Friday afternoon , Parallele session II
Discussion after first speaker LANGACKER

Louis MICHEL:

I would like to point out that ,although quasi two-body reactions $\nu p^{+} \to \mu^{-} \Delta^{++}$, $\bar{\nu} p^{+} \to \mu^{+} \Delta^{0}$, $\nu p^{+} \to \nu \Delta^{+}$, etc.have a smaller cross section than the elastic reactions, the observable Δ-polarization is much more easy to observe: it is known by the very observation of this resonnance. From the angular distribution of the (strong, parity conserving) Δ-decay one can measure only the quadrupole of the Δ-polarization,i.e. five real components q_i which must satisfy $\Sigma q_i^2 = 1/3$ (1 corresponds to complete polarization): for details, see M.Doncel,L.Michel,P.Minnaert: Analysis of Δpolarization, in "Physics from Friends" Papers dedicated to Ch.Peyrou on his 60th birthday; Multi Office S.A.Geneva 1978).Time reversal invariance of the weak currents can be tested since it implies that two of these five components vanish. For charge weak currents in this quoted paper, we have compared the theoretical prediction with the only published data we know of (Schreiner ,von Hippel, Phys.Rev.Lett.30(1973)307.The agreement is not good; there must exist abundant(and more recent) data.As shown in the paper Le Yaouanc et al.Phys.Rev.D15(1977)2447, the polarization of Δ's produced by neutral weak currents give some information on their nature.

Participation to the discussion at the IIIrd International symposium on High Energy Physics with Polarized Beams and Targets, Argonne National Lab, October 25-28, 1978