| **Page** | **Section** | **Line** | **Type** | **Comment/ Rationale** | **Source of Comment (Name/Agency)** | **Suggested Disposition** | **Disposition**  **(Completed by Principal Editor)** |
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| 3-9 | 3.3.1.12 | Table 3-3 | ed/te | TRACK\_ID: Column M/O/C specifies that this keyword is conditional, but the condition for using it is not specified. | David S. Berry / NASA | Specify the conditions that apply for use of this keyword. Note that there are a few more keywords marked as "C" (conditional) where the conditions for use should be added. | Attempted to address as follows: “When a prior instance of the Metadata has been previously defined (see 3.3.1.12), this keyword may be used as a substitute for all keywords defined in this table (table 3‑3), including mandatory keywords, except for META\_START and META\_STOP keywords. The TRACK\_ID keyword shall be included in this scenario. An example use case is the transmission of real-time tracking data.” |
| 3-9 | Table 3-3 | Table 3-3 | ed | TRACK\_ID: About 2/3 through the Description, it says "(see 3.3.1.12)". But this table is part of section 3.3.1.12, so the instruction is self-referential and thus not very useful. | David S. Berry / NASA | A couple of options (a) remove the "(see 3.3.1.12)" instruction, or (b) specify more in more detail the part of 3.3.1.12 to which the user should refer. | Need to address some headings in that section. Shouldn’t the table be in its own section, as it is not a part of this one?  Addressed by adding a section just for table 3-3 |
| 3-9 | Table 3-3 | Table 3-3 | ed | TRACK\_ID: Could direct the user to Example G-23 | David S. Berry / NASA | Consider. | Added G-25 as example to real-time under section 3.3.1.11 (prior 12) |
| 3-9 | Table 3-3 | Table 3-3 | te | TRACK\_ID\_SEGMENT: I didn't quite understand from the Description (or from Example G-25) how/when to use this keyword. | David S. Berry / NASA | Can the "Description" be augmented a bit to better describe conditions for use? | Added a bit more of an explanation |
| 3-9 | Table 3-3 | Table 3-3 | ed/te | TRACK\_ID\_SEGMENT: M/O/C value is "O" but probably should be "C" | David S. Berry / NASA | Consider changing M/O/C value from "O" to "C" with condition that TRACK\_ID is used in the TDM. | The TRACK\_ID\_SEGMENT is actually OPTIONAL. The CSTS team mentioned they may not use it. Others that do not have external accounting may want to use it.  NO ACTION |
| 3-9 | Table 3-3 | Table 3-3 | te | PREVIOUS\_MESSAGE\_ID: the phrase "for this space object" is somewhat ambiguous in the context of TDM, which may have multiple participants. | David S. Berry / NASA | Perhaps consider changing the Description as follows:  From: "uniquely identifies the previous message from this message originator for this space object."  To: "uniquely identifies a related previous message from this message originator." | Accepted. Implemented. |
| 3-10 | Table 3-3 | Table 3-3 | te | NEXT\_MESSAGE\_ID: the phrase "for this space object" is somewhat ambiguous in the context of TDM, which may have multiple participants. | David S. Berry / NASA | See suggestion for "PREVIOUS\_MESSAGE\_ID" | Accepted. Implemented. |
| 3-10 | Table 3-3 | Table 3-3 | ed | DATA\_TYPES: Examples are all single data types. Add a comma separated example | David S. Berry / NASA | Consider adding something that fits easily in the examples cell in the table, e.g.,  "RANGE, CLOCK\_BIAS" | Added ANGLE\_1, ANGLE\_2. Suggested by J.M. |
| 3-10 | Table 3-3 | Table 3-3 | ed | TDM\_BASIS\_ID: last sentence use "for the entire data within the collection" | David S. Berry / NASA | Consider using "for the entire set of data within the collection" or "for the entire dataset within the collection" | Implemented: “for the entire set of data within the collection” |
| 3-13 | Table 3-3 | Table 3-3 | te | PATH\_m: It might be helpful to add something like "For most Tracking Data Messages, a PATH statement should be used", since there are only a few where it is not necessary to discern the signal path. | David S. Berry / NASA | Consider. (BTW I think I should have added something like this in TDM V.1 and V.2). | Conditional was added and the condition was when more than 1 participants are involved (resolving comment from J.M.). Added: “The PATH keyword may only be omitted when only one participant is defined.” |
| 3-13 | Table 3-3 | Table 3-3 | ed | PATH\_M: I think it would help a user to look examples G-11 and G-24 | David S. Berry / NASA | Consider. | Section 3.3.2 (modes) links to the examples. Should we do this again in the PATH\_m definition?  Not added |
| 3-19 | Table 3-3 | Table 3-3 | ed | Blank line between RECEIVE\_PHASE\_CT\_SCALE and TRANSMIT\_DELAY\_n keywords | David S. Berry / NASA | Delete blank line. | Implemented |
| 3-20 | Table 3-3 | Table 3-3 | ed | Extra "\_n\_" in SYSTEM\_CONFIG\_n\_START\_n | David S. Berry / NASA | Based on the convention, the "\_n" at the end here is a duplicate that should be removed. | Correct!  Was already corrected |
| 3-21 | Table 3-3 | Table 3-3 | ed/te | DATA\_QUALITY keyword | David S. Berry / NASA | Suggest referring reader to see Example G-21 for an example of using the DATA\_QUALITY indicators on the tracking data record lines. | Agree. Added |
| 3-22 | Table 3-3 | Table 3-3 | ed/te | CORRECTIONS\_ORDER\_n | David S. Berry / NASA | Suggest referring reader to see Example G-26 for an example of using the DATA\_QUALITY indicators on the tracking data record lines. | Agree. Added |
| 3-22 | Table 3-3 | Table 3-3 | ed/te | CORRECTIONS\_APPLIED\_n, CORRECTION\_TIMETAG\_OBS\_k | David S. Berry / NASA | Suggest referring reader to see Example G-27 for an example of using these metadata keywords. | Agree. Added |
| 3-23 | 3.3.1.13 | 1 | ed | Clarification | David S. Berry / NASA | From: Correction values shall have been added to the corresponding data when corrections have been applied.  To: Correction values shall have been added by the TDM producer to the corresponding data when corrections have been applied. | Agree. Implemented. |
| 3-23 | 3.3.1.13 | para 2, line 2-4 | ed/te | Clarification... remove ", only" | David S. Berry / NASA | From: The ‘\_n’ index shall be included to indicate the association with PARTICIPANT\_n, only when it is necessary to differentiate corrections attributed to different participants.  To: The ‘\_n’ index shall be included to indicate the association with PARTICIPANT\_n~~, only~~ when it is necessary to differentiate corrections attributed to different participants.  Rationale: Makes it sound like a violation to simplify coding by always including the indexer. | Agree. Implemented. |
| 3-24 | 3.3.1.13 |  | ed | CORRECTION\_RANGE: carryover in line 2 of data type from previous paragraph | David S. Berry / NASA | From: MAG  To: RANGE | Corrected with a previous comment |
| 3-24 | 3.3.1.13 |  | ed | CORRECTION\_ABERRATION\_DIURNAL\_ANGLE\_1/2, lines 2-3 | David S. Berry / NASA | From: represents an angle correction  To: represent angle corrections  This makes it consistent with the wording for the data type immediately above. | Agree. Implemented. |
| 3-25 | 3.3.1.14 | para2, line6 | ed | Typo | David S. Berry / NASA | From: delinieated  To: delineated | Accept. Implemented |
| 3-25 | 3.3.1.14 |  | ed | For consideration... The use of "UpperCamelCase" in the System Configuration Parameters could potentially be confused with the use of lowerCamelCase in the XML structural keywords (case difference was chosen to highlight the fact that they are not part of the TDM vocabulary). | David S. Berry / NASA | Question: Is there a rationale for using UpperCamelCase for the System Configuration information? | Similar comment from J.M.  Need to discuss if all CAPS is preferred. Was intending to differentiate from keywords.  Using all CAPS, per Nav WG input 5 Nov 2024. |
| 3-27 | 3.3.1.14 | Table 3-4 | ed | Table organization | David S. Berry / NASA | Consider alphabetizing the parameters in the table | **DONE** |
| 3-27 | 3.3.1.14 | Table 3-4 | te | Parameter "Absorption\_Normalization\_Applied" | David S. Berry / NASA | Shouldn't this be included in the set of CORRECTION keywords? | CORRECTION\_\* keywords should have an associated value provided, then there is an indication of if those were applied by a different keyword. Are you suggesting that a value be provided, or that we update the CORRECTIONS\_APPLIED\_n keyword?  Not added |
| 3-28 | 3.3.1.14 | Table 3-4 | te | The parameters "Astrometry\_Catalogue" and "Photometry\_Catalogue" seem like metadata keywords. | David S. Berry / NASA | Compare for example, the ODM and CDM "CATALOG\_NAME" keyword. | Changed to ASTROMETRY\_CATALOG\_NAME  PHOTOMETRY\_CATALOG\_NAME |
| 3-28 | 3.3.1.14 | Table 3-4 | ed/te | Consider using "Catalog" instead of "Catalogue" for "Astrometry\_Catalogue" and "Photometry\_Catalogue" | David S. Berry / NASA | While both "catalog" and "catalogue" are acceptable English spellings, we have ODM and CDM precedent. Consider how in the future these would fit into the "Navigation Composite Message" concept. | Accept.  Implemented with prior comment |
| 3-28 | 3.3.1.14 | Table 3-4 | te | RCS\_MIN and RCS\_MAX comments | David S. Berry / NASA | These are in the UpperCamelCase System Configuration Parameters section, so perhaps should be specified in UpperCamelCase (Rcs\_Min, Rcs\_Max). On the other hand however, these are data section keywords in the ODM B-3 and CDM P-1.1. Clearly they have a different technical meaning in the TDM, but maybe they should be in the Metadata section of the TDM? Consider how in the future these would fit into the "Navigation Composite Message" concept. | These can change from observation to observation and need to be maintained in the data section.  WRT UpperCamelCase, we are changing the parameters to all CAPS, per agreement with other comment.  Partial Accept. Implemented with a prior comment |
| 3-28 | 3.3.1.14 | Table 3-4 | te | It's not clear how the "Sensor\_Offset" parameter is to be used... does it require specification of an ADM\_MSG\_LINK\_n keyword? If not, how is the sensor offset frame specified? | David S. Berry / NASA | May need to specify how to link the offsets to the frame. | TODO  Made and attempt  Looks like it works |
| 3-33 | 3.4.1 |  | ed/te | The small diagram that appears above Table 3-5 does not mention the "indicator symbol". | David S. Berry / NASA | Two options, I think:  1. add "indicator" after "keyword = timetag measurement"  or  2. Delete the simple diagram and associated note, leaving Table 3-5 which contains all the relevant detail. | Accept. Added option #1, with a comment that the indicator is optional |
| 3-39 thru  3-43 | 3.5.1 | Table 3-6, Table 3-7 | ed/te | CORRECTIONS\_n | David S. Berry / NASA | Instead of referring the reader BACK to 3.3.1.13 in the metadata section, the CORRECTIONS\_n should appear in the Data keywords, and the text of 3.3.1.13 should be moved into this section. Just as with the other Data Section Keywords. Also note that CORRECTIONS\_n does not appear in Annex A, the ICS. | CORRECTION\_ keywords are defined in that section, which can be used as metadata. CORRECTIONS\_n keywords have units per each correction they represent. Perhaps we can just point to the definition of the CORRECTIONS\_n keyword to avoid confusion.  Implemented this.  Added to ICS |
| 3-39 thru  3-43 | 3.5.1 | Table 3-6, Table 3-7 | ed/te | DIFF\_FREQ from this Table does not appear in Annex A, the ICS | David S. Berry / NASA | Add to Annex A | TODO: add to ICS  REMOVED, but added FDOA to ICS |
| 3-39 thru  3-43 | 3.5.1 | Table 3-6, Table 3-7 | ed/te | OBS\_COVARIANCE from this Table does not appear in Annex A, the ICS | David S. Berry / NASA | Add to Annex A | TODO: add to ICS  ADDED |
| 3-44 | 3.5.2.3 | next to last | ed | Typo | David S. Berry / NASA | From: itegrated  To: integrated | Corrected |
| 3-45 | 3.5.2.6 | 12 | ed | Typo | David S. Berry / NASA | From: pre-coordinated  To: pre-coordinate | Reject. The sentence seems to read fine.  2nd instance. CORRECTED |
| 3-47 | 3.5.2.8 | 1 | ed | Typo | David S. Berry / NASA | From: Metdata  To: Metadata | Corrected with a prior comment |
| 3-55 | 3.5.9.5 | para2 | te | Not a major concern right now, but at this point I'm not sure how to accomplish the data quality symbols in XML. | David S. Berry / NASA | None currently... I need to try a few things out. | KEEP AS NOTE |
| 3-55 | 3.5.9.6 | 2 | ed | Two typos. | David S. Berry / NASA | From: "eclosed", "braquets"  To: "enclosed", "brackets" | Removed description while addressing other comment.  OBE |
| 3-2 (the 2nd one) | after 3.5.9.9 | Table 3-8 | te | Signal\_SNR | David S. Berry / NASA | This seems like it should be added to the Data Section | System status updates are provided in the data section. These are not direct observables used for orbit determination (potentially could but no one suggested its use). Rather this parameter provides status of the system collecting observables used for OD.  No Action |
| 3-3 (the 2nd one) | after 3.5.9.9 | Table 3-8 | te | Wind\_Speed | David S. Berry / NASA | This seems like it should be added to the Data Section | Same as prior comment |
| 3-4 (the 2nd one) | after 3.5.9.9 | Table 3-8 | te | Wind\_Direction | David S. Berry / NASA | This seems like it should be added to the Data Section | Same as prior comment |