

will operate LAMPF. Many of the ideas and circuits for the proton linac are built into the electron prototype, and computer-controlled operation of the prototype was accomplished in March. The prototype will also investigate targeting for LAMPF because thin-target damage is almost identical for the two.

Prospective users of LAMPF will meet at Los Alamos on 20 June, right after the American Physical Society meeting there. Open to all interested scientists, the meeting will include talks by Louis Rosen, R. Ronald Rau (Brookhaven), G. Victor Beard (executive director of Associated Western Universities, Inc), George Igo (Los Alamos), Ken Crowe (Berkeley), Vernon Hughes (Yale).

An organizing committee will be elected to draft a charter for the users' organization and to submit a list of nominees for office. Election of officers and adoption of a charter will be considered at a future meeting.

Invitations are available from Fred Tesche at Los Alamos. Those who are not US citizens should inform Tesche.

—RHE

References

1. D. E. Nagle, E. A. Knapp, Rev. Sci. Instr. 38, 1583 (1967).
2. E. A. Knapp, B. C. Knapp, J. M. Potter, Rev. Sci. Instr. 39, 979 (1968).

The Tale of the Eta (Or More on C Invariance)

The asymmetry that wouldn't go away could almost be the title of a detective novel. This time, however, it describes the latest chapter in the CP-violation story. At the Washington APS meeting, Wonyong Lee and his Columbia collaborators (Mike Gormley, Emile Hyman, Tom Nash, John Peoples, Claude Schultz and Steve Stein) said that they had found a very small asymmetry in the decay of the η meson. If the asymmetry exists, it is evidence for violation of charge-conjugation (C) invariance in the electromagnetic interaction or some other intermediate interaction. Although the effect is small, three-standard-deviations worth, Lee feels their data is very suggestive of C violation. But to really be sure, they will have to do a new experiment.

In the spark-chamber experiment done at the Brookhaven AGS, the Co-

lumbia group observed some 40 000 events in which η decayed into π^+ , π^- and π^0 and 8000 decays into π^+ , π^- and γ . They calculated N^+ , the number of events for which the positive pion had more energy than the negative pion, and N^- , the number of events for which the negative pion had more energy than the positive pion. The asymmetry $A = (N^+ - N^-)/(N^+ + N^-)$ turned out to be $+1.5\% \pm 0.5\%$. In earlier experiments with 1351 events, Paolo Franzini and his collaborators (PHYSICS TODAY, August 1966, page 71) found $A = +7.2\% \pm 2.8\%$, and a CERN spark-chamber experiment with 10 665 events (PHYSICS TODAY, October 1966, page 85) found $A = +0.3\% \pm 1.0\%$.

Six months after the end of the experiment, Lee still hesitated to announce finding an asymmetry since the effect may disappear with further data. He feels that a more useful approach than quoting a value for A is to look at the experimental points far from the center of their Dalitz plot. These values, where the energy difference between positive and negative pions is large, are more likely to show an asymmetry than those in the middle of the plot.

Hybrid Magnets Will Need Less Power for Same Field

More intense magnetic fields for the same power input can be had by piggy-backing standard water-cooled solenoids with superconducting ones. Plans at Francis Bitter National Magnet Laboratory, MIT, foresee superconducting boosters that could add 100 kilogauss to any of the 25 conventional solenoids now available at the Bitter laboratory. Then, since the laboratory 10-megawatt power supply can be divided into four independently controlled blocks, one can have four simultaneous experiments in 200-kG fields or one experiment at more than 300 kG. With its present equipment the laboratory is limited to one experiment at more than 200 kG and a maximal field of 225 kG.

Superconducting magnets by themselves are useful and economical up to 125 kG even at large bores. At more intense fields, though, cost rises rapidly because one reaches the limiting current for the conductor to remain superconducting. Meanwhile conventional water-cooled coils are cheap at all fields but are limited by the power they require. Thus one operates the

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