| **Page** | **Section** | **Line** | **Type** | **Comment/ Rationale** | **Source of Comment (Name/Agency)** | **Suggested Disposition** | **Disposition****(Completed by Principal Editor)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 8-1 thru 8-nn | 8 |  | te | I'm still incomplete providing this section for the OCM, waiting for the content to settle. | David S. Berry / NASA | None at this time. |  |
| A-13 | Annex A, A1.1 | 2 | ed | Document Title (missing character) | David S. Berry / NASA | From: Orbit Data MessageTo: Orbit Data Messages |  |
| A-15 | Annex A, A2 | Title | ed | Document Title (missing character) | David S. Berry / NASA | From: Orbit Data MessageTo: Orbit Data Messages |  |
| A-15 | Annex A, A2.4 | Row 1  | ed | Missing version number | David S. Berry / NASA | From: Document VersionTo: Document Version 3 |  |
| B-17 | Annex B | Intro | te | Missing keyword: EC\_REF\_FRAME | David S. Berry / NASA | Add "EC\_REF\_FRAME" to the list of reference frames for which the Annex (or SANA registry) is applicable. Could potentially condense this to a wild card "\*\_REF\_FRAME". |  |
| B-17 | Annex B | Intro | ed | Reference update | David S. Berry / NASA | From: "reference [L1]"To: "reference [P-1]" |  |
| B-18 | B1 | para 1 | ed/te | Once the time systems move to the SANA, the discussion about MET and MRT might get lost in the shuffle. Should it be moved into another document section? | David S. Berry / NASA | Consider. |  |
| B-19 | B2 |  | ed/te | The table doesn't have an entry that is simply "ICRF", without the year designation, but we show it as an example value in Tables 3-2 and 5-3 | David S. Berry / NASA | Add "ICRF" with no year designations to the table (and draft SANA material) |  |
| B-19 | B2 |  | ed | MOON\_MEIAUE: refers to "[L11]" | David S. Berry / NASA | From: "[L11]"To: "[P-11]"This is a generic change from [Lnn] to [P-nn] throughout the document that you may have already completed. |  |
| B-19 | B2 |  | te | UVW: Says to use a comment field for the go-inertial epoch, but I think using a "REF\_FRAME\_EPOCH" keyword would be better than a comment and less prone to processing error. | David S. Berry / NASA | Consider. |  |
| B-20 | B2 |  | ed | The explanatory paragraph about NORAD TLEs might be better moved to the vicinity of Table 4-2 in preparation for this table moving to the SANA Registry. Either that, or incorporate the explanatory material into the "Meaning" column for TEME. | David S. Berry / NASA | Consider. |  |
| B-20 | B3 |  | ed/te | INSTRUMENT\_xx: In the "Meaning" column, it's not clear what the 'y' refers to. | David S. Berry / NASA | I think you want to change 'y' to 'xx'. |  |
| B-21 | B3 |  | ed/te | SC\_BODY\_xx: There are two entries in the table, with different "Meanings", but since the value is the same it's not clear why 2 rows are needed. It's actually not clear why we need a body frame of a different spacecraft at all, since all ODMs refer to a single spacecraft. | David S. Berry / NASA | Consider removing the second row. |  |
| B-23 | B4 |  | ed | The second through fourth introductory paragraphs should be moved to Table 6-8 in preparation for migration to the SANA registry. I'm not sure what to do about paragraph 1. | David S. Berry / NASA | Consider moving the text. |  |
| C-26 | Annex C | All | ed | I think these definitions should be moved into Section 1.5 rather than occupying an Annex. | David S. Berry / NASA | Consider moving them to the section 1.5, called "Definitions". |  |
| D-27 | D1 | para 5 | ed | The equation of ZOEB\_MIN refers to XOEB\_MAX and YOEB\_MAX, but based on the immediately preceding statement, the equation should refer to YOEB\_MED. | David S. Berry / NASA | Correct the equation. |  |
| D-28 | D1 | 1 | ed | Refers to "Optimally-Enclosing Box", which seems to have been replaced by the term "Optimally-Encompassing Box". | David S. Berry / NASA | From: EnclosingTo: Encompassing |  |
| D-28 | D1 |  | te | The purpose of the OEB\_PARENT\_FRAME is not entirely clear to me. It seems like it would need to be inertial (or at least indirectly tied to an inertial frame), but the definition in Table 6-4 allows many non-inertial frames, and it's not clear how the tie to an inertial frame would be achieved. | David S. Berry / NASA | It's quite possible I'm misunderstanding... |  |
| E-1 | E1 |  | te | In the various equations, rTarget does not appear to be used. | David S. Berry / NASA | If it is not used, it should be removed from the "Definitions". |  |
| E-1 | E1 |  | te | In the equation of Etarget , the angle $θ$(in $τ$Atmosphere($θ$)) is not defined; it's not mentioned in the definition of $τ$Atmosphere | David S. Berry / NASA | Provide definition if it's used, or remove from equation if it's not. |  |
| E-2 | E1 |  | ed/te | In the paragraph starting with "From the above equations...", it's not clear how the substitutions into the equation for VMabsolute are correct. The equation for VMabsolute is not provided. | David S. Berry / NASA | Provide equation for VM absolute based on the Definitions provided in this section. |  |
| E-1, E-2 | E1 |  | ed | To reduce number of Annexes, combine with Annex D. | David S. Berry / NASA | Consider. |  |
| F-3 | Annex F |  | ed | Paragraph starting with "Figures Annex Fig. F-1..." and "Figure Annex Fig. F-3..." are irrelevant to ODM V.3. | David S. Berry / NASA | Remove these 2 paragraphs (the two paragraphs immediately preceding Fig F-1. |  |
| F-3 | Fig F-1 |  | ed/te | The OBJECT\_NAME is fictional, the OBJECT\_ID is not. (The fact that this is here is my prior error as Lead Editor.) | David S. Berry / NASA | From: 1998-057ATo: 1998-999A (a fictional #) |  |
| F-4 | Fig F-2 |  | ed/te | The OBJECT\_NAME is real, but the OBJECT\_ID is not. (The fact that this is here is my prior error as Lead Editor.) | David S. Berry / NASA | From: 1998-099ATo: 2000-028A |  |
| F-5 | Fig F-3 |  | ed/te | The OBJECT\_NAME is fictional, the OBJECT\_ID is not. (The fact that this is here is my prior error as Lead Editor.) | David S. Berry / NASA | From: 1998-057ATo: 1998-999A (a fictional #) |  |
| F-6 | Fig F-4 |  | ed/te | The OBJECT\_NAME is real, but the OBJECT\_ID is not. (The fact that this is here is my prior error as Lead Editor.) | David S. Berry / NASA | From: 1998-099ATo: 2000-028A |  |
| F-7 | Fig F-5 |  | ed/te | The OBJECT\_NAME is fictional, the OBJECT\_ID is not. (The fact that this is here is my prior error as Lead Editor.) | David S. Berry / NASA | From: 1998-057ATo: 1998-999A (a fictional #) |  |
| H-13 |  |  | ed/te | Text starting with "Annex Fig. H-1..." and ending with "'CCSDS\_OEM-VERS=2.0' must be specified." is irrelevant for ODM 3.0. | David S. Berry / NASA | Delete cited text. |  |
| H-14 | Fig H-1 |  | ed/te | I think we don't need to worry about ODM V.1 any more. | David S. Berry / NASA | From: existing captionTo: "OEM Example with No Acceleration, No Covariance". |  |
| H-15 | Fig H-2 |  | ed/te | I think we don't need to worry about providing examples in the book about ODM V.1/ODM V.2 differences any more. | David S. Berry / NASA | From first comment, remove "MUST BE OEM VERSION 2.0" |  |
| H-15 | Fig H-2 |  | ed/te | I think we don't need to worry about version differences in examples any more. | David S. Berry / NASA | Remove "Version 2" from the caption. |  |
| H-16 | Fig H-3 |  | ed/te | I think we don't need to worry about version differences in examples any more. | David S. Berry / NASA | Remove "Version 2" from the caption. |  |
| H-16 | Fig H-4 |  | ed/te | I think we don't need to worry about version differences in examples any more. | David S. Berry / NASA | Remove first comment in the header "<COMMENT>THIS EXAMPLE CONFORMS...>Also, Remove tail end of second comment, specifically, remove "CAN ONLY BE OEM VERSION 2.0". |  |
| K-30 | K2.1 |  | ed/te | Requirement numbers were added to requirements in K2.2 and K2.3, but not K2.1 | David S. Berry / NASA | Add requirement numbers to requirements in K2.1 (i.e., the Primary Requirements). |  |
| K-31 | K2.3 |  | te | Requirement DC4 has an "N" for "OEM?" In my experience OEMs are in fact used for purposes other than exclusively predicts generation. | David S. Berry / NASA | On DC4, change "N" to "Y" for OEM. |  |
| K-31 | K2.4 | 2 | ed | Refers to "three recommended messages". | David S. Berry / NASA | From: "three"To: "four" |  |
| K-32 | K3 | 1 | ed/te | Refers to "OPM, OMM, and/or OCM" but the title only deals with OPM and OMM. | David S. Berry / NASA | Change title to include OCM, or remove OCM from first sentence. NOTE: The first sentence is the only one that refers to OCM, so if that's meant to be included, the full section will need to be revised. |  |
| L-34 | L1 |  | ed/te | Row 5) add 6.2.3 to the Section list | David S. Berry / NASA | Add 6.2.3 to the section list |  |
| L-34 | L1 |  | ed/te | Row 8)  | David S. Berry / NASA | Change 7.5 to 7.5.5 |  |
| L-35 | L1 |  | ed/te | Row 11) and 12) | David S. Berry / NASA | Will need to be modified when annexes are moved to SANA. |  |
| M-36 | Intro |  | ed/te | Change to reflect current document | David S. Berry / NASA | From: "ODM 1.0 and ODM 2.0"To: "ODM 2.0 and ODM 3.0" |  |
| M-36 | M1 |  | ed/te | Item 1: Change to reflect OCM | David S. Berry / NASA | From: Mean-ElementsTo: ComprehensiveFrom: (OMM)To: (OCM) |  |
| M-36 | M1 |  | ed/te | Items 2 through 10 are obsolete | David S. Berry / NASA | Remove list items 2 through 10. |  |
| M-37 | M1 |  | ed/te | Items 11 through 12 are obsolete | David S. Berry / NASA | Remove list items 11 through 12. |  |
| M-37 | M2 |  | ed/te | Item 1 should be modified to reflect movement of Annex material to SANA | David S. Berry / NASA | Modify item 1 accordingly |  |
| M-37 | M2 |  | ed/te | Items 2 through 10 are obsolete. | David S. Berry / NASA | Remove list items 2 - 10. |  |
| M-37 | M2 |  | ed/te | Here are a few items that I think could be in this section:* Several annexes were added. Some are required by CCSDS rule changes, and some are for the provision of supplementary material.
* Examples for OPM, OMM, and OEM that formerly appeared in Sections 3, 4, and 5 respectively have been moved to Informative Annexes.
* The "Checklist ICD" that was added in ODM Version 2 has been removed. It is replaced by the material that can be specified in the Orbit Comprehensive Message.
 | David S. Berry / NASA | Consider adding these to M2. There may be more, but these are a start. |  |
| N-39 | N2 |  | ed | The reference for ODM originators refers to an Annex Q which is not in the document. | David S. Berry / NASA | From: Q-17To: P-17 |  |
| N-40 | N2 |  | te | The text in "red" can be replaced by a reference to our "Orbit Centers" SANA registry. | David S. Berry / NASA | Add "Orbit centers" to the list at the top of the page, and delete the red text. |  |
| N-40 | N2.1 |  | ed | The "Patent Considerations" are a separate class, not a SANA registry consideration. | David S. Berry / NASA | From: N2.1To: N3 |  |
| P-43 | [P-1] |  | ed | The document number 500.0-G-3, Issue number 4, and issue date are inconsistent. NOTE: The CCSDS Editor will take care of document numbers and Issue number consistency when the document is published, so we don't need to worry about it. Best to refer to the most recently published version of the Green Book. | David S. Berry / NASA | From: Issue 4To: Issue 3From: May 2018To: May 2010 |  |
| P-43 | [P-2] |  | ed | Issue date is incorrect. | David S. Berry / NASA | From: July 2014To: April 2014 |  |