

Comments

Referee #1

The paper provides a clear and useful overview of the moon-earth gravity assist from a trajectory design, navigation and spacecraft operations perspective.

A few suggestions are provided below, mainly to provide a few explanations which will help a broader audience to understand the paper.

Actionee Answer

1 use always the same format for the dates (e.g. 14 April 2023 (line 22)) throughout the paper. Different formats are use: e.g. caption Fig. 2, line 190, ...	AD	Fixed
2 Line 15-16 can be removed, they look out of scope in the abstract and the papers are references elsewhere in the article.	AD	Lines removed
3 Line 41: explain what cold- and hot-redundancy means	AD	Simplified sentence and just stated unit redundancies.
4 Line 50 to 55: add references to the listed instruments. Here are a few: JANUS: Palumbo et al 2025, MAJIS: Poulet et al. 2024, RIME: Bruzzone et al. 2015	AD	References to relevant instrument publications have been painfully added.
5 Line 66: explain what delta-V is	AB	Footnote was added
6 Line 104: Ariane 5 ECA: explain acronym (ECA)	AB	Footnote was added
7 Fig 2: Change 19th and 20th August to 19 and 20 August (to be consistent with the other dates throughout the paper)	AB	Fixed
8 Fig 2: S/C vel change into S/C velocity	AB	Fixed
9 Fig 3: the label "outgoing" would be better place on the left-hand side of the plot, close to the line	AB	The labels "incoming" and "outgoing" represent the connection with the heliocentric part of the trajectory. They take place when the distance w.r.t. the Earth becomes large, hence they are located on the right side of the plot
10 Line 127: Different "cases", scenarios might be better than cases	AB	Fixed
11 Line 129: explain what periselenium is	AB	this term was removed
12 Line 155: replace "see next section" with "see Sec. XXX" with ref to the section number.	AB	Fixed
13 Line 176: replace "the previous section" with "Sec. XXX" with ref to the section number.	FB	Fixed
14 Line 180: replace 1/1/2025 with 1 January 2025	FB	Fixed
15 Fig 5: in the caption: remove schedule after TCM. Write "data-cutoff" in a consistent way throughout the paper: either data cutoff or data-cutoff	FB	Fixed
16 Line 190: replace 16/07/2024 with 16 July 2024	FB	Fixed
17 Line 204: replace 31/07 and 06/08/2024 with 31 July and 6 August 2024	FB	Fixed
18 Line 205: correct reference to Fig. 7 (and not Fig. 6)	FB	Fixed
19 Line 211: caption Fig. 7: replace 31/07/2014 with 31 July 2024 and 06 August/2024 with 6 August 2024	FB	Fixed
20 Line 228, 231, 236, 237, 247, 254: correct date format	FB	Fixed
21 Line 247: change Km into km	AD	Fixed
22 Line 263: change closest approach + 5 minutes into CA+5min	AD	Fixed
23 Line 289: replace dry-run with rehearsal (it's a more broadly understood term)	AD	Fixed
24 Line 291: after "-X Sun pointing throughout the entire phase" add what that means, e.g. though using the high-gain antenna as a sun shield.	AD	Fixed
25 Line 300 and 301: replace figure with Figure	AD	Fixed
26 Line 302 and 306: caption Fig. 9 and Fig. 10: correct date format	AD	Fixed
27 Line 311: use flyby instead of swingby to be consistent throughout the paper.	AD	Fixed