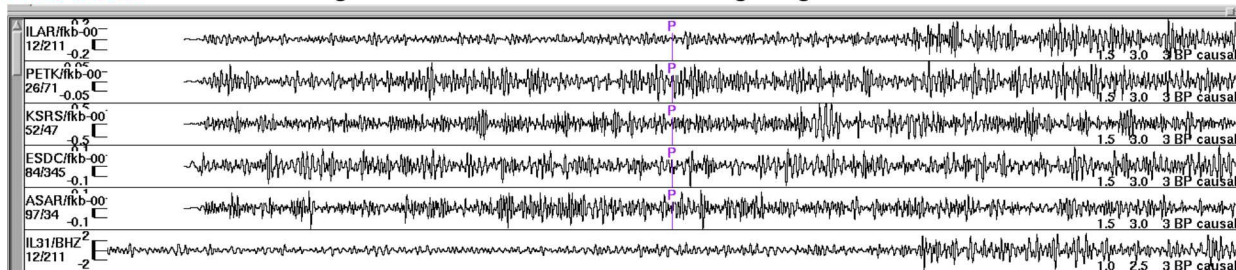


num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
53	7570708	5:9:	59.41	2.99	54.760	-157.100	44.4	4.07	0.66	5	NEW	0 0.000 -

1.000 0 33 23.0 23.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	11.82	29.62	5:12: 37.62	1.609	158.53	4.5	0.0	3.200	0.140	8.7	0 -99.000
PETK	24.30	282.65	5:15: 35.60	-4.226	335.81	4.7	0.0	3.410	0.130	3.6	0 -99.000
NVAR	32.79	102.84	5:16: 5.92	-2.707	367.13	4.6	0.0	3.610	0.180	5.4	0 -99.000
KRSR	50.20	280.63	5:19: 10.49	4.173	550.68	6.6	0.0	4.310	0.080	3.0	0 -99.000
ESDC	83.47	17.98	5:22: 19.01	-1.472	740.26	4.6	0.0	4.010	0.060	3.0	0 -99.000
ASAR	96.24	237.10	5:23: 31.52	3.750	812.43	4.8	0.0	4.950	0.030	3.2	0 -99.000

False event. Can't confirm signals. ILAR has a local event coming in right after this P

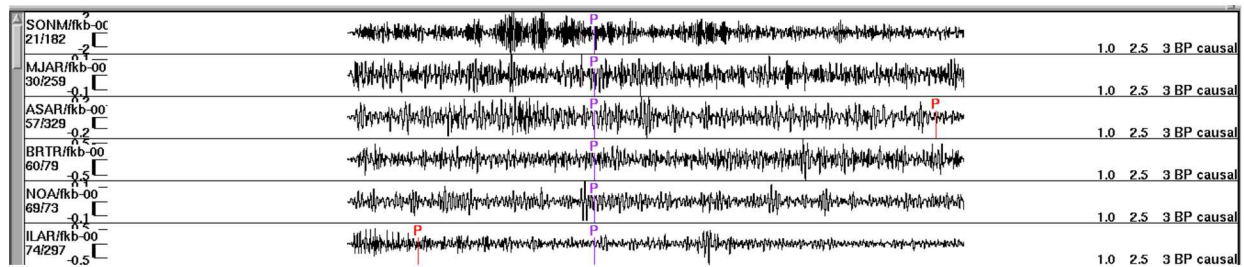


num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
54	16711754	5:10:	57.42	2.91	26.310	105.530	0.0	4.23	0.50	6	NEW	0 0.000 -

1.000 0 26 25.0 27.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
SONM	19.63	2.95	5:15: 48.78	-1.400	291.00	4.5	0.0	3.312	0.130	6.5	0 -99.000
MJAR	29.23	64.97	5:17: 9.20	4.480	370.93	4.6	0.0	4.532	0.120	3.0	0 -99.000
ASAR	58.65	148.65	5:20: 41.46	-1.736	584.11	4.8	0.0	4.182	0.040	8.0	0 -99.000
BRTR	58.82	301.38	5:21: 11.78	2.810	613.56	4.7	0.0	4.292	0.250	3.0	0 -99.000
NOA	67.49	328.28	5:22: 7.15	0.070	669.06	4.8	0.0	4.972	0.190	3.8	0 -99.000
ILAR	72.14	25.33	5:22: 26.92	-4.224	689.41	4.5	0.0	4.112	0.060	3.0	0 -99.000

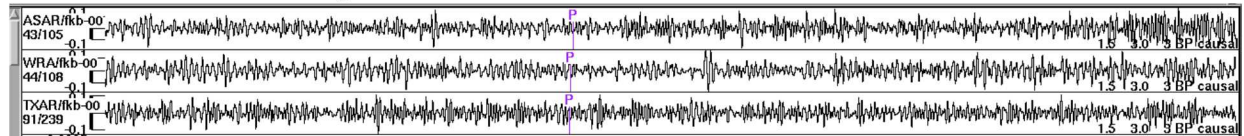
False event:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 55 5557389 5:14: 27.04 0.17 -26.970 -178.180 254.0 3.73 0.24 4 NEW 0 0.000 -
 1.000 0 12 25.4 26.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	43.10	103.28	5:22: 4.51	-0.216	457.19	5.3	0.0	-1.655	0.002	9.5	0 -99.000
WRA	43.68	107.02	5:22: 9.79	0.240	462.09	8.1	0.0	-1.525	0.002	9.8	0 -99.000
NVAR	85.28	231.60	5:26: 40.05	-0.070	732.74	5.0	0.0	-1.045	0.002	3.7	0 -99.000
TXAR	90.35	240.32	5:27: 1.14	0.046	754.29	4.4	0.0	-1.265	0.002	3.3	0 -99.000

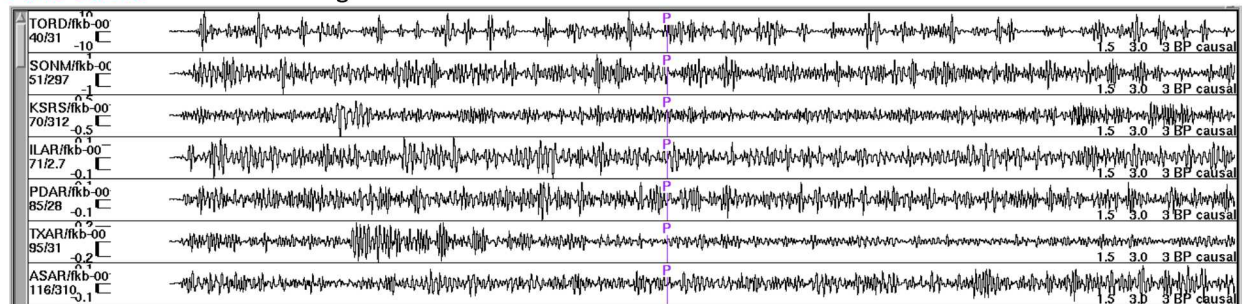
False event: Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 56 10183217 5:16: 0.64 3.18 44.970 29.490 136.3 4.02 0.42 7 NEW 0 0.000 -
 1.000 0 30 23.0 23.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TORD	38.53	220.75	5:23: 18.34	0.608	437.93	4.5	0.0	4.935	0.150	5.3	0 -99.000
SONM	52.53	56.72	5:24: 46.67	-2.782	526.02	4.5	0.0	3.555	0.260	3.0	0 -99.000
CMAR	64.93	88.84	5:26: 12.36	3.032	611.60	5.2	0.0	3.745	0.080	3.0	0 -99.000
ILAR	69.83	356.93	5:26: 57.19	-2.983	656.35	4.5	0.0	4.075	0.150	3.0	0 -99.000
KSRS	71.35	55.40	5:26: 59.82	3.125	659.31	4.9	0.0	3.735	0.160	3.0	0 -99.000
PDAR	83.65	328.98	5:28: 26.84	3.632	745.81	4.7	0.0	4.045	0.250	3.0	0 -99.000
ASAR	118.57	95.45	5:34: 24.11	-4.632	1102.81	4.4	0.0	4.035	0.030	3.0	0 -99.000

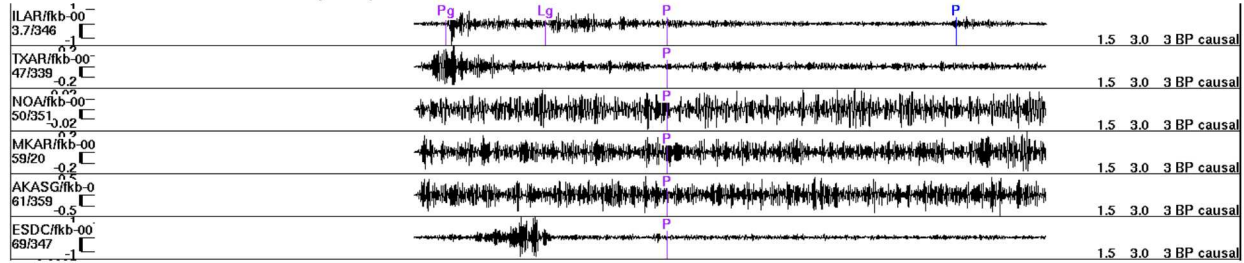
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
57 6825955 5:20: 48.05 2.82 68.300 -149.340 0.0 3.44 0.71 6 NEW 0 0.000 -
1.000 0 42 26.0 30.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	4.55	182.53	5:21: 43.42	-2.450	54.84	4.5	0.0	2.037	0.050	9.2	0 -99.000
TXAR	46.88	125.70	5:29: 24.84	3.031	516.32	5.0	0.0	3.317	0.220	5.8	0 -99.000
NOA	48.98	14.21	5:29: 40.66	-4.485	533.24	4.5	0.0	3.327	0.130	3.0	0 -99.000
MKAR	58.81	322.88	5:30: 49.22	1.871	601.67	4.5	0.0	3.737	0.110	6.3	0 -99.000
AKASG	60.28	3.19	5:31: 3.72	-0.831	615.24	5.0	0.0	3.917	0.090	3.5	0 -99.000
ESDC	67.88	30.51	5:32: 0.41	2.865	672.29	4.6	0.0	4.297	0.060	3.0	0 -99.000

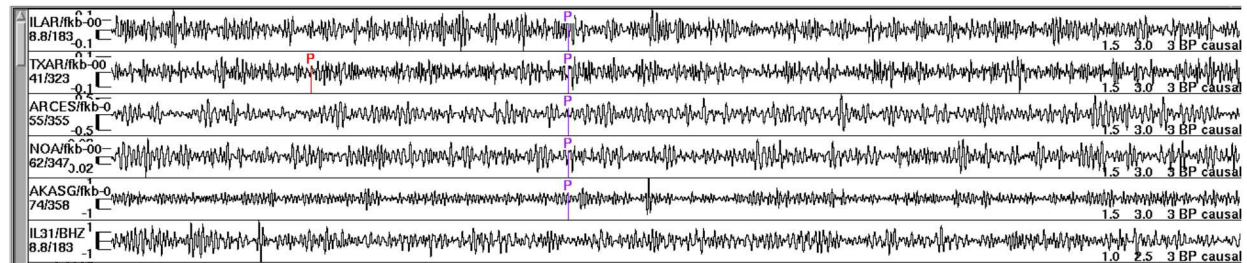
False event. ILAR has local just prior to this event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
58 15405815 5:31: 59.09 2.15 56.040 -147.780 0.0 3.72 0.83 6 NEW 0 0.000 -
1.000 0 133.4 34.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	8.35	188.48	5:34: 5.65	1.166	126.57	4.3	0.0	-2.947	0.003	10.0	0 -99.000
NVAR	27.24	321.69	5:37: 41.87	2.654	342.77	10.8	0.0	-0.731	0.002	5.2	0 -99.000
TXAR	41.82	323.69	5:39: 43.15	-2.493	463.72	6.6	0.0	-0.984	0.003	7.5	0 -99.000
ARCES	54.18	356.32	5:41: 25.99	-2.501	566.62	6.7	0.0	-1.474	0.003	4.2	0 -99.000
NOA	61.76	347.77	5:42: 20.04	-1.164	620.35	6.4	0.0	-1.250	0.003	4.0	0 -99.000
AKASG	73.13	359.03	5:43: 36.50	2.339	696.47	6.1	0.0	-0.303	0.005	3.4	0 -99.000

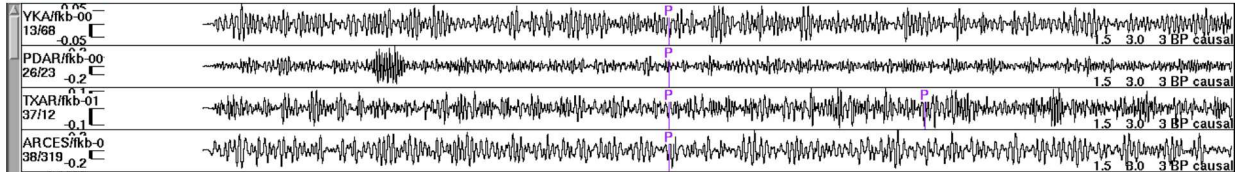
False event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
59 13373878 5:32: 4.37 1.47 64.520 -86.190 0.0 2.76 0.39 4 NEW 0 0.000 -
1.000 0 42 23.1 25.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
YKA	12.52	70.61	5:35:	3.66	-0.323	179.55	5.2	0.0	-0.740	0.009	8.9 0 -99.000
PDAR	24.97	23.67	5:37:	35.27	2.138	331.55	8.5	0.0	-0.134	0.003	7.2 0 -99.000
TXAR	36.34	12.37	5:39:	10.20	-1.976	426.18	5.0	0.0	-0.890	0.007	5.7 0 -99.000
ARCES	38.58	319.29	5:39:	24.70	0.161	441.10	4.5	0.0	-1.208	0.013	3.9 0 -99.000

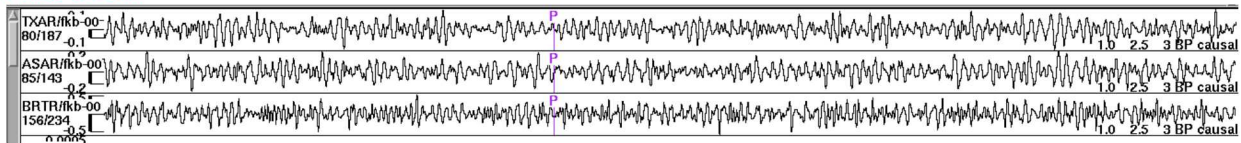
False event



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
60 10114292 5:34: 51.80 1.94 -50.100 -115.020 0.0 3.70 0.23 4 NEW 0 0.000 -
1.000 0 43 16.2 18.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	5:46:	58.21	-2.706	726.93	6.2	0.0	-0.586	0.003	5.1 0 -99.000
ASAR	85.24	143.18	5:47:	25.90	-0.492	754.30	5.8	0.0	-1.034	0.002	5.0 0 -99.000
NVAR	88.19	177.23	5:47:	46.99	2.702	775.30	6.3	0.0	-1.026	0.011	4.7 0 -99.000
BRTR	155.04	234.82	5:55:	13.92	0.497	1221.90	5.4	0.0	-0.568	0.003	3.6 0 -99.000

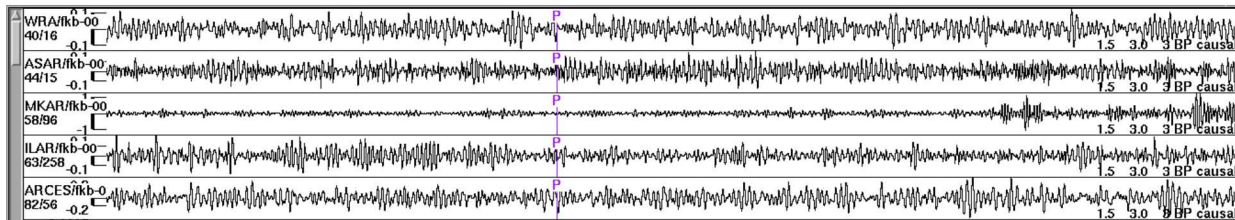
False event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
61 5028729 5:42: 49.04 1.09 19.360 145.190 418.0 2.56 0.24 6 NEW 0 0.000 -
1.000 0 18 24.6 38.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	39.59	16.32	5:49:	49.60	-0.498	420.46	6.4	0.0	-1.274	0.002	9.4 0 -99.000
ASAR	43.26	15.76	5:50:	19.92	0.303	450.03	10.1	0.0	-1.278	0.004	7.7 0 -99.000
MKAR	58.32	96.63	5:51:	58.80	-0.384	549.36	4.8	0.0	-1.522	0.003	7.5 0 -99.000
ILAR	64.10	257.93	5:52:	33.08	-1.881	583.18	6.7	0.0	-1.282	0.010	5.7 0 -99.000
ARCES	82.61	56.26	5:54:	23.82	1.279	694.25	4.7	0.0	-1.941	0.002	3.5 0 -99.000
NVAR	83.68	288.36	5:54:	33.05	1.182	703.25	7.1	0.0	-1.321	0.013	4.5 0 -99.000

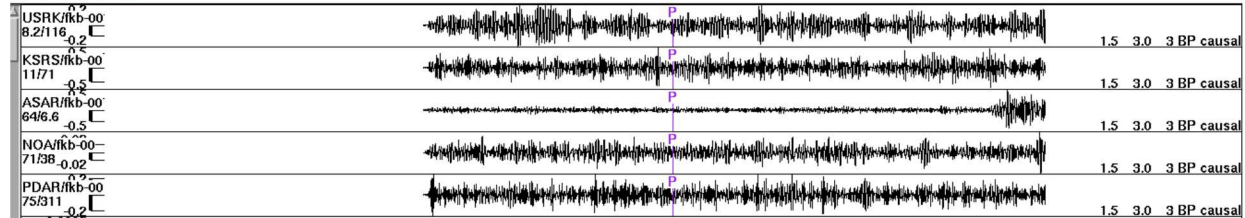
False event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
62 8693003 5:44: 29.24 2.03 40.210 141.620 0.0 3.76 0.27 5 NEW 0 0.000 -
1.000 0 19 26.4 27.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
USRK	8.79	116.92	5:46: 30.53	-2.682	121.95	4.1	0.0	-1.546	0.005	8.0	0 -99.000
KSRS	11.41	73.99	5:47: 15.35	2.253	167.23	5.2	0.0	-1.337	0.001	3.8	0 -99.000
ASAR	63.55	7.11	5:55: 0.73	-2.139	632.43	7.1	0.0	-0.751	0.005	6.6	0 -99.000
NOA	71.92	37.78	5:55: 50.83	1.788	682.50	4.6	0.0	-1.395	0.002	4.7	0 -99.000
PDAR	75.36	310.83	5:56: 14.56	0.780	706.28	4.8	0.0	-1.174	0.009	4.3	0 -99.000

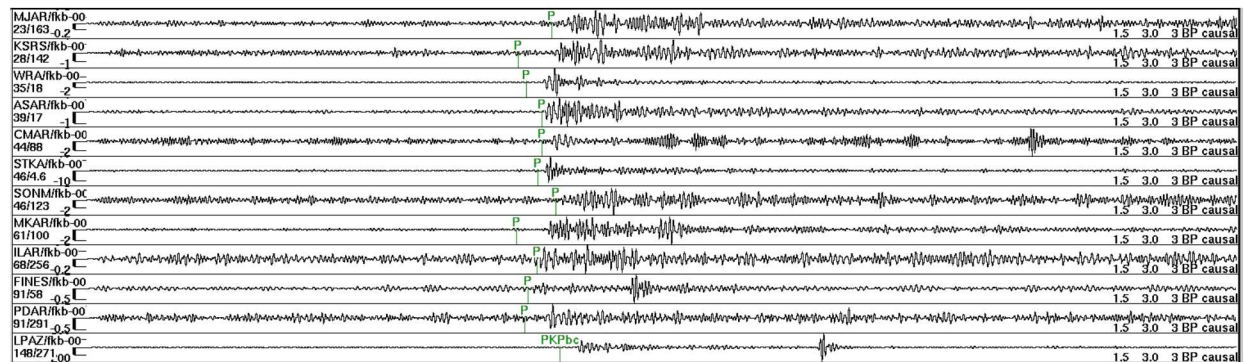
False event



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
63 6492361 5:54: 30.41 2.38 14.120 145.100 141.0 3.83 0.29 13 SEL 17815694 -6.257
0.245 13 18 24.0 63.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	23.20	346.18	5:59: 25.72	3.225	295.63	4.9	8.6	3.090	0.120	4.3	1 0.369
KSRS	27.84	329.98	6: 0: 3.96	-2.400	334.00	8.2	7.4	3.940	0.150	3.4	1 3.610
WRA	35.33	197.44	6: 1: 12.51	-0.131	402.38	18.7	22.6	3.750	0.240	9.4	1 1.444
ASAR	38.99	196.22	6: 1: 42.83	-0.326	433.06	14.4	22.4	3.750	0.260	7.7	1 1.364
CMAR	44.31	282.12	6: 2: 22.38	-2.409	472.85	17.7	13.2	4.350	0.310	3.5	1 4.748
STKA	45.75	183.99	6: 2: 39.52	2.275	489.45	6.4	4.7	4.110	0.350	3.0	1 -0.007
SONM	46.43	324.57	6: 2: 46.11	1.960	495.86	4.2	4.1	3.810	0.190	5.0	1 -1.659
MKAR	61.24	315.87	6: 4: 28.95	-2.988	598.58	7.0	12.3	3.950	0.160	7.5	1 2.796
ILAR	68.14	25.38	6: 5: 12.45	1.507	642.56	8.6	9.5	3.520	0.120	6.0	1 1.650
NVAR	86.58	51.38	6: 6: 59.24	0.918	748.75	9.8	10.9	3.760	0.190	4.7	1 1.398
PDAR	91.60	45.23	6: 7: 21.65	1.291	772.06	6.4	4.7	3.860	0.230	3.0	1 1.034
VNDA	91.89	176.37	6: 7: 24.29	2.036	774.48	6.1	4.0	3.850	0.290	3.0	1 -0.496
LPZ	148.00	98.33	6:13: 53.20	-4.958	1163.03	5.3	3.2	4.020	0.240	3.0	1 9.793

Good event.

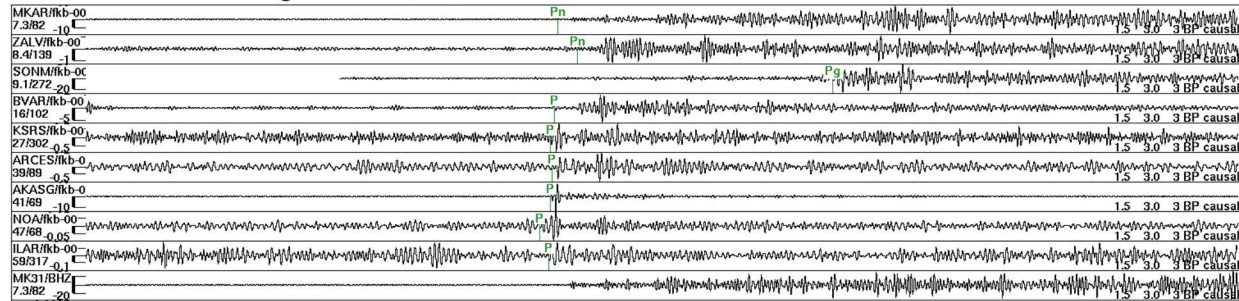


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
64 9749416 6:20: 18.16 3.35 51.170 91.630 27.0 3.91 0.57 10 SEL 17810240 18.425
3.976 3 28 26.0 47.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ZALV	5.40	302.89	6:21: 33.31	2.521	75.17	5.0	0.0	2.777	0.090	8.7	0 -99.000
MKAR	8.06	240.27	6:22: 4.95	-1.700	107.07	4.6	0.0	3.777	0.130	9.6	0 -99.000
KURK	8.85	271.29	6:22: 18.13	3.189	121.02	5.8	0.0	3.407	0.040	8.0	1 6.089
KSRS	28.52	105.11	6:26: 15.44	-0.044	357.64	4.5	0.0	3.997	0.080	3.0	0 -99.000
AKASG	38.73	294.80	6:27: 37.18	2.107	439.45	5.3	0.0	4.437	0.110	3.0	1 5.350
PETK	38.78	60.90	6:27: 39.81	-4.423	441.97	4.6	0.0	4.087	0.100	3.0	0 -99.000
BRTR	41.77	277.74	6:28: 4.86	3.130	466.55	7.2	0.0	3.607	0.090	3.0	0 -99.000
NOA	43.45	315.61	6:28: 10.14	-4.883	472.64	4.5	0.0	4.567	0.260	3.0	0 -99.000
ILAR	55.55	26.57	6:29: 55.61	4.261	578.50	5.5	0.0	3.627	0.120	3.0	1 3.399
PDAR	84.40	16.13	6:32: 43.04	-4.158	745.14	4.8	0.0	4.787	0.060	3.0	0 -99.000

Good **partial** event. BRTR,PETK, PDAR couldn't be confirmed. Added ARCES and SONM.

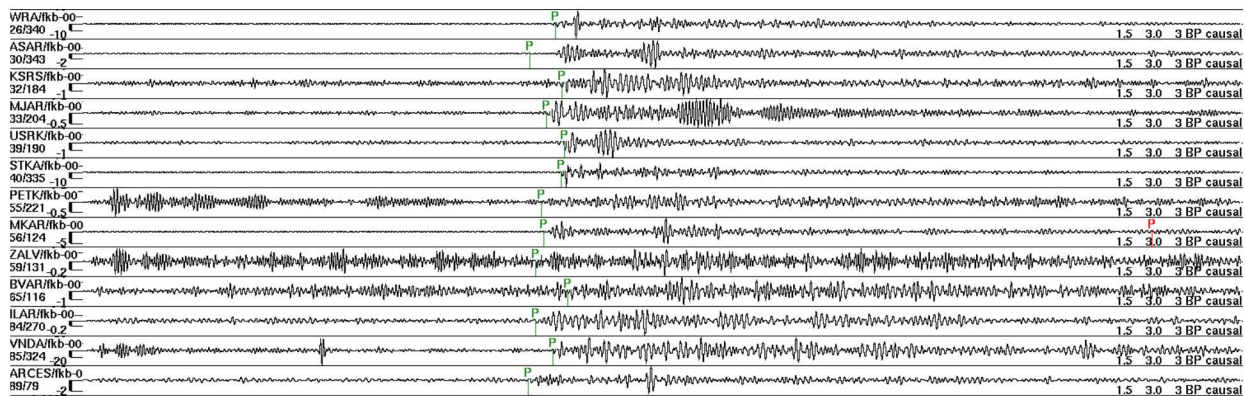
ISC has the event in Mongolia 2019/09/01 06:19:59.28 47.2910N 92.9669E



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
65 8526738 6:23: 53.06 3.02 4.740 125.250 79.3 4.05 0.40 17 SEL 17810054 0.775
0.497 15 23 27.0 70.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	24.76	160.29	6:29: 16.05	-4.107	322.60	22.8	52.5	4.078	0.130	9.8	1 7.375
ASAR	28.13	163.89	6:29: 51.65	4.655	358.50	12.4	32.8	4.278	0.170	9.5	1 2.200
KSRS	33.87	3.11	6:30: 15.38	-2.839	382.30	7.6	7.9	3.768	0.140	3.0	1 -1.851
MJAR	34.87	17.82	6:30: 23.29	-3.370	389.90	6.9	13.1	3.618	0.290	3.0	1 0.062
USRK	40.94	6.90	6:31: 16.03	-1.964	443.32	7.7	14.1	4.138	0.380	3.0	1 -1.200
PETK	56.06	22.65	6:33: 22.59	1.661	569.62	6.0	5.2	4.278	0.160	3.0	1 -8.687
MKAR	57.19	325.82	6:33: 26.54	3.592	573.30	6.5	18.3	4.028	0.220	8.8	1 -4.751
ZALV	60.36	333.57	6:33: 42.36	-1.845	588.67	4.5	5.3	4.528	0.160	3.0	1 1.074
KURK	61.41	327.86	6:33: 47.64	-2.937	594.92	7.3	4.5	4.288	0.120	3.0	1 2.449
BVAR	66.98	327.34	6:34: 31.14	2.250	638.07	6.8	4.8	3.508	0.270	3.0	1 -3.225
ILAR	85.78	25.42	6:36: 21.88	4.975	749.35	9.1	15.6	4.558	0.100	3.0	1 -6.300
BRTR	89.40	309.58	6:36: 33.75	-0.934	760.90	5.1	3.2	4.258	0.190	3.0	1 2.336
FINES	91.58	331.71	6:36: 40.34	-3.246	767.52	4.2	2.9	4.108	0.150	3.0	1 2.549
ARCES	90.34	339.75	6:36: 40.34	4.059	767.80	5.0	4.2	3.028	0.100	3.0	1 -4.471
NOA	98.56	333.39	6:37: 17.26	2.002	804.37	4.7	3.9	3.718	0.150	3.0	0 -99.000
ESDC	116.97	318.20	6:42: 25.75	-1.807	1112.57	4.2	10.8	4.598	0.030	3.0	0 -99.000
TXAR	122.57	51.84	6:42: 38.94	-0.145	1126.00	7.0	9.1	3.988	0.330	3.0	1 1.425

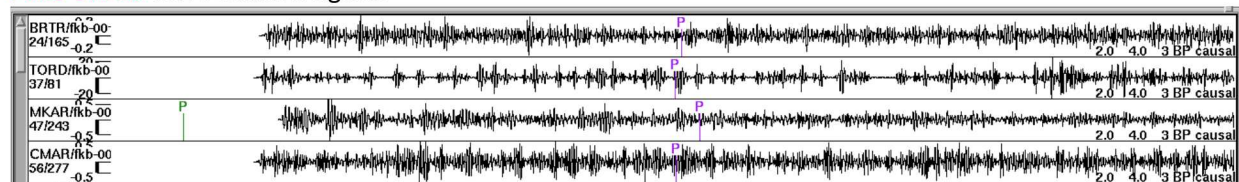
Good event, FINES,NOA,ESDC,TXAR arrivals couldn't be confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 66 12938188 6:26: 8.85 1.46 16.000 39.910 48.7 3.92 0.49 4 NEW 0 0.000 -
 1.000 0 37 22.0 27.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
BRTR	22.84	346.71	6:31: 22.62	-1.250	312.97	4.7	0.0	3.193	0.230	6.5	0	-99.000
TORD	37.42	268.82	6:33: 14.68	0.380	425.89	4.9	0.0	4.573	0.220	6.6	0	-99.000
MKAR	45.19	40.40	6:34: 35.10	2.230	505.39	5.8	0.0	3.843	0.120	8.9	0	-99.000
CMAR	55.58	79.36	6:35: 44.97	-1.361	575.37	4.7	0.0	4.053	0.140	5.3	0	-99.000

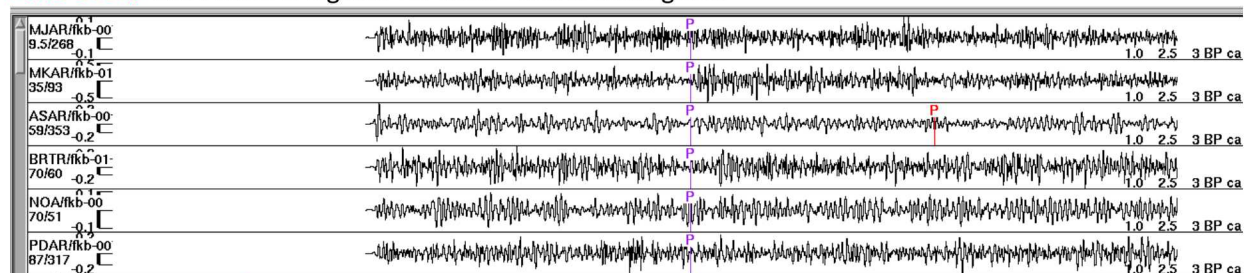
False event: can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 67 13583064 6:31: 21.30 1.93 35.610 126.630 0.0 3.97 0.45 6 NEW 0 0.000 -
 1.000 0 20 23.0 32.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	7.38	81.65	6:33: 38.41	-0.583	138.05	4.6	0.0	3.316	0.120	7.5	0	-99.000
MKAR	36.40	302.32	6:38: 13.95	0.812	412.69	4.8	0.0	4.376	0.070	7.7	0	-99.000
ASAR	59.30	174.96	6:41: 23.79	-0.556	602.94	5.0	0.0	3.856	0.080	7.0	0	-99.000
NOA	71.15	332.98	6:42: 32.34	-2.895	671.77	4.6	0.0	4.686	0.090	3.8	0	-99.000
BRTR	71.93	306.15	6:42: 36.30	-0.331	675.24	4.7	0.0	3.676	0.290	3.0	0	-99.000
PDAR	85.23	39.17	6:44: 7.27	3.552	765.79	4.8	0.0	3.936	0.250	3.0	0	-99.000

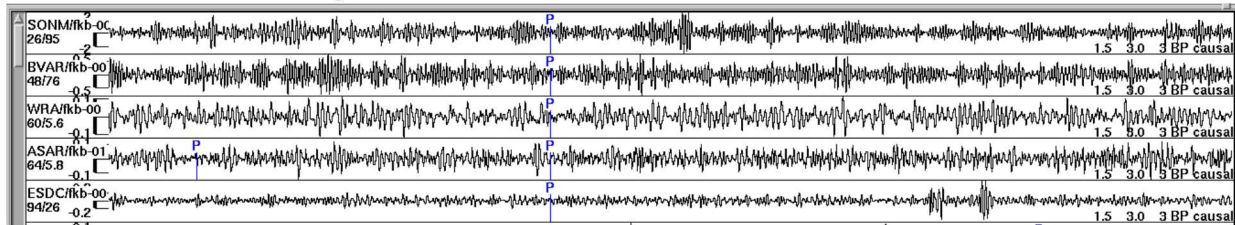
False event can't confirm signals No KSRS – MKAR looks good.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 68 10253825 6:31: 59.53 1.42 39.750 139.490 204.5 3.88 0.61 5 NEW 0 0.000 -
 1.000 0 19 23.0 26.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
SONM	24.08	295.99	6:37: 4.07	0.926	305.68	4.6	0.0	4.080	0.150	5.5	0 -99.000
BVAR	46.34	308.79	6:40: 12.60	-1.847	493.51	5.4	0.0	2.570	0.080	3.0	0 -99.000
WRA	61.51	185.38	6:41: 38.29	-1.777	579.51	4.4	0.0	4.180	0.100	8.3	0 -99.000
ASAR	65.23	185.52	6:42: 8.61	1.820	609.96	4.5	0.0	3.860	0.070	6.7	0 -99.000
ESDC	92.42	332.53	6:44: 53.41	-0.263	774.21	5.5	0.0	4.420	0.130	3.0	0 -99.000

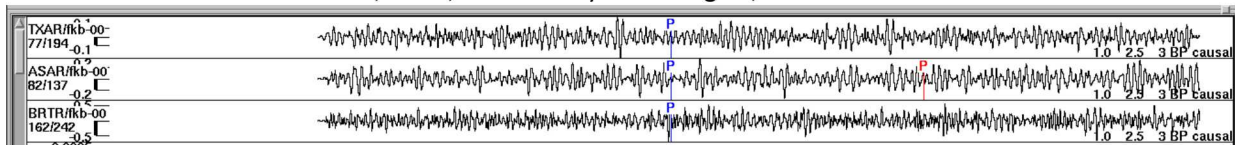
False Event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 69 10114292 6:34: 52.24 1.94 -50.100 -115.020 0.0 3.68 0.23 4 NEW 0 0.000 -
 1.000 0 43 16.2 18.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	6:46: 58.65	-2.706	726.93	5.9	0.0	-0.612	0.002	5.1	0 -99.000
ASAR	85.24	143.18	6:47: 26.34	-0.492	754.30	5.7	0.0	-1.051	0.001	5.0	0 -99.000
NVAR	88.19	177.23	6:47: 47.43	2.702	775.30	6.1	0.0	-1.043	0.010	4.7	0 -99.000
BRTR	155.04	234.82	6:55: 13.04	0.497	1221.90	5.2	0.0	-0.572	0.002	3.6	0 -99.000

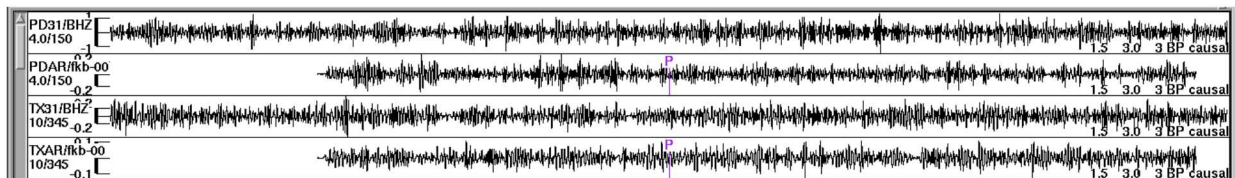
False event. Can't confirm TXAR, ASAR, -- BRTR may have a signal, but not related to this event location.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 70 1837083 6:36: 17.93 0.08 39.230 -106.960 0.0 1.72 0.92 3 NEW 0 0.000 -
 1.000 0 34 21.9 21.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	4.08	153.41	6:37: 34.39	0.113	75.94	7.4	0.0	-1.827	0.008	9.0	0 -99.000
NVAR	8.69	82.19	6:38: 29.77	-0.054	131.79	4.0	0.0	-0.625	0.004	6.6	0 -99.000
TXAR	10.16	344.17	6:38: 48.22	-0.059	150.06	4.5	0.0	-2.876	0.003	6.3	0 -99.000

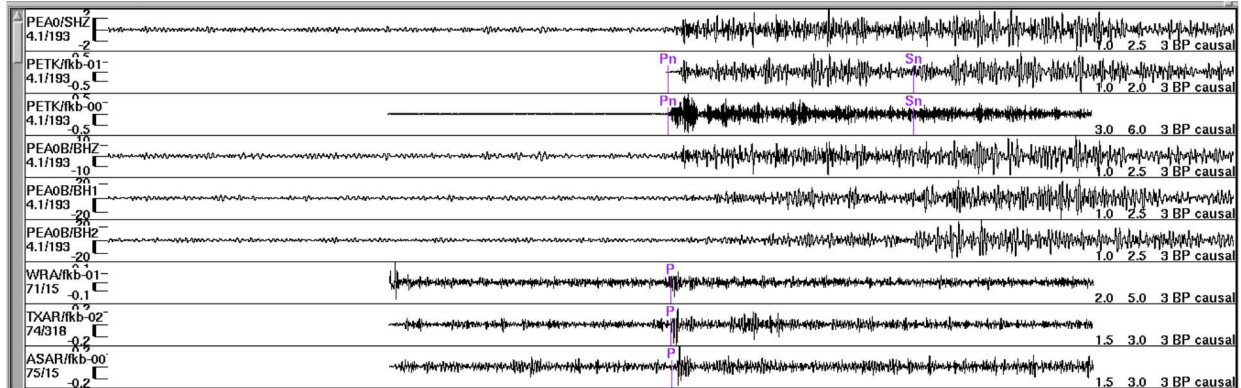
False event. No signals, nothing present on ANMO either.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
71 9137431 6:39: 51.50 3.63 53.740 142.660 0.0 4.00 0.26 6 SEL 17813520 -63.482
4.950 1 41 20.0 30.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PETK	8.97	86.28	6:42: 7.29	4.494	136.36	5.6	0.0	3.755	0.070	4.0	1 -1.938
KSRS	19.05	218.71	6:44: 13.86	-2.910	262.91	4.7	0.0	3.945	0.050	3.7	0 -99.000
ILAR	35.87	43.54	6:46: 49.42	-2.084	418.26	4.3	0.0	3.705	0.060	6.2	0 -99.000
MKAR	38.28	285.24	6:47: 17.11	4.981	445.56	4.3	0.0	3.955	0.100	8.0	0 -99.000
CMAR	48.56	241.22	6:48: 36.21	0.128	525.46	4.8	0.0	4.475	0.080	3.0	0 -99.000
NOA	59.52	334.99	6:49: 48.72	-4.610	597.91	4.8	0.0	4.175	0.110	5.6	0 -99.000

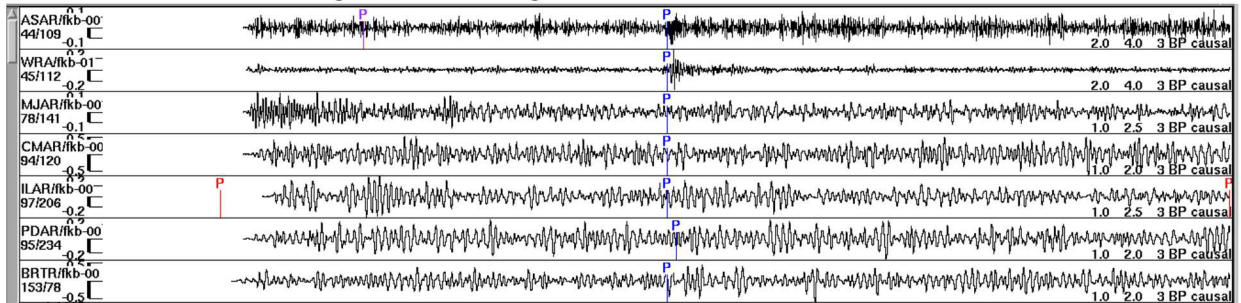
Good event, but not all arrivals are valid. Added others



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
72 10868005 6:40: 49.51 2.40 -30.100 -178.110 375.1 4.11 0.53 8 NEW 0 0.000
-1.000 0 12 25.0 38.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	42.42	264.21	6:48: 9.84	-3.258	440.07	5.3	0.0	3.578	0.070	9.5	0 -99.000
WRA	43.14	269.60	6:48: 21.71	1.474	452.07	4.2	0.0	3.858	0.040	9.8	0 -99.000
MJAR	75.29	325.60	6:52: 7.15	1.820	678.32	4.3	0.0	3.638	0.140	3.0	0 -99.000
CMAR	91.56	289.89	6:53: 23.61	1.963	753.97	5.2	0.0	4.378	0.110	3.0	0 -99.000
PDAR	94.65	43.78	6:53: 34.16	1.901	764.87	4.3	0.0	4.848	0.080	3.0	0 -99.000
ILAR	95.29	13.24	6:53: 38.12	-3.098	768.62	5.2	0.0	4.148	0.150	3.9	0 -99.000
ZALV	115.23	319.48	6:58: 46.61	-2.907	1076.82	5.0	0.0	4.928	0.080	3.0	0 -99.000
BRTR	150.32	302.74	7: 0: 3.08	2.105	1153.57	4.8	0.0	3.498	0.240	3.3	0 -99.000

False event. ASAR/WRA are good, No other signals can be confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
73 11273313 6:41: 48.84 3.42 53.470 148.990 560.0 2.89 0.70 8 SEL 17813520 54.601
1.641 4 41 20.0 47.4

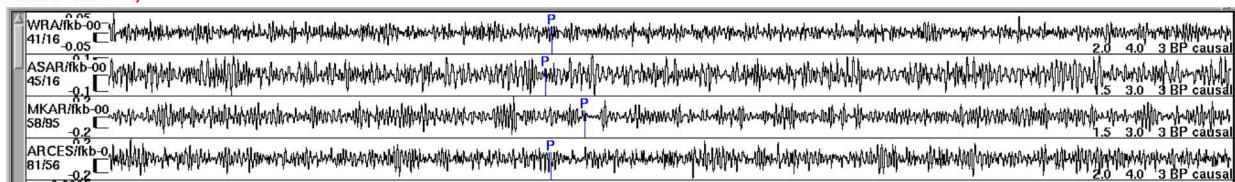
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	18.44	216.65	6:45: 26.37	-4.491	217.03	4.5	0.0	2.496	0.060	5.6	0	-99.000
ILAR	32.93	43.75	6:47: 42.16	1.828	352.43	4.7	0.0	2.866	0.110	6.3	1	-3.250
CMAR	53.10	251.12	6:50: 12.45	4.251	502.88	4.6	0.0	3.096	0.080	3.0	0	-99.000
NOA	62.72	339.66	6:51: 9.14	-0.051	559.68	4.8	0.0	3.966	0.130	5.6	0	-99.000
PDAR	62.23	55.37	6:51: 23.64	3.691	574.08	5.0	0.0	2.806	0.220	5.1	0	-99.000
WRA	73.51	197.13	6:52: 25.61	-2.645	636.73	7.5	0.0	2.506	0.080	6.3	1	0.200
TXAR	75.52	60.81	6:52: 44.06	3.638	654.53	7.4	0.0	2.456	0.190	6.5	1	0.399
ASAR	77.23	196.80	6:52: 48.02	-0.833	659.38	8.2	0.0	1.736	0.150	5.9	1	-0.251

Split event. ILAR, TXAR, WRA, ASAR belong to previous event in the same area.

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
74 5028729 6:42: 49.48 1.09 19.360 145.190 418.0 2.55 0.24 6 NEW 0 0.000 -
1.000 0 18 24.6 38.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	39.59	16.32	6:49: 50.04	-0.498	420.46	6.2	0.0	-1.299	0.002	9.4	0	-99.000
ASAR	43.26	15.76	6:50: 19.04	0.303	450.03	8.9	0.0	-1.298	0.004	7.7	0	-99.000
MJAR	58.32	96.63	6:51: 59.24	-0.384	549.36	4.6	0.0	-1.537	0.003	7.5	0	-99.000
ILAR	64.10	257.93	6:52: 32.20	-1.881	583.18	5.4	0.0	-1.261	0.008	5.7	0	-99.000
ARCES	82.61	56.26	6:54: 22.94	1.279	694.25	4.7	0.0	-1.939	0.001	3.5	0	-99.000
NVAR	83.68	288.36	6:54: 32.17	1.182	703.25	6.4	0.0	-1.348	0.011	4.5	0	-99.000

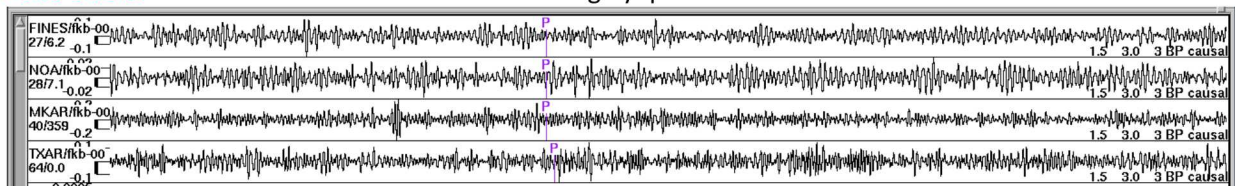
False event, can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
75 13705722 6:48: 58.62 1.38 86.400 76.080 0.0 3.00 0.09 4 NEW 0 0.000 -
1.000 0 40 23.7 26.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
FINES	26.69	8.54	6:54: 38.76	1.777	339.74	4.5	0.0	-1.253	0.011	7.2	0	-99.000
NOA	28.20	9.09	6:54: 47.99	-2.014	348.76	5.8	0.0	-1.269	0.005	5.0	0	-99.000
MJAR	38.95	0.37	6:56: 32.14	-0.299	452.79	4.5	0.0	-1.225	0.009	7.6	0	-99.000
TXAR	65.23	359.24	6:59: 38.03	0.537	638.93	5.5	0.0	-1.037	0.007	6.6	0	-99.000

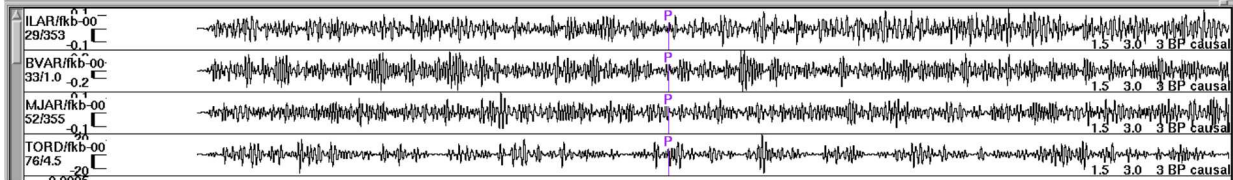
False event. Possible arrival on TXAR – all others highly questionable.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
76 15032926 6:48: 58.62 2.54 85.540 77.430 0.0 3.93 0.54 5 NEW 0 0.000 -
1.000 0 40 21.0 21.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	28.25	19.94	6:54: 55.90	-2.328	357.67	4.3	0.0	3.660	0.070	6.9	0 -99.000
BVAR	34.19	163.69	6:55: 30.18	-2.929	391.32	4.7	0.0	3.340	0.100	3.0	0 -99.000
KURK	36.75	155.11	6:55: 52.59	-0.580	413.85	5.5	0.0	3.820	0.070	3.0	0 -99.000
MJAR	53.34	94.72	6:58: 8.38	3.607	550.41	4.7	0.0	3.910	0.190	3.0	0 -99.000
TORD	75.12	234.17	7: 0: 47.90	2.230	709.25	4.3	0.0	4.930	0.130	5.3	0 -99.000

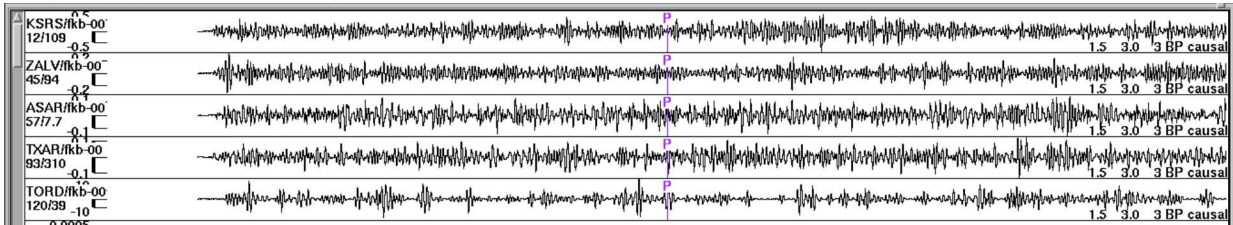
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
77 9955647 6:52: 9.79 1.82 32.760 141.530 0.0 4.31 0.57 6 NEW 0 0.000 -
1.000 0 18 24.0 24.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	12.11	295.42	6:55: 10.40	1.843	180.32	4.4	0.0	4.090	0.030	3.9	0 -99.000
ZALV	44.87	315.46	7: 0: 24.17	-3.169	493.39	4.4	0.0	3.980	0.110	4.3	0 -99.000
ASAR	56.81	188.50	7: 1: 53.82	-0.272	583.67	4.2	0.0	4.390	0.030	6.9	0 -99.000
NVAR	77.28	52.45	7: 4: 9.61	0.654	718.62	4.9	0.0	3.970	0.100	3.5	0 -99.000
TXAR	92.43	52.58	7: 5: 26.07	2.111	796.02	4.2	0.0	3.880	0.190	3.1	0 -99.000
TORD	120.29	313.47	7:11: 0.94	-1.168	1131.19	4.2	0.0	5.530	0.180	3.0	0 -99.000

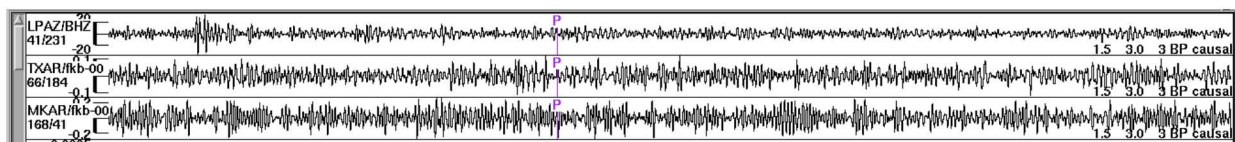
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
78 4803911 6:55: 57.86 0.58 -37.160 -107.790 0.0 4.21 0.44 4 NEW 0 0.000 -
1.000 0 43 25.4 26.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	40.37	232.45	7: 3: 41.92	0.158	464.20	7.5	0.0	0.000	0.016	6.9	0 -99.000
TXAR	65.54	183.57	7: 6: 49.13	-0.794	651.28	7.3	0.0	-0.652	0.002	7.6	0 -99.000
NVAR	75.15	171.17	7: 7: 49.78	0.806	711.90	5.0	0.0	-1.139	0.008	8.7	0 -99.000
MKAR	167.26	39.33	7:16: 5.48	-0.169	1207.00	5.1	0.0	-0.986	0.002	3.8	0 -99.000

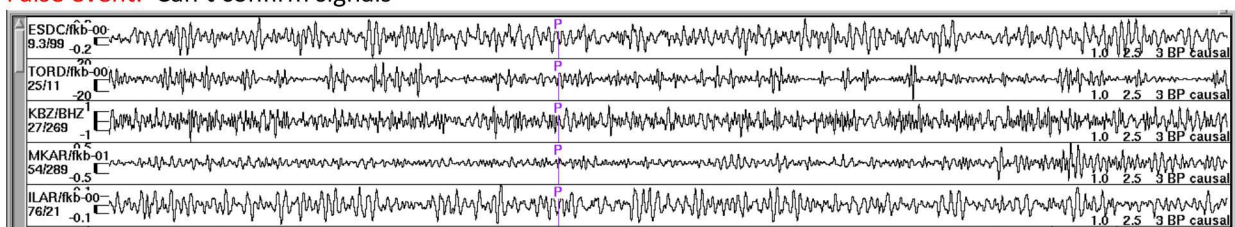
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 79 17626516 7:0: 18.90 2.86 37.700 7.610 0.0 3.86 0.78 5 NEW 0 0.000 -
 1.000 0 31 23.0 23.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ESDC	8.09	291.70	7:2: 37.32	2.099	137.75	4.8	0.0	3.044	0.020	3.0	0-99.000
TORD	24.10	189.81	7:5: 44.53	-0.627	324.90	4.8	0.0	5.134	0.120	6.2	0-99.000
KBZ	28.85	65.01	7:6: 9.58	3.721	350.05	5.1	2.3	4.224	0.490	3.0	0-99.000
MKAR	55.64	54.03	7:9: 40.52	-4.684	561.68	4.6	0.0	3.094	0.150	8.5	0-99.000
ILAR	76.25	348.32	7:12: 8.17	-0.509	708.45	6.3	0.0	3.814	0.140	3.0	0-99.000

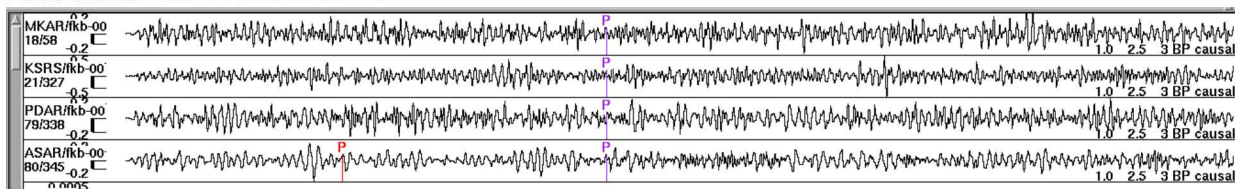
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 80 7775310 7:18: 14.68 1.49 53.560 108.780 14.0 3.69 0.43 5 NEW 0 0.000 -
 1.000 0 28 30.0 26.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	17.96	260.83	7:22: 25.17	-0.707	249.77	4.5	0.0	3.218	0.080	9.5	0-99.000
KURK	18.69	275.21	7:22: 30.44	0.115	255.77	4.5	0.0	3.458	0.070	8.1	0-99.000
KSRS	20.46	131.21	7:22: 56.81	-1.578	281.32	4.5	0.0	3.618	0.090	3.0	0-99.000
PDAR	79.23	27.58	7:30: 15.82	-0.612	721.02	4.6	0.0	3.638	0.160	3.0	0-99.000
ASAR	79.32	156.49	7:30: 26.37	2.783	730.62	5.0	0.0	4.498	0.030	3.0	0-99.000

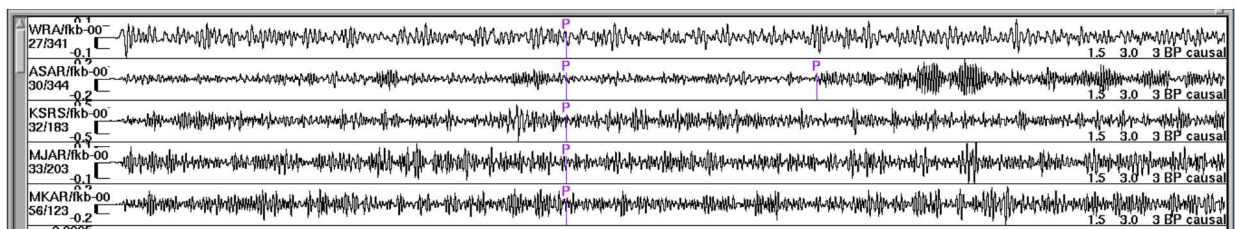
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 81 5128870 7:23: 58.77 1.11 5.600 126.090 135.0 3.43 0.22 5 NEW 0 0.000 -
 1.000 0 22 28.5 34.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	26.65	340.10	7:29: 24.40	1.143	326.17	11.1	0.0	-0.950	0.004	9.8	0-99.000
ASAR	30.04	343.14	7:29: 53.41	-1.125	354.89	10.5	0.0	-1.263	0.004	9.5	0-99.000
KSRS	31.95	184.46	7:30: 11.87	1.435	373.70	4.8	0.0	-1.133	0.004	3.0	0-99.000
MJAR	33.09	203.69	7:30: 17.14	-1.184	378.32	6.6	0.0	-1.368	0.003	3.0	0-99.000
MKAR	55.49	124.16	7:33: 20.39	-0.269	562.27	6.5	0.0	-1.616	0.004	8.8	0-99.000

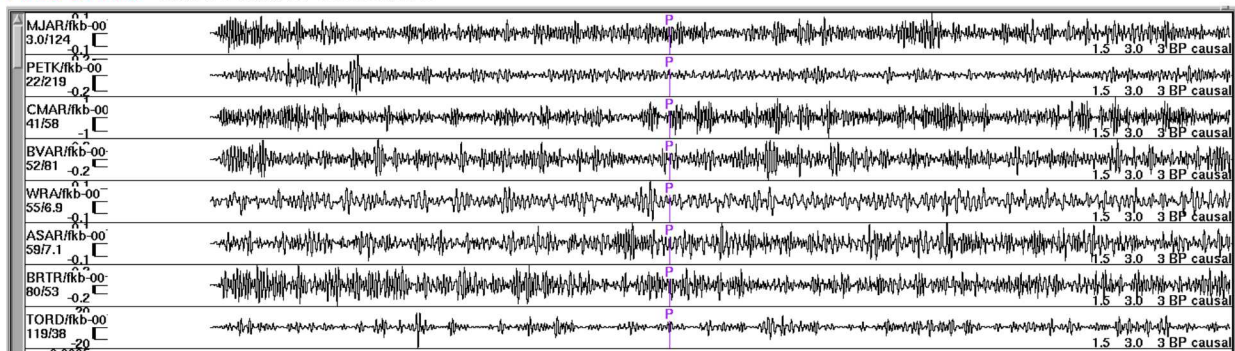
False event, can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 82 10946113 7:24: 5.36 2.06 34.840 141.240 127.0 3.72 1.15 8 NEW 0 0.000 -
 1.000 0 18 23.9 38.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	2.87	338.38	7:24: 48.87	-1.135	44.49	4.5	0.0	1.967	0.130	7.5	0 -99.000
PETK	23.19	28.46	7:28: 48.81	0.772	283.59	4.4	0.0	3.817	0.190	3.0	0 -99.000
CMAR	39.28	257.44	7:31: 34.92	2.031	449.69	4.4	0.0	4.727	0.150	3.0	0 -99.000
BVAR	51.64	313.94	7:33: 1.93	1.390	537.04	4.3	0.0	2.347	0.160	3.0	0 -99.000
WRA	53.73	186.10	7:33: 17.75	-3.293	553.49	4.6	0.0	3.987	0.050	8.8	0 -99.000
ASAR	57.45	186.15	7:33: 50.71	2.664	586.04	4.3	0.0	3.687	0.030	6.9	0 -99.000
BRTR	79.81	311.10	7:35: 58.59	-2.807	714.04	5.0	0.0	3.377	0.210	3.0	0 -99.000
TORD	118.41	312.01	7:42: 38.06	0.378	1113.39	4.2	0.0	5.837	0.190	3.0	0 -99.000

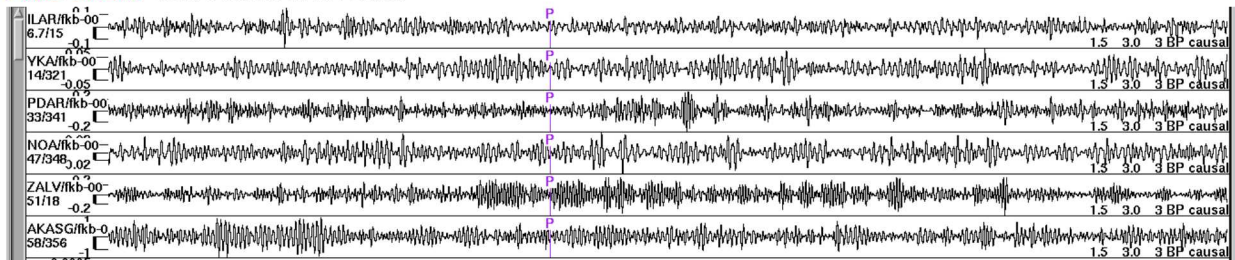
False event. Can't confirm detections



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 83 16152580 7:32: 47.43 3.16 71.120 -141.520 0.0 3.71 0.98 6 NEW 0 0.000 -
 1.000 0 42 26.0 34.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	4.98	188.66	7:34: 22.35	-1.996	95.90	5.3	0.0	2.071	0.030	9.3	0 -99.000
YKA	14.17	105.50	7:35: 52.00	-3.899	184.53	4.8	0.0	3.031	0.100	9.2	0 -99.000
PDAR	32.53	127.17	7:39: 25.58	4.897	398.45	4.9	0.0	3.741	0.030	5.6	0 -99.000
NOA	48.48	15.11	7:41: 15.00	-1.478	508.48	4.5	0.0	4.801	0.050	3.0	0 -99.000
ZALV	51.47	324.65	7:41: 53.23	3.622	545.70	5.7	0.0	4.881	0.090	3.9	0 -99.000
AKASG	59.86	4.14	7:42: 42.01	-1.146	594.55	4.7	0.0	3.741	0.060	3.5	0 -99.000

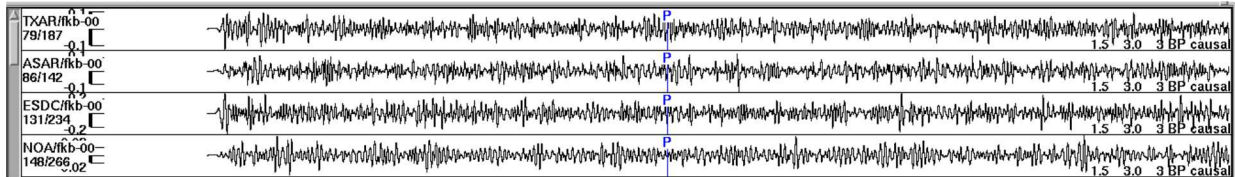
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
84 10867182 7:34: 55.31 3.64 -49.510 -113.470 0.0 4.13 0.28 5 NEW 0 0.000 -
1.000 0 43 16.0 24.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.34	10.39	7:46: 56.46	-3.981	720.99	4.3	0.0	3.919	0.160	6.7	0 -99.000
ASAR	84.68	239.47	7:47: 34.69	-1.056	759.11	4.9	0.0	3.809	0.090	8.7	0 -99.000
NVAR	87.76	357.70	7:47: 49.19	3.650	774.41	4.3	0.0	4.049	0.220	3.0	0 -99.000
ESDC	131.80	74.53	7:54: 11.51	4.883	1156.69	4.3	0.0	4.299	0.230	3.0	0 -99.000
NOA	148.50	48.40	7:54: 33.93	-3.497	1179.46	4.9	0.0	4.579	0.220	3.0	0 -99.000

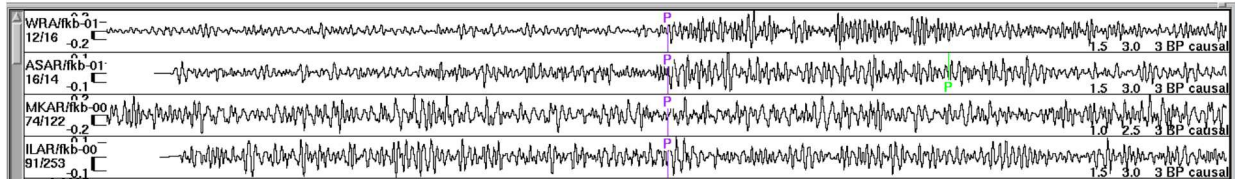
False event, can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
85 5028729 7:42: 48.60 0.96 19.420 145.130 418.0 2.63 0.10 5 NEW 0 0.000 -
1.000 0 18 24.6 34.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	39.59	16.32	7:49: 49.16	-0.567	420.71	6.0	0.0	-1.317	0.002	9.4	0 -99.000
ASAR	43.26	15.76	7:50: 19.48	0.255	450.28	8.7	0.0	-1.319	0.003	7.7	0 -99.000
MKAR	58.32	96.63	7:51: 58.36	0.389	549.61	4.8	0.0	-1.548	0.003	7.5	0 -99.000
ILAR	64.10	257.93	7:52: 32.64	-1.469	583.43	5.2	0.0	-1.279	0.007	5.7	0 -99.000
NVAR	83.68	288.36	7:54: 32.61	1.391	703.51	7.1	0.0	-1.366	0.011	4.5	0 -99.000

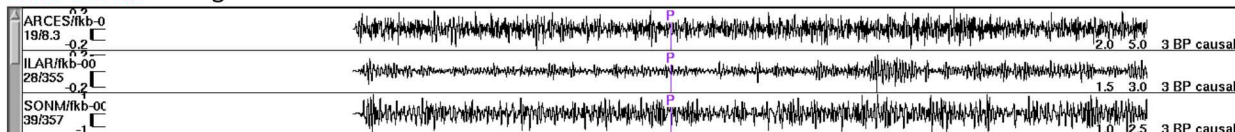
False event. WRA and ASAR are good signals, suggest they go to New Guinea / Solomons area. ILAR won't produce consistent FK, MKAR is non-existent.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
86 13749693 7:48: 53.79 0.12 86.680 77.720 0.0 3.43 0.05 3 NEW 0 0.000 -
1.000 0 40 21.0 20.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ARCES	19.58	265.45	7:53: 12.19	-0.122	258.12	4.4	0.0	3.483	0.110	8.9	0 -99.000
ILAR	27.94	55.43	7:54: 45.79	0.167	350.89	4.5	0.0	3.443	0.050	6.9	0 -99.000
SONM	37.35	169.89	7:56: 25.99	-0.045	451.08	4.5	0.0	3.363	0.280	4.8	0 -99.000

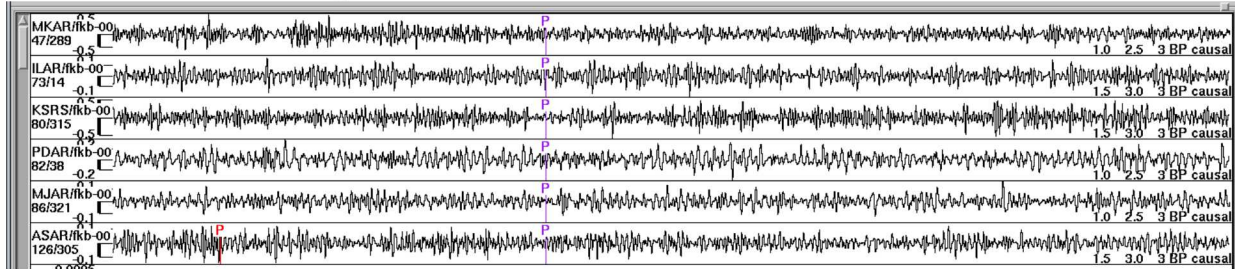
False event. No signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
87 13720218 7:49: 3.02 3.82 41.630 15.350 0.0 4.18 0.45 6 NEW 0 0.000 -
1.000 0 31 23.0 22.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	47.79	60.14	7:57: 30.59	-3.684	507.63	4.8	0.0	3.488	0.160	7.5	0-99.000
ILAR	71.53	351.09	8: 0: 37.79	4.959	694.78	4.8	0.0	3.988	0.130	3.0	0-99.000
KSRS	80.50	47.09	8: 1: 12.07	-2.513	729.38	5.1	0.0	4.108	0.100	3.0	0-99.000
PDAR	80.38	321.02	8: 1: 23.94	-4.765	740.78	4.5	0.0	4.798	0.060	3.0	0-99.000
MJAR	86.52	41.27	8: 1: 51.62	4.042	768.73	4.6	0.0	3.998	0.190	3.0	0-99.000
ASAR	128.04	88.15	8: 8: 8.67	1.960	1145.98	4.9	0.0	4.698	0.130	3.0	0-99.000

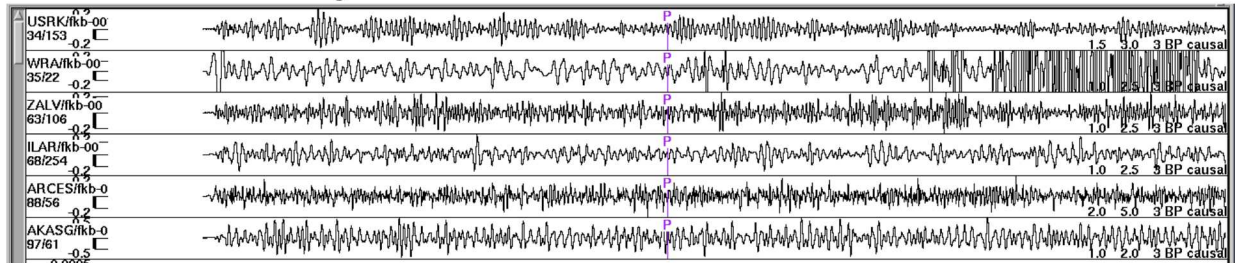
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
88 7715777 7:54: 26.02 3.20 12.890 146.780 78.4 3.98 0.71 6 NEW 0 0.000 -
1.000 0 17 25.0 28.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
USRK	33.39	340.66	8: 1: 2.84	3.755	397.11	4.2	0.0	5.076	0.120	3.0	0-99.000
WRA	35.07	200.46	8: 1: 9.43	0.091	402.82	5.1	0.0	3.346	0.050	9.4	0-99.000
ZALV	62.99	324.20	8: 4: 43.01	-3.010	617.24	4.3	0.0	3.946	0.160	3.5	0-99.000
ILAR	68.20	25.03	8: 5: 18.60	0.361	652.61	4.7	0.0	3.486	0.100	6.1	0-99.000
ARCES	88.02	342.47	8: 7: 4.07	-4.927	757.57	4.2	0.0	3.246	0.190	3.3	0-99.000
AKASG	96.36	325.40	8: 7: 50.21	3.730	803.59	4.7	0.0	4.766	0.080	3.0	0-99.000

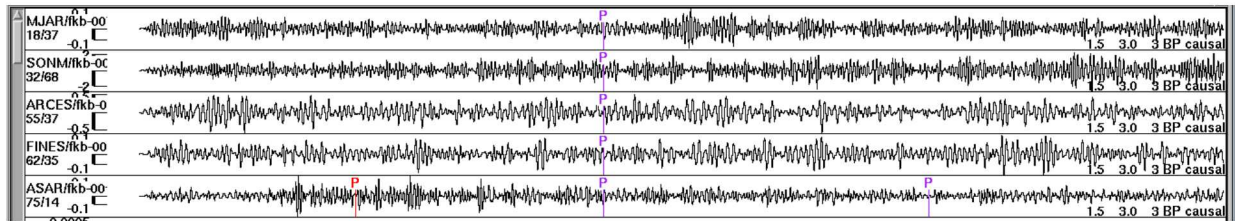
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
89 12376578 7:55: 46.44 2.42 49.780 155.030 48.0 3.71 1.02 5 NEW 0 0.000 -
1.000 0 19 26.4 28.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	17.98	38.70	7:59: 49.01	-2.783	242.20	5.6	0.0	-3.049	0.003	7.6	0-99.000
SONM	32.00	68.47	8: 2: 7.44	2.779	380.91	4.7	0.0	0.000	0.001	5.4	0-99.000
ARCES	55.81	37.22	8: 5: 15.97	2.028	569.78	4.5	0.0	-1.813	0.001	3.0	0-99.000
FINES	62.25	34.75	8: 5: 55.52	-2.984	608.58	4.4	0.0	-1.199	0.004	5.9	0-99.000
ASAR	75.28	14.35	8: 7: 26.48	0.960	700.08	4.6	0.0	-0.886	0.002	6.6	0-99.000

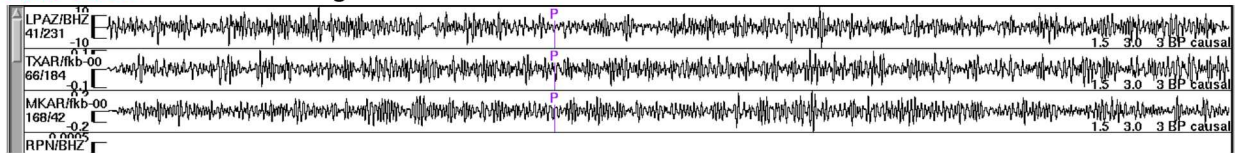
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 90 4803911 7:55: 58.30 0.39 -37.220 -107.790 0.0 4.20 0.44 4 NEW 0 0.000 -
 1.000 0 43 25.4 26.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	40.37	232.45	8: 3: 42.36	0.117	464.32	7.2	0.0	0.000	0.014	6.9	0 -99.000
TXAR	65.54	183.57	8: 6: 49.57	-0.563	651.97	7.7	0.0	-0.659	0.002	7.6	0 -99.000
NVAR	75.15	171.17	8: 7: 50.21	0.511	712.04	4.8	0.0	-1.147	0.007	8.7	0 -99.000
MKAR	167.26	39.33	8:16: 4.60	-0.066	1207.14	4.9	0.0	-0.989	0.002	3.8	0 -99.000

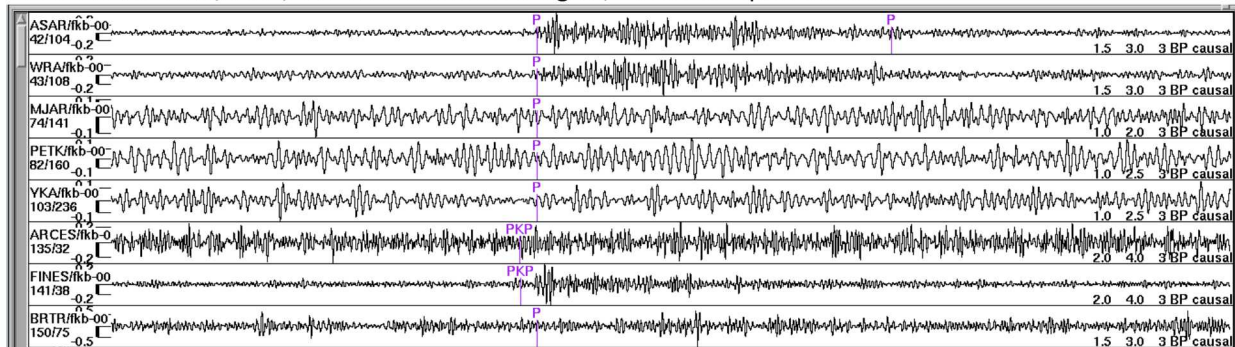
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 91 13174527 7:59: 55.61 3.62 -24.620 179.290 505.1 3.80 0.69 8 SEL 17813529 80.649
 7.995 1 12 25.0 37.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	41.17	262.51	8: 6: 54.84	-1.761	418.97	7.3	0.0	2.717	0.110	9.5	0 -99.000
WRA	41.68	268.09	8: 7: 2.75	3.601	427.37	11.4	0.0	2.937	0.090	9.7	0 -99.000
MJAR	72.77	326.38	8:10: 32.37	3.835	636.34	4.5	0.0	3.807	0.130	3.0	0 -99.000
PETK	80.44	347.00	8:11: 6.65	-4.082	671.22	4.5	0.0	4.107	0.210	3.0	0 -99.000
YKA	102.02	25.72	8:12: 53.44	1.276	777.19	5.1	0.0	5.127	0.130	3.0	0 -99.000
ARCES	133.25	347.68	8:18: 16.44	4.982	1100.39	4.3	0.0	3.987	0.200	3.0	0 -99.000
FINES	139.68	340.45	8:18: 21.71	-4.311	1105.24	5.2	0.0	3.987	0.180	3.2	1 -3.425
BRTR	147.96	304.90	8:18: 36.21	-3.539	1119.82	4.7	0.0	3.707	0.190	3.2	0 -99.000

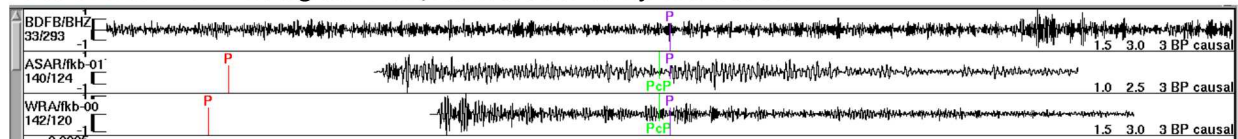
Good event. WRA,ASAR, and FINES have clear signal, others are questionable.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 92 5817404 8: 1: 1.52 1.38 -5.860 -35.020 0.0 3.40 0.94 4 NEW 0 0.000 -
 1.000 0 35 25.7 27.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BDFB	15.73	51.40	8: 4: 44.33	0.043	223.02	5.7	0.0	-2.208	0.016	10.0	0 -99.000
NVAR	87.58	98.87	8:13: 55.40	-0.388	774.61	5.1	0.0	-0.276	0.084	3.9	0 -99.000
ASAR	149.31	200.56	8:20: 53.32	2.103	1191.46	4.7	0.0	-0.094	0.086	6.9	0 -99.000
WRA	152.91	202.16	8:21: 6.50	-1.758	1205.76	5.2	0.0	0.187	0.025	6.9	0 -99.000

False event. BDFB – no signal. WRA/ASAR are PcP to Fiji event at 08:11

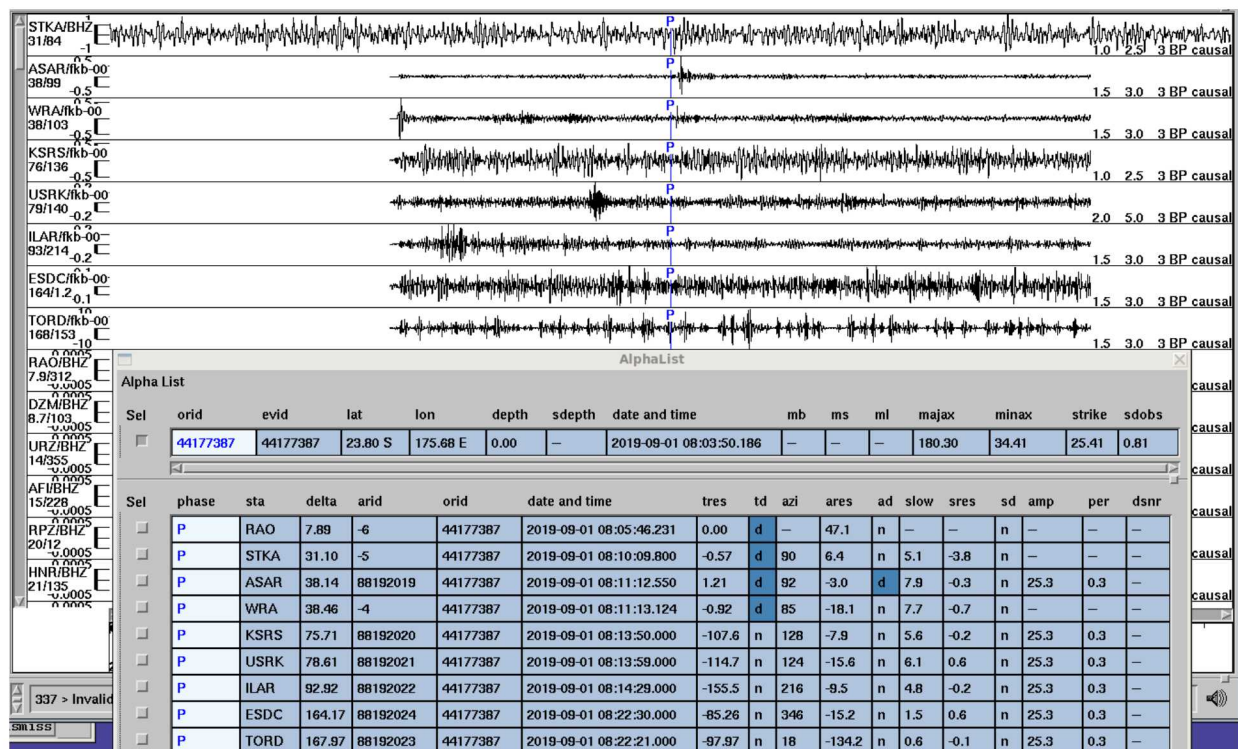


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 93 9971226 8: 2: 12.71 3.24 -14.260 -175.540 0.0 4.47 1.16 6 NEW 0 0.000 -
 1.000 0 12 25.0 26.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	49.97	251.82	8:11: 0.06	3.283	526.47	10.9	0.0	2.978	0.200	9.5	0 -99.000
KSRS	75.97	315.60	8:13: 50.13	-2.097	696.67	4.8	0.0	4.098	0.070	3.0	0 -99.000
USRK	77.18	323.14	8:13: 59.36	0.519	706.19	4.4	0.0	4.458	0.060	3.0	0 -99.000
ILAR	82.37	11.20	8:14: 29.68	-3.117	735.97	4.7	0.0	3.908	0.040	4.7	0 -99.000
TORD	174.96	114.36	8:22: 21.65	-3.582	1207.89	4.3	0.0	6.788	0.080	3.0	0 -99.000
ESDC	154.06	18.52	8:22: 30.88	4.994	1217.42	4.3	0.0	4.588	0.040	3.0	0 -99.000

False / Split event – ASAR, and an uncalled WRA. Downloaded data for stations MSVF and RAO and found signals present. Added detection for RAO (part of IMS network) and made a weak call on STKA. Event locates to

-23 x 175, like the following event. Unfortunately, no signal for KSRS,USRK,ILAR,ESDC or TORD could be confirmed for this event.



```

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
94 10208667 8:11: 6.65 2.36 -23.010 -175.500 115.0 4.24 0.43 18 SEL 17810128 12.562
0.510 15 12 25.4 73.0
Sta Dist seaz ArrivTime Tres TT_EVENT CC SNR dRM CC wgt Match Tres
STKA 38.13 246.73 8:18: 19.07 -0.878 432.86 8.0 3.8 3.627 0.360 6.2 1 0.425
WRA 45.64 263.71 8:19: 19.72 -3.323 493.08 11.7 0.0 3.487 0.230 9.8 1 2.175
ASAR 45.35 258.50 8:19: 22.35 3.161 496.26 14.4 0.0 3.807 0.150 9.5 1 -3.650
MJAR 72.60 323.23 8:22: 28.24 1.565 681.39 4.9 0.0 4.417 0.160 3.0 1 -0.450
PETK 78.58 344.53 8:22: 58.56 -1.675 712.28 9.4 0.0 4.547 0.240 3.0 1 0.349
NVAR 81.63 42.48 8:23: 7.79 -1.718 721.86 8.3 0.0 4.647 0.230 3.7 1 4.600
KSRS 79.30 318.11 8:23: 9.11 4.846 722.96 4.4 0.0 4.517 0.120 3.0 0 -99.000
USRK 81.39 325.35 8:23: 14.38 -1.168 728.08 4.6 0.0 4.467 0.180 3.0 0 -99.000
TXAR 87.07 56.70 8:23: 38.12 1.960 751.16 25.1 0.0 4.527 0.330 3.4 1 1.824
PLCA 86.92 133.00 8:23: 38.12 3.612 751.43 5.4 3.8 4.817 0.340 3.0 1 -0.076
PDAR 89.57 42.69 8:23: 47.34 -2.155 761.06 9.9 0.0 4.637 0.220 3.0 1 3.405
ILAR 90.03 12.26 8:23: 53.94 0.481 767.01 5.4 0.0 4.087 0.100 3.9 1 0.950
KURK 116.43 316.57 8:29: 36.71 0.078 1110.53 8.1 0.0 4.347 0.140 3.0 1 1.874
BVAR 121.48 319.31 8:29: 47.26 0.127 1120.53 5.8 0.0 3.297 0.240 3.0 1 2.249
FINES 138.10 343.90 8:30: 14.94 -4.445 1148.26 4.6 0.0 4.337 0.140 3.2 1 4.645
AKASG 145.43 330.78 8:30: 30.76 -1.434 1164.53 11.1 0.0 4.017 0.120 3.0 1 3.099
BRTR 149.17 310.73 8:30: 39.99 1.161 1173.86 10.0 0.0 3.987 0.450 3.3 1 5.350
ESDC 161.82 18.49 8:31: 39.32 -0.196 1233.26 4.6 0.0 4.667 0.070 3.0 0 -99.000

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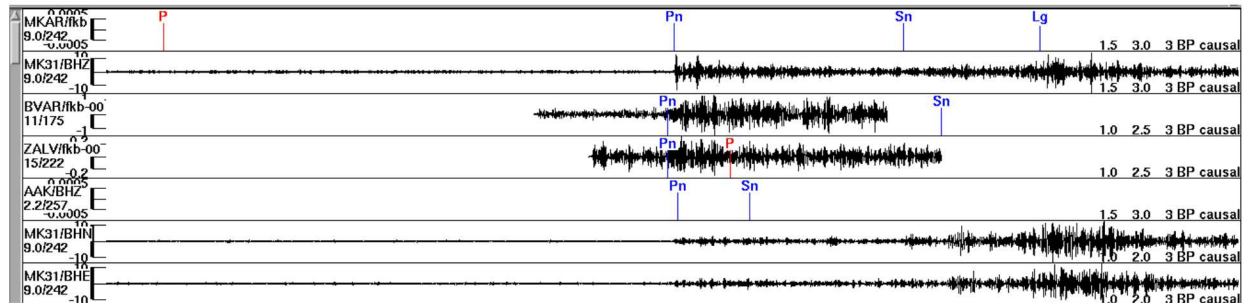
Good event!

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
95 4873943 8:19: 15.76 1.42 52.970 99.490 0.0 3.47 0.43 4 NEW 0 0.000 -
1.000 0 28 30.0 31.6

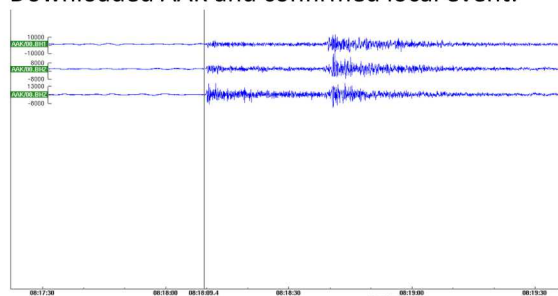
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ZALV	8.28	96.69	8:21: 23.64	-1.422	127.68	4.4	0.0	-1.140	0.003	10.0	0 -99.000
MKAR	11.71	56.58	8:22: 16.38	-0.922	180.88	6.9	0.0	-2.306	0.006	10.0	0 -99.000
KURK	12.42	75.02	8:22: 25.61	2.269	190.76	5.0	0.0	-1.656	0.002	8.6	0 -99.000
ILAR	53.03	315.66	8:28: 26.84	0.075	551.66	5.0	0.0	-1.401	0.012	3.0	0 -99.000

False / Split event

MKAR/ZALV times off. Event occurs at 08:17:31.54 42.3416N 71.7824E according to ISC



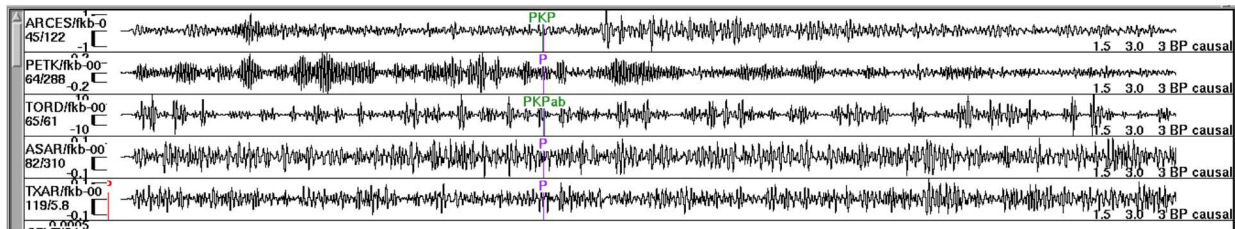
Downloaded AAK and confirmed local event:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
96 5007665 8:21: 48.69 1.95 31.950 68.450 0.0 4.07 0.98 6 NEW 0 0.000 -
1.000 0 47 22.0 27.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KURK	21.55	19.16	8:26: 24.23	1.940	275.79	4.8	0.0	2.858	0.100	5.1	0 -99.000
ARCES	45.59	340.72	8:29: 59.12	-2.488	490.59	7.8	0.0	3.098	0.070	6.6	0 -99.000
TORD	62.80	269.56	8:32: 18.87	0.405	629.61	5.7	0.0	5.788	0.100	5.8	0 -99.000
PETK	66.17	41.23	8:32: 24.14	-1.828	635.81	4.4	0.0	4.648	0.100	3.0	0 -99.000
ASAR	83.38	122.32	8:34: 14.88	-0.942	745.61	5.0	0.0	3.828	0.130	4.3	0 -99.000
TXAR	119.76	351.24	8:40: 42.48	2.914	1133.26	4.3	0.0	4.188	0.150	3.0	0 -99.000

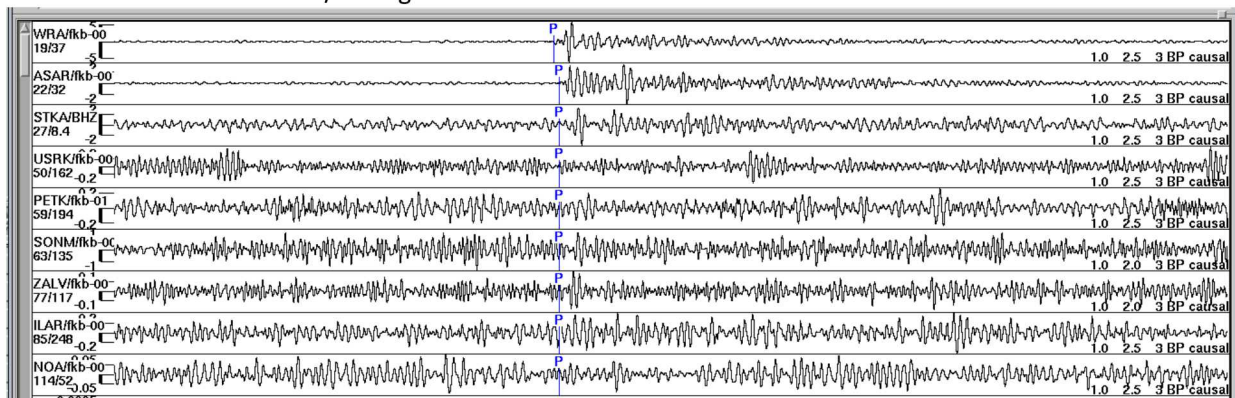
False event. ARCES and TORD are PKP and PKPab respectively to the Fiji event at 08:11. Other detections can't be verified by the waveforms.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 97 11205109 8:25: 46.00 3.17 -5.150 146.950 233.3 3.79 0.67 9 SEL 17813639 30.673
 2.006 3 16 26.0 42.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	18.91	218.93	8:29: 48.57	-4.007	242.75	17.0	0.0	3.111	0.150	9.8	1	2.400
ASAR	22.05	213.15	8:30: 26.81	1.343	280.40	12.4	0.0	3.101	0.280	9.5	1	-0.101
USRK	51.13	346.30	8:34: 20.16	-4.986	513.63	4.4	0.0	4.011	0.190	3.0	0	-99.000
PETK	58.98	7.61	8:35: 19.48	-0.837	573.98	4.5	0.0	3.771	0.230	3.0	0	-99.000
SONM	63.78	330.84	8:35: 53.76	-0.044	607.26	4.4	0.0	3.311	0.170	3.3	0	-99.000
ZALV	78.40	327.80	8:37: 20.77	1.426	694.35	4.6	0.0	4.641	0.090	3.0	0	-99.000
KURK	80.64	323.14	8:37: 36.59	4.371	710.10	4.2	0.0	3.841	0.150	3.0	0	-99.000
ILAR	84.97	23.19	8:37: 49.78	-1.980	724.35	5.7	0.0	3.221	0.190	5.1	1	-6.350
NOA	115.32	337.88	8:44: 2.87	4.713	1096.55	4.3	0.0	5.111	0.220	3.0	0	-99.000

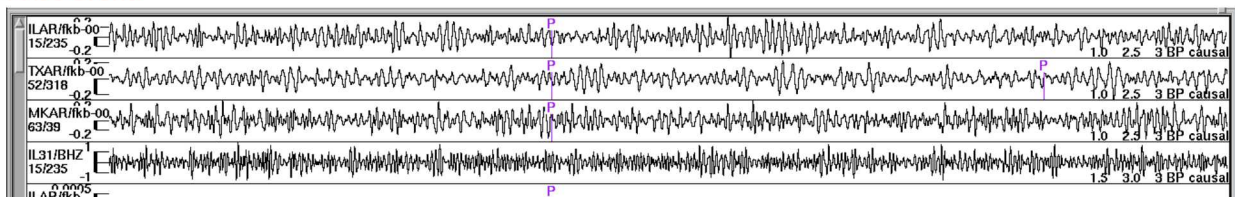
Good event – kind of. ASAR/WRA good detections. Added STKA. Discarded the rest.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 98 16587836 8:30: 38.67 1.18 54.050 -168.230 81.0 2.25 0.86 4 NEW 0 0.000 -
 1.000 0 1 27.4 28.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ILAR	14.60	231.49	8:34: 5.65	0.146	207.64	4.3	0.0	-3.016	0.002	8.7	0	-99.000
NVAR	35.97	311.57	8:37: 41.87	-1.494	423.02	14.2	0.0	-0.860	0.002	5.3	0	-99.000
TXAR	50.98	317.51	8:39: 40.52	1.780	541.84	5.3	0.0	-1.078	0.002	7.4	0	-99.000
MKAR	63.96	37.75	8:40: 56.98	-0.432	618.67	4.5	0.0	-1.254	0.006	6.6	0	-99.000

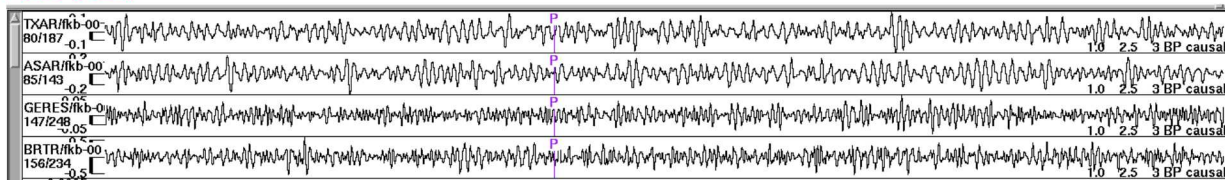
False event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
99 10114292 8:34: 51.80 1.89 -50.150 -114.830 0.0 3.62 0.22 5 NEW 0 0.000 -
1.000 0 43 16.2 21.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	8:46: 58.21	-2.479	727.39	5.2	0.0	-0.649	0.002	5.1	0 -99.000
ASAR	85.24	143.18	8:47: 25.90	-0.418	754.76	5.4	0.0	-1.077	0.001	5.0	0 -99.000
NVAR	88.19	177.23	8:47: 46.99	2.741	775.76	5.5	0.0	-1.073	0.009	4.7	0 -99.000
GERES	146.56	247.70	8:54: 33.05	-1.329	1181.86	7.1	0.0	-1.015	0.008	3.0	0 -99.000
BRTR	155.04	234.82	8:55: 13.92	1.485	1222.32	5.2	0.0	-0.586	0.002	3.6	0 -99.000

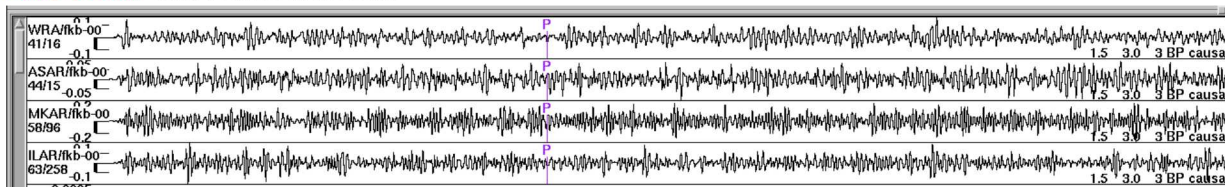
False event. Can't confirm detections



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
100 5028729 8:42: 49.04 0.96 19.420 145.130 418.0 2.62 0.09 5 NEW 0 0.000 -
1.000 0 18 24.6 34.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	39.59	16.32	8:49: 49.60	-0.567	420.71	6.0	0.0	-1.329	0.002	9.4	0 -99.000
ASAR	43.26	15.76	8:50: 19.92	0.255	450.28	7.9	0.0	-1.334	0.003	7.7	0 -99.000
MKAR	58.32	96.63	8:51: 58.80	0.389	549.61	4.6	0.0	-1.543	0.002	7.5	0 -99.000
ILAR	64.10	257.93	8:52: 33.08	-1.469	583.43	5.8	0.0	-1.295	0.002	5.7	0 -99.000
NVAR	83.68	288.36	8:54: 33.05	1.391	703.51	6.9	0.0	-1.384	0.009	4.5	0 -99.000

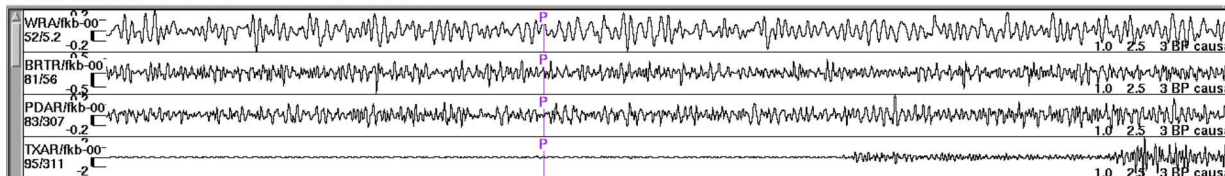
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
101 15084661 8:52: 2.75 2.37 32.030 139.160 0.0 3.76 0.35 5 NEW 0 0.000 -
1.000 0 18 24.0 21.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	52.38	188.38	9: 1: 13.83	0.231	551.44	4.8	0.0	3.663	0.040	8.9	0 -99.000
ARCES	68.42	340.11	9: 3: 4.57	0.615	662.07	4.8	0.0	4.253	0.130	3.0	0 -99.000
BRTR	81.99	312.12	9: 4: 18.40	-0.305	736.04	4.9	0.0	3.193	0.170	3.0	0 -99.000
PDAR	81.01	44.80	9: 4: 19.72	-3.972	736.29	4.3	0.0	3.923	0.140	3.2	0 -99.000
TXAR	93.02	52.45	9: 5: 26.95	3.430	804.12	4.2	0.0	3.753	0.190	3.1	0 -99.000

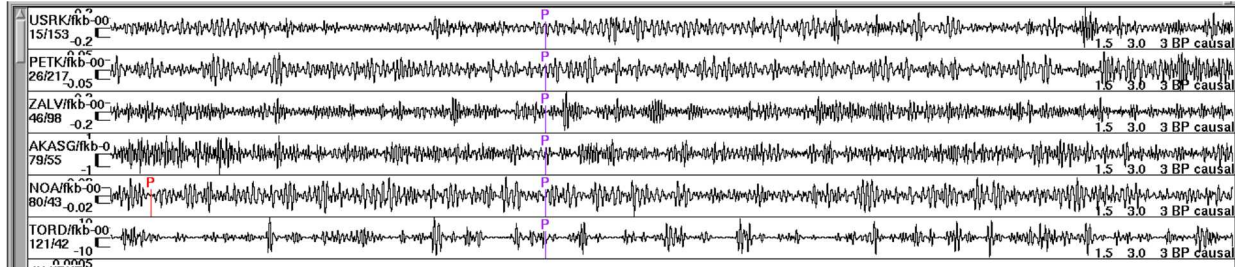
False event. Can't confirm detections



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
102 11331236 8:52: 2.75 3.34 30.400 139.930 56.4 4.45 0.64 6 NEW 0 0.000 -
1.000 0 18 24.0 20.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
USRK	14.08	334.28	8:55: 32.37	-0.236	210.10	4.5	0.0	4.367	0.130	3.2	0 -99.000
PETK	24.73	25.33	8:57: 23.12	-3.729	321.00	4.4	0.0	3.977	0.190	3.0	0 -99.000
ZALV	45.02	316.40	9: 0: 19.78	2.135	496.80	4.6	0.0	4.537	0.100	4.4	0 -99.000
AKASG	77.98	322.69	9: 3: 53.35	-4.989	711.25	4.3	0.0	3.837	0.080	3.1	0 -99.000
NOA	78.73	337.39	9: 4: 7.85	3.204	724.67	5.4	0.0	4.217	0.140	3.6	0 -99.000
TORD	120.36	311.88	9:10: 51.27	3.615	1129.25	4.2	0.0	5.777	0.120	3.0	0 -99.000

False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
103 7777814 8:57: 29.71 2.40 38.330 20.270 0.0 3.88 0.50 6 SEL 17810529 6.194
0.886 5 31 23.0 32.9

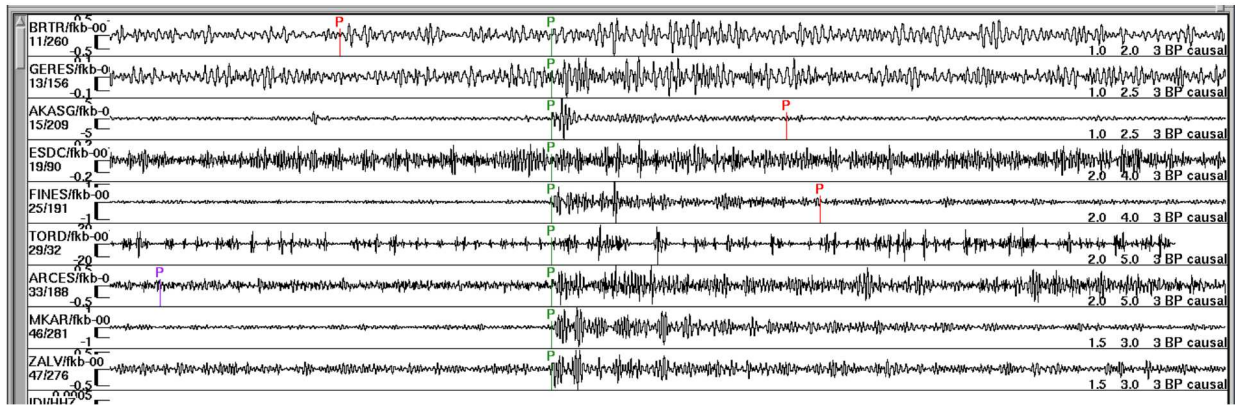
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ESDC	19.09	283.95	9: 1: 52.06	0.726	262.29	4.4	4.1	4.240	0.100	4.6	1 -0.708
FINES	24.21	6.74	9: 2: 40.84	1.503	311.36	4.8	8.2	3.920	0.070	7.7	1 0.399
ARCES	32.19	3.42	9: 3: 50.71	-0.414	381.21	4.8	6.1	2.720	0.140	5.2	1 0.949
MKAR	45.78	57.81	9: 5: 46.73	-2.411	496.34	8.0	11.0	3.980	0.200	7.8	1 -1.133
ZALV	46.24	47.61	9: 5: 50.68	-1.161	500.41	4.9	5.0	3.780	0.160	4.6	0 -99.000
ILAR	77.54	354.42	9: 9: 24.26	0.127	713.82	4.3	4.1	4.280	0.080	3.0	0 -99.000

Partial credit. Good split event, but not all signals can be confirmed – some are included in the next event

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
104 11173767 8:57: 44.21 3.42 34.580 23.040 87.1 3.94 0.49 9 SEL 17810529 20.374
3.521 2 30 23.0 44.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	8.31	65.57	9: 0: 3.96	-4.087	140.18	4.9	0.0	2.835	0.120	6.0	0 -99.000
AKASG	14.54	13.80	9: 1: 29.65	-3.134	225.61	4.4	0.0	3.575	0.040	4.7	0 -99.000
FINES	24.83	2.59	9: 3: 16.44	-3.468	332.11	4.4	0.0	3.985	0.150	7.6	0 -99.000
NOA	25.66	345.80	9: 3: 17.75	-3.514	333.43	4.4	0.0	4.115	0.060	5.2	0 -99.000
TORD	30.70	225.94	9: 3: 34.89	1.175	351.23	4.4	0.0	4.735	0.130	6.5	1 -6.225
KURK	41.03	52.37	9: 5: 38.82	4.632	474.08	4.8	0.0	3.915	0.090	3.0	0 -99.000
CMAR	67.48	83.28	9: 8: 39.43	1.641	655.48	5.0	0.0	4.175	0.080	3.0	0 -99.000
KSRS	78.20	52.07	9: 9: 42.71	-1.640	718.28	4.5	0.0	4.235	0.040	3.0	1 -7.746
ASAR	119.38	98.82	9:16: 27.45	3.075	1122.84	4.5	0.0	3.585	0.050	3.0	0 -99.000

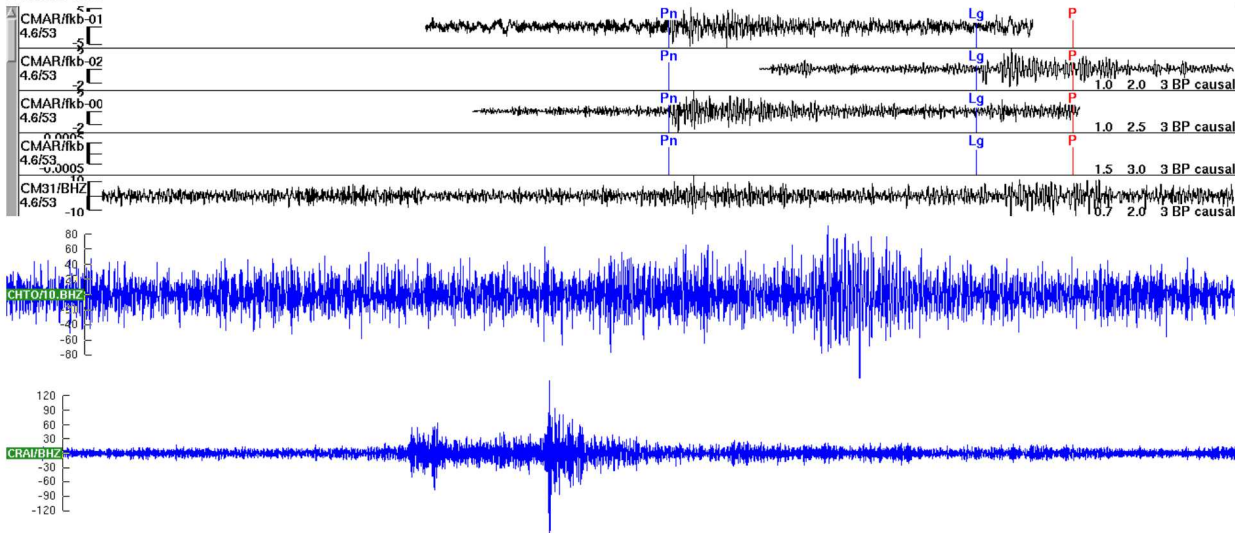
Good / split event with previous – not all arrivals confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 105 9026599 9:10: 56.54 0.36 29.290 105.600 47.5 3.42 0.40 5 NEW 0 0.000 -
 1.000 0 26 25.0 29.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	10.21	208.44	9:13: 49.25	-0.029	173.46	6.6	0.0	3.504	0.150	6.8	0 -99.000
MKAR	25.71	324.05	9:16: 18.22	0.484	321.83	4.4	0.0	2.744	0.240	9.0	0 -99.000
MJAR	30.20	64.15	9:16: 44.59	-0.369	348.92	4.6	0.0	3.574	0.150	3.0	0 -99.000
BVAR	35.59	324.88	9:17: 43.92	-0.406	407.61	5.3	0.0	3.324	0.120	3.0	0 -99.000
WRA	55.60	144.89	9:20: 31.35	0.319	575.98	4.9	0.0	3.954	0.090	8.1	0 -99.000

False event. CMAR is real, locates to 21.23N x 102.91E – found corroborating arrivals on two local Thai stations.

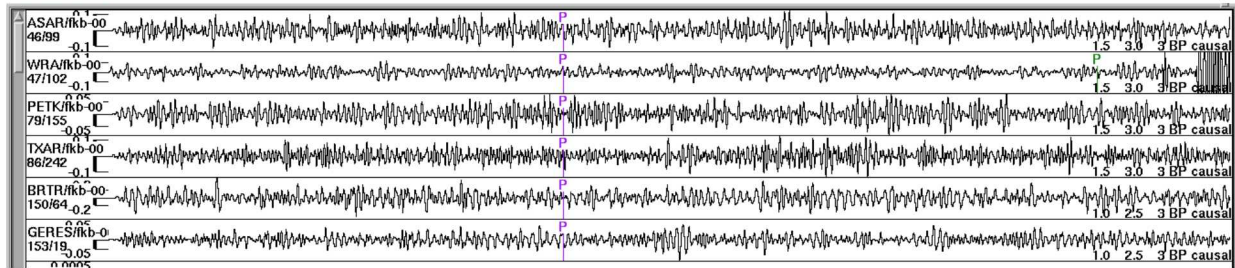


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 106 8818829 9:11: 16.32 1.15 -22.340 -175.680 169.0 3.53 0.40 7 NEW 0 0.000 -
 -1.000 0 13 25.5 36.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	45.65	101.29	9:19: 22.79	-1.875	487.15	7.8	0.0	-1.033	0.003	9.8	0 -99.000
ASAR	45.44	97.80	9:19: 25.43	1.981	489.48	11.0	0.0	-1.516	0.013	9.5	0 -99.000
PETK	77.81	155.72	9:22: 59.00	-0.116	703.85	4.7	0.0	-0.957	0.003	3.0	0 -99.000
NVAR	81.11	233.24	9:23: 10.87	0.726	715.46	5.3	0.0	-0.896	0.003	3.8	0 -99.000
TXAR	86.71	242.93	9:23: 37.24	-0.971	741.88	10.1	0.0	-0.769	0.004	3.4	0 -99.000

GERES 151.74 20.72 9:30: 44.38 0.551 1169.15 4.6 0.0 -1.992 0.003 3.4 0 -99.000
BRTR 148.60 64.24 9:30: 45.70 -0.296 1169.58 6.6 0.0 -1.031 0.009 3.3 0 -99.000

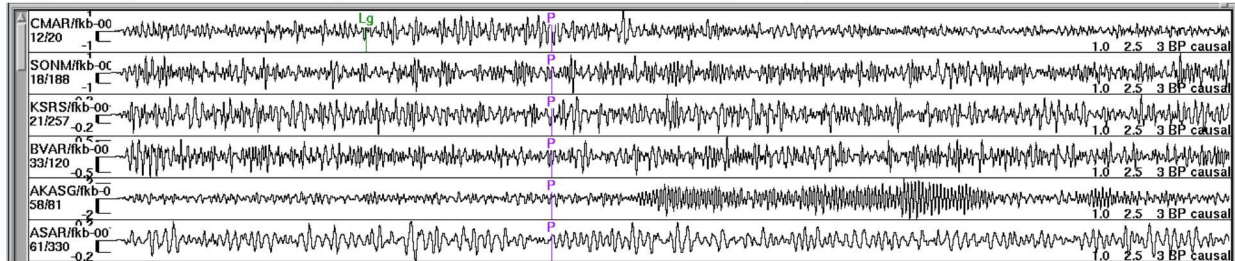
False event. Can't confirm arrivals



MASTER HH:MM:SS OT_STDEV LAT, deg LON, deg DEPTH, km MB MB_STVEV NASS NEW/REB
REB_ORID REBdelttime REBdist #MATCH SRN EDC
107 9717660 9:12: 18.28 3.09 30.090 103.690 17.6 3.53 0.49 6 NEW 0 0.000 -
1.000 0 26 25.0 30.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	12.32	198.18	9:15: 17.58	1.181	178.43	5.2	0.0	3.943	0.050	6.7	0 -99.000
SONM	17.74	7.61	9:16: 28.77	2.115	250.04	4.8	0.0	3.083	0.220	6.6	0 -99.000
KRSR	21.86	64.26	9:17: 3.05	-1.995	284.63	4.6	0.0	3.043	0.080	3.0	0 -99.000
BVAR	32.85	323.16	9:18: 52.47	-4.604	392.98	5.4	0.0	3.133	0.160	3.0	0 -99.000
AKASG	57.24	313.45	9:22: 12.86	4.880	594.38	4.6	0.0	4.333	0.100	3.0	0 -99.000
ASAR	61.31	147.49	9:22: 28.68	-1.576	609.83	4.5	0.0	3.623	0.090	7.9	0 -99.000

False event. Can't confirm signals. CMAR is picked in coda of Lg from prior event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
108 9669022 9:13: 25.52 3.01 36.920 24.580 27.7 3.80 0.54 6 NEW 0 0.000 -
1.000 0 30 23.0 23.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	9.01	54.47	9:15: 16.26	-0.985	109.65	4.5	0.0	2.767	0.150	6.2	0 -99.000
ESDC	22.83	290.49	9:18: 22.15	-1.363	296.76	4.6	0.0	3.887	0.060	5.1	0 -99.000
SONM	60.34	50.20	9:23: 26.69	4.312	600.35	4.5	0.0	3.287	0.200	3.6	0 -99.000
KRSR	79.13	51.93	9:25: 17.43	-2.563	711.56	4.6	0.0	3.907	0.090	3.0	0 -99.000
ILAR	80.46	356.11	9:25: 20.07	-4.272	714.15	5.6	0.0	3.977	0.140	3.0	0 -99.000
PETK	83.57	26.08	9:25: 41.16	0.787	734.63	4.9	0.0	4.477	0.240	3.0	0 -99.000

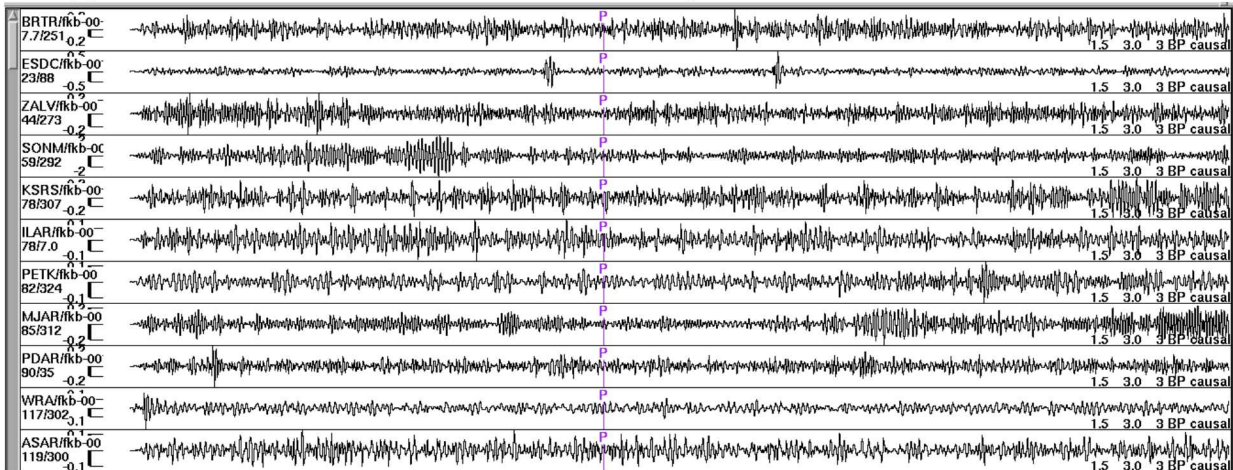
False event – explanation below next event – these were split events.

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
109 10168735 9:13: 28.15 2.60 35.840 25.910 10.3 4.02 0.60 7 NEW 0 0.000 -
1.000 0 30 23.0 28.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	44.89	56.61	9:21: 25.40	-2.067	476.85	4.4	0.0	3.081	0.080	8.4	0 -99.000
ZALV	45.89	46.38	9:21: 38.58	3.131	490.92	4.4	0.0	3.361	0.110	5.1	0 -99.000

MJAR	86.28	47.02	9:25: 58.30	-1.486	750.91	4.3	0.0	3.761	0.060	3.0	0 -99.000
PDAR	90.97	327.29	9:26: 33.90	-2.956	785.40	4.4	0.0	4.161	0.190	3.0	0 -99.000
NVAR	98.27	330.43	9:27: 13.45	4.539	825.22	4.4	0.0	4.301	0.080	3.0	0 -99.000
WRA	118.18	95.26	9:32: 7.44	-1.242	1120.05	4.4	0.0	4.781	0.040	3.0	0 -99.000
ASAR	119.65	99.17	9:32: 15.35	0.082	1127.30	4.9	0.0	4.691	0.060	3.0	0 -99.000

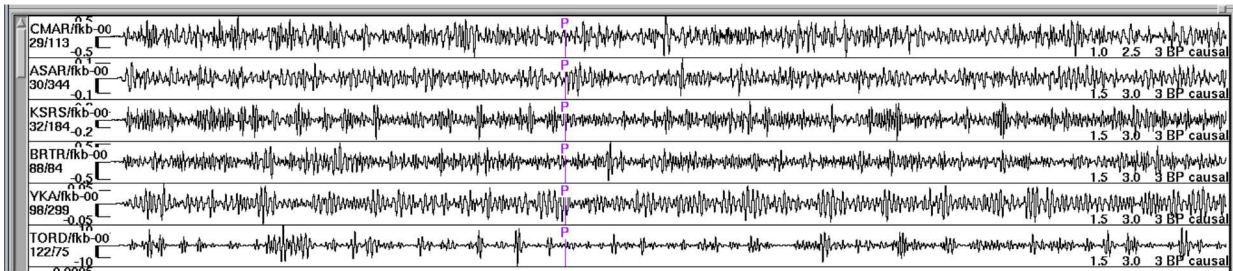
The two preceding events should locate as one +/-3 secs origin time, < 1 degree location. Both are: **False event(s)** – can’t confirm the arrivals. Presented as one entity.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 110 16892827 9:23: 59.65 1.17 5.420 125.920 65.6 4.38 0.79 7 NEW 0 0.000 -
 1.000 0 22 27.0 27.5

Sta	Dist	seaz	ArrivTime		Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	29.98	296.85	9:29:	59.56	1.469		359.26	4.2	0.0	4.642	0.050	3.0	0 -99.000
ASAR	30.27	167.30	9:30:	2.20	0.779		362.61	4.8	0.0	3.682	0.040	9.5	0 -99.000
KSRS	31.29	1.41	9:30:	19.34	0.921		379.71	4.4	0.0	4.412	0.090	3.0	0 -99.000
KURK	59.96	326.60	9:33:	59.50	0.329		599.71	4.2	0.0	3.132	0.150	3.0	0 -99.000
BRTR	88.75	309.64	9:36:	42.98	-1.625		762.36	4.6	0.0	4.002	0.090	3.0	0 -99.000
YKA	97.33	24.31	9:37:	29.12	-0.099		808.43	5.1	0.0	5.192	0.120	3.0	0 -99.000
TORD	122.40	289.61	9:42:	45.53	-1.774		1125.16	4.8	0.0	5.592	0.120	3.0	0 -99.000

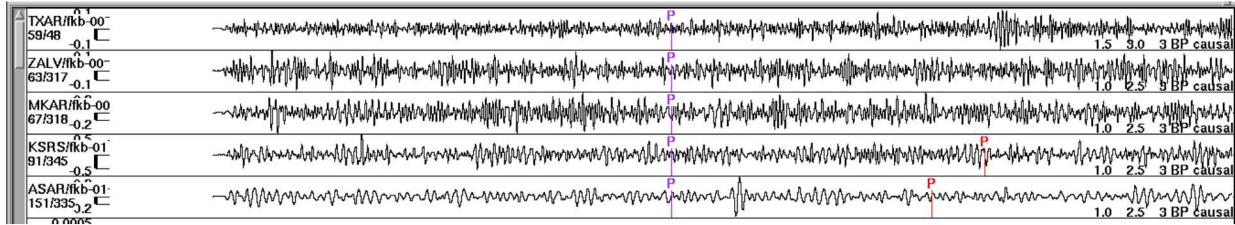
False event. Can’t confirm detections



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
111 10132031 9:27: 10.81 2.41 48.960 -28.370 0.0 3.83 0.33 6 NEW 0 0.000 -
1.000 0 32 18.0 29.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	58.97	279.97	9:37: 11.98	-0.478	601.31	4.3	0.0	3.938	0.140	6.6	0 -99.000
NVAR	61.90	297.08	9:37: 35.71	2.023	624.79	4.4	0.0	3.728	0.100	3.2	0 -99.000
ZALV	62.73	37.63	9:37: 42.30	2.824	630.86	4.8	0.0	4.108	0.080	3.0	0 -99.000
MKAR	66.98	44.25	9:38: 7.35	0.209	655.94	4.4	0.0	3.348	0.290	7.9	0 -99.000
KSRS	91.00	18.57	9:40: 12.60	-4.746	782.01	5.2	0.0	4.318	0.110	3.0	0 -99.000
ASAR	150.80	34.54	9:46: 58.65	0.167	1188.41	6.0	0.0	3.568	0.040	5.3	0 -99.000

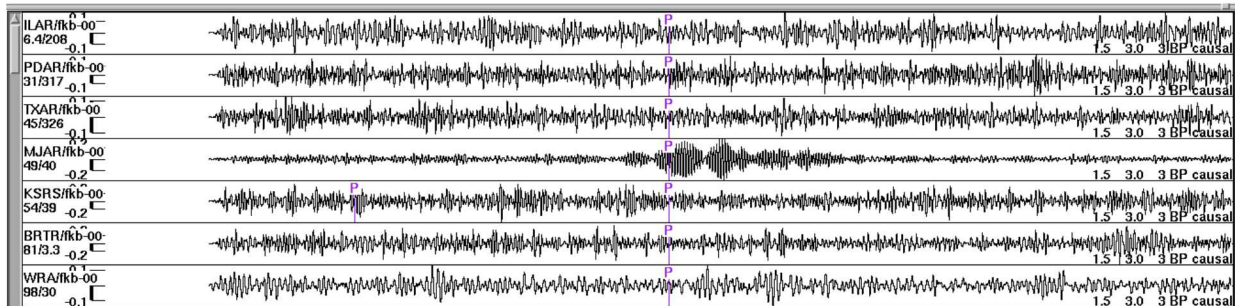
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
112 9276716 9:31: 38.44 3.19 59.020 -152.710 72.4 3.48 0.94 7 NEW 0 0.000 -
1.000 0 123.0 34.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	3.85	27.31	9:33: 6.77	-3.701	87.49	4.5	0.0	1.721	0.120	8.8	0 -99.000
PDAR	30.84	108.02	9:37: 46.26	-2.414	367.05	4.6	0.0	3.681	0.120	6.2	0 -99.000
TXAR	44.61	113.89	9:39: 46.23	2.907	487.20	4.3	0.0	3.151	0.090	7.0	0 -99.000
MJAR	49.66	273.91	9:40: 13.92	-4.000	514.66	4.5	0.0	3.161	0.200	3.0	0 -99.000
KSRS	53.85	283.11	9:40: 53.47	0.788	554.30	4.9	0.0	3.751	0.070	3.0	0 -99.000
BRTR	79.14	356.35	9:43: 52.76	4.950	733.80	5.2	0.0	3.781	0.240	3.0	0 -99.000
WRA	100.22	247.20	9:45: 7.91	1.470	808.40	4.6	0.0	5.111	0.200	3.0	0 -99.000

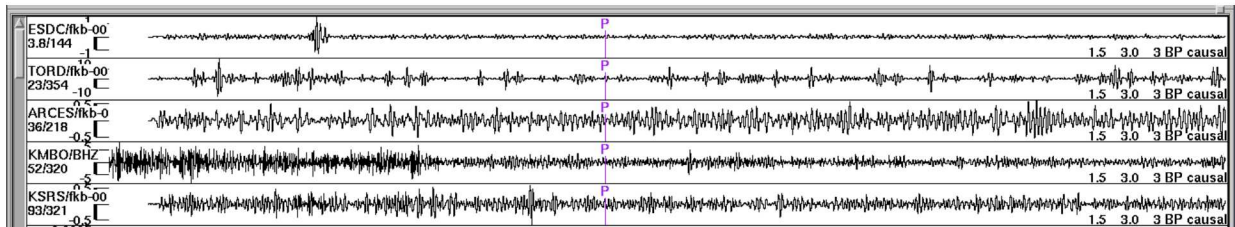
False event. Can't confirm detections.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
113 4783114 9:33: 16.00 2.51 36.580 -1.220 0.0 4.00 0.81 5 NEW 0 0.000 -
1.000 0 31 23.0 22.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ESDC	4.54	325.29	9:34: 15.32	0.124	59.89	4.7	0.0	2.939	0.030	6.5	0 -99.000
TORD	22.83	174.19	9:38: 24.49	-1.009	309.31	5.0	0.0	4.199	0.160	6.2	0 -99.000
ARCES	36.51	15.09	9:40: 13.92	-3.521	419.06	4.6	0.0	3.169	0.150	3.2	0 -99.000
KMBO	51.04	127.89	9:42: 27.07	0.160	551.76	7.3	1.8	4.889	0.060	3.0	0 -99.000
KSRS	92.74	38.58	9:46: 32.29	4.246	796.48	5.4	0.0	4.789	0.110	3.0	0 -99.000

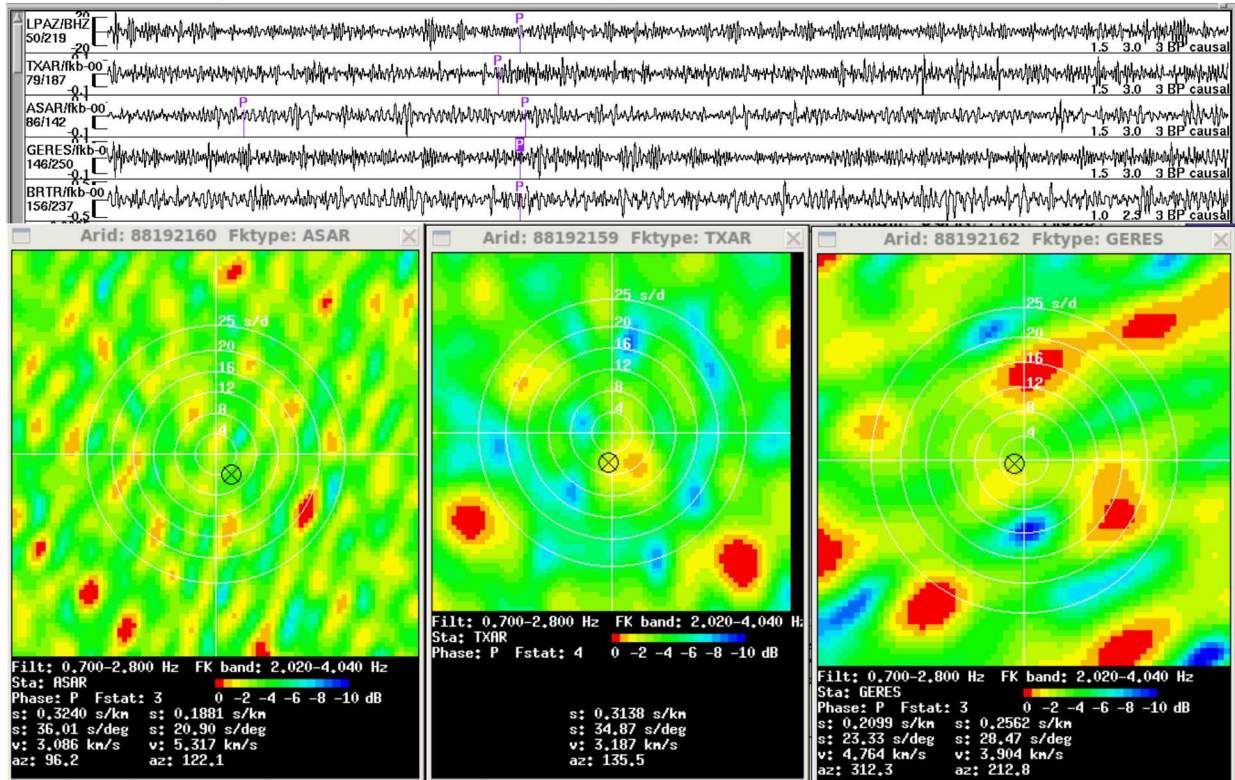
False event. Can't confirm detections.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 114 10114292 9:34: 53.55 1.53 -49.770 -113.370 0.0 3.76 0.38 6 NEW 0 0.000 -
 1.000 0 43 16.2 26.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	49.91	217.21	9:43: 46.17	-0.913	532.09	5.1	0.0	0.000	0.006	5.4	0 -99.000
TXAR	79.57	186.76	9:46: 58.65	-1.468	724.49	5.8	0.0	-0.661	0.002	5.1	0 -99.000
ASAR	85.24	143.18	9:47: 32.93	-0.668	759.36	5.4	0.0	-1.059	0.001	5.0	0 -99.000
NVAR	88.19	177.23	9:47: 47.43	2.112	772.84	5.3	0.0	-1.087	0.009	4.7	0 -99.000
GERES	146.56	247.70	9:54: 33.49	-1.230	1178.97	6.7	0.0	-1.031	0.007	3.0	0 -99.000
BRTR	155.04	234.82	9:55: 13.04	2.166	1219.42	5.5	0.0	-0.591	0.002	3.6	0 -99.000

False event. A couple of the detections look possible, but can't be confirmed via FK.

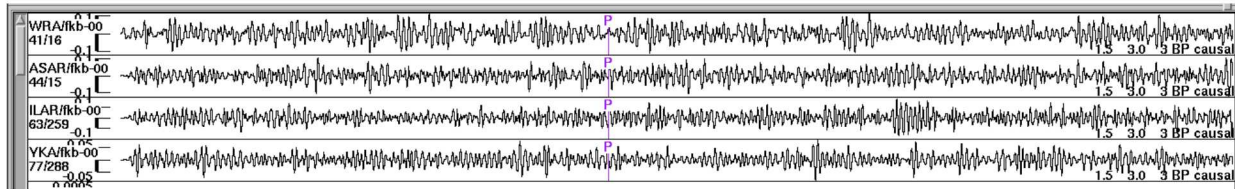


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 115 15337939 9:42: 23.12 0.09 19.680 145.200 151.0 3.10 0.13 5 NEW 0 0.000
 -1.000 0 18 24.6 31.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	40.81	16.08	9:49: 50.04	0.112	447.02	5.3	0.0	-1.344	0.001	9.4	0 -99.000
ASAR	44.49	15.57	9:50: 19.04	-0.103	476.35	7.9	0.0	-1.368	0.003	7.7	0 -99.000
ILAR	62.92	258.34	9:52: 32.20	0.096	609.50	5.5	0.0	-1.319	0.002	5.2	0 -99.000
YKA	77.28	287.90	9:54: 0.53	-0.071	697.89	4.2	0.0	-1.049	0.002	5.2	0 -99.000

NVAR 82.77 289.20 9:54: 32.17 -0.035 729.57 6.0 0.0 -1.413 0.008 4.3 0 -99.000

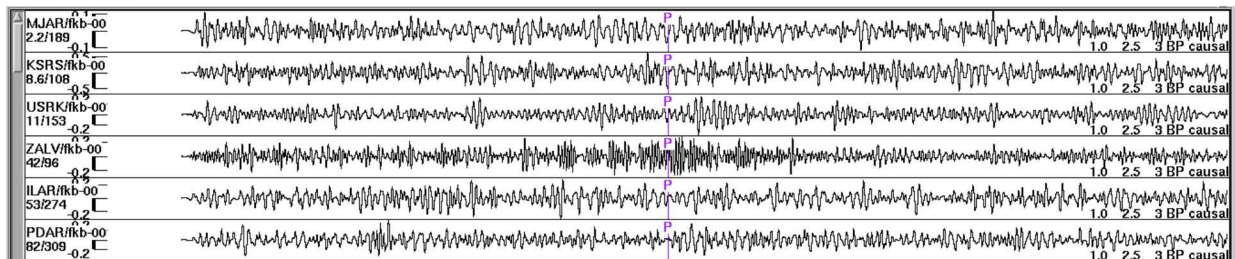
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
116 9368818 9:52: 25.61 3.30 34.350 137.840 365.1 3.23 0.59 6 NEW 0 0.000 -
1.000 0 18 24.0 27.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	4.52	3.50	9:53: 14.38	-4.247	47.88	4.4	0.0	1.997	0.120	7.4	0 -99.000
KSRS	9.87	306.11	9:54: 28.21	-3.017	121.78	4.6	0.0	3.237	0.070	3.9	0 -99.000
USRK	13.03	340.81	9:54: 57.22	2.000	150.83	4.2	0.0	3.277	0.190	3.2	0 -99.000
ZALV	43.36	316.50	9:59: 44.62	4.083	438.28	5.1	0.0	3.877	0.140	4.4	0 -99.000
ILAR	55.29	30.27	10: 1: 12.95	3.483	527.38	4.3	0.0	3.567	0.110	5.6	0 -99.000
PDAR	83.28	43.22	10: 4: 6.97	-2.301	701.08	4.7	0.0	3.437	0.200	3.1	0 -99.000

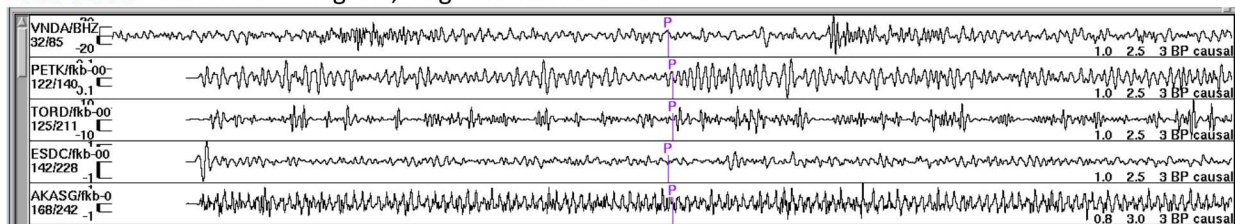
False event. Can't confirm detections



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
117 6871350 9:54: 29.53 2.12 -54.940 -131.790 0.0 4.87 0.43 7 NEW 0 0.000 -
1.000 0 43 16.0 21.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
VNDA	32.30	201.93	10: 0: 59.77	0.997	390.12	6.3	2.8	4.317	0.070	3.0	0 -99.000
NVAR	93.49	10.43	10: 7: 49.78	1.013	800.27	4.3	0.0	4.737	0.210	3.0	0 -99.000
PETK	122.29	317.69	10:13: 28.59	2.325	1138.12	4.3	0.0	4.717	0.200	3.0	0 -99.000
TORD	124.86	120.22	10:13: 31.23	1.067	1141.65	4.6	0.0	5.817	0.100	3.0	0 -99.000
ESDC	142.31	91.41	10:14: 5.51	1.105	1175.15	4.5	0.0	4.827	0.080	3.4	0 -99.000
KURK	161.35	269.72	10:14: 25.28	-3.793	1195.92	5.1	0.0	4.987	0.190	3.0	0 -99.000
AKASG	167.71	101.25	10:14: 33.19	-2.713	1202.92	5.9	0.0	4.687	0.100	3.0	0 -99.000

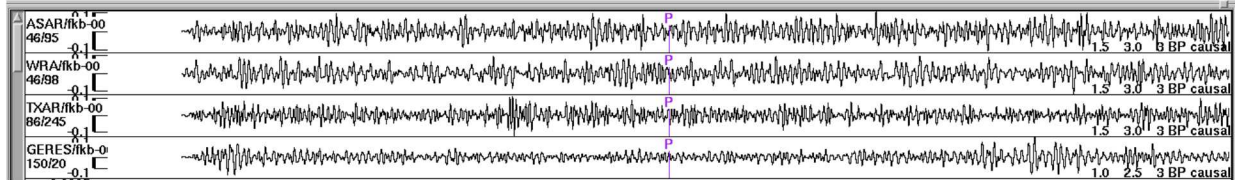
False event. Can't confirm signals, illogical association set.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
118 1050199 10:11: 22.03 1.95 -19.720 -177.010 192.0 3.15 0.45 5 NEW 0 0.000
-1.000 0 13 26.2 33.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	45.85	99.73	10:19: 23.23	-0.611	481.24	7.9	0.0	-1.039	0.003	9.7	0 -99.000
ASAR	45.74	96.26	10:19: 24.55	1.912	483.57	11.1	0.0	-1.536	0.013	9.5	0 -99.000
NVAR	80.24	233.99	10:23: 9.99	2.587	708.37	4.8	0.0	-0.914	0.006	4.1	0 -99.000
TXAR	86.05	243.86	10:23: 37.68	-1.302	735.97	9.8	0.0	-0.776	0.004	5.1	0 -99.000
GERES	150.65	20.05	10:30: 52.73	-2.585	1170.84	4.4	0.0	-1.980	0.004	5.1	0 -99.000

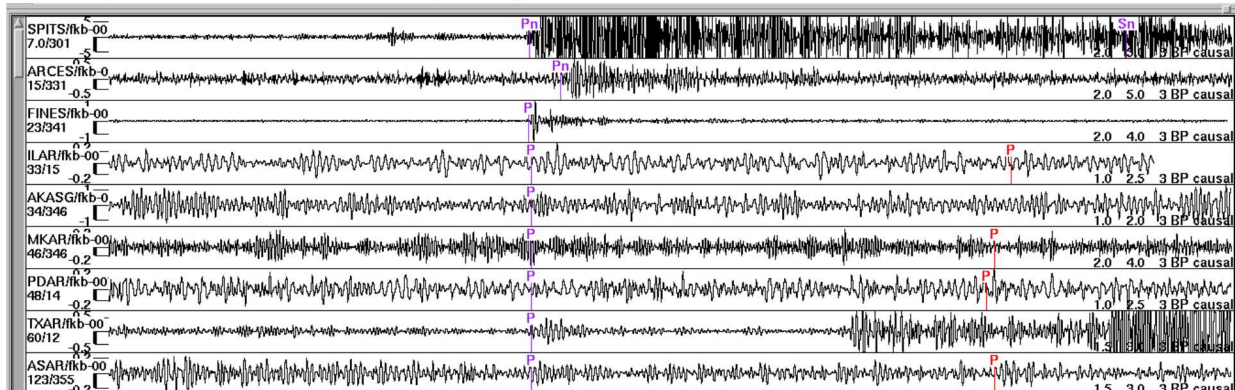
False event. Can't confirm signals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
119 11561457 10:23: 50.86 2.35 78.280 -20.010 0.0 3.73 0.21 7 SEL 17815401 2.157
1.178 1 40 21.0 39.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
FINES	22.34	114.42	10:28: 43.54	-2.902	292.68	7.0	16.7	3.500	0.130	8.1	1 1.495
AKASG	33.12	118.17	10:30: 25.05	0.010	393.40	4.4	3.5	3.630	0.090	4.8	0 -99.000
ILAR	33.21	321.25	10:30: 30.32	-3.533	398.53	4.4	4.4	3.720	0.110	6.8	0 -99.000
MKAR	46.80	67.05	10:32: 25.02	1.412	513.25	4.8	4.1	3.810	0.090	6.3	0 -99.000
PDAR	48.33	279.65	10:32: 35.57	0.197	523.98	4.2	4.5	3.950	0.080	5.1	0 -99.000
TXAR	60.21	269.98	10:34: 1.26	0.961	610.00	5.6	4.0	3.420	0.230	5.3	0 -99.000
ASAR	123.44	28.88	10:42: 55.20	3.854	1144.43	4.9	4.0	4.060	0.120	3.0	0 -99.000

Good event. Can't confirm all arrivals, but a good event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
120 11561457 10:24: 50.19 2.69 77.160 -20.620 0.0 3.78 0.16 5 NEW 0 0.000 -
1.000 0 40 21.0 25.1

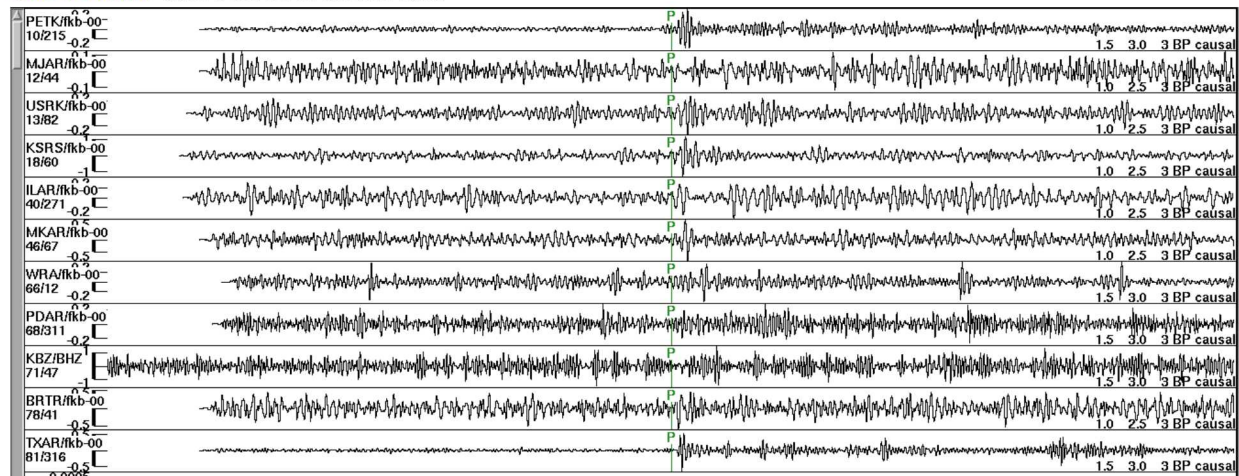
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	33.21	321.25	10:31: 42.83	4.050	413.12	4.2	4.4	3.880	0.070	6.8	0 -99.000
BRTR	44.52	117.63	10:32: 59.30	1.878	489.42	4.5	4.6	3.760	0.110	3.9	0 -99.000
MKAR	46.80	67.05	10:33: 23.03	-3.077	513.28	4.8	4.1	3.710	0.180	6.3	0 -99.000
PDAR	48.33	279.65	10:33: 32.26	-2.547	521.83	4.6	7.6	3.700	0.230	5.1	0 -99.000
CMAR	77.30	58.36	10:37: 0.56	1.775	730.17	4.7	4.8	4.080	0.100	3.1	0 -99.000

False event – see red picks in previous picture. Close stations don't support this hypothesis.

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
121 14340988 10:32: 50.07 2.53 45.170 148.880 72.1 3.80 0.24 13 SEL 17815406
2.090 0.562 8 19 23.0 64.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
PETK	10.46	31.50	10:35: 8.50	0.756	138.30	6.5	0.0	3.929	0.150	3.0	1	-1.402
MJAR	11.23	228.28	10:35: 30.91	-1.003	160.88	4.7	0.0	3.639	0.090	7.6	0	-99.000
USRK	11.93	274.33	10:35: 42.77	3.880	173.45	4.6	0.0	3.829	0.090	3.3	1	-0.254
KSRS	17.17	252.88	10:36: 48.69	1.156	238.59	5.3	0.0	3.989	0.040	3.8	1	1.860
ILAR	40.24	36.78	10:40: 10.40	-3.608	441.25	4.9	0.0	3.799	0.180	5.9	1	0.160
MKAR	45.19	297.48	10:41: 0.50	1.740	490.67	4.6	0.0	3.179	0.310	7.8	1	-0.406
WRA	65.46	194.80	10:43: 26.84	-1.751	636.80	5.1	0.0	4.169	0.100	8.0	1	0.168
PDAR	68.60	50.74	10:43: 49.25	4.982	659.40	4.4	0.0	4.029	0.050	4.2	0	-99.000
ASAR	69.17	194.45	10:43: 51.88	-0.551	661.84	4.6	0.0	4.019	0.110	6.6	1	-1.831
KBZ	70.09	312.09	10:43: 53.20	0.032	663.50	5.9	1.0	3.649	0.450	3.0	0	-99.000
AKASG	71.60	324.28	10:43: 59.79	-0.924	669.77	4.8	0.0	3.819	0.070	3.8	0	-99.000
BRTR	77.79	314.35	10:44: 38.03	-0.263	707.80	4.9	0.0	3.699	0.260	3.0	0	-99.000
TXAR	81.33	57.30	10:44: 52.53	-4.444	722.55	12.0	0.0	3.639	0.120	4.9	1	0.320

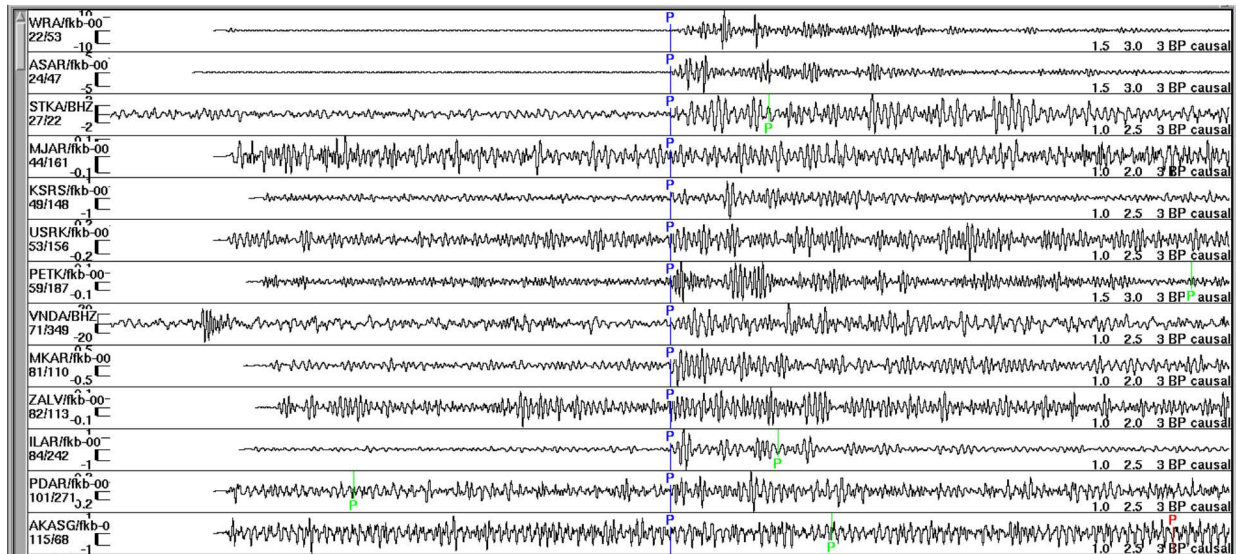
Good event. Can't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
122 12164311 10:34: 18.40 3.05 -6.530 150.520 54.2 4.29 0.36 14 SEL 17815488
12.726 0.845 9 15 25.0 66.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	22.10	227.57	10:38: 55.25	0.106	276.46	17.4	0.0	3.753	0.220	9.8	1	-0.026
ASAR	24.86	221.27	10:39: 21.62	-1.035	303.91	20.2	0.0	3.733	0.220	9.5	1	1.150
STKA	27.94	198.21	10:39: 47.99	-3.202	329.89	6.4	2.0	4.113	0.320	4.2	1	3.048
MJAR	43.50	344.43	10:42: 20.92	-1.024	482.52	4.7	0.0	4.133	0.110	3.0	0	-99.000
KSRS	47.96	334.57	10:42: 55.20	-1.666	517.11	5.4	0.0	4.393	0.060	3.0	1	-5.741
USRK	52.39	342.34	10:43: 36.06	4.271	557.11	4.6	0.0	4.283	0.060	3.0	0	-99.000
PETK	58.51	4.37	10:44: 12.98	-3.127	594.21	6.2	0.0	4.393	0.190	3.0	1	-5.221
VNDA	72.30	177.65	10:45: 34.72	3.798	676.96	5.5	2.0	4.063	0.160	3.0	1	-7.701
MKAR	79.92	319.27	10:46: 23.50	0.727	725.14	4.3	0.0	3.903	0.100	5.9	1	-4.734
ZALV	80.92	326.65	10:46: 31.41	3.204	732.73	4.4	0.0	4.563	0.110	3.0	0	-99.000
KURK	83.46	322.19	10:46: 39.32	-1.998	740.73	4.8	0.0	4.803	0.130	3.0	1	-2.719

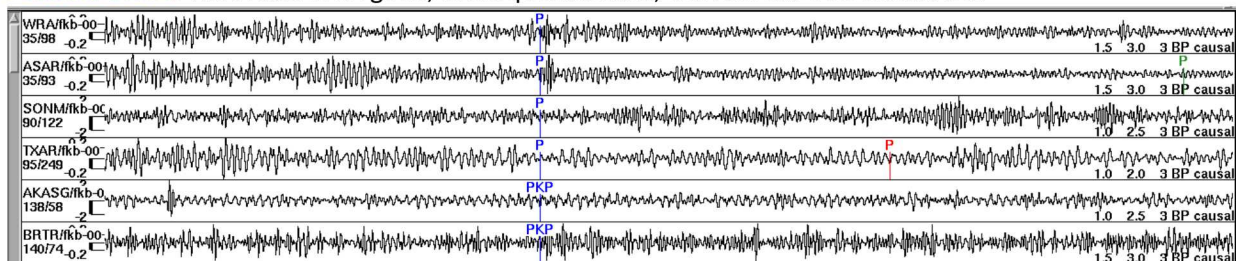
ILAR 83.18 22.32 10:46: 40.63 -2.639 742.06 7.7 0.0 4.313 0.220 5.6 1 -4.752
 PDAR 100.19 47.66 10:48: 5.01 3.270 826.26 5.1 0.0 4.203 0.090 3.0 0 -99.000
 AKASG 114.21 323.88 10:52: 56.37 4.609 1117.64 4.5 0.0 4.563 0.040 3.0 0 -99.000
 Good event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 123 12016611 10:34: 57.95 2.87 -17.040 169.500 56.8 4.24 0.72 8 NEW 0 0.000
 -1.000 0 14 25.0 38.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	32.29	261.92	10:41: 30.82	0.314	392.84	5.1	0.0	3.980	0.090	9.7	0 -99.000
ASAR	32.65	255.01	10:41: 32.14	-4.356	394.26	6.7	0.0	3.000	0.160	9.5	0 -99.000
SONM	86.31	323.35	10:47: 33.37	2.155	754.93	5.1	0.0	3.660	0.220	3.0	0 -99.000
NVAR	88.86	48.75	10:47: 36.01	-0.099	757.39	5.7	0.0	4.340	0.110	3.9	0 -99.000
TXAR	97.03	61.54	10:48: 18.19	1.610	799.66	4.7	0.0	4.340	0.150	3.3	0 -99.000
AKASG	134.58	324.41	10:54: 2.29	-4.983	1144.16	4.8	0.0	4.440	0.120	3.0	0 -99.000
KMBO	128.29	253.15	10:54: 4.92	2.286	1146.59	5.4	3.4	5.710	0.180	3.0	0 -99.000
BRTR	135.90	308.30	10:54: 16.79	3.073	1158.56	4.7	0.0	4.440	0.100	3.0	0 -99.000

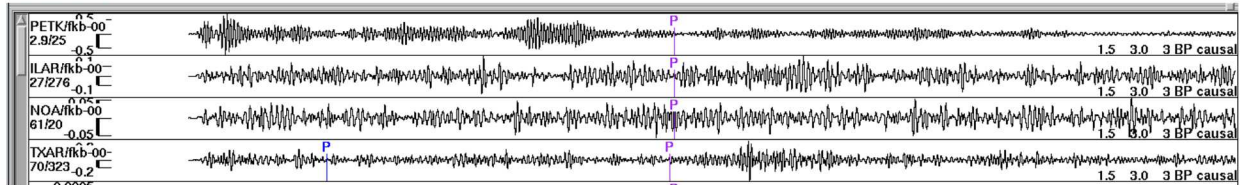
Possible event. ASAR and WRA good, BRTR questionable, the rest can't be confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
124 12484340 10:38: 19.66 3.45 55.690 159.890 282.8 3.32 0.51 4 NEW 0 0.000
-1.000 0 19 23.0 24.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PETK	2.71	197.58	10:39: 9.76	-1.062	50.50	5.6	0.0	2.313	0.170	5.0	0 -99.000
ILAR	27.48	48.76	10:43: 30.79	-4.910	311.58	4.7	0.0	3.053	0.090	6.3	0 -99.000
NOA	60.87	342.75	10:48: 6.33	4.182	586.80	4.6	0.0	3.403	0.130	5.8	0 -99.000
TXAR	70.18	67.03	10:49: 1.70	1.747	642.50	4.6	0.0	3.773	0.050	7.6	0 -99.000

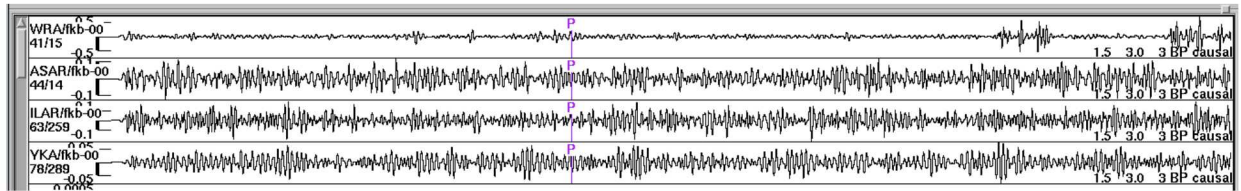
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
125 14484098 10:42: 45.97 0.50 19.800 144.390 391.0 1.79 0.13 5 NEW 0 0.000
-1.000 0 18 24.5 32.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	40.21	16.10	10:49: 50.48	0.121	424.22	5.1	0.0	-1.347	0.001	9.4	0 -99.000
ASAR	43.88	15.57	10:50: 19.48	-0.156	453.55	8.0	0.0	-1.371	0.002	7.7	0 -99.000
ILAR	63.51	258.21	10:52: 32.64	-0.757	586.64	5.0	0.0	-1.373	0.002	5.6	0 -99.000
YKA	77.87	287.76	10:54: 0.97	0.789	675.14	4.4	0.0	-1.057	0.003	5.2	0 -99.000
NVAR	83.25	288.84	10:54: 32.61	0.003	706.77	5.7	0.0	-1.425	0.007	4.4	0 -99.000

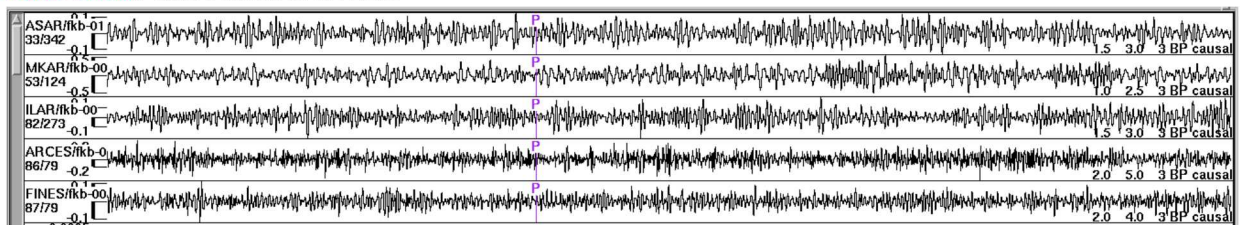
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
126 15808840 10:49: 25.43 1.38 7.970 124.080 558.0 3.77 0.26 5 NEW 0 0.000
-1.000 0 22 28.9 29.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	31.95	341.01	10:55: 12.16	-0.144	346.42	4.7	0.0	-1.511	0.002	9.2	0 -99.000
MKAR	53.33	124.70	10:57: 46.41	-1.801	501.52	8.8	0.0	-1.282	0.003	8.6	0 -99.000
ILAR	83.43	272.24	11: 0: 48.34	-0.413	682.97	5.4	0.0	-0.890	0.004	3.5	0 -99.000
ARCES	86.48	79.72	11: 1: 2.84	-0.108	697.74	8.8	0.0	-1.502	0.002	3.9	0 -99.000
FINES	87.69	79.83	11: 1: 12.07	2.465	706.84	5.9	0.0	-0.951	0.002	4.3	0 -99.000

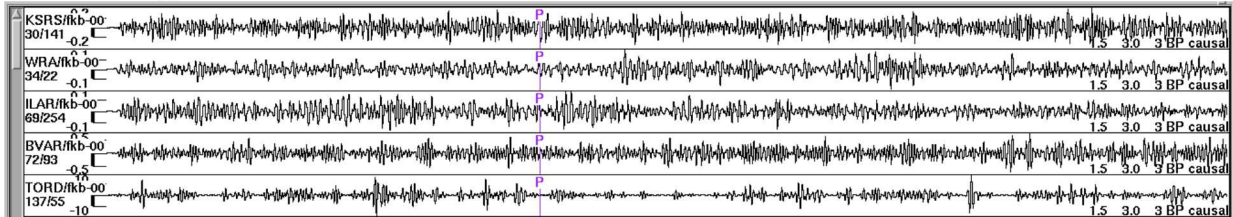
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
127 17661388 10:54: 19.42 1.88 12.440 146.740 0.0 4.43 0.99 5 NEW 0 0.000 -
1.000 0 17 25.0 25.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KSRS	28.83	332.68	11: 0: 31.20	-0.101	372.41	4.8	0.0	4.275	0.080	3.0	0	-99.000
WRA	33.51	196.67	11: 1: 8.12	-0.981	408.49	4.8	0.0	4.035	0.120	9.3	0	-99.000
ILAR	70.00	25.22	11: 5: 22.56	-1.302	663.96	4.2	0.0	3.905	0.210	7.2	0	-99.000
BVAR	70.36	322.02	11: 5: 44.97	-1.279	685.34	4.5	0.0	3.575	0.090	3.1	0	-99.000
TORD	134.85	302.91	11:13: 47.49	3.663	1169.06	4.4	0.0	6.355	0.110	3.0	0	-99.000

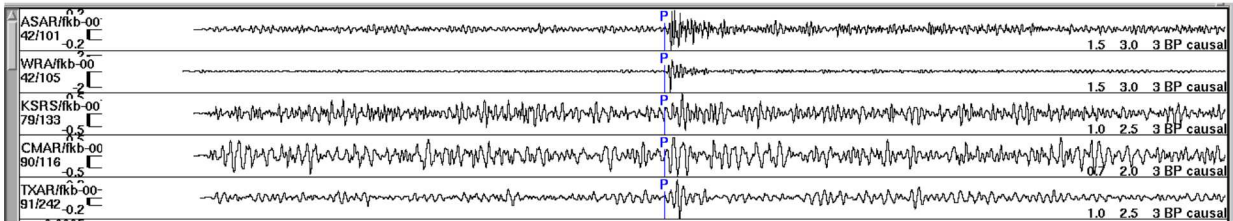
False event. Can't confirm arrivals – tried changing ILAR and WRA time to where it appears there is energy, FK doesn't support detections.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
128 9838166 10:59: 14.74 1.30 -25.650 180.020 554.3 3.30 0.43 8 SEL 17815512 6.314
0.855 4 12 25.0 37.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	42.40	260.01	11: 6: 15.29	-1.471	420.47	14.9	0.0	2.444	0.220	9.5	1	0.083
WRA	42.73	265.50	11: 6: 17.93	-1.132	424.00	7.2	0.0	2.874	0.300	9.7	1	-0.041
MJAR	71.62	325.34	11: 9: 47.55	-1.256	633.33	6.7	0.0	3.414	0.180	3.0	1	-1.251
USRK	80.50	327.00	11:10: 37.65	-0.725	683.33	4.5	0.0	3.644	0.220	3.0	0	-99.000
CMAR	89.62	290.21	11:11: 18.52	0.517	723.43	4.9	0.0	3.874	0.130	3.0	0	-99.000
TXAR	89.93	57.92	11:11: 25.11	0.364	730.60	4.4	0.0	3.634	0.230	3.3	1	-0.626
AKASG	144.71	327.85	11:17: 52.71	2.461	1118.08	4.5	0.0	3.304	0.080	3.0	0	-99.000
BRTR	147.50	307.94	11:18: 0.62	1.241	1125.78	4.5	0.0	3.204	0.210	3.2	0	-99.000

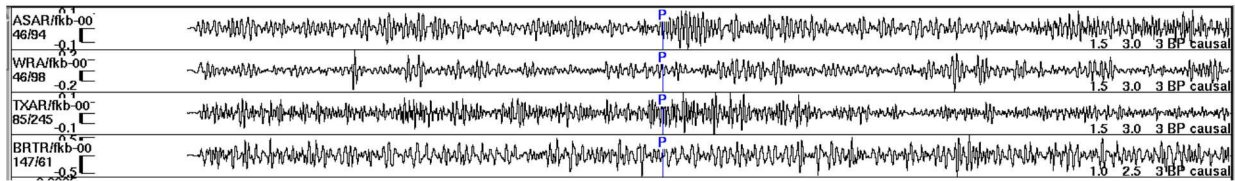
Good event. Not all arrivals could be confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
129 10443978 11:11: 14.56 1.21 -21.490 -176.010 149.0 3.92 0.26 5 NEW 0 0.000
-1.000 0 13 26.2 32.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	45.75	101.46	11:19: 22.35	-1.920	488.32	8.6	0.0	-1.083	0.003	9.7	0	-99.000
ASAR	45.52	97.98	11:19: 24.99	1.465	490.19	11.5	0.0	-1.563	0.011	9.5	0	-99.000
NVAR	81.12	233.09	11:23: 10.43	0.358	715.44	4.6	0.0	-0.939	0.005	4.1	0	-99.000
TXAR	86.68	242.78	11:23: 38.12	-0.780	743.02	9.5	0.0	-0.767	0.003	5.1	0	-99.000
BRTR	148.75	64.26	11:30: 45.26	0.877	1170.74	6.3	0.0	-1.059	0.008	3.6	0	-99.000

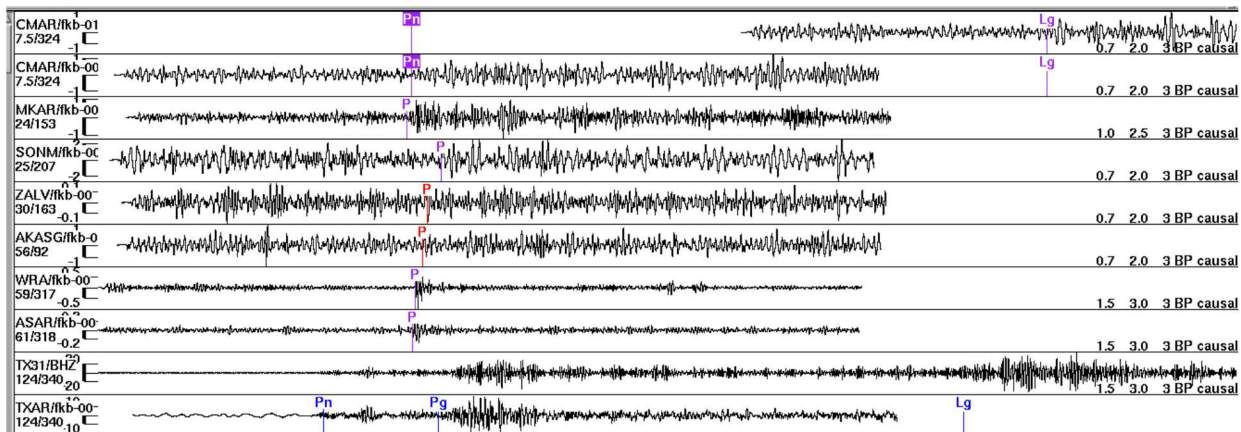
False event. Couldn't confirm arrivals. While ASAR appears to have some energy, FK doesn't confirm an arrival consistent with the location.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 130 5245764 11:13: 10.58 3.11 25.170 95.580 34.0 3.30 0.75 8 SEL 17815523 8.601
 1.526 4 25 29.5 53.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	8.35	150.23	11:14: 57.36	-3.081	106.64	5.9	4.1	3.136	0.090	6.8	0 -99.000
SONM	23.88	19.92	11:18: 24.35	0.052	313.77	4.5	4.0	3.066	0.130	6.5	1 5.817
MKAR	23.11	338.12	11:18: 26.98	4.427	316.24	5.0	5.8	2.786	0.130	8.8	1 -5.924
ZALV	29.03	348.08	11:19: 17.08	1.810	366.14	4.4	3.8	3.676	0.140	5.4	0 -99.000
AKASG	55.03	315.14	11:22: 48.02	2.569	577.42	4.3	3.7	3.436	0.070	3.0	0 -99.000
WRA	59.66	135.80	11:23: 2.52	-1.593	591.76	11.3	6.5	2.906	0.180	8.3	1 1.080
ASAR	62.19	138.94	11:23: 19.66	-2.117	609.09	11.9	14.4	2.856	0.150	7.8	1 0.901
TXAR	122.44	18.91	11:32: 8.32	3.375	1136.69	5.1	24.3	5.226	0.130	3.0	0 -99.000

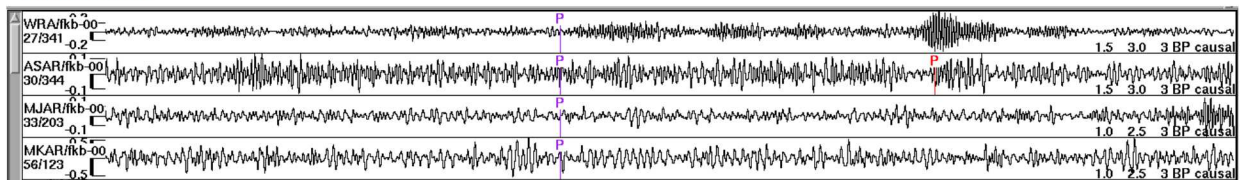
Good event. Used CMAR/WRA/ASAR/MKAR/SONM for location, added a CMAR Lg. TXAR is Pg to a regional event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 131 5734900 11:23: 48.66 0.60 5.720 126.000 33.0 3.73 0.23 4 NEW 0 0.000 -
 1.000 0 22 28.5 31.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	26.41	341.70	11:29: 24.84	0.745	335.74	9.4	0.0	-1.014	0.003	9.8	0 -99.000
ASAR	29.84	344.59	11:29: 53.85	-0.924	364.46	10.5	0.0	-1.350	0.003	9.5	0 -99.000
MJAR	32.86	202.38	11:30: 17.58	0.045	387.88	6.2	0.0	-1.436	0.002	3.0	0 -99.000
MKAR	55.93	123.42	11:33: 20.83	0.134	571.84	6.1	0.0	-1.669	0.003	8.8	0 -99.000

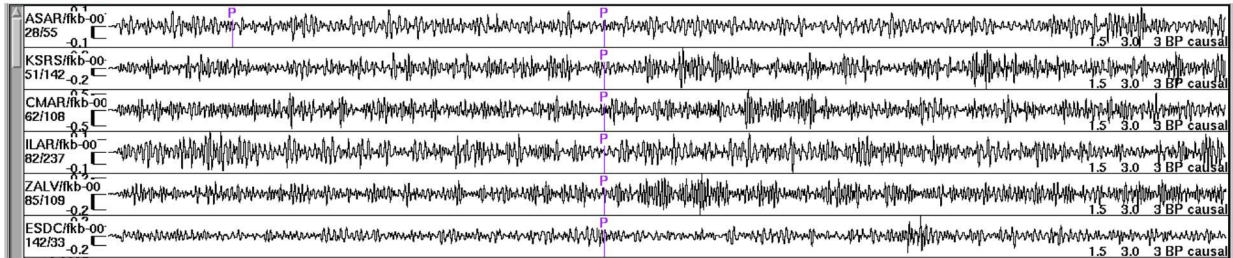
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
132 10489469 11:24: 54.58 3.36 -6.410 156.440 0.0 4.31 0.29 7 NEW 0 0.000 -
1.000 0 15 25.0 36.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	26.30	230.80	11:30: 38.67	-4.246	344.75	4.4	0.0	3.939	0.090	9.5	0 -99.000
KSRS	52.12	331.73	11:34: 3.02	4.160	548.95	5.3	0.0	4.429	0.040	3.0	0 -99.000
CMAR	61.96	295.65	11:35: 19.48	2.128	624.55	4.4	0.0	4.219	0.070	3.2	0 -99.000
ILAR	83.84	21.25	11:37: 15.50	-0.621	741.70	4.8	0.0	4.099	0.160	6.0	0 -99.000
ZALV	85.39	325.88	11:37: 32.64	4.226	757.97	5.4	0.0	4.869	0.100	3.0	0 -99.000
NVAR	91.55	51.59	11:37: 56.37	-1.478	782.30	4.6	0.0	4.339	0.220	3.0	0 -99.000
ESDC	143.53	333.44	11:44: 29.24	1.167	1174.52	4.6	0.0	4.589	0.050	3.0	0 -99.000

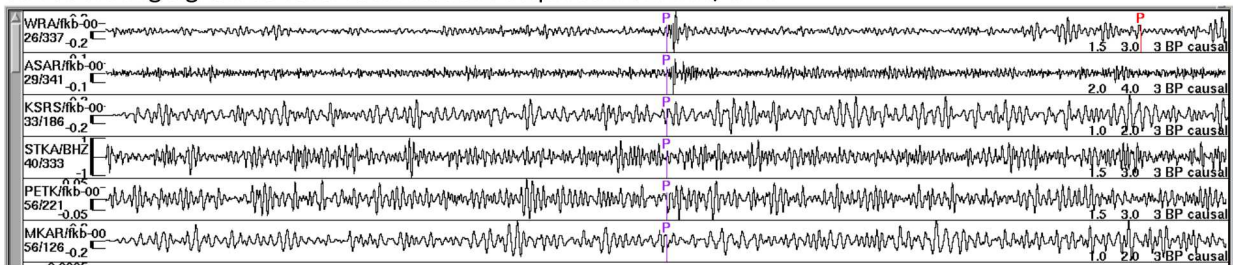
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
133 6547155 11:26: 21.59 2.08 6.230 122.010 566.6 3.09 0.78 6 NEW 0 0.000 -
1.000 0 22 27.0 39.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	28.08	158.13	11:31: 32.72	-0.232	311.05	6.8	0.0	2.234	0.090	9.8	0 -99.000
ASAR	31.37	161.63	11:31: 57.77	-2.240	336.48	5.9	0.0	2.184	0.090	9.5	0 -99.000
KSRS	31.31	6.57	11:32: 0.41	1.928	338.78	5.5	0.0	4.244	0.080	3.0	0 -99.000
STKA	41.60	156.67	11:33: 28.74	3.023	427.10	5.3	4.2	3.164	0.250	4.9	0 -99.000
MKAR	53.74	325.77	11:34: 45.21	0.319	504.40	4.7	0.0	2.814	0.120	8.9	0 -99.000
PETK	54.38	24.57	11:34: 55.75	-2.797	514.45	4.6	0.0	3.914	0.110	3.0	0 -99.000

False event. ASAR/WRA are good detections and locate, by themselves, to 4N x 124E – can't find corroborating signals at other local stations acquired from IRIS/GFZ.



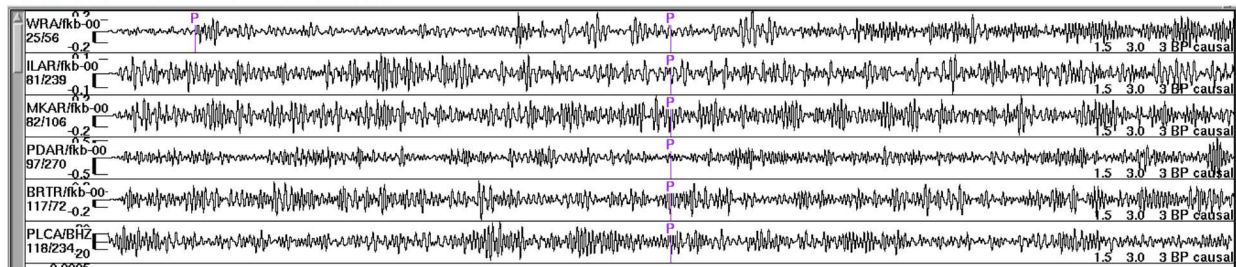


Stations acquired from IRIS/GFZ to check previous event.

```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
134 9905281 11:27: 31.46 1.73 -4.750 155.400 394.0 3.25 0.65 6 NEW 0 0.000 -
1.000 0 15 25.0 30.6
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	24.77	228.62	11:32: 24.14	-0.285	292.98	4.7	0.0	3.448	0.080	9.8	0 -99.000
ILAR	81.01	21.89	11:38: 59.65	-2.560	688.28	4.6	0.0	2.428	0.110	5.8	0 -99.000
MKAR	80.42	318.62	11:39: 8.88	0.817	697.81	4.6	0.0	2.268	0.230	6.0	0 -99.000
PDAR	97.52	47.55	11:40: 22.71	3.119	771.18	4.4	0.0	3.858	0.070	3.0	0 -99.000
BRTR	115.55	312.39	11:45: 29.88	-0.167	1078.58	4.9	0.0	3.658	0.200	3.0	0 -99.000
PLCA	119.78	142.21	11:45: 32.52	-0.924	1081.38	5.3	4.6	3.828	0.300	3.0	0 -99.000

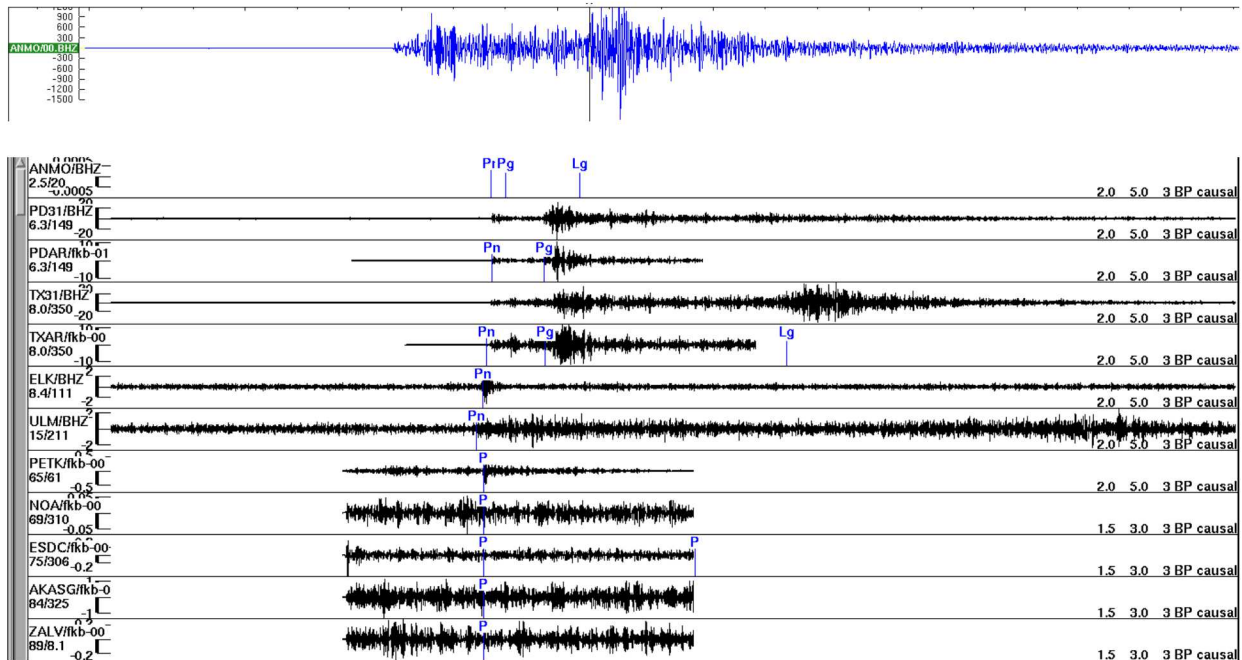
False event. Can't confirm arrivals



```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
135 14808079 11:31: 11.63 2.57 42.340 -111.960 12.5 3.77 1.01 8 NEW 0 0.000
-1.000 0 34 27.0 33.7
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	1.33	82.81	11:31: 41.95	-1.267	30.84	6.1	0.0	1.845	0.050	9.0	0 -99.000
NVAR	6.75	234.04	11:32: 45.23	-0.439	94.09	6.3	0.0	2.255	0.100	6.7	0 -99.000
PETK	57.94	314.66	11:41: 3.57	-0.241	591.57	5.0	0.0	4.065	0.180	3.0	0 -99.000
NOA	66.68	26.53	11:42: 2.90	-1.613	651.32	4.6	0.0	4.565	0.140	3.0	0 -99.000
ESDC	75.00	49.68	11:42: 59.59	4.668	708.84	5.2	0.0	4.385	0.170	3.0	0 -99.000
AKASG	80.91	24.14	11:43: 29.91	3.107	738.50	4.5	0.0	4.135	0.140	3.0	0 -99.000
ZALV	82.82	350.45	11:43: 31.23	-4.089	739.55	4.8	0.0	4.445	0.090	3.0	0 -99.000
WRA	120.97	270.73	11:50: 1.46	-0.127	1130.72	4.6	0.0	4.425	0.170	3.0	0 -99.000

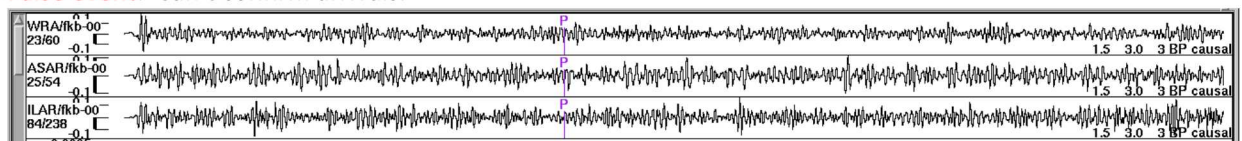
Partial event - event actually locates to 37N x 105W PDAR is part of it. A TXAR from a previous event is the Pg to this one. PETK is a valid arrival, but doesn't belong to this association set. Waveform data from ANMO was downloaded and times picked in Geotool.



```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
136 16619288 11:33: 49.83 0.83 -7.520 154.420 0.0 3.16 0.13 4 NEW 0 0.000 -
1.000 0 15 26.8 28.1
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	23.65	60.18	11:38: 54.38	-1.016	305.35	6.6	0.0	-1.454	0.001	9.7	0 -99.000
ASAR	26.00	54.09	11:39: 19.42	1.026	329.77	10.1	0.0	-1.261	0.006	9.5	0 -99.000
ILAR	83.52	238.13	11:46: 21.30	0.581	751.27	4.4	0.0	-1.105	0.004	5.9	0 -99.000
NVAR	91.89	262.49	11:47: 3.49	-0.591	793.97	5.5	0.0	-1.150	0.007	3.0	0 -99.000

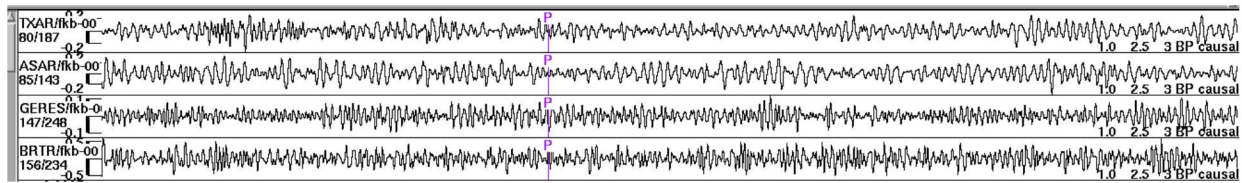
False event. Can't confirm arrivals.



```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
137 10114292 11:34: 51.80 1.82 -50.130 -114.880 0.0 3.61 0.25 5 NEW 0 0.000 -
-1.000 0 43 16.2 21.4
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	11:46: 58.21	-2.518	727.26	6.2	0.0	-0.578	0.007	5.1	0 -99.000
ASAR	85.24	143.18	11:47: 25.90	-0.439	754.64	5.1	0.0	-1.111	0.001	5.0	0 -99.000
NVAR	88.19	177.23	11:47: 46.99	2.755	775.64	5.3	0.0	-1.101	0.007	4.7	0 -99.000
GERES	146.56	247.70	11:54: 33.05	-0.991	1182.29	7.4	0.0	-1.061	0.006	3.0	0 -99.000
BRTR	155.04	234.82	11:55: 13.92	1.193	1222.19	5.2	0.0	-0.599	0.001	3.6	0 -99.000

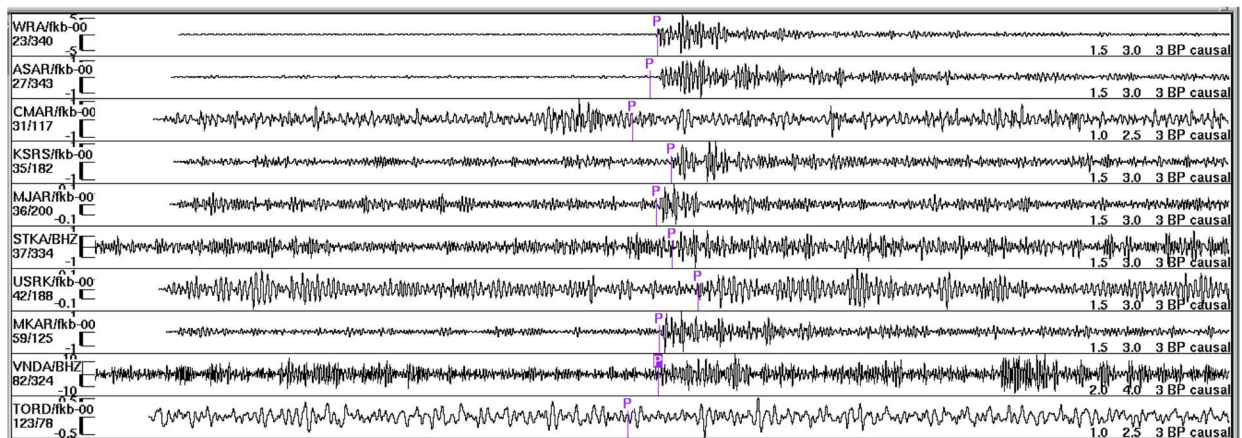
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 138 8787824 11:38: 10.87 1.45 2.490 126.340 61.0 4.01 0.63 11 SEL 17815681 -0.550
 0.435 6 23 27.0 53.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	22.33	161.14	11:43: 16.73	-1.644	305.12	13.9	28.7	3.902	0.160	9.8	1	-1.810
ASAR	25.72	164.94	11:43: 45.73	0.464	335.07	11.3	21.0	3.752	0.150	9.5	1	-0.251
CMAR	32.26	303.70	11:44: 23.96	-1.341	373.57	6.1	4.4	4.692	0.110	3.0	0	-99.000
KRSR	36.01	1.41	11:44: 56.92	0.428	405.92	4.7	5.4	4.342	0.070	3.0	1	1.087
MJAR	36.64	15.48	11:45: 2.20	0.737	411.06	4.8	4.4	3.372	0.160	3.0	1	0.532
STKA	35.81	158.26	11:45: 16.70	0.318	425.20	5.4	3.6	3.952	0.260	4.8	0	-99.000
USRK	42.99	5.43	11:45: 53.61	-1.945	462.22	4.8	4.0	3.942	0.170	3.0	0	-99.000
MKAR	59.64	326.04	11:48: 0.18	-0.180	589.70	7.6	8.0	3.802	0.230	8.8	1	1.199
KURK	63.87	328.01	11:48: 31.82	2.547	620.42	4.8	7.1	3.062	0.040	3.0	1	-1.227
VNDA	80.99	172.74	11:50: 27.83	2.182	736.45	5.2	3.7	3.742	0.140	3.0	0	-99.000
TORD	123.76	286.65	11:56: 59.38	-1.565	1128.22	4.3	3.3	5.532	0.180	3.0	0	-99.000

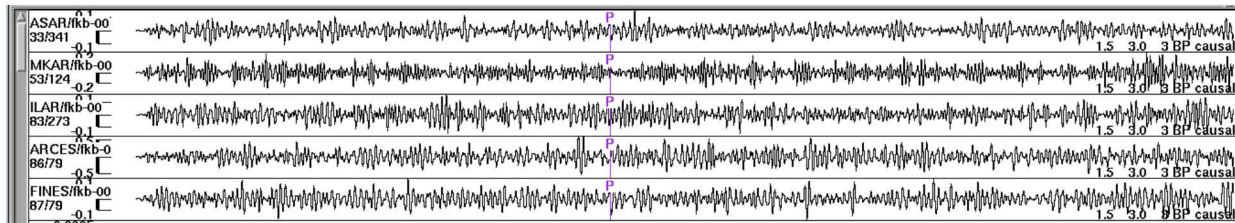
Good event. Couldn't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 139 8775507 11:49: 28.51 1.52 7.720 123.920 613.0 2.86 0.27 5 NEW 0 0.000 -
 1.000 0 22 28.9 29.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	31.78	340.67	11:55: 11.28	-0.213	342.81	4.7	0.0	-1.521	0.002	9.2	0	-99.000
MKAR	53.45	124.98	11:57: 46.85	-2.236	497.91	8.8	0.0	-1.287	0.003	8.6	0	-99.000
ILAR	83.68	272.26	12: 0: 48.78	-0.745	679.36	4.9	0.0	-0.887	0.004	3.5	0	-99.000
ARCES	86.65	79.91	12: 1: 3.28	0.912	694.14	8.3	0.0	-1.522	0.002	3.9	0	-99.000
FINES	87.83	80.04	12: 1: 12.51	2.281	703.01	5.0	0.0	-0.973	0.002	4.3	0	-99.000

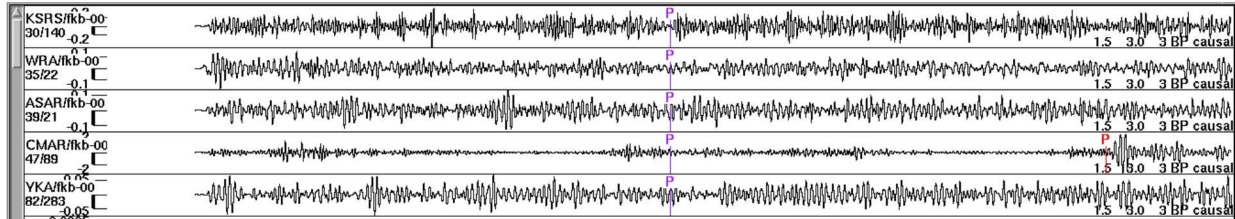
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 140 12082830 11:54: 14.59 1.18 13.210 147.090 0.0 4.25 0.20 6 NEW 0 0.000 -
 1.000 0 17 25.0 34.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	29.27	329.31	12: 0: 18.46	-1.082	364.61	4.4	0.0	4.194	0.060	3.4	0 -99.000
WRA	34.78	199.73	12: 1: 8.55	-1.209	414.53	5.1	0.0	3.924	0.240	9.4	0 -99.000
ASAR	38.40	198.25	12: 1: 41.51	1.175	447.61	4.3	0.0	4.164	0.130	7.8	0 -99.000
CMAR	45.66	283.10	12: 2: 42.16	0.798	508.36	5.0	0.0	4.254	0.040	3.5	0 -99.000
YKA	82.76	27.51	12: 6: 38.14	1.509	744.38	4.5	0.0	4.414	0.110	5.8	0 -99.000
NVAR	86.28	51.57	12: 6: 53.96	-1.191	759.93	4.5	0.0	4.544	0.180	4.7	0 -99.000

False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 141 9086574 11:57: 42.89 2.10 5.560 126.830 152.1 4.30 0.50 22 SEL 17815786 7.336
 0.133 22 22 27.0 87.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	26.63	164.33	12: 3: 9.84	4.953	326.57	18.6	0.0	4.626	0.140	9.8	1 -8.274
ASAR	30.10	167.20	12: 3: 32.26	-4.345	349.12	16.1	0.0	4.596	0.200	9.5	1 0.550
CMAR	30.05	297.14	12: 3: 37.53	-2.206	354.12	12.2	0.0	4.376	0.210	3.0	1 -0.150
KSRS	31.47	1.43	12: 3: 52.03	-0.994	369.27	9.2	0.0	4.126	0.200	3.0	1 -0.268
MJAR	32.25	17.21	12: 3: 58.62	-0.873	374.71	9.8	0.0	3.246	0.260	3.0	1 -0.315
USRK	38.46	5.84	12: 4: 53.99	-0.181	430.05	11.9	0.0	4.006	0.330	3.0	1 -0.676
STKA	40.02	160.45	12: 5: 0.59	-1.407	437.12	5.7	4.5	4.596	0.250	4.8	1 -1.425
SONM	45.39	340.60	12: 5: 50.68	1.455	487.22	8.1	0.0	4.206	0.280	3.4	1 -1.870
PETK	53.41	22.58	12: 6: 50.01	-0.064	546.80	25.3	0.0	4.066	0.460	3.0	1 -0.311
MKAR	55.97	324.36	12: 7: 7.15	-0.446	563.90	16.1	0.0	4.276	0.430	8.9	1 -1.792
ZALV	58.83	332.39	12: 7: 30.88	4.339	587.75	15.5	0.0	4.246	0.540	3.0	1 -4.825
KURK	60.10	326.66	12: 7: 36.15	0.642	593.35	12.2	0.0	4.226	0.320	3.0	1 -2.427
BVAR	65.69	326.42	12: 8: 14.38	0.866	630.35	8.2	0.0	3.546	0.450	3.0	1 -2.127
KBZ	81.70	313.22	12: 9: 47.99	2.513	724.37	5.5	4.1	4.306	0.520	3.0	1 -2.625
ILAR	83.12	25.51	12: 9: 51.94	-0.153	728.62	14.7	0.0	4.086	0.610	3.0	1 0.062
VNDA	85.48	172.83	12: 9: 59.85	-1.533	736.87	5.6	3.9	4.416	0.230	3.0	1 0.400
BRTR	88.85	309.64	12:10: 16.99	-3.123	753.82	7.0	0.0	4.376	0.230	3.0	1 2.172
ARCES	88.56	339.83	12:10: 19.63	-0.522	755.60	18.8	0.0	3.716	0.350	3.0	1 -0.177
FINES	90.09	331.84	12:10: 24.90	-0.335	762.05	11.2	0.0	4.516	0.360	3.0	1 0.058
AKASG	90.40	320.94	12:10: 26.22	-0.790	762.92	11.1	0.0	4.606	0.260	3.0	1 0.584

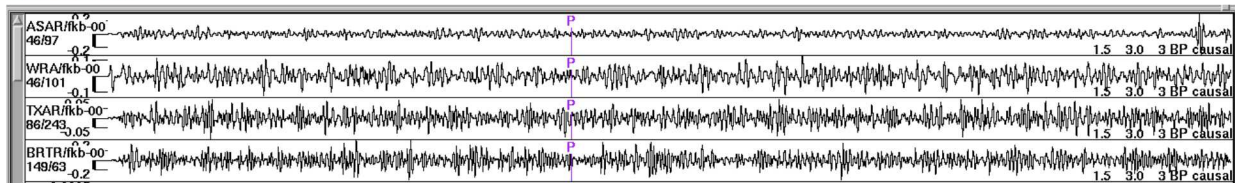
TXAR	120.13	51.29	12:16: 18.22	0.333	1114.35	7.2	0.0	4.476	0.170	3.0	1	0.216
TORD	122.45	289.50	12:16: 22.18	1.869	1118.95	4.9	0.0	5.976	0.090	3.0	1	-1.293

Good event. Well recorded.

num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
142	10443978	12:11:	15.00	1.32	-21.380	-176.050	149.0	3.91	0.26	5	NEW	0 0.000

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	45.75	101.46	12:19: 22.79	-2.042	488.02	8.6	0.0	-1.096	0.003	9.7	0	-99.000
ASAR	45.52	97.98	12:19: 25.43	1.703	490.34	11.4	0.0	-1.554	0.010	9.5	0	-99.000
NVAR	81.12	233.09	12:23: 9.55	0.432	715.12	4.5	0.0	-0.954	0.005	4.1	0	-99.000
TXAR	86.68	242.78	12:23: 37.24	-0.886	742.72	9.4	0.0	-0.763	0.003	5.1	0	-99.000
BRTR	148.75	64.26	12:30: 45.70	0.793	1170.39	5.6	0.0	-1.071	0.003	3.6	0	-99.000

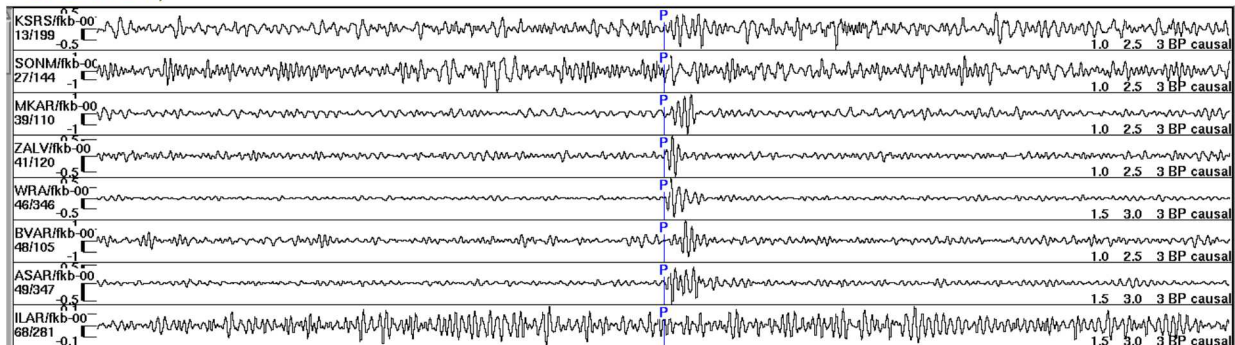
False event. Can't confirm arrivals



num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
143	15434395	12:14:	56.48	2.50	24.380	122.620	0.0	3.56	0.41	9	SEL	17815693 -17.792

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KSRS	14.14	19.82	12:18: 18.19	-1.703	201.89	4.3	0.0	3.095	0.040	4.0	0	-99.000
SONM	26.60	336.26	12:20: 44.53	4.953	347.90	4.3	0.0	2.885	0.150	6.2	0	-99.000
MKAR	38.78	315.60	12:22: 24.73	-1.515	448.59	5.4	0.0	3.755	0.130	8.3	1	7.302
ZALV	40.58	326.77	12:22: 37.91	-1.735	461.12	5.7	0.0	4.285	0.040	4.4	1	5.120
KURK	42.51	319.65	12:22: 55.05	-0.756	478.54	4.3	0.0	3.185	0.060	3.2	1	6.482
WRA	45.53	163.52	12:23: 18.78	1.496	502.27	5.8	0.0	3.745	0.070	9.0	1	4.727
BVAR	48.07	320.53	12:23: 35.92	-3.934	519.92	4.4	0.0	3.595	0.070	3.0	1	8.376
ASAR	49.00	165.38	12:23: 46.46	1.515	530.29	6.4	0.0	3.825	0.040	8.5	1	4.885
ILAR	68.88	27.34	12:26: 3.57	1.679	666.49	4.2	0.0	3.635	0.160	3.5	0	-99.000

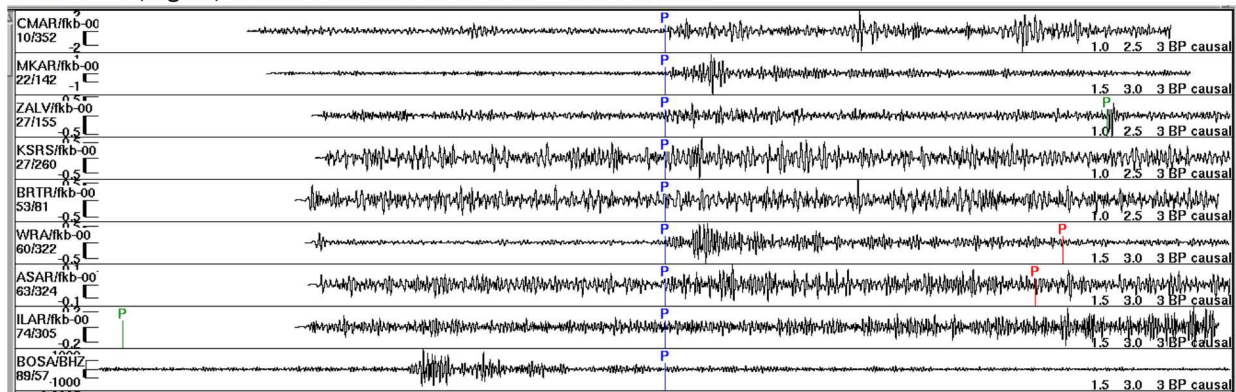
Good event, couldn't confirm all arrivals. Some start times were off about 5 or 6 seconds.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
144 15882032 12:15: 54.49 2.11 28.530 96.710 19.9 4.05 0.43 10 SEL 17815776 3.284
1.654 5 25 28.0 54.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	8.80	168.36	12:18: 23.47	1.383	147.98	4.5	0.0	4.033	0.080	6.8	0 -99.000
MKAR	22.84	333.14	12:20: 37.94	-3.437	282.93	6.5	0.0	3.733	0.140	8.9	1 3.224
KURK	27.40	333.88	12:21: 28.04	1.043	332.63	7.3	0.0	3.553	0.070	5.1	1 -1.350
ZALV	28.29	344.64	12:21: 34.63	0.050	339.18	5.1	0.0	3.973	0.160	5.4	1 -3.884
KSRS	27.89	60.62	12:21: 41.22	2.807	346.98	4.9	0.0	4.523	0.080	3.0	0 -99.000
BRTR	53.42	300.78	12:25: 9.52	3.664	554.93	5.1	0.0	3.963	0.220	3.0	0 -99.000
WRA	59.10	138.41	12:26: 2.26	-1.534	607.03	6.9	0.0	3.873	0.080	8.4	1 -2.099
ASAR	61.76	141.41	12:26: 19.39	-1.698	624.88	5.9	0.0	3.693	0.100	7.9	1 -0.451
ILAR	75.99	23.38	12:27: 31.90	-1.661	697.23	4.9	0.0	4.013	0.090	3.1	0 -99.000
BOSA	88.37	236.69	12:28: 48.37	-0.617	773.78	5.9	2.6	5.093	0.280	3.0	0 -99.000

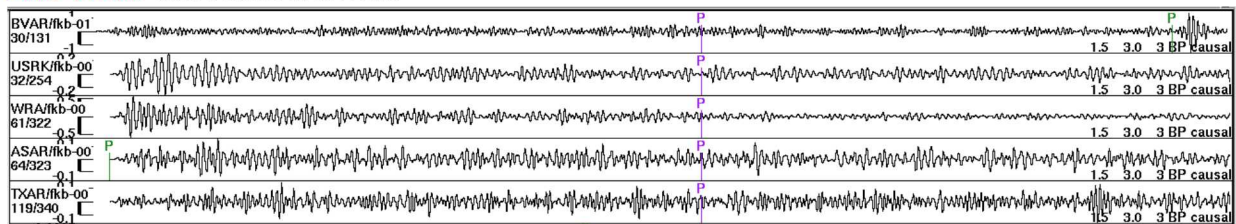
Good event, again, couldn't confirm all arrivals – some arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
145 9994983 12:16: 45.91 3.35 29.130 96.220 0.0 4.13 0.43 5 NEW 0 0.000 -
1.000 0 26 25.0 25.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BVAR	30.58	326.59	12:22: 56.37	-4.830	370.53	4.6	4.6	3.429	0.070	3.4	0 -99.000
USRK	30.32	52.75	12:23: 14.82	0.388	388.93	4.8	5.6	4.539	0.140	3.0	0 -99.000
WRA	60.75	140.31	12:27: 5.54	3.089	619.36	4.3	5.0	3.949	0.160	8.1	0 -99.000
ASAR	63.54	143.11	12:27: 17.40	-3.122	631.33	4.3	4.5	4.169	0.120	7.6	0 -99.000
TXAR	117.45	21.33	12:35: 38.38	4.921	1133.03	4.5	5.1	4.759	0.280	3.0	0 -99.000

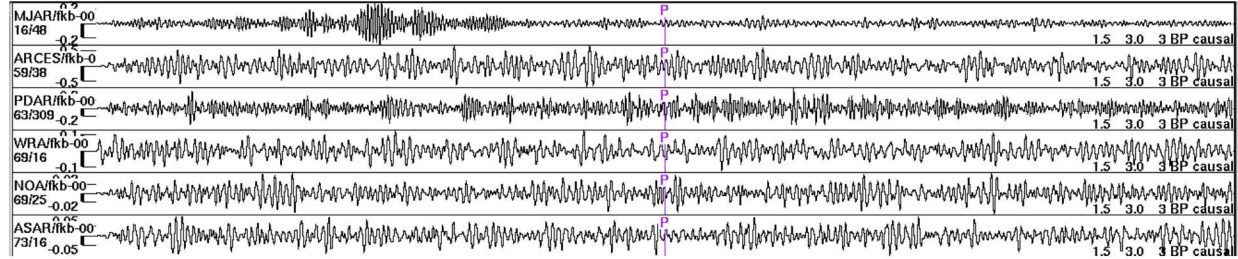
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
146 15065371 12:17: 7.00 2.67 46.390 155.950 82.1 3.79 0.40 6 NEW 0 0.000 -
1.000 0 19 23.0 33.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	15.56	230.67	12:20: 47.17	-2.736	220.67	5.4	0.0	3.072	0.120	7.0	0 -99.000
ARCES	57.17	340.65	12:26: 53.67	-0.861	587.42	4.4	0.0	3.802	0.180	3.0	0 -99.000
PDAR	64.28	54.18	12:27: 27.95	-2.723	620.84	4.9	0.0	3.522	0.100	4.6	0 -99.000
WRA	69.22	198.96	12:28: 6.18	4.696	659.62	4.3	0.0	4.362	0.210	7.5	0 -99.000
NOA	67.54	341.07	12:28: 7.50	2.759	660.42	4.4	0.0	4.082	0.120	4.8	0 -99.000
ASAR	72.92	198.46	12:28: 23.32	-1.961	676.59	4.6	0.0	4.112	0.150	6.4	0 -99.000

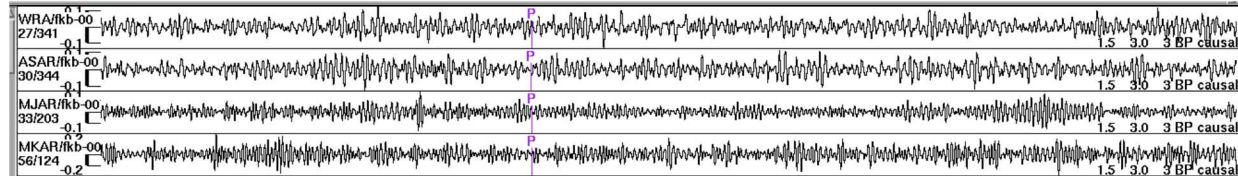
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
147 5734900 12:23: 49.10 0.58 5.720 125.970 33.0 3.72 0.23 4 NEW 0 0.000 -
1.000 0 22 28.5 31.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	26.41	341.70	12:29: 25.28	0.740	335.84	9.1	0.0	-1.032	0.002	9.8	0 -99.000
ASAR	29.84	344.59	12:29: 52.97	-0.891	364.57	10.8	0.0	-1.366	0.003	9.5	0 -99.000
MJAR	32.86	202.38	12:30: 16.70	0.046	387.98	6.3	0.0	-1.447	0.002	3.0	0 -99.000
MKAR	55.93	123.42	12:33: 21.27	0.104	571.66	6.4	0.0	-1.678	0.003	8.8	0 -99.000

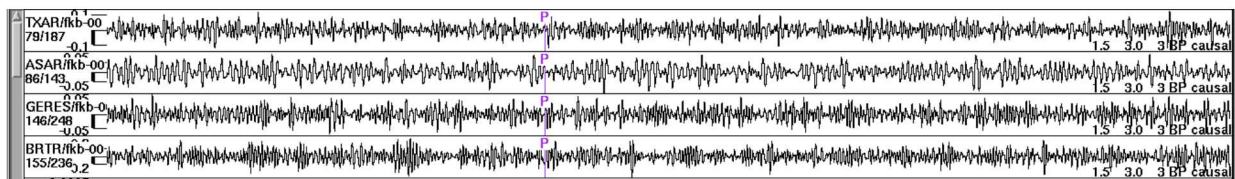
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
148 10114292 12:34: 54.87 1.47 -49.760 -113.620 0.0 3.61 0.24 5 NEW 0 0.000
-1.000 0 43 16.2 21.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	12:46: 58.65	-1.749	724.26	6.3	0.0	-0.592	0.007	5.1	0 -99.000
ASAR	85.24	143.18	12:47: 32.93	-0.275	759.13	5.0	0.0	-1.094	0.001	5.0	0 -99.000
NVAR	88.19	177.23	12:47: 47.43	2.107	772.63	4.6	0.0	-1.107	0.006	4.7	0 -99.000
GERES	146.56	247.70	12:54: 33.49	-1.324	1179.31	7.1	0.0	-1.076	0.006	3.0	0 -99.000
BRTR	155.04	234.82	12:55: 13.04	1.241	1219.18	5.3	0.0	-0.600	0.001	3.6	0 -99.000

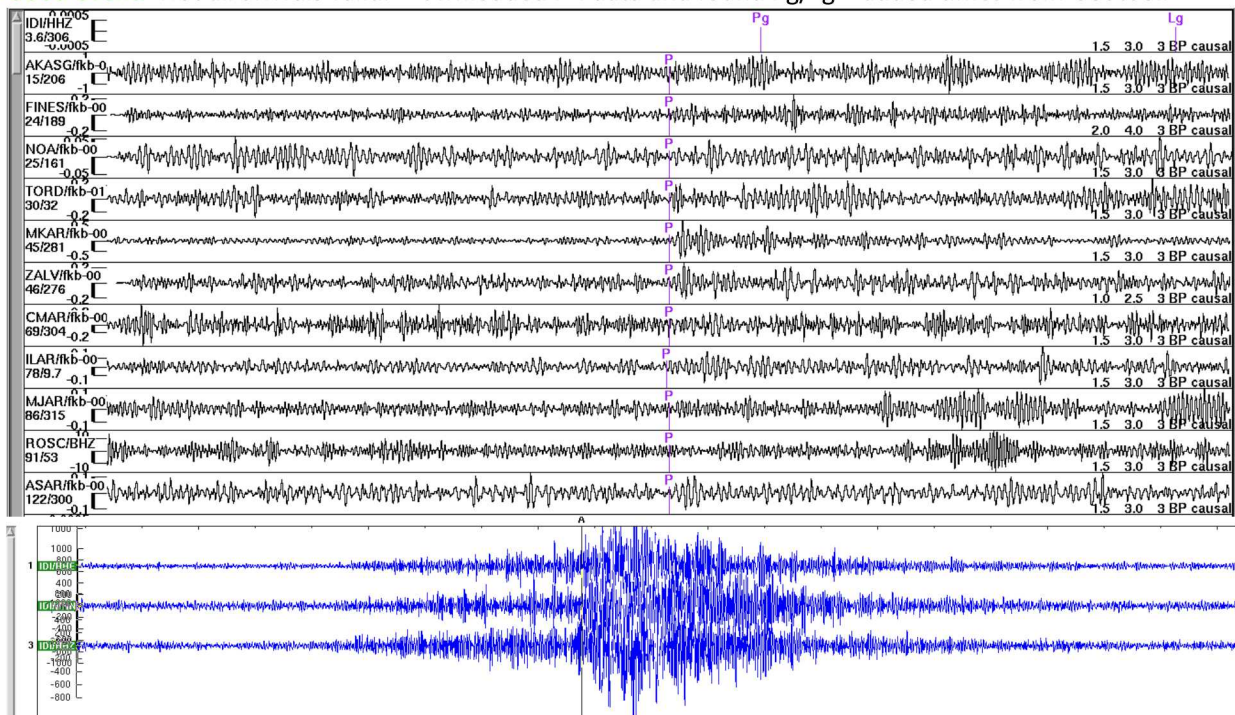
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 149 15955900 12:37: 46.26 3.51 37.700 20.950 0.0 4.06 0.29 8 REB 17814324 0.784
 0.235 1 30 23.0 33.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
AKASG	15.07	19.44	12:41: 11.92	2.524	204.79	4.4	4.7	3.670	0.060	4.6	0 -99.000
NOA	25.19	348.33	12:43: 0.03	-4.991	312.74	4.6	4.5	3.960	0.120	5.2	0 -99.000
MKAR	45.48	57.33	12:46: 3.28	-2.663	495.94	7.3	7.0	3.590	0.130	8.3	1 4.184
CMAR	69.40	81.96	12:48: 57.30	-1.552	670.04	4.6	8.1	4.120	0.060	3.0	0 -99.000
ILAR	78.43	354.91	12:49: 48.72	4.206	722.38	4.3	4.7	4.220	0.030	3.0	0 -99.000
MJAR	86.53	46.06	12:50: 34.86	4.816	767.37	4.4	5.2	4.110	0.050	3.0	0 -99.000
ROSC	91.72	277.28	12:50: 57.28	1.470	790.01	5.3	4.1	4.520	0.270	3.0	0 -99.000
ASAR	121.30	97.52	12:56: 40.05	-3.809	1132.54	4.5	7.6	4.270	0.050	3.0	0 -99.000

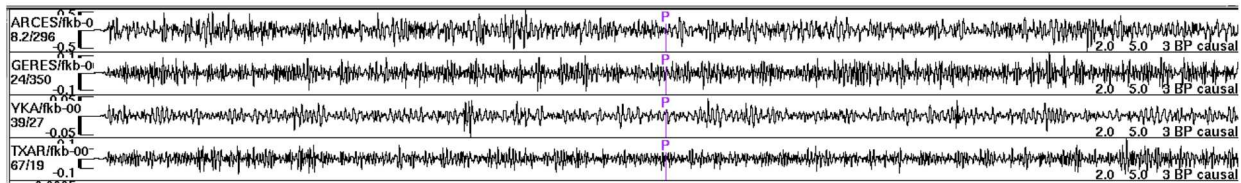
Good event. Not all arrivals valid. Downloaded IDI data and found Pg/Lg – added times from Geotool.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 150 14391664 12:38: 23.17 0.04 71.600 1.630 0.0 2.83 0.61 4 NEW 0 0.000 -
 1.000 0 40 22.0 24.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ARCES	7.87	303.11	12:40: 21.83	-0.031	117.82	4.7	0.0	-1.846	0.003	7.7	0 -99.000
GERES	24.30	352.27	12:43: 34.31	-0.037	311.01	8.6	0.0	-1.818	0.002	5.7	0 -99.000
YKA	38.78	25.18	12:45: 51.42	0.052	448.07	4.3	0.0	-0.369	0.005	5.5	0 -99.000
TXAR	67.11	18.23	12:49: 18.40	0.016	655.32	4.8	0.0	-1.060	0.006	5.4	0 -99.000

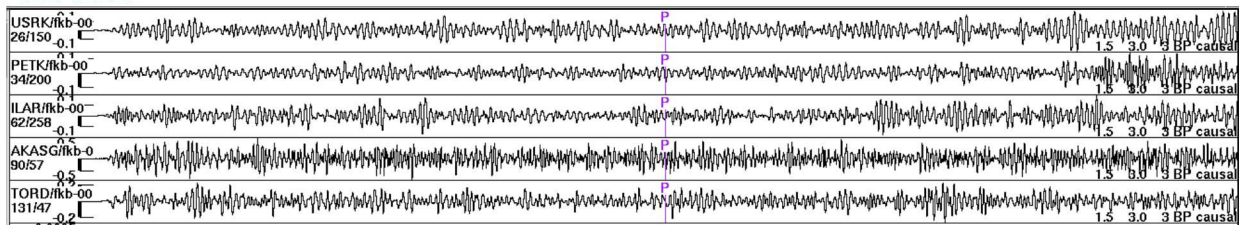
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 151 10379113 12:42: 16.52 3.03 20.430 145.690 50.8 4.16 0.91 6 NEW 0 0.000
 -1.000 0 18 24.0 21.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
USRK	26.37	335.76	12:47: 52.71	2.462	336.22	4.2	0.0	3.589	0.200	3.0	0 -99.000
PETK	33.39	12.09	12:48: 50.71	-4.632	394.82	4.7	0.0	3.779	0.220	3.0	0 -99.000
ILAR	61.40	26.58	12:52: 34.83	4.913	618.07	4.3	0.0	3.939	0.150	5.6	0 -99.000
NVAR	81.15	52.35	12:54: 32.17	-0.182	735.62	4.9	0.0	3.449	0.190	4.3	0 -99.000
AKASG	90.14	325.65	12:55: 7.76	-1.055	771.32	4.4	0.0	4.089	0.100	3.0	0 -99.000
TORD	131.83	311.39	13: 1: 22.18	-1.507	1145.65	4.2	0.0	6.139	0.120	3.0	0 -99.000

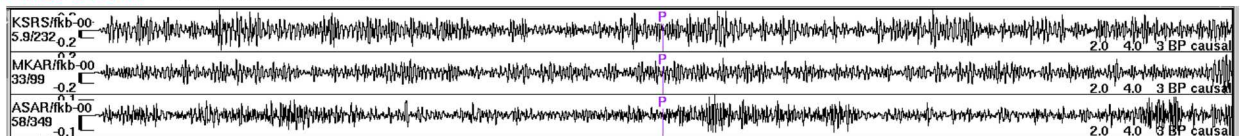
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 152 8979454 12:45: 5.27 1.90 33.680 122.250 0.0 1.78 0.25 4 NEW 0 0.000 -
 1.000 0 41 26.2 27.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	5.84	236.56	12:46: 34.92	-0.059	89.75	5.1	0.0	-2.138	0.003	8.8	0 -99.000
MKAR	32.46	98.65	12:51: 38.14	-2.681	393.73	4.8	0.0	-2.722	0.005	7.8	0 -99.000
KURK	35.56	100.81	12:52: 11.10	2.683	426.10	5.5	0.0	-2.605	0.005	3.0	0 -99.000
ASAR	58.52	348.43	12:55: 1.17	0.057	596.30	7.2	0.0	-2.217	0.004	7.6	0 -99.000

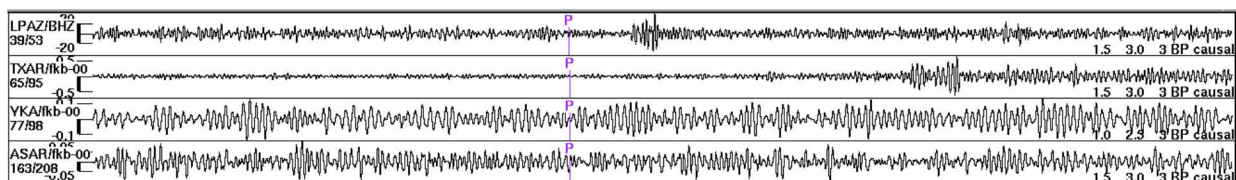
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 153 12889120 12:45: 46.14 2.29 8.220 -37.890 0.0 3.47 0.30 4 NEW 0 0.000 -
 1.000 0 32 18.1 19.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	37.99	52.72	12:53: 13.07	1.527	447.25	5.1	0.0	-0.950	0.012	4.1	0 -99.000
TXAR	64.50	95.20	12:56: 24.23	-2.971	638.40	5.2	0.0	-1.265	0.006	5.5	0 -99.000
YKA	76.53	98.65	12:57: 39.38	2.809	713.81	4.3	0.0	-0.462	0.004	5.5	0 -99.000
ASAR	162.81	206.31	13: 6: 37.27	-1.364	1251.75	7.2	0.0	-0.660	0.002	4.7	0 -99.000

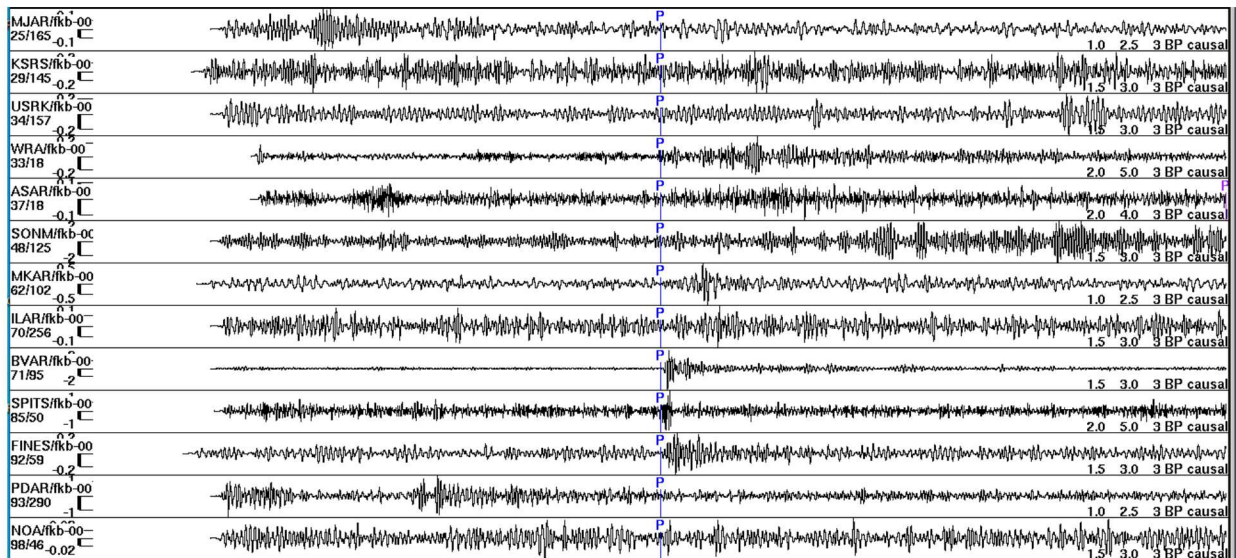
False event, can't confirm arrivals. The LPAZ arrival occurring after the pick FKs toward the north, as does the arrival on TXAR 39 seconds after the pick for this event. Downloaded ANMO data and called PDAR arrivals to go with TXAR Pg – locates to 36N x 105W



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 154 7594868 12:46: 37.56 3.04 12.490 144.460 10.2 4.09 0.48 12 SEL 17815790 0.536
 0.652 7 17 25.0 62.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	24.66	348.70	12:52: 0.56	2.963	322.75	4.8	0.0	2.992	0.140	4.0	0 -99.000
KRSR	28.91	332.68	12:52: 33.52	-3.190	356.12	5.1	0.0	4.102	0.100	3.3	0 -99.000
USRK	33.42	344.14	12:53: 19.66	2.808	401.59	4.4	0.0	4.392	0.160	3.0	0 -99.000
WRA	33.47	196.76	12:53: 23.61	4.469	405.92	4.8	0.0	4.072	0.100	9.4	1 -6.902
ASAR	37.13	195.55	12:53: 51.30	-1.449	432.67	5.1	0.0	3.662	0.050	7.8	1 -4.433
SONM	47.32	325.94	12:55: 16.99	3.851	519.36	4.2	0.0	4.232	0.090	4.9	1 -1.094
MKAR	61.86	316.64	12:56: 55.87	-3.258	617.67	5.1	0.0	3.982	0.130	7.5	1 5.298
ILAR	70.04	25.20	12:57: 48.60	1.871	670.67	5.3	0.0	4.232	0.080	6.0	1 3.317
NVAR	88.31	51.15	12:59: 30.12	-0.012	771.99	5.2	0.0	3.852	0.120	4.6	1 3.548
FINES	91.97	334.88	12:59: 44.62	-0.172	786.82	4.7	0.0	4.302	0.120	5.7	1 3.186
PDAR	93.40	45.05	12:59: 51.21	-2.888	792.62	4.4	0.0	5.152	0.050	3.0	0 -99.000
NOA	97.94	338.89	13: 0: 7.03	-4.993	809.62	4.3	0.0	4.132	0.110	3.0	0 -99.000

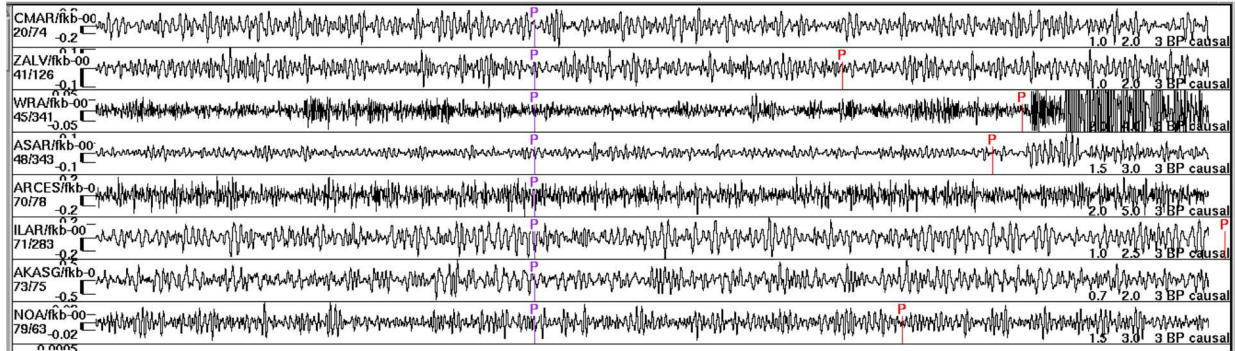
Good event. Couldn't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
155 15434395 12:52: 11.10 3.16 22.960 119.860 0.0 3.71 0.47 8 NEW 0 0.000 -
1.000 0 21 26.0 38.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	22.14	259.42	12:56: 53.23	1.756		281.96	4.2	4.9	3.565	0.080	4.4 0 -99.000
ZALV	40.58	326.77	12:59: 56.48	2.969		464.54	4.3	4.0	3.015	0.180	4.4 0 -99.000
WRA	45.53	163.52	13: 0: 22.85	-4.027		491.61	4.3	6.6	3.415	0.090	9.0 0 -99.000
ASAR	49.00	165.38	13: 0: 55.81	-0.982		523.46	5.2	5.4	3.415	0.110	8.5 0 -99.000
ARCES	69.75	338.13	13: 3: 22.15	-4.981		670.86	4.4	3.8	4.125	0.220	3.0 0 -99.000
ILAR	68.88	27.34	13: 3: 34.01	4.783		682.76	4.5	4.4	3.595	0.090	3.5 0 -99.000
AKASG	73.29	318.45	13: 3: 40.61	-1.005		689.44	4.2	5.1	3.895	0.050	3.0 0 -99.000
NOA	78.50	332.32	13: 4: 17.52	1.488		725.64	5.0	4.8	4.625	0.190	3.1 0 -99.000

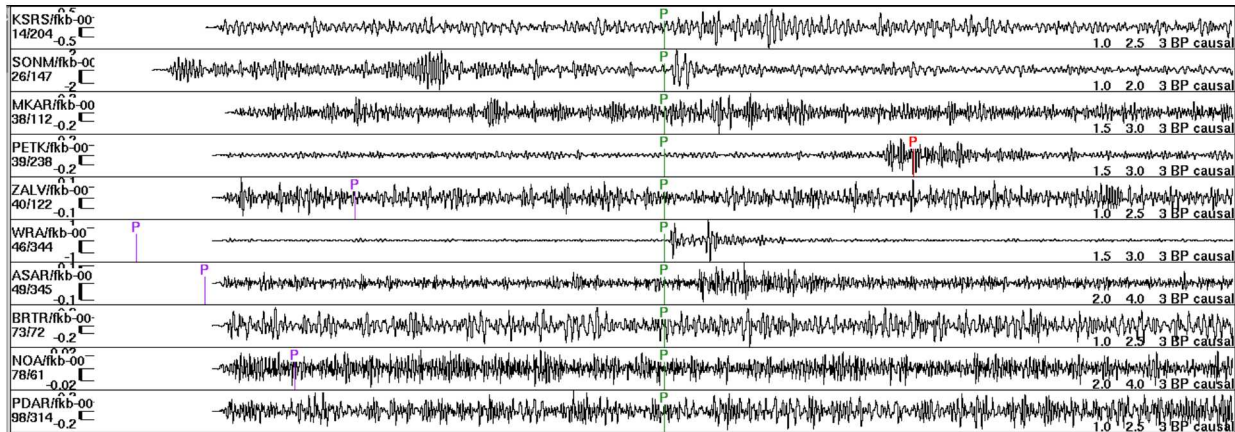
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
156 10231168 12:53: 2.52 3.39 24.350 121.480 0.0 3.77 0.63 10 SEL 17815792 -5.546
0.447 4 21 26.0 47.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	14.94	19.95	12:56: 28.18	2.675		205.08	6.6	0.0	3.237	0.040	3.9 1 5.148
SONM	27.13	337.29	12:58: 36.06	-4.023		333.58	6.5	0.0	3.057	0.240	6.2 1 8.103
ZALV	41.00	327.40	13: 0: 37.35	-3.947		453.73	4.9	0.0	2.837	0.200	4.4 0 -99.000
PETK	40.26	33.40	13: 0: 37.35	-1.341		454.68	4.3	0.0	4.367	0.140	3.0 0 -99.000
KURK	42.85	320.29	13: 1: 1.08	4.848		478.66	4.4	0.0	3.287	0.070	3.2 0 -99.000
WRA	44.94	162.84	13: 1: 27.45	0.696		503.85	5.8	0.0	4.027	0.100	9.0 1 5.600
ASAR	48.39	164.78	13: 1: 56.46	3.531		533.48	4.9	0.0	3.977	0.050	8.5 1 3.500
BRTR	73.85	306.64	13: 4: 34.66	-1.672		691.58	4.6	0.0	3.627	0.130	3.0 0 -99.000
NOA	78.99	332.29	13: 5: 6.30	3.797		723.38	4.4	0.0	4.497	0.150	3.1 0 -99.000
PDAR	99.00	35.47	13: 6: 42.54	-4.565		819.33	5.1	0.0	4.817	0.260	3.0 0 -99.000

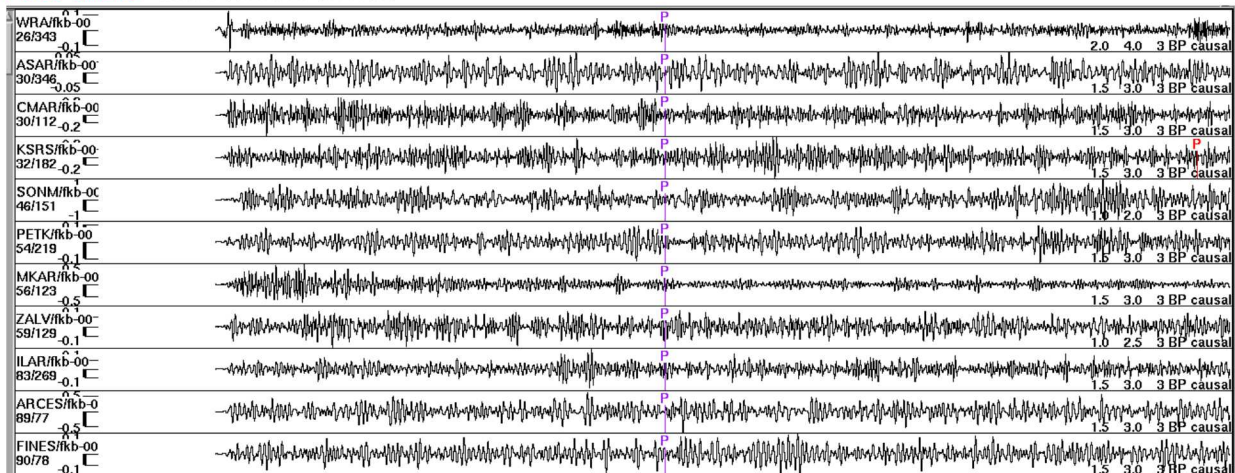
Good event. Can't confirm all arrivals – added MKAR.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 157 5812625 12:57: 36.74 1.33 5.380 126.620 108.0 3.96 0.32 11 NEW 0 0.000
 -1.000 0 22 28.9 57.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	26.88	343.11	13: 3: 3.69	1.498	326.53	7.9	0.0	-0.985	0.004	9.4	0 -99.000
ASAR	30.34	345.81	13: 3: 34.01	-0.923	356.85	8.9	0.0	-1.172	0.002	9.2	0 -99.000
CMAR	29.79	110.95	13: 3: 35.33	-0.791	358.50	4.8	0.0	-0.708	0.001	4.6	0 -99.000
KRSR	31.28	182.17	13: 3: 52.47	1.145	375.50	8.1	0.0	-1.114	0.006	3.0	0 -99.000
SONM	45.14	150.78	13: 5: 48.49	0.607	490.84	9.0	0.0	-0.768	0.002	4.7	0 -99.000
PETK	53.30	219.63	13: 6: 50.45	0.576	552.70	9.5	0.0	-0.812	0.003	3.0	0 -99.000
MKAR	55.69	122.51	13: 7: 6.27	-0.679	568.57	10.5	0.0	0.000	0.004	8.6	0 -99.000
ZALV	58.56	128.83	13: 7: 28.68	2.388	591.18	7.1	0.0	-0.963	0.008	3.7	0 -99.000
ILAR	83.02	269.29	13: 9: 49.75	-2.613	732.95	6.0	0.0	-0.750	0.004	3.5	0 -99.000
ARCES	88.30	77.38	13:10: 17.43	-0.755	760.65	8.9	0.0	-1.229	0.002	3.9	0 -99.000
FINES	89.82	77.77	13:10: 24.02	-0.453	767.28	12.4	0.0	-0.752	0.005	4.3	0 -99.000

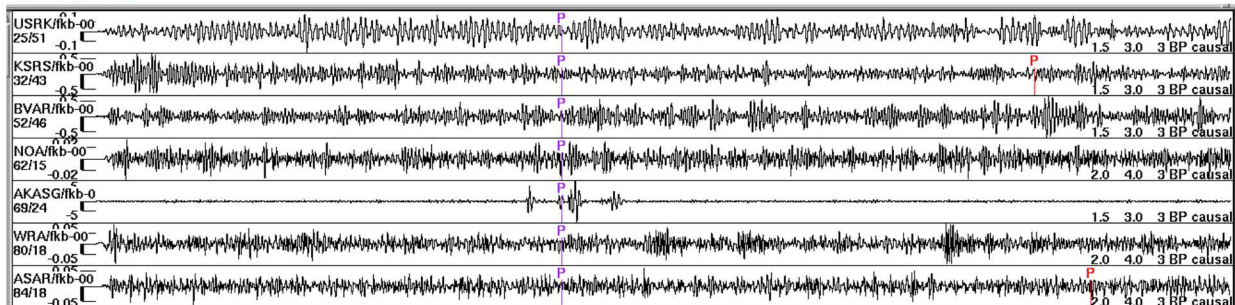
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
158 17551448 12:58: 40.02 2.68 55.270 166.950 0.0 4.10 0.16 8 NEW 0 0.000 -
1.000 0 1 23.0 26.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
USRK	23.59	252.89	13: 4: 0.38	-1.592	321.44	4.4	4.4	3.972	0.260	3.0	0 -99.000
KSRS	30.61	247.49	13: 5: 3.66	0.236	384.21	4.3	5.4	4.282	0.060	3.0	0 -99.000
KURK	48.16	301.52	13: 7: 39.23	4.382	540.16	4.4	5.4	3.912	0.040	3.0	0 -99.000
BVAR	50.25	308.37	13: 7: 48.46	-3.530	548.46	4.3	4.1	4.162	0.040	3.0	0 -99.000
NOA	61.11	345.33	13: 9: 0.97	-3.154	621.06	4.5	4.7	4.382	0.070	4.0	0 -99.000
AKASG	67.05	330.71	13: 9: 47.11	3.185	667.54	4.2	4.6	4.052	0.040	3.4	0 -99.000
WRA	79.96	208.32	13:10: 50.39	1.434	731.46	4.3	5.4	4.122	0.060	3.2	0 -99.000
ASAR	83.63	207.66	13:11: 8.85	-0.961	749.21	4.6	4.6	3.902	0.080	3.6	0 -99.000

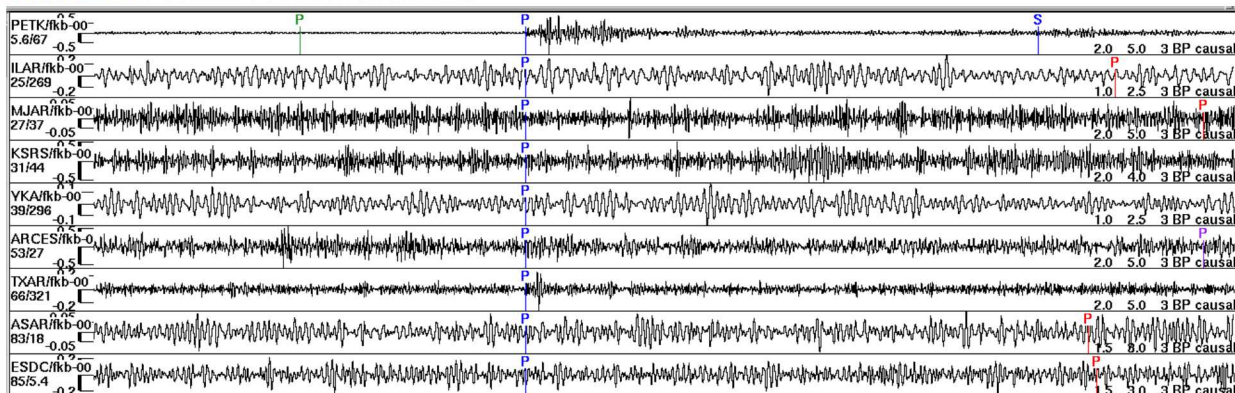
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
159 14636637 12:59: 41.98 3.80 55.600 166.010 0.0 3.68 0.54 10 SEL 17813857 1.972
0.464 3 1 23.0 50.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PETK	5.65	249.45	13: 1: 10.31	4.050	88.45	8.5	17.6	2.666	0.240	5.2	1 -6.978
ILAR	24.48	48.73	13: 5: 6.30	4.607	325.30	5.3	4.8	3.276	0.130	6.6	1 -6.775
MJAR	26.95	237.26	13: 5: 18.16	-4.604	336.55	4.4	4.1	3.266	0.110	3.8	0 -99.000
KSRS	31.57	251.54	13: 6: 2.99	-1.536	381.55	4.4	4.4	3.846	0.050	3.3	0 -99.000
YKA	38.87	46.55	13: 7: 10.22	1.861	449.02	4.3	4.3	4.046	0.120	6.3	0 -99.000
NVAR	51.47	76.08	13: 8: 47.78	-3.797	545.70	4.7	3.5	3.456	0.230	4.7	0 -99.000
ARCES	52.18	343.72	13: 8: 54.38	3.548	552.37	4.6	3.0	4.556	0.100	4.1	0 -99.000
TXAR	66.31	72.46	13:10: 29.30	-3.434	648.20	5.5	5.0	3.396	0.170	7.9	1 1.176
ESDC	84.93	352.62	13:12: 12.13	-4.847	750.82	4.4	5.8	4.156	0.090	3.0	0 -99.000
ASAR	83.53	209.80	13:12: 14.77	4.152	753.70	4.5	4.0	4.186	0.110	6.0	0 -99.000

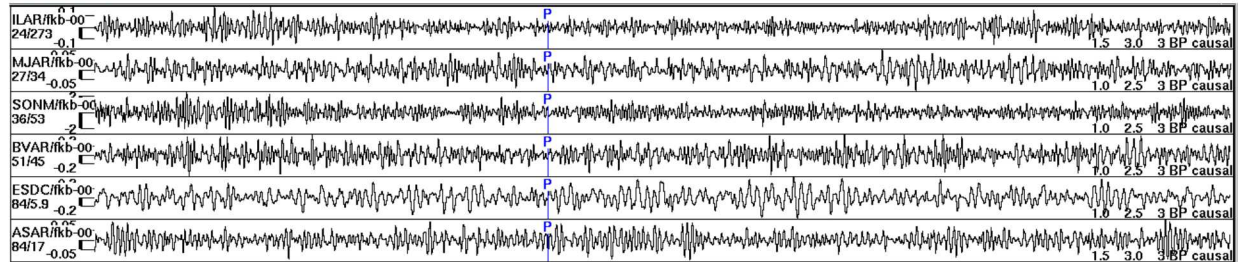
Good event. Couldn't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
160 17551448 13:0: 53.17 1.96 56.620 165.420 0.0 3.47 0.46 7 NEW 0 0.000 -
1.000 0 1 23.0 29.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	24.96	50.05	13: 6: 12.22	1.467	318.93	5.2	4.7	3.102	0.140	8.9	0 -99.000
MJAR	26.33	232.39	13: 6: 41.22	3.472	348.32	4.7	5.2	2.902	0.160	3.0	0 -99.000
SONM	35.51	281.30	13: 7: 56.37	-0.756	423.40	4.7	4.8	3.742	0.100	4.9	0 -99.000
KURK	48.16	301.52	13: 9: 36.56	-0.376	524.08	4.4	5.4	3.392	0.110	3.0	0 -99.000
BVAR	50.25	308.37	13: 9: 53.70	0.455	540.93	4.2	4.1	3.122	0.180	3.0	0 -99.000
ESDC	83.90	350.77	13:13: 22.00	-0.970	748.63	4.3	5.3	4.352	0.090	3.0	0 -99.000
ASAR	83.63	207.66	13:13: 23.32	-3.291	750.73	4.2	4.6	3.702	0.050	3.6	0 -99.000

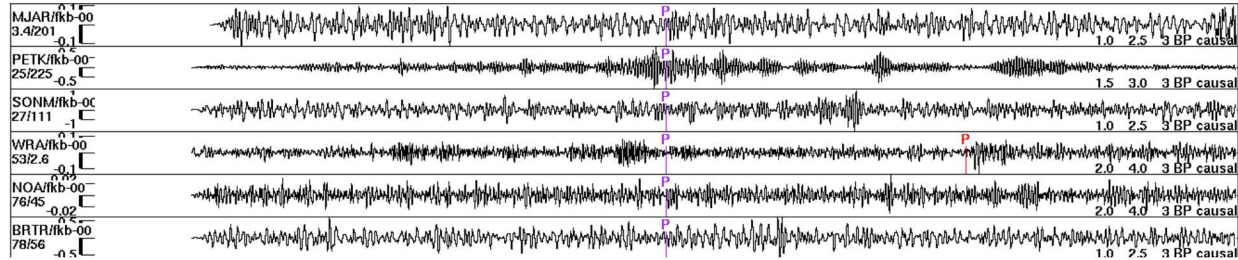
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
161 10274281 13:10: 26.66 2.97 33.300 136.810 333.6 3.49 0.90 6 NEW 0 0.000
-1.000 0 19 23.0 31.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	2.39	24.03	13:11: 25.99	-0.957	59.40	4.4	0.0	1.644	0.140	7.5	0 -99.000
PETK	23.83	31.78	13:15: 14.06	-1.519	287.74	4.7	0.0	4.494	0.090	3.0	0 -99.000
SONM	26.54	309.79	13:15: 36.47	-3.464	310.79	4.6	0.0	3.324	0.270	5.7	0 -99.000
WRA	54.04	183.14	13:19: 10.05	1.241	524.36	4.7	0.0	3.904	0.080	8.8	0 -99.000
NOA	75.24	335.91	13:21: 41.66	4.997	675.41	4.4	0.0	4.384	0.170	3.8	0 -99.000
BRTR	77.90	309.89	13:21: 46.93	-3.303	681.07	4.7	0.0	3.654	0.220	3.0	0 -99.000

False event. Can't confirm arrivals

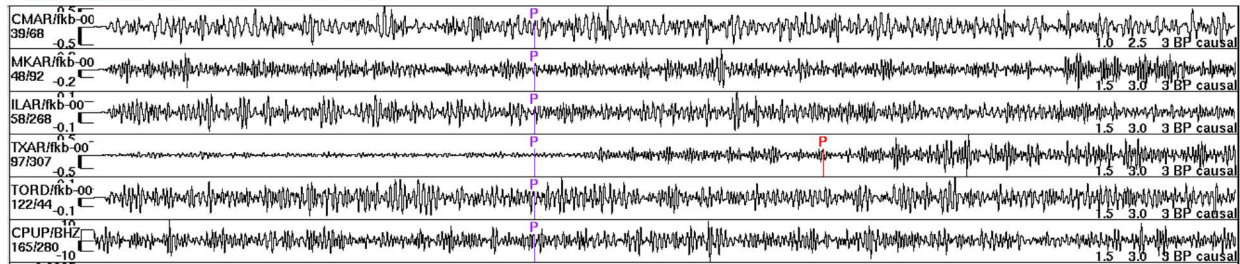


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
162 6895283 13:10: 46.44 3.14 28.080 139.880 497.7 3.43 0.91 7 NEW 0 0.000
-1.000 0 18 24.0 28.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	38.10	263.95	13:17: 28.54	1.672	401.68	5.0	0.0	3.310	0.060	3.0	0 -99.000
MKAR	47.63	308.80	13:18: 35.77	-4.946	469.84	4.4	0.0	2.950	0.060	7.6	0 -99.000
KURK	50.26	313.76	13:19: 4.78	4.280	498.38	5.1	0.0	2.340	0.100	3.4	0 -99.000
ILAR	57.86	29.09	13:19: 50.92	1.998	544.13	4.7	0.0	2.630	0.110	5.5	0 -99.000
TXAR	96.91	51.53	13:23: 24.49	0.752	758.43	4.7	0.0	4.230	0.070	3.0	0 -99.000
TORD	121.75	309.32	13:28: 44.85	0.568	1078.73	5.1	0.0	5.170	0.130	3.0	0 -99.000

CPU 165.15 85.98 13:30: 47.46 -4.324 1201.31 5.7 4.1 3.390 0.150 3.0 0 -99.000

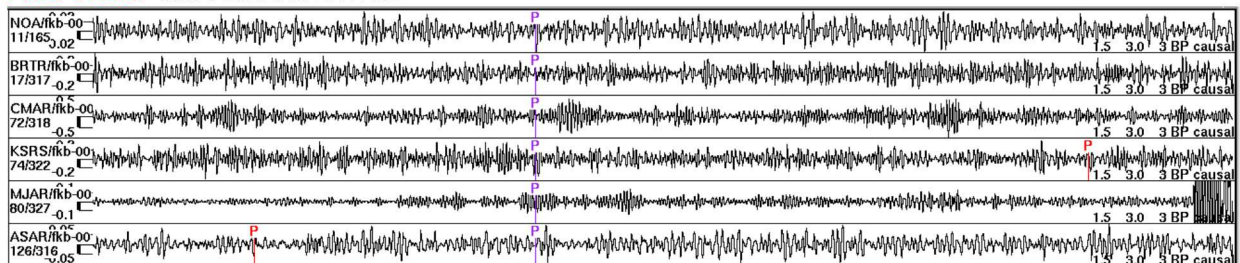
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
163 13687340 13:10: 59.62 2.83 50.570 15.680 0.0 3.94 0.15 6 NEW 0 0.000 -
1.000 0 36 29.0 21.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
NOA	9.96	346.14	13:13: 29.91	-0.695	150.91	4.6	0.0	4.187	0.090	6.6	0 -99.000	
BRTR	16.94	127.08	13:14: 52.97	-1.463	234.26	5.2	0.0	3.707	0.260	3.0	0 -99.000	
CMAR	71.37	83.67	13:22: 25.17	1.076	685.41	4.8	0.0	3.917	0.070	3.0	0 -99.000	
KSRS	73.28	50.51	13:22: 40.99	4.702	702.31	4.7	0.0	3.957	0.120	3.0	0 -99.000	
MJAR	78.79	44.05	13:23: 3.40	-4.591	724.70	4.4	0.0	3.847	0.130	3.0	0 -99.000	
ASAR	125.38	84.08	13:30: 2.64	0.971	1143.81	4.4	0.0	3.997	0.060	3.0	0 -99.000	

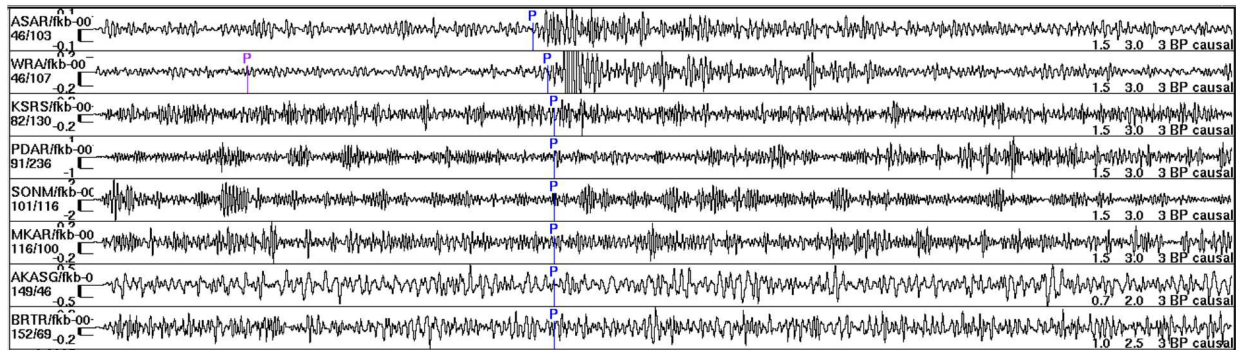
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
164 9786699 13:11: 57.63 3.64 -25.460 -178.440 180.0 3.86 0.49 9 NEW 0 0.000
-1.000 0 12 25.4 41.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	43.35	263.49	13:19: 44.33	3.028	466.22	7.6	0.0	3.455	0.110	9.5	0 -99.000	
WRA	44.04	268.80	13:19: 48.28	3.440	470.62	7.4	0.0	3.585	0.180	9.8	0 -99.000	
KSRS	81.87	319.37	13:23: 49.54	-0.186	711.97	4.4	0.0	3.625	0.040	3.0	0 -99.000	
NVAR	85.86	42.85	13:24: 4.04	-4.805	726.47	4.8	0.0	3.805	0.240	3.7	0 -99.000	
PDAR	93.79	43.35	13:24: 56.78	4.633	778.47	4.4	0.0	4.935	0.110	3.0	0 -99.000	
SONM	100.70	318.39	13:25: 23.14	3.949	805.16	4.2	0.0	4.365	0.130	3.0	0 -99.000	
MJAR	115.63	311.31	13:30: 9.23	-4.846	1091.59	4.5	0.0	4.115	0.160	3.0	0 -99.000	
AKASG	148.64	325.98	13:31: 16.46	-1.954	1158.55	4.5	0.0	3.615	0.050	3.0	0 -99.000	
BRTR	150.89	303.66	13:31: 21.74	-3.258	1164.22	4.9	0.0	3.275	0.170	3.3	0 -99.000	

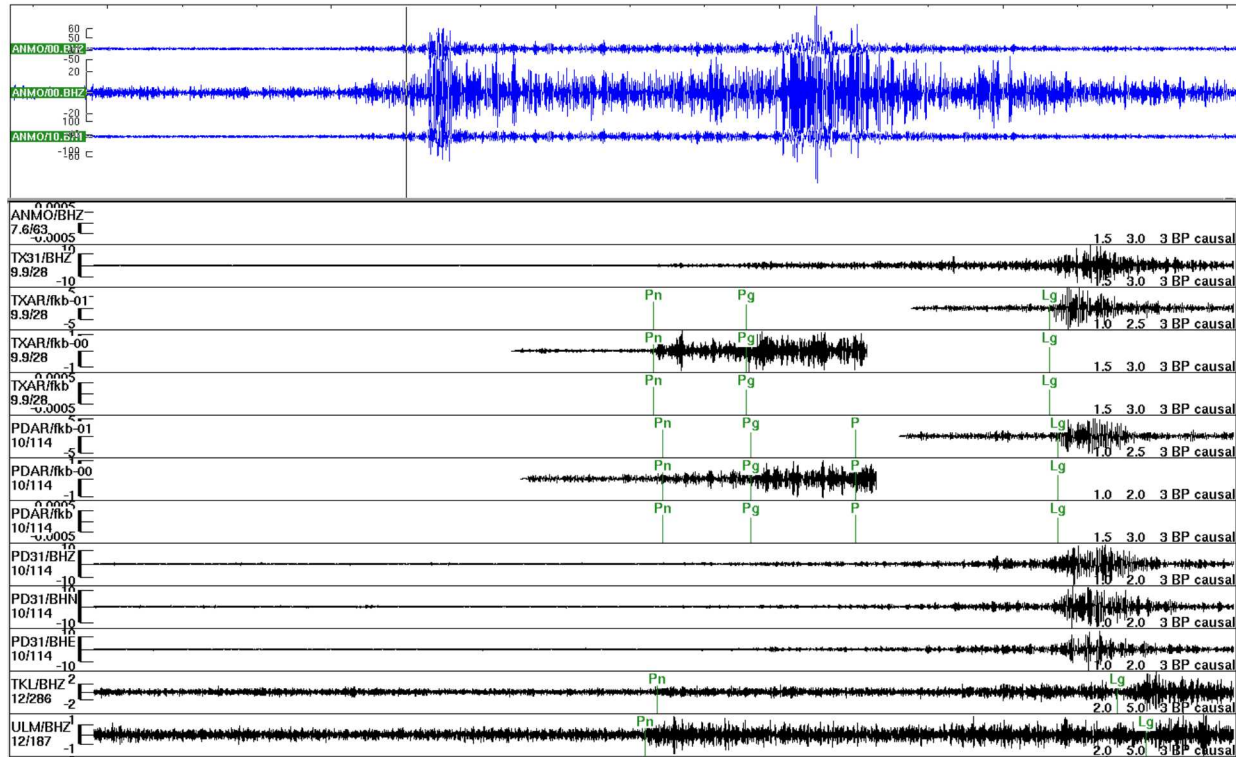
ASAR/WRA are valid arrivals. Found a possible signal at station RAO that would agree with a solution at 13:11:19.7 27.25S x 175.56W



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 165 12606005 13:21: 19.25 3.11 37.600 -98.540 0.0 3.66 0.56 4 SEL 17818932 12.977
 0.682 2 34 27.0 23.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	10.59	307.49	13:23: 35.04	-3.526	135.97	5.6	3.9	3.764	0.120	9.5	1 -4.472
TXAR	8.80	213.35	13:24: 0.09	-1.744	161.39	5.6	6.9	2.764	0.110	5.4	1 7.173
NVAR	16.06	281.77	13:25: 6.01	4.781	227.74	4.5	3.5	3.804	0.110	5.6	0 -99.000
ARCES	66.26	18.65	13:32: 3.93	0.489	644.97	5.2	3.8	4.314	0.070	3.0	0 -99.000

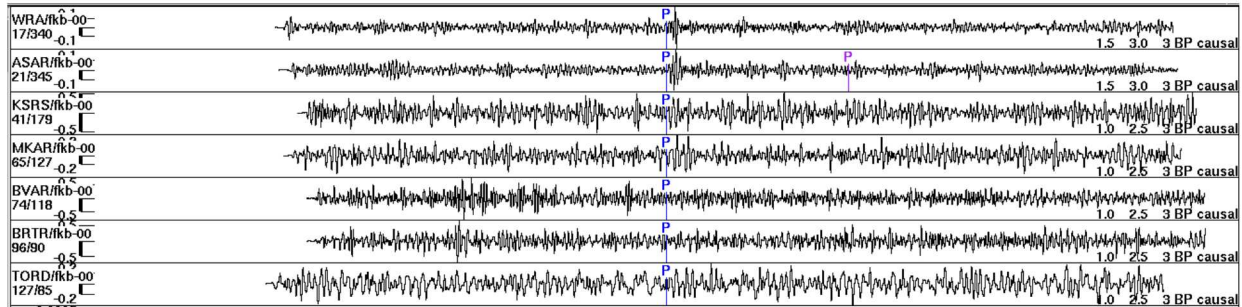
Good event! Can't confirm NVAR (no waveforms) TXAR from a previous event is Pn to this, this TXAR is Pg.
 Lg called on PDAR/TXAR et. al. ARCES is not a valid arrival. Added ANMO as well



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
166 6865482 13:26: 17.20 3.61 -9.850 130.330 0.0 3.98 0.99 7 NEW 0 0.000 -
1.000 0 24 27.0 40.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	12.97	159.33	13:28: 48.81	4.730	152.76	4.9	0.0	2.843	0.040	9.9	0 -99.000
ASAR	16.35	165.54	13:29: 27.04	-4.742	190.79	9.8	0.0	3.183	0.040	9.6	0 -99.000
KSRS	45.01	358.17	13:34: 48.72	-2.312	512.09	6.0	0.0	4.393	0.070	3.0	0 -99.000
MKAR	68.61	327.21	13:37: 36.15	0.940	679.09	4.5	0.0	3.603	0.120	8.8	0 -99.000
BVAR	78.46	328.05	13:38: 32.84	2.576	736.76	4.5	0.0	3.193	0.160	3.0	0 -99.000
BRTR	99.43	308.95	13:40: 13.04	3.446	836.64	4.6	0.0	4.823	0.230	3.0	0 -99.000
TORD	128.48	280.57	13:45: 24.17	-4.638	1147.56	4.8	0.0	5.803	0.170	3.0	0 -99.000

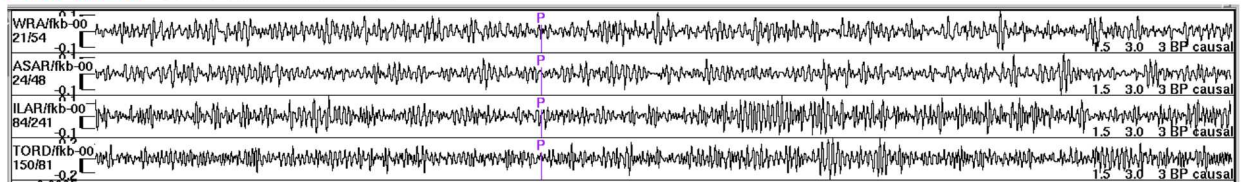
ASAR/WRA are valid arrivals, and locate to 3E x 128E – can't confirm the other arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
167 6583001 13:34: 2.58 1.74 -6.600 151.530 0.0 4.12 0.63 4 NEW 0 0.000 -
1.000 0 15 27.7 30.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	21.19	51.33	13:38: 51.30	-0.657	288.04	5.5	0.0	-1.268	0.002	9.8	0 -99.000
ASAR	23.96	45.47	13:39: 18.98	-0.373	316.21	10.1	0.0	-1.281	0.005	9.4	0 -99.000
ILAR	84.00	242.30	13:46: 32.72	-1.824	750.06	5.2	0.0	-1.193	0.002	5.3	0 -99.000
TORD	148.76	79.78	13:53: 53.06	2.854	1190.06	5.8	0.0	0.212	0.002	6.2	0 -99.000

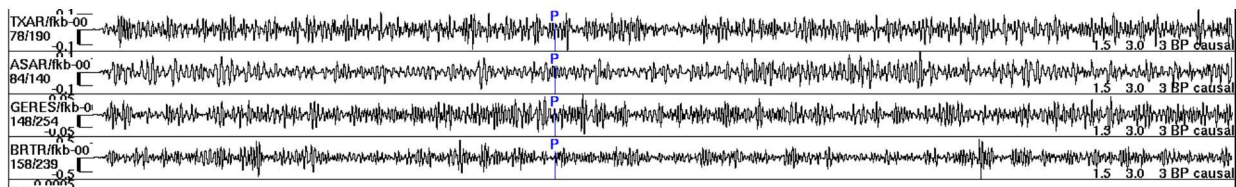
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
168 10114292 13:34: 53.99 1.47 -49.760 -113.620 0.0 3.60 0.24 5 NEW 0 0.000
-1.000 0 43 16.2 21.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	13:46: 59.09	-1.762	724.24	6.0	0.0	-0.605	0.007	5.1	0 -99.000
ASAR	85.24	143.18	13:47: 33.37	-0.266	759.14	4.9	0.0	-1.103	0.001	5.0	0 -99.000
NVAR	88.19	177.23	13:47: 46.55	2.093	772.62	4.8	0.0	-1.111	0.006	4.7	0 -99.000
GERES	146.56	247.70	13:54: 33.93	-1.315	1179.32	6.7	0.0	-1.090	0.006	3.0	0 -99.000
BRTR	155.04	234.82	13:55: 13.48	1.250	1219.19	5.4	0.0	-0.600	0.001	3.6	0 -99.000

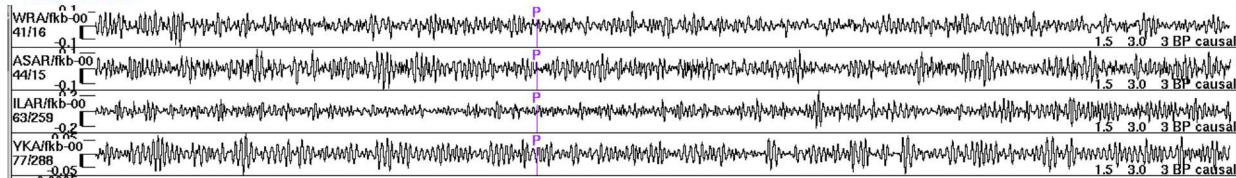
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 169 15337939 13:42: 23.55 0.09 19.660 145.240 151.0 3.08 0.13 5 NEW 0 0.000
 -1.000 0 18 24.6 31.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	40.81	16.08	13:49: 50.48	0.115	446.95	5.6	0.0	-1.368	0.001	9.4	0 -99.000
ASAR	44.49	15.57	13:50: 19.48	-0.102	476.28	7.8	0.0	-1.411	0.002	7.7	0 -99.000
ILAR	62.92	258.34	13:52: 32.64	0.082	609.48	5.3	0.0	-1.328	0.004	5.2	0 -99.000
YKA	77.28	287.90	13:54: 0.97	-0.079	697.88	4.7	0.0	-1.066	0.003	5.2	0 -99.000
NVAR	82.77	289.20	13:54: 32.61	-0.016	729.51	5.7	0.0	-1.444	0.006	4.3	0 -99.000

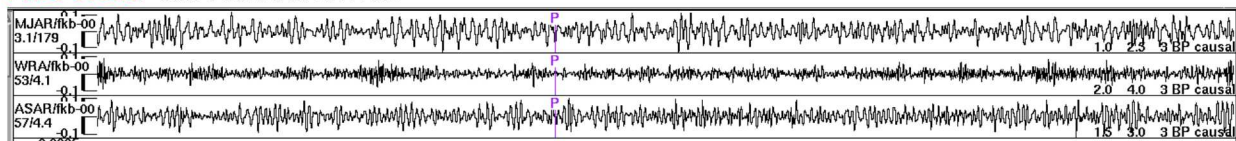
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 170 4112159 13:52: 4.95 1.47 33.440 138.280 78.0 2.92 0.62 3 NEW 0 0.000 -
 1.000 0 18 23.9 24.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	3.72	176.15	13:52: 52.41	-0.050	47.10	5.1	0.0	0.000	0.001	8.9	0 -99.000
WRA	52.60	4.46	14: 1: 13.39	-1.773	548.53	4.7	0.0	-1.315	0.001	8.9	0 -99.000
ASAR	56.33	4.69	14: 1: 45.03	1.822	579.15	6.9	0.0	-1.320	0.002	6.9	0 -99.000

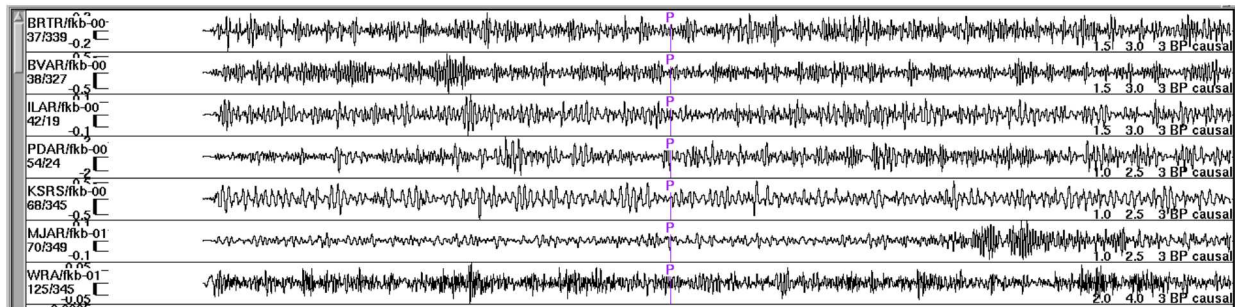
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 171 16563753 13:56: 19.39 2.02 70.610 -7.030 0.0 3.83 0.59 8 NEW 0 0.000 -
 1.000 0 40 21.0 26.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BVAR	38.44	74.04	14: 3: 31.82	-2.098	432.19	4.4	0.0	3.228	0.060	3.0	0 -99.000
BRTR	39.04	120.00	14: 3: 35.77	2.305	436.56	4.9	0.0	3.448	0.110	3.0	0 -99.000
KURK	43.00	69.06	14: 4: 11.37	0.087	472.64	4.6	0.0	3.208	0.100	3.0	0 -99.000
ILAR	40.56	332.50	14: 4: 11.37	0.485	472.81	4.9	0.0	3.328	0.130	4.6	0 -99.000
PDAR	52.54	293.32	14: 5: 44.97	-0.091	566.36	4.5	0.0	4.928	0.080	4.0	0 -99.000
KSRS	67.50	34.22	14: 7: 15.94	-2.341	656.46	4.4	0.0	4.448	0.050	3.0	0 -99.000
MJAR	70.04	25.69	14: 7: 37.03	3.844	678.52	4.1	0.0	3.938	0.120	3.0	0 -99.000
WRA	124.63	40.10	14:15: 15.82	-2.539	1136.58	4.4	0.0	4.418	0.070	3.0	0 -99.000

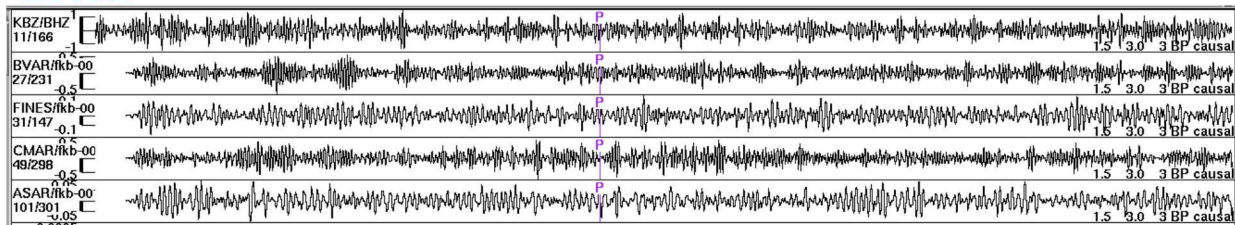
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 172 15337213 13:56: 19.39 2.05 32.900 45.990 0.0 3.77 0.71 5 NEW 0 0.000 -
 1.000 0 29 23.2 24.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KBZ	10.25	166.42	13:59: 6.83	2.540	167.52	5.3	0.0	-1.624	0.011	3.1	0	-99.000
BVAR	26.10	232.10	14: 1: 58.21	-2.616	338.72	4.3	0.0	-2.555	0.007	6.7	0	-99.000
FINES	30.51	146.40	14: 2: 40.40	-1.400	381.22	4.3	0.0	-1.603	0.002	8.1	0	-99.000
CMAR	49.60	298.82	14: 5: 13.33	2.268	533.50	4.9	0.0	-0.738	0.002	3.2	0	-99.000
ASAR	101.28	301.84	14:10: 8.64	-0.792	829.15	5.6	0.0	-0.608	0.001	3.0	0	-99.000

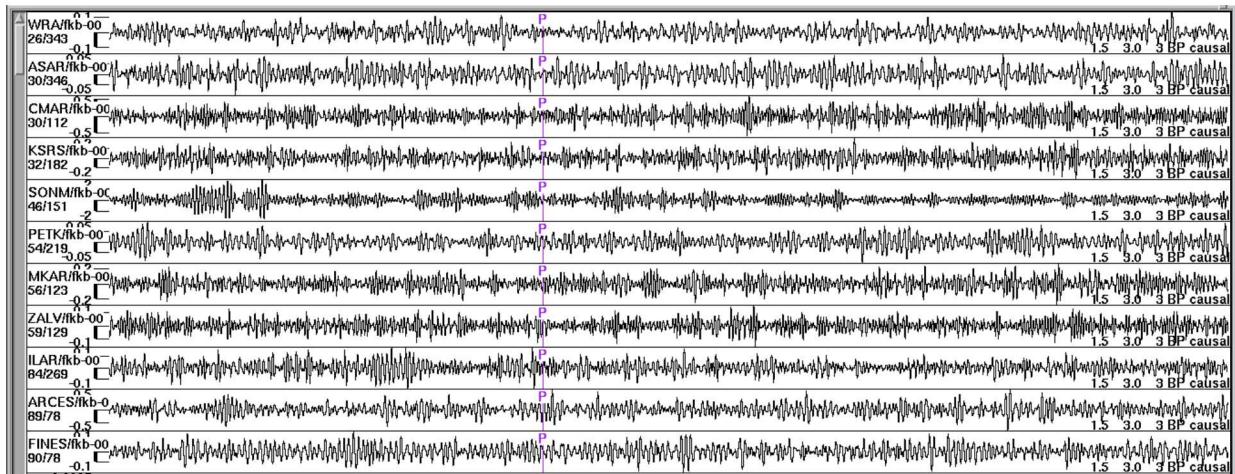
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 173 5748509 13:57: 38.50 1.84 5.350 126.810 122.0 3.85 0.32 11 NEW 0 0.000
 -1.000 0 22 28.9 57.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	25.83	343.79	14: 3: 4.13	2.423	325.32	8.0	0.0	-1.001	0.004	9.4	0	-99.000
ASAR	29.31	346.52	14: 3: 34.45	2.378	355.65	9.5	0.0	-1.187	0.002	9.2	0	-99.000
CMAR	30.72	112.05	14: 3: 35.77	-2.984	357.29	4.7	0.0	-0.721	0.001	4.6	0	-99.000
KRSR	32.19	181.04	14: 3: 52.91	-1.025	374.29	7.9	0.0	-1.118	0.005	3.0	0	-99.000
SONM	46.20	150.46	14: 5: 47.61	-0.857	489.63	8.5	0.0	-0.738	0.001	4.7	0	-99.000
PETK	53.94	218.54	14: 6: 49.57	0.500	551.49	9.3	0.0	-0.824	0.003	3.0	0	-99.000
MKAR	56.78	122.60	14: 7: 5.39	-1.841	567.37	10.5	0.0	0.000	0.003	8.6	0	-99.000
ZALV	59.64	128.74	14: 7: 27.80	2.979	589.97	7.0	0.0	-0.974	0.008	3.7	0	-99.000
ILAR	83.61	268.37	14: 9: 50.19	-1.543	731.74	5.8	0.0	-0.759	0.004	3.5	0	-99.000
ARCES	89.37	77.17	14:10: 17.87	0.233	759.45	9.0	0.0	-1.241	0.002	3.9	0	-99.000
FINES	90.91	77.71	14:10: 24.46	-0.263	766.07	11.6	0.0	-0.757	0.004	4.3	0	-99.000

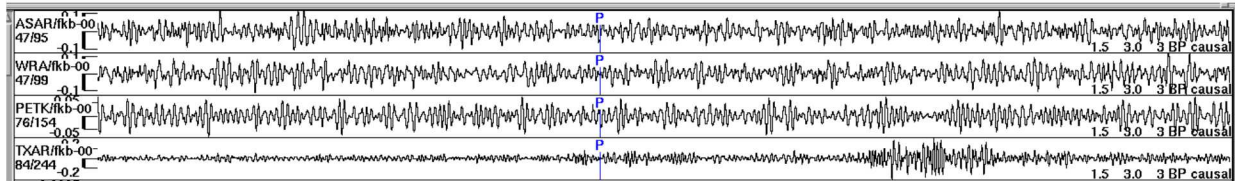
False event. Can't confirm signals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 174 14333376 14: 5: 34.42 0.91 -18.440 -176.650 643.0 2.56 0.41 4 NEW 0 0.000
 -1.000 0 13 26.2 27.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	45.09	96.90	14:13: 1.35	-1.349	446.81	5.4	0.0	-0.829	0.005	9.7	0 -99.000
ASAR	45.16	93.35	14:13: 5.30	1.222	451.01	6.2	0.0	-1.899	0.002	9.5	0 -99.000
PETK	74.64	155.92	14:16: 9.87	0.157	635.51	4.4	0.0	-0.979	0.002	3.0	0 -99.000
TXAR	85.93	246.02	14:17: 2.61	-0.030	689.21	4.6	0.0	-1.241	0.006	5.1	0 -99.000

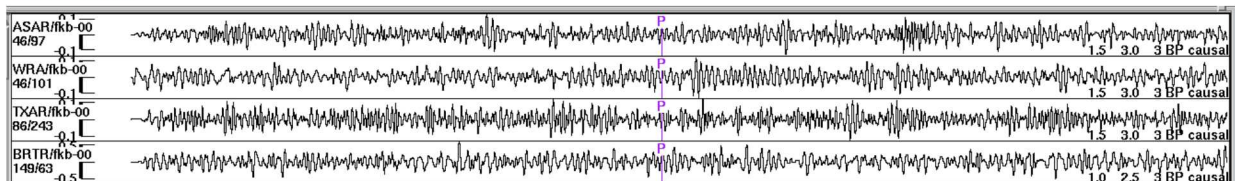
False event. Can't confirm detections, TXAR is a local.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 175 10443978 14:11: 15.88 1.25 -21.180 -176.170 149.0 3.88 0.25 5 NEW 0 0.000
 -1.000 0 13 26.2 32.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	45.75	101.46	14:19: 22.35	-1.950	487.45	8.6	0.0	-1.119	0.003	9.7	0 -99.000
ASAR	45.52	97.98	14:19: 24.99	1.599	489.77	10.5	0.0	-1.573	0.010	9.5	0 -99.000
NVAR	81.12	233.09	14:23: 10.43	0.388	714.55	4.5	0.0	-0.971	0.004	4.1	0 -99.000
TXAR	86.68	242.78	14:23: 38.12	-0.832	742.65	5.8	0.0	-0.832	0.009	5.1	0 -99.000
BRTR	148.75	64.26	14:30: 45.26	0.795	1169.82	5.7	0.0	-1.094	0.003	3.6	0 -99.000

False event. Can't confirm arrivals

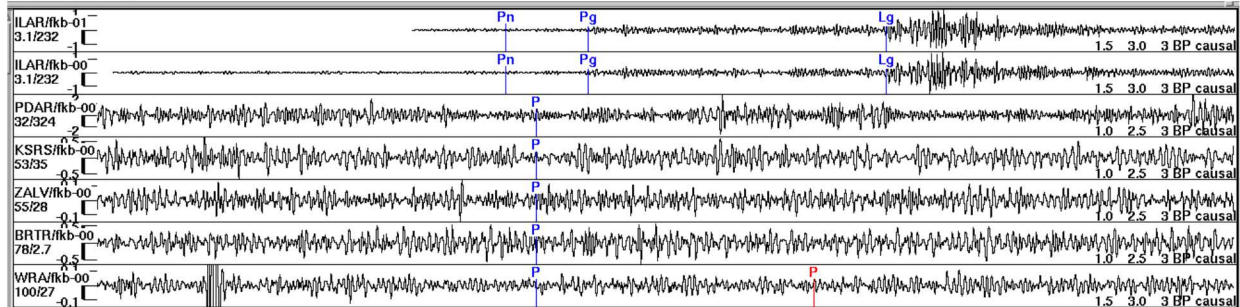


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 176 11249138 14:15: 26.37 0.90 61.880 -156.760 104.9 3.86 1.20 6 NEW 0 0.000
 -1.000 0 33 23.0 27.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
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ILAR	3.59	38.47	14:16:	41.51	0.192	74.49	4.7	0.0	1.646	0.050	8.8	0-99.000
PDAR	31.53	107.80	14:21:	50.01	-0.724	382.49	4.6	0.0	4.486	0.050	6.2	0-99.000
KSRS	53.20	281.77	14:24:	18.98	-0.470	531.53	6.2	0.0	3.876	0.070	3.0	0-99.000
ZALV	55.97	323.30	14:24:	45.35	0.696	558.81	4.8	0.0	3.216	0.140	3.2	0-99.000
BRTR	78.46	355.48	14:27:	14.33	-1.173	707.53	4.9	0.0	4.526	0.110	3.0	0-99.000
WRA	100.00	246.38	14:28:	49.25	1.479	802.99	4.7	0.0	5.436	0.090	3.0	0-99.000

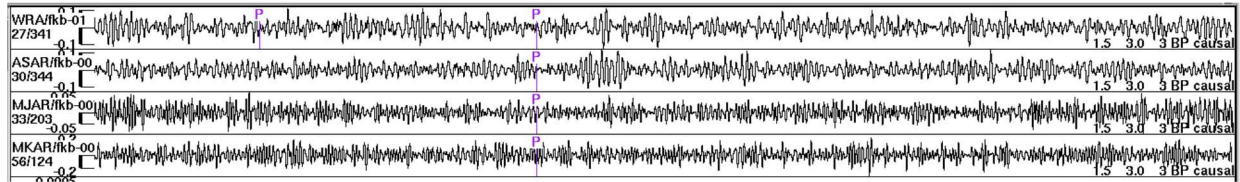
False event. Can't confirm most arrivals. ILAR is a local event.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
177	5734900	14:23:	48.66	0.58	5.720	125.970	33.0	3.69	0.23	4	NEW	0	0.000
1.000	0	22	28.5	31.1									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	26.41	341.70	14:29: 24.84	0.740	335.84	9.1	0.0	-1.065	0.002	9.8	0-99.000	
ASAR	29.84	344.59	14:29: 53.85	-0.891	364.57	11.1	0.0	-1.394	0.002	9.5	0-99.000	
MJAR	32.86	202.38	14:30: 17.58	0.046	387.98	6.1	0.0	-1.468	0.002	3.0	0-99.000	
MKAR	55.93	123.42	14:33: 20.83	0.104	571.66	5.2	0.0	-1.698	0.003	8.8	0-99.000	

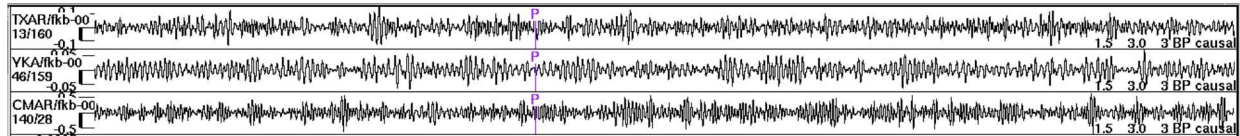
False event. Can't confirm arrivals



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
178	15834931	14:26:	5.77	1.07	17.270	-99.070	70.0	3.02	0.48	4	NEW	0	0.000
1.000	0	5	25.3	29.6									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
TXAR	12.83	156.70	14:29: 5.07	1.112	179.57	4.6	0.0	-1.987	0.003	9.4	0-99.000	
NVAR	27.25	134.74	14:31: 40.63	-0.572	334.54	4.2	0.0	-1.669	0.001	8.1	0-99.000	
YKA	46.46	158.42	14:34: 22.79	-1.471	497.52	4.2	0.0	-1.084	0.001	7.8	0-99.000	
CMAR	140.51	26.57	14:45: 28.56	0.931	1162.57	8.7	0.0	-0.772	0.003	4.2	0-99.000	

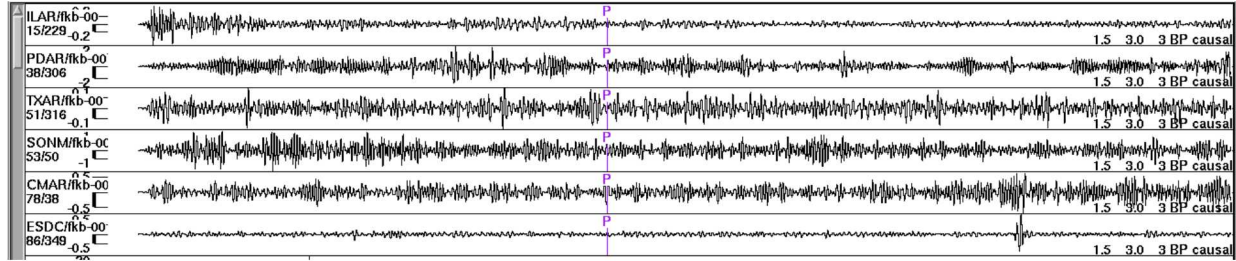
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
179 12671303 14:30: 30.76 4.20 52.980 -166.300 33.5 3.79 0.34 6 NEW 0 0.000
-1.000 0 1 23.0 34.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	16.02	34.02	14:34: 1.70	-4.441	210.58	4.4	0.0	3.527	0.050	8.7	0 -99.000
PDAR	39.49	80.69	14:37: 49.78	-2.983	438.83	4.5	0.0	3.887	0.180	6.8	0 -99.000
TXAR	51.91	90.43	14:39: 35.24	4.038	543.30	4.5	0.0	3.267	0.140	7.4	0 -99.000
SONM	51.72	301.16	14:39: 45.79	4.781	554.95	4.5	0.0	4.047	0.230	5.1	0 -99.000
CMAR	77.30	283.68	14:42: 23.99	-4.992	712.37	4.7	0.0	3.677	0.080	3.5	0 -99.000
ESDC	86.74	12.27	14:43: 14.09	3.597	762.50	4.2	0.0	4.317	0.110	3.0	0 -99.000

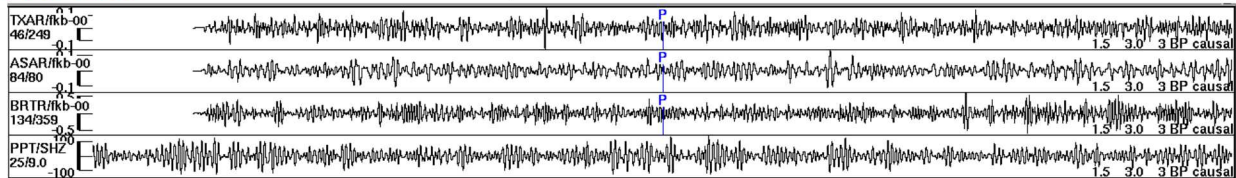
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
180 10114292 14:34: 54.43 1.24 -49.680 -113.820 0.0 3.64 0.25 4 NEW 0 0.000
-1.000 0 43 16.2 18.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	79.57	186.76	14:46: 58.21	-1.736	723.88	5.6	0.0	-0.615	0.006	5.1	0 -99.000
ASAR	85.24	143.18	14:47: 33.81	-0.287	758.78	5.1	0.0	-1.111	0.001	5.0	0 -99.000
NVAR	88.19	177.23	14:47: 46.99	1.720	771.68	4.6	0.0	-1.105	0.005	4.7	0 -99.000
BRTR	155.04	234.82	14:55: 13.92	0.302	1218.83	5.3	0.0	-0.603	0.001	3.6	0 -99.000

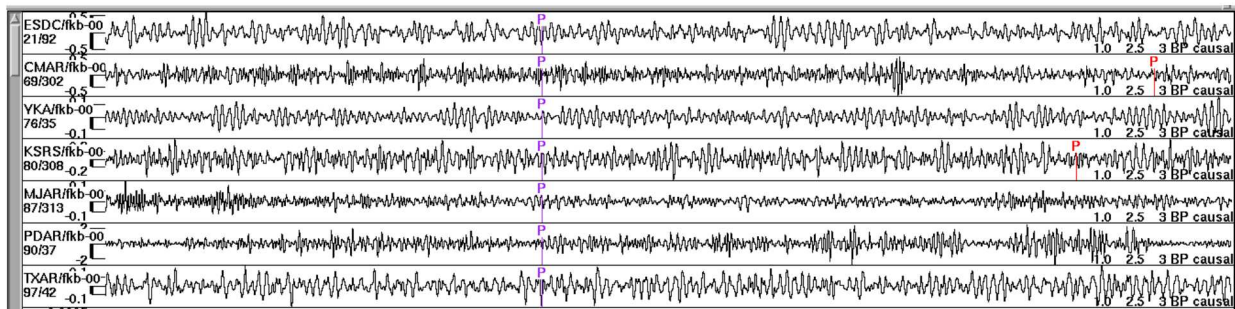
False event. Can't confirm arrivals. TXAR is possible.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
181 14526317 14:36: 28.04 2.76 36.160 21.860 60.4 4.25 0.31 7 NEW 0 0.000 -
1.000 0 30 23.0 23.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ESDC	21.36	285.87	14:40: 59.62	-1.889	272.63	4.7	4.9	3.796	0.080	4.9	0 -99.000
CMAR	68.08	82.91	14:47: 27.22	-2.017	659.23	5.4	8.9	4.266	0.070	3.0	0 -99.000
YKA	75.32	341.13	14:48: 2.81	-3.244	695.16	4.3	4.3	4.186	0.090	3.3	0 -99.000
KSRS	78.59	51.71	14:48: 26.54	-2.059	719.38	5.0	4.6	4.196	0.100	3.0	0 -99.000
MJAR	85.50	46.97	14:49: 8.73	4.068	761.25	4.3	5.0	3.956	0.080	3.0	0 -99.000
PDAR	89.77	327.17	14:49: 21.91	1.835	773.78	5.1	7.0	4.756	0.190	3.0	0 -99.000
TXAR	97.34	315.11	14:49: 57.51	3.306	810.31	5.3	4.0	4.576	0.280	3.0	0 -99.000

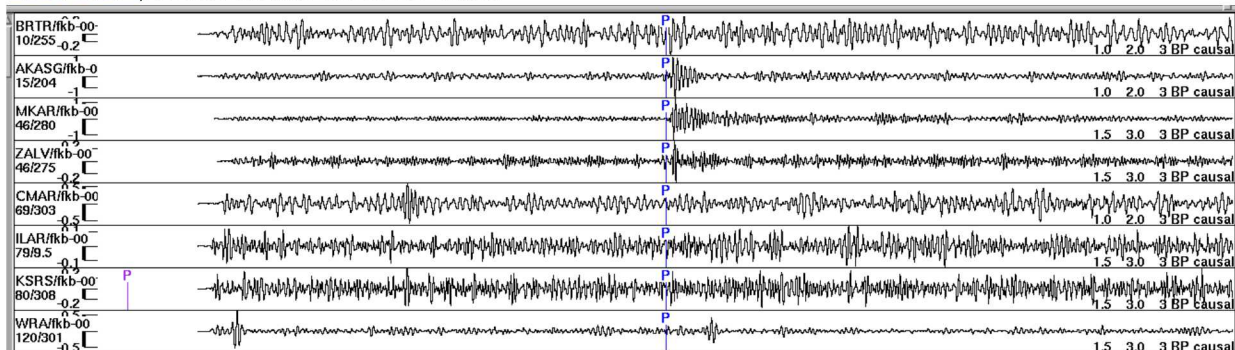
False event Can't confirm arrivals



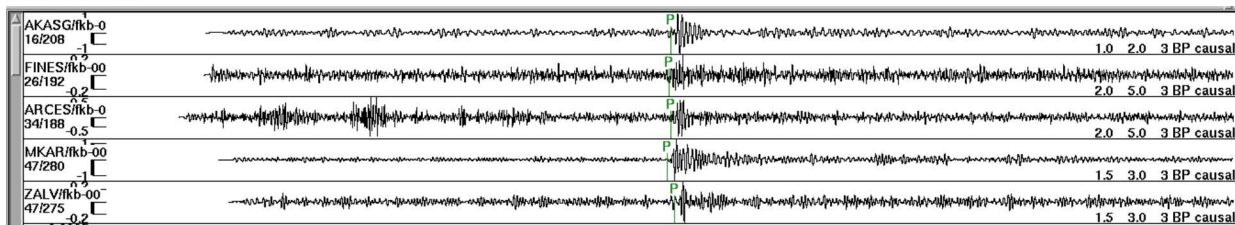
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 182 16523354 14:37: 26.04 2.49 38.920 19.330 0.0 3.95 0.50 9 SEL 17819043 0.030
 1.993 3 31 23.0 37.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	10.35	74.91	14:40: 10.84	0.807	164.24	4.7	0.0	3.639	0.040	5.4	0 -99.000
AKASG	14.34	22.52	14:40: 42.48	0.147	196.59	6.6	0.0	3.949	0.070	4.8	0 -99.000
KURK	42.42	53.12	14:45: 18.02	-4.838	472.37	4.6	0.0	3.669	0.100	3.0	1 2.750
MKAR	45.45	58.04	14:45: 47.02	-1.502	501.22	6.8	0.0	3.719	0.220	7.8	1 -2.202
ZALV	45.92	47.79	14:45: 53.61	3.514	507.79	5.0	0.0	3.329	0.230	4.6	1 -4.151
CMAR	69.85	81.91	14:48: 46.32	1.008	680.04	4.5	0.0	3.879	0.080	3.0	0 -99.000
ILAR	77.36	354.56	14:49: 15.32	-1.783	709.04	5.1	0.0	4.279	0.150	3.0	0 -99.000
KRSR	79.52	50.63	14:49: 35.10	-0.837	728.74	4.3	0.0	3.879	0.070	3.0	0 -99.000
WRA	120.42	92.56	14:56: 23.79	3.484	1137.42	4.2	0.0	5.169	0.130	3.0	0 -99.000

Good event, not all arrivals above are valid.



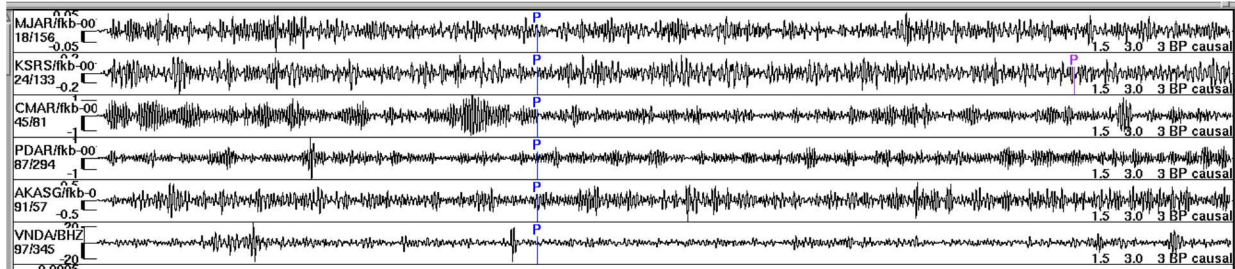
Final result:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
183 13418642 14:42: 27.95 4.51 19.410 145.860 217.1 3.84 0.59 6 NEW 0 0.000
-1.000 0 18 24.0 20.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	19.03	341.98	14:46: 29.21	4.462	240.53	4.8	0.0	2.964	0.220	5.2	0 -99.000
KSRS	24.34	324.36	14:47: 17.99	-3.698	289.52	5.3	0.0	3.554	0.060	3.3	0 -99.000
CMAR	44.00	277.64	14:50: 14.65	-4.945	465.97	4.6	0.0	3.344	0.090	3.3	0 -99.000
PDAR	88.13	45.37	14:54: 47.55	-4.822	739.02	4.4	0.0	4.204	0.110	3.0	0 -99.000
AKASG	91.32	325.20	14:55: 8.64	4.275	760.22	4.3	0.0	4.474	0.050	3.0	0 -99.000
VNDA	96.32	176.46	14:55: 38.96	4.727	791.09	6.1	2.3	4.504	0.220	3.0	0 -99.000

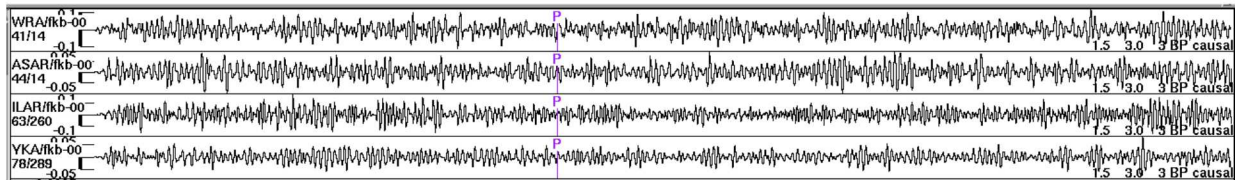
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
184 16645174 14:42: 47.72 0.55 19.840 144.220 409.0 2.18 0.13 5 NEW 0 0.000
-1.000 0 18 24.6 31.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	40.55	15.38	14:49: 49.60	-0.307	422.66	5.1	0.0	-1.370	0.001	9.4	0 -99.000
ASAR	44.23	14.91	14:50: 19.92	0.241	452.02	7.7	0.0	-1.409	0.002	7.7	0 -99.000
ILAR	63.27	258.79	14:52: 33.08	-0.813	585.22	4.7	0.0	-1.327	0.004	5.2	0 -99.000
YKA	77.64	288.30	14:54: 1.41	0.838	673.61	4.3	0.0	-1.066	0.002	5.2	0 -99.000
NVAR	83.25	289.42	14:54: 33.05	0.040	705.24	5.9	0.0	-1.443	0.006	4.3	0 -99.000

False event. Can't confirm arrivals

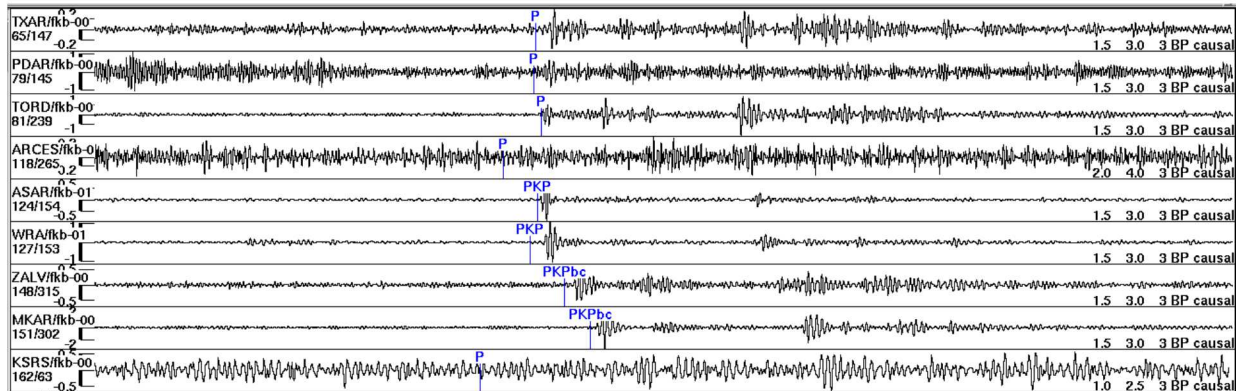


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
185 11745759 14:50: 2.78 3.43 -28.740 -71.530 42.9 4.28 0.51 11 SEL 17819070 -8.096
1.837 7 8 23.0 54.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	13.12	12.90	14:53: 3.40	3.761	181.73	7.4	3.2	3.968	0.170	8.5	0 -99.000
TXAR	65.94	329.07	15: 0: 40.87	0.912	638.40	6.8	0.0	3.968	0.130	5.9	1 0.801
PDAR	79.83	332.31	15: 2: 1.29	-0.658	719.15	7.2	0.0	4.408	0.180	4.0	1 1.870
NVAR	80.39	324.27	15: 2: 7.88	2.423	725.20	4.6	0.0	4.238	0.160	3.4	0 -99.000
TORD	81.86	70.10	15: 2: 17.11	-1.237	734.80	5.9	0.0	5.628	0.110	7.7	1 -4.702
ARCES	119.32	23.62	15: 8: 40.75	-3.088	1118.95	4.8	0.0	4.628	0.100	3.0	0 -99.000
ASAR	122.20	207.32	15: 8: 56.57	4.914	1134.40	15.5	0.0	3.978	0.240	3.3	1 1.451
WRA	125.32	209.76	15: 9: 3.16	4.905	1140.50	11.7	0.0	3.998	0.180	5.0	1 1.474
ZALV	149.69	28.48	15: 9: 38.76	-3.609	1176.43	9.9	0.0	3.568	0.120	4.2	1 5.523
MKAR	152.85	42.31	15: 9: 44.03	-3.336	1182.10	19.5	0.0	4.238	0.400	6.3	1 8.198

KSRS 162.10 302.37 15: 9: 53.26 -4.988 1191.40 4.5 0.0 4.448 0.140 3.0 0 -99.000

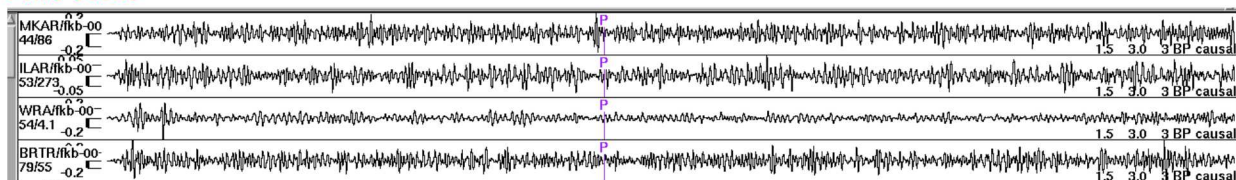
Good event. Couldn't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
186 13034359 14:51: 50.89 2.70 34.210 138.390 0.0 3.83 0.27 5 NEW 0 0.000 -
1.000 0 20 23.0 28.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	42.70	304.87	14:59: 56.04	-0.743	485.79	4.8	0.0	3.347	0.300	7.7	0 -99.000
ILAR	54.79	30.70	15: 1: 16.46	4.149	565.51	5.0	0.0	3.887	0.150	5.6	0 -99.000
WRA	53.02	182.39	15: 1: 16.46	0.889	565.81	4.3	0.0	4.177	0.060	8.9	0 -99.000
NVAR	80.51	50.17	15: 3: 52.03	-4.237	721.36	4.3	0.0	3.907	0.170	3.3	0 -99.000
BRTR	78.11	309.76	15: 3: 55.99	-0.058	725.16	5.0	0.0	3.837	0.290	3.0	0 -99.000

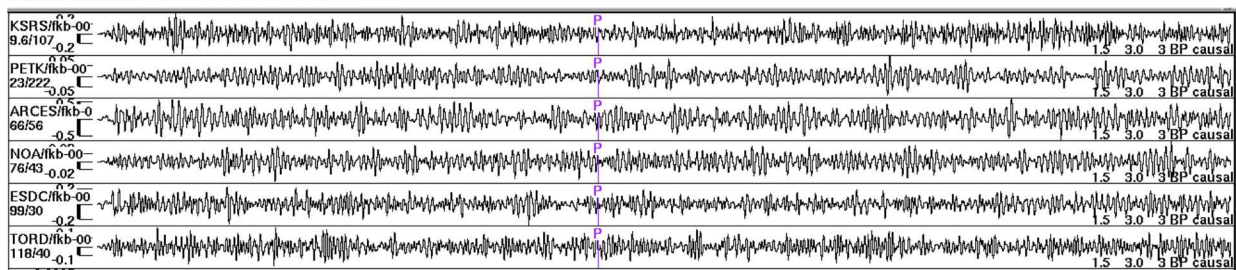
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
187 5533335 14:52: 8.03 3.62 34.040 138.980 0.0 4.37 1.35 6 NEW 0 0.000 -
1.000 0 19 23.0 19.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	8.89	291.03	14:54: 26.46	-2.679	138.49	4.8	0.0	3.833	0.040	3.9	0 -99.000
PETK	22.98	30.81	14:57: 11.25	-4.642	302.88	4.4	0.0	3.753	0.180	3.0	0 -99.000
ARCES	65.30	339.10	15: 3: 3.25	4.983	654.61	4.4	0.0	3.163	0.220	3.0	0 -99.000
NOA	75.35	336.35	15: 3: 54.67	-2.924	706.09	5.1	0.0	3.223	0.120	3.8	0 -99.000
ESDC	98.22	331.51	15: 5: 53.32	1.453	825.56	4.9	0.0	5.253	0.270	3.0	0 -99.000
TORD	117.10	311.29	15:10: 59.18	3.809	1130.71	4.6	0.0	6.973	0.120	3.0	0 -99.000

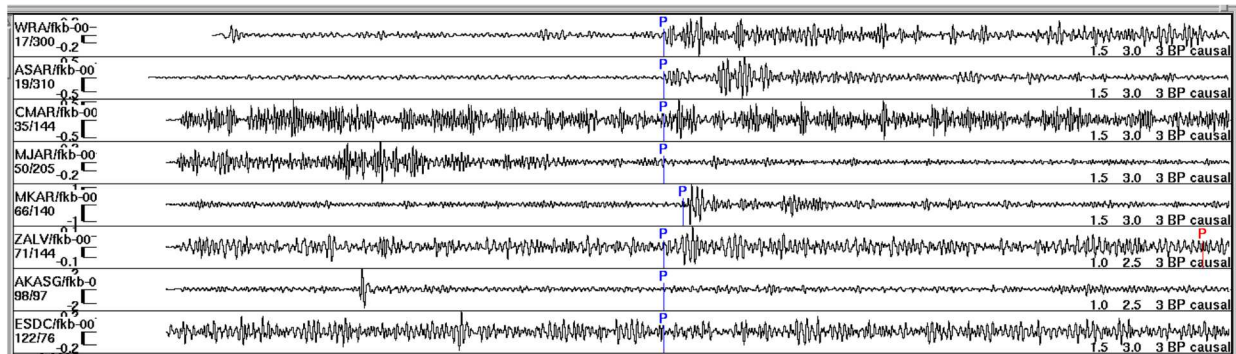
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
188 9236756 14:55: 4.69 2.34 -11.770 117.790 0.0 4.24 0.56 9 SEL 17819075 -1.195
0.851 4 24 27.0 46.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	17.94	120.37	14:59: 16.49	3.415	250.93	9.4	5.0	3.974	0.060	9.8	1 -6.050
ASAR	19.51	130.92	14:59: 31.00	-1.398	265.91	15.0	14.4	3.634	0.190	9.6	1 1.228
CMAR	35.06	327.48	15: 2: 5.24	2.983	420.46	4.2	4.1	4.384	0.060	3.0	0 -99.000
MJAR	51.34	20.99	15: 4: 11.81	-1.013	546.61	5.2	3.6	3.664	0.130	3.0	0 -99.000
MKAR	66.09	334.03	15: 5: 54.64	-0.421	650.33	7.3	9.8	3.744	0.190	8.8	1 1.398
ZALV	70.88	340.02	15: 6: 23.64	-0.852	678.86	4.8	3.7	3.694	0.120	3.0	1 0.875
AKASG	97.88	320.07	15: 8: 46.03	3.552	820.66	4.6	4.1	5.224	0.130	3.0	0 -99.000
ESDC	121.63	309.68	15:13: 58.48	-2.841	1133.46	4.4	4.4	5.084	0.050	3.0	0 -99.000
NVAR	123.32	51.38	15:14: 2.43	-3.084	1137.56	4.4	7.5	4.644	0.120	3.0	0 -99.000

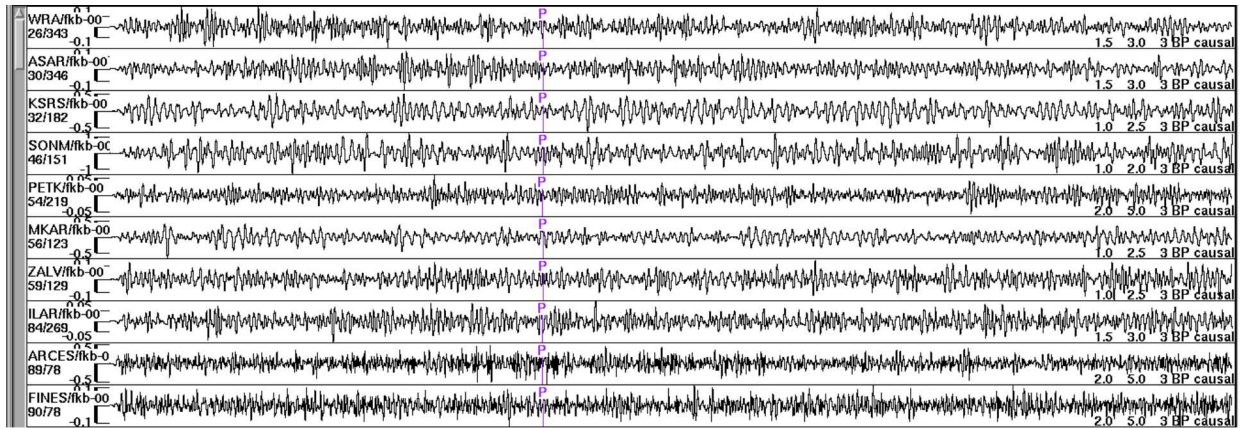
Good event. Can't confirm all arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
189 5812625 14:57: 37.62 1.34 5.420 126.770 108.0 3.83 0.18 10 NEW 0 0.000
-1.000 0 22 28.9 53.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	26.88	343.11	15: 3: 3.25	1.447	326.42	8.2	0.0	-1.015	0.004	9.4	0 -99.000
ASAR	30.34	345.81	15: 3: 33.57	-1.046	356.74	9.0	0.0	-1.201	0.002	9.2	0 -99.000
KSRS	31.28	182.17	15: 3: 53.35	1.390	375.39	8.1	0.0	-1.119	0.005	3.0	0 -99.000
SONM	45.14	150.78	15: 5: 48.05	0.397	490.73	8.0	0.0	-0.748	0.001	4.7	0 -99.000
PETK	53.30	219.63	15: 6: 50.01	0.867	552.57	9.0	0.0	-0.836	0.003	3.0	0 -99.000
MKAR	55.69	122.51	15: 7: 5.83	-1.172	568.46	10.6	0.0	-1.034	0.003	8.6	0 -99.000
ZALV	58.56	128.83	15: 7: 28.24	2.043	591.07	6.6	0.0	-0.987	0.007	3.7	0 -99.000
ILAR	83.02	269.29	15: 9: 50.62	-2.248	732.84	5.7	0.0	-0.766	0.004	3.5	0 -99.000
ARCES	88.30	77.38	15:10: 18.31	-0.949	760.54	8.5	0.0	-1.251	0.002	3.9	0 -99.000
FINES	89.82	77.77	15:10: 24.90	-0.730	767.17	11.5	0.0	-0.764	0.004	4.3	0 -99.000

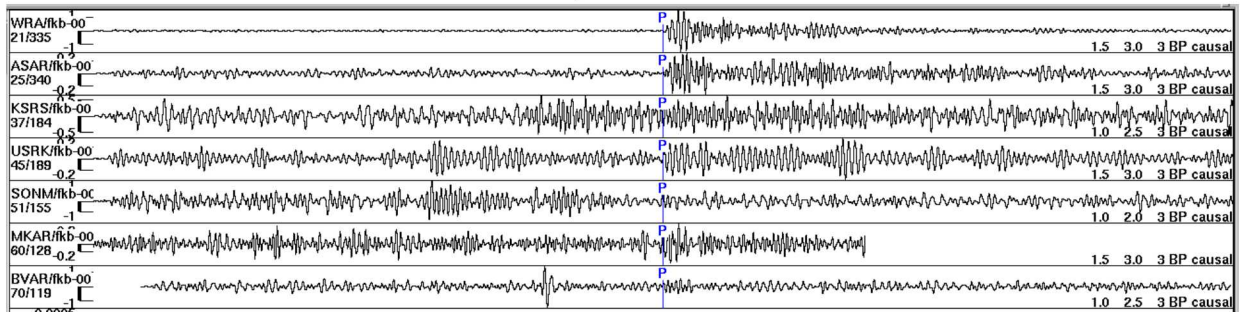
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 190 8696252 15:13: 26.84 1.58 4.050 124.570 36.6 3.96 0.59 8 REB 17815583 -31.670
 4.136 2 23 27.0 43.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	23.50	159.82	15:18: 51.15	-2.554	324.66	14.4	5.2	3.111	0.090	9.8	1 -2.350
ASAR	26.85	163.65	15:19: 22.79	3.067	356.03	9.8	13.4	3.291	0.160	9.5	1 1.350
CMAR	31.00	303.24	15:19: 26.75	0.616	359.73	5.2	4.6	4.341	0.080	3.0	0 -99.000
KSRS	35.12	2.70	15:20: 1.03	-1.013	394.78	6.1	5.3	4.321	0.020	3.0	0 -99.000
USRK	42.17	6.49	15:21: 4.31	1.137	457.18	4.9	5.1	4.491	0.140	3.0	0 -99.000
SONM	48.50	342.49	15:21: 49.13	-0.024	502.06	4.3	4.6	4.011	0.170	3.4	0 -99.000
MKAR	58.37	326.16	15:23: 1.64	-1.157	574.28	4.3	4.8	3.351	0.090	8.8	0 -99.000
TXAR	123.16	52.59	15:32: 20.62	-0.072	1134.08	4.3	4.2	4.791	0.210	3.0	0 -99.000

Partial event. WRA/ASAR are valid. Added an MKAR ~1 minute later than the pick and found the event.
 Other arrivals are not consistent with this location/O.T. Final solution: 15:13:39 0.17S x 125.48E



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 191 6520073 15:16: 23.50 3.30 -7.700 151.970 0.0 3.80 0.58 6 NEW 0 0.000 -
 1.000 0 15 25.0 35.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	21.24	227.48	15:21: 10.90	3.148	287.03	7.6	0.0	3.173	0.060	9.8	0 -99.000
ASAR	24.01	220.99	15:21: 33.31	-2.416	309.86	8.0	0.0	3.043	0.210	9.5	0 -99.000
ILAR	83.93	22.43	15:28: 58.92	-1.519	754.81	4.3	0.0	3.613	0.110	5.5	0 -99.000
AKASG	114.24	323.56	15:35: 4.10	-4.743	1120.23	4.4	0.0	4.053	0.060	3.0	0 -99.000
BRTR	114.57	311.04	15:35: 14.65	4.965	1131.01	4.3	0.0	4.343	0.090	3.0	0 -99.000
TORD	148.75	285.56	15:36: 12.66	0.565	1189.01	4.3	0.0	4.593	0.140	4.5	0 -99.000

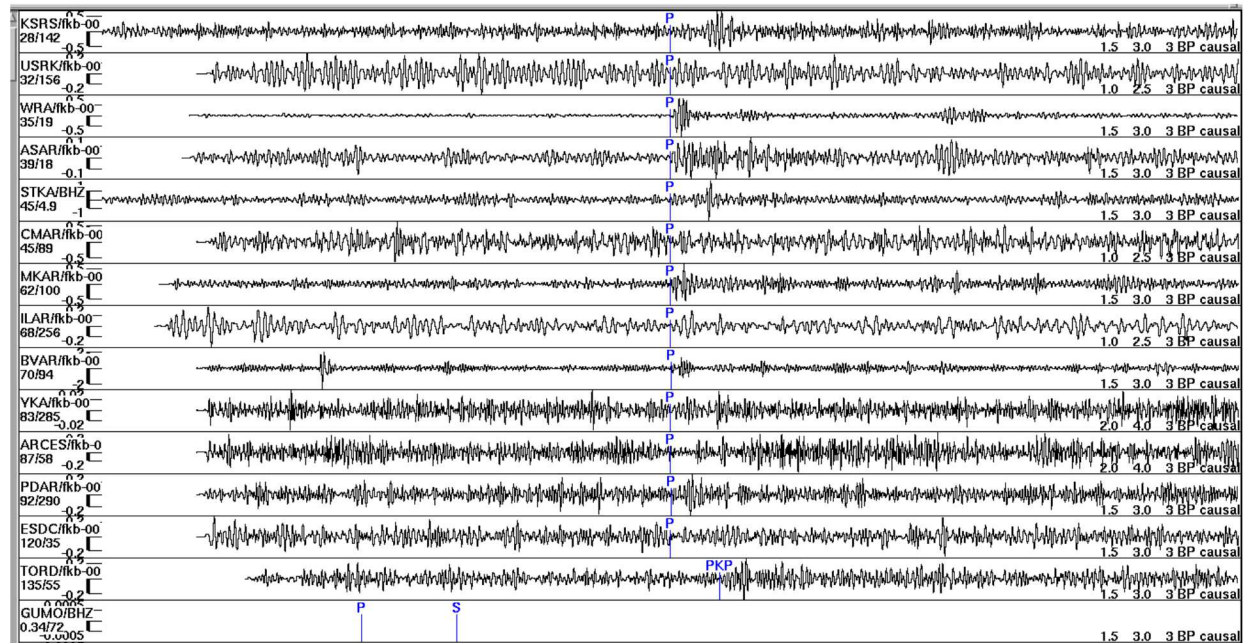
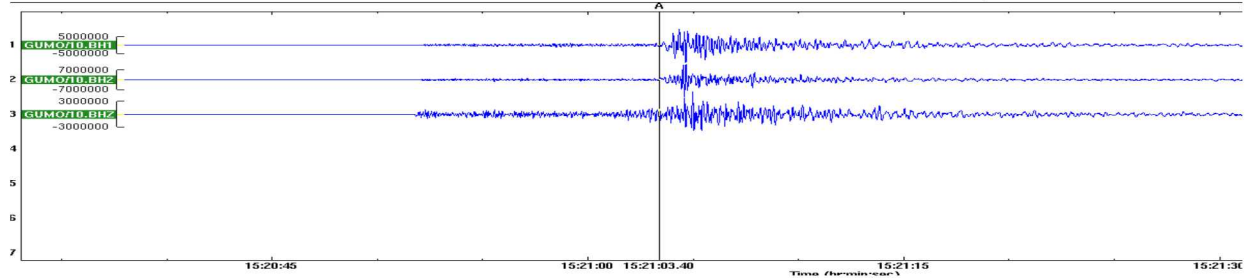
Partial credit. WRA/ASAR are valid and locate to New Guinea. Waveforms for PMG and AU:QIS were downloaded and show arrivals. Since PMG is part of the IMS network, pick times were added and the event

The screenshot displays the SigRepo2 software interface. At the top, a menu bar includes options like 'DB Open', 'Select All', 'Deselect All', 'Unzoom All', and 'SigRepo2'. Below the menu, a series of seismic data plots are shown, labeled 1 through 6, with waveforms and amplitude scales. The x-axis represents time in hours, minutes, and seconds, ranging from 15:16:00 to 15:22:00. The y-axis represents amplitude, with scales varying by plot (e.g., 20, -20, 16, -16, 20, -20, 16, -16, 20, -20, 16, -16, 20, -20). The plots are labeled with station names and codes: PMG/60.BH1, PMG/60.BH2, PMG/60.BH3, QIS/BH2, QIS/BH1, and QIS/BH3. Below the plots, a table titled 'Alpha List' is visible, showing a list of seismic events with columns for 'Sel', 'orid', 'evid', 'lat', 'lon', 'depth', 'sdepth', 'date and time', 'mb', 'ms', 'ml', 'majax', 'minax', 'strike', and 'sdocs'. The table contains several rows of data, including events from 2019-09-01. The interface also shows a 'Time (hr:min:sec)' axis at the bottom of the plots.

num	ref	HH:MM:SS	OTSTD	LAT	Lon	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltime	dist
192	15448191	15:20:	20.80	1.73	14.430	145.110	27.9	3.85	0.55	11	SEL	17815610	-
12.537	0.533	6	17	25.0	55.7								
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres	
KSRS	28.72	328.27	15:26:	4.89	-0.931	343.49	5.2	0.0	3.257	0.060	3.4	1	9.697
USRK	32.68	340.63	15:26:	41.81	-1.297	380.01	5.4	0.0	4.277	0.150	3.0	0	-99.000
WRA	35.60	199.74	15:27:	17.40	-0.499	415.44	6.2	0.0	3.667	0.090	9.4	1	1.025
ASAR	39.22	198.29	15:27:	47.72	-0.836	446.29	9.4	0.0	3.727	0.140	7.7	1	1.398
CMAR	45.72	282.36	15:28:	32.55	-0.582	490.64	4.2	0.0	3.857	0.070	3.5	0	-99.000
MKAR	62.35	315.75	15:30:	35.16	2.468	614.47	5.7	0.0	3.227	0.180	7.5	1	3.398
KURK	65.40	319.54	15:30:	56.25	3.334	635.54	4.8	0.0	3.027	0.080	3.0	1	2.745
ILAR	67.71	25.18	15:31:	16.03	1.426	654.69	6.3	0.0	3.757	0.090	6.0	1	5.150
YKA	81.96	27.59	15:32:	39.08	-0.003	737.79	4.9	0.0	4.257	0.060	5.8	0	-99.000
ARCES	87.31	342.41	15:32:	56.22	-3.120	754.39	4.8	0.0	4.237	0.180	3.4	0	-99.000

ESDC 120.04 333.84 15:39: 9.32 0.040 1127.62 4.3 0.0 5.027 0.170 3.0 0-99.000

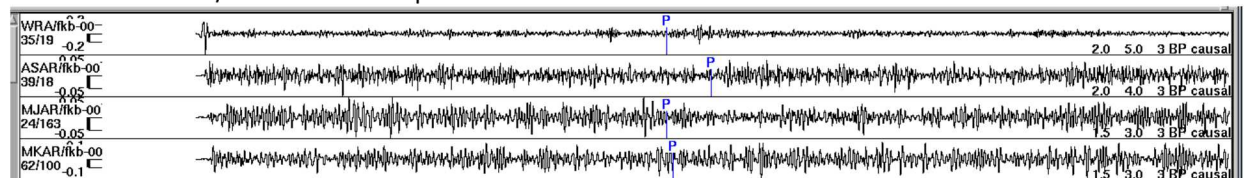
Good event! All arrivals could not be confirmed. Downloaded GUMO and added P/S picks



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
193 5734900 15:23: 49.10 0.58 5.720 125.970 33.0 3.68 0.22 4 NEW 0 0.000 -
1.000 0 22 28.5 31.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres	
WRA	26.41	341.70	15:29: 25.28	0.740		335.84	9.2	0.0	-1.079	0.002	9.8	0-99.000
ASAR	29.84	344.59	15:29: 52.97	-0.891		364.57	10.9	0.0	-1.407	0.002	9.5	0-99.000
MJAR	32.86	202.38	15:30: 16.70	0.046		387.98	6.0	0.0	-1.479	0.002	3.0	0-99.000
MKAR	55.93	123.42	15:33: 21.27	0.104		571.66	5.4	0.0	-1.707	0.003	8.8	0-99.000

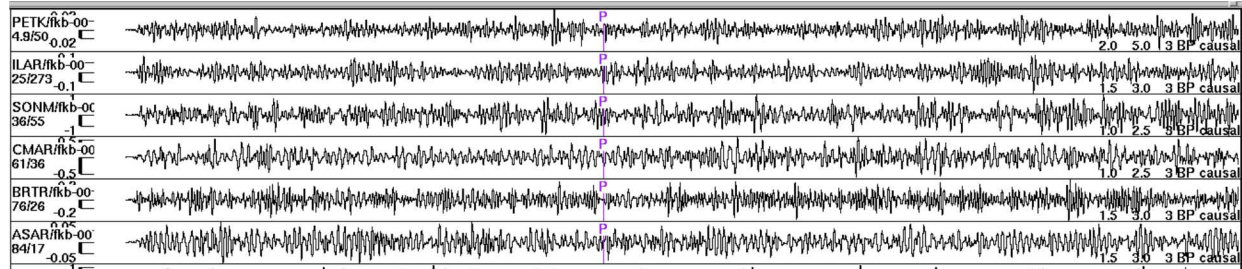
False event. WRA/ASAR are PcP to previous event in Mariannas Islands. MJAR and MKAR are invalid.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
194 16840197 15:28: 11.46 2.83 56.080 164.440 0.0 3.84 0.52 6 NEW 0 0.000 -
1.000 0 1 23.0 28.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PETK	4.52	249.54	15:29: 27.92	1.656	77.33	4.6	0.0	3.058	0.090	5.1	0 -99.000
ILAR	25.59	47.89	15:33: 38.41	2.714	327.13	4.6	0.0	3.198	0.220	6.5	0 -99.000
SONM	36.15	283.55	15:35: 13.33	1.129	422.03	4.5	0.0	4.338	0.130	4.2	0 -99.000
CMAR	61.20	261.07	15:38: 31.08	2.354	619.58	4.5	0.0	4.258	0.080	3.2	0 -99.000
BRTR	76.89	323.36	15:39: 54.14	-4.327	703.68	4.7	0.0	3.978	0.310	3.0	0 -99.000
ASAR	82.59	208.28	15:40: 37.65	-3.525	746.33	4.5	0.0	4.238	0.070	5.9	0 -99.000

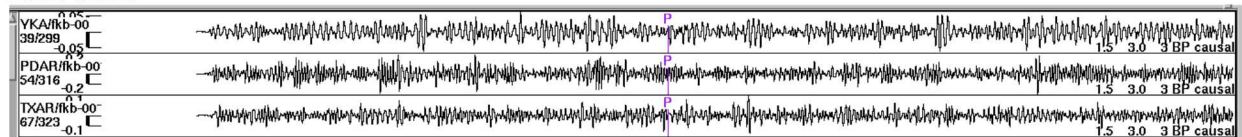
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
195 12337192 15:28: 15.41 1.05 56.310 164.790 0.0 3.48 0.43 4 NEW 0 0.000 -
1.000 0 1 25.1 25.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
YKA	39.24	299.21	15:35: 42.33	-0.067	446.47	4.4	0.0	-0.450	0.004	6.2	0 -99.000
NVAR	52.49	316.57	15:37: 27.80	-1.385	551.72	4.3	0.0	-1.581	0.004	4.8	0 -99.000
PDAR	53.94	316.40	15:37: 39.67	-0.076	564.29	8.5	0.0	-0.881	0.005	6.3	0 -99.000
TXAR	67.25	322.73	15:39: 13.27	1.872	656.74	5.0	0.0	-1.465	0.005	7.8	0 -99.000

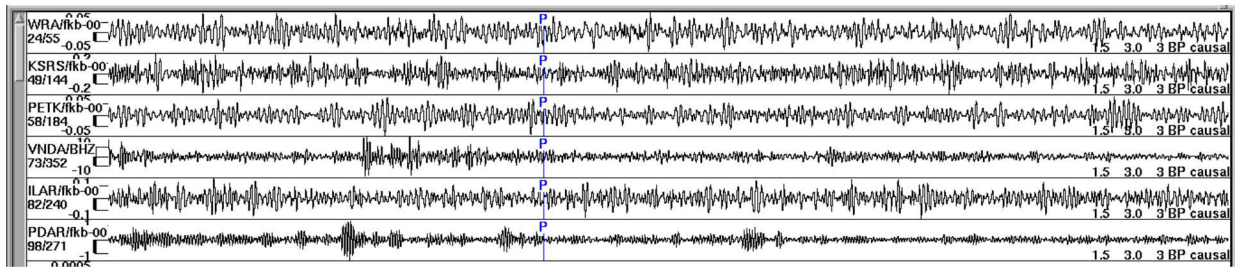
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
196 10798528 15:33: 46.32 3.49 -4.820 153.980 17.9 3.89 0.36 6 NEW 0 0.000 -
1.000 0 15 25.0 27.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	24.10	234.63	15:39: 5.36	2.295	319.11	4.3	0.0	3.441	0.060	9.7	0 -99.000
KSRS	50.63	331.95	15:42: 25.75	-2.282	519.41	5.5	0.0	4.431	0.060	3.0	0 -99.000
PETK	59.52	1.84	15:43: 39.58	2.865	594.03	4.5	0.0	3.541	0.130	3.0	0 -99.000
VNDA	70.97	178.44	15:45: 9.23	-3.263	683.46	6.5	2.0	4.101	0.180	3.0	0 -99.000
ILAR	82.99	21.49	15:45: 58.01	-4.486	731.76	4.8	0.0	3.671	0.060	5.9	0 -99.000
PDAR	98.39	47.82	15:47: 26.34	4.871	819.81	4.3	0.0	4.131	0.150	3.0	0 -99.000

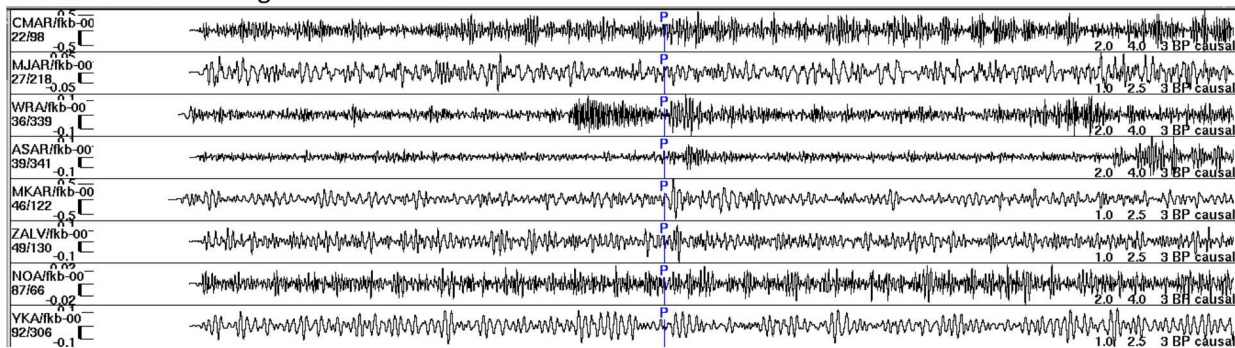
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 197 15997946 15:44: 1.99 3.08 13.020 118.720 155.6 3.78 0.49 8 SEL 17813854
 15.597 1.689 4 22 27.0 43.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	21.32	284.93	15:48: 19.07	-3.783	257.94	4.8	5.2	3.907	0.100	3.2	0 -99.000
MJAR	27.41	31.91	15:49: 43.45	-3.334	341.96	4.2	4.9	4.177	0.120	3.0	0 -99.000
WRA	36.30	157.93	15:50: 46.73	-0.691	405.96	5.3	5.0	3.207	0.050	9.6	1 0.304
ASAR	39.60	160.76	15:51: 17.05	1.632	436.13	5.7	6.3	3.047	0.040	9.1	1 -1.550
MKAR	45.78	323.48	15:52: 9.79	4.491	488.74	5.4	4.4	3.407	0.230	8.9	1 1.678
ZALV	48.79	332.61	15:52: 33.52	2.612	511.56	4.5	4.0	3.727	0.150	3.2	1 1.022
NOA	86.99	332.64	15:56: 24.23	-3.622	743.16	4.3	4.5	4.517	0.100	3.0	0 -99.000
YKA	92.53	22.45	15:57: 5.10	2.694	784.16	4.3	4.8	4.227	0.120	3.0	0 -99.000

Good event. Not all signals confirmed.

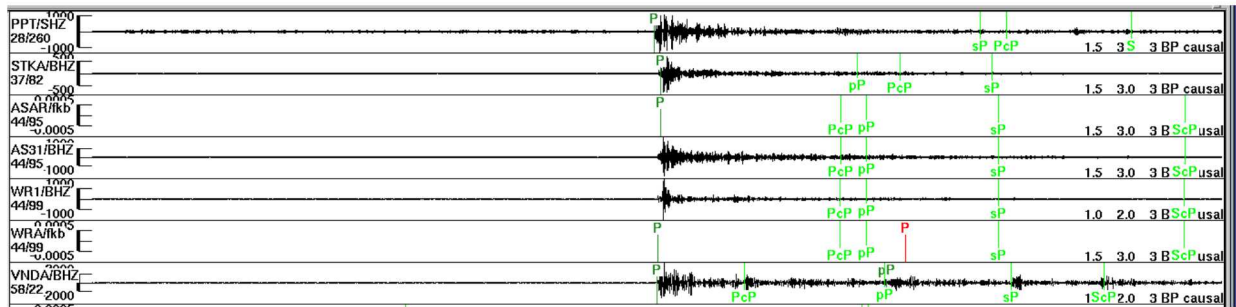


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 198 11945319 15:54: 21.62 1.41 -20.530 181.460 583.6 5.52 0.27 26 SEL 17818821 -
 0.554 0.131 24 13 26.0 96.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
STKA	37.05	244.41	16: 0: 46.58	1.076	384.90	11.0	4.7	5.838	0.530	6.3	1 -1.677
WRA	43.90	262.53	16: 1: 38.00	0.697	437.10	20.8	0.0	5.648	0.640	9.7	1 -1.576
ASAR	43.80	257.15	16: 1: 39.32	0.782	437.35	26.0	0.0	5.848	0.370	9.5	1 -2.151
VNDA	57.53	184.92	16: 3: 18.19	0.262	536.85	11.8	5.8	5.228	0.690	3.0	1 -0.701
MJAR	70.05	324.20	16: 4: 34.66	-0.231	612.84	9.8	0.0	5.598	0.500	3.0	1 -2.889
PETK	76.42	345.63	16: 5: 10.25	-0.153	648.80	10.8	0.0	5.668	0.630	3.0	1 -3.425
KRSR	76.71	318.96	16: 5: 12.89	-0.192	651.70	34.5	0.0	5.728	0.420	3.0	1 -2.802
USRK	78.86	326.23	16: 5: 24.76	-0.221	663.05	30.3	0.0	5.618	0.460	3.0	1 -2.293
NVAR	81.72	43.64	16: 5: 39.26	1.786	678.23	13.9	0.0	5.258	0.260	3.7	1 -3.526
TXAR	87.79	57.59	16: 6: 9.58	0.767	708.23	30.5	0.0	5.498	0.420	3.3	1 -3.201
ILAR	88.78	13.06	16: 6: 10.90	0.392	709.50	18.3	0.0	5.528	0.600	4.1	1 -3.099
PDAR	89.65	43.49	16: 6: 14.85	-2.534	713.00	36.5	0.0	5.348	0.510	3.0	1 -0.649
CMAR	89.60	289.82	16: 6: 17.49	-2.432	715.70	18.2	0.0	5.368	0.640	3.0	1 -0.202

PLCA	89.53	133.77	16: 6: 17.49	-0.590	715.75	7.9	3.9	5.828	0.670	3.0	1	-0.599
SONM	95.57	319.19	16: 6: 43.86	-0.302	741.77	13.3	0.0	5.618	0.360	3.0	1	-2.559
LPAZ	102.54	112.91	16: 7: 16.82	-0.834	775.60	7.3	5.1	5.828	0.290	3.0	1	-0.501
BVAR	118.90	319.87	16:12: 1.58	0.352	1060.70	8.4	0.0	4.718	0.310	3.0	1	-1.852
BDFB	119.53	122.91	16:12: 8.17	2.069	1066.10	6.2	2.7	5.428	0.400	3.0	1	-4.807
ARCES	129.12	349.29	16:12: 17.40	-4.376	1076.10	8.0	0.0	5.468	0.160	3.0	1	1.599
BOSA	125.67	206.08	16:12: 17.40	-0.733	1075.80	7.6	12.9	5.398	0.600	3.0	1	-0.725
KBZ	138.64	313.24	16:12: 42.45	0.359	1100.68	7.1	5.1	5.448	0.380	3.0	0	-99.000
KMBO	138.60	242.60	16:12: 43.77	0.642	1102.43	14.8	5.6	5.298	0.270	3.0	0	-99.000
NOA	139.22	352.62	16:12: 45.09	2.636	1103.15	6.3	0.0	5.428	0.320	3.0	0	-99.000
BRTR	146.56	311.51	16:12: 58.27	0.405	1117.20	11.1	0.0	5.348	0.370	3.2	1	-2.987
ESDC	160.68	12.34	16:13: 14.09	-0.208	1132.85	14.8	0.0	5.418	0.640	3.0	1	-2.601
TORD	172.35	182.94	16:13: 23.32	0.581	1142.50	11.0	0.0	6.108	0.240	3.0	1	-2.724

Good event! Very large 6.5 mb, 600km deep earthquake.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
199	12870227	15:55:	27.54	3.17	-19.890	-177.560	0.0	5.61	0.45	17	NEW	0	0.000
-1.000	0	12 25.0	59.0										

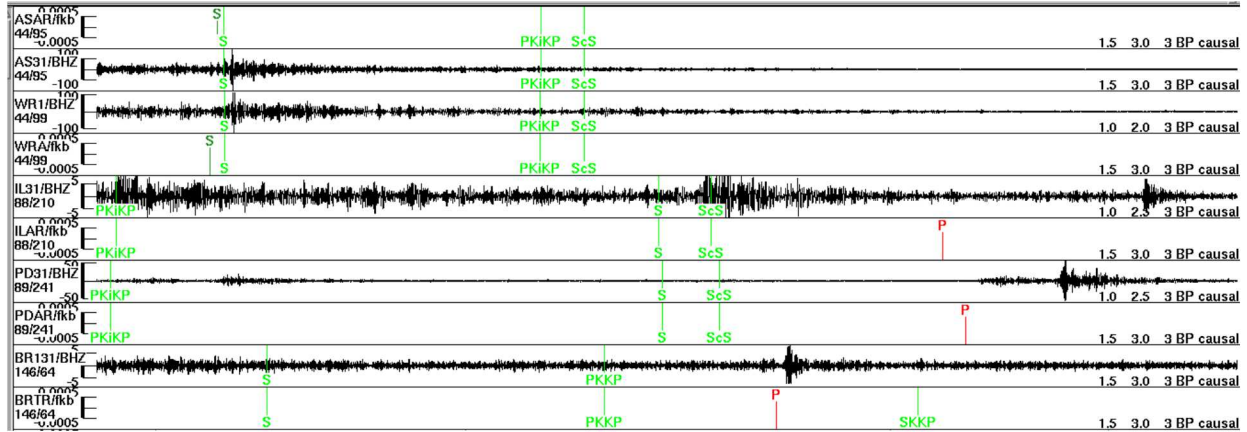
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	46.72	261.88	16: 3: 44.56	-1.760	496.14	4.8	0.0	5.942	0.140	9.8	0	-99.000
VNSA	57.73	185.65	16: 5: 23.44	-1.938	595.77	6.1	4.0	5.252	0.150	3.0	0	-99.000
PETK	77.22	343.90	16: 7: 11.54	-3.321	703.79	5.5	0.0	5.172	0.600	3.0	0	-99.000
USRK	80.53	324.73	16: 7: 28.68	-4.553	720.19	6.4	0.0	5.622	0.400	3.0	0	-99.000
NVAR	79.81	42.21	16: 7: 41.87	-2.337	733.54	5.1	0.0	5.162	0.440	3.8	0	-99.000
TXAR	85.42	56.41	16: 8: 10.87	-2.749	762.67	7.0	0.0	5.492	0.750	3.5	0	-99.000
PLCA	87.41	132.74	16: 8: 22.73	-4.475	774.92	5.2	4.5	5.122	0.390	3.0	0	-99.000
CMAR	92.32	288.75	16: 8: 31.96	-3.052	783.72	7.3	0.0	5.702	0.420	3.0	0	-99.000
SONM	97.49	318.35	16: 8: 55.69	0.343	808.03	5.1	0.0	6.122	0.310	3.0	0	-99.000
YKA	95.95	24.11	16: 8: 58.33	2.754	809.92	6.1	0.0	5.682	0.080	3.0	0	-99.000
KURK	115.82	317.09	16:14: 12.10	4.705	1123.49	6.6	0.0	5.802	0.190	3.0	0	-99.000
BVAR	120.79	320.02	16:14: 17.37	1.303	1129.72	4.8	0.0	4.972	0.210	3.0	0	-99.000
KBZ	140.74	314.45	16:14: 55.61	0.919	1167.47	5.3	6.8	5.752	0.560	3.0	0	-99.000
NOA	139.59	354.85	16:14: 56.92	4.723	1168.99	5.1	0.0	5.652	0.250	3.0	0	-99.000
ESDC	159.96	19.00	16:15: 33.84	4.325	1205.52	5.4	0.0	5.232	0.060	3.0	0	-99.000
DBIC	163.29	146.45	16:15: 36.47	1.334	1208.85	5.4	3.7	5.872	0.390	3.0	0	-99.000
TORD	171.90	161.34	16:15: 44.38	3.781	1216.57	5.1	0.0	6.892	0.140	3.0	0	-99.000

False event – depth phases (in most cases) to previous event

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
200 13484541 16: 4: 26.75 2.89 -21.160 147.420 0.0 5.70 0.23 4 NEW 0 0.000 -
1.000 0 38 31.0 27.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	13.51	266.57	16: 7: 23.41	1.046	176.46	5.1	0.0	5.410	0.110	9.8	0 -99.000
ASAR	14.30	251.36	16: 7: 26.04	-1.916	179.19	5.9	0.0	5.850	0.130	9.5	0 -99.000
ILAR	97.38	22.94	16:18: 4.13	-3.320	817.83	4.7	0.0	5.560	0.100	5.1	0 -99.000
BRTR	121.40	305.06	16:23: 24.49	4.190	1138.54	4.8	0.0	5.990	0.350	3.0	0 -99.000

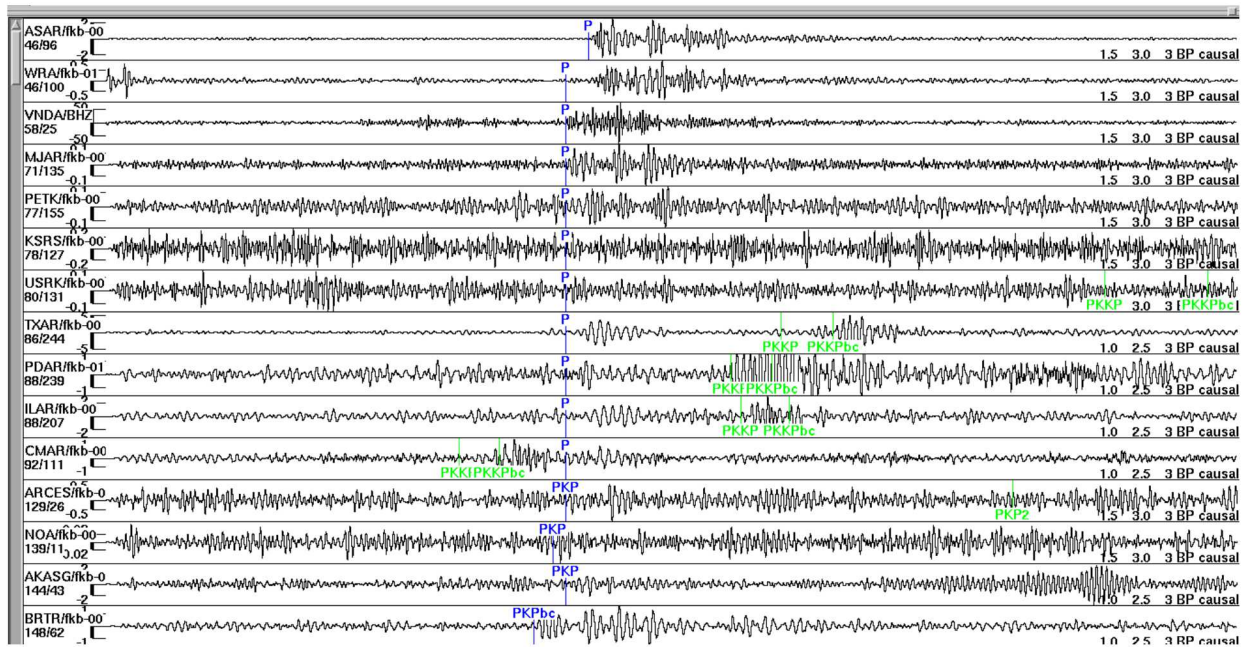
False event. WRA/ASAR are S phases to large Fiji event above. BRTR occurs within seconds of the SKKP for BRTR to the large event shown in ISC catalog/REB



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltime	dist
201	12189731	16:10:	39.84	2.71	-20.560	-175.770	12.0	4.61	0.32	16	SEL	17818930	
1.190	1.568	9	12	25.0	64.0								

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	47.58	261.62	16:19: 2.14	-3.132	502.93	13.5	0.0	4.448	0.110	9.8	1 3.298
ASAR	47.42	256.57	16:19: 3.46	-2.863	504.03	18.3	0.0	4.728	0.480	9.5	1 2.501
MJAR	72.29	321.78	16:22: 0.12	0.444	680.93	10.1	0.0	4.198	0.350	3.0	1 -8.202
PETK	77.42	343.39	16:22: 31.76	1.955	711.90	5.4	0.0	4.238	0.420	3.0	1 -7.424
KSRS	79.21	316.96	16:22: 37.03	-3.053	717.73	5.5	0.0	4.788	0.100	3.0	0 -99.000
NVAR	79.19	41.77	16:22: 47.58	-0.805	728.63	4.6	0.0	4.628	0.070	3.7	1 -3.426
USRK	80.99	324.29	16:22: 55.49	4.437	736.33	4.6	0.0	4.528	0.190	3.0	0 -99.000
TXAR	84.68	56.05	16:23: 20.54	2.826	761.43	20.1	0.0	4.818	0.360	3.6	1 -3.727
PDAR	87.13	42.00	16:23: 24.49	-1.906	764.63	5.0	0.0	4.368	0.270	3.0	0 -99.000
ILAR	87.99	11.56	16:23: 25.81	-1.205	766.68	5.1	0.0	4.668	0.290	4.0	1 -3.402
CMAR	93.11	288.44	16:23: 56.13	4.949	797.03	4.7	0.0	5.108	0.170	3.0	0 -99.000
KURK	116.37	317.09	16:29: 16.49	-3.513	1116.63	4.6	0.0	4.788	0.120	3.0	0 -99.000
ARCES	129.76	350.89	16:29: 45.50	-1.842	1145.68	4.4	0.0	4.658	0.180	3.0	0 -99.000
NOA	139.61	355.54	16:30: 6.59	-0.292	1167.03	4.5	0.0	5.348	0.130	3.0	0 -99.000
AKASG	144.73	333.44	16:30: 13.18	0.475	1173.23	5.1	0.0	4.138	0.110	3.0	1 0.848
BRTR	149.29	314.14	16:30: 26.37	3.524	1186.83	5.1	0.0	4.308	0.250	3.5	1 -4.500

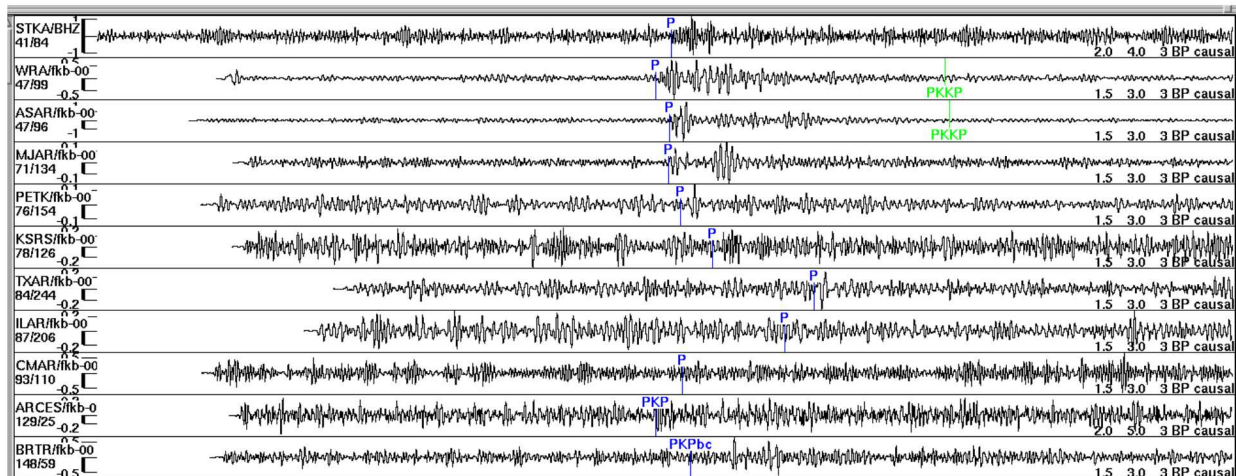
Good event! Aftershock of the big one.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 202 12804417 16:16: 41.07 2.50 -19.330 -177.280 516.9 3.74 0.34 11 SEL 17818934
 61.252 0.863 7 13 26.0 51.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
STKA	38.13	244.09	16:23: 23.17	2.456	402.72	6.3	3.3	3.805	0.330	6.3	0 -99.000
ASAR	44.86	256.57	16:24: 9.32	-3.236	448.37	26.3	0.0	3.115	0.350	9.5	1 -0.849
WRA	44.94	261.85	16:24: 13.27	0.693	451.95	13.1	0.0	3.425	0.200	9.7	1 -5.402
MJAR	70.28	323.45	16:27: 0.70	1.702	619.21	11.2	0.0	3.425	0.260	3.0	1 -6.039
PETK	76.24	345.00	16:27: 25.75	-4.282	644.07	5.7	0.0	3.805	0.310	3.0	1 0.698
KSRS	77.04	318.35	16:27: 40.25	1.240	658.77	4.2	0.0	3.935	0.090	3.0	0 -99.000
TXAR	86.72	57.21	16:28: 25.08	-1.555	703.67	6.4	0.0	4.115	0.150	3.4	1 -5.122
ILAR	88.13	12.67	16:28: 34.31	4.912	713.72	7.0	0.0	4.045	0.350	4.1	1 -9.116
CMAR	90.39	289.45	16:28: 48.81	-0.289	727.42	4.6	0.0	3.745	0.140	3.0	0 -99.000
ARCES	128.87	349.77	16:34: 46.08	-1.470	1084.35	4.9	0.0	4.285	0.130	3.0	0 -99.000
BRTR	147.00	312.65	16:35: 20.36	-0.171	1119.92	5.4	0.0	3.415	0.230	3.2	1 3.050

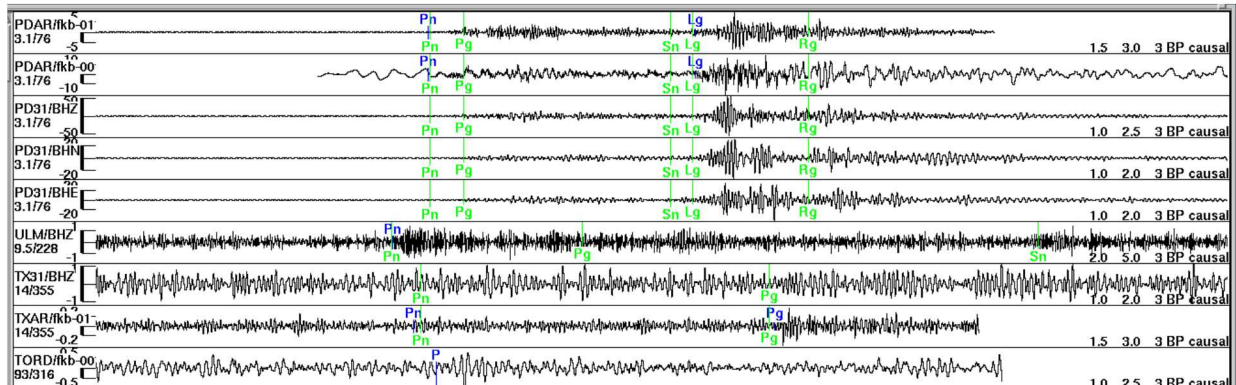
Good event. Can't confirm all arrivals. TXAR,PEWTK,CMAR,ILAR,ARCES ,KSRS suspect. Adjusted timing on some others.



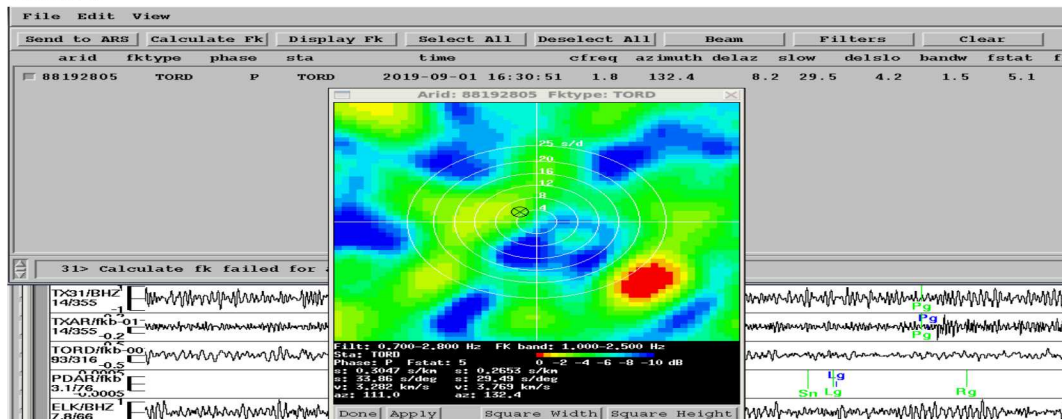
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 203 7472981 16:17: 33.81 2.33 43.250 -105.580 0.0 4.08 1.22 4 SEL 17819910 3.216
 0.404 2 34 27.0 23.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	3.18	257.85	16:18: 21.27	-2.938		47.51	13.6	29.3	2.556	0.170	9.1 1 7.250
NVAR	11.04	247.00	16:20: 17.29	3.544		162.83	4.9	3.4	3.706	0.110	6.0 0 -99.000
TXAR	14.22	174.06	16:20: 55.52	-0.731		201.56	4.3	3.7	4.126	0.190	5.6 0 -99.000
TORD	93.01	68.86	16:30: 51.42	0.126		796.81	4.2	6.1	5.946	0.190	3.0 0 -99.000

Good event! TORD can't be confirmed. Added ULM Pn.



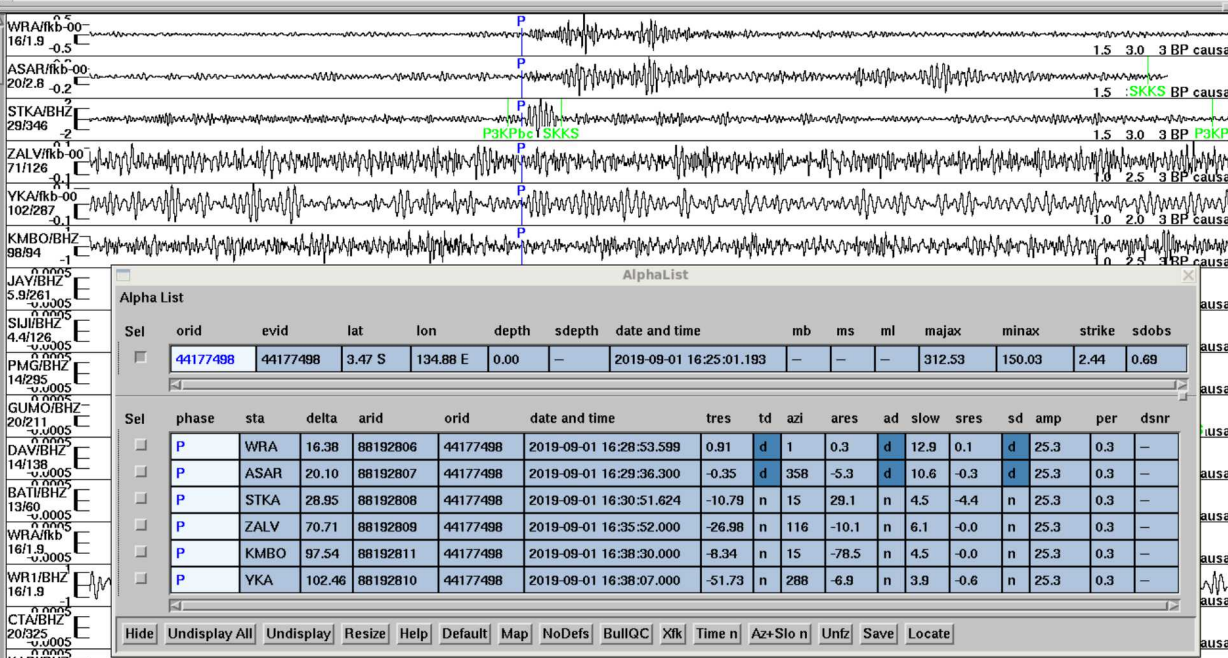
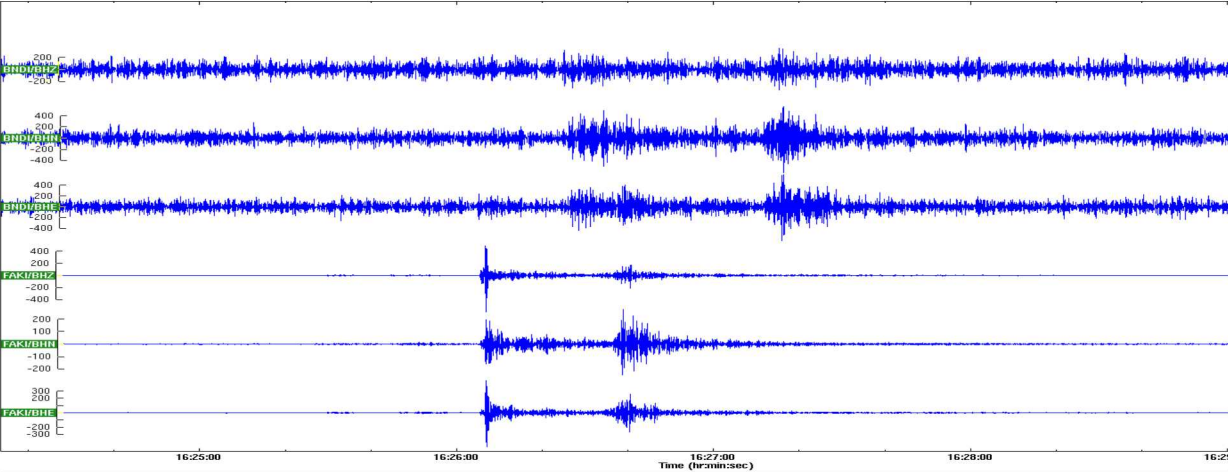
TORD fk -



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
204 12260891 16:24: 27.77 2.02 -1.930 140.180 0.0 4.31 1.03 6 NEW 0 0.000 -
1.000 0 16 26.0 32.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	17.67	193.18	16:28: 51.45	2.919		263.10	7.4	0.0	3.353	0.060	9.8 0 -99.000
ASAR	21.37	191.78	16:29: 24.40	-3.659		296.87	6.1	0.0	2.613	0.110	9.6 0 -99.000
STKA	29.21	174.70	16:30: 36.91	0.944		369.32	5.3	3.3	4.493	0.250	4.4 0 -99.000
ZALV	71.81	329.89	16:35: 52.00	-1.073		683.72	4.4	0.0	4.723	0.040	3.0 0 -99.000
YKA	100.08	26.83	16:38: 7.79	0.115		820.27	4.4	0.0	5.073	0.130	3.0 0 -99.000
KMBO	101.24	268.33	16:38: 30.21	0.754		842.02	6.9	2.9	5.623	0.270	3.0 0 -99.000

Partial credit. WRA/ASAR locate by themselves to O.T. 16:25:01, 3S x 134E , STKA is included as a P3KP in the big Fiji event at 15:54. ZALV, YKA, KMBO detections can't be confirmed. Data from GEOFON stations FAKI and BNDI was downloaded and are consistent with an event in that area.



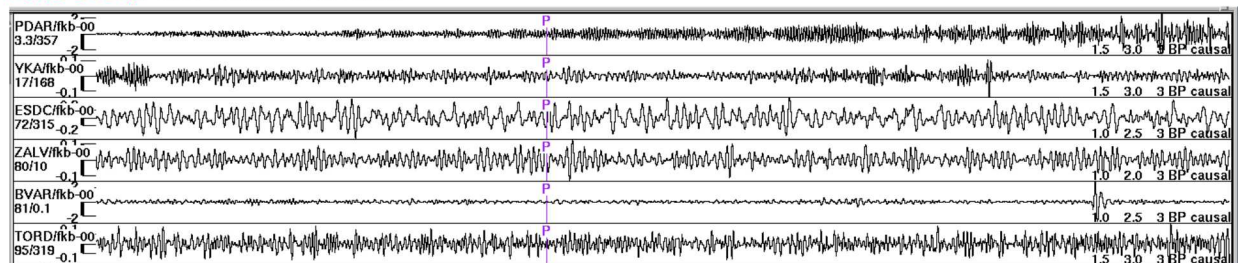


BNDI and FAKI station locations, FAKI is the one to the northeast.

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num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
205 14598533 16:27: 49.48 2.64 46.020 -109.810 0.0 4.13 0.96 6 NEW 0 0.000 -
1.000 0 34 27.0 27.5
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	4.66	151.95	16:28: 46.17	-1.051	56.45	4.7	0.0	3.355	0.060	9.0	0 -99.000
YKA	15.65	356.43	16:31: 38.88	-0.769	230.30	4.7	0.0	3.585	0.060	6.5	0 -99.000
ESDC	72.87	49.96	16:39: 11.07	-4.081	681.37	4.5	0.0	4.615	0.110	3.0	0 -99.000
ZALV	78.43	349.63	16:39: 57.22	-0.592	727.80	4.7	0.0	3.525	0.180	3.0	0 -99.000
BVAR	80.40	358.21	16:40: 9.08	2.220	740.07	4.4	0.0	3.615	0.210	3.0	0 -99.000
TORD	96.28	63.34	16:41: 17.64	4.273	808.27	4.5	0.0	6.075	0.200	3.0	0 -99.000

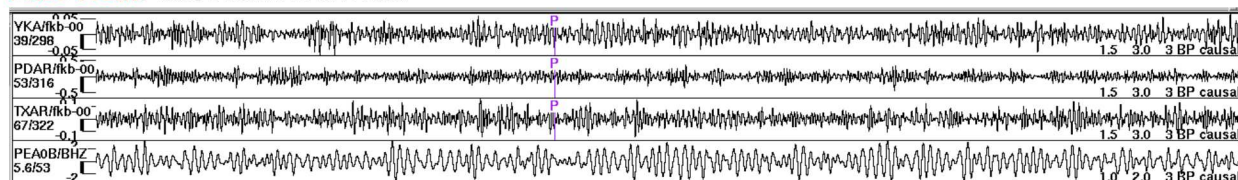
False event. Can't confirm arrivals



```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
206 12337192 16:28: 18.49 0.97 56.220 165.630 0.0 3.40 0.45 4 NEW 0 0.000 -
1.000 0 125.1 25.1
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
YKA	39.24	299.21	16:35: 42.77	-0.003	444.27	4.3	0.0	-0.464	0.004	6.2	0 -99.000
NVAR	52.49	316.57	16:37: 28.24	-0.560	549.52	4.5	0.0	-1.571	0.004	4.8	0 -99.000
PDAR	53.94	316.40	16:37: 40.11	-1.003	562.09	8.5	0.0	-0.893	0.005	6.3	0 -99.000
TXAR	67.25	322.73	16:39: 12.39	1.566	654.54	5.1	0.0	-1.463	0.005	7.8	0 -99.000

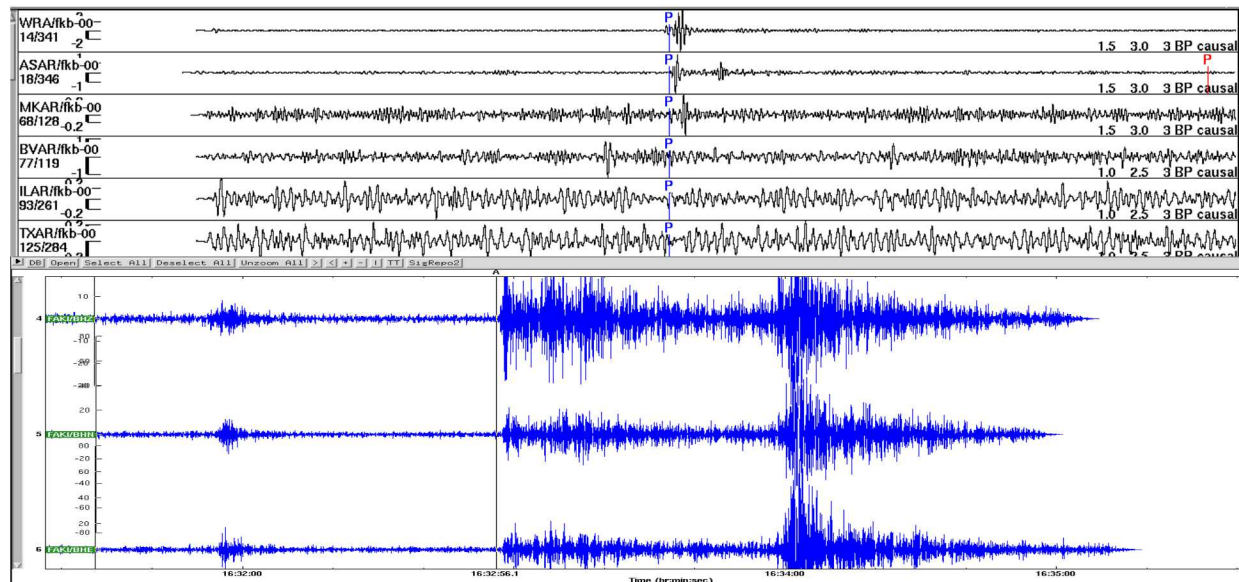
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
207 5389005 16:31: 36.24 2.38 -6.550 128.590 371.0 3.24 0.59 7 SEL 17819007 -0.178
0.681 3 24 27.0 40.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	15.59	158.04	16:34: 43.45	-0.469		187.09	26.5	26.5	2.695	0.120	9.8	1 3.256
ASAR	18.92	163.69	16:35: 21.68	1.244		225.29	12.5	42.3	2.825	0.160	9.6	1 1.399
MKAR	65.97	327.29	16:41: 51.91	1.129		615.74	5.5	4.3	2.875	0.180	8.8	1 1.131
KURK	70.27	328.94	16:42: 16.96	1.021		641.46	4.5	4.9	3.255	0.100	3.0	0 -99.000
BVAR	75.82	328.18	16:42: 45.97	-2.496		669.34	5.1	5.6	2.775	0.240	3.0	0 -99.000
ILAR	92.72	25.30	16:44: 11.66	3.616		755.34	4.9	7.0	4.085	0.130	3.0	0 -99.000
TXAR	125.64	57.69	16:49: 51.80	-4.045		1095.36	4.5	3.8	4.175	0.300	3.0	0 -99.000

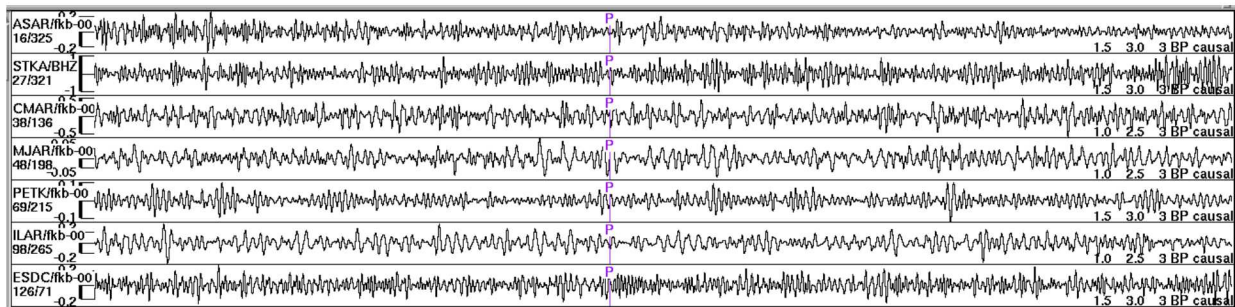
Good event. WRA/ASAR/MKAR good – other detections can't be confirmed. GEOFON station FAKI confirms.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
208 16257241 16:32: 48.75 3.35 -9.810 124.540 0.0 4.17 0.56 7 NEW 0 0.000 -
1.000 0 24 27.0 29.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ASAR	15.95	145.69	16:36: 31.55	-4.541		222.24	4.5	0.0	3.203	0.070	9.6	0 -99.000
STKA	26.59	145.32	16:38: 38.12	4.910		348.71	5.1	4.2	3.933	0.300	4.7	0 -99.000
CMAR	38.14	319.06	16:40: 6.45	-1.283		437.38	4.5	0.0	3.993	0.100	3.0	0 -99.000
MJAR	48.72	15.10	16:41: 24.23	-3.857		515.29	4.7	0.0	4.023	0.190	3.0	0 -99.000
PETK	69.63	20.80	16:43: 59.79	2.175		670.54	4.6	0.0	4.383	0.230	3.0	0 -99.000
ILAR	99.06	25.72	16:46: 31.41	3.433		821.88	5.5	0.0	4.463	0.190	3.0	0 -99.000
ESDC	125.80	311.55	16:51: 51.77	-0.837		1142.88	4.7	0.0	5.173	0.030	3.0	0 -99.000

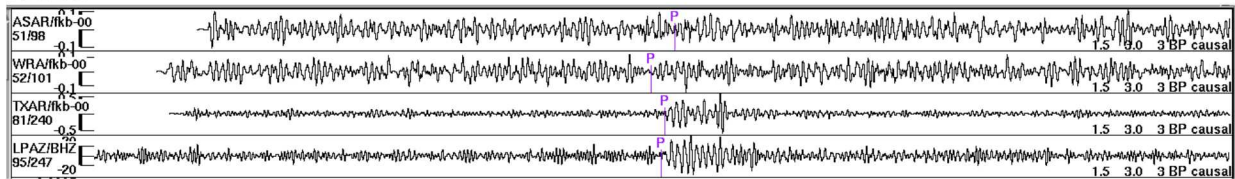
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 209 7620424 16:35: 46.73 0.87 -20.030 -171.870 0.0 4.00 0.58 5 NEW 0 0.000 -
 1.000 0 12 25.0 30.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	50.59	258.53	16:44: 41.98	-1.427	535.96	5.1	0.0	3.922	0.110	9.8	0 -99.000
ASAR	50.63	253.71	16:44: 44.62	1.165	538.36	4.5	0.0	3.072	0.100	9.5	0 -99.000
NVAR	75.26	40.92	16:47: 42.60	0.317	716.34	4.4	0.0	3.882	0.200	3.8	0 -99.000
TXAR	80.89	55.31	16:48: 11.60	-0.420	744.36	8.0	0.0	4.322	0.140	4.0	0 -99.000
LPAZ	97.80	109.81	16:49: 21.47	0.366	815.24	5.1	3.5	4.822	0.340	3.0	0 -99.000

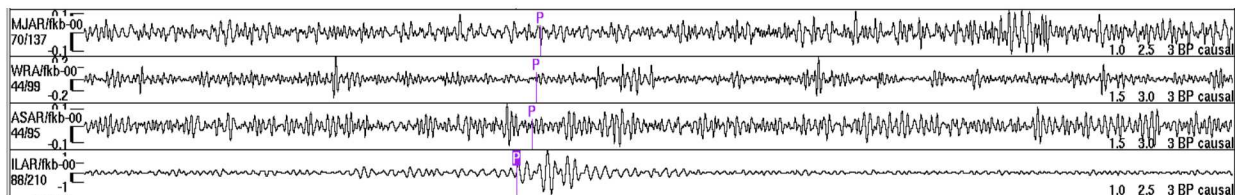
False event. ASAR/WRA can't be confirmed. TXAR and LPAZ look like they may originate from a similar source.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 210 16614129 16:42: 16.96 1.19 18.270 147.980 46.0 2.80 0.55 5 NEW 0 0.000
 -1.000 0 18 24.6 32.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	20.99	153.30	16:46: 48.54	0.396	271.80	4.7	0.0	0.000	0.001	6.0	0 -99.000
WRA	39.34	20.76	16:49: 50.48	-0.317	452.76	5.6	0.0	-1.380	0.001	9.4	0 -99.000
ASAR	42.96	19.88	16:50: 19.48	0.312	482.12	8.1	0.0	-1.431	0.002	7.7	0 -99.000
ILAR	63.97	254.78	16:52: 37.91	-2.020	620.87	6.6	0.0	-1.238	0.005	5.2	0 -99.000
NVAR	82.31	285.86	16:54: 32.61	1.629	735.34	5.7	0.0	-1.434	0.005	4.3	0 -99.000

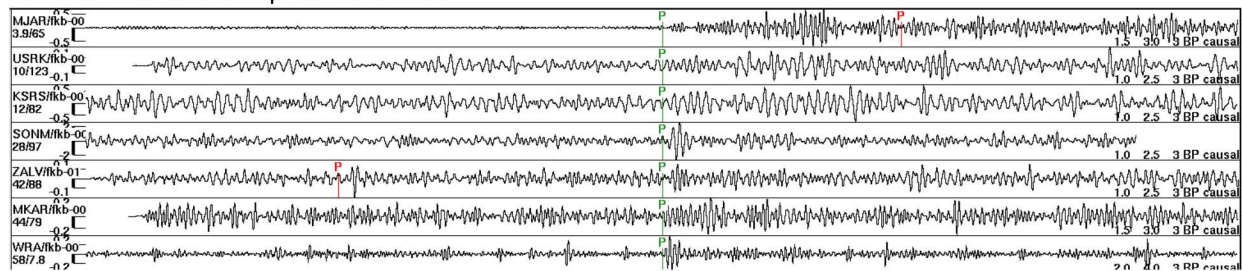
False event. The only good arrival is ILAR.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
211 13117040 16:50: 32.67 2.33 40.360 140.620 46.4 3.68 0.55 9 SEL 17819077 -
10.638 2.869 2 19 23.0 45.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	2.90	243.71	16:51: 33.31	-2.011		61.40	4.7	0.0	2.492	0.100	7.6	1 6.603
SONM	27.38	302.64	16:55: 55.66	-0.461		323.89	4.3	0.0	3.242	0.140	5.5	0 -99.000
ZALV	41.40	311.70	16:57: 58.27	1.473		445.37	4.5	0.0	3.222	0.200	4.1	0 -99.000
CMAR	41.76	254.47	16:58: 22.00	4.045		469.47	4.5	0.0	4.132	0.060	3.0	0 -99.000
ILAR	48.78	32.74	16:59: 0.23	-0.031		507.82	4.4	0.0	3.792	0.150	5.6	0 -99.000
WRA	57.88	187.93	17: 0: 35.16	-0.075		602.45	5.9	0.0	3.952	0.050	8.4	1 2.443
YKA	63.07	30.36	17: 0: 40.43	-1.566		608.47	4.7	0.0	4.282	0.130	4.4	0 -99.000
BRTR	78.35	311.44	17: 2: 11.40	-4.066		699.52	4.4	0.0	3.832	0.130	3.0	0 -99.000
TXAR	89.58	52.40	17: 3: 25.22	2.693		772.42	4.3	0.0	4.132	0.080	4.0	0 -99.000

Good event. Not all arrivals are valid. Combined arrivals from subsequent event to form the good location.
Good arrivals that comprise the event:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
212 7336822 16:50: 32.67 3.26 38.790 145.080 0.0 3.90 0.66 6 SEL 17819077 -10.093
2.291 3 19 23.0 27.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	4.49	234.31	16:52: 6.27	1.896		93.87	4.3	17.7	2.469	0.150	7.6	0 -99.000
USRK	9.46	305.06	16:53: 14.82	-0.698		162.50	5.2	4.6	3.269	0.040	3.3	1 -5.712
PETK	17.25	31.58	16:54: 24.70	-4.673		232.12	4.3	4.3	4.349	0.190	3.0	0 -99.000
ZALV	41.26	310.56	16:58: 29.91	-1.345		477.18	4.4	4.1	3.919	0.070	4.1	1 4.787
ASAR	63.12	189.12	17: 0: 58.89	-1.851		625.53	4.3	5.0	4.219	0.070	6.8	0 -99.000
CPUP	158.81	58.60	17:10: 35.01	4.610		1202.78	5.6	3.1	4.709	0.280	3.0	0 -99.000

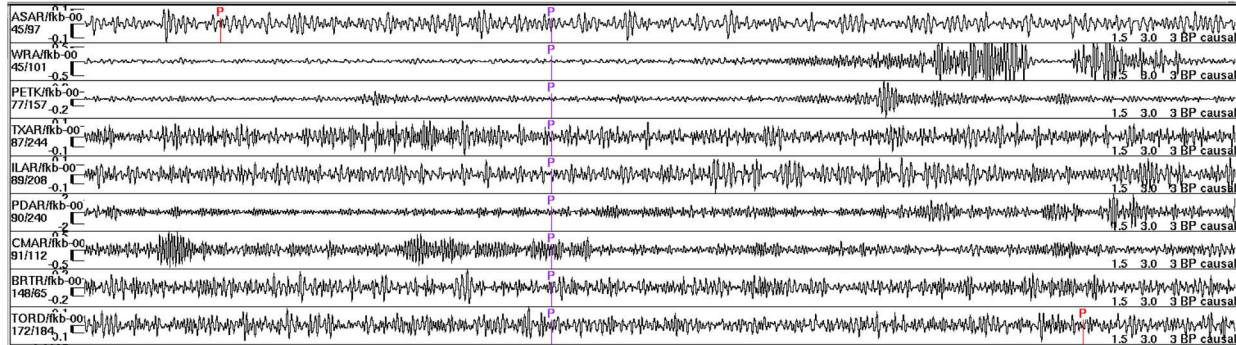
Split event – Some arrivals associate to previous event.

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
213 5396436 16:54: 7.56 1.54 -21.670 -177.670 453.0 4.03 0.20 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	44.42	99.61	17: 1: 38.44	0.629		451.49	12.4	0.0	0.895	0.004	9.7	0 -99.000
ASAR	44.32	95.96	17: 1: 39.76	2.702		452.54	21.1	0.0	0.693	0.006	9.5	0 -99.000
PETK	76.47	156.81	17: 5: 10.69	-1.720		663.20	10.6	0.0	0.454	0.004	3.0	0 -99.000
NVAR	81.30	234.96	17: 5: 41.02	1.911		693.47	6.9	0.0	0.290	0.003	4.1	0 -99.000
TXAR	87.31	244.54	17: 6: 8.70	1.603		721.42	11.2	0.0	0.449	0.004	5.1	0 -99.000
ILAR	88.58	209.07	17: 6: 11.34	-1.583		724.49	8.8	0.0	0.610	0.004	5.7	0 -99.000
PDAR	89.24	240.63	17: 6: 15.29	-0.202		728.04	10.4	0.0	0.566	0.003	3.8	0 -99.000
CMAR	90.06	111.75	17: 6: 20.57	-0.730		733.74	17.7	0.0	0.730	0.004	3.0	0 -99.000
BRTR	146.90	64.53	17:12: 58.71	-1.726		1130.99	7.2	0.0	0.347	0.004	3.6	0 -99.000

TORD 172.45 181.09 17:14: 46.82 -0.884 1238.79 5.1 0.0 0.237 0.001 3.0 0 -99.000

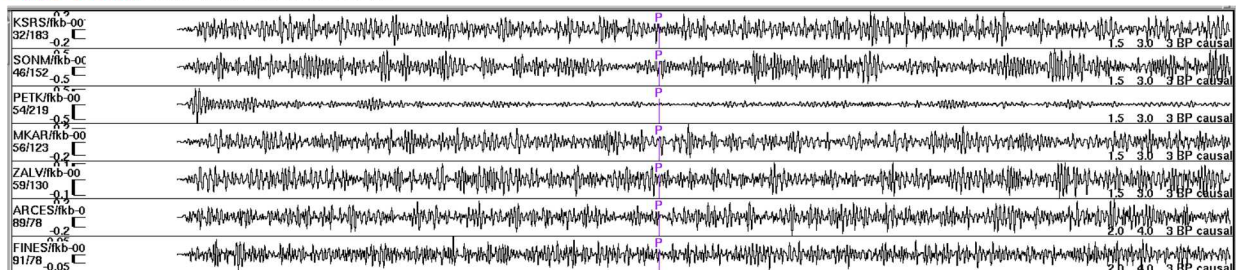
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
214 5812625 16:57: 35.86 0.93 5.070 126.530 108.0 3.87 0.24 7 NEW 0 0.000 -
1.000 0 22 28.9 31.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	31.28	182.17	17: 3: 52.91	-0.292	376.77	7.8	0.0	-1.120	0.005	3.0	0 -99.000
SONM	45.14	150.78	17: 5: 47.61	-0.183	492.11	7.9	0.0	-0.768	0.001	4.7	0 -99.000
PETK	53.30	219.63	17: 6: 49.57	0.374	554.02	4.2	0.0	-0.493	0.007	3.0	0 -99.000
MKAR	55.69	122.51	17: 7: 5.39	-0.831	569.84	10.9	0.0	-1.060	0.003	8.6	0 -99.000
ZALV	58.56	128.83	17: 7: 27.80	2.052	592.44	6.6	0.0	-1.010	0.007	3.7	0 -99.000
ARCES	88.30	77.38	17:10: 17.87	-0.875	761.92	6.7	0.0	-1.268	0.002	3.9	0 -99.000
FINES	89.82	77.77	17:10: 24.46	-0.244	768.55	11.9	0.0	-0.779	0.004	4.3	0 -99.000

False event. Can't confirm arrivals

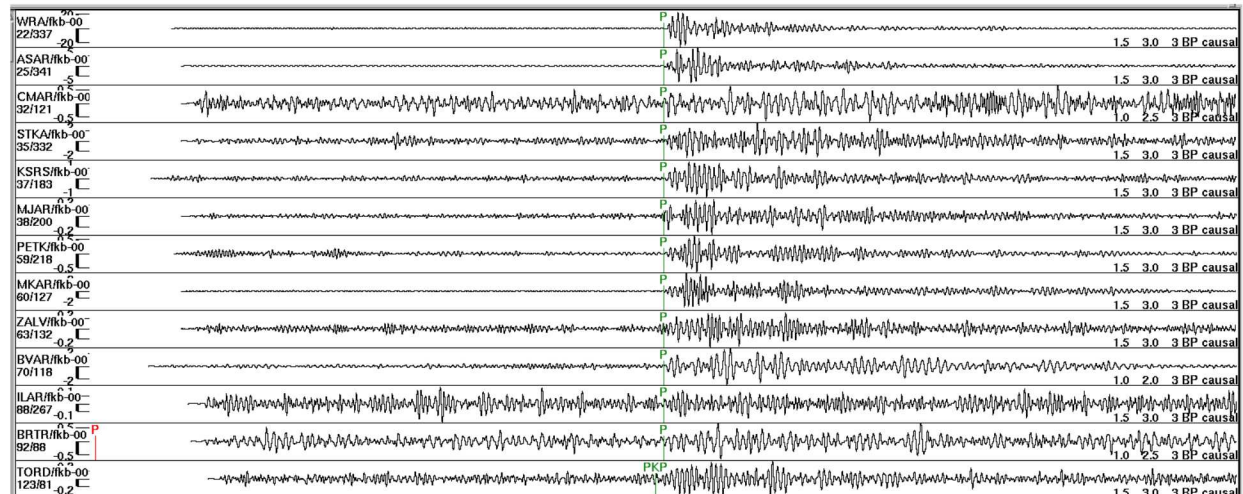


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
215 9311152 16:58: 25.96 2.62 0.500 126.170 27.7 4.22 0.58 16 SEL 17810936 -1.210
0.278 15 23 27.0 62.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	21.83	158.93	17: 3: 10.72	-4.893	284.50	24.6	0.0	4.216	0.280	9.8	1 0.574
CMAR	32.15	305.30	17: 4: 52.24	0.108	385.93	5.2	0.0	4.536	0.140	3.0	1 0.257
STKA	35.35	156.98	17: 5: 22.56	3.455	416.77	6.4	3.3	4.106	0.350	4.8	1 -7.649
KSRS	36.80	2.28	17: 5: 29.15	-2.992	423.23	10.1	0.0	4.216	0.120	3.0	1 3.648
MJAR	37.56	16.05	17: 5: 39.70	3.068	433.59	6.0	0.0	3.266	0.230	3.0	1 -2.362
USRK	43.82	6.05	17: 6: 29.79	-0.517	483.30	9.6	0.0	4.376	0.230	3.0	1 1.048
SONM	50.18	342.74	17: 7: 18.57	-1.114	532.33	4.6	0.0	4.216	0.150	3.4	1 1.340
PETK	58.62	21.67	17: 8: 20.54	-0.044	594.70	7.8	0.0	4.116	0.280	3.0	1 0.050
MKAR	59.90	326.60	17: 8: 27.13	-1.344	601.20	14.5	0.0	3.966	0.390	8.9	1 1.921
ZALV	63.22	334.06	17: 8: 54.81	2.955	628.02	5.6	0.0	4.516	0.240	3.0	1 -3.282
KURK	64.16	328.47	17: 8: 56.13	-0.870	630.27	11.5	0.0	3.996	0.160	3.0	1 1.526
BVAR	69.72	327.83	17: 9: 29.09	-4.056	663.25	5.7	0.0	3.096	0.160	3.0	1 3.324

ILAR	88.25	25.35	17:11:	13.24	0.707	767.38	5.5	0.0	4.296	0.070	3.0	1	-1.151
KMBO	88.93	268.87	17:11:	23.79	3.358	776.98	5.9	3.0	4.226	0.280	3.0	0	-99.000
BRTR	91.64	309.58	17:11:	29.06	-1.345	783.02	5.2	0.0	4.466	0.180	3.0	1	0.423
TORD	123.33	286.03	17:17:	23.70	3.525	1137.70	4.8	0.0	5.896	0.090	3.0	1	-4.008

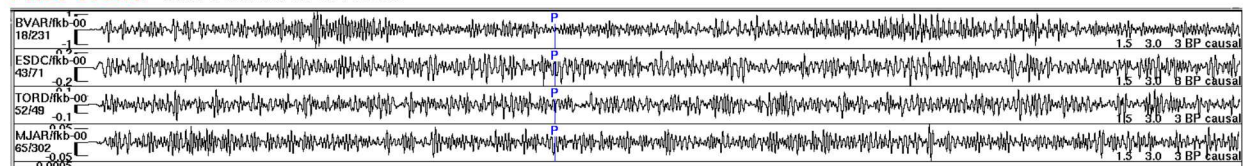
Good event.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
216	5421070	17: 6:	48.25	4.35	40.550	52.190	0.0	4.23	1.03	4	NEW	0	0.000

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BVAR	18.32	40.69	17:10: 50.83	-3.974	242.42	4.5	0.0	2.916	0.070	5.9	0 -99.000
ESDC	41.12	287.13	17:14: 48.13	4.147	479.27	4.3	0.0	4.796	0.100	3.1	0 -99.000
TORD	50.62	251.64	17:15: 52.73	-4.713	544.64	4.8	0.0	5.576	0.160	5.7	0 -99.000
MJAR	65.87	61.88	17:17: 32.93	4.540	644.38	4.2	0.0	3.616	0.210	3.0	0 -99.000

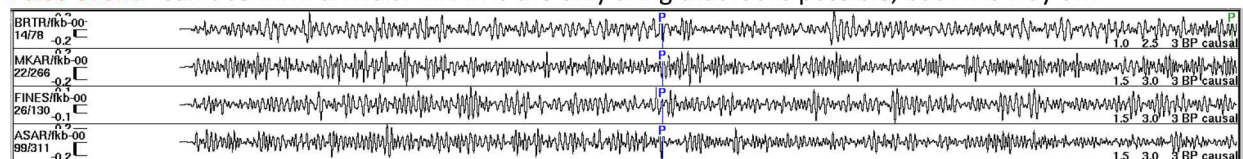
False event. Can't confirm arrivals

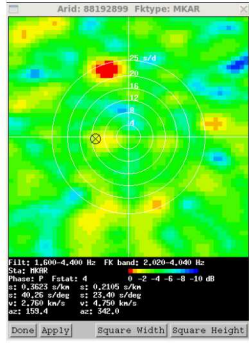


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
217	10923794	17: 6:	53.53	0.40	41.140	52.490	30.0	4.12	0.37	4	NEW	0	0.000

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	13.73	81.90	17:10: 17.87	0.417	204.74	4.7	0.0	-1.517	0.001	6.0	0 -99.000
MKAR	23.13	264.89	17:11: 47.52	0.382	293.79	5.7	0.0	-0.599	0.002	8.4	0 -99.000
FINES	26.26	132.02	17:12: 20.48	-0.319	327.31	4.7	0.0	-1.126	0.002	8.1	0 -99.000
ASAR	99.44	309.78	17:20: 30.91	-0.480	816.63	4.6	0.0	-0.690	0.001	3.0	0 -99.000

False event. Can't confirm arrivals. MKAR is the only thing that looks possible, but FK is way off.

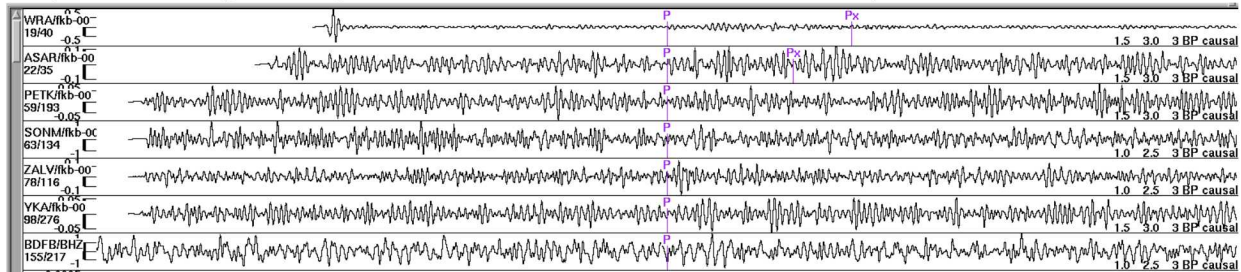




num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 218 14711675 17:8: 35.04 2.00 -5.690 153.120 19.7 4.12 0.69 7 NEW 0 0.000 -
 1.000 0 15 25.0 35.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	22.26	227.73	17:13: 39.58	-0.158	303.84	4.8	0.0	3.670	0.050	9.8	0 -99.000
ASAR	25.01	221.44	17:14: 7.27	2.238	332.14	5.9	0.0	2.930	0.130	9.5	0 -99.000
PETK	58.44	4.26	17:18: 34.89	1.940	598.74	5.0	0.0	4.500	0.230	3.0	0 -99.000
SONM	66.18	328.45	17:19: 28.95	-0.867	652.79	4.8	0.0	3.560	0.170	3.8	0 -99.000
ZALV	80.97	326.61	17:20: 52.00	-2.162	735.92	4.5	0.0	4.780	0.070	3.0	0 -99.000
YKA	96.41	27.79	17:22: 3.19	2.069	807.34	5.2	0.0	4.960	0.090	3.0	0 -99.000
BDFB	151.47	137.20	17:28: 22.88	-3.060	1187.76	5.1	3.3	4.450	0.220	3.0	0 -99.000

Partial credit. Had to change WRA/ASAR start times, ZALV included. Three stations solution. Px arrivals in the plot are the original WRA/ASAR times from this event. Can't confirm any of the other arrivals.

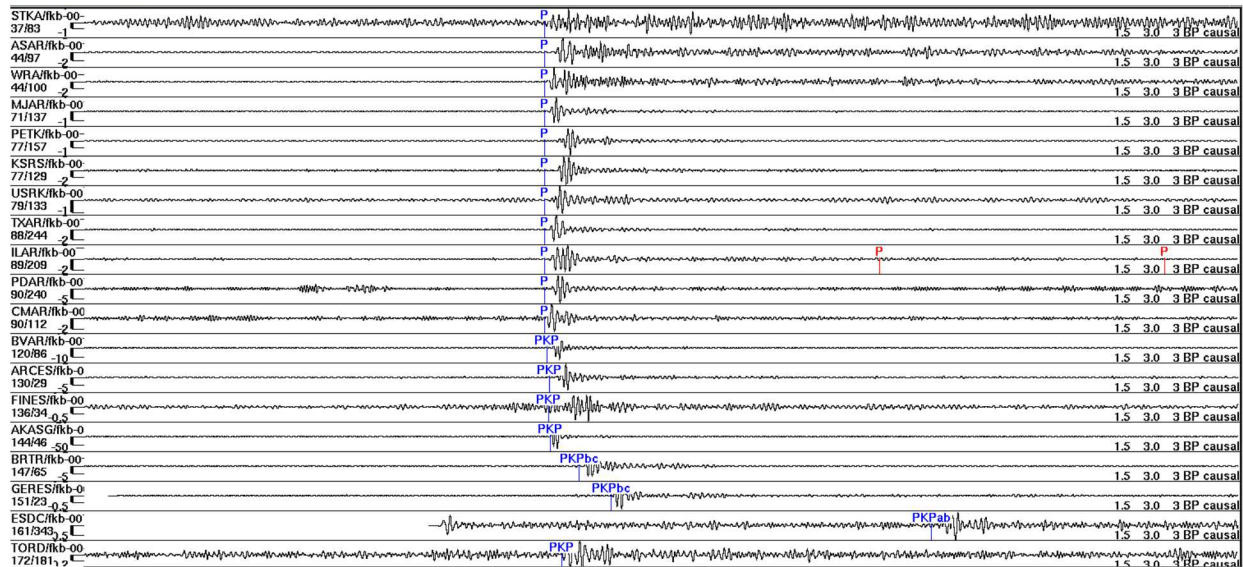


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 219 10667665 17:18: 25.66 2.06 -21.460 -178.090 612.0 4.03 0.60 19 SEL 17820001 -
 2.433 1.107 18 13 26.0 76.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
STKA	37.01	244.20	17:24: 50.62	2.883	385.26	5.3	4.8	3.650	0.280	6.4	1 -1.374
ASAR	43.71	257.00	17:25: 42.04	1.275	437.14	31.1	0.0	3.400	0.730	9.5	1 0.451
WRA	43.80	262.39	17:25: 43.36	0.281	437.44	20.7	0.0	3.570	0.480	9.7	1 0.425
VNDA	57.68	184.88	17:27: 10.37	-4.625	524.99	8.0	4.8	4.420	0.380	3.0	0 -99.000
MJAR	69.85	324.25	17:28: 38.70	-3.357	612.64	17.6	0.0	3.840	0.640	3.0	1 0.201
PETK	76.23	345.69	17:29: 12.98	1.062	648.01	17.3	0.0	3.940	0.740	3.0	1 -0.124
KSRS	76.51	319.00	17:29: 16.93	-2.780	651.54	16.7	0.0	4.030	0.240	3.0	1 0.348
USRK	78.66	326.29	17:29: 28.80	-2.754	662.92	16.5	0.0	3.990	0.370	3.0	1 0.648
NVAR	81.69	43.72	17:29: 43.30	0.022	677.44	13.1	0.0	4.310	0.220	3.7	1 0.250
TXAR	87.81	57.64	17:30: 13.62	1.740	707.72	63.1	0.0	4.180	0.670	3.3	1 0.423
ILAR	88.65	13.11	17:30: 14.94	-1.584	708.89	23.8	0.0	4.020	0.360	4.1	1 0.151
PDAR	89.62	43.53	17:30: 20.21	0.758	714.69	40.9	0.0	4.820	0.460	3.0	1 0.400
CMAR	89.43	289.86	17:30: 24.17	0.583	718.04	35.0	0.0	3.920	0.710	3.0	1 0.298

BVAR	118.70	319.92	17:36:	6.94	0.838	1060.79	14.5	0.0	3.180	0.600	3.0	1	0.398
ARCES	128.94	349.26	17:36:	25.40	1.286	1079.87	19.7	0.0	3.190	0.370	3.0	1	0.299
FINES	135.71	343.15	17:36:	39.90	0.938	1094.44	8.0	0.0	4.080	0.240	3.0	1	-2.945
BRTR	146.37	311.61	17:36:	58.36	1.199	1112.94	24.5	0.0	3.930	0.640	3.2	1	2.964
TORD	172.51	183.99	17:37:	27.36	3.074	1141.67	8.9	0.0	5.940	0.170	3.0	1	-0.377
ESDC	160.55	11.95	17:38:	2.96	-0.841	1177.97	6.8	0.0	4.230	0.100	3.0	1	-0.552

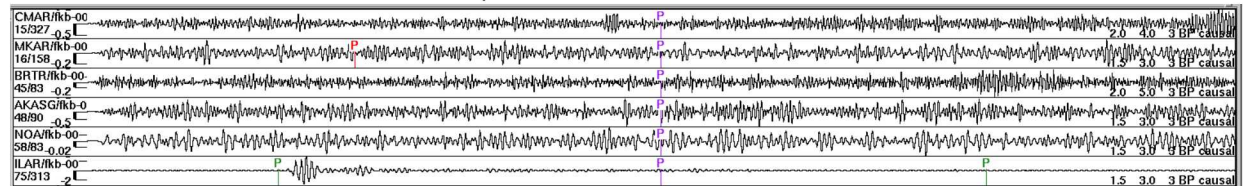
Good event. Added a few extra arrivals



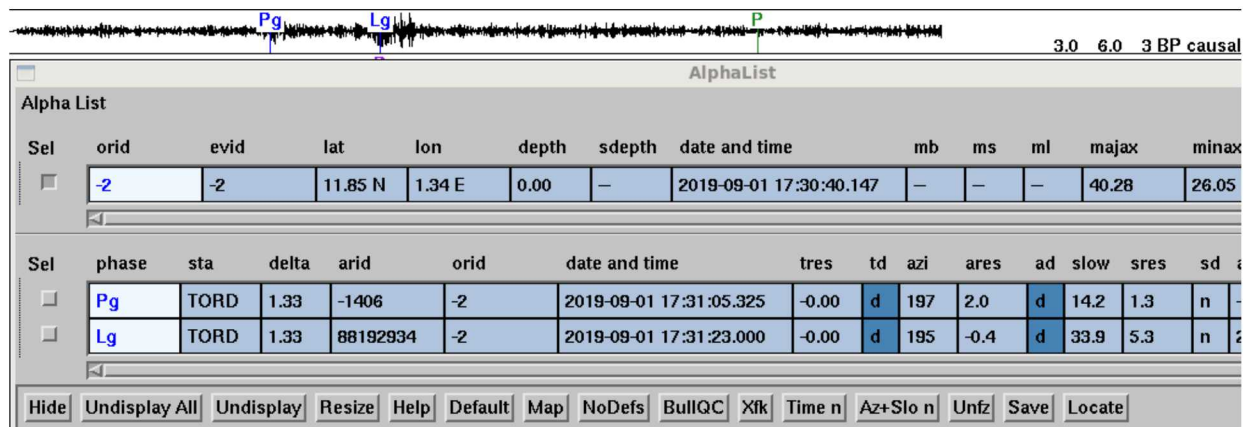
num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
220	16898910	17:19:	9.17	3.48	30.960	89.160	0.0	4.28	0.77	6	SEL	17813586	-32.040
5.915	1	26	25.0	26.0									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	15.60	136.29	17:22:	49.34	3.960	220.75	4.5	0.0	3.802	0.080	4.8	0-99.000
MKAR	17.03	347.33	17:23:	2.52	-1.237	233.20	5.5	0.0	3.392	0.220	8.9	0-99.000
BRTR	44.66	297.40	17:27:	35.42	4.006	505.75	4.9	0.0	3.742	0.200	3.0	0-99.000
AKASG	47.54	312.75	17:27:	47.29	-2.315	517.95	4.2	0.0	4.202	0.080	3.0	0-99.000
NOA	57.54	325.89	17:29:	5.07	3.897	595.30	4.7	0.0	4.292	0.160	4.9	0-99.000
ILAR	76.24	21.06	17:30:	54.49	0.880	705.20	4.2	0.0	4.632	0.050	3.3	0-99.000
TORD	80.05	279.42	17:31:	23.50	-4.377	733.70	4.7	0.0	6.082	0.090	3.9	0-99.000

False event. Can't confirm arrivals – except for TORD – which is local.



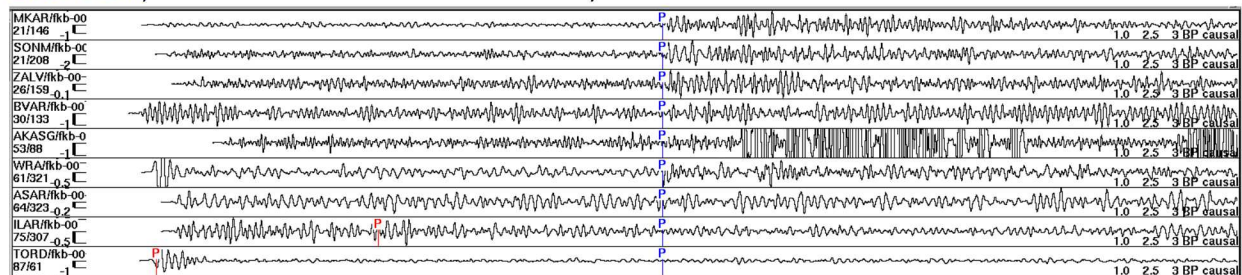
TORD is a local signal:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 221 9604827 17:19: 43.45 3.47 28.560 95.230 25.7 3.76 0.66 9 SEL 17813586 2.839
 0.484 5 26 25.0 48.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MKAR	20.63	332.81	17:24: 21.62	-1.594	277.60	8.0	7.2	3.250	0.370	9.1	1	1.700
KURK	25.19	333.55	17:25: 7.76	-2.115	323.62	4.8	4.9	3.500	0.090	5.4	1	0.608
ZALV	26.14	345.13	17:25: 20.95	2.221	336.92	4.7	4.1	3.350	0.240	5.7	1	-4.189
BVAR	30.39	329.12	17:25: 51.27	-4.817	367.22	4.3	3.4	3.240	0.090	3.5	0	-99.000
AKASG	53.57	313.49	17:29: 6.39	4.887	562.08	4.3	5.2	3.910	0.050	3.0	0	-99.000
WRA	61.26	138.10	17:29: 57.80	0.610	613.72	5.8	4.2	3.600	0.170	8.1	1	1.208
ASAR	63.95	141.01	17:30: 16.26	0.806	631.92	8.0	4.7	3.500	0.140	7.6	1	0.848
ILAR	74.65	23.27	17:31: 28.77	4.927	704.58	5.0	4.7	3.940	0.150	3.1	0	-99.000
TORD	87.28	283.43	17:32: 21.50	-4.927	758.08	4.4	6.2	5.510	0.080	3.0	0	-99.000

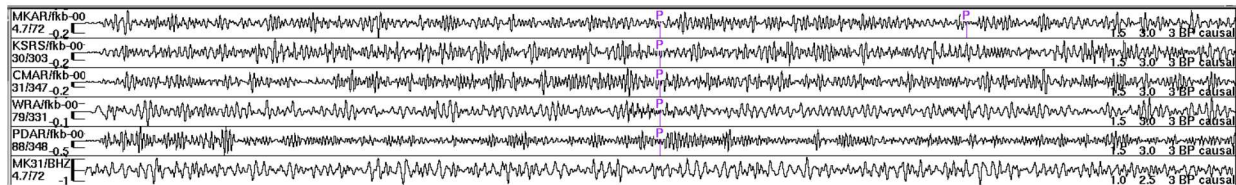
Good event, not all arrivals can be confirmed. ILAR/TORD will not FK. Added an SONM arrival.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 222 11662479 17:21: 14.41 2.26 48.040 89.030 0.0 3.71 1.29 5 NEW 0 0.000 -
 1.000 0 28 26.0 21.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MKAR	4.74	233.20	17:22: 30.88	0.814	76.58	4.4	0.0	1.222	0.070	9.5	0	-99.000
CMAR	32.49	160.07	17:27: 26.19	-2.959	372.10	4.4	0.0	4.182	0.070	3.0	0	-99.000
KSRS	31.15	97.92	17:27: 27.51	1.140	373.10	4.8	0.0	3.962	0.150	3.0	0	-99.000
WRA	80.70	136.24	17:33: 22.15	3.169	727.80	5.1	0.0	4.232	0.150	3.0	0	-99.000
PDAR	86.59	12.73	17:34: 5.65	-2.165	771.80	4.3	0.0	4.942	0.110	3.0	0	-99.000

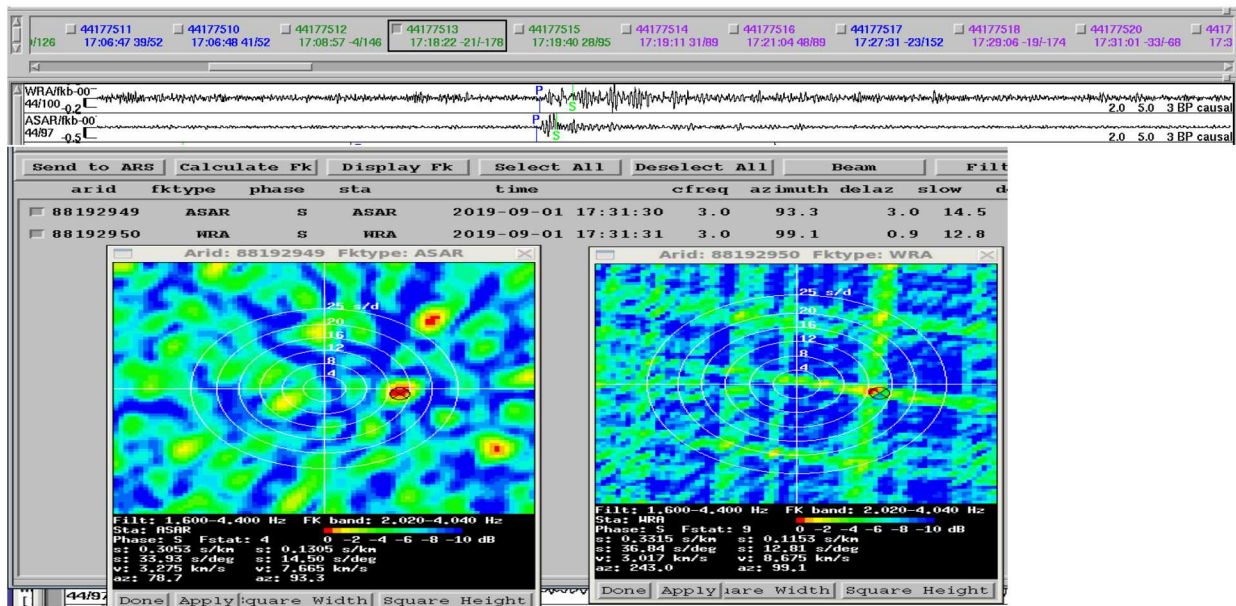
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 223 13484541 17:28: 24.20 3.10 -21.680 147.630 0.0 4.24 0.32 6 NEW 0 0.000 -
 1.000 0 38 31.0 33.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	14.30	251.36	17:31: 26.13	-0.882	181.24	8.4	0.0	4.160	0.100	9.5	0-99.000
WRA	13.51	266.57	17:31: 26.13	3.304	181.92	5.7	0.0	3.900	0.110	9.8	0-99.000
KRSR	60.13	340.97	17:38: 41.19	-2.874	617.14	4.7	0.0	4.350	0.070	3.0	0-99.000
CMAR	61.81	304.72	17:38: 45.15	-3.883	620.44	5.4	0.0	4.030	0.070	3.0	0-99.000
PETK	72.93	5.67	17:40: 10.84	4.750	706.94	4.8	0.0	4.100	0.180	3.0	0-99.000
TORD	147.72	263.46	17:48: 6.77	-0.414	1182.39	4.6	0.0	4.900	0.090	5.5	0-99.000

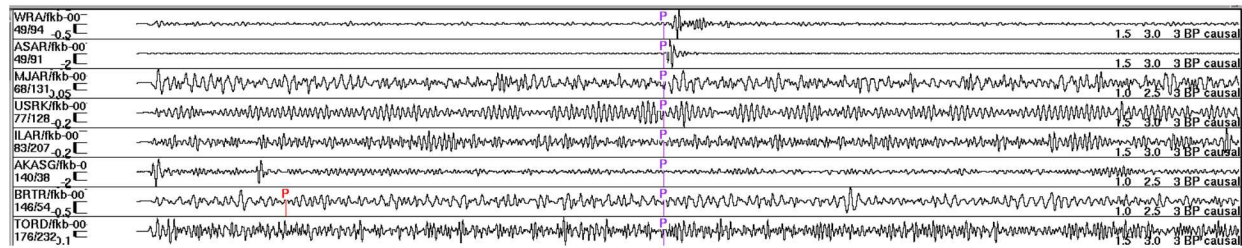
False event. ASAR/WRA S-phases to earlier Fiji event @17:18:22



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 224 12189731 17:29: 6.39 2.95 -19.210 -174.790 12.0 4.37 0.53 8 NEW 0 0.000
 -1.000 0 12 25.0 38.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	47.58	261.62	17:37: 39.23	-1.985	513.21	6.2	0.0	4.498	0.060	9.8	0-99.000
ASAR	47.42	256.57	17:37: 40.55	-1.457	514.15	14.0	0.0	4.308	0.160	9.5	0-99.000
MJAR	72.29	321.78	17:40: 22.71	-1.091	676.40	5.2	0.0	4.108	0.120	3.0	0-99.000
USRK	80.99	324.29	17:41: 19.39	4.490	733.36	4.4	0.0	4.608	0.110	3.0	0-99.000
ILAR	87.99	11.56	17:41: 41.81	-4.996	755.01	4.6	0.0	4.098	0.120	4.0	0-99.000
AKASG	144.73	333.44	17:48: 39.73	1.391	1172.81	4.2	0.0	4.138	0.050	3.0	0-99.000
BRTR	149.29	314.14	17:48: 52.91	3.925	1186.76	5.2	0.0	3.658	0.240	3.5	0-99.000
TORD	171.63	155.34	17:49: 14.00	-0.278	1207.93	4.4	0.0	5.578	0.130	3.0	0-99.000

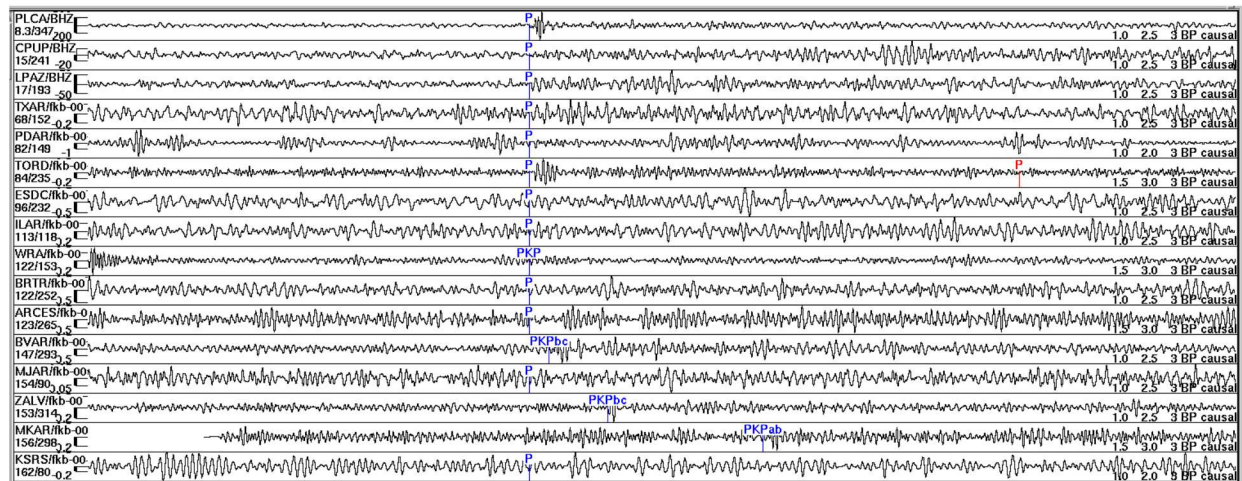
Partial credit. ASAR and WRA are good detections. The rest can't be confirmed. Doesn't meet LEB criteria.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 225 12065442 17:31: 12.95 2.85 -34.000 -69.790 0.0 4.23 0.55 6 REB 17819711 -5.367
 2.246 1 8 23.0 29.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
LPAZ	17.89	12.92	17:35: 22.12	-0.067		250.10	5.9	17.0	3.453	0.250	8.4 0 -99.000
TXAR	69.54	330.92	17:42: 30.59	-2.268		677.92	4.7	3.6	3.683	0.250	6.0 0 -99.000
PDAR	83.57	333.30	17:43: 51.01	1.968		758.94	4.2	2.5	4.853	0.220	4.1 0 -99.000
ARCES	123.96	24.85	17:50: 5.42	-4.993		1132.40	4.5	4.6	4.933	0.060	3.0 0 -99.000
KURK	152.88	43.04	17:51: 4.75	3.093		1192.69	5.8	4.3	4.343	0.080	3.0 0 -99.000
ZALV	154.20	31.97	17:51: 6.06	2.267		1193.50	4.4	4.0	4.103	0.140	4.5 1 9.470

Split event, this and the subsequent event are one. Not all arrivals can be confirmed. Added CPUP, BVAR, TORD



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 226 15778223 17:31: 31.41 2.77 -33.670 -68.100 122.2 4.35 0.25 8 REB 17819711
 13.741 3.310 2 8 23.0 33.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PLCA	7.53	184.34	17:33: 12.92	-0.128		101.12	5.7	4.3	4.297	0.220	6.1 1 6.098
ESDC	94.69	44.96	17:44: 34.51	-1.904		782.76	4.5	4.1	4.557	0.250	3.0 0 -99.000
ILAR	114.35	332.71	17:49: 52.24	-4.891		1100.79	4.3	4.3	4.497	0.120	3.0 0 -99.000
BRTR	119.82	59.84	17:50: 5.42	0.026		1113.94	4.2	4.4	4.647	0.180	3.0 0 -99.000
WRA	122.33	207.09	17:50: 12.01	0.555		1120.44	5.0	16.2	4.627	0.120	4.9 0 -99.000
MKAR	154.84	49.14	17:51: 33.75	3.558		1202.79	4.5	4.2	4.007	0.170	6.9 1 4.736
MJAR	156.78	286.09	17:51: 53.53	4.317		1221.66	4.3	4.7	4.097	0.140	3.0 0 -99.000
KSRS	164.96	291.27	17:52: 23.85	-1.533		1251.99	4.2	4.6	4.087	0.110	3.0 0 -99.000

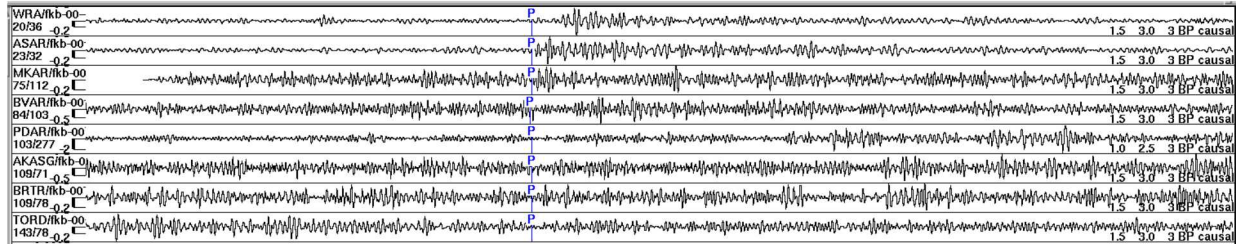
Split event, see previous event.

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist

227 14062090 17:34: 30.70 2.93 -7.080 153.400 148.0 3.88 0.91 8 SEL 17819815 -2.119
7.936 2 15 25.0 41.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	24.33	233.91	17:39: 16.79	-2.316	286.29	6.3	0.0	2.623	0.060	9.7	1 2.398
ASAR	26.75	227.33	17:39: 44.47	2.710	313.46	7.8	0.0	3.383	0.140	9.5	1 8.151
MKAR	82.86	318.59	17:46: 38.44	2.608	728.13	4.8	0.0	2.783	0.260	5.9	0 -99.000
BVAR	91.71	323.01	17:47: 17.99	-0.258	767.51	4.3	0.0	3.643	0.120	3.0	0 -99.000
PDAR	98.11	47.78	17:47: 58.86	4.403	808.31	4.3	0.0	5.173	0.070	3.0	0 -99.000
BRTR	117.91	311.86	17:52: 52.85	-4.994	1102.61	4.5	0.0	3.923	0.210	3.0	0 -99.000
AKASG	116.94	324.67	17:52: 54.17	-2.147	1103.33	4.3	0.0	4.413	0.050	3.0	0 -99.000
TORD	152.88	286.74	17:54: 2.72	-0.006	1172.21	4.3	0.0	5.113	0.100	4.4	0 -99.000

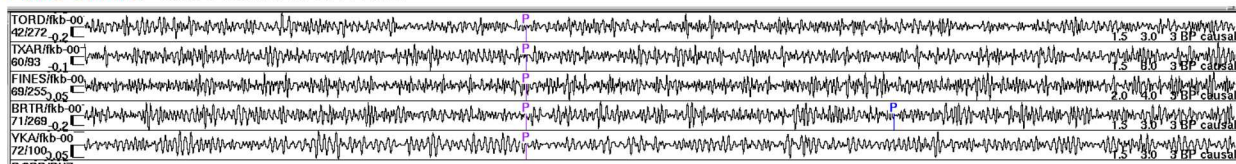
Good event, only kept WRA/ASAR/MKAR – retimed MKAR by 20+ seconds. Locates to 3S x 145E



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
228 13174116 17:36: 49.13 1.60 11.360 -41.440 0.0 3.42 0.22 5 NEW 0 0.000 -
1.000 0 32 21.1 29.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TORD	42.65	271.76	17:44: 45.06	1.242	476.35	5.6	0.0	-0.666	0.006	7.1	0 -99.000
TXAR	60.24	94.20	17:46: 59.53	-1.094	610.54	5.2	0.0	-1.072	0.006	7.2	0 -99.000
FINES	70.08	255.60	17:47: 57.54	-1.093	668.27	4.2	0.0	-0.794	0.006	3.4	0 -99.000
BRTR	72.05	269.24	17:48: 9.40	-1.574	679.87	4.7	0.0	-0.942	0.003	4.8	0 -99.000
YKA	72.51	100.38	17:48: 18.63	2.519	689.44	4.4	0.0	-0.426	0.002	6.8	0 -99.000

False event. Can't confirm arrivals.

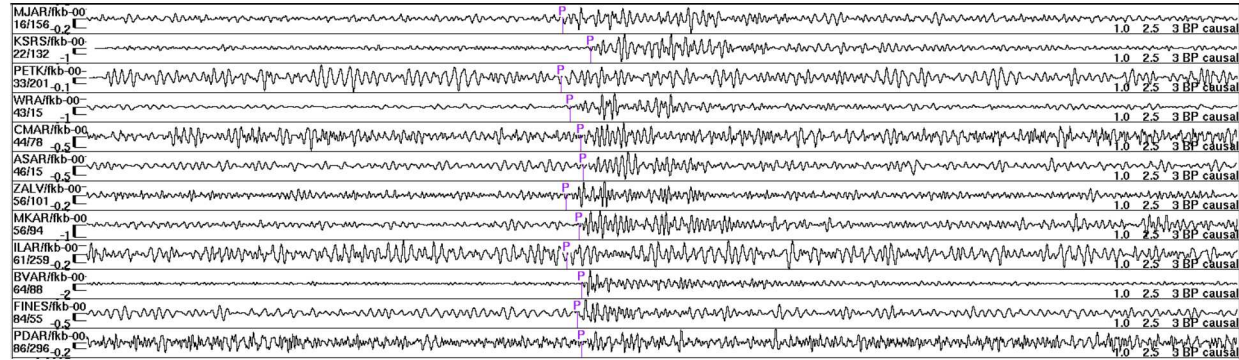


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
229 5882605 17:51: 37.71 2.31 21.620 145.610 204.2 3.40 0.41 12 SEL 17819920
21.738 0.232 10 18 24.0 60.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	15.65	343.31	17:55: 9.96	-2.695	211.83	4.8	5.3	2.333	0.120	6.2	1 -1.070
KSRS	20.95	322.47	17:56: 18.52	1.621	280.89	6.4	6.8	3.443	0.120	3.4	1 -4.122
PETK	33.24	15.36	17:57: 57.39	4.894	379.64	4.8	2.9	3.753	0.180	3.0	0 -99.000
WRA	42.28	193.24	17:59: 16.49	0.599	457.84	8.2	6.5	3.303	0.100	9.3	1 -1.528
CMAR	42.12	274.00	17:59: 24.40	2.285	466.34	5.4	4.1	3.473	0.100	3.0	1 -0.533
ASAR	45.98	192.61	17:59: 45.50	1.108	486.89	12.1	8.5	3.433	0.130	7.5	1 -1.399
ZALV	54.64	321.62	18: 0: 51.42	0.030	553.79	5.4	4.4	3.793	0.190	3.6	1 2.423
MKAR	55.18	312.66	18: 0: 56.69	-0.764	558.49	6.0	7.0	3.253	0.230	7.6	1 3.124
KURK	57.98	316.99	18: 1: 16.46	-0.294	577.99	4.5	3.6	3.153	0.080	3.0	1 2.449
ILAR	61.90	27.04	18: 1: 25.69	-4.074	587.64	4.8	4.0	3.243	0.120	5.4	1 7.208

FINES 83.52 334.65 18: 3: 44.12 -0.198 726.52 5.9 4.9 3.663 0.220 5.5 1 4.926
PDAR 87.10 44.94 18: 3: 52.03 -2.512 733.84 4.3 3.0 4.003 0.150 3.0 0 -99.000

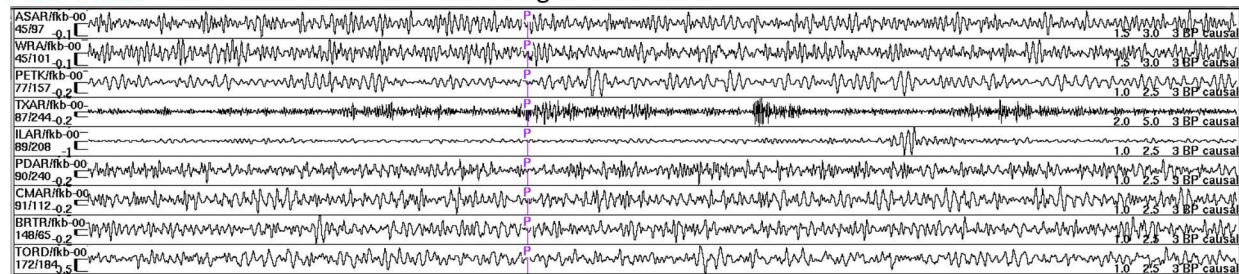
Good event. Not all arrivals can be confirmed (ILAR,PETK), added BVAR.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
230 5396436 17:54: 6.68 1.69 -21.650 -177.690 453.0 4.01 0.20 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	44.42	99.61	18: 1: 38.88	0.813	451.56	12.3	0.0	0.883	0.004	9.7	0 -99.000
ASAR	44.32	95.96	18: 1: 40.20	2.884	452.61	21.2	0.0	0.681	0.006	9.5	0 -99.000
PETK	76.47	156.81	18: 5: 11.13	-1.578	663.27	10.8	0.0	0.442	0.004	3.0	0 -99.000
NVAR	81.30	234.96	18: 5: 41.46	1.989	693.54	6.9	0.0	0.278	0.003	4.1	0 -99.000
TXAR	87.31	244.54	18: 6: 9.14	1.638	721.49	11.4	0.0	0.407	0.003	5.1	0 -99.000
ILAR	88.58	209.07	18: 6: 11.78	-1.443	724.56	8.9	0.0	0.597	0.003	5.7	0 -99.000
PDAR	89.24	240.63	18: 6: 15.73	-0.129	728.11	10.3	0.0	0.554	0.003	3.8	0 -99.000
CMAR	90.06	111.75	18: 6: 21.01	-0.592	733.81	17.8	0.0	0.718	0.004	3.0	0 -99.000
BRTR	146.90	64.53	18:12: 57.83	-2.686	1129.96	5.7	0.0	0.348	0.006	3.6	0 -99.000
TORD	172.45	181.09	18:14: 45.94	-0.895	1238.87	5.0	0.0	0.228	0.001	3.0	0 -99.000

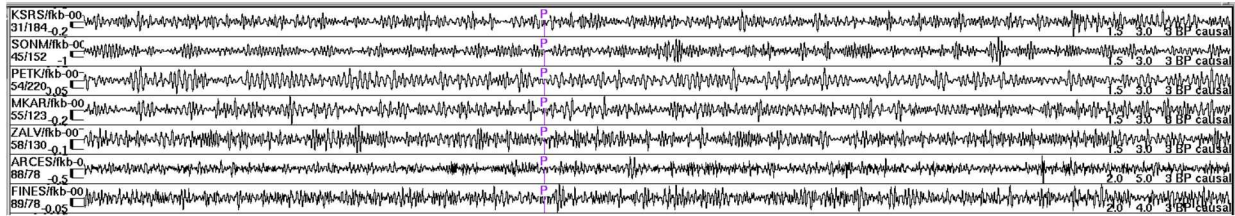
False event. Can't confirm arrivals – TXAR is Lg to local event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
231 10024981 17:57: 52.12 0.77 6.040 126.020 197.0 2.78 0.24 7 NEW 0 0.000
-1.000 0 22 28.9 31.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	30.72	182.28	18: 3: 53.35	-0.455	361.12	7.5	0.0	-1.117	0.005	3.0	0 -99.000
SONM	44.60	150.58	18: 5: 48.05	1.233	476.76	7.2	0.0	-0.792	0.001	4.7	0 -99.000
PETK	52.81	219.95	18: 6: 50.01	0.529	538.37	4.6	0.0	-0.495	0.007	3.0	0 -99.000
MKAR	55.22	122.16	18: 7: 5.83	0.715	554.19	10.8	0.0	-1.075	0.003	8.6	0 -99.000
ZALV	58.05	128.57	18: 7: 24.29	-1.100	572.17	5.3	0.0	-0.835	0.002	3.7	0 -99.000
ARCES	87.77	77.23	18:10: 18.31	-0.550	746.27	9.2	0.0	-1.277	0.002	3.9	0 -99.000
FINES	89.31	77.55	18:10: 24.90	-0.371	752.92	7.8	0.0	-0.816	0.002	4.3	0 -99.000

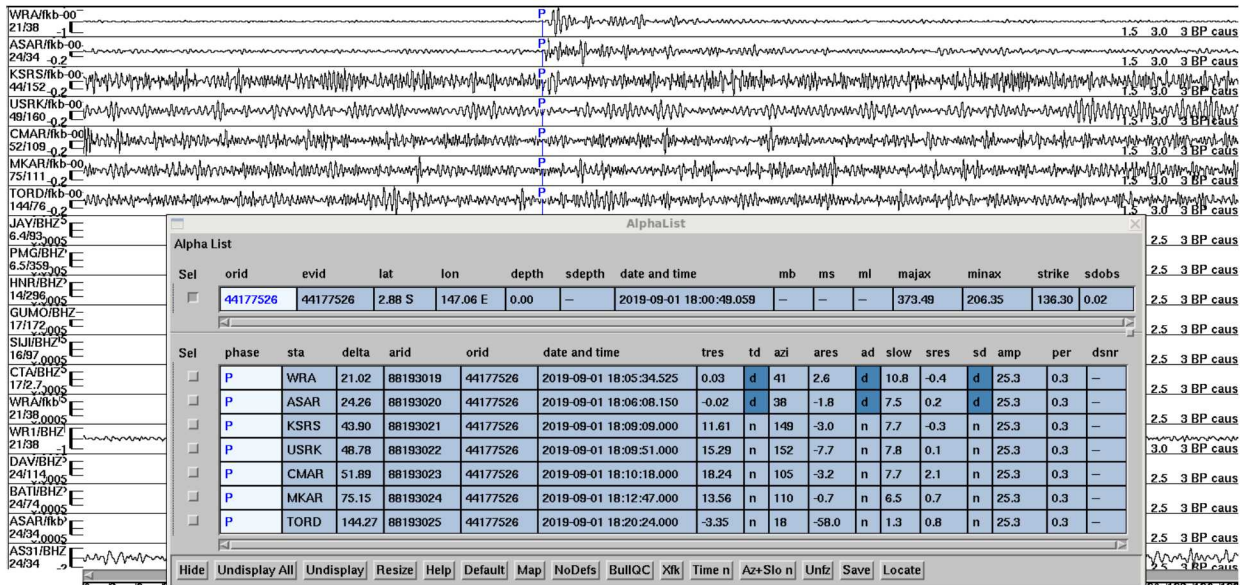
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
232 6520073 18: 0: 44.82 3.02 -4.480 149.290 0.0 3.72 0.52 7 NEW 0 0.000 -
1.000 0 15 25.0 38.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	21.24	227.48	18: 5: 29.59	-1.745	284.52	8.8	0.0	3.163	0.090	9.8	0 -99.000
ASAR	24.01	220.99	18: 6: 6.50	3.406	321.37	11.3	0.0	3.043	0.120	9.5	0 -99.000
KRSR	48.16	335.39	18: 9: 9.76	-2.956	504.57	4.8	0.0	3.563	0.050	3.0	0 -99.000
USRK	52.70	343.03	18: 9: 51.94	2.600	547.00	5.4	0.0	3.803	0.170	3.0	0 -99.000
CMAR	56.59	296.55	18:10: 18.31	-1.741	573.27	5.4	0.0	4.053	0.090	3.0	0 -99.000
MKAR	79.89	319.49	18:12: 47.29	4.118	722.45	4.4	0.0	3.703	0.150	5.9	0 -99.000
TORD	148.75	285.56	18:20: 24.76	-3.682	1179.45	4.7	0.0	4.703	0.070	4.5	0 -99.000

Partial credit: ASAR and WRA are good to this area. None of the other arrivals can be confirmed. WRA pick was 5 seconds early.



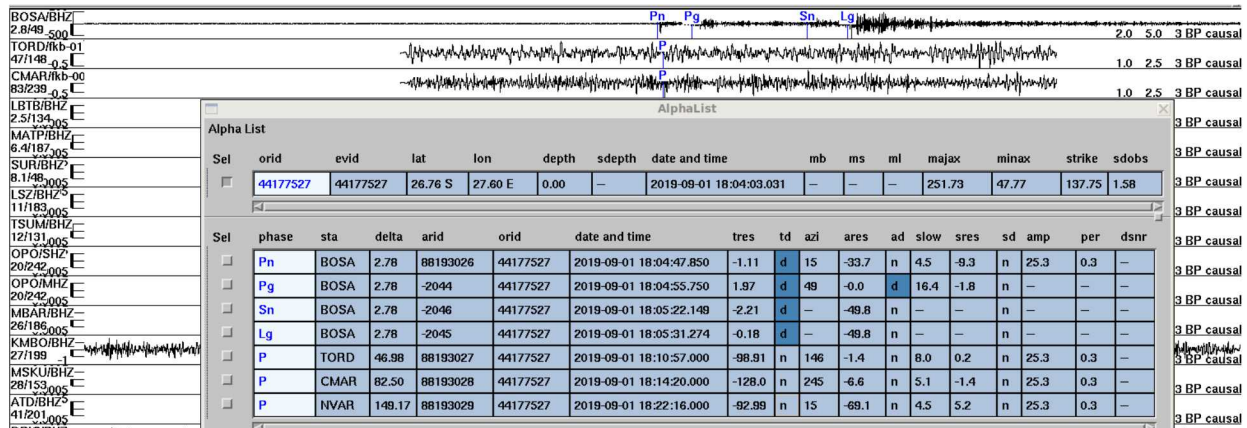
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
233 5051610 18: 2: 32.93 0.45 -22.480 32.810 27.0 3.92 0.77 4 NEW 0 0.000 -
1.000 0 37 22.0 22.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BOSA	10.05	226.22	18: 4: 39.49	-0.138	127.51	7.8	3.4	2.960	0.110	9.1	0 -99.000
TORD	46.72	315.17	18:10: 57.86	-0.322	505.99	4.9	0.0	5.140	0.210	6.4	0 -99.000
CMAR	75.53	63.09	18:14: 20.89	0.412	708.31	4.4	0.0	4.400	0.120	3.0	0 -99.000
NVAR	150.70	310.67	18:22: 16.82	0.632	1184.89	4.9	0.0	3.360	0.230	4.2	0 -99.000

False event. BOSA has signal to African mines 8 seconds after this pick. The rest of the arrivals can't be confirmed.

The event is shown in ISC link to Botswana Geoscience Center

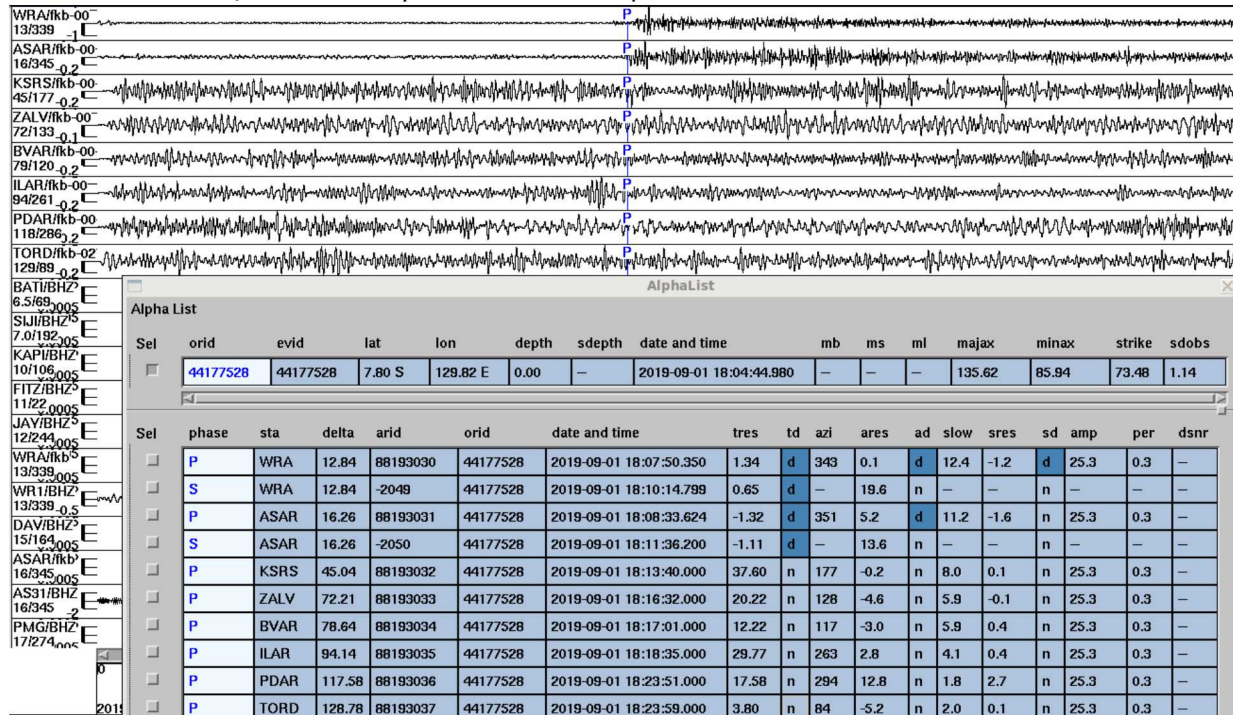
2019/09/01 18:04:22.60 0.30 0.000 -25.4700 26.2960 6.4 12.1 -1 15.0
0.0 3 266 BGSi 12777416



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
234 12107680 18:4: 57.95 2.56 -10.800 125.490 0.0 4.08 0.95 8 NEW 0 0.000 -
1.000 0 24 27.0 37.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	14.00	140.55	18:7:45.38	-1.934		167.70	6.0	0.0	3.191	0.050	9.9	0-99.000
ASAR	16.72	150.21	18:8:30.21	3.839		212.63	4.9	0.0	3.091	0.080	9.6	0-99.000
KSRS	46.51	3.23	18:13:40.02	0.277		521.97	4.7	0.0	4.301	0.090	3.0	0-99.000
ZALV	71.48	336.32	18:16:32.72	3.689		694.72	4.6	0.0	3.621	0.220	3.0	0-99.000
BVAR	77.36	329.72	18:17:1.73	-0.118		724.43	4.6	0.0	3.241	0.130	3.0	0-99.000
ILAR	97.50	25.60	18:18:35.33	0.028		817.13	4.4	0.0	5.051	0.140	3.0	0-99.000
PDAR	122.01	44.99	18:23:51.74	-4.177		1133.58	5.6	0.0	4.211	0.170	3.0	0-99.000
TORD	124.28	279.61	18:23:59.65	-1.603		1141.10	5.2	0.0	5.961	0.150	3.0	0-99.000

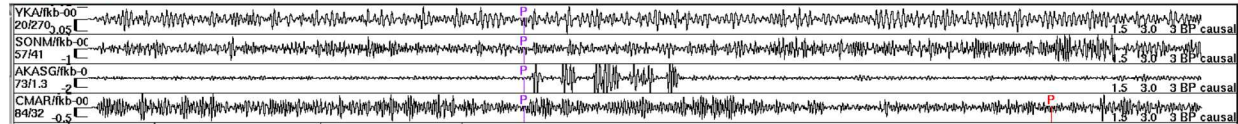
Partial credit. ASAR/WRA locate by themselves with S phases to:



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
235 15805009 18:12: 38.06 3.24 56.290 -153.090 73.5 3.41 0.55 4 NEW 0 0.000
-1.000 0 123.0 27.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
YKA	20.78	59.52	18:17: 5.68	-2.085	268.03	4.5	4.7	3.282	0.130	7.9	0 -99.000
SONM	54.93	305.35	18:22: 15.50	-0.471	577.64	4.5	4.4	3.362	0.230	4.7	0 -99.000
KURK	63.16	324.56	18:23: 6.91	-3.561	629.33	4.3	4.7	3.652	0.120	3.0	0 -99.000
CMAR	82.44	292.52	18:25: 1.61	0.174	744.13	4.2	8.2	4.232	0.100	3.5	0 -99.000

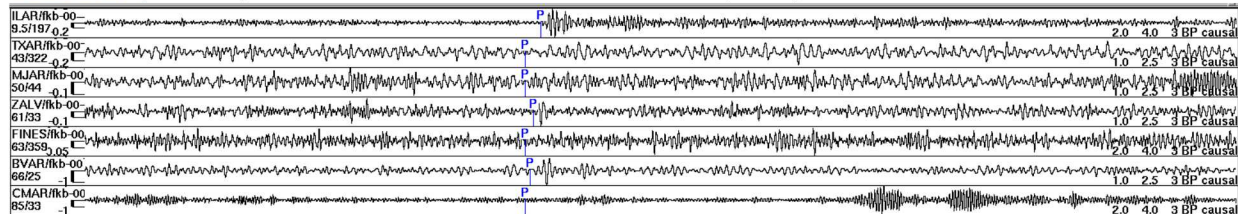
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
236 8752665 18:13: 49.25 2.22 56.930 -153.960 59.4 3.44 0.58 7 REB 17815221 4.398
0.525 2 123.0 35.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	8.69	25.51	18:15: 50.54	-0.397	120.09	5.6	9.1	3.358	0.090	8.8	1 1.873
NVAR	30.77	111.44	18:19: 51.80	-1.338	361.37	4.4	8.8	3.958	0.110	5.3	0 -99.000
TXAR	45.43	105.14	18:21: 58.36	2.538	488.54	4.7	5.0	3.728	0.140	7.2	0 -99.000
ZALV	58.81	323.05	18:23: 50.42	2.968	599.99	4.8	4.0	3.528	0.120	3.0	0 -99.000
FINES	61.69	359.07	18:23: 59.65	-3.673	609.19	4.2	3.5	4.028	0.280	4.7	0 -99.000
BVAR	63.88	331.05	18:24: 22.06	2.350	632.84	4.5	4.2	2.158	0.220	3.0	1 0.322
CMAR	82.73	292.72	18:26: 11.48	-0.892	741.54	4.3	7.1	3.758	0.090	3.4	0 -99.000

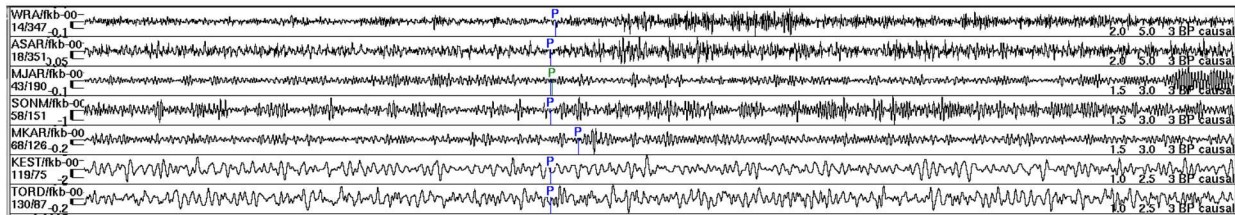
Good event, can only confirm 3 of the associated arrivals. ILAR,BVAR,ZALV. Added a MKAR P.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
237 5022868 18:14: 41.98 2.47 -6.120 129.880 0.0 3.99 0.99 8 REB 17815026 -2.101
1.137 3 24 27.0 43.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	14.11	158.87	18:18: 3.69	2.034	201.65	4.6	4.9	3.578	0.080	9.8	1 6.034
ASAR	17.47	164.80	18:18: 45.88	-3.343	243.68	5.1	3.9	3.218	0.050	9.6	1 7.130
MJAR	43.92	10.78	18:22: 41.87	1.095	480.54	4.9	4.5	2.928	0.170	3.0	0 -99.000
SONM	57.89	342.21	18:24: 29.97	-3.619	588.63	5.5	3.7	3.518	0.080	3.2	0 -99.000
MKAR	67.46	327.23	18:25: 39.84	0.790	658.20	5.5	4.1	3.928	0.090	8.8	1 -0.245
KURK	71.77	328.86	18:26: 6.21	-0.604	684.05	4.8	4.8	3.508	0.110	3.0	0 -99.000
KEST	117.87	306.87	18:33: 31.82	-0.570	1130.13	5.2	2.1	5.488	0.460	3.0	0 -99.000
TORD	127.77	281.35	18:33: 56.87	4.217	1155.13	4.4	10.0	5.788	0.080	3.0	0 -99.000

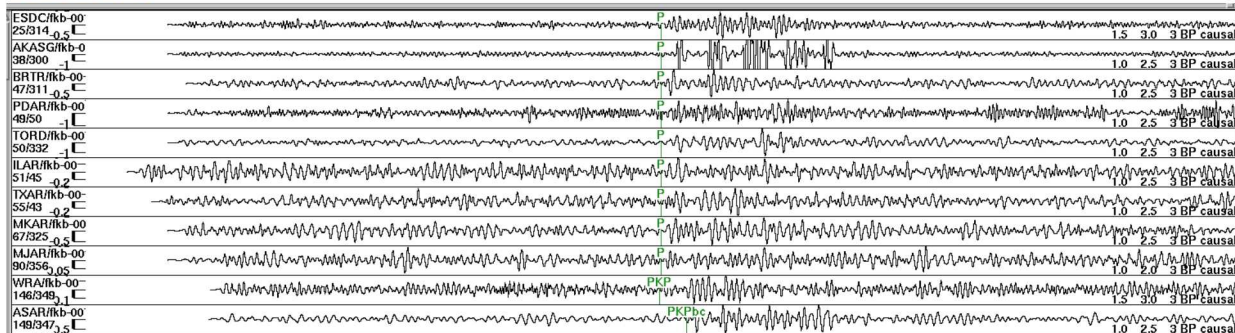
Good event, can only confirm WRA/ASAR/MKAR



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 238 11248490 18:16: 52.50 3.48 53.590 -34.960 0.0 4.04 0.65 11 SEL 17819709 1.697
 0.348 7 32 18.0 59.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
AKASG	38.57	66.85	18:24: 8.88	-4.738		436.36	5.5	0.0	3.692	0.110	4.6	1 4.404
BRTR	47.44	77.42	18:25: 30.62	3.192		518.44	5.5	0.0	3.602	0.270	4.9	1 -6.586
PDAR	48.76	289.38	18:25: 34.57	-4.208		522.04	6.3	0.0	4.822	0.150	8.3	1 0.173
TORD	49.46	129.79	18:25: 45.12	-0.071		532.61	4.3	0.0	5.762	0.080	6.4	1 1.329
ILAR	51.27	329.32	18:25: 54.35	-1.671		541.84	4.4	0.0	3.852	0.060	7.0	0 -99.000
TXAR	54.44	272.70	18:26: 18.08	-3.749		565.66	4.2	0.0	3.652	0.160	6.3	1 0.709
NVAR	56.60	290.92	18:26: 41.81	4.345		588.97	4.8	0.0	3.752	0.180	3.2	0 -99.000
MKAR	67.08	41.46	18:27: 42.45	-3.074		649.57	4.2	0.0	3.902	0.190	7.9	1 0.554
MJAR	90.50	5.32	18:29: 54.29	2.911		782.32	4.3	0.0	4.262	0.080	3.0	0 -99.000
WRA	145.86	17.83	18:36: 36.39	4.987		1184.19	5.2	0.0	3.732	0.160	3.0	0 -99.000
ASAR	149.40	20.02	18:36: 42.98	2.077		1190.84	11.3	0.0	3.442	0.140	5.1	1 -3.428

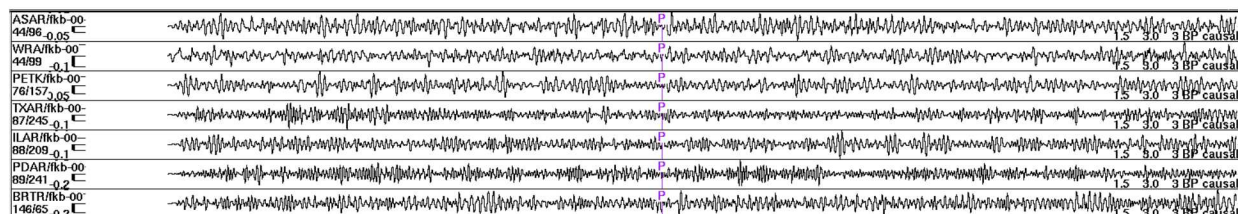
Good event!



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 239 9379865 18:18: 24.79 0.48 -20.480 -178.470 583.0 3.63 0.43 9 NEW 0 0.000
 -1.000 0 13 26.2 47.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	44.04	99.44	18:25: 42.48	-0.327		437.52	9.6	0.0	-1.188	0.003	9.7	0 -99.000
ASAR	43.95	95.75	18:25: 43.80	0.140		437.82	14.5	0.0	-1.458	0.019	9.5	0 -99.000
PETK	76.31	157.19	18:29: 13.42	-0.049		647.74	4.8	0.0	-0.844	0.014	3.0	0 -99.000
NVAR	81.53	235.30	18:29: 41.10	0.089		676.30	5.1	0.0	-0.844	0.005	4.1	0 -99.000
TXAR	87.61	244.80	18:30: 12.74	0.328		707.59	8.2	0.0	-0.780	0.003	5.1	0 -99.000
ILAR	88.61	209.48	18:30: 14.06	0.079		709.02	8.6	0.0	-0.784	0.015	5.7	0 -99.000
PDAR	89.46	240.96	18:30: 19.34	-0.719		714.47	6.8	0.0	0.111	0.002	3.8	0 -99.000
ARCES	129.00	29.45	18:36: 25.84	-0.493		1079.90	9.3	0.0	-1.427	0.002	3.0	0 -99.000
BRTR	146.55	64.93	18:37: 0.12	1.134		1115.02	6.2	0.0	-0.953	0.002	3.6	0 -99.000

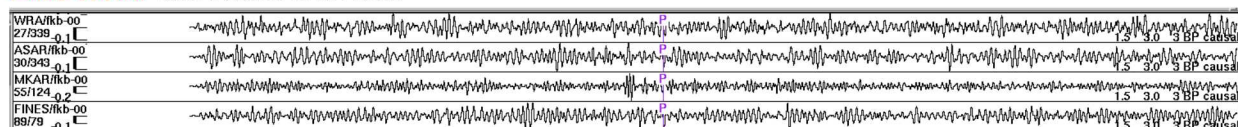
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
240 3254623 18:23: 59.65 2.20 5.570 125.150 127.0 3.61 0.27 4 NEW 0 0.000 -
1.000 0 22 28.9 31.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	27.62	340.98	18:29: 25.28	-2.644	324.72	9.2	0.0	-1.116	0.002	9.4	0	-99.000
ASAR	31.03	343.82	18:30: 3.52	2.988	362.95	10.1	0.0	-1.326	0.003	9.2	0	-99.000
MKAR	54.68	123.35	18:33: 21.27	1.491	560.80	5.3	0.0	-1.732	0.002	8.6	0	-99.000
FINES	88.90	78.59	18:36: 39.02	-2.392	759.07	4.7	0.0	-0.932	0.001	4.3	0	-99.000

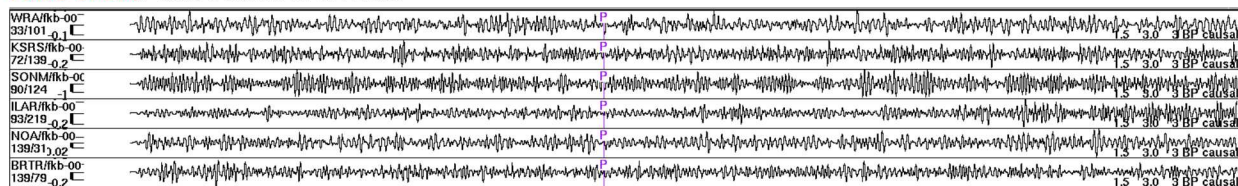
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
241 7091023 18:36: 45.62 2.93 -22.770 169.840 0.0 4.53 0.30 7 NEW 0 0.000 -
1.000 0 14 25.0 30.7

Sta	Dist	seaz	ArrivTime		Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	32.08	265.23	18:43:	23.76	1.099		397.80	5.2	0.0	4.684	0.160	9.7	0 -99.000
KSRS	69.37	326.33	18:48:	12.48	2.244		686.55	4.7	0.0	5.024	0.060	3.0	0 -99.000
SONM	88.01	323.40	18:49:	48.72	-1.420		782.10	4.5	0.0	4.564	0.080	3.0	0 -99.000
NVAR	90.23	48.73	18:49:	55.31	3.641		789.87	5.2	0.0	3.944	0.150	3.9	0 -99.000
ILAR	91.81	17.50	18:49:	57.95	-3.667		792.25	5.4	0.0	4.434	0.140	5.2	0 -99.000
NOA	136.68	344.15	18:56:	9.73	-4.367		1163.50	4.5	0.0	4.554	0.160	3.0	0 -99.000
BRTR	137.19	306.54	18:56:	18.96	2.470		1173.20	4.6	0.0	4.514	0.130	3.0	0 -99.000

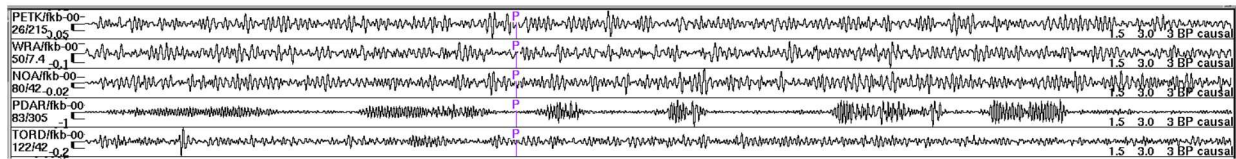
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
242 12979693 18:40: 57.42 2.19 30.260 140.930 0.0 4.63 0.59 5 NEW 0 0.000 -
1.000 0 18 24.0 21.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
PETK	26.58	19.92	18:46: 29.65	-1.324	332.60	4.6	0.0	4.467	0.270	3.0	0 -99.000	
WRA	49.18	190.85	18:49: 55.31	-0.275	538.88	4.3	0.0	3.937	0.050	9.1	0 -99.000	
NOA	82.32	338.54	18:53: 11.75	2.122	734.38	4.8	0.0	4.567	0.190	3.3	0 -99.000	
PDAR	82.47	45.14	18:53: 24.93	2.701	747.82	5.1	0.0	4.447	0.130	3.1	0 -99.000	
TORD	124.02	312.79	18:59: 48.57	-3.224	1132.05	4.3	0.0	5.727	0.110	3.0	0 -99.000	

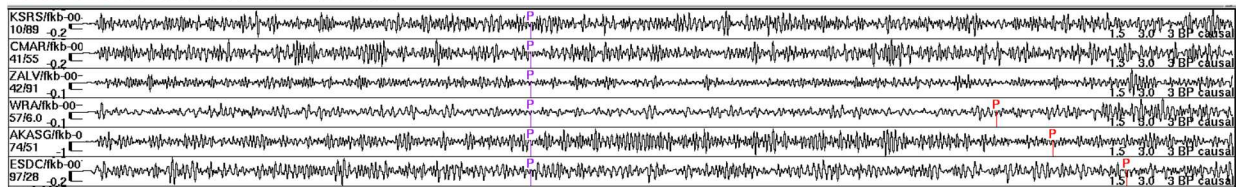
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
243 7524568 18:52: 59.88 4.14 36.940 140.660 8.2 4.35 0.56 6 NEW 0 0.000 -
1.000 0 19 23.0 26.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	10.20	276.16	18:55: 38.09	4.951	158.21	4.5	5.1	3.725	0.080	4.0	0 -99.000
CMAR	40.91	254.68	19: 0: 37.35	-4.977	457.31	4.5	6.8	4.925	0.060	3.0	0 -99.000
ZALV	41.47	312.39	19: 0: 43.95	-3.693	463.21	4.3	4.2	3.705	0.190	4.1	0 -99.000
WRA	56.98	187.10	19: 2: 47.87	3.511	587.81	4.2	5.0	4.355	0.050	8.5	0 -99.000
AKASG	73.93	321.98	19: 4: 41.25	4.651	700.26	4.4	4.6	4.535	0.060	3.6	0 -99.000
ESDC	97.02	333.24	19: 6: 28.04	-4.804	807.37	4.7	4.6	5.275	0.120	3.0	0 -99.000

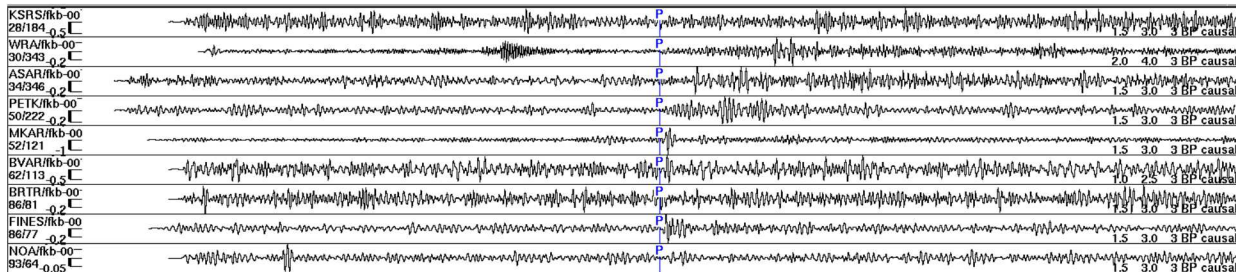
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
244 8505978 18:53: 10.43 3.40 9.450 125.970 28.8 3.77 0.29 7 SEL 17819556 2.978
0.145 3 22 27.0 45.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	27.36	4.03	18:58: 57.16	-2.311	346.27	4.3	4.3	3.867	0.050	3.0	0 -99.000
ASAR	34.48	166.40	18:59: 47.26	-3.782	396.06	6.9	5.3	3.327	0.120	9.3	1 3.892
PETK	50.14	24.70	19: 2: 1.73	-3.738	531.29	4.5	5.0	3.677	0.170	3.0	1 6.247
MKAR	51.79	323.18	19: 2: 20.19	-0.779	549.89	6.0	8.5	3.637	0.190	8.8	1 2.320
BVAR	61.46	325.64	19: 3: 31.38	3.426	621.23	4.9	2.7	3.227	0.080	3.0	0 -99.000
BRTR	85.14	309.32	19: 5: 41.89	-4.466	751.36	4.5	3.5	3.887	0.110	3.0	0 -99.000
FINES	85.76	331.63	19: 5: 49.80	0.653	759.21	5.7	2.9	4.007	0.060	3.0	0 -99.000
NOA	92.65	333.65	19: 6: 20.13	-1.179	789.69	4.6	6.4	4.017	0.170	3.0	0 -99.000

Good event. Can't confirm all arrivals.

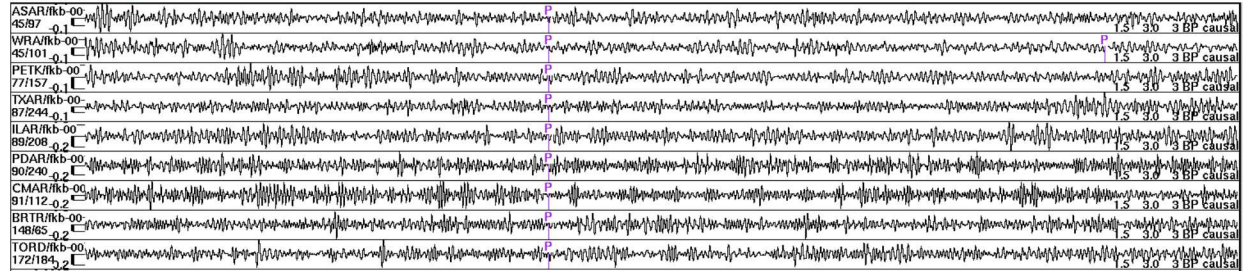


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
245 5396436 18:54: 7.12 1.69 -21.650 -177.690 453.0 4.00 0.20 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	44.42	99.61	19: 1: 39.32	0.782	451.53	12.9	0.0	0.871	0.004	9.7	0 -99.000

ASAR	44.32	95.96	19: 1:	39.32	2.858	452.59	21.0	0.0	0.669	0.006	9.5	0 -99.000
PETK	76.47	156.81	19: 5:	10.25	-1.609	663.23	10.7	0.0	0.430	0.004	3.0	0 -99.000
NVAR	81.30	234.96	19: 5:	40.58	1.958	693.51	7.1	0.0	0.267	0.003	4.1	0 -99.000
TXAR	87.31	244.54	19: 6:	8.26	1.611	721.46	11.6	0.0	0.396	0.003	5.1	0 -99.000
ILAR	88.58	209.07	19: 6:	12.22	-1.474	724.53	8.9	0.0	0.586	0.003	5.7	0 -99.000
PDAR	89.24	240.63	19: 6:	16.17	0.141	728.38	8.0	0.0	0.543	0.002	3.8	0 -99.000
CMAR	90.06	111.75	19: 6:	21.45	-0.623	733.78	17.8	0.0	0.706	0.003	3.0	0 -99.000
BRTR	146.90	64.53	19:12:	56.95	-2.717	1129.93	5.6	0.0	0.337	0.006	3.6	0 -99.000
TORD	172.45	181.09	19:14:	46.38	-0.926	1238.84	5.0	0.0	0.233	0.001	3.0	0 -99.000

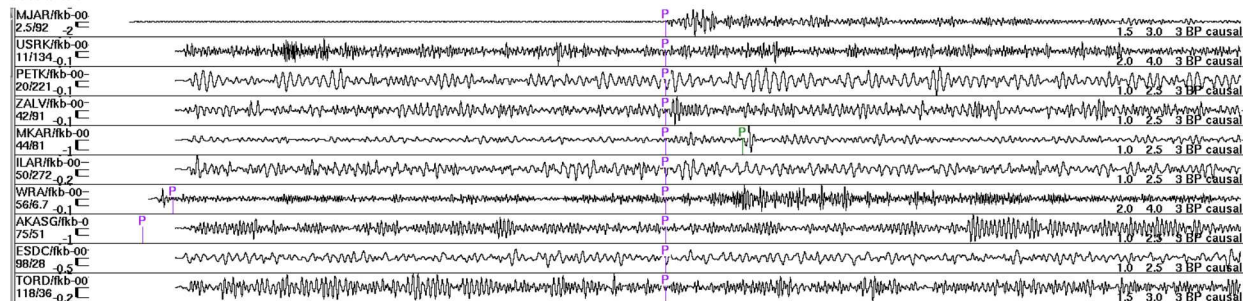
False event. Can't confirm arrivals



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
246	7325411	18:54:	8.44	3.49	36.420	141.290	39.4	3.77	0.97	9	REB	17819615	7.841
0.426	3	19 23.0	44.5										

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MJAR	2.67	269.41	18:54: 42.71	-4.144	33.33	10.0	66.2	2.069	0.240	7.5	1	4.927
USRK	10.53	319.08	18:56: 42.69	4.164	153.81	4.6	3.6	3.189	0.140	3.3	0	-99.000
PETK	20.00	29.32	18:58: 36.06	-4.644	267.29	4.7	3.8	3.789	0.160	3.0	0	-99.000
KURK	46.37	308.33	19: 2: 28.10	-0.609	499.64	4.7	3.8	3.199	0.050	3.2	1	-0.803
ILAR	49.80	32.16	19: 3: 3.69	4.241	534.83	4.3	4.6	3.689	0.040	5.5	0	-99.000
WRA	56.65	188.15	19: 3: 44.56	-0.853	575.68	4.5	4.6	3.739	0.040	8.5	1	2.920
AKASG	74.72	322.43	19: 5: 45.85	2.325	697.31	4.8	3.9	3.809	0.070	3.5	0	-99.000
ESDC	97.73	333.84	19: 7: 41.87	2.214	812.56	4.3	4.3	5.089	0.080	3.0	0	-99.000
TORD	117.72	314.83	19:12: 53.00	2.720	1124.46	5.2	13.0	5.769	0.060	3.0	0	-99.000

Good event, but only two of the arrivals are included in the REB solution. MJAR and WRA. Added ZALV and MKAR

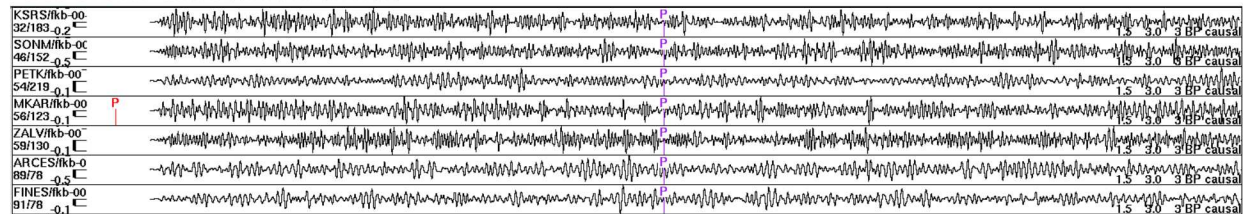


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
247	5812625	18:57:	35.42	0.93	5.070	126.530	108.0	3.86	0.24	7	NEW	0	0.000
1.000	0	22 28.9	31.2										

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KSRS	31.28	182.17	19: 3: 52.47	-0.289	376.77	7.2	0.0	-1.118	0.005	3.0	0	-99.000
SONM	45.14	150.78	19: 5: 48.49	-0.184	492.11	7.4	0.0	-0.788	0.001	4.7	0	-99.000

PETK	53.30	219.63	19: 6: 50.45	0.377	554.02	4.4	0.0	-0.514	0.007	3.0	0-99.000
MKAR	55.69	122.51	19: 7: 6.27	-0.832	569.84	10.9	0.0	-1.083	0.003	8.6	0-99.000
ZALV	58.56	128.83	19: 7: 28.68	2.050	592.44	6.1	0.0	-1.031	0.007	3.7	0-99.000
ARCES	88.30	77.38	19:10: 17.43	-0.876	761.92	8.3	0.0	-1.283	0.001	3.9	0-99.000
FINES	89.82	77.77	19:10: 24.02	-0.245	768.55	11.3	0.0	-0.791	0.004	4.3	0-99.000

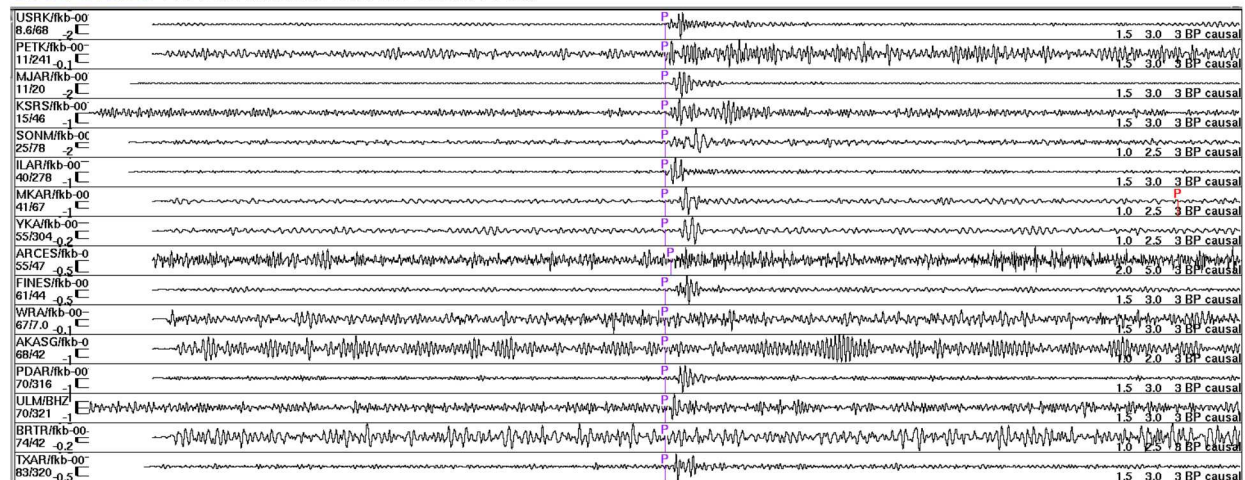
False event. Can't confirm arrivals



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
248	15982140	18:57: 53.88	1.48	46.440	143.390	384.3	3.41	0.46	16	SEL	17815506	-	
1.541	0.488	13	41	20.0	77.7								

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
USRK	9.44	257.33	18:59: 52.53	-1.474	118.80	4.3	26.2	3.251	0.380	3.4	1	5.375
MJAR	11.58	207.46	19: 0: 21.53	3.212	148.63	18.4	44.0	3.401	0.390	7.5	1	1.877
KRSR	15.76	238.74	19: 1: 1.08	-2.988	187.57	5.1	5.9	3.341	0.100	3.8	1	8.352
SONM	25.85	286.09	19: 2: 45.23	0.136	291.97	5.2	4.9	2.791	0.200	5.3	1	1.863
ILAR	39.87	38.39	19: 4: 55.75	-1.378	422.12	17.4	30.0	3.241	0.510	5.9	1	1.697
MKAR	41.71	293.59	19: 5: 2.34	1.269	429.17	9.1	9.9	2.731	0.380	7.7	1	0.775
KURK	42.50	300.30	19: 5: 8.94	1.009	435.73	7.5	6.0	2.881	0.150	3.3	1	0.720
YKA	54.01	34.35	19: 6: 43.86	-0.808	530.87	8.8	8.5	3.441	0.120	4.5	1	0.322
FINES	61.23	331.28	19: 7: 28.68	0.297	575.15	6.7	7.2	3.801	0.170	5.8	1	-0.377
WRA	67.32	190.71	19: 8: 1.64	-1.535	607.87	4.9	6.0	4.431	0.070	7.9	0	-99.000
AKASG	68.00	321.80	19: 8: 12.19	1.124	618.27	5.7	4.0	4.301	0.050	3.8	0	-99.000
NVAR	67.21	57.76	19: 8: 13.51	-0.891	620.48	9.1	8.3	3.231	0.130	3.5	1	1.445
PDAR	69.03	49.43	19: 8: 24.05	1.463	630.67	15.4	14.3	3.021	0.480	4.2	1	1.150
ULM	69.86	36.61	19: 8: 28.01	-0.826	634.67	5.1	2.3	3.511	0.220	3.0	1	0.500
BRTR	74.14	311.63	19: 8: 47.78	0.766	654.92	4.5	4.4	3.641	0.110	3.0	0	-99.000
TXAR	82.15	55.10	19: 9: 37.88	0.625	704.02	12.2	8.5	3.541	0.200	5.0	1	1.498

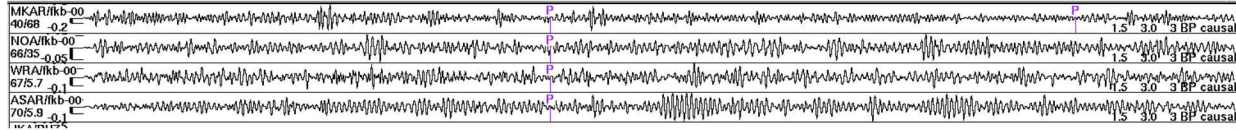
Good event. Not all arrivals can be confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
249 4324051 18:58: 26.84 0.90 46.540 141.980 0.0 4.00 0.32 4 NEW 0 0.000 -
1.000 0 41 20.0 26.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	39.83	292.56	19: 6: 2.99	0.052	456.90	4.2	9.9	4.061	0.040	7.7	0 -99.000
NOA	65.35	335.97	19: 9: 11.51	0.091	645.25	5.2	5.0	3.521	0.130	4.5	0 -99.000
WRA	66.72	187.56	19: 9: 18.11	1.205	651.40	5.8	9.5	4.421	0.130	8.0	0 -99.000
ASAR	70.45	187.60	19: 9: 39.20	-1.348	673.35	5.1	5.3	4.011	0.120	6.6	0 -99.000

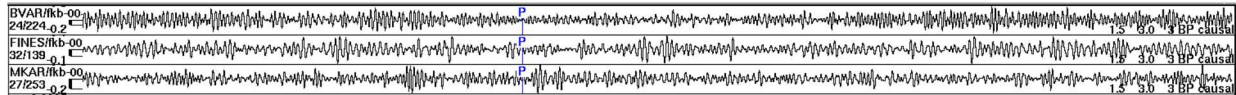
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
250 16649488 19: 5: 59.03 0.01 33.510 50.490 0.0 2.70 0.80 3 NEW 0 0.000 -
1.000 0 29 22.1 22.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BVAR	25.08	224.54	19:11: 16.76	-0.013	318.00	4.0	0.0	-2.428	0.007	6.2	0 -99.000
MKAR	28.43	252.26	19:11: 47.08	0.015	348.92	5.7	0.0	-0.623	0.002	8.0	0 -99.000
FINES	32.47	141.04	19:12: 26.63	-0.003	387.70	5.5	0.0	-0.841	0.002	7.9	0 -99.000

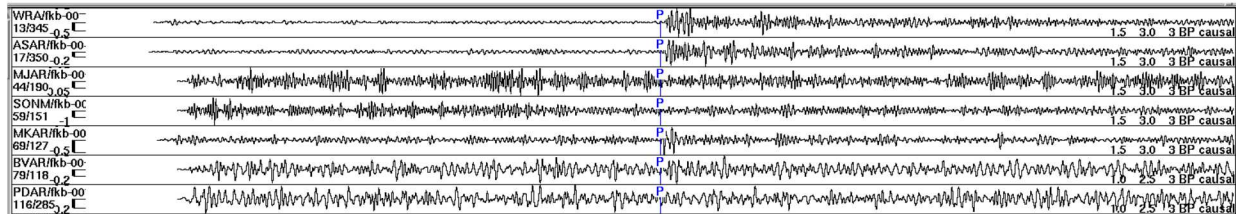
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
251 9693856 19: 8: 16.14 2.69 -6.250 131.320 65.4 3.27 0.64 8 SEL 17819624 4.961
0.403 3 24 27.0 43.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	14.09	166.79	19:11: 22.03	-2.167	185.60	11.8	13.6	2.598	0.060	9.8	1 3.125
ASAR	17.63	171.02	19:12: 9.49	-1.407	233.45	11.1	12.4	2.348	0.130	9.6	1 2.548
MJAR	43.01	8.63	19:16: 10.75	1.621	474.18	4.2	4.9	3.848	0.140	3.0	0 -99.000
SONM	57.96	340.71	19:18: 0.18	-4.985	582.93	4.2	4.8	3.728	0.180	3.1	0 -99.000
MKAR	68.05	326.21	19:19: 14.00	2.626	657.78	5.3	4.9	2.908	0.220	8.8	1 2.059
KURK	72.30	328.00	19:19: 37.73	0.632	680.83	4.4	4.6	3.558	0.140	3.0	0 -99.000
BVAR	77.87	327.45	19:20: 13.33	4.024	716.08	4.8	3.9	2.908	0.140	3.0	0 -99.000
PDAR	115.63	45.31	19:26: 51.47	-0.344	1115.00	4.5	4.0	4.298	0.170	3.0	0 -99.000

Good event. Can't confirm all arrivals

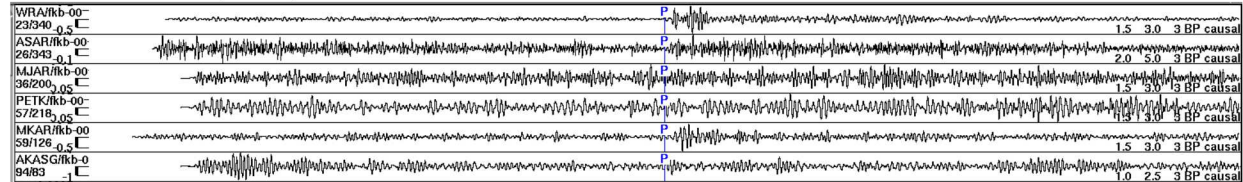


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
252 8985354 19:12: 31.90 3.33 1.500 126.880 69.6 3.58 0.79 7 REB 17815395 5.275
0.519 3 23 27.0 40.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
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WRA	23.19	161.82	19:17:	27.22	1.826	294.56	6.8	6.1	2.642	0.100	9.8	1	3.076
ASAR	26.60	165.40	19:17:	57.54	0.066	326.03	8.5	6.4	3.032	0.110	9.5	1	3.449
MJAR	35.76	15.83	19:19:	32.46	3.378	419.90	4.6	4.5	2.822	0.210	3.0	0	-99.000
PETK	56.81	21.69	19:22:	8.03	-4.263	575.86	4.6	3.8	4.062	0.190	3.0	0	-99.000
MKAR	58.88	325.74	19:22:	23.85	-4.155	591.61	5.6	6.0	3.232	0.150	8.8	1	6.698
KMBO	89.62	268.87	19:25:	21.83	-1.775	770.26	5.0	2.9	4.732	0.120	3.0	0	-99.000
AKASG	93.15	320.86	19:25:	44.24	4.923	792.19	4.6	5.0	4.532	0.090	3.0	0	-99.000

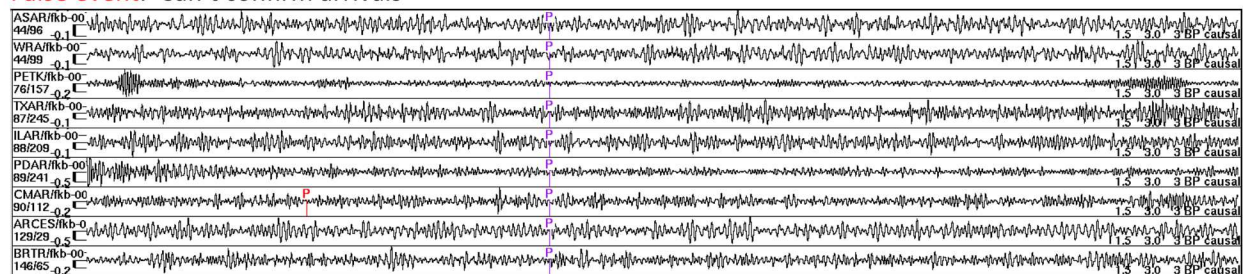
Good event. WRA/ASAR/MKAR could be confirmed.



num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
253	9379865	19:18:	25.22	0.48	-20.480	-178.470	583.0	3.62	0.43	10	NEW	0 0.000
-1.000	0	13	26.2	50.5								

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	44.04	99.44	19:25: 42.92	-0.330	437.52	9.3	0.0	-1.192	0.002	9.7	0 -99.000
ASAR	43.95	95.75	19:25: 42.92	0.137	437.82	15.3	0.0	-1.466	0.019	9.5	0 -99.000
PETK	76.31	157.19	19:29: 13.86	-0.021	647.77	4.9	0.0	-0.849	0.013	3.0	0 -99.000
NVAR	81.53	235.30	19:29: 41.54	0.086	676.29	4.9	0.0	-0.851	0.004	4.1	0 -99.000
TXAR	87.61	244.80	19:30: 13.18	0.325	707.59	7.8	0.0	-0.783	0.003	5.1	0 -99.000
ILAR	88.61	209.48	19:30: 14.50	0.076	709.02	8.9	0.0	-0.792	0.015	5.7	0 -99.000
PDAR	89.46	240.96	19:30: 19.78	-0.722	714.46	6.4	0.0	0.100	0.002	3.8	0 -99.000
CMAR	89.66	111.83	19:30: 23.73	-0.186	718.32	8.1	0.0	-0.539	0.007	3.0	0 -99.000
ARCES	129.00	29.45	19:36: 24.96	-0.496	1079.89	9.5	0.0	-1.427	0.002	3.0	0 -99.000
BRTR	146.55	64.93	19:37: 0.56	1.131	1115.02	6.2	0.0	-0.962	0.002	3.6	0 -99.000

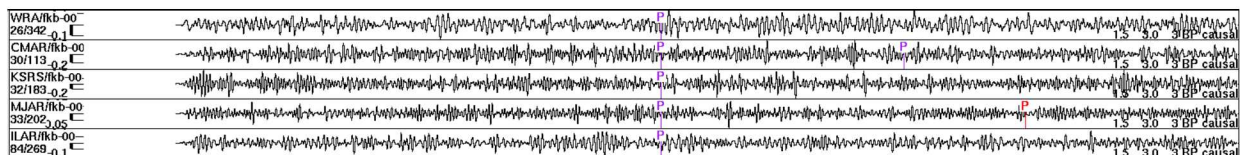
False event. Can't confirm arrivals



num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
254	12761823	19:23: 44.27	2.60	5.290	126.370	0.0	3.94	0.39	6	NEW	0 0.000	-
1.000	0	23	27.0	24.8								

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	24.77	162.75	19:29: 21.77	0.293	337.27	4.3	0.0	3.349	0.050	9.8	0 -99.000
CMAR	30.84	300.26	19:29: 53.41	-1.051	369.85	4.8	0.0	4.149	0.090	3.0	0 -99.000
KSRS	33.47	1.64	19:30: 10.55	-2.512	386.20	4.8	0.0	4.109	0.100	3.0	0 -99.000
MJAR	34.22	16.59	19:30: 22.41	4.049	399.06	4.8	0.0	4.259	0.110	3.0	0 -99.000
KURK	61.67	327.34	19:33: 55.99	2.470	612.16	4.6	0.0	3.439	0.130	3.0	0 -99.000
ILAR	85.01	25.43	19:36: 11.78	-3.249	747.35	4.3	0.0	4.319	0.120	3.0	0 -99.000

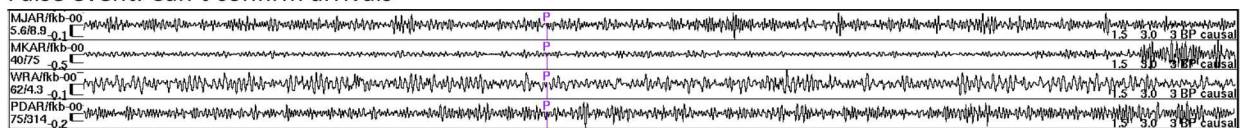
False event, can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
255 4934089 19:24: 43.59 0.27 42.050 139.410 150.0 3.01 0.93 4 NEW 0 0.000
-1.000 0 19 26.4 28.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	5.31	18.65	19:26: 4.01	0.187	80.90	5.2	0.0	-3.320	0.002	8.0	0-99.000
MKAR	41.26	75.37	19:32: 6.56	0.082	442.44	4.6	0.0	-1.728	0.002	7.8	0-99.000
WRA	61.43	5.27	19:34: 44.77	-0.455	601.74	7.8	0.0	-0.952	0.001	8.0	0-99.000
PDAR	75.02	313.07	19:36: 9.14	0.187	685.74	5.1	0.0	-1.144	0.005	4.3	0-99.000

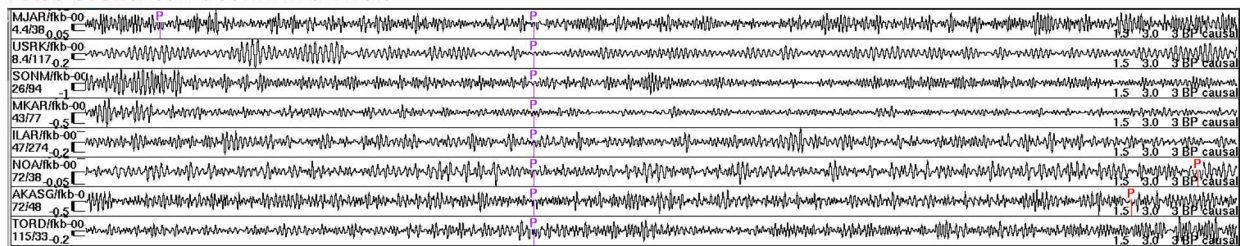
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
256 7253253 19:29: 56.04 3.66 39.960 141.760 0.0 3.49 1.26 8 NEW 0 0.000 -
1.000 0 19 23.0 40.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	4.21	244.28	19:31: 7.24	0.947	71.31	4.6	0.0	1.463	0.130	7.6	0-99.000
USRK	10.05	308.34	19:32: 6.56	4.772	130.15	4.8	0.0	3.013	0.090	3.3	0-99.000
SONM	28.05	301.41	19:35: 32.23	-3.758	336.06	4.8	0.0	2.863	0.260	5.5	0-99.000
MKAR	44.42	301.15	19:37: 51.97	-4.866	475.13	4.5	0.0	2.853	0.200	7.7	0-99.000
ILAR	47.64	33.06	19:38: 28.89	0.273	512.21	4.6	0.0	4.363	0.050	5.6	0-99.000
NOA	73.35	337.73	19:41: 15.00	-4.553	678.01	4.9	0.0	2.983	0.160	4.2	0-99.000
AKASG	73.92	322.71	19:41: 26.87	4.968	690.76	4.8	0.0	3.583	0.040	3.6	0-99.000
TORD	117.17	316.75	19:48: 40.61	-1.240	1124.48	4.2	0.0	6.313	0.100	3.0	0-99.000

False event. Can't confirm arrivals

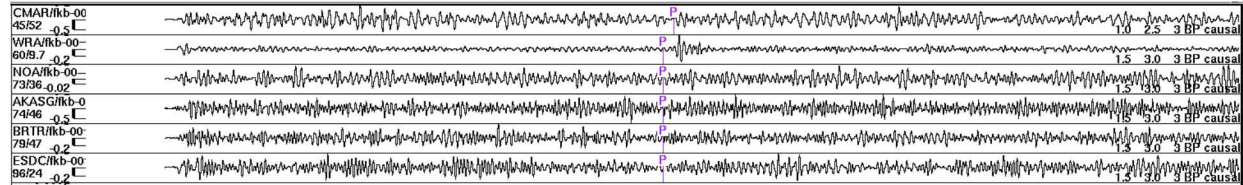


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
257 7644914 19:31: 3.28 2.72 39.450 145.230 0.0 4.17 0.67 7 NEW 0 0.000 -
1.000 0 19 23.0 31.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	43.59	257.26	19:39: 20.30	-0.098	497.57	4.4	0.0	4.562	0.090	3.0	0-99.000
WRA	57.57	190.85	19:41: 11.04	0.897	608.61	4.6	0.0	3.752	0.060	8.4	0-99.000
NVAR	73.18	54.41	19:42: 23.55	1.821	681.07	4.5	0.0	4.342	0.130	3.5	0-99.000
NOA	74.83	338.30	19:42: 35.42	0.783	692.38	4.8	0.0	3.602	0.090	4.2	0-99.000
AKASG	75.44	323.40	19:42: 38.06	-2.929	695.07	5.2	0.0	4.192	0.070	3.6	0-99.000
BRTR	80.31	312.84	19:43: 9.70	-1.232	727.23	4.9	0.0	4.282	0.110	3.0	0-99.000

ESDC 98.04 335.62 19:44: 28.80 -4.324 806.07 5.0 0.0 5.502 0.080 3.0 0 -99.000

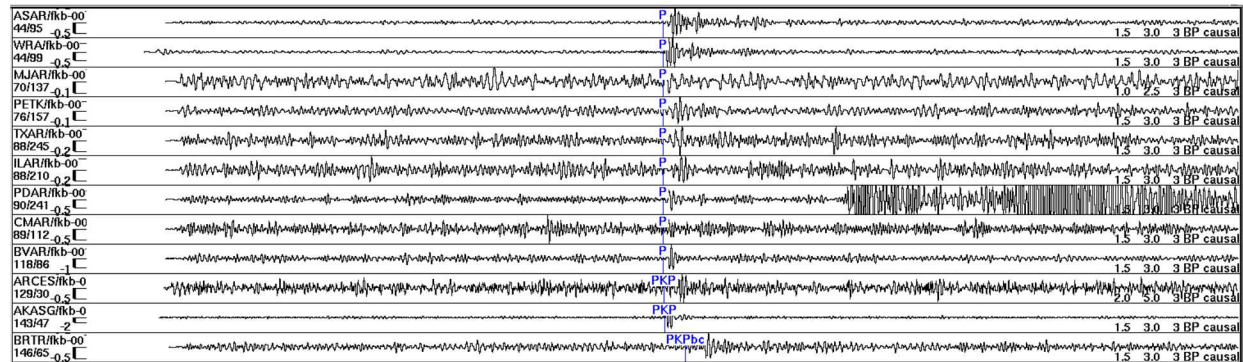
False event. WRA is a valid arrival, all others can't be confirmed.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
258 8548042 19:31: 11.19 1.21 -20.700 -178.600 596.6 3.26 0.34 12 SEL 17819635 -
1.194 0.304 9 13 26.0 50.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	43.73	262.86	19:38: 26.25	-0.194		435.24	10.1	0.0	3.417	0.120	9.7 1 1.895
ASAR	43.60	257.46	19:38: 28.89	1.738		436.99	14.5	0.0	3.307	0.130	9.5 1 -0.005
MJAR	70.21	324.35	19:41: 24.23	0.109		612.77	4.3	0.0	2.517	0.120	3.0 0 -99.000
PETK	76.67	345.73	19:41: 59.82	0.163		648.04	5.5	0.0	3.267	0.220	3.0 1 -1.081
TXAR	88.06	57.63	19:42: 59.15	0.801		708.12	7.5	0.0	3.567	0.180	3.3 1 -0.530
ILAR	89.09	13.11	19:43: 0.47	0.206		709.29	6.0	0.0	3.547	0.090	4.1 1 -0.454
CMAR	89.57	289.87	19:43: 5.74	-3.463		713.79	4.9	0.0	3.717	0.070	3.0 0 -99.000
PDAR	89.96	43.54	19:43: 7.06	-0.867		715.14	8.8	0.0	3.687	0.130	3.0 1 0.847
BVAR	119.04	319.76	19:48: 52.47	0.794		1060.71	4.9	0.0	2.977	0.180	3.0 1 0.227
ARCES	129.38	349.18	19:49: 10.93	0.218		1079.79	4.5	0.0	2.947	0.100	3.0 1 0.613
AKASG	143.16	330.06	19:49: 34.66	-0.078		1103.27	18.3	0.0	3.097	0.350	3.0 0 -99.000
BRTR	146.65	311.10	19:49: 43.89	0.575		1112.54	6.2	0.0	3.107	0.280	3.2 1 3.498

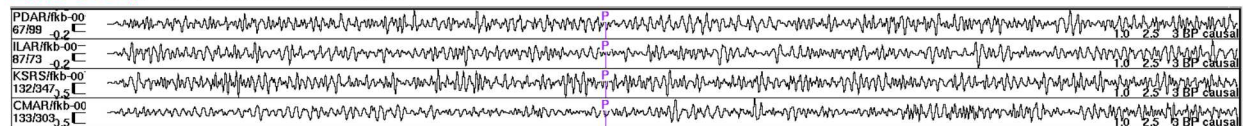
Good event!



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
259 9873330 19:36: 40.78 0.51 9.600 -42.770 0.0 4.62 0.67 4 NEW 0 0.000 -
1.000 0 32 18.0 19.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	65.89	312.04	19:47: 34.69	0.360		653.27	4.5	0.0	3.895	0.150	6.6 0 -99.000
ILAR	86.34	335.41	19:49: 28.07	-0.745		767.87	4.5	0.0	4.065	0.030	6.8 0 -99.000
KSRS	131.19	10.12	19:55: 56.98	-0.172		1156.22	4.5	0.0	5.535	0.090	3.0 0 -99.000
CMAR	132.17	52.87	19:56: 0.94	0.557		1160.07	4.4	0.0	4.985	0.040	3.0 0 -99.000

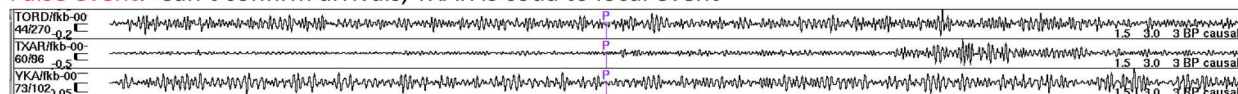
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
260 13174116 19:36: 46.05 0.16 10.350 -41.750 0.0 3.60 0.35 3 NEW 0 0.000 -
1.000 0 32 21.1 21.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TORD	42.65	271.76	19:44: 44.62	0.091	478.75	5.0	0.0	-0.246	0.001	7.1	0 -99.000
TXAR	60.24	94.20	19:46: 59.09	-0.225	613.00	5.2	0.0	-1.087	0.005	7.2	0 -99.000
YKA	72.51	100.38	19:48: 18.19	0.134	691.93	4.4	0.0	-0.481	0.004	6.8	0 -99.000

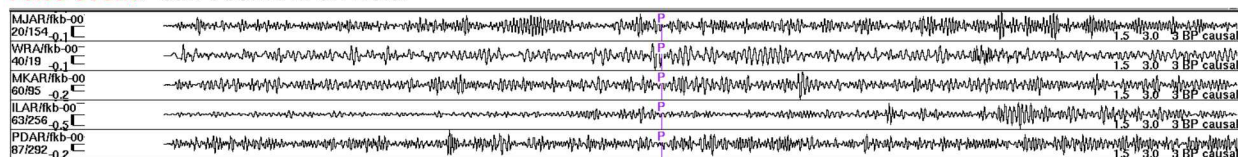
False event. Can't confirm arrivals, TXAR is coda to local event



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
261 13440302 19:42: 32.78 2.63 18.300 147.280 219.7 3.58 0.21 5 NEW 0 0.000
-1.000 0 18 24.0 30.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MJAR	19.17	342.21	19:46: 44.59	-3.052	251.08	4.6	0.0	3.653	0.180	5.2	0 -99.000
WRA	39.58	196.46	19:49: 45.21	-1.988	432.68	4.4	0.0	3.483	0.080	9.4	0 -99.000
MKAR	58.50	314.05	19:52: 19.45	3.622	586.68	4.2	0.0	3.323	0.120	7.5	0 -99.000
ILAR	64.08	26.16	19:52: 36.59	-1.197	604.01	4.4	0.0	3.483	0.060	5.7	0 -99.000
PDAR	88.27	45.35	19:55: 0.29	2.616	746.65	5.5	0.0	3.933	0.100	3.0	0 -99.000

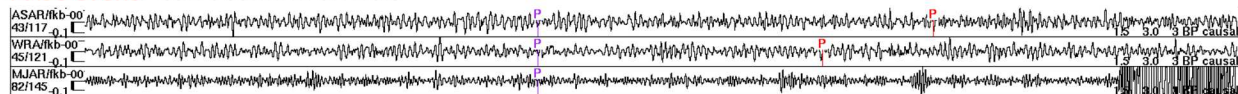
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
262 12201897 19:52: 51.09 2.20 -35.410 -177.790 20.4 4.16 0.49 4 NEW 0 0.000
-1.000 0 43 16.0 25.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	41.60	273.09	20: 0: 49.66	-1.102	478.27	4.3	0.0	3.457	0.100	9.4	0 -99.000
WRA	43.02	278.21	20: 1: 2.84	-0.272	491.00	4.7	0.0	3.707	0.110	9.8	0 -99.000
MJAR	81.29	326.98	20: 5: 10.69	-0.431	739.25	4.3	0.0	4.437	0.200	3.0	0 -99.000
KURK	123.19	311.81	20:11: 44.88	-2.338	1133.62	4.9	0.0	4.387	0.110	3.0	0 -99.000

False event. Can't confirm arrivals

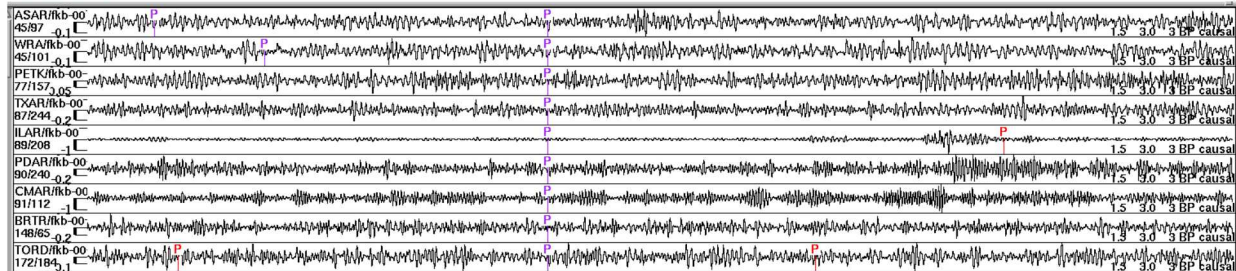


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
263 5396436 19:54: 7.56 1.69 -21.650 -177.690 453.0 4.00 0.19 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	44.42	99.61	20: 1: 38.44	0.782	451.53	12.9	0.0	0.860	0.004	9.7	0 -99.000
ASAR	44.32	95.96	20: 1: 39.76	2.858	452.59	20.1	0.0	0.658	0.006	9.5	0 -99.000
PETK	76.47	156.81	20: 5: 10.69	-1.609	663.23	10.7	0.0	0.419	0.004	3.0	0 -99.000
NVAR	81.30	234.96	20: 5: 41.02	1.958	693.51	7.1	0.0	0.256	0.002	4.1	0 -99.000
TXAR	87.31	244.54	20: 6: 8.70	1.611	721.46	11.9	0.0	0.414	0.003	5.1	0 -99.000

ILAR	88.58	209.07	20: 6: 11.34	-1.474	724.53	8.8	0.0	0.575	0.003	5.7	0-99.000
PDAR	89.24	240.63	20: 6: 15.29	0.141	728.38	8.0	0.0	0.532	0.002	3.8	0-99.000
CMAR	90.06	111.75	20: 6: 20.57	-0.623	733.78	17.6	0.0	0.695	0.003	3.0	0-99.000
BRTR	146.90	64.53	20:12: 57.39	-2.717	1129.93	5.6	0.0	0.326	0.006	3.6	0-99.000
TORD	172.45	181.09	20:14: 46.82	-0.926	1238.84	5.0	0.0	0.239	0.001	3.0	0-99.000

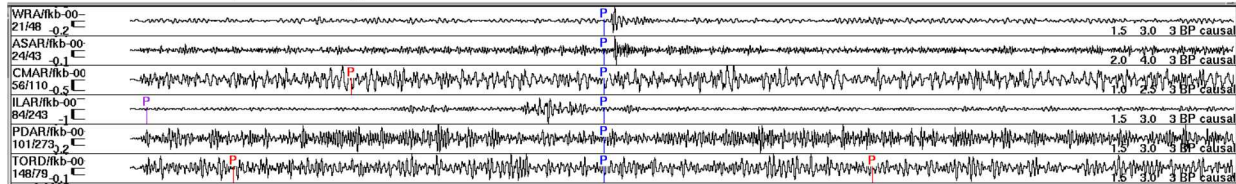
False event. Can't confirm arrivals



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
264	7568727	19:54:	56.34	3.39	-7.750	149.130	262.0	3.71	0.94	6	NEW	0	0.000
1.000	0	15	25.0	35.2									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	20.39	223.91	19:58: 57.60	-0.473	241.56	6.1	0.0	2.503	0.040	9.8	0-99.000
ASAR	23.33	217.72	19:59: 27.92	-0.120	272.12	8.1	0.0	2.433	0.130	9.5	0-99.000
CMAR	54.98	296.93	20: 4: 7.41	-3.201	551.06	5.1	0.0	4.313	0.110	3.0	0-99.000
ILAR	84.16	22.76	20: 7: 9.35	3.943	733.52	4.9	0.0	3.913	0.160	5.4	0-99.000
PDAR	101.94	47.59	20: 8: 20.54	-4.715	804.67	4.4	0.0	4.173	0.220	3.0	0-99.000
TORD	147.10	285.68	20:14: 12.54	4.567	1157.31	4.5	0.0	4.953	0.140	4.5	0-99.000

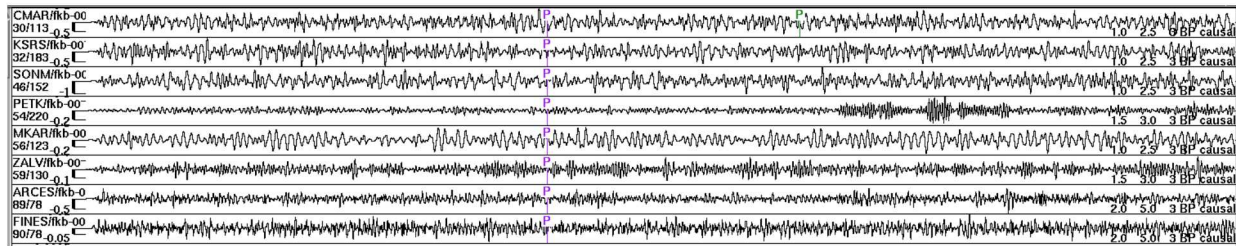
Partial credit. ASAR/WRA are good detections. The others can't be confirmed.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
265	5812625	19:57:	37.18	0.77	5.230	126.390	108.0	3.85	0.24	8	NEW	0	0.000
1.000	0	22	28.9	35.8									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CMAR	29.79	110.95	20: 3: 35.77	0.762	359.06	4.8	0.0	-1.171	0.002	4.6	0-99.000
KSRS	31.28	182.17	20: 3: 52.91	0.425	376.11	6.8	0.0	-1.115	0.004	3.0	0-99.000
SONM	45.14	150.78	20: 5: 47.61	0.734	491.45	7.3	0.0	-0.798	0.001	4.7	0-99.000
PETK	53.30	219.63	20: 6: 49.57	0.172	553.36	4.5	0.0	-0.524	0.007	3.0	0-99.000
MKAR	55.69	122.51	20: 7: 5.39	0.049	569.18	11.1	0.0	-1.094	0.003	8.6	0-99.000
ZALV	58.56	128.83	20: 7: 23.85	-1.777	587.16	5.0	0.0	-0.827	0.002	3.7	0-99.000
ARCES	88.30	77.38	20:10: 17.87	-0.442	761.26	8.1	0.0	-1.292	0.001	3.9	0-99.000
FINES	89.82	77.77	20:10: 24.46	0.077	767.89	11.3	0.0	-0.797	0.004	4.3	0-99.000

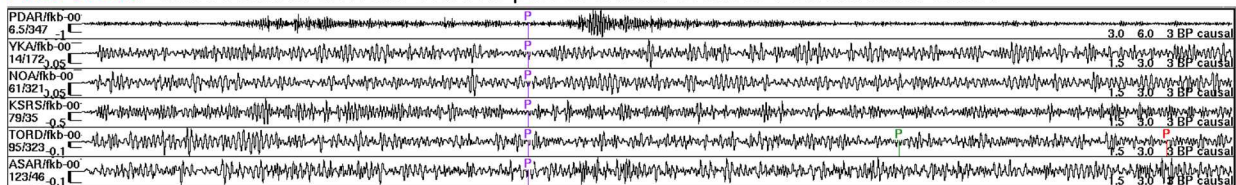
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
266 14598533 19:59: 56.92 3.46 49.080 -111.710 0.0 4.39 0.74 6 NEW 0 0.000 -
1.000 0 34 27.0 27.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	4.66	151.95	20: 1: 30.53	-3.126	92.77	5.7	0.0	3.595	0.040	9.0	0 -99.000
YKA	15.65	356.43	20: 3: 8.09	1.819	191.41	4.5	0.0	3.215	0.060	6.5	0 -99.000
NOA	63.21	26.96	20:10: 7.32	-4.769	609.84	4.4	0.0	5.125	0.070	3.0	0 -99.000
KRSR	80.13	315.36	20:12: 7.29	3.274	729.81	5.1	0.0	4.375	0.070	3.0	0 -99.000
TORD	96.28	63.34	20:13: 25.08	4.683	807.96	4.7	0.0	5.075	0.200	3.0	0 -99.000
ASAR	122.81	269.54	20:18: 53.35	-1.881	1136.31	4.6	0.0	4.935	0.060	3.0	0 -99.000

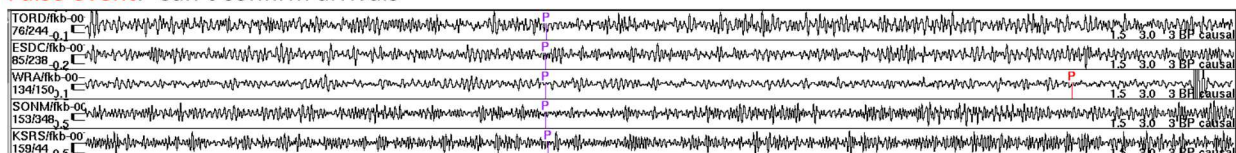
False event. Can't confirm arrivals. PDAR is part of a local event to Powder River Basin.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
267 6559479 20: 5: 46.29 0.77 -23.970 -66.220 192.0 4.14 0.32 5 NEW 0 0.000 -
1.000 0 8 23.0 21.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TORD	76.55	68.88	20:17: 11.84	0.682	686.22	4.4	0.0	4.027	0.070	7.7	0 -99.000
ESDC	86.42	43.55	20:18: 4.57	-1.093	738.44	4.7	0.0	4.547	0.080	3.0	0 -99.000
WRA	131.58	207.17	20:24: 36.12	-0.774	1129.85	4.6	0.0	3.667	0.040	5.1	0 -99.000
SONM	155.71	10.94	20:25: 16.99	0.577	1171.39	4.4	0.0	4.027	0.370	3.0	0 -99.000
KRSR	161.59	319.80	20:25: 24.90	0.608	1178.89	4.7	0.0	4.447	0.080	3.0	0 -99.000

False event. Can't confirm arrivals

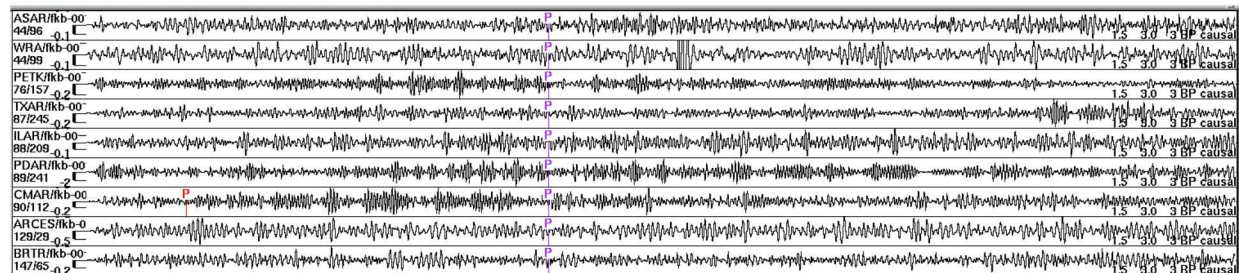


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
268 9379865 20:18: 25.66 0.54 -20.540 -178.410 583.0 3.62 0.43 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	44.04	99.44	20:25: 43.36	-0.342	437.84	9.2	0.0	-1.197	0.002	9.7	0 -99.000
ASAR	43.95	95.75	20:25: 43.36	0.158	438.13	15.9	0.0	-1.472	0.018	9.5	0 -99.000
PETK	76.31	157.19	20:29: 12.98	-0.238	648.09	5.8	0.0	-0.854	0.014	3.0	0 -99.000
NVAR	81.53	235.30	20:29: 41.98	0.386	676.61	4.7	0.0	-0.858	0.004	4.1	0 -99.000
TXAR	87.61	244.80	20:30: 10.99	-0.715	706.46	7.6	0.0	-0.786	0.002	5.1	0 -99.000

ILAR	88.61	209.48	20:30:	14.94	0.186	709.34	9.1	0.0	-0.799	0.015	5.7	0	-99.000
PDAR	89.46	240.96	20:30:	20.21	-0.411	714.78	6.8	0.0	0.106	0.002	3.8	0	-99.000
CMAR	89.66	111.83	20:30:	24.17	-0.089	718.63	7.7	0.0	-0.542	0.006	3.0	0	-99.000
ARCES	129.00	29.45	20:36:	25.40	-0.260	1080.21	8.8	0.0	-1.429	0.002	3.0	0	-99.000
BRTR	146.55	64.93	20:37:	1.00	1.324	1115.34	6.1	0.0	-0.971	0.002	3.6	0	-99.000

False event. Can't confirm arrivals.

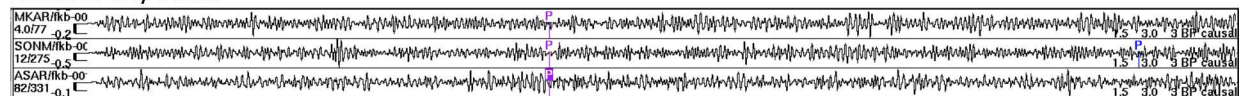


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
269	9937518	20:21:	6.50	2.76	47.560	88.120	0.0	2.51	0.71	4	NEW	0	0.000

1.000 0 28 24.6 25.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	4.61	78.95	20:22: 16.38	-2.787	70.22	4.4	0.0	-2.486	0.004	9.4	0 -99.000
KURK	7.55	110.56	20:22: 51.97	2.567	106.45	4.0	0.0	-1.587	0.002	9.4	0 -99.000
SONM	11.76	274.75	20:24: 1.85	-2.716	175.41	4.6	0.0	-2.602	0.001	3.5	0 -99.000
ASAR	81.55	331.04	20:33: 30.06	2.936	744.20	5.7	0.0	-0.873	0.007	3.0	0 -99.000

False event. Can't confirm arrivals. Cycles prior to onset on ASAR will not produce clear or consistent FK result in any band.

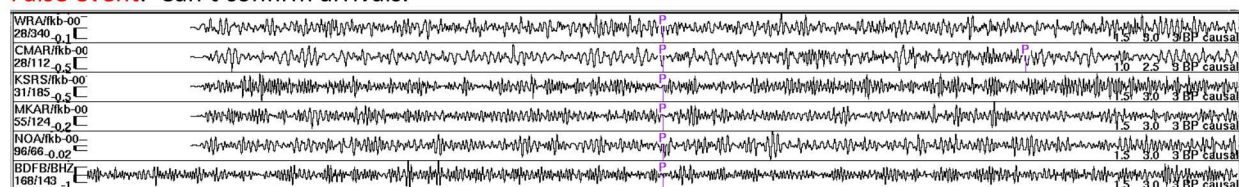


num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	deltim	dist
270	7214314	20:23:	51.30	2.03	6.260	125.100	73.5	3.93	0.66	6	NEW	0	0.000

1.000 0 23 27.0 30.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	25.91	162.98	20:29: 31.44	-0.791	340.13	5.0	0.0	3.508	0.040	9.8	0 -99.000
CMAR	30.09	298.78	20:29: 38.03	-2.396	346.45	5.2	0.0	4.278	0.020	3.0	0 -99.000
KSRS	32.36	2.02	20:30: 1.76	-2.247	370.40	4.3	0.0	4.298	0.060	3.0	0 -99.000
MKAR	56.44	324.89	20:33: 12.92	1.268	561.75	4.2	0.0	2.798	0.130	8.9	0 -99.000
NOA	97.61	333.65	20:37: 11.54	3.327	799.86	4.3	0.0	3.848	0.100	3.0	0 -99.000
BDFB	168.10	206.39	20:43: 51.01	0.838	1199.56	5.6	2.7	4.868	0.400	3.0	0 -99.000

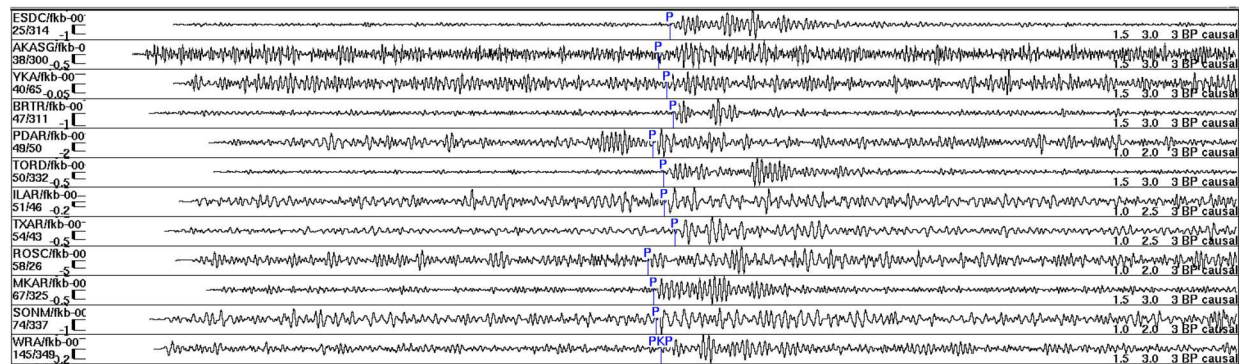
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 271 13305735 20:34: 3.02 3.07 53.910 -35.200 0.0 4.06 0.40 13 SEL 17819706 -0.707
 0.007 9 32 18.0 72.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ESDC	25.53	111.04	20:39: 31.29	-0.983		328.11	6.7	0.0	3.867	0.200	7.0 1 2.425
AKASG	38.41	67.60	20:41: 20.71	-4.205		437.49	9.0	0.0	4.027	0.170	4.6 1 5.125
YKA	40.06	314.87	20:41: 40.49	-0.048		456.54	4.5	0.0	4.267	0.090	6.2 0 -99.000
BRTR	47.42	77.93	20:42: 35.86	-3.459		512.26	4.6	0.0	4.007	0.280	5.0 1 5.602
PDAR	48.38	288.60	20:42: 51.68	4.195		528.07	5.4	0.0	5.317	0.060	8.3 0 -99.000
TORD	50.06	130.01	20:43: 2.23	4.425		538.36	4.9	0.0	4.107	0.170	6.4 1 -2.599
ILAR	50.55	328.91	20:43: 4.86	0.802		541.07	6.4	0.0	3.847	0.230	7.0 0 -99.000
TXAR	54.26	271.97	20:43: 29.91	-1.792		566.49	6.1	0.0	3.757	0.280	6.3 1 3.800
NVAR	56.20	290.29	20:43: 49.69	3.071		585.51	4.2	0.0	3.947	0.220	3.2 1 -2.163
ROSC	58.25	227.44	20:43: 58.92	-2.008		595.51	5.8	1.2	3.597	0.420	3.0 0 -99.000
MKAR	66.61	41.53	20:44: 59.56	4.966		656.32	5.9	0.0	3.957	0.200	7.9 1 -4.078
SONM	73.58	25.76	20:45: 35.16	-3.044		691.50	4.7	0.0	3.907	0.110	4.4 1 3.899
WRA	145.19	17.10	20:53: 38.99	-1.919		1175.96	4.7	0.0	4.187	0.150	3.0 1 1.976

Good event. Had to adjust several of the times. PDAR is in coda of an Lg phase – questionable pick. Not included.



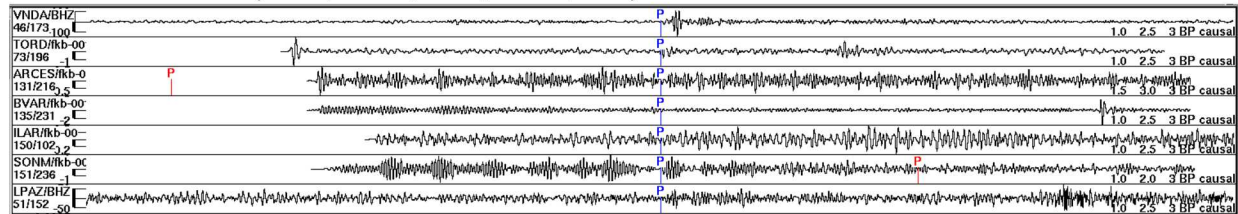
Times after adjustment:

phase	sta	delta	arid	orid	date and time
P	ESDC	25.40	88193289	44177565	2019-09-01 20:39:34.075
P	AKASG	38.46	88193290	44177565	2019-09-01 20:41:26.639
P	YKA	40.26	88193291	44177565	2019-09-01 20:41:42.674
P	BRTR	47.43	88193292	44177565	2019-09-01 20:42:41.500
P	PDAR	48.50	88193293	44177565	2019-09-01 20:42:47.299
P	TORD	49.86	88193294	44177565	2019-09-01 20:42:59.049
P	ILAR	50.78	88193295	44177565	2019-09-01 20:43:05.500
P	TXAR	54.32	88193296	44177565	2019-09-01 20:43:33.750
P	NVAR	56.33	88193297	44177565	2019-09-01 20:43:49.000
P	ROSC	58.13	88193298	44177565	2019-09-01 20:43:58.000
P	MKAR	66.76	88193299	44177565	2019-09-01 20:44:55.749
P	SONM	73.78	88193300	44177565	2019-09-01 20:45:39.220
PKP	WRA	145.40	88193301	44177565	2019-09-01 20:53:42.324

num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
272 10988572 20:38: 16.14 3.24 -56.240 -26.360 0.0 3.90 0.65 7 SEL 17819930 2.116
0.129 2 10 25.0 38.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
VNDA	47.07	183.02	20:46: 41.07	-3.777		504.16	6.4	2.2	3.896	0.230	5.5 1 1.777
TORD	72.93	30.71	20:49: 41.69	-4.950		685.47	4.3	5.4	4.216	0.230	8.1 1 3.297
NVAR	120.57	294.20	20:57: 12.57	-0.705		1136.79	4.3	2.7	4.566	0.190	3.0 0 -99.000
ARCES	130.70	22.01	20:57: 25.75	-2.323		1148.79	4.5	4.0	3.446	0.170	3.1 0 -99.000
BVAR	135.06	57.69	20:57: 38.94	4.188		1162.51	4.6	2.8	3.226	0.120	3.0 0 -99.000
SONM	151.37	86.42	20:58: 5.30	2.977		1189.08	4.4	3.7	3.766	0.160	6.6 0 -99.000
ILAR	149.26	312.54	20:58: 9.26	1.169		1193.54	5.1	4.3	2.996	0.140	8.7 0 -99.000

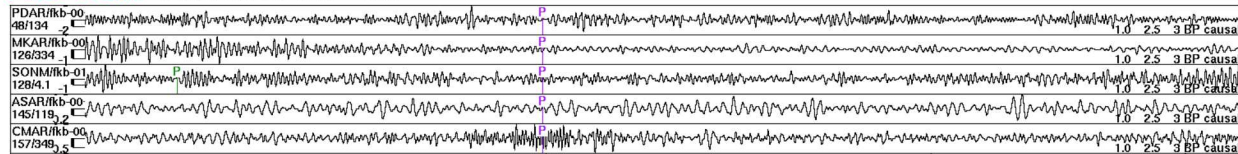
Good event, in ISC bulletin/SEL – can only confirm VNDA and TORD – added LPAZ. Can't confirm the remainder of arrivals (NVAR/ARCES/BVAR/SONM/ILAR)



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
273 4367609 20:39: 48.43 2.73 1.120 -85.810 55.5 4.10 0.46 6 NEW 0 0.000 -
1.000 0 6 24.0 27.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	45.76	334.03	20:48: 12.04	-0.106		503.69	4.9	0.0	4.930	0.160	6.0 0 -99.000
NVAR	47.14	323.23	20:48: 19.95	-1.318		511.26	4.7	0.0	3.350	0.150	6.7 0 -99.000
SONM	128.75	350.74	20:58: 48.81	-3.691		1140.60	4.6	0.0	4.130	0.260	3.0 0 -99.000
MKAR	129.27	11.84	20:58: 51.45	-1.698		1143.47	4.5	0.0	4.010	0.190	3.0 0 -99.000
ASAR	137.59	237.30	20:59: 4.63	2.143		1156.24	5.0	0.0	4.030	0.140	4.6 0 -99.000
CMAR	158.68	351.40	21: 0: 27.69	4.670		1239.05	5.0	0.0	4.170	0.120	4.0 0 -99.000

False event. Can't confirm arrivals

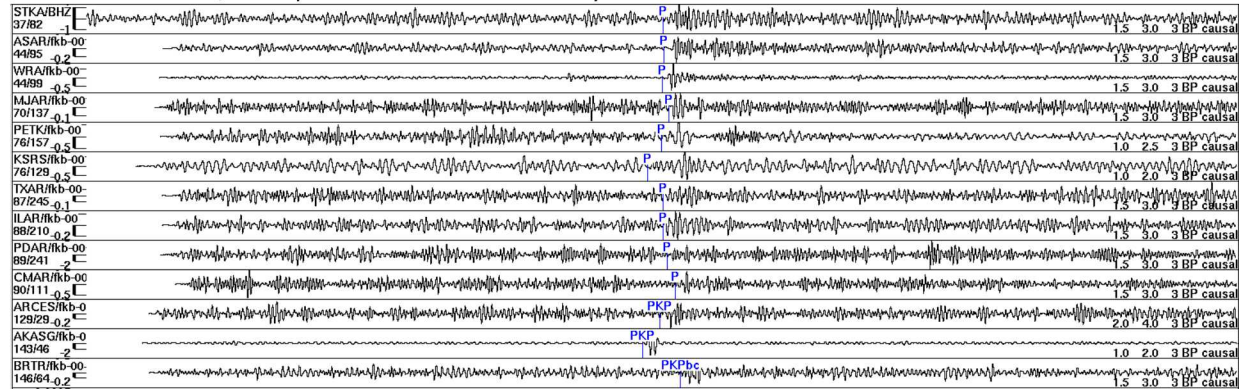


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
274 12138408 20:41: 11.48 0.98 -20.280 181.450 572.2 3.62 0.57 13 SEL 17819714
2.342 0.126 9 13 26.0 57.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
STKA	37.48	243.97	20:47: 37.76	-0.159		385.82	6.4	1.6	3.290	0.270	6.4 1 0.677
ASAR	44.16	256.68	20:48: 30.50	0.217		438.62	10.8	0.0	2.800	0.210	9.5 1 0.647
WRA	44.23	262.03	20:48: 30.50	0.733		438.77	14.4	0.0	2.740	0.120	9.7 1 0.523
VNDA	57.97	184.97	20:50: 10.69	-0.350		539.67	7.6	2.8	3.430	0.320	3.0 1 0.500
MJAR	69.87	323.93	20:51: 24.52	0.684		613.36	4.7	0.0	3.720	0.150	3.0 1 0.898
KSRS	76.57	318.74	20:52: 0.12	-3.099		648.77	4.3	0.0	4.010	0.100	3.0 0 -99.000
PETK	76.08	345.43	20:52: 0.12	0.945		648.98	6.1	0.0	3.540	0.320	3.0 0 -99.000
TXAR	87.33	57.49	20:52: 59.44	-0.288		708.02	4.5	0.0	4.090	0.100	3.3 1 -0.051
ILAR	88.31	12.96	20:53: 2.08	0.357		709.98	7.8	0.0	3.510	0.150	4.1 1 0.382

PDAR	89.16	43.38	20:53:	7.35	0.630	716.38	5.3	0.0	5.030	0.150	3.0	1	0.758
CMAR	89.72	289.71	20:53:	11.31	0.316	719.42	5.3	0.0	3.850	0.090	3.0	0	-99.000
ARCES	128.76	349.46	20:59:	12.54	0.159	1081.00	4.3	0.0	3.840	0.100	3.0	0	-99.000
BRTR	146.49	312.16	20:59:	45.50	-0.146	1114.42	7.7	0.0	3.200	0.460	3.2	1	3.229

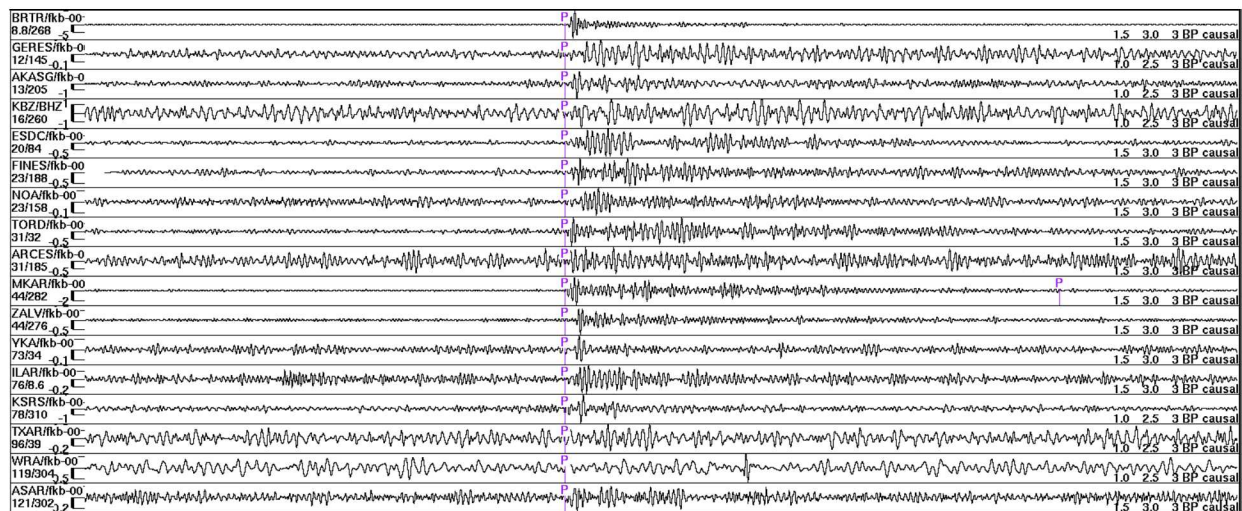
Good event. KSRS/ILAR questionable. Added a very nice AKASG PKP arrival.



num	ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
275	16957907	20:49:	39.05	2.97	38.360	22.610	0.0	4.06	0.28	13	SEL	17819801	-5.012
0.369	11	31	23.0	59.5									

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
ESDC	19.09	279.75	20:54:	21.18	-0.317	282.61	4.3	4.0	4.138	0.090	4.6	1 2.670
NOA	22.81	348.04	20:54:	50.19	-2.892	311.15	4.8	5.6	3.668	0.110	5.3	1 4.099
FINES	22.68	6.68	20:54:	51.50	4.975	313.20	5.9	7.0	3.568	0.130	7.7	1 -4.523
ARCES	30.67	3.30	20:56:	2.70	2.319	383.55	4.6	3.8	4.148	0.070	5.2	0 -99.000
TORD	30.79	218.33	20:56:	2.70	3.570	384.45	4.6	4.7	3.968	0.160	6.1	1 3.902
MKAR	44.73	59.16	20:57:	46.85	1.300	487.90	9.3	15.4	3.678	0.200	7.7	1 4.673
ZALV	45.01	48.75	20:57:	48.16	-1.549	489.38	7.5	12.2	3.908	0.110	4.6	1 6.372
YKA	72.64	340.00	21: 1:	11.19	-2.451	693.03	4.2	5.6	4.278	0.080	3.3	1 5.717
ILAR	76.07	354.56	21: 1:	27.01	-4.314	708.88	5.8	5.1	4.348	0.090	3.0	1 7.554
KSRS	78.65	50.86	21: 1:	36.24	-2.099	717.88	5.0	7.1	4.508	0.100	3.0	1 5.762
TXAR	94.50	313.71	21: 3:	5.89	-2.094	806.70	4.5	3.5	4.148	0.220	3.0	1 5.375
ASAR	122.11	95.72	21: 8:	31.52	-1.347	1133.18	4.8	4.4	4.108	0.070	3.0	1 5.266
WRA	120.42	91.84	21: 8:	34.16	4.899	1135.03	5.3	10.8	4.308	0.100	3.0	0 -99.000

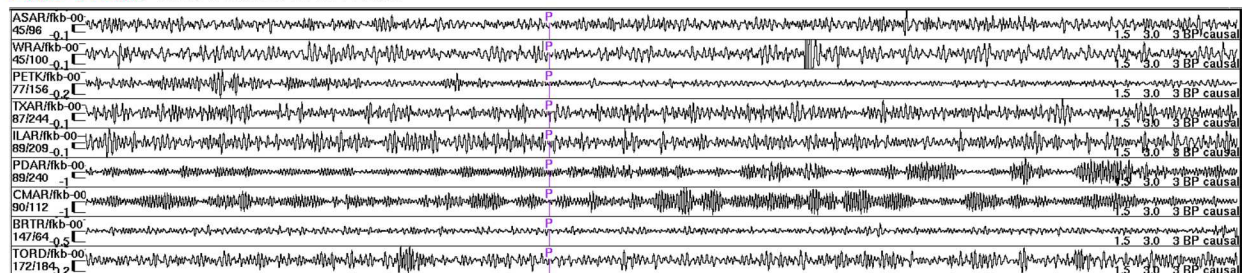
Good event. Added nice detections on BRTR,GERES,AKASG – marginal signal on KBZ. Made some adjustments to onset times.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
276 10911576 20:54: 1.41 0.96 -20.890 -177.780 370.0 4.99 0.18 10 NEW 0 0.000
-1.000 0 13 25.6 45.8

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	45.26	98.57	21: 1: 38.88	-0.301	457.67	11.8	0.0	0.822	0.003	9.7	0 -99.000
ASAR	45.22	95.03	21: 1: 40.20	1.490	458.75	20.1	0.0	0.644	0.006	9.5	0 -99.000
PETK	75.84	155.87	21: 5: 11.13	-0.449	669.40	11.5	0.0	0.433	0.004	3.0	0 -99.000
NVAR	80.19	235.02	21: 5: 41.46	-0.490	699.67	6.7	0.0	0.247	0.002	3.8	0 -99.000
TXAR	86.25	244.86	21: 6: 9.14	0.736	727.63	11.0	0.0	0.361	0.003	3.4	0 -99.000
ILAR	87.60	208.56	21: 6: 11.78	0.635	730.70	8.7	0.0	0.561	0.003	4.1	0 -99.000
PDAR	88.13	240.69	21: 6: 15.73	1.339	734.55	7.8	0.0	0.526	0.002	3.0	0 -99.000
CMAR	90.45	110.72	21: 6: 21.01	-1.745	739.95	18.0	0.0	0.681	0.003	3.0	0 -99.000
BRTR	146.85	62.51	21:12: 57.83	-0.596	1137.20	7.0	0.0	0.295	0.004	3.2	0 -99.000
TORD	173.24	187.34	21:14: 52.53	-0.618	1251.30	5.8	0.0	0.281	0.009	3.0	0 -99.000

False event. Can't confirm arrivals

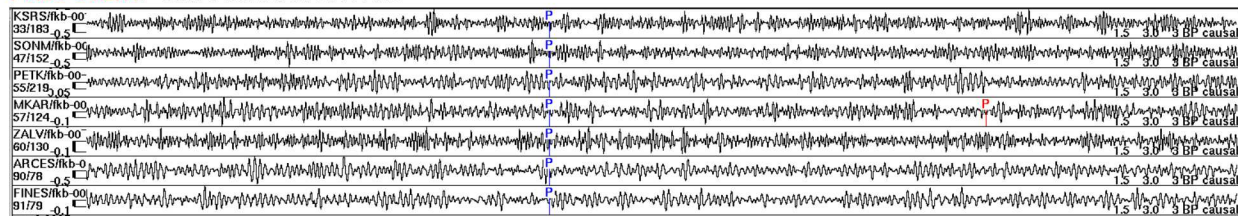


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
277 5812625 20:57: 36.30 0.69 5.120 126.260 108.0 3.87 0.24 7 NEW 0 0.000 -
1.000 0 22 28.9 31.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	31.28	182.17	21: 3: 53.35	-0.019	376.66	6.5	0.0	-1.113	0.004	3.0	0 -99.000
SONM	45.14	150.78	21: 5: 48.05	0.789	492.00	7.4	0.0	-0.808	0.001	4.7	0 -99.000
PETK	53.30	219.63	21: 6: 50.01	0.007	553.91	4.4	0.0	-0.534	0.007	3.0	0 -99.000
MKAR	55.69	122.51	21: 7: 5.83	0.478	569.73	11.0	0.0	-1.104	0.003	8.6	0 -99.000
ZALV	58.56	128.83	21: 7: 24.29	-1.501	587.71	5.0	0.0	-0.835	0.002	3.7	0 -99.000
ARCES	88.30	77.38	21:10: 18.31	-0.211	761.81	6.0	0.0	-1.299	0.002	3.9	0 -99.000

FINES 89.82 77.77 21:10: 24.90 0.456 768.43 11.2 0.0 -0.803 0.003 4.3 0 -99.000

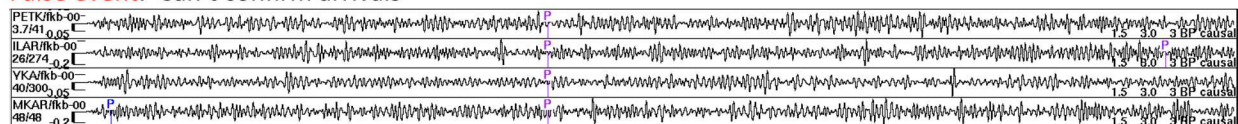
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
278 14237707 20:59: 28.36 1.78 55.830 162.060 90.0 2.35 0.92 4 NEW 0 0.000
-1.000 0 19 25.2 28.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PETK	3.09	45.51	21: 0: 22.41	-0.093	53.57	4.4	0.0	-2.970	0.004	7.7	0 -99.000
ILAR	26.74	273.73	21: 4: 56.63	2.454	327.65	7.3	0.0	-1.275	0.001	6.4	0 -99.000
YKA	41.04	299.78	21: 6: 55.28	-2.557	446.49	4.5	0.0	-0.531	0.005	6.2	0 -99.000
MKAR	48.02	49.25	21: 7: 58.56	0.196	509.42	5.3	0.0	-1.005	0.004	7.6	0 -99.000

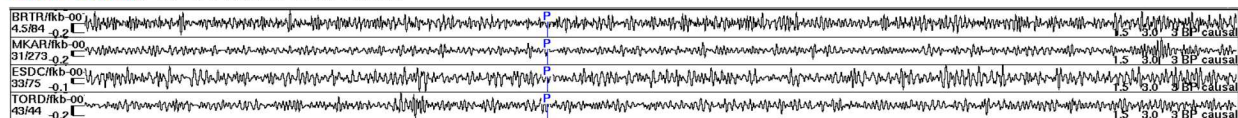
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
279 7967133 21: 5: 25.63 1.41 40.570 39.260 0.0 3.40 0.40 4 NEW 0 0.000 -
1.000 0 30 26.8 27.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	3.76	87.10	21: 6: 32.87	-1.871	67.23	4.4	0.0	-3.363	0.005	8.6	0 -99.000
MKAR	32.27	273.65	21:11: 47.96	-0.495	382.66	4.8	0.0	-0.319	0.006	8.6	0 -99.000
ESDC	32.44	75.86	21:12: 2.46	2.403	396.83	5.2	0.0	-0.847	0.002	3.0	0 -99.000
TORD	41.86	43.77	21:13: 22.88	0.468	478.16	8.7	0.0	-0.118	0.005	6.8	0 -99.000

False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
280 9379865 21:18: 26.10 0.49 -20.460 -178.490 583.0 3.62 0.43 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	44.04	99.44	21:25: 42.48	-0.284	437.45	9.1	0.0	-1.197	0.002	9.7	0 -99.000
ASAR	43.95	95.75	21:25: 43.80	0.172	437.75	16.8	0.0	-1.479	0.018	9.5	0 -99.000
PETK	76.31	157.19	21:29: 13.42	0.094	647.70	5.7	0.0	-0.859	0.013	3.0	0 -99.000
NVAR	81.53	235.30	21:29: 41.10	0.029	676.23	4.6	0.0	-0.866	0.004	4.1	0 -99.000
TXAR	87.61	244.80	21:30: 12.74	0.287	707.58	7.5	0.0	-0.785	0.002	5.1	0 -99.000
ILAR	88.61	209.48	21:30: 14.06	0.082	708.95	9.3	0.0	-0.805	0.015	5.7	0 -99.000
PDAR	89.46	240.96	21:30: 19.34	-0.783	714.40	6.6	0.0	0.110	0.002	3.8	0 -99.000
CMAR	89.66	111.83	21:30: 23.29	-0.175	718.25	7.5	0.0	-0.543	0.006	3.0	0 -99.000
ARCES	129.00	29.45	21:36: 25.84	-0.532	1079.83	9.1	0.0	-1.425	0.002	3.0	0 -99.000
BRTR	146.55	64.93	21:37: 0.12	1.109	1114.95	6.2	0.0	-0.979	0.002	3.6	0 -99.000

Figure 1 displays 10 time-series plots showing the evolution of the normalized difference in the number of infected individuals, $\Delta I(t)/I(t)$, over time for various countries. The countries are ASAR (Arabia Saudita), WRA (Irak), PET (Arabia Saudita), TXA (Arabia Saudita), ILA (Arabia Saudita), PDA (Arabia Saudita), CMA (Arabia Saudita), ARCES (Arabia Saudita), and BTR (Arabia Saudita). Each plot shows a sharp initial peak followed by a decline and then a more gradual increase. The x-axis represents time in days, and the y-axis represents the normalized difference in the number of infected individuals. The plots are arranged in a grid with 10 rows and 10 columns. The first column shows the time series for each country, and the subsequent columns show the time series for the difference in the number of infected individuals for each country. The plots are labeled with the country name and the time series identifier.

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres			
ASAR	46.20	251.55	21:28:	11.46	-0.641	467.28	8.0	0.0	2.708	0.080	9.5	1	-2.217	
ILAR	82.97	12.81	21:31:	59.53	0.474	695.33	6.4	0.0	3.048	0.300	4.8	1	-0.314	
TXAR	83.96	57.62	21:32:	14.03	-1.530	709.45	4.7	0.0	2.808	0.160	3.7	0	-99.000	
PDAR	84.86	43.36	21:32:	16.67	0.052	712.63	5.8	0.0	3.368	0.110	3.0	1	-7.476	
BVAR	114.99	321.78	21:38:	13.95	-3.552	1070.03	5.7	0.0	3.348	0.100	3.0	0	-99.000	
BRTR	143.13	317.93	21:39:	10.63	1.197	1126.98	7.9	0.0	3.518	0.230	3.3	1	-0.358	
ESDC	154.86	11.27	21:39:	35.68	3.999	1152.10	4.6	0.0	4.648	0.110	3.0	0	-99.000	

[illegible]

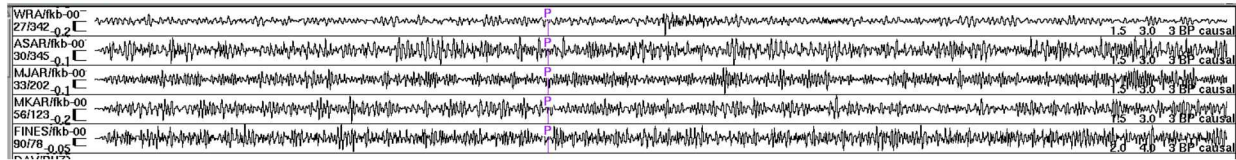
Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	4.53	59.28	21:22: 16.82	-1.331	69.52	4.4	0.0	-2.495	0.004	9.4	0 -99.000
KURK	6.48	101.18	21:22: 52.41	0.655	105.75	4.0	0.0	-1.587	0.002	9.4	0 -99.000
SONM	12.15	282.05	21:24: 0.97	-1.096	174.71	4.7	0.0	-2.596	0.001	3.2	0 -99.000
ASAR	83.00	331.62	21:33: 30.50	1.773	743.50	5.6	0.0	-0.873	0.007	3.0	0 -99.000

Figure 1 displays genomic tracks for four genes: MKAR1, SONM1, ASAR1, and MK31RB2. The tracks are organized into two rows. The top row shows the 500 bp scale for MKAR1 (top) and SONM1 (bottom). The bottom row shows the 500 bp scale for ASAR1 (top) and MK31RB2 (bottom). Each 500 bp scale track is accompanied by a 100 bp scale track below it. The 100 bp scale tracks are labeled with '5' UTR' and '1st exon'.

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres	
WRA	26.60	339.50	21:29:	25.28	0.988	320.35	8.8	0.0	-1.156	0.002	9.8	0 -99.000
ASAR	29.98	342.61	21:29:	52.97	-1.124	349.07	10.8	0.0	-1.464	0.002	9.5	0 -99.000
MJAR	33.29	204.02	21:30:	16.70	-0.066	372.49	5.6	0.0	-1.497	0.001	3.0	0 -99.000

MKAR	55.47	124.49	21:33:	21.27	0.165	556.42	4.6	0.0	-1.695	0.002	8.8	0	-99.000
FINES	89.79	79.42	21:36:	39.02	0.037	754.92	4.7	0.0	-0.937	0.001	3.0	0	-99.000

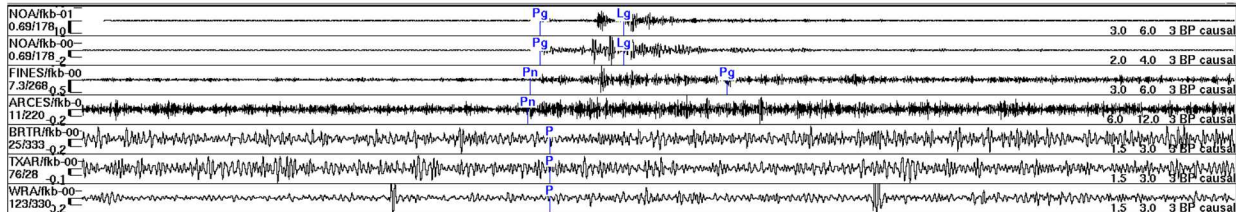
False event. Can't confirm arrivals.



num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
284	11228605	21:24:	57.66	3.43	60.250	11.700	20.3	3.40	0.65	5	REB	17819813 2.774

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
NOA	1.58	248.53	21:25: 10.84	-3.852	13.72	5.8	126.2	3.078	0.030	7.0	1	-3.555
FINES	5.66	86.90	21:26: 41.81	1.913	104.79	5.3	6.3	2.428	0.040	8.7	1	-2.807
BRTR	24.96	142.63	21:30: 12.74	-4.465	314.87	5.1	3.2	3.278	0.240	3.0	0	-99.000
TXAR	76.51	307.49	21:36: 49.57	3.370	711.50	4.4	3.1	3.888	0.220	3.0	0	-99.000
WRA	121.54	72.75	21:43: 54.08	3.034	1136.85	4.3	10.5	4.308	0.250	3.0	0	-99.000

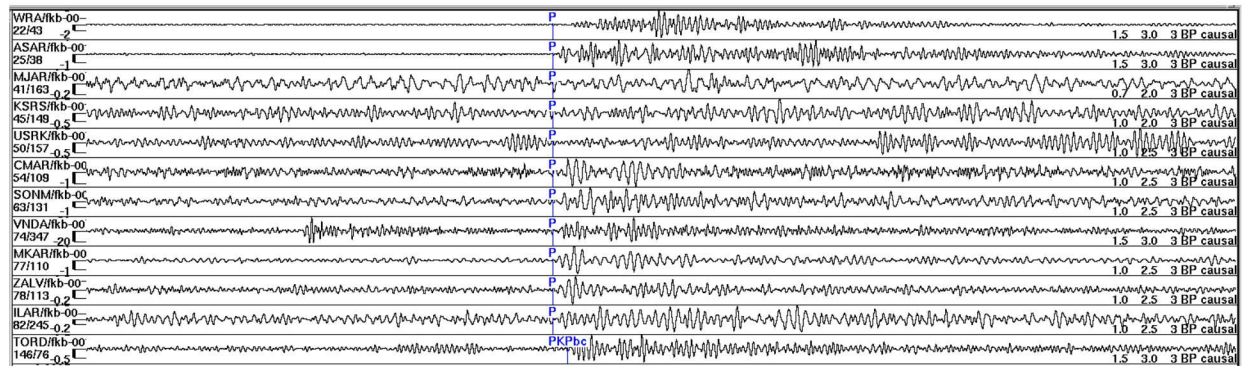
Good event – NOA and FINES are legitimate arrivals. BRTR, TXAR, and WRA are spurious. Added an ARCSES.



num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delttime	dist
285	13400286	21:29:	43.74	2.12	-3.010	148.670	0.0	4.35	0.28	14	SEL	17819817 -3.083

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	21.50	217.29	21:34: 37.73	0.215	294.31	11.3	12.3	3.708	0.240	9.8	1	1.742
ASAR	24.68	212.31	21:35: 6.74	-2.132	323.12	39.5	23.8	4.188	0.240	9.5	1	4.337
MJAR	40.33	347.84	21:37: 23.85	-0.205	460.04	5.1	4.7	4.418	0.170	3.0	0	-99.000
KSRS	44.33	336.95	21:37: 56.81	-0.415	494.02	5.7	4.7	4.588	0.100	3.0	0	-99.000
USRK	49.10	344.79	21:38: 32.40	-1.761	529.52	4.9	6.1	4.398	0.150	3.0	0	-99.000
CMAR	52.76	295.78	21:39: 9.32	4.918	566.31	7.2	5.3	4.778	0.120	3.0	1	2.517
SONM	62.28	329.65	21:40: 8.64	-0.904	625.60	4.5	5.0	4.028	0.110	3.4	1	7.405
VNDA	74.86	176.91	21:41: 25.11	0.906	701.94	5.7	3.2	4.238	0.230	3.0	1	0.452
MKAR	75.82	319.77	21:41: 35.65	2.161	712.52	5.8	9.5	4.178	0.260	6.1	1	3.661
ZALV	77.00	327.22	21:41: 40.93	1.169	717.72	7.0	6.9	4.428	0.220	3.0	1	4.074
KURK	79.43	322.64	21:41: 52.79	-1.152	729.19	8.0	7.9	4.558	0.120	3.0	1	6.007
ILAR	82.32	23.10	21:42: 4.66	1.030	741.97	5.7	4.2	4.418	0.070	5.2	1	4.995
NVAR	94.73	51.85	21:43: 3.98	0.694	801.24	4.3	3.0	4.178	0.200	3.0	0	-99.000
TORD	145.18	288.80	21:49: 19.72	-4.523	1176.54	4.6	24.6	4.798	0.120	4.4	1	9.397

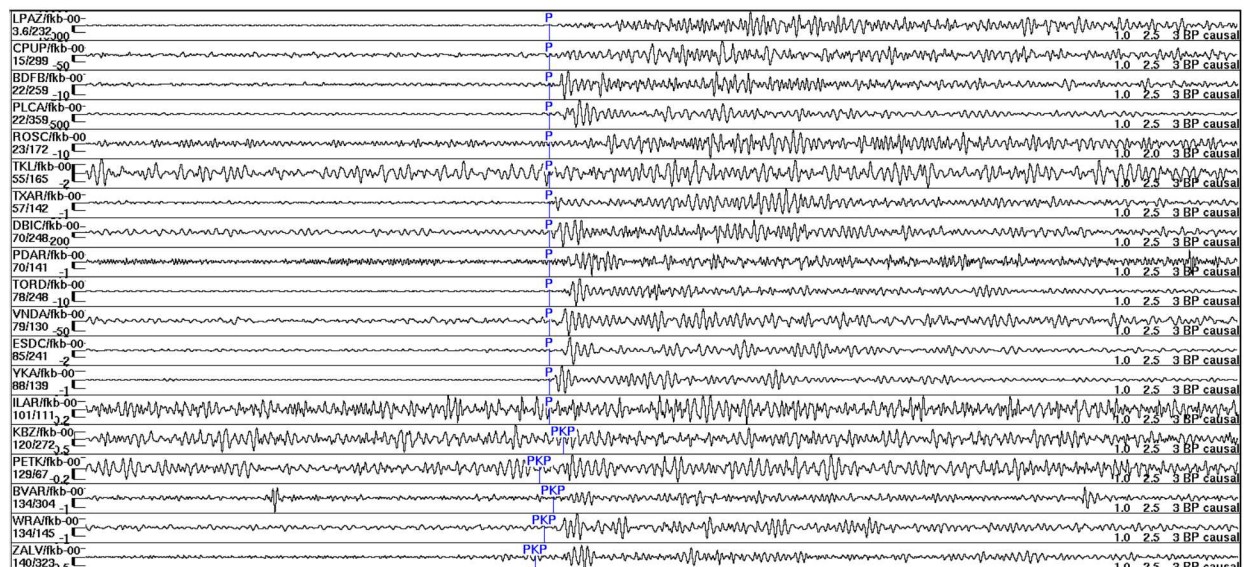
Good event. Can't confirm all arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 286 6321469 21:32: 11.40 1.55 -18.230 -70.940 0.0 4.67 0.34 21 SEL 17819928 -0.301
 0.247 21 8 23.0 81.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
CPUP	14.77	126.05	21:35: 47.61	4.689		216.86	5.6	5.1	4.648	0.200 4.6	1 -6.600
BDFB	21.76	86.95	21:37: 5.39	-3.602		293.70	6.8	3.5	4.408	0.250 5.3	1 5.250
PLCA	22.56	179.89	21:37: 10.66	-1.000		299.09	6.5	4.8	4.658	0.400 5.3	1 -1.560
ROSC	23.08	350.53	21:37: 22.53	2.203		310.84	6.3	3.7	4.758	0.470 3.0	1 2.080
PDAR	70.37	330.56	21:43: 27.71	0.804		675.76	13.6	6.5	5.228	0.280 4.1	1 0.914
NVAR	71.84	322.31	21:43: 36.94	0.241		685.09	7.2	6.8	4.828	0.210 3.3	1 1.083
TORD	77.77	71.73	21:44: 11.22	-0.437		720.09	11.4	6.2	4.768	0.200 7.5	1 0.723
VNDA	79.91	190.09	21:44: 20.45	-0.763		728.79	6.7	3.7	4.688	0.320 3.0	1 -0.070
ESDC	84.56	45.38	21:44: 49.45	0.129		757.61	19.3	12.5	4.448	0.320 3.0	1 1.210
ILAR	100.50	334.95	21:45: 59.33	0.332		827.82	4.4	4.6	5.198	0.100 3.0	0 -99.000
KBZ	119.19	49.59	21:51: 5.19	1.121		1133.17	5.4	17.4	4.508	0.410 3.0	1 -1.688
PETK	128.88	324.67	21:51: 19.69	0.047		1148.94	4.3	3.5	4.758	0.200 3.0	1 -0.069
WRA	134.96	214.11	21:51: 31.55	-0.353		1159.99	8.9	4.4	4.828	0.170 5.5	1 0.543
BVAR	133.83	31.80	21:51: 31.55	-0.234		1159.88	4.5	3.7	4.028	0.140 3.0	1 -0.049
ZALV	139.49	22.24	21:51: 39.46	-2.244		1167.92	12.0	10.9	4.668	0.360 3.9	1 3.043
MKAR	143.71	31.93	21:51: 46.05	-0.208		1174.76	9.9	30.7	4.908	0.240 6.0	1 1.420
USRK	147.79	328.77	21:51: 55.28	0.298		1184.54	15.4	9.1	4.388	0.490 3.0	1 2.502
MJAR	148.65	311.66	21:52: 0.56	0.159		1188.95	34.8	20.8	3.778	0.510 3.0	1 0.749
SONM	150.24	4.07	21:52: 0.56	0.381		1188.65	17.2	15.5	4.648	0.260 3.0	1 0.421
KSRS	154.80	323.63	21:52: 5.83	-0.450		1194.57	7.3	5.9	4.698	0.140 3.0	1 0.804
CMAR	170.07	86.28	21:52: 20.33	-1.111		1209.36	7.5	5.9	5.158	0.210 3.0	1 2.182

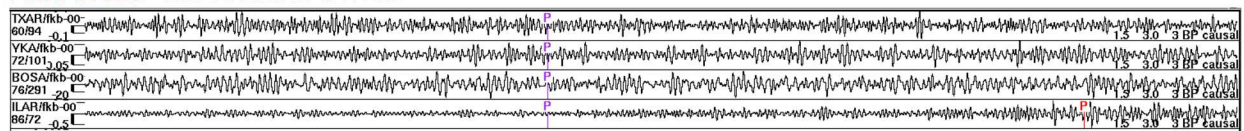
Good event. Added arrivals on LPAZ,TKL,TXAR,DBIC,YKA



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 287 13174116 21:36: 53.53 1.42 10.870 -42.410 0.0 4.20 0.84 4 NEW 0 0.000 -
 1.000 0 32 21.1 23.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
TXAR	60.24	94.20	21:46: 59.97	-0.216	606.40	5.5	0.0	-1.098	0.005	7.2	0	-99.000
YKA	72.51	100.38	21:48: 17.75	-1.523	685.33	4.7	0.0	-0.485	0.004	6.8	0	-99.000
BOSA	75.71	290.91	21:48: 42.80	-0.572	709.35	5.1	0.0	10.000	0.009	3.0	0	-99.000
ILAR	86.59	71.92	21:49: 39.49	2.311	766.98	5.5	0.0	-0.819	0.003	6.8	0	-99.000

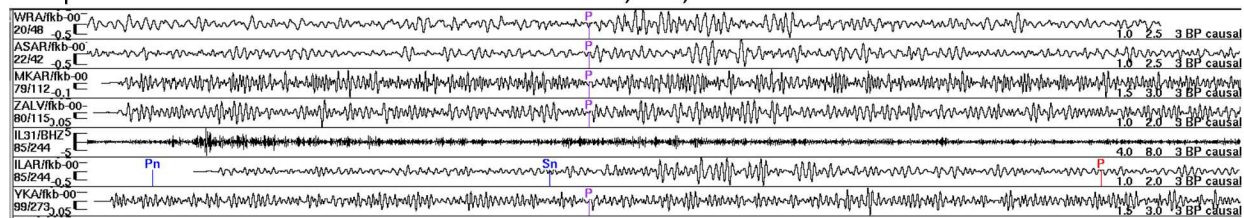
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 288 12396781 21:38: 11.31 3.08 -5.730 144.410 43.4 4.05 0.32 6 NEW 0 0.000 -
 1.000 0 16 26.0 36.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	18.33	219.77	21:42: 5.98	-3.951	233.98	4.7	0.0	3.765	0.040	9.8	0	-99.000
ASAR	21.44	213.71	21:42: 52.12	4.282	279.68	7.4	0.0	3.695	0.150	9.5	0	-99.000
MKAR	77.30	320.57	21:49: 52.68	-0.049	700.60	4.6	0.0	3.805	0.270	6.1	0	-99.000
ZALV	78.85	327.91	21:50: 1.90	1.005	710.08	4.6	0.0	4.245	0.110	3.0	0	-99.000
ILAR	85.61	23.20	21:50: 44.09	-3.894	751.64	4.4	0.0	4.225	0.070	5.1	0	-99.000
YKA	99.32	27.72	21:51: 55.28	2.607	823.18	4.5	0.0	4.565	0.130	3.0	0	-99.000

Partial credit. WRA/ASAR FK and locate to near New Guinea. Downloaded PMG but can't confirm. ILAR is an S phase to an Alaskan event at 61N x 153W. MKAR, YKA, ZALV can't be confirmed. Will not FK.

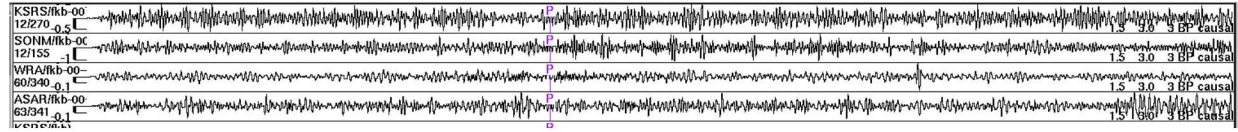


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist

289 7815913 21:39: 43.59 0.23 36.420 112.830 0.0 1.58 0.35 4 NEW 0 0.000 -
1.000 0 41 26.5 27.6

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	12.64	270.63	21:42: 42.89	-0.041	178.44	8.7	0.0	-2.029	0.002	5.2	0 -99.000
SONM	12.07	157.40	21:42: 42.89	0.034	179.10	5.1	0.0	-2.136	0.003	7.0	0 -99.000
WRA	59.96	339.40	21:49: 50.04	0.332	605.74	4.9	0.0	-1.675	0.001	7.8	0 -99.000
ASAR	63.30	340.45	21:50: 12.45	-0.325	628.84	5.1	0.0	-2.648	0.001	7.6	0 -99.000

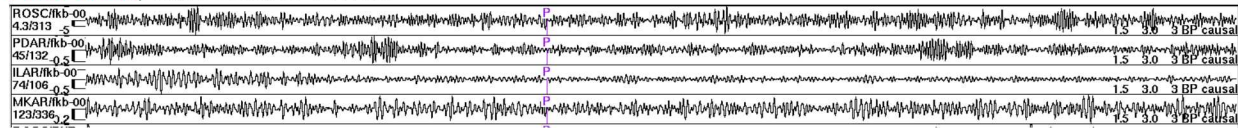
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
290 12406328 21:39: 52.82 2.22 7.800 -77.490 0.0 3.27 0.47 4 NEW 0 0.000 -
1.000 0 6 24.0 24.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ROSC	4.83	305.33	21:41: 4.01	-1.278	70.60	5.8	0.0	-1.937	0.011	8.7	0 -99.000
PDAR	44.49	132.77	21:48: 5.89	-2.885	493.45	5.0	0.0	-1.034	0.007	6.7	0 -99.000
ILAR	74.07	106.32	21:51: 34.19	2.835	701.45	5.4	0.0	-1.284	0.003	6.3	0 -99.000
MKAR	123.12	336.83	21:58: 51.88	1.328	1139.05	4.6	0.0	-0.650	0.005	3.0	0 -99.000

False event, can't confirm arrivals

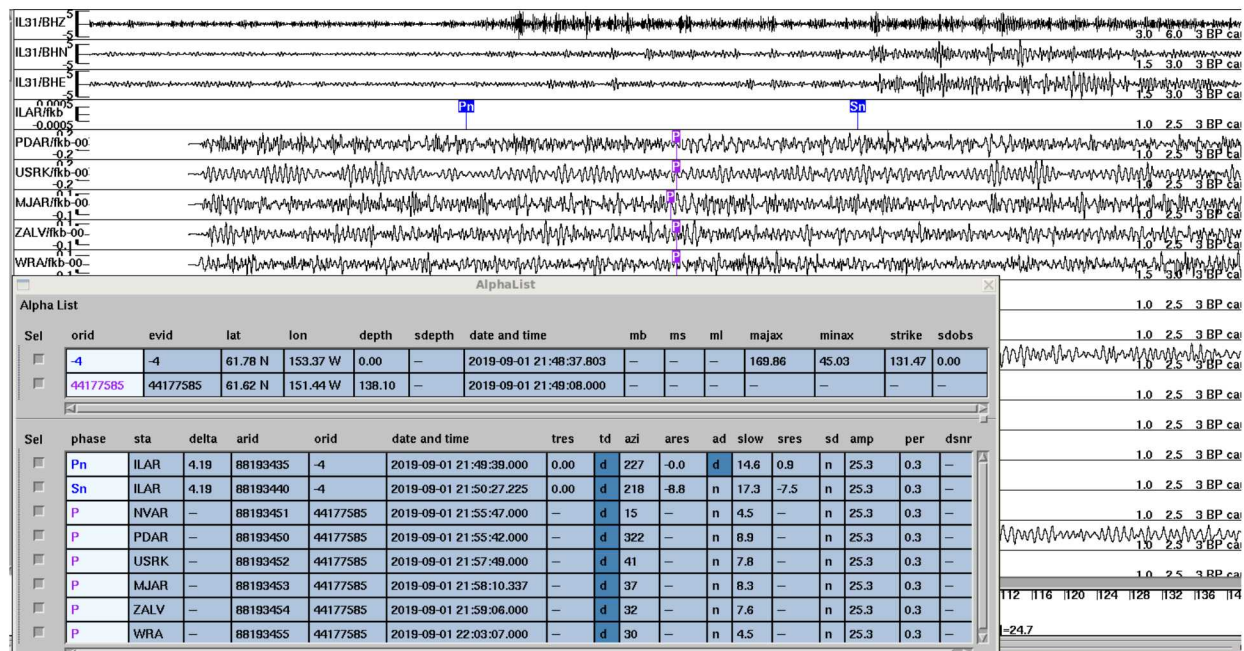


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
291 13180134 21:49: 38.17 2.26 61.620 -151.440 138.1 3.80 0.66 6 NEW 0 0.000
-1.000 0 1 23.0 23.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
PDAR	31.48	110.75	21:55: 42.04	-3.214	363.50	4.6	0.0	3.298	0.180	6.1	0 -99.000
NVAR	31.69	125.94	21:55: 47.31	2.568	368.43	4.6	0.0	3.408	0.210	5.4	0 -99.000
USRK	46.12	283.61	21:57: 49.92	0.399	491.12	4.2	0.0	4.278	0.150	3.0	0 -99.000
MJAR	49.52	272.31	21:58: 11.02	-2.875	513.01	4.8	0.0	3.698	0.190	3.0	0 -99.000
ZALV	55.32	323.47	21:59: 6.39	1.094	567.97	4.3	0.0	3.088	0.180	3.3	0 -99.000
WRA	100.89	247.44	22: 3: 7.65	2.028	809.60	5.5	0.0	5.008	0.140	3.0	0 -99.000

False event. Can't confirm arrivals

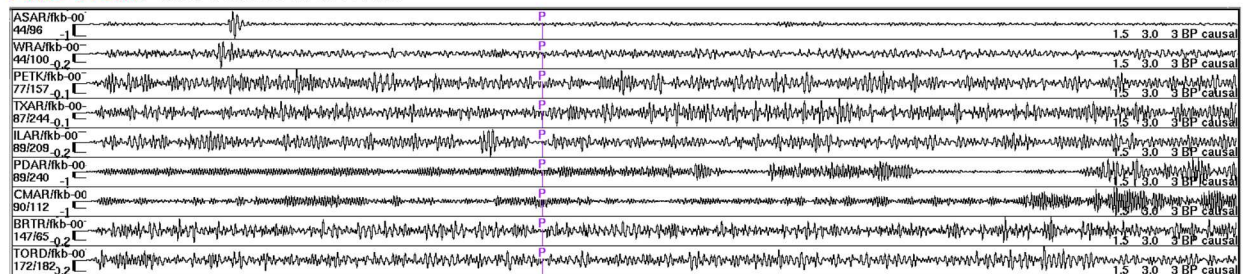
However, this event is perplexing – there is an event recorded on ILAR that locates close to this location. No ILAR in this solution, the Sn was in an earlier event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
292 5396436 21:54: 9.76 1.33 -20.880 -178.090 453.0 3.98 0.19 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	44.42	99.61	22: 1: 39.32	0.453		449.40	12.3	0.0	0.840	0.003	9.7	0 -99.000
ASAR	44.32	95.96	22: 1: 39.32	2.178		450.45	19.3	0.0	0.638	0.006	9.5	0 -99.000
PETK	76.47	156.81	22: 5: 10.25	-1.193		661.10	10.8	0.0	0.399	0.004	3.0	0 -99.000
NVAR	81.30	234.96	22: 5: 40.58	2.515		691.37	7.3	0.0	0.237	0.002	4.1	0 -99.000
TXAR	87.31	244.54	22: 6: 8.26	0.155		719.33	11.8	0.0	0.394	0.003	5.1	0 -99.000
ILAR	88.58	209.07	22: 6: 12.22	-0.378		722.40	8.9	0.0	0.554	0.003	5.7	0 -99.000
PDAR	89.24	240.63	22: 6: 16.17	-0.951		726.25	8.0	0.0	0.513	0.002	3.8	0 -99.000
CMAR	90.06	111.75	22: 6: 21.45	-1.083		731.65	18.1	0.0	0.675	0.003	3.0	0 -99.000
BRTR	146.90	64.53	22:12: 58.27	-1.693		1128.90	7.2	0.0	0.292	0.004	3.6	0 -99.000
TORD	172.45	181.09	22:14: 52.97	-0.004		1243.02	4.9	0.0	0.279	0.008	3.0	0 -99.000

False event. Can't confirm arrivals

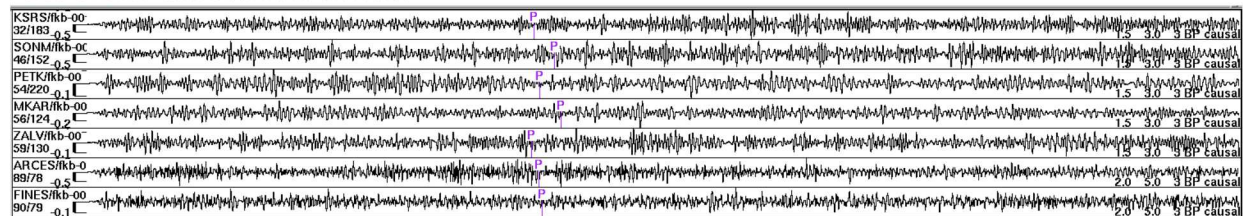


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
293 5812625 21:57: 35.42 0.69 5.120 126.260 108.0 3.87 0.24 7 NEW 0 0.000 -
1.000 0 22 28.9 31.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
KSRS	31.28	182.17	22: 3: 52.47	-0.019		376.66	6.5	0.0	-1.109	0.004	3.0	0 -99.000
SONM	45.14	150.78	22: 5: 48.49	0.789		492.00	7.5	0.0	-0.817	0.001	4.7	0 -99.000

PETK	53.30	219.63	22: 6:	50.45	0.007	553.91	4.4	0.0	-0.542	0.007	3.0	0 -99.000
MKAR	55.69	122.51	22: 7:	6.27	0.478	569.73	10.9	0.0	-1.114	0.003	8.6	0 -99.000
ZALV	58.56	128.83	22: 7:	23.41	-1.501	587.71	4.9	0.0	-0.842	0.002	3.7	0 -99.000
ARCES	88.30	77.38	22:10:	17.43	-0.211	761.81	7.5	0.0	-1.303	0.001	3.9	0 -99.000
FINES	89.82	77.77	22:10:	24.02	0.456	768.43	11.1	0.0	-0.808	0.003	4.3	0 -99.000

False event. Can't confirm arrivals.

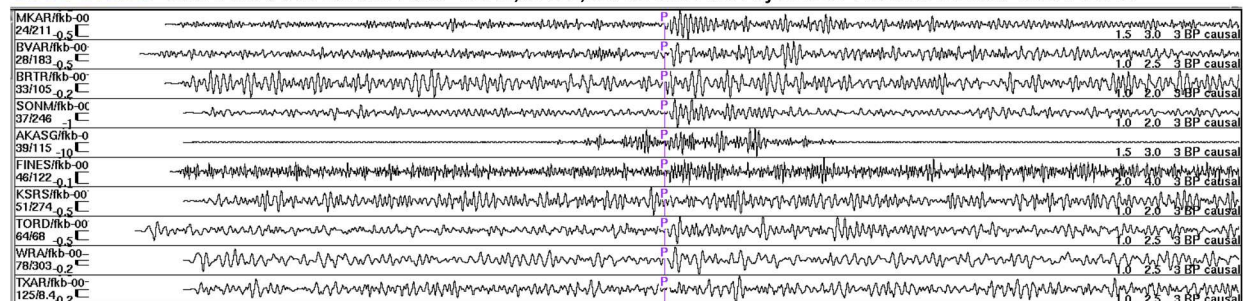


num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
294	10943790	22: 0:	4.39	3.23	26.460	68.030	0.0	4.08	0.65	10	REB	17819915 -3.101

0.401 5 47 22.0 50.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
MKAR	23.04	29.56	22: 5:	14.21	2.138	310.55	7.8	6.6	3.222	0.120	8.6	1 1.372
KURK	24.87	19.23	22: 5:	35.30	1.567	331.00	5.1	3.7	5.072	0.090	5.0	1 1.576
BVAR	25.58	6.18	22: 5:	44.53	-0.092	340.20	4.7	3.9	2.632	0.210	6.6	1 3.649
BRTR	29.33	302.63	22: 6:	30.67	3.181	386.23	4.7	3.3	4.012	0.230	3.5	0 -99.000
AKASG	36.09	319.76	22: 7:	28.68	4.493	444.67	4.8	5.4	3.842	0.080	3.2	0 -99.000
KRSR	52.28	62.58	22: 9:	6.24	-3.135	542.33	4.5	4.2	3.892	0.070	3.0	0 -99.000
TORD	61.36	270.36	22:10:	29.30	-4.454	625.48	4.5	5.3	4.172	0.120	6.0	1 5.142
WRA	81.30	117.79	22:12:	16.08	3.542	731.67	4.8	4.7	4.242	0.060	5.5	1 0.557
NVAR	114.16	3.68	22:18:	47.64	0.618	1123.55	5.0	3.0	4.672	0.100	3.0	0 -99.000
TXAR	122.49	349.27	22:19:	3.46	-2.481	1139.95	4.4	3.2	4.562	0.100	3.0	0 -99.000

Good event. Can't confirm all arrivals. KRSR,BRTR,TXAR arrivals rejected. Added SONM and FINES.

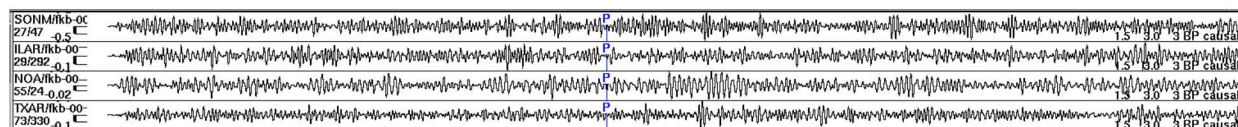


num ref	HH:MM:SS	OTSTD	LAT	LON	DEPTH	MB	MB_STV	NASS	NEW?	REB_ORID	delt	dist
295	5152120	22: 3:	18.19	0.94	60.740	148.350	19.0	2.31	1.17	4	NEW	0 0.000 -

1.000 0 42 22.3 22.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
SONM	27.51	46.82	22: 8:	59.65	0.417	341.82	4.9	0.0	-0.137	0.001	3.9	0 -99.000
ILAR	28.61	291.49	22: 9:	15.47	1.209	357.17	4.1	0.0	-3.169	0.001	5.7	0 -99.000
NOA	54.59	24.05	22:12:	41.13	-0.284	563.01	5.0	0.0	-0.749	0.005	5.7	0 -99.000
TXAR	72.82	330.27	22:14:	43.74	-1.342	686.14	5.9	0.0	-0.705	0.005	7.6	0 -99.000

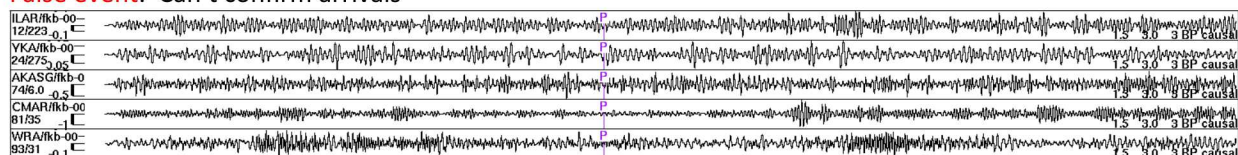
False event. Can't confirm arrivals.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 296 14467436 22:14: 46.38 3.43 55.460 -160.940 0.0 3.97 0.52 5 NEW 0 0.000 -
 1.000 0 123.0 26.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	13.09	27.55	22:17: 29.85	-0.873	163.83	4.8	0.0	3.248	0.010	8.7	0 -99.000
YKA	25.44	51.55	22:20: 4.10	-1.863	317.97	4.5	0.0	4.078	0.120	7.9	0 -99.000
AKASG	75.48	353.28	22:26: 26.43	4.770	700.45	4.4	0.0	3.678	0.080	3.7	0 -99.000
CMAR	81.05	288.88	22:26: 54.11	-4.875	728.72	4.2	0.0	4.028	0.100	3.6	0 -99.000
WRA	91.96	238.27	22:28: 5.30	2.841	798.97	4.4	0.0	4.828	0.130	3.0	0 -99.000

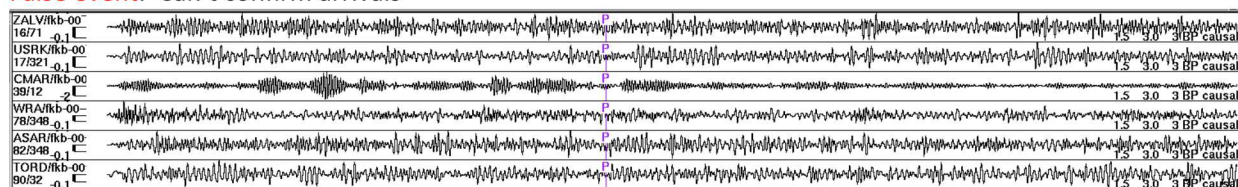
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 297 12365398 22:17: 35.13 2.29 56.180 112.190 0.0 3.98 0.82 6 NEW 0 0.000 -
 1.000 0 28 26.0 21.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ZALV	17.70	274.03	22:21: 15.29	-2.601	220.42	4.5	0.0	2.720	0.130	6.6	0 -99.000
USRK	16.22	133.69	22:21: 35.07	-1.564	240.69	4.6	0.0	3.300	0.160	3.0	0 -99.000
CMAR	40.21	205.05	22:25: 3.37	1.815	448.42	4.7	0.0	4.660	0.110	3.0	0 -99.000
WRA	77.96	162.08	22:29: 36.27	1.884	721.87	4.3	0.0	3.830	0.060	3.3	0 -99.000
ASAR	81.54	163.15	22:29: 52.09	-2.543	736.72	4.6	0.0	4.140	0.090	3.0	0 -99.000
TORD	91.71	297.08	22:30: 39.55	3.010	784.47	4.4	0.0	5.210	0.210	3.0	0 -99.000

False event. Can't confirm arrivals

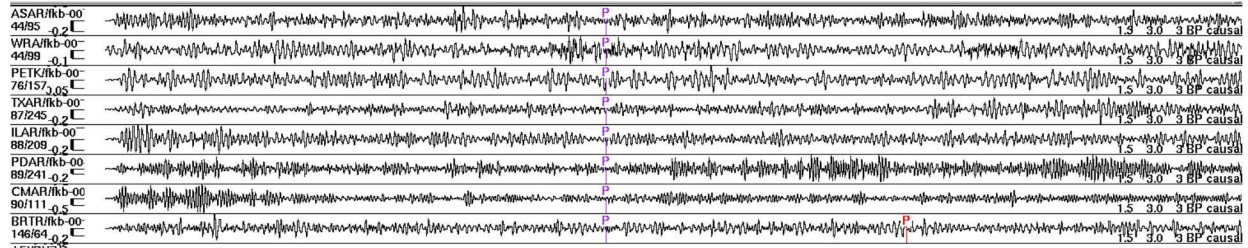


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 298 11989654 22:18: 29.18 1.16 -20.240 -178.380 612.0 3.41 0.43 10 NEW 0 0.000
 -1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	43.83	95.55	22:25: 42.92	-1.898	434.48	17.3	0.0	-1.486	0.017	9.5	0 -99.000
WRA	43.90	99.27	22:25: 46.88	1.875	437.98	6.0	0.0	-1.215	0.002	9.7	0 -99.000
PETK	76.17	157.31	22:29: 12.54	-0.261	644.40	5.3	0.0	-0.864	0.013	3.0	0 -99.000
NVAR	81.56	235.48	22:29: 41.54	-0.265	672.96	4.6	0.0	-0.873	0.004	4.1	0 -99.000
TXAR	87.68	244.97	22:30: 13.18	0.498	704.31	8.0	0.0	-0.827	0.003	5.1	0 -99.000
ILAR	88.54	209.65	22:30: 14.50	0.274	705.68	9.5	0.0	-0.807	0.014	5.7	0 -99.000
PDAR	89.49	241.15	22:30: 19.78	-1.116	711.13	6.3	0.0	0.097	0.002	3.8	0 -99.000
CMAR	89.49	111.78	22:30: 23.73	-0.817	714.98	7.4	0.0	-0.553	0.005	3.0	0 -99.000
ARCES	128.87	29.61	22:36: 24.96	-0.278	1076.56	8.1	0.0	-1.422	0.002	3.0	0 -99.000

BRTR 146.38 64.97 22:37: 0.56 1.988 1111.73 6.2 0.0 -0.987 0.002 3.6 0 -99.000

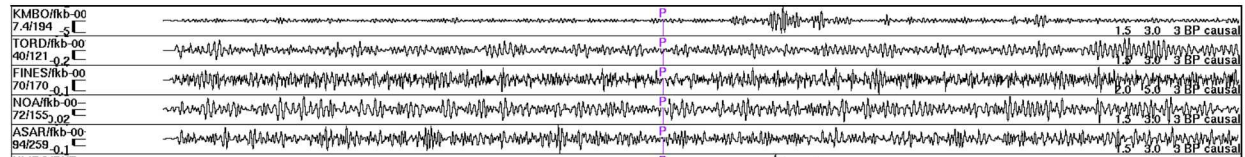
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
299 13569085 22:28: 36.94 2.96 -0.700 32.530 0.0 4.11 0.80 6 NEW 0 0.000 -
1.000 0 37 22.0 27.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KMBO	5.62	90.70	22:29: 48.13	-3.400	71.19	5.5	3.4	2.573	0.080	7.9	0 -99.000
TORD	32.87	296.42	22:35: 15.09	-2.847	397.75	4.6	0.0	4.283	0.110	6.8	0 -99.000
FINES	62.48	356.99	22:39: 3.16	4.144	626.57	4.5	0.0	3.933	0.290	3.4	0 -99.000
NOA	63.90	349.10	22:39: 7.12	-2.028	630.67	4.5	0.0	4.373	0.130	3.8	0 -99.000
ASAR	100.81	114.20	22:42: 27.51	3.324	830.82	5.0	0.0	5.283	0.060	3.0	0 -99.000
NVAR	133.71	327.02	22:47: 58.42	0.807	1161.57	4.5	0.0	4.233	0.210	3.0	0 -99.000

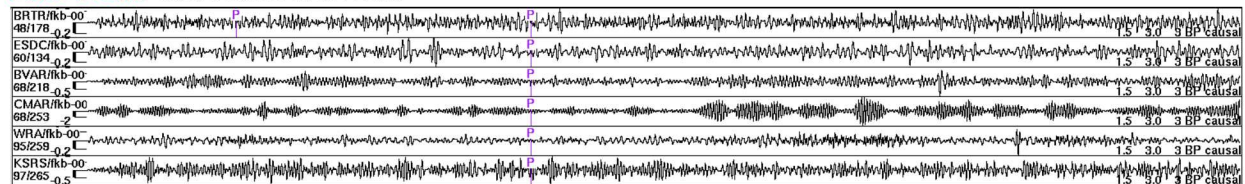
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
300 5750189 22:28: 54.08 3.00 -8.340 35.400 0.0 4.29 0.64 6 NEW 0 0.000 -
1.000 0 37 22.0 23.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	49.25	359.68	22:37: 36.15	1.630	521.37	5.4	0.0	3.856	0.190	4.9	0 -99.000
ESDC	60.47	326.97	22:39: 1.85	-1.537	607.31	4.7	0.0	4.536	0.120	4.7	0 -99.000
CMAR	69.98	66.29	22:39: 51.94	-1.606	657.97	4.5	0.0	4.236	0.070	4.2	0 -99.000
BVAR	69.85	22.47	22:39: 58.54	3.590	664.29	5.0	0.0	3.166	0.230	3.0	0 -99.000
KSRS	98.97	53.50	22:42: 22.24	-4.990	808.31	4.7	0.0	4.986	0.090	3.0	0 -99.000
WRA	96.32	111.41	22:42: 23.55	2.913	809.02	4.7	0.0	4.956	0.070	3.1	0 -99.000

False event. Can't confirm arrivals

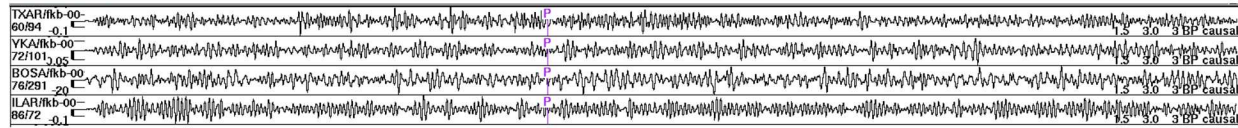


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
301 13174116 22:36: 52.65 1.42 10.870 -42.410 0.0 4.20 0.84 4 NEW 0 0.000 -
1.000 0 32 21.1 23.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
TXAR	60.24	94.20	22:46: 59.09	-0.216	606.40	5.9	0.0	-1.102	0.005	7.2	0 -99.000
YKA	72.51	100.38	22:48: 18.19	-1.523	685.33	5.2	0.0	-0.486	0.004	6.8	0 -99.000

BOSA 75.71 290.91 22:48: 41.92 -0.572 709.35 5.4 0.0 10.000 0.009 3.0 0 -99.000
 ILAR 86.59 71.92 22:49: 39.93 2.311 766.98 5.5 0.0 -0.824 0.002 6.8 0 -99.000

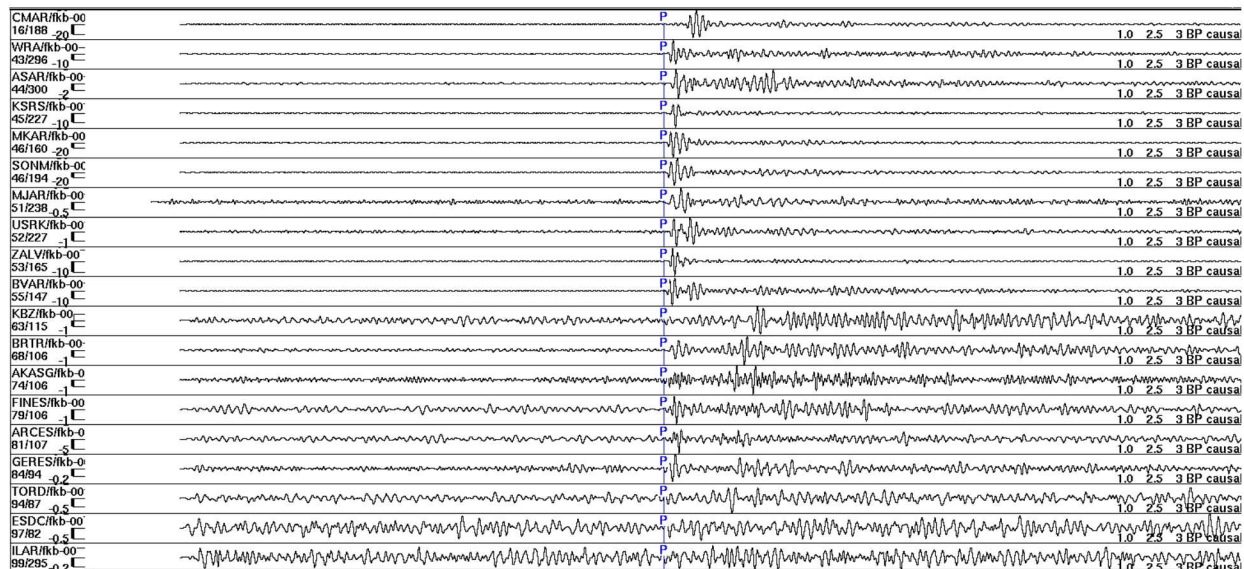
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 302 5754981 22:41: 13.68 2.22 2.370 96.540 0.0 4.58 0.50 22 SEL 17819919 -2.916
 0.249 20 46 24.0 94.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	15.78	10.51	22:45: 3.08	-0.606	229.53	18.0	0.0	4.659	0.410	6.6	1	4.968
WRA	43.97	122.70	22:49: 14.88	0.288	481.28	16.7	0.0	4.549	0.210	9.1	1	3.016
ASAR	45.39	127.61	22:49: 26.75	-0.853	492.83	17.4	0.0	4.809	0.260	7.8	1	2.867
KSR5	45.21	36.39	22:49: 33.34	1.362	500.13	13.9	0.0	4.479	0.320	3.0	1	2.746
MKAR	45.35	346.82	22:49: 34.66	-4.634	501.13	12.2	0.0	4.479	0.340	7.7	1	8.989
SONM	45.71	9.83	22:49: 39.93	-0.002	506.66	6.1	0.0	4.239	0.320	7.1	1	4.260
KURK	49.82	345.55	22:50: 11.57	-2.010	538.33	12.5	0.0	4.199	0.170	3.0	1	6.373
MJAR	51.36	43.95	22:50: 19.48	0.264	545.62	7.2	0.0	4.059	0.310	3.0	1	3.912
USRK	52.03	32.47	22:50: 26.07	0.104	553.11	12.7	0.0	4.719	0.540	3.0	1	3.072
ZALV	51.74	351.65	22:50: 27.39	0.245	554.26	11.9	0.0	4.589	0.190	4.3	1	4.215
KBZ	62.01	319.00	22:51: 42.54	1.072	628.95	9.8	2.1	4.619	0.210	3.0	1	3.036
BRTR	67.08	312.15	22:52: 14.18	1.575	661.49	10.2	0.0	4.429	0.180	3.5	1	2.895
AKASG	73.19	322.39	22:52: 49.78	1.305	697.11	10.4	0.0	4.669	0.180	3.0	1	3.335
FINES	77.96	332.53	22:53: 17.46	0.707	723.83	4.5	0.0	4.459	0.160	4.2	1	3.441
ARCES	80.57	340.37	22:53: 31.96	0.480	738.36	13.8	0.0	3.449	0.290	3.7	1	3.797
TORD	93.50	283.28	22:54: 40.52	4.752	807.45	4.2	0.0	5.569	0.100	3.0	1	-2.296
ESDC	95.81	310.17	22:54: 44.47	-1.398	810.95	4.8	0.0	5.399	0.180	3.0	0	-99.000
ILAR	98.67	22.69	22:54: 51.06	-2.634	817.43	4.4	0.0	5.069	0.090	3.0	1	7.601
NVAR	128.15	34.20	23: 0: 21.97	0.383	1149.16	5.8	0.0	4.449	0.310	3.0	1	3.734
PDAR	129.08	24.11	23: 0: 23.29	-0.178	1150.08	4.8	0.0	5.549	0.150	3.0	1	2.606
CPUP	145.33	225.18	23: 0: 49.66	-4.696	1175.76	7.1	3.3	3.799	0.150	3.0	1	8.020
TXAR	142.88	29.06	23: 0: 52.29	4.475	1178.83	4.9	0.0	4.459	0.220	4.0	0	-99.000

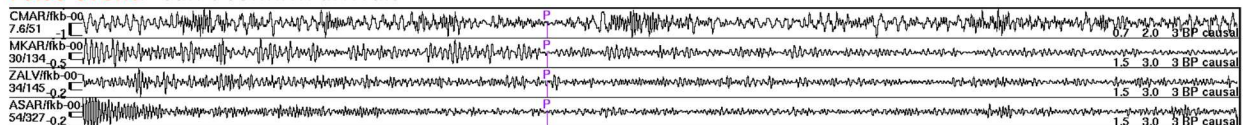
Good event.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 303 4372561 22:45: 34.72 0.35 23.190 105.350 0.0 2.81 0.52 4 NEW 0 0.000 -
 1.000 0 26 29.2 31.4

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	7.93	50.62	22:47: 28.10	0.153	113.67	4.3	0.0	-1.934	0.001	8.9	0	-99.000
MKAR	29.94	133.23	22:51: 43.86	-0.537	369.38	4.4	0.0	-1.418	0.003	8.9	0	-99.000
ZALV	34.29	144.64	22:52: 22.09	0.407	408.60	4.3	0.0	-0.705	0.001	5.2	0	-99.000
ASAR	54.25	327.54	22:55: 1.61	-0.023	567.42	7.8	0.0	-0.689	0.001	8.4	0	-99.000

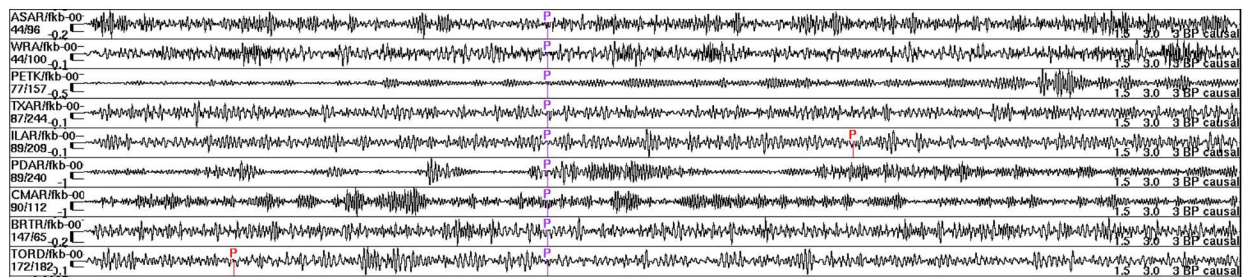
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
 304 5396436 22:54: 8.88 1.35 -20.880 -178.090 453.0 3.97 0.19 10 NEW 0 0.000
 -1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	44.42	99.61	23: 1: 38.44	0.478	449.42	12.4	0.0	0.830	0.003	9.7	0	-99.000
ASAR	44.32	95.96	23: 1: 39.76	2.203	450.48	18.4	0.0	0.628	0.005	9.5	0	-99.000
PETK	76.47	156.81	23: 5: 10.69	-1.168	661.13	10.6	0.0	0.390	0.004	3.0	0	-99.000
NVAR	81.30	234.96	23: 5: 41.02	2.540	691.40	7.4	0.0	0.227	0.002	4.1	0	-99.000
TXAR	87.31	244.54	23: 6: 8.70	0.180	719.35	11.9	0.0	0.384	0.003	5.1	0	-99.000
ILAR	88.58	209.07	23: 6: 11.34	-0.353	722.42	9.0	0.0	0.545	0.003	5.7	0	-99.000
PDAR	89.24	240.63	23: 6: 15.29	-1.176	726.02	7.9	0.0	0.504	0.002	3.8	0	-99.000
CMAR	90.06	111.75	23: 6: 20.57	-1.058	731.67	17.7	0.0	0.665	0.003	3.0	0	-99.000
BRTR	146.90	64.53	23:12: 58.71	-1.668	1128.92	7.3	0.0	0.282	0.004	3.6	0	-99.000
TORD	172.45	181.09	23:14: 52.09	0.021	1243.05	5.0	0.0	0.283	0.008	3.0	0	-99.000

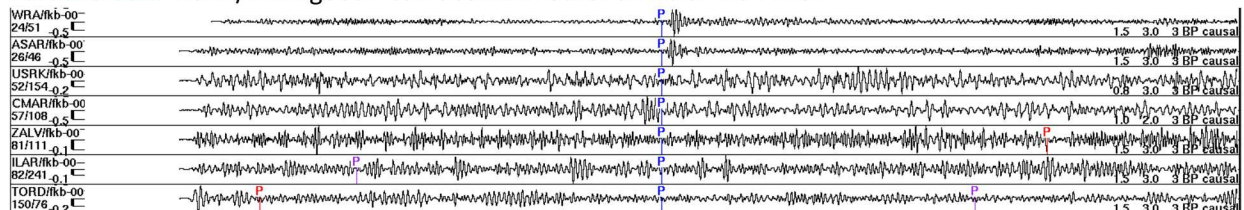
False event Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
305 9376302 22:54: 22.06 3.08 -5.080 150.780 0.0 3.94 0.37 7 NEW 0 0.000 -
1.000 0 16 26.0 38.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	21.76	219.40	22:59: 18.69	4.058	296.62	5.2	0.0	3.404	0.070	9.8	0 -99.000
ASAR	24.86	214.16	22:59: 41.10	-4.012	318.24	4.6	0.0	3.394	0.050	9.5	0 -99.000
USRK	49.64	344.13	23: 3: 35.77	2.648	553.72	5.0	0.0	4.264	0.110	3.0	0 -99.000
CMAR	53.66	295.68	23: 3: 56.87	-4.963	574.59	5.4	0.0	4.214	0.110	3.0	0 -99.000
ZALV	77.73	327.06	23: 6: 35.07	0.401	732.54	4.3	0.0	3.864	0.200	3.0	0 -99.000
ILAR	82.30	22.93	23: 6: 49.57	0.698	747.24	4.7	0.0	4.164	0.060	5.4	0 -99.000
TORD	146.07	288.70	23:14: 13.86	1.170	1191.04	4.3	0.0	4.304	0.150	4.5	0 -99.000

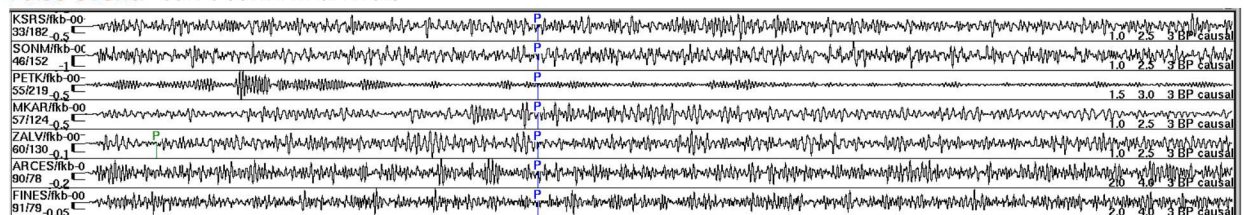
Partial credit. ASAR/WRA good. Can't confirm other arrivals. No PMG.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
306 5812625 22:57: 35.86 0.69 5.120 126.260 108.0 3.86 0.23 7 NEW 0 0.000 -
1.000 0 22 28.9 31.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	31.28	182.17	23: 3: 52.91	-0.019	376.66	6.3	0.0	-1.106	0.004	3.0	0 -99.000
SONM	45.14	150.78	23: 5: 47.61	0.789	492.00	7.4	0.0	-0.826	0.001	4.7	0 -99.000
PETK	53.30	219.63	23: 6: 49.57	0.007	553.91	4.4	0.0	-0.550	0.007	3.0	0 -99.000
MKAR	55.69	122.51	23: 7: 5.39	0.478	569.73	11.3	0.0	-1.122	0.003	8.6	0 -99.000
ZALV	58.56	128.83	23: 7: 23.85	-1.501	587.71	4.9	0.0	-0.849	0.002	3.7	0 -99.000
ARCES	88.30	77.38	23:10: 17.87	-0.211	761.81	6.0	0.0	-1.300	0.001	3.9	0 -99.000
FINES	89.82	77.77	23:10: 24.46	0.456	768.43	10.9	0.0	-0.813	0.003	4.3	0 -99.000

False event. Can't confirm arrivals

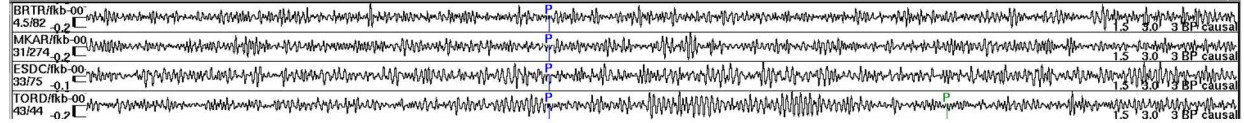


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist

307 7967133 23: 5: 25.20 1.40 40.570 39.260 0.0 3.39 0.39 4 NEW 0 0.000 -
1.000 0 30 26.8 27.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
BRTR	3.76	87.10	23: 6: 32.43	-1.912	67.19	4.5	0.0	-3.368	0.005	8.6	0 -99.000
MKAR	32.27	273.65	23:11: 47.52	-0.536	382.62	4.8	0.0	-0.338	0.006	8.6	0 -99.000
ESDC	32.44	75.86	23:12: 2.02	2.362	396.79	5.3	0.0	-0.840	0.002	3.0	0 -99.000
TORD	41.86	43.77	23:13: 23.76	0.427	478.12	8.9	0.0	-0.137	0.005	6.8	0 -99.000

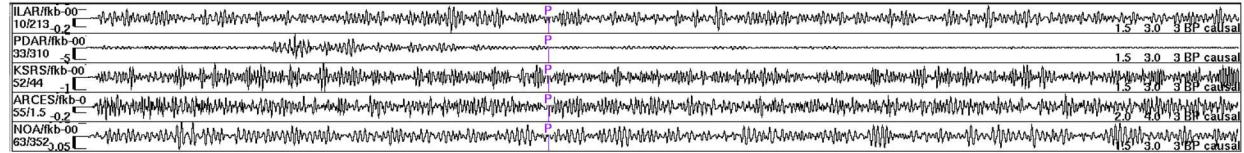
False event Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
308 13223640 23:14: 56.04 2.25 55.860 -156.610 40.1 3.90 0.39 6 NEW 0 0.000
-1.000 0 1 23.0 31.9

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	10.89	27.53	23:17: 17.11	-0.307	140.99	4.4	0.0	3.086	0.060	8.7	0 -99.000
NVAR	31.85	105.54	23:21: 11.78	1.251	375.72	4.5	0.0	3.876	0.130	5.4	0 -99.000
PDAR	33.82	91.33	23:21: 27.60	-1.644	391.09	6.1	0.0	3.986	0.080	6.9	0 -99.000
KSRS	51.18	281.65	23:24: 3.16	-0.325	546.54	4.9	0.0	4.106	0.030	3.0	0 -99.000
ARCES	55.15	358.22	23:24: 25.58	4.080	569.41	4.2	0.0	4.026	0.060	4.2	0 -99.000
NOA	63.44	5.50	23:25: 15.67	-3.055	619.51	4.9	0.0	4.346	0.120	3.7	0 -99.000

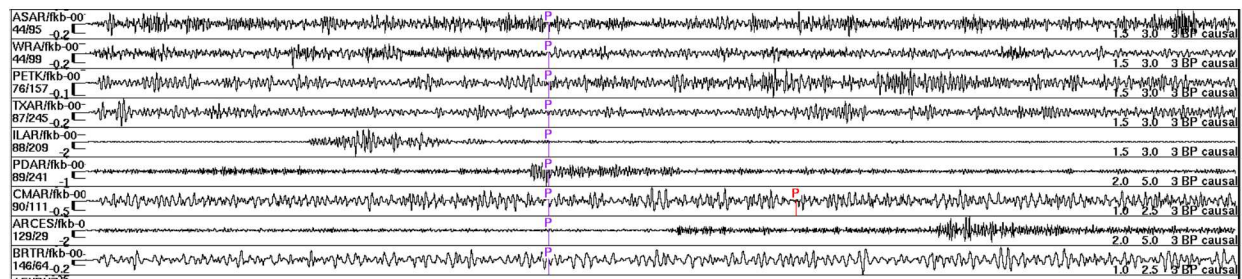
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
309 11989654 23:18: 28.30 1.16 -20.240 -178.380 612.0 3.41 0.43 10 NEW 0 0.000
-1.000 0 13 26.2 50.5

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	43.83	95.55	23:25: 43.36	-1.901	434.48	17.4	0.0	-1.490	0.016	9.5	0 -99.000
WRA	43.90	99.27	23:25: 47.31	1.872	437.98	5.9	0.0	-1.221	0.002	9.7	0 -99.000
PETK	76.17	157.31	23:29: 12.98	-0.233	644.43	5.3	0.0	-0.868	0.013	3.0	0 -99.000
NVAR	81.56	235.48	23:29: 41.98	-0.268	672.95	4.3	0.0	-0.878	0.003	4.1	0 -99.000
TXAR	87.68	244.97	23:30: 13.62	0.495	704.31	7.8	0.0	-0.828	0.002	5.1	0 -99.000
ILAR	88.54	209.65	23:30: 14.94	0.271	705.68	11.1	0.0	-0.780	0.014	5.7	0 -99.000
PDAR	89.49	241.15	23:30: 20.21	-1.120	711.12	6.4	0.0	0.092	0.002	3.8	0 -99.000
CMAR	89.49	111.78	23:30: 24.17	-0.820	714.98	7.4	0.0	-0.556	0.005	3.0	0 -99.000
ARCES	128.87	29.61	23:36: 25.40	-0.281	1076.56	7.9	0.0	-1.421	0.002	3.0	0 -99.000
BRTR	146.38	64.97	23:37: 1.00	1.984	1111.73	6.1	0.0	-0.995	0.001	3.6	0 -99.000

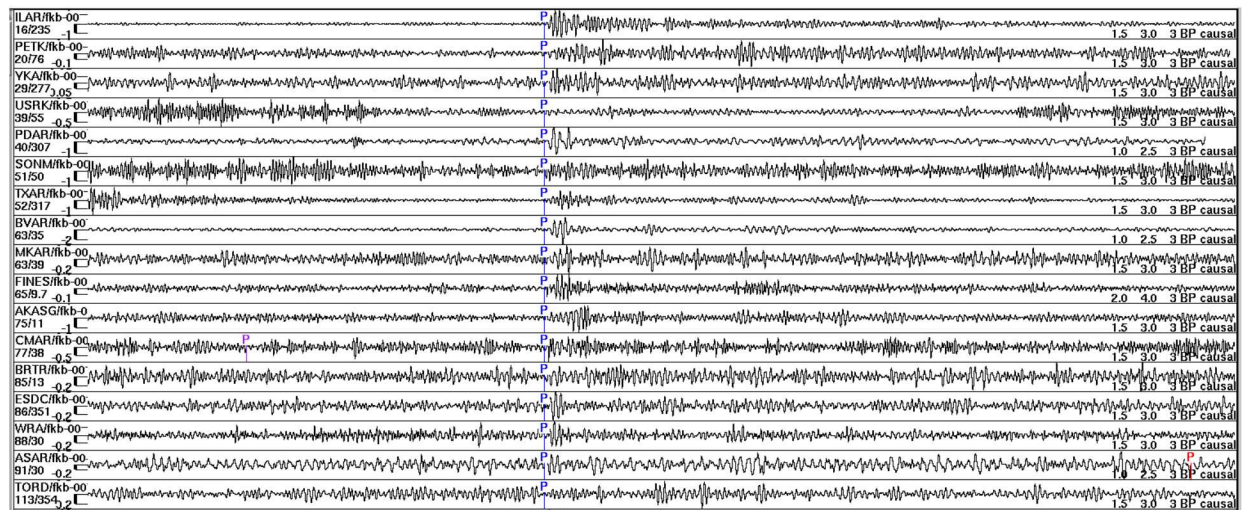
False event. Can't confirm arrivals ARCES, ILAR, and PDAR have local events close in time.



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
310 7892945 23:19: 2.58 2.90 52.510 -168.580 38.1 3.89 0.58 12 SEL 17819924 -14.898
0.914 8 123.0 54.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ILAR	17.88	35.86	23:22: 50.65	0.027	228.35	8.4	0.0	3.940	0.050	8.7	1 6.219
PETK	18.51	284.85	23:23: 36.80	-3.392	274.45	5.2	0.0	3.210	0.130	4.5	1 5.794
USRK	37.51	280.65	23:26: 29.50	4.291	447.50	4.3	0.0	4.130	0.060	3.0	0 -99.000
PDAR	41.83	77.47	23:26: 33.46	-4.104	451.60	5.9	0.0	3.210	0.340	6.7	1 9.218
TXAR	54.18	87.02	23:28: 16.29	3.606	553.50	7.3	0.0	3.920	0.180	7.3	1 4.929
KURK	61.61	317.05	23:29: 24.84	1.972	622.12	4.5	0.0	3.030	0.070	3.0	0 -99.000
FINES	65.78	350.74	23:29: 41.98	0.735	640.30	4.8	0.0	3.980	0.150	4.6	1 4.394
AKASG	75.91	346.46	23:30: 42.63	-1.287	700.25	4.8	0.0	4.040	0.050	3.6	1 6.142
CMAR	75.24	281.04	23:30: 55.81	3.324	713.00	5.3	0.0	3.820	0.060	3.5	1 4.267
BRTR	85.79	340.67	23:31: 38.00	-0.265	756.35	4.5	0.0	3.880	0.180	3.0	0 -99.000
ESDC	87.84	9.44	23:31: 44.59	-0.032	761.73	4.9	0.0	4.090	0.060	3.0	1 6.033
TORD	114.63	7.08	23:37: 31.32	-4.875	1109.68	4.8	0.0	5.400	0.110	3.0	0 -99.000

Good event. Couldn't confirm USRK,BRTR, and TORD arrivals. Added YKA,SONM,BVAR,MKAR,WRA, and ASAR arrivals.

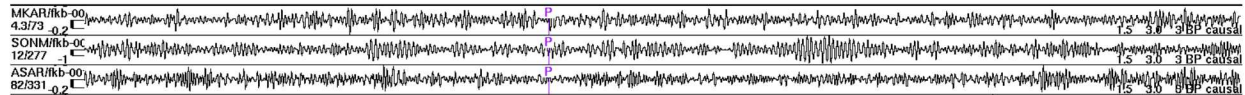


num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
311 9937518 23:21: 7.82 0.70 47.860 88.440 0.0 2.50 0.71 4 NEW 0 0.000 -
1.000 0 28 24.6 25.2

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
MKAR	4.61	78.95	23:22: 24.29	-0.536	77.30	4.5	0.0	-2.508	0.004	9.4	0 -99.000
KURK	7.55	110.56	23:22: 51.97	0.454	104.93	4.0	0.0	-1.607	0.001	9.4	0 -99.000
SONM	11.76	274.75	23:24: 1.85	-0.811	173.89	4.6	0.0	-2.625	0.001	3.5	0 -99.000

ASAR 81.55 331.04 23:33: 30.06 0.894 742.62 5.6 0.0 -0.875 0.006 3.0 0 -99.000

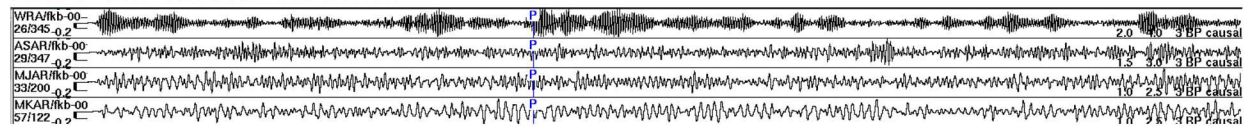
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
312 7042740 23:23: 56.57 1.49 5.130 127.600 37.0 3.16 0.21 4 NEW 0 0.000 -
1.000 0 22 28.5 31.1

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
WRA	26.70	344.66	23:29: 24.84	1.971		328.45	8.6	0.0	-1.172	0.002	9.8	0 -99.000
ASAR	30.19	347.20	23:29: 53.85	-2.220		357.18	10.3	0.0	-1.474	0.002	9.5	0 -99.000
MJAR	31.90	200.60	23:30: 24.17	-0.048		387.66	5.2	0.0	-1.364	0.001	3.0	0 -99.000
MKAR	56.10	121.80	23:33: 37.97	0.298		582.20	5.0	0.0	-1.750	0.002	8.8	0 -99.000

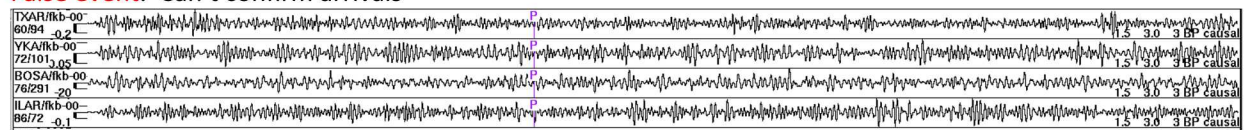
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
313 13174116 23:36: 53.09 1.42 10.870 -42.410 0.0 4.20 0.85 4 NEW 0 0.000 -
1.000 0 32 21.1 23.7

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
TXAR	60.24	94.20	23:46: 59.53	-0.192		606.42	5.9	0.0	-1.106	0.005	7.2	0 -99.000
YKA	72.51	100.38	23:48: 18.63	-1.531		685.32	5.5	0.0	-0.486	0.004	6.8	0 -99.000
BOSA	75.71	290.91	23:48: 42.36	-0.580		709.34	5.2	0.0	10.000	0.009	3.0	0 -99.000
ILAR	86.59	71.92	23:49: 40.37	2.303		766.97	5.5	0.0	-0.828	0.002	6.8	0 -99.000

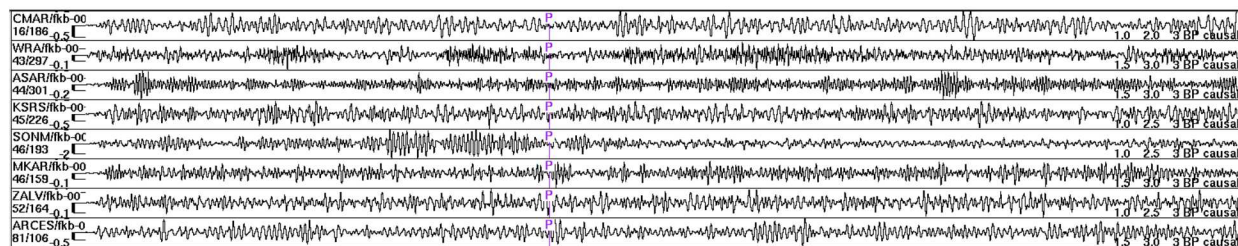
False event. Can't confirm arrivals



num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
314 12988884 23:41: 29.94 1.53 2.560 97.200 92.0 3.16 0.30 8 NEW 0 0.000 -
1.000 0 46 28.2 49.3

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
CMAR	15.16	183.58	23:45: 8.79	-1.135		219.28	5.2	0.0	-0.895	0.001	6.6	0 -99.000
WRA	42.47	298.81	23:49: 16.64	-1.221		466.90	9.3	0.0	-1.000	0.002	9.1	0 -99.000
ASAR	44.01	302.58	23:49: 29.82	1.087		480.47	5.9	0.0	-0.795	0.001	7.8	0 -99.000
KSRS	43.70	226.05	23:49: 33.78	-0.082		483.97	4.9	0.0	-0.683	0.001	3.0	0 -99.000
MKAR	45.49	157.71	23:49: 43.01	0.400		493.78	5.9	0.0	-0.839	0.007	7.7	0 -99.000
SONM	45.02	191.88	23:49: 44.33	2.996		495.42	10.0	0.0	-0.792	0.001	7.1	0 -99.000
ZALV	51.70	163.13	23:50: 27.83	-2.340		538.95	6.5	0.0	-0.797	0.006	4.3	0 -99.000
ARCES	80.91	105.35	23:53: 35.04	0.295		725.57	4.6	0.0	-1.709	0.001	3.6	0 -99.000

False event. Can't confirm arrivals



I didn't have waveforms for these remaining events since all of the arrivals occur on September 2nd.
I did check various catalogs ISC, EMSC, GeoNet (New Zealand), NEIC, and could find no reference for any of the following events.

```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
315 10415027 23:53: 0.76 2.32 -34.490 -179.770 46.0 4.08 0.50 4 NEW 0 0.000
-1.000 0 43 16.2 16.9
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
ASAR	42.25	117.13	0:0: 43.51	-1.470	462.00	5.2	0.0	-1.077	0.002	5.0	0-99.000
ZALV	121.14	108.38	0:11: 41.37	-2.964	1120.90	6.8	0.0	0.021	0.002	3.4	0-99.000
MKAR	120.26	110.77	0:11: 46.64	2.802	1125.58	5.3	0.0	0.212	0.001	5.5	0-99.000
KBZ	146.93	89.91	0:12: 36.74	1.632	1175.62	7.7	0.0	-0.419	0.009	3.0	0-99.000

```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
316 10911576 23:54: 1.41 0.92 -20.910 -177.780 370.0 4.94 0.17 10 NEW 0 0.000
-1.000 0 13 25.6 45.8
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
WRA	45.26	98.57	0: 1: 38.88	-0.251	457.71	12.6	0.0	0.793	0.003	9.7	0-99.000
ASAR	45.22	95.03	0: 1: 40.20	1.556	458.79	18.6	0.0	0.616	0.005	9.5	0-99.000
PETK	75.84	155.87	0: 5: 11.13	-0.508	669.43	11.7	0.0	0.405	0.004	3.0	0-99.000
NVAR	80.19	235.02	0: 5: 41.46	-0.354	699.93	6.8	0.0	0.215	0.002	3.8	0-99.000
TXAR	86.25	244.86	0: 6: 9.14	0.707	727.66	10.9	0.0	0.333	0.003	3.4	0-99.000
ILAR	87.60	208.56	0: 6: 11.78	0.585	730.73	9.4	0.0	0.532	0.003	4.1	0-99.000
PDAR	88.13	240.69	0: 6: 15.73	1.075	734.33	8.0	0.0	0.500	0.002	3.0	0-99.000
CMAR	90.45	110.72	0: 6: 21.01	-1.730	739.98	18.0	0.0	0.487	0.003	3.0	0-99.000
BRTR	146.85	62.51	0:12: 57.83	-0.597	1137.23	7.0	0.0	0.267	0.003	3.2	0-99.000
TORD	173.24	187.34	0:14: 52.53	-0.482	1251.36	5.4	0.0	0.275	0.008	3.0	0-99.000

```
num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
317 16671137 23:57: 49.48 1.04 6.000 126.310 186.0 3.85 0.23 7 NEW 0 0.000
-1.000 0 22 28.9 31.2
```

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC wgt	Match	Tres
KSRS	30.76	184.55	0: 3: 53.35	0.475	363.78	6.8	0.0	-1.100	0.003	3.0	0-99.000
SONM	44.21	152.14	0: 5: 45.41	-0.484	476.66	4.6	0.0	-0.853	0.002	4.7	0-99.000
PETK	53.25	221.29	0: 6: 50.01	0.451	541.03	4.7	0.0	-0.552	0.006	3.0	0-99.000
MKAR	54.53	123.30	0: 7: 5.83	1.775	556.85	10.7	0.0	-1.136	0.003	8.6	0-99.000
ZALV	57.50	129.78	0: 7: 24.29	-0.162	574.83	4.8	0.0	-0.862	0.002	3.7	0-99.000
ARCES	87.35	78.32	0:10: 18.31	-1.933	748.93	6.6	0.0	-1.306	0.001	3.9	0-99.000
FINES	88.75	78.56	0:10: 24.90	-0.122	755.56	9.8	0.0	-0.826	0.003	4.3	0-99.000

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num ref HH:MM:SS OTSTD LAT LON DEPTH MB MB_STV NASS NEW? REB_ORID deltime dist
```

318 16591817 23:59: 4.63 0.51 29.070 59.020 102.0 3.09 0.73 5 NEW 0 0.000 -
 1.000 0 29 23.2 26.0

Sta	Dist	seaz	ArrivTime	Tres	TT_EVENT	CC	SNR	dRM	CC	wgt	Match	Tres
BRTR	23.25	111.71	0: 4: 5.21	-0.583		300.07	4.4	0.0	-1.797	0.003	6.0	0 -99.000
MKAR	26.34	234.08	0: 4: 22.35	-0.532		317.74	5.0	0.0	-1.914	0.005	8.4	0 -99.000
AKASG	31.27	124.58	0: 5: 13.77	0.762		368.70	3.8	0.0	-1.354	0.003	5.3	0 -99.000
SONM	41.83	259.96	0: 6: 38.14	0.274		453.20	7.5	0.0	-0.358	0.004	3.3	0 -99.000
WRA	87.77	301.09	0:11: 42.69	0.080		757.52	5.2	0.0	-0.147	0.005	3.0	0 -99.000