| **Page** | **Section** | **Line** | **Type** | **Comment/ Rationale** | **Source of Comment (Name/Agency)** | **Suggested Disposition** | **Disposition**  **(Completed by Principal Editor)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1-2 | 1.4 |  |  | Add reference: Fundamentals of Spacecraft Attitude Determination and Control, authors: F. Landis Markley and John. L. Crassidis, Publisher: Springer, 2014 | J. Thienel/NASA | suggestion |  |
| 5-4 | 5.2.3.2 |  |  | Define SPG4 and include a reference. | J. Thienel/NASA | suggestion |  |
| 5-5 | 5.2.3.2 |  |  | Provide a reference for Draper Semianalytic Satellite Theory | J. Thienel/NASA | suggestion |  |
| 5-6 | 5.2.5 |  |  | Add text describing an ephemeris as either definitive or predictive (or both) | J. Thienel/NASA | suggestion |  |
| 5-8 | 5.3.4 | 27 |  | Change U (with overbar) to **u** for consistency. State that **u** is a unit vector. | J. Thienel/NASA | fix |  |
| 5-8 and 5-9 |  | 32 |  | Remove the equation relating U and U’. The equation appears on p. 5-9, and needs to be corrected. The standard quaternion multiplication symbol is an x with a circle around it, not \***.** The quaternion conjugate is not QT . It is generally written as Q\* and is {cos(phi/2),-**u** sin(phi/2)}. Equation should be written as:  **x**f = Q x **x**i x Q\*  Where ‘x’ should be the quaternion multiplication symbol (x with a circle around it). **x**f is the vector in the body frame, **x**i is the vector in the inertial. These vectors are defined at the top of p. 5-9. | J. Thienel/NASA | fix |  |
| 5-8 | Last equation |  |  | Correct the definition of the conjugate (see above). Q\*={cos(phi/2),-**u** sin(phi/2)}. Or Q\*={QC,-Q1,-Q2,-Q3} | J. Thienel/NASA | fix |  |
| 5-11 | 5.3.6 |  |  | After the end of the sentence following Euler’s equation add a comment that for spacecraft with devices that generate angular momentum, like reaction wheels, that additional angular momentum must be included in Euler’s equation. | J. Thienel/NASA | suggestion |  |
| 5-12 | 5.3.7 |  |  | Change the sentence before the 4 bullets. To propagate the attitude of a spacecraft without a gyro a simple algorithm could be followed. | J. Thienel/NASA | suggestion |  |
| 6-10 | 6.3.2 |  |  | Suggest adding a little more detail. Typical angle based sensors are sun sensors and earth sensors. | J. Thienel/NASA | suggestion |  |
| 6=10 | 6.3.4 |  |  | Star sensors now are typically autonomous and produce an attitude quaternion. Internally they use the location of stars in the FOV (and the magnitudes) to determine an attitude quaternion. So, the attitude quaternion from the star tracker becomes an attitude data type for use in an attitude estimation algorithm. So, another section could be added, or 6.3.4 expanded to cover autonomous star trackers. | J. Thienel/NASA | fix |  |
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