

This Montreal paper ended with these conclusions:

- “1) No conventional explanation for the signature $e\mu$ events has been found.
- 2) The hypothesis that the signature $e\mu$ events come from the production of a pair of new particles – each of mass about 2 GeV – fits almost all the data. Only the θ_{coll} distribution is somewhat puzzling.
- 3) The assumption that we are also detecting ee and $\mu\mu$ events coming from these new particles is still being tested.”

I was still not able to specify the source of the μe events: leptons, mesons or bosons. But I remember that I felt strongly that the source was heavy leptons. It would take two more years to prove that.

First Publication

As 1974 passed we acquired e^+e^- annihilation data at more and more energies, and at each of these energies there was an anomalous $e\mu$ event signal, Fig. 4. Thus, I and my colleagues in the Mark I experiment became more and more convinced of the reality of the $e\mu$ events and the absence of a conventional explanation.

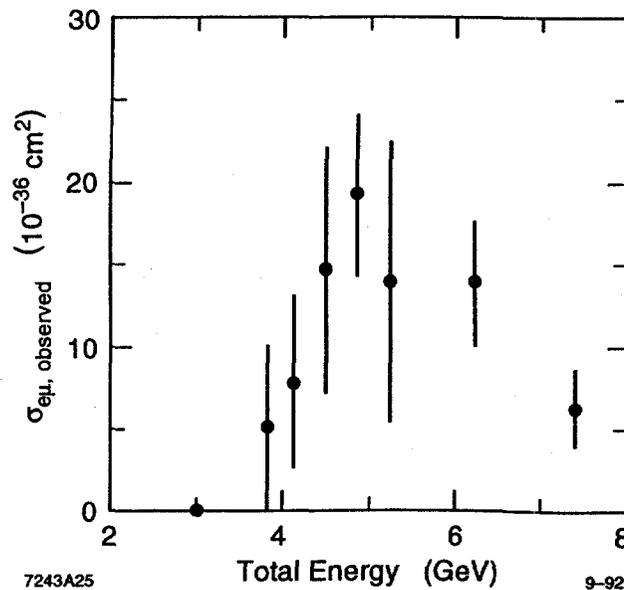


Fig. 4. From Perl *et al.*³⁵: the observed cross section for the signature $e\mu$ events from the Mark I experiment at SPEAR. This observed cross section is not corrected for acceptance. There are 86 events with a calculated background of 22 events.