LETTERE ALLA REDAZIONE

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B

Remark on a Paper of L. Broglio.

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(ricevuto il 3 Giugno 1965)

In a paper recently published in the *Supplemento al Nuovo Cimento*, BROGLIO ⁽¹⁾ compares the relative merits of satellite drag measurements by means of an orbiting accelerometer and by orbital analysis, respectively. Referring to the latter method, he states that it « eliminates any possibility of studying the “short-period” density variations, in particular the local, often considerable variations connected with magnetic storms, “black-out”, etc., and the one-day period variations connected with the atmospheric bulge ». (Page 475, last paragraph; literal translation.)

As a person who has been responsible for studying in detail these short-period variations by the method which according to Broglio cannot do it, I felt I should point out the falseness of this statement. This, however, is entirely unnecessary, because a discerning reader of Broglio's statement has only to turn to page 476 to find

Fig. 2, which is the unauthorized reproduction of an illustration to my paper « Satellite drag during the events of November 1960 » ⁽²⁾ and which shows the drag perturbations caused by two magnetic storms as revealed by orbital analysis. As to the day-to-night variations caused by the diurnal bulge, the same method is particularly suited to their study; since the perigees of nearly all satellites move only very slowly with respect to the bulge—not with a one-day period, but with periods of several months, allowing an accurate mapping of density and temperature distribution around the globe ⁽³⁾. Actually, thanks to orbital-analysis studies, the diurnal variation can be considered to be the best known of all atmospheric variations connected with the sun.

⁽²⁾ L. G. JACCHIA: *Satellite drag during the events of November 1960*, in *Space Research II*, (Amsterdam, 1961), p. 747

⁽³⁾ L. G. JACCHIA: *The temperature above the thermopause*, in *Space Research V* (Amsterdam, 1965), p. 1152.

⁽¹⁾ L. BROGLIO: *Suppl. Nuovo Cimento*, 2, 471 (1964).