

LEHRSTUHL FÜR RAUMFAHRTTECHNIK
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SPACE MEDIA
Mr. R.L. Dowling

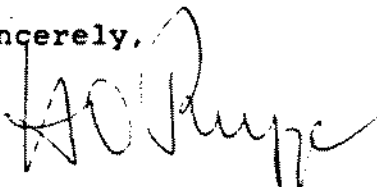
Hollywood, California
U.S.A.

Gentlemen,

your research as reported in IAA paper 90-630 "The Origin of Gravity-Propelled Interplanetary Space Travel" is interesting. Certainly, your results are true for engineers. But astronomers working in the field of celestial mechanics knew since a long time (I would think, at least since Tisserand 1889, "Criterion of identity") that solar-centered energy of e.g. a comet (they did not think of a space probe!) could change drastically due to e.g. a Jupiter encounter.

We investigated - and I still do! - mainly the manned Mars mission. In this context, gravitational maneuvering has (practically) no place. The so-called fast mission (which I do not think is a good choice) might apply Venus grave maneuvering on the homebound leg in order to improve Earth return conditions (at the price of increased mission duration). Some additional info can be found in [1, 2] below.

Sincerely,



- [1] H.O. Ruppe Introduction to Astronautics, Academic Press,
1966, Vol. 1, p. 136-155; p. 405-433
- [2] " 1967, Vol. 2, p. 159-164
- [3] F. Tisserand (1889) Traité de mécanique celeste, Tome I-IV,
Paris.

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Dear Fred,

here a request: I try to get a letter to any one of the authors of the gravity-propelled paper (front page inclosed, and also my letter, which is to Mr. Dowling - but any of the 4 gents would do!). Unfortunately, the letters keep coming back- could you help? Thanks a lot -