

swered by a marked increase in numbers of very large optical telescopes at superior sites. As Allen Sandage has stated in his recent Halley Lecture on Observational Cosmology (*The Observatory* 88, 91-106, 1968), "To fail because of lack of facilities is to lose the promise of the subject, which is nothing less than the time scale of genesis."

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Reviews, alerts and archives

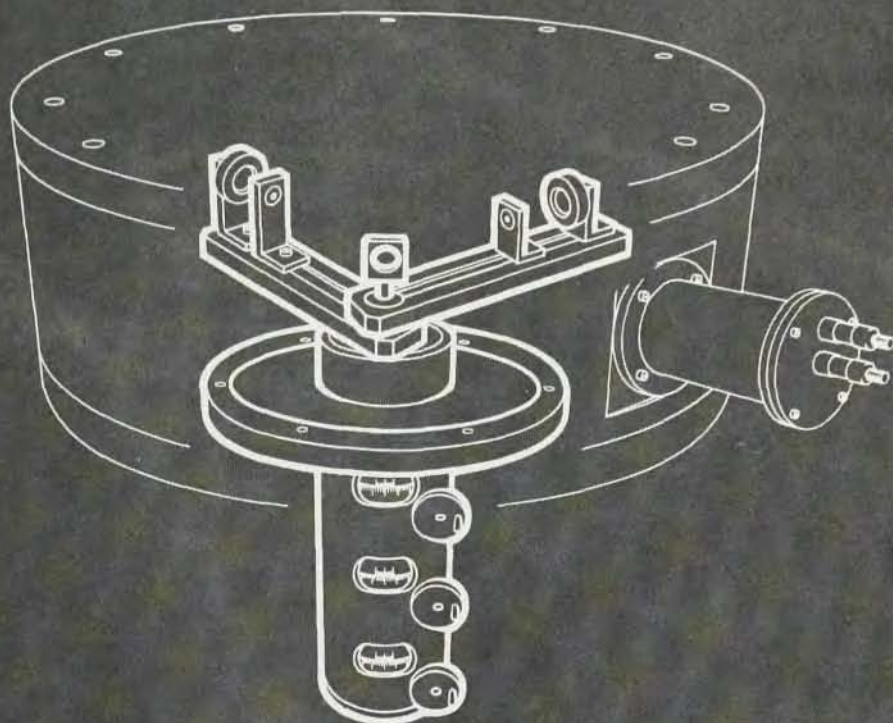
In his article on reviews (*PHYSICS TODAY*, September, page 27) Conyers Herring called attention to the useful role that might be played by commissioned reviews written perhaps by review fellows (to suggest a title). This is an excellent idea, which I would like to see extended as well to shorter reviews in the specialist journals (among which include the sections of *The Physical Review*). These mini-reviews would be invaluable to the specialist and to authors of the more encyclopedic review and would be much easier to prepare.

A deliberate policy of commissioning reviews with a rational choice of topics cannot fail to improve on the uneven and haphazard performance of the *Reviews of Modern Physics*. Let us hope, however, that the recent statements by the editor elect do not imply, as they seem to, that the title should become *Data Reviews of Modern Physics*. There is a lot more to physics than the critical evaluation of measurements in well established fields as can be seen by looking at *Soviet Physics Uspekhi*.

Specialist book reviews should really go into the specialist journals where they can assume their proper length rather than being crammed into *PHYSICS TODAY*. British journals carry book reviews which are much appreciated.

In connection with retrieving articles, three simple reforms would help a great deal. Even if the key words are revamped later, a compulsory keyword set attached to titles now would make computer-assisted information retrieval much easier. (After all, any future system can absorb the old one in the computer program.) Full addresses (including the zip-code num-

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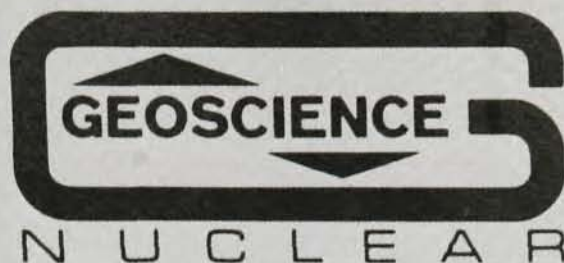
bers required for postcards on US addresses) would save having to burrow about in directories when sending a request card. Papers on clearly defined specialties with appropriate American Institute of Physics journals (for example plasma physics and *Physics of Fluids*) should be redirected to that journal. It is difficult to see why papers on plasma physics should be looked for in *Journal of Applied Physics* and *The Physical Review*, as well as *Physics of Fluids*. Incidentally, the sooner *The Physical Review* numbers become separate journals with individual names, the better. For example, we could make *Atomic and Molecular Physics* of number 1, *Solid State Physics* of numbers 2 and 3, *Low-Energy Nuclear Physics* of number 4, and *High-Energy Physics* of number 5. General theory should all go into *The Journal of Mathematical Physics* anyway.

Even when a paper has been tracked down, it is usually too detailed and complex for those who would skim it, yet lacking many details for the reader with the most interest. To satisfy both the reasonable alerting function and the archival aspect of scientific literature, I suggest the following: Let papers be submitted in two parts: a very full report with all relevant details (so it can be more easily followed and refereed) and a fair and useful summary of the salient points including appropriate illustrations and equations. The referee sees and judges both. Only the summary appears in the journal, which thus fulfills its alerting function better (the papers would be much easier to read) and reduces the cost per paper. The full report (probably as microfilm) goes into an appropriate archive, hopefully run by AIP. The author is responsible for guaranteeing, say 50 backup copies of the full report for his immediate audience. When his stock is exhausted, copies (possibly microfilm or microfiche) are bought by subsequent requestors from the archive at a fair rate.

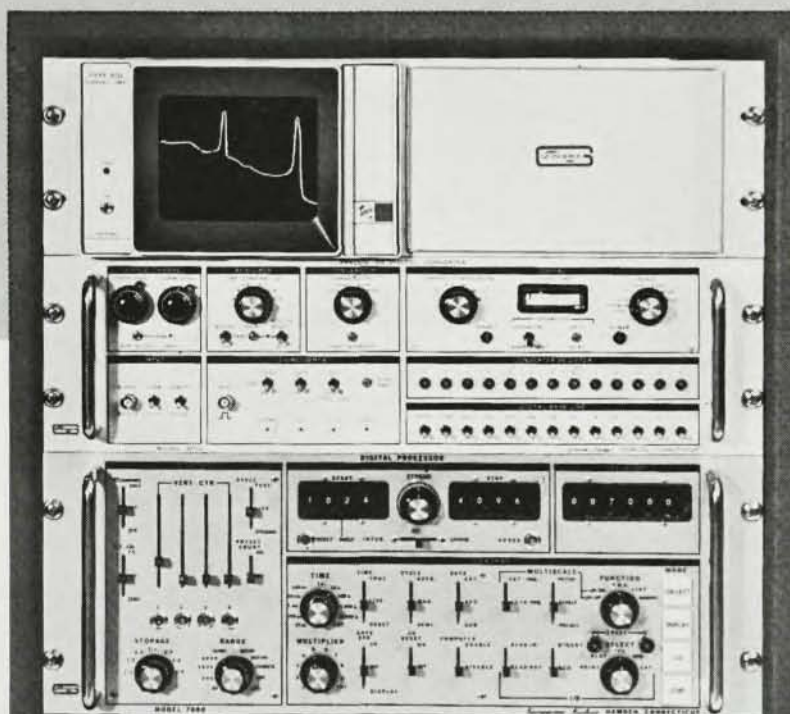
With this scheme the journal saves space and labor per article; the articles themselves will be easier to read, and yet more information is available than now to those who wish the gory details.

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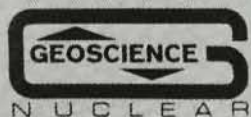
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