

## Flying saucers

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1968 Phys. Bull. 19 393

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knowledge", but to expect a lifetime so engaged, while others, less fortunate or with more conscience, have to do as they are told, can sometimes be asking too much, except in the case of people obviously gifted so that employment in any other way would be wasteful.

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### Flying saucers

I must apologize for the hyperbole to which Dr D. S. Evans has drawn attention (*Physics Bulletin*, September 1968) in my statement that about 1925 I knew a married couple who sat up all night watching Venus.

The time was summer, the year probably 1926. In July of that year Venus was of magnitude  $-3.4$ , and about 11 July it rose at 01.40 GMT while sunrise was at 03.57 GMT. They first noticed the apparition that aroused their interest rising in the small hours of one day, as Venus would have done, and then they waited the whole of the next night for it to appear again, which it duly did.

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### SI omissions

We are currently being exhorted to convert to the use of SI units. This is, I feel, a good thing. However, there seem to me to be two omissions in the system.

Firstly, the range of prefixes representing powers of 10 ( $10^{-18}$  to  $10^{12}$ ) is inadequate. The mass of the proton, for example, is about  $10^{-27}$  kg, and the distance across the galaxy about  $10^{21}$  m. I would suggest the prefixes u, v, w, x, y, z, A, B, C, D, E, F for  $10^{15}$  to  $10^{48}$  respectively, and z, y, x, w, v, u, t, s, r, q for  $10^{-21}$  to  $10^{-48}$  respectively. Names to suit these prefixes can no doubt be invented if required.

Secondly, there is no unit of volume other than  $m^3$ , and the preferred multiples of this leap in steps of  $10^9$ . A possible name for such a unit might be the euclid, abbreviated E, unless this is required for the unit of area.

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## News and comment

### Industry and the universities

By Professor J. C. Anderson, F Inst P

Government policy is inevitably like an axe in the hands of a woodman rather than a scalpel in the hands of a surgeon. The policy recommended by the Committee on Scientific Manpower of pressing the 'best' science and engineering graduates straight into industry after graduation could very well result in the felling of the whole tree of university research.

A university has the dual functions of education and training and, if it is to do this effectively, it is important that its graduates should have contact with real problems of practical importance to industry in the course of their professional training. The average academic is well aware of this fact and will generally be most receptive to suggestions involving direct cooperation with industry. This is not to say, however, that university research should either be immediately orientated directly to industrial needs or die. In all areas of science and technology, it is virtually impossible for a student to reach the frontiers of knowledge in any part of his subject in his first degree course. His postgraduate studies are intended to extend his knowledge to the frontier in his particular field, and his research

will necessarily include training in its techniques. It is from amongst these frontiersmen that the innovators will be drawn.

Thus university research has an important educational function to fulfil. Nevertheless, within this limitation, much could be done to make it more relevant to the needs of industry if only these needs were clearly stated. But they are not, and the academic faces the problem of choosing his research line in the face of a massive industrial indifference. He must, therefore, take the initiative and teach industry that scientific research in a university can make real contributions to the solution of industrial problems and to the improvement of products. At the same time he must learn what are the current industrial problems which relate to his research field, and be prepared to consider whether his research programmes can be re-orientated to match.

None of this can be done by staying in one's own laboratory or office. A regular schedule of yearly visits to laboratories and factories relevant to one's research interests can do wonders. Encouraging industrialists to visit the university laboratories, through the medium of personal invitations, open days and the holding of conferences and symposia, is equally helpful. Furthermore