Fig. 12a Mass spectrum for events in the mass range $2.5 < m_{ee} < 3.5$ GeV/c. The shaded events correspond to those taken at the normal magnet setting, while the unshaded ones correspond to the spectrometer magnet setting at - 10% lower than normal value.

Fig. 12b. The measurement of the width of the J. The width is shown to be less than 5 MeV.
VI. Now, immediately after the discovery of J, because of its heavy mass and unusually long lifetime, there were many speculations as to the nature of this particle. Lee, Peoples, O'Halloran and collaborators [27] were able to photo-produce the J particle coherently from nuclear targets with an ~ 100 GeV photon beam. They showed that the photoproduction of the J is very similar to ρ production and thus were the first to establish that J is a strongly interacting particle.

Pilcher, Smith and collaborators [28] have ingeniously used a large acceptance spectrometer to perform an accurate and systematic study of J production at energies >100 GeV. By using π beams as well as proton beams, and by measuring a wide range of mass and the momentum transfer dependence of μμ production, they were the first to state that the single muon yield which produced the mysterious $\mu/\pi = 10^4$, which had puzzled me for a long time, comes mostly from the production of muon pairs. The J yield from the π mean seems to be much higher than from the proton.

In Fig. 13 arc listed some of the relative yields of J production from various proton accelerators. It seems that I had chosen the most difficult place to discover the J.