ERRATA

Observation of Prompt Like-Sign Dimuon Production in Neutrino Reactions. K. NISHIKAWA, D. BUCHHOLZ, B. C. BARISH, J. F. BARTLETT, R. BLAIR, Y. CHU, J. LEE, P. LINSAY, J. LUDWIG, R. MESSNER, P. MINE, F. J. SCIULLI, M. SHAEVITZ, E. SISKIND, D. EDWARDS, H. EDWARDS, H. E. FISK, Y. FUKUSHIMA, G. KRAFCZYK, D. NEASE, A. BODEK, W. MARSH, and O. FACKLER [Phys. Rev. Lett. **46**, 1555 (1981)].

The published paper presented evidence for a prompt signal in like-sign dimuon events produced in neutrino interactions. A total of 12 events were presented with a calculated nonprompt background of 1.3 events.

A recent reanalysis of the data resulted in the following changes. A close examination of the 12 events, with more stringent selection criteria, results in the removal of 2 events from the data sample.[1] A recalculation of the nonprompt contribution from pion and kaon decays yields a nonprompt background of 4.3 events. The old background estimate was lower primarily due to a mistake in the acceptance calculation. In addition, a small change resulted from the use of the latest bubble-chamber data on final-state hadrons produced in neutrino interactions. With all the newly available data, the systematic error in the nonprompt background is estimated[2] to be about 20%. In summary, 10 like-sign dimuon events were observed with a calculated nonprompt background of 4.3 events.

A corrected version of Table I of the article is given below. In order to facilitate a more direct comparison with other experiments, we are now normalizing to the number of all single-muon events; unlike the previous technique where the normalization was to single muons for which the hadron-shower direction pointed at the magnet. A calculation of the rates requires that the number of prompt dimuon events be corrected for geometrical acceptance. This acceptance must rely on a specific model. In the absence of such a model we have used a model in which the distribution of prompt dimuon events is the same as that of the nonprompt background. It has been determined that a model in which the prompt like-sign events originate from charm-anticharm production yields a similar acceptance.[2]

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[1]The first event was found to have a short track at the vertex, and with the current classification scheme would be a trimuon event. The second event had a muon track very close to the hole of the toroidal magnetic spectrometer resulting in a possible ambiguity in the sign of the second muon.

[2]K. Lang, Ph.D. thesis, University of Rochester, University of Rochester Report No. UR-90 (ER 13065-409), 1985 (to be published); K. Lang *et al.*, Nevis Laboratory Report No. R 1335, 1985 (to be published).

TABLE I. The number of single muons (1μ), like-sign dimuons ($\mu^-\mu^-$) and the calculated nonprompt background ($\mu^-\mu^-$ decay) events. ACC is the geometrical correction calculated under the assumption that prompt and nonprompt events have the same distributions. The rates have been corrected using ACC. The errors include the 20% systematic error in the nonprompt background subtraction.

Energy (GeV)	Events 1μ	Events $\mu^-\mu^-$	Events $\mu^-\mu^-$ decay	ACC	Prompt rate
20–100	22 670	1	0.6	0.70	$(2.5 \pm 6.4) \times 10^{-5}$
100–200	11 345	4	2.1	0.76	$(2.2 \pm 2.4) \times 10^{-4}$
200–300	4630	5	1.6	0.77	$(9.5 \pm 6.5) \times 10^{-4}$
Total	38 645	10	4.3	0.75	$(2.0 \pm 1.1) \times 10^{-4}$