In the spring of 1976, we took some data in the dimuon mode, using the detector setup optimized for dielectrons. This provided only a factor of 5 increase in sensitivity — but that was sufficient to show that the 6 GeV "resonance" was an "Oops-Leon" and not an "Upsilon."

V FIRST HINT OF UPSILON IN NOVEMBER 1976

As the "Oops-Leon" 6.0 GeV dielectron bump faded with the summer, I kept up with the data coming in, doing data reduction as well as a first look at the spectrum — within days of the data-taking. Soon after we reverted to dielectrons (E288/E494), I noticed another clustering and wrote an internal note dated 11/17/76, entitled "From the people who brought you the Υ, a bigger (but not necessary better) resonance." This note was triggered by two recent dielectron events at 9.51 and 9.67 GeV. When combined with other events from the *ee* spectrum and a cluster of 6 dimuon events near 9.5 GeV, these resulted in a cluster of 10 events within 300 MeV, compared to 7 events in adjacent bins 4 times wider (*i.e.*, a 1.75-event estimated background) — a probability of less than one in 200 or so, even accounting for possible clustering anywhere in the mass plot. As I was writing the memo, another event came in at 9.44 GeV, strengthening the clustering. The significance of this clustering was thus much stronger than the "Oops-Leon." Some collaborators even claimed that I underestimated the significance. My conclusion in that internal note was that "$\mu\mu$II," a phase then under planning and scheduled to run in the Spring of 1977, just 6 months away, "should settle this in 1 month [of running]." I also put a bottle of French champagne (Moët) with the written label "Υ 9.5" pasted on in the refrigerator at the experiment's trailer.

Thus the year 1976, which was so disastrous for CFS in mid-summer, ended on a hopeful note.

VI E288/CFS $\mu\mu$II PHASE — PLANNING AND IMPLEMENTATION

It is well known that by searching for muons in the final state in hadronic interactions, one could reach much higher sensitivity than by searching for electrons. This involved putting absorbers just downstream of the interaction point to absorb all the hadronic debris from the interactions, reducing the rates of particles in the detectors by orders of magnitude. Furthermore, there would be no "neutral envelope" to worry about, making possible the placement of detectors much closer to the bending magnet and giving a factor of 3–5 increase in acceptance. Thus, the sensitivity for dimuons could be about two orders of magnitude higher than for dielectrons.