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borne and his associates showed that the track structure in the emulsion was consistent with the monopole explanation, but not with the superheavy nucleus.

While this evidence appears convincing, researchers will remain skeptical until more data and hopefully more monopoles are available. For example, implausible though it may seem, an electrically charged particle with a Z of about 70 and a mass of 10,000 protons could also have caused the observed track. Some physicists, including Owen Chamberlain of the University of California's Lawrence Berkeley Laboratory who has had a chance to examine the experimental results, believe that there is a small but nonnegligible chance that a less massive charged particle could have caused the observed detector response. If the particle suffered one or more collisions that caused it to lose some of its charge as it passed through the Lexan, the damage would approximate the uniform damage expected for a monopole.

Other scientists, such as Luis Alvarez of the Lawrence Berkeley Laboratory who was involved in the search for monopoles in the moon rocks, want to know why previous attempts to find monopoles failed. More than one unsuccessful monopole hunter suggested that monopoles with the charge, mass, and velocity reported by Price and his colleagues ought also to have been detected in their experiments. It is important that this question have a satisfactory answer because the effective collecting power (measured in square meteryears) of the other experiments exceeds that of the balloon experiments by about a factor of 105. It is to be noted, however, that this large collecting power is based on the assumption of certain properties of monopoles that have not been verified.

The best answer would be to catch a monopole or at least obtain more monopole tracks. Price, Osborne, and their associates are looking into the possibility of an expanded balloon experiment embodying perhaps 50 balloons with 40 square meter detectors. Antarctica might be a good location for the search, they suggest, because the continuous sunshine in the summer there would enable balloons to be kept aloft for long periods.

Regardless of whether the present report of a magnetic monopole is confirmed by future experiments, it might be wise to recall what Dirac noted in his original paper: since the possibility of the existence of monopoles is not precluded by quantum mechanics, it would be surprising if nature did not make use of this possibility.

—ARTHUR L. ROBINSON

#### References

1. P. B. Price, E. K. Shirk, W. Z. Osborne, L. S. Pinsky, *Phys. Rev. Lett.*, in press.

#### **LETTERS**

(Continued from page 750)

and even with colleagues at MIT to vague hints that an interesting structure had been observed in the electron pair spectrum. Some colleagues interpreted my remarks as important news, others did not. B. Richter (a member of the SLAC experimental team), who was in Cambridge to give the Loeb lectures at Harvard, did not seem particularly impressed by my story—told at a cocktail party at the end of October. I now regret having been so ambiguous in my remarks and I apologize to him and others for not being more explicit.

In any case, it became obvious that the news was spreading through the physics community. On 4 or 5 November, a technician working for a different MIT-LNS group at Fermilab remarked in a telephone call that the Ting group at Brookhaven was preparing a champagne party to celebrate their discovery of a new particle. I repeatedly urged members of the Ting group to end this state of "secret publication." The first news of the beautiful SPEAR experiments reached me on 10 November, when D. Frisch relayed the gist of a telephone call he had received from SLAC, and I, in turn, alerted Ting, who was on his way there.

MARTIN DEUTSCH

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#### **Island Sanctuary**

The system of primary wildlife reserves which A. L. Sullivan and M. L. Shaffer examine in their article (4 July, p. 13) is an essential system for the ensuring of a diversity of plant and animal species in the future. They rightly point out the need for a hierarchy in developing such reserves.

I should like to offer a reserve, an established sanctuary, a coral atoll in the South Pacific which is already dedicated to scientific research. This atoll is 5 kilometers in diameter, 700 meters from outer reef to lagoon, and 5 meters above sea level. Two hundred years ago it served as the center of a Polynesian kingdom.

For those who wish to work in an island biogeography environment, the sanctuary provides a unique opportunity. Scientists interested in working on the atoll are cordially invited to respond. No grants are available, but the committee will help in other ways and housing will be provided

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