

editorial

A new particle and a new agency

The highly significant discovery of the two new fundamental particles (see page 17) is a befitting way to celebrate the 75-year point in this century of remarkable progress in physics. To find a breakthrough of comparable importance, one must go back as far as 1947 when G. D. Rochester and C. C. Butler discovered the neutral kaon, the first of the strange particles.

In terms of working out the jig-saw puzzle of the nature of matter, the intervening years have brought feelings of increasing frustration, and perhaps even discouragement, on the part of high-energy physicists. This new, very tangible development has generated a surge of fresh enthusiasm and excitement in the field.

Whether or not the new kind of particle turns out to be some version of the intermediate boson or of "charmonium" (both predicted by theorists) or something totally unforeseen, the strong intuition of researchers in the field that important pieces were still missing from the puzzle has been affirmed and the insistence of high-energy physicists on the need to bear the expense of going to still higher energies has been vindicated.

By coincidence another important development in high-energy physics is also taking place at this time. The government funds for support of high-energy physics that had been administered by the now defunct AEC will this year become part of the budget of the new Energy Research and Development Administration. The high-energy funds of approximately \$130 million are part of the old AEC budget for physical research that totals almost \$300 million. This budget, now being transferred to ERDA, is the largest source of support for physics research in the country and directors of laboratories funded from this source are understandably quite interested to learn how this support will be administered by the new agency. Presumably nothing will definitely be settled about how the AEC physical research program will fit into ERDA until the new Administrator has had the opportunity after his confirmation to reach his own decisions. However, the White House tentatively proposes (see page 117) that the AEC program be administered as part of one of the six mission-oriented divisions that will be

responsible for most of the ERDA's activities. Specifically, physical research would come under the division entitled "Solar, Geothermal and Advanced Energy Systems." One might complain that, whereas physical research had its own division at the AEC (Division of Physical Research), in the proposed ERDA scheme it would be part of a division whose title does not reflect its presence. However, the scheme calls for the physical-research program to report directly to the ERDA Assistant Administrator who heads the division so that in practice the program remains at the same level in the hierarchy. An alternative scheme, which we understand is receiving consideration, is to create a special office of physical research off to the side of the six main divisions and reporting directly to the Administrator.

In any case, our experience with the excellent management of this program under the AEC argues that the selection of personnel for the top-level agency positions is more important than what organizational niche physics research finally occupies in ERDA. We are confident that the President's office will seek to continue the practice so successfully pursued with the AEC of proposing highly qualified engineers and scientists for the assistant administrator posts at ERDA.

The new particle discovery reminds us once again of what an outstandingly excellent program in high-energy physics we have been able to achieve in the US. An essential factor in this achievement was the competent management of the AEC. To ERDA, on behalf of the physics community, we offer pledges of cooperation and our best wishes for success in emulating the example of its predecessor in fostering the growth of important areas of basic research as part of a larger mission of vital significance to the nation.

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