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LETTER OF INTENT

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AntiMatter Physics at Low Energy (AMPLE)

Submitted to: FNAL Program Advisory Committee

Submitted by: B. E. Bonner (Rice Univ.) and L. S. Pinsky (Univ. of Houston)

The First Workshop on Antimatter Physics at Low Energy was held at FNAL last spring, April 10-12, with the stated purpose of gauging the interest in the physics that would be made possible by adding a variable energy pbar storage and cooling ring to the existing Accumulator at FNAL. The Workshop Proceedings are now published and include a concise collection of papers addressing the physics with pbars below 10 GeV/c that could be made available from the present antiproton source at FNAL. It is worth emphasizing that this is possible without major impact on the primary mission of the laboratory. Such a facility would include provisions for extracted cooled pbar beams as well as future internal target and colliding beam experiments. Specific experimental proposals would be facilitated by the existence of a reference design for such a facility. A central effort to produce such a reference design would be the logical next step. We are requesting the opportunity to present to this committee an overview of the physics arguments for such a facility; what we would require from the committee is "strong encouragement" to proceed with such a reference design leading to a formal proposal. The aid of the FNAL staff in drawing up this reference design would be essential. One or more formal proposals for specific physics experiments would be forthcoming.

Excellent summaries of the broad range of physics that will be discussed can be found particularly in the Workshop Proceedings talks by R. Jaffe, S. Brodsky, J. Donoghue, and M. Chanowitz. We look forward to the opportunity to present the case for proceeding to investigate the desirability of this project.

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WORKING GROUP
(4/18/86)

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