below the cloud chamber. By this means, a sudden expansion in the cloud chamber was more easily obtained than by the usual mechanical means of moving a piston.

At 80 atmospheres of nitrogen saturated with water vapour, the practicability of a high-pressure Wilson chamber was confirmed. We found that for an expansion ratio of only about 17 per cent, condensation occurred in an ionised atmosphere (radioactive material was brought near the chamber); for a greater expansion ratio a general cloud was always present, and for a smaller expansion ratio no visible condensation occurred even in the presence of strongly ionising substances.

We are now constructing a Wilson chamber of 8 cm. diameter to continue investigations which were suggested by the satisfactory preliminary results obtained with the apparatus just described.

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Feb. 18.

[1] Mott-Smith, L. M., *Rev. Sci. Instr.*, **5**, 346; 1934; and Brubaker, W. M., and Bonner, T. W., *Phys. Rev.*, **47**, 225, 1935. Description of a high-pressure Wilson chamber in which pressure can be increased to 20 atmospheres.

## Plea for the Preservation of a Scientific Library

THE object of this letter is to avert the threatened dispersal of a unique scientific library with historic associations.

Stephen Peter Rigaud, the most eminent historian of British science of his day and professor of experimental philosophy at Oxford from 1810 until 1839, formed a valuable working collection of books on physics, mathematics and astronomy, of which he made great use during the last decade of his life, when, as Savilian professor of astronomy, he was engaged on his great "Works and Correspondence of Dr. Bradley", 1831, and the much quoted "Correspondence of Scientific Men of the Seventeenth Century", published posthumously in 1841.

Rigaud's library is not only of unique value for the history of a third of the nineteenth century and of the first Radcliffe Observers, but it also includes earlier works as well. That this collection, even at considerable cost, should be kept together in its entirety for the benefit of future students, is the view of Exeter College of which Rigaud was a fellow, and was the view of those Radcliffe Trustees who purchased the collection for historical purposes about the time when the Duke of Marlborough, Sir W. Heathcote, Mr. W. E. Gladstone and Mr. Peel, Speaker of the House of Commons, were managers of that trust for charitable purposes. Also, but a few months back, it was the view taken by the late trustees, Lord Chelmsford and Lord Grey of Fallodon.

The solicitor now writes that the present trustees are contemplating a sale by auction. They have, it is true, given a first choice of books to the Bodleian Library and a selection of pamphlets to the Lewis Evans Collection. But the elimination of the remainder will seriously detract from the scientific value of these portions.

Such a dispersal is believed not to have been their original intention. Before the death of Prof. H. H. Turner it was, I believe, arranged that the entire collection would go to the Savilian professor; and quite recently an offer of the un-donated part of the collection, including many appropriate books on instruments, was made to the Lewis Evans Collection on the condition that the Bodleian should agree to place its recently acquired Rigaud books so as to restore the integrity of the whole library. This, however, the Bodleian found impracticable.

There is now a need for these books in Oxford as never before. The gift of the instruments of the Radcliffe Observatory to the new Museum for the History of Science is only half a gift, if the instruments are unaccompanied by the books of those who used them. The collection of Rigaud pamphlets in the Lewis Evans Collection cannot be adequately dealt with, without contemporary books of reference of their collector. The need of books of historical interest is urgent.

Soon after 1860, when the University Museum of Science was first founded, the Trustees transferred their general library there, to the great and lasting benefit of the University. Now that the University has founded a Museum of the History of Science for ordinary study and historic research, will not the Radcliffe Trustees reaffirm their original policy by adding books to the instruments, pamphlets and manuscripts of Hornsby and Rigaud with which they have endowed the new institution?

Even at this eleventh hour it cannot be too late for the Trustees thus to signalise the worth of their own Observers, and by conserving the whole of the Rigaud library, to earn the gratitude of future historians by giving instead of depriving them of the opportunity of doing for Hornsby, Rigaud and others, what Rigaud with his private library did for Hariot, Bradley and Newton.

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Feb. 27.

## The Concept of Time in Physics

IT would be in the highest degree ungrateful for me to cavil at Prof. Dingle's review of "The Serial Universe" in NATURE of February 9, and I have no intention of so doing. But his criticism of the immortality discussion—a criticism which has been made also by Prof. Stocks and Prof. Joad—arouses in me an uneasy feeling that the book has failed here to emphasise properly the salient points of the argument.

In all questions of continuity, the onus falls, of course, upon the contestant who asserts a boundary. The prisoner is presumed innocent until he has been proved guilty. That, indeed, is the only hope of observer 1, who is in the dock—on the circumstantial evidence of psychoneural parallelism and is pleading for the benefit of any vestige of doubt that may remain. But observer 2 is in a superior position. He is not even accused. He stands beyond the range of the old indictment.

The comment which has been made now is that observer 2, though unaffected by the death of observer 1, may, later on in his own time, encounter some death of a higher-order description. But here the law of the regress must hold. Observer 3, in his turn, would be unaffected by the death of observer 2. Thus, the receding ultimate observer must elude