for this period obtained when the tank was exposed to the presumed natural neutrino radiation. The missing run numbers correspond to experiments in which a neutron source was placed in the tank or an ^{37}Ar source was deliberately introduced.

The ^{37}Ar production rate was calculated from the period of exposure and the number of atoms in the tank at the time of purge, presuming a non-varying neutrino flux during the exposure interval. If there were any fluctuations, say from pulsed sources of neutrinos or sudden changes in cosmic ray production, this calculation of ^{37}Ar production rate would not be correct. We would like to emphasize that we have designated all counts in the ^{37}Ar region less counter background as ^{37}Ar decays. If there are spurious counts, the rates listed would be too high. Criteria for testing whether counts with the correct pulse rise-time and energy (fwhm) for ^{37}Ar decay are indeed ^{37}Ar are that (1) the energy spectrum of the fast events has an ^{37}Ar distribution, (2) the counting rate decays with a 35-day half life, and (3) the time distribution of the occurrence of counts is consistent with a 35-day activity. The energy spectrum of fast counts has a clear ^{37}Ar-like distribution in run 27, and in the runs in which very low background counters were used, nos. 37, 38 and 39. Only in run 27 were there a sufficient number of counts to test for decay, and the rate listed for this run was obtained from a least-squares fit of the counting data. The time distribution of the counts in runs 36, 37, 38 and 39 has been examined, and has been found to be reasonably statistically distributed for runs 36 and 37. However, in run 38 no counts were observed in the first 20.8 days of counting, though a total of 9 decay events were observed during the first 70 days of counting. If all events are ^{37}Ar decays following a binomial distribution in time, the probability of not observing any decays in the first 20.8 days of run 38 is approximately 0.01.