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Abstract of paper to be presented before the 287th meeting of the American Physical Society, June 24-26, 1948, at Pasadena, California.

The Detection of Light and Heavy Mesotrons Outside the Tank of the 184" Cyclotron

by

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The mesotrons artificially produced in the 184" cyclotron^x have been brought out of the cyclotron tank by means of a specially designed magnetic channel which bring mesotrons of $H \rho = 132,000$ gauss-cm. $\pm 12\%$ out of the field of 14,000 gauss at the target into a region of 4,000 gauss in a re-entrant chamber in the cyclotron wall. Both light and heavy mesotrons have been detected in this chamber. A measurement of the lifetime of the heavy meson appears possible in this arrangement. The writer is indebted to L. W. Alvarez for suggesting the magnetic channel method. This work was sponsored by the Atomic Energy Commission.

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^xGardner and Lattes, "Science", 107, March 12, 1948