According to the catalogue of John Scott, of Merriott, Somerset, dated 1868, it is a very old variety, having been cultivated for several hundred years. In Dr Hogg's Fruit Manual (1884), a standard work of reference, it is said to be a first-rate kitchen apple, from October to January, a good bearer and one of the strongest and most vigorous growers; it is very large, bright green except where exposed to the sun which causes it to be striped with crimson. It is mentioned in Parkinson's classic 'Paradisi in Sole Paradisus Terrestris: or a Garden of all sorts of pleasant flowers which our English ayre will permit to be noursed up .. Collected by John Parkinson, Apothecary of London .. 1629.' It would be quite possible for such a highly-esteemed apple to be in the orchard at Woolsthorpe (which is only a mile or so from the Ermine Street) in 1666, the date of the story of the origin of Newton's thoughts on Gravitation.

Intending visitors to Newton's birthplace, which is now in the care of the National Trust and open to the public, should note that there are two Woolsthorpes in that part of Lincolnshire. Only the 'wrong' Woolsthorpe (near Belvoir), which happens to be larger, is shown on the new Quarter-Inch Ordnance Map (1962). The 'right' Woolsthorpe is almost part of Colsterworth and should be approached from A.1., following the most northerly signpost to Colsterworth. It is disgraceful that the Manor House should be so difficult to find, it is well worth a visit.

Upton Hellions, A. P ROLLETT
Crediton,
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CORRESPONDENCE

To the Editor of the *Mathematical Gazette*

Relativistic Paradoxes

DEAR SIR,

In *The Mathematical Gazette* for May 1964, Professor P T Landsberg refers to a comment of mine [1] on Einstein's argument in his original paper on the special relativity theory [2] that (roughly speaking) a moving clock runs slower than a stationary one. I claimed that an equivalent argument showed that the *same* moving clock runs *faster* than the *same* stationary one. Professor Landsberg holds that both arguments show only that "the basic interval of a clock is shortest when it is judged in its own rest frame", so that there is no contradiction between them.

It would be helpful if he would now elucidate the immediately succeeding passage in Einstein's paper, in which it is *deduced from the argument in question* (thus showing, whether or not Einstein was mistaken in thinking such a deduction valid, the sense in which he understood that argument) that "a balance-clock at the equator must

go more slowly, by a very small amount, than a precisely similar clock situated at one of the poles under otherwise identical conditions". Does this mean only that the equatorial clock runs slow when judged in the rest frame of the polar one, and, similarly, the polar clock runs slow when judged in the rest frame of the equatorial one? If so, is it not strange that Einstein should have mentioned only the former consequence, and failed to see that he might thereby be misunderstood—as, in fact, if Professor Landsberg is right, he has been by everyone ever since?

I am sure your readers would be glad to know what really happens: would experimental tests (assuming instruments of unlimited sensitivity) made by observers at the pole and the equator, show that each clock appeared to run slow from the point of view of the other, or would both tests show that the equatorial clock was the slower worker? A clear solution of this problem, which again requires only "clear thought", would certainly "bring about a useful broadening in a student's intellectual equipment", particularly if the student happened to read Einstein's paper for himself. Will Professor Landsberg therefore not complete his exposition by providing it?

Yours faithfully,

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1. H. Dingle, *Nature*, **195**, 985 (1962).
2. A. Einstein, *Annalen der Physik*, **17**, 891 (1905).

Correction

Math. Gazette XLVIII (1964), *p.* 289.

line 7 from top and again line 8 from bottom.

for "lim" read "$\underline{\lim}$" or "lim inf"

ADDENDUM. Professor Satyanarayana asks us to say that copies of his book, *Angles and In- and Ex-elements of triangles and tetrahedra*, reviewed in February, 1964, may be obtained from him personally at

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