| **Page** | **Section** | **Line** | **Type** | **Comment/ Rationale** | **Source of Comment (Name/Agency)** | **Suggested Disposition** | **Disposition****(Completed by** **Principal Editor)** |
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| 5-3 | 5.2.2.2 | 3 | Te | Suggest updating this content to incorporate recent changes to M/O/C content in ODM. | Dan Oltrogge/NASA | Consider updating. |  |
| 5-1 | 5.1.5 | 8 | Ge | New NAV WG Appendix ordering | Dan Oltrogge/NASA | Update. |  |
| 5-3 | 5.2.2.4 | 1 | Te | Recommend deleting: “Where one or more duplicate time tags are discovered, the former value(s) shall be supplanted by the single latter entry.” | Dan Oltrogge/NASA | Already stated that duplicate time tags shall not be used. |  |
| 5-3 | 5.2.2.8 | 0 | Te | Suggest adding “Within an OCM data block, all time-tags must adhere to either relative time, or absolute time, for the entirety of that data block. Relative and absolute time shall not be used within the same data block.” | Dan Oltrogge/NASA | Consider. |  |
| 5-3 | 5.2.3.2 | 2 | Te | Is there a reason that this format doesn’t reference Section 7.7.9? | Dan Oltrogge/NASA | Consider. |  |
| 5-4 | 5.2.4.4 | 3 | Te | Suggest considering latest ODM content (from received comments), “NOTE 1 – For some keywords (OBJECT\_NAME, OBJECT\_DESIGNATOR) there are no definitive lists of authorized values maintained by a control authority; References [3] and [11] and the organizations provided on the SANA Registry (ANNEX B, Section B1) are the best known sources for authorized values to date.” | Dan Oltrogge/NASA | Consider. |  |
| 5-5 | Table 5-3 | ~10 | Te | Suggest adding “ORIGINATOR\_EMAIL” in step with requested ODM enhancement. | Dan Oltrogge/NASA | Consider. (in fact more generally, suggest considering each of the requested enhancements on the ODM for possible incorporation into ADM). |  |
| 5-6 | Tab 5-3 | ~10 | Te | Suggest adding new “Next\_LEAP”TAIMUTC” and other LEAP sec  | Dan Oltrogge/NASA | Consider. |  |
| 5-1 | 5.2.5 | 5 | Te | Suggest moving 5.2.5.2 “The order of occurrence of these ACM Attitude State Time History keywords shallbe fixed as shown in Table 5-4.” To the above General Requirements section |  | Don’t need to duplicate this for all sections. |  |
| 5-6 | 5.2.5.5.2 | 5 | Te | Suggest that “The Attitude State Time History is based upon a unique attitude determination Solution” include explicit mention of ATT\_BASIS |  | Consider. |  |
| 5-8 | Table 5-5 | 4 | Te | Curious why drag coefficient is necessary here? |  | Consider removing. |  |
| 5-9 | 5.2.7.4 | 3 | Te | Consider incorporating explicit list of “COV\_BASIS”  |  | Consider. |  |
| 5-6 | 5.2.5.5.2 | 0 | Te | Wouldn’t you also want to include ATT\_TYPE here? |  | Consider. |  |
| 5-9 | 5.2.7.4 | 0 | Te | Wouldn’t “COV\_TYPE” be useful here as well? |  | Consider. |  |
| 5-9 | 5.2.7 | 0 | Te | Would it be useful to include the text that was added to the ODM, “**6.2.6.5** Where multiple covariance time history data blocks are provided for the same COV\_BASIS and COV\_BASIS\_ID, the top-most depiction shall be adopted as the true or master depiction.” ? |  | Consider. |  |
| 5-9 | 5.2.7.7 | 1 | Te | Showing my ignorance of attitude quaternion covariances, but it’s unclear to me how the off-diagonals are not provided – suggest a picture of what the covariance contains, akin to the picture in the OCM. |  | Consider clarifying and adding picture(s) to “Values in the covariance matrix shall be only main diagonal elements provided ona single line directly following the time tag specification. Off-diagonal elements may bedefined in a user-defined block.” |  |
| 5-10 | 5.2.8.2 | 3 | Ge | Suggest moving “The order of occurrence of these ACM Maneuver Specification keywords shall be fixed asshown in Table 5-7.” Into the General Requirements section |  | Consider. |  |
| 5-11 | Table 5-7 | ~15 | Ge | Suggest modifying MAN\_BEGIN and MAN\_END to be more descriptive that it contains time |  | Consider (e.g., MAN\_BEGIN\_TIME) |  |
| 5-11 | Table 5-7 | ~20 | Te | At Julie’s request, isn’t there more than one SC\_BODY frame (see SANA registry, SC\_BODY\_i) ? And each ACM Attitude Time History Block could use a different body frame? |  | Consider how this maps into your use of SC\_BODY in the ACM. |  |
| 5-12 | Table 5-8 | ~4 | Te | Is there an intention for the Attitude State Time History block to reference the Attitude Determination it was based upon (AD\_ID)? |  | Consider. |  |
| 5-13 | Table 5-8 | 2nd pg | Te | Regarding “SENSORS\_USED\_I”, I presume that there is an implicit requirement that the ordering of the noise and std deviations matches the ordering of “SENSORS\_USED\_I”, correct? |  | I wonder if it is worth explicitly stating that? |  |
| 5-13 | 5.2.10 | 1 | Ge | Would it be worth matching the latest ODM version, “A single section of User-Defined Parameters may be provided if necessary. In principle, this provides flexibility, but also introduces complexity, non-standardization, potential ambiguity, and potential processing errors. Accordingly, if used, the keywords and their meanings must be described in an ICD. User-Defined Parameters, if included, should be used as sparingly as possible; their use is not encouraged.” |  | Consider. |  |
| D-5 |  | 1 | Ge | Does “CCSDS\_AEM\_VERS = 2.0” need to move to version 3.0? |  | Consider. |  |
| D-5 |  | 2 | Ge | Suggest changing epochs to present day, e.g. 2021 or 2020. |  | Consider. |  |
| D-5 | D2 | Fig D-5 | TE | Is originator pointed to SANA “Organizations” registry? “GSFC FDF” does not seem to appear there. |  | Switch to a supported organization name |  |
| D-5 | D2 | Fig D-5 | Te | Recommend that we keep the new ACM and ODM consistent w.r.t. use of “INTERNATIONAL\_DESIGNATOR” and “OBJECT\_DESIGNATOR” |  | Consider. |  |
| D-6 |  |  |  | The official name for JAXA is Japan Aerospace Exploration Agency. Unclear to me whether the abbreviation can be used (JAXA). |  | For us to discuss. Convention seems to be that abbreviation is used (as is true in OCM as well), but as David notes, only about half of those are populated. |  |
| D-5 |  | Fig D-7 | Te | Remove [] around multipartite, per our agreement (as well as in the other examples). |  | Consider. |  |
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