

The Discovery of the b Quark at Fermilab in 1977: The Experiment Coordinator's Story

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Abstract. I present the history of the discovery of the Upsilon (Υ) particle (the first member of the b -quark family to be observed) at Fermilab in 1977 by the CFS (Columbia-Fermilab-Stony Brook collaboration) E288 experiment headed by Leon Lederman. We found the first evidence of the Υ in November 1976 in an early phase of E288. The subsequent discovery in the spring of 1977 resulted from an upgraded E288 — the $\mu\mu$ II phase, optimized for dimuons, with about 100 times the sensitivity of the previous investigatory dimuon phase (which had been optimized for dielectrons). The events leading to the discovery, the planning of $\mu\mu$ II and the running, including a misadventure (the infamous Shunt Fire of May 1977), are described. Some discussions of the aftermath, a summary, and an acknowledgement list end this brief historical note.

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