

Peer Review

SD 2805 Flight Mechanics

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Reviewer : Lore Ricquemaque

Technical work

All the aspects have been treated in this report and the subject seems to have been really well understood. Indeed all the results are reasonable and surely correct.

However, the reasons why some values (maximum altitude and maximum Mach number) cannot be reached are missing. The comments on the figures for the part 3 "Static performance" are for the most part descriptive and could be completed.

Generally speaking, the governing equations and the conditions seem to have been clearly understood regarding the results but they are too rarely explained. The methods used to obtain the figures should be set out since only the "matlab part" is currently explained.

The figures showing the control variables in part 4 "Minimum time to climb" are interesting and could be added also for the third path (minimum time to climb up to the maximum altitude) since it is different.

Content

The general structure of the report is apparent and natural, helping the reader to keep track but some theories, methods and results are not separated. Sub-parts could be added to separate them without disrupting the logical structure.

The abstract gives essential information but key results and main conclusions are missing. In the same way, a section with the main results could be added at the end. The introduction seems a bit too long compared to the full report and could surely be summed up.

Style

The overall report is clearly and properly presented (figures, titles, front size, references and pages numbers). The figures are always introduced in the report. The axes are generally labeled (with unities) and appropriate titles are chosen.

Nevertheless, the three graphs in part 2 presenting the control variables are less clear : the X-axis (supposedly the time) is not labeled. Besides, the green line is not always labeled and it is not clear what it is supposed to represent. The fuel consumption plot seems constant so the scale should be changed.

The paper is written in commendable English. The only quite poorly expressed sentence is at the beginning of the abstract "This is the report for the performance analysis project in the *Flight Mechanics* course".

Overall impression

The results of this paper seem correct so the subject had been clearly understood and properly treated. Nevertheless, some explanations over the method (equations, assumptions) and further comments over the figures would be appreciated.