CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
160	Thomas Nagle GPC	Page: Para: 1.3	Adminstrative	Comment: Suggested Change: From: To: Eliminate the word "approval" from the first sentence. Rationale: Rationale is the ICC does not have approval authority	PO Resolution: Reject Rationale: 5/22/08: SE&I and WING to take to address this comment. 6/13/08: Reject - this comment is outside the purview of the ICWG. This issue is already beign discussed at the GPSW/CC level. Concurrence: Concur Rationale:	
221	Bilbey SE&I	Page: Para: 1.3	Adminstrative	Comment: ICC statement is different in IS-GPS-705 and 200 Suggested Change: From: Science Applications International Corporation has been designated Tthe Interface Control Contractor (ICC) and is responsible for the basic preparation, obtaining approval, distribution, retention, and Interface Control Working Group (ICWG) coordination of this IS in accordance with GP-03-001A. To: The Interface Control Contractor (ICC), designated by the government, is responsible for the basic preparation, approval, distribution, retention, and Interface Control Working Group (ICWG) coordination of the IS in accordance with GP-03-001. Rationale: Maintain Consistency between documents	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
260	Thomas Nagle GPC	Page: Para: 3.3	Adminstrative	Comment: Editorial on the last sentence of the third paragraph. Suggested Change: From: "Contrary to convention, a "0" is in-phase	PO Resolution: Accept Rationale: Concurrence: Concur	Concur (05/21/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				with the carrier and a "1" is 180 out of phase with the carrier." To: TO "Contrary to convention, a "0" is in-phase with the carrier and a "1" is 180 degrees out of phase with the carrier." Rationale: Editorial	Rationale:	
294	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: line 1 Suggested Change: From: To: add "and" before "L1C" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
295	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: para 2, line 1 Suggested Change: From: To: add "the" before "L1Cp" Rationale: readability	PO Resolution: Accept Rationale: Also add "signal" after L1Cp. Concurrence: Concur Rationale:	Concur (05/05/09)
296	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: para 3, line 1 Suggested Change: From: To: add "the" before "L1Cd" Rationale:	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
297	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: inconsistent format for BOC text throughout doc Suggested Change:	PO Resolution: Accept Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: make format consistent throughout document (i.e. use either BOC (x,y) or BOC(x,y) everywhere) Rationale: consistency	Concurrence: Concur Rationale:	
298	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: para 3, line 5 Suggested Change: From: To: add "they" before "are" and add "the" before "bits" and add "the" before "L1Cd" Rationale: readability	PO Resolution: Accept Rationale: Will add the words "the" as suggested. The word "they" is not needed. Concurrence: Concur Rationale:	Concur (05/05/09)
299	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: para 3, last line Suggested Change: From: To: insert "degrees" after 180 Rationale: clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
300	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: para 4, first line Suggested Change: From: To: insert "the" before "L1Cp" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
301	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: para 5, line 2 Suggested Change:	PO Resolution: Accept Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: insert "for" before "L1Cp" Rationale: readability	Concurrence: Concur Rationale:	
302	Charlton MITRE	Page: Page 30 Para: 3.3	Adminstrative	Comment: last para, line 1 Suggested Change: From: To: insert "they" before "are aligned" and insert "the" before "bits" Rationale: readability	PO Resolution: Accept Rationale: The sentence shall read as: "…sine-phasing, and so, are aligned with bits of the L1CP-code." Concurrence: Concur Rationale:	Concur (05/05/09)
307	Charlton MITRE	Page: Page 34 Para: 3.5	Adminstrative	Comment: line 1 Suggested Change: From: To: reword to read "… L1C CNAV-2 message structure utilizes …" Rationale: readability/clarity	PO Resolution: Reject Rationale: L1C message is referred to as CNAV-2. Correct as is. Concurrence: Concur Rationale:	Concur (05/05/09)
255	Thomas Nagle GPC	Page: Para: 3.2.1.6	Substantive	Comment: Delete alternatives 1, 2, and 3 from signal component phase relationship Suggested Change: From: To: Specify language in alternative 4 as only phase relationship, as issue is no longer TBR Rationale: This was concurred by GPS IIIA PM and Chief Engineer at LM GPS IIIA PMR. Most precision GPS positioning, velocity determination and timing systems as well as applications using carrier phase	PO Resolution: Reject Rationale: See comment #163 and 256. Concurrence: Concur Rationale: (05/11/09) GPC rejects PO resolution and in-line with our rationale provided for this comment, requests a more expanded explanation on why an option has not yet been selected. "Phase Relationship has not been finalized" opens several questions as to why	9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				require known signal component phase relationships for receiver		
222	Steve Brown LMCO	Page: 6 Para: 3.2.1.2	Critical	Comment: Suggested Change: From: The transmitted signal shall be Right-Hand Circularly Polarized (RHCP). For an angular range of ±14.3 degrees from boresight, the L1 ellipticity shall be no worse than 1.8 dB. To: The transmitted signal shall be Right-Hand Circularly Polarized (RHCP). For an angular range of ±13.8 degrees plus pointing error from boresight, the L1 ellipticity shall be no worse than 1.8 dB. Rationale: The original text with 14.3 degrees allows for up to 0.5 degree pointing error. LM historical performance for IIR/IIR-M has been much better than that with less that 0.1 degree pointing error. Redline allows LM to take advantage of better pointing error	PO Resolution: A/C Rationale: Defer. Space IPT (Soon Yi) has action to provide angular range required independent of pointing error. Concurrence: Concur Rationale: 11/18/08: Accept with modification - replace "boresight" with "nadir" and remove pointing error. Changes made real-time during ICWG. Concurrence received at ICWG.	
268	Thomas Nagle GPC	Page: Para: Gen	Critical	Comment: As part of the 200/705/800 ICWG comments I submitted was the following: "Comment: There is no document identifying the requirements redundantly repeated in 200/705/800 documents. Suggested Change: Provide a document of some kind identifying common/redund Suggested Change: From: To: Rationale: It's critical that changes to IS-GPS-200 originate in the IS-GPS-200 ICWG process, and not	PO Resolution: Reject Rationale: Duplicate of the original comment #104 made by GPA in the IS-GPS-200 CRM. Concurrence: Concur Rationale: GPC rejects PO Resolution as the comment was not answered. 8/26/09: GPC withdraws comment since duplicate with GPA Comment.	8/13/09: team maintains position to reject comment due to SE&I resource limitations.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				first initiated as part of a change to 705 or 800. The only way to ensure this does not happen is to modify the wording in 705 and 800 to refer to 200 to the maxim		
92	John Clark (for Raj Aggarwal) GPV	Page: Para: 3.2.1.8	Substantive	Comment: There is a statement that the time bias of the BOC 1,1 signal is of no consequence to us. I am not familiar enough with the spectrum seen by one of our receivers with the BOC signal present and absent to be positive that there won't be any effect on a mi Suggested Change: From: To: Rationale:	PO Resolution: Reject Rationale: As it is stated in this section, the bias term is only in relation to the equipment group delay as defined in this section. As it further explains, this bias term is of no concern because it is already included in the clock correction parameters that use Concurrence: Rationale:	9/1/09: sent email requesting concurrence. 9/8/09: John Clark has no recollection of comments. Sent email to Raj Agarwal.
270	Charlton MITRE	Page: page 6 Para: 3.2.1.1	Adminstrative	Comment: 2nd para, line 1 Suggested Change: From: To: add "the" before "20.69 MHz" Rationale: readability - consistent with word usage/style in 3.2.1.5	PO Resolution: A/C Rationale: The sentence shall now read "within a 30.69 MHz bandwidth". Concurrence: Concur Rationale:	Concur (05/05/09)
138	Bakeman Aerospace	Page: Para: 3.2.1.3	Critical	Comment: Recommend modifying the requirement for carrier phase noise. Suggested Change: From: The phase noise spectral density of the unmodulated carrier shall be such that a phase locked loop of 10 Hz onesided noise bandwidth shall be able to track the carrier to an accuracy of 0.01 radians Root Mean Square (RMS).	PO Resolution: A/C Rationale: 14 Jan 2008: defer until after ATP. 9/1/09: Updated language from WG with Deelo, Bakeman, and Holmes: The phase noise spectral density of the unmodulated carrier shall not exceed the magnitude of a straight line (on a log-log plot) between -30 dBc/Hz at Concurrence: Concur	5/22/08: Recommendation by FAA is to look at IS-GPS-705. The new suggested change may include a figure similar to section 6.3.1 figure from the 705 document. Action Item for GPH to harmonize carrier phase noise across all IS's. Provide analysis to sho

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: The phase noise spectral density of the unmodulated carrier shall be such that a reasonable approximation to a third order Jaffe-Rechtin phase lock loop, which has a 10 Hz one-sided loop noise bandwidth, shall be able to track the carrier to an accuracy o Rationale: The present spec defines phase noise only in terms of the performance of a phase lock loop, but does not completely define the loop. Also, phase noise measurements are usually made by measuring the spectral characteristics of the noise, thus requiring an	Rationale:	
347	Martin/Wang/Yi Aerospace	Page: Para: 3.2.1.2	Substantive	Comment: Suggested Change: From: The transmitted signal shall be Right-Hand Circularly Polarized (RHCP). For an angular range of ±13.8 degrees from nadir, the L1 ellipticity shall be no worse than 1.8 dB. To: The transmitted signal shall be Right-Hand Circularly Polarized (RHCP). For an angular range of ±13.8 degrees (plus pointing error) from nadir, the L1 ellipticity shall be no worse than 1.8 dB. Pointing error is described in paragraph 3.2.8.1.1.3 of SS- Rationale: Clairity and consistency among the user interface specifications	PO Resolution: Reject Rationale: The contractor has to meet the requirement inclusive of any pointing error introduced by their design. Concurrence: Concur Rationale:	(05/13/09) Accept.
348	Rhonda Slattery Aerospace	Page: Para: 3.2.1.2	Substantive	Comment: What happened to the impact of pointing error? If there is a 0.5 deg pointing error, does the edge of earth still get this polarization or will it be higher? Suggested Change: From:	PO Resolution: Reject Rationale: The contractor has to meet the requirement inclusive of any pointing error introduced by their design. There is no general pointing error requirement in SS-SS-800. Concurrence: Concur	Concur (05/06/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: Clarify whether this is irrespective of pointing error. Be consistent between all space to user ICDs Rationale: Can the user rely on this anywhere in view of the SV?	Rationale:	
175	Thomas Nagle GPC	Page: Para: 3.2.1.3	Substantive	Comment: The accoracuy of 0.01 radians RMS is not achievable. Suggested Change: From: …to track the carrier to an accuracy of 0.01 radians Root Mean Square (RMS)… To: …to track the carrier to an accuracy of 0.1 radians Root Mean Square (RMS)… Rationale: Correction	PO Resolution: A/C Rationale: See comment 138. Concurrence: Concur Rationale:	11/18/08: recommend to close with resolution of comment 138. 8/13/09: Michael Deelo to provide language by 8/28/09 generated in working group with Bakeman and Holmes (same action item as comment 138) 9/1/09: sent email requesting concurrence on proposed l
229	Thomas Nagle GPC	Page: 6 Para: 3.2.1.3	Substantive	Comment: Carrier phase noise should be specified as suggested for IS-GPS-800 in telecons during August 08. Suggested Change: From: To: Replace current text in this section with "The single-sideband phase noise spectral density of the L-band carrier shall not exceed: -30 dBc at Df =1 Hz decreasing 30 dB/decade until it reaches Df = 10 Hz. From 10 Hz to 10,000 Hz it decreases at 10 dB pe Rationale: Outcome of August 14 meeting on phase noise text.	PO Resolution: A/C Rationale: See comment 138. Concurrence: Concur Rationale:	11/18/08: see disposition of comment 138. 8/13/09: Michael Deelo to provide language by 8/28/09 generated in working group with Bakeman and Holmes (same action item as comment 138) 9/1/09: sent email requesting concurrence on proposed language from Deelo,
254	Thomas Nagle GPC	Page: Para: 3.2.1.3	Critical	Comment: Recommend modifying the requirement for Carrier Phase Noise. Suggested Change:	PO Resolution: A/C Rationale: See comment 138.	8/13/09: Michael Deelo to provide language by 8/28/09 generated in working group with Bakeman and Holmes (same action item as comment 138)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: Original Text: Was: "3.2.1.3 Carrier Phase Noise (TBR) The phase noise spectral density of the unmodulated carrier shall not exceed the magnitude of a straight line (on a log-log plot) between -30 dBc/Hz at 1 Hz and -70 dBc/Hz at 1 x 10^4Hz, and the one-sided integrated phase noise spectrum between 1 Hz and 10 kHz shall not exceed 0.01 radians rms. Or, The phase noise spectral density of the unmodulated carrier shall be such that an approximation to the third order Jaffe-Rechtin phase lock loop, which as a 10 Hz one-sided loop noise bandwidth, shall be able to track the carrier to an accuracy of 0.01 radians rms." To: Change to: "3.2.1.3 Carrier Phase Noise The one-sided phase noise spectral density of the unmodulated carrier shall not exceed the magnitude of a straight line (on a log-log plot) between -30 dBc/Hz at 1 Hz offset and -70 dBc/Hz at 10 kHz offset from th Rationale: Correction of typos and simplification. The suggested change text provides the user with as much information as required and makes no assumption regarding the user implementation.	Concurrence: Concur Rationale: (05/11/09) GPC rejects the PO's disposition to defer to the next ICWG or otherwise because we have provided suggested new language in our comment.	9/1/09: sent email requesting concurrence on proposed language from Deelo, Bakeman, and Holmes. 9/8/09: recieved "co
271	Charlton MITRE	Page: Page 6 Para: 3.2.1.3	Adminstrative	Comment: line 2 Suggested Change: From: To: replace "1x10^4" with 1E4 Rationale: make consistent with notation used in 3.2.1.1	PO Resolution: Reject Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
272	Charlton MITRE	Page: Page 6 Para: 3.2.1.3	Adminstrative	Comment: para 2 Suggested Change: From: To: reword if this option is chosen Rationale: wording, especially that regarding the bandwidth, is awkward	PO Resolution: Reject Rationale: New language is being created and will be brought to the next ICWG for review. Concurrence: Concur Rationale:	Concur (05/05/09)
139	Bakeman Aerospace	Page: Para: 3.2.1.5	Critical	Comment: Recommend modifying the requirement for correlation loss. Suggested Change: From: Correlation loss is defined as the difference between the SV power received in a 24 MHz bandwidth (± 12 MHz of L1 carrier) and the signal power recovered in an ideal correlation receiver of the same bandwidth, which ideally correlates using an exact replica of the waveform within an ideal sharp-cutoff filter bandwidth at 24 MHz with linear phase. The correlation loss apportionment due to SV modulation and filter imperfections shall be 0.2 dB maximum. To: Correlation loss is defined as the difference in receiver correlation power between that produced by the SV and that produced by an ideal signal generator, which emulates the SV payload signal formation with minimum distortion; when both are providing the Rationale: With correlation loss due to combining now being addressed in the signal power level requirement, this requirement addresses just the correlation loss due to unnecessary signal distortion created by the payload when transmitting at full power (e.g., evil	PO Resolution: Reject Rationale: 14 Jan 2008: Defer until correlation loss language can be uniformly described across all SV documents. 1 Sept 09: To use proposed language from Mike Deelo's informal WG with Bud Bakeman and Jack Holmes: Correlation loss is defined as the difference betwe Concurrence: Non-concur Rationale: 9/30/09: Mr. Bakeman does not believe the language is clear for how to verify the requirement.	5/22/08: There is a new suggested change proposed by Bakeman, GPH/Aero. The Consensus of forum does not believe that the new proposal is clearly defined. Further discussion will include the SE&I update from 11/19/07. this disposition also includes #2

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
230	Thomas Nagle GPC	Page: 7 Para: 3.2.1.4	Adminstrative	Comment: Commonly expressed as L1 signals, instead of L1 waveforms. Suggested Change: From: In-band spurious transmissions are defined as transmissions within the band which are not expressly components of the L1 waveforms. To: In-band spurious transmissions are defined as transmissions within the band which are not expressly components of the L1 signals." Rationale: Clarity	PO Resolution: A/C Rationale: 9/30/09: Updated real time in ICWG to maintain consistency with public interface documents: In-band spurious transmissions, from the SV, shall be at or below -40 dBc over the band specified in 3.2.1.1. In-band spurious transmissions are defined as transm Concurrence: Concur Rationale: 9/30/09: Concurrence real time in ICWG.	
126	J. Betz MITRE	Page: Para: 3.2.1.5	Critical	Comment: This section should be consistent with 3.2.1.1 Suggested Change: From: To: Correlation loss is defined as the difference between the SV signal power received in a 24 MHz the bandwidth (±12 MHz of L1 carrier) defined in 3.2.1.1 and the signal power recovered in an ideal correlation receiver of the same bandwidth, which ideally co Rationale: Consistent with 3.2.1.1	PO Resolution: Reject Rationale: Correlation loss language is currently under development. Sentence will be revised to read: "Correlation loss is defined as the difference between the SV power received in the bandwidth defined in 3.2.1.1 and the signal power recovered in an ideal correl Concurrence: Non-concur Rationale: See comment 139	5/22/08: There is a new suggested change proposed by Bakeman, GPH/Aero. The consensus of forum does not believe that the new proposal is clearly defined. Further discussion will include the SE&I update from 11/19/07. This disposition also includes #2
249	Steve Brown LMCO	Page: Para: 3.2.1.6	Critical	Comment: Suggested Change: From: [Alternative 1. Carriers of the two L1C components defined in Section 3.1 shall be in phase quadrature within ±100 milliradians. The L1CP signal carrier shall lag the L1CD carrier by 90 degrees, so that L1CP carrier phase is the same (within ±100 milliradians) as C/A-code carrier	PO Resolution: Reject Rationale: See comment #163 and 256. Concurrence: Concur Rationale:	11/18/08: Defer. Refer to Comment #148. 12/11/08: Accept; see comment #148. 9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				phase, and L1CD carrier phase is the same (within ±100 milliradians) as P(Y)-code carrier phase. Referring to the phase of the L1CD carrier when L1CDi(t) equals zero as the "zero phase angle", the L1CD and L1CP values shall control the respective signal phases in the following manner: when L1CDi(t) equals one, a 180-degree phase reversal of the L1CD-carrier occurs; when L1CPi(t) equals one, the L1CP carrier advances 90 degrees; when the L1CPi(t) equals zero, the L1CP carrier shall be retarded 90 degrees (such that when L1CPi(t) changes state, a 180-degree phase reversal of the L1CP carrier occurs).] To: [Alternative 1. Carriers of the two L1C components defined in Section 3.1 shall be in phase quadrature within ±100 milliradians. The L1CP signal carrier shall lag the L1CD carrier by 90 degrees, so that L1CP carrier phase is the same (within ±100 millirad Rationale: NAV IPT informed by E. Wang that implementation of phase relation would not be dictated to GPS III contractor		
148	Thomas Nagle GPC	Page: Para: 3.2.1.6	Critical	Comment: Hold the phase relationship of civilian L1 signals fixed. Suggested Change: From: To: In the first sentence of 3.2.1.6, delete "or in same phase." At the beginning of the second sentence, delete "When in phase quadrature," and capitalize the following letter. Replace the second paragraph that currently begins "The phase relationship info Rationale: The variable phase feature of the L1C	PO Resolution: Reject Rationale: 25 Jan 2008: defer until after the NPEF phase change working group completes its findings. <UNDATED>: Agree per GPSW Chief Engineer and NPEF resolution. Change the entire second subparagraph of paragraph 3.2.1.6 which currently reads as: "The phase rela Concurrence: Concur Rationale: 8 Feb 2008: Document is unacceptable until all language regarding phase change is removed.	8/13/09 - team says there is a signed agreement by Colonel Madden to choose Alternative 4. Once we get a copy of the signed agreement will incorporate into document. Bill Notely to see if Captain Palmer has a copy. 9/11/09: Signed memo by Madden - using

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				signal as currently defined in this document renders this signal useless for precision dual frequency use as required in Agricultural, Construction, Seismic, Surveying, Scientific, and other uses, including in augment		
163	Thomas Nagle GPC	Page: Para: 3.2.1.6	Substantive	Comment: Section 3.2.1.6 Signal Component Phase Relationship (TBD) currently contains 4 possible alternatives for that section. Suggested Change: From: To: One alternative should be selected before the next release of this document. Rationale: Completion	PO Resolution: A/C Rationale: 5/22/08: defer until contractor provides input/decision. 2/19/09: see comment #148. 9/11/09: Language developed by Karl Kovach: 3.2.1.6.1 Phase Relationship Carriers of the two L1C components defined in Section 3.1 shall be in the same phase within ±100 Concurrence: Concur Rationale: 9/30/09: ICWG members concur (including GPC representatives)	8/13/09 - team says there is a signed agreement by Colonel Madden to choose Alternative 4. Once we get a copy of the signed agreement will incorporate into document. Bill Notely to see if Captain Palmer has a copy. 9/11/09: Signed memo by Madden - using
154	Mike Morgan GPL	Page: Para: 3.2.1.6	Substantive	Comment: Does Text have a most significant bit (MSB)? Suggested Change: From: To: Add explanation such as: For non-numeric data MSB signifies first letter or other non-numeric symbol first. Rationale: Clearer terminology, in fact would prefer new term to replace MSB such as first transmitted symbol (FTS) for any data that is not numerical.	PO Resolution: Reject Rationale: The GPS convention of labeling the first bit of every subframe as MSB also appears is IS-GPS-200D. Since both documents use the same approach, the SE&I resolution is to leave the convention as is. Concurrence: Concur Rationale:	11/18/08: Stakeholders agree to reject the comment.
135	Chris Hegarty MITRE	Page: Para: 3.2.1.6	Substantive	Comment: The paragraph as currently written does not specify an allowable range of errors for the "in phase" condition. Suggested Change:	PO Resolution: Reject Rationale: The incorporationg of this language is contingent on the findings of the phase change working group of the NPEF. A decision will be made when a	5/22/08: Concur. 2/19/09: See comment #148 8/13/09: Comment now OBE - see comment #163 and 256.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: "…in phase quadrature (within +/- 100 milliradians) or in same phase… To: "…in phase quadrature or in the same phase (within +/- 100 milliradians)…" Rationale: Ensures that the "in phase" mode of operation will be achieved with the same tolerance as the "phase quadrature" mode.	more mature technical perspective is available. This will tentatively be resolved by 10 March 2008. 9/30/09: Concurrence: Concur Rationale:	
107	S Lazar Aerospace	Page: Para: 3.2.1.6	Substantive	Comment: First paragraph. The four phases of the carrier described here as a function of the state of the codes applies to the components in phase quadrature. The first sentence states that the components may also be modulated on the carrier with the same phase. Suggested Change: From: To: Rationale: Recommend clarifying.	PO Resolution: Reject Rationale: The first sentence of the paragraph states that the TWO COMPONENTS (i.e L1CD and L1CP) are either in phase quadrature or in the same phase. The remainder of the paragraph describes the quadrature relationship as it is clearly stated in the second sentenc Concurrence: Rationale:	9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.
250	Steve Brown LMCO	Page: Para: 3.2.1.6	Critical	Comment: Suggested Change: From: [Alternative 2. Carriers of the two L1C components defined in Section 3.1 shall be in phase quadrature within ±100 milliradians. The L1CD signal carrier shall lag the L1CP carrier by 90 degrees, so that L1CD carrier phase is the same (within ±100 milliradians) as C/A-code carrier phase, and L1CP carrier phase is the same (within ±100 milliradians) as P(Y)-code carrier phase. Referring to the phase of the L1CP carrier when L1CPi(t) equals zero as the "zero phase angle", the L1CD and L1CP values shall control the respective	PO Resolution: Reject Rationale: See comment #163 and 256. Concurrence: Concur Rationale:	11/18/08: Defer. Refer to Comment #148. 12/11/08: Accept; see comment #148. 9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				signal phases in the following manner: when L1CPi(t) equals one, a 180-degree phase reversal of the L1CP-carrier occurs; when L1CDi(t) equals one, the L1CD carrier advances 90 degrees; when the L1CDi(t) equals zero, the L1CD carrier shall be retarded 90 degrees (such that when L1CDi(t) changes state, a 180-degree phase reversal of the L1CD carrier occurs).] To: [Alternative 2. Carriers of the two L1C components defined in Section 3.1 shall be in phase quadrature within ±100 milliradians. The L1CD signal carrier shall lag the L1CP carrier by 90 degrees, so that L1CD carrier phase is the same (within ±100 millirad Rationale: NAV IPT informed by E. Wang that implementation of phase relation would not be dictated to GPS III contractor		
251	Steve Brown LMCO	Page: Para: 3.2.1.6	Critical	Comment: Suggested Change: From: [Alternative 3. Carriers of the two L1C components defined in Section 3.1 shall be in the same phase within ±100 milliradians, with the same carrier phase (within ±100 milliradians) as C/A-code carrier phase. Referring to the phase of the L1CP and L1CD carrier when L1CPi(t) equals zero as the "zero phase angle", the L1CD and L1CP values shall control the respective signal phases in the following manner: when L1CPi(t) ⊕ L1CDi(t) equals one (where ⊕ indicates exclusive or) a 180-degree phase reversal of the L1CP and L1CD carrier occurs; when L1CPi(t) ⊕ L1CDi(t) equals zero the L1CP and L1CD carrier phase is not changed.] To: [Alternative 3. Carriers of the two L1C components defined in Section 3.1 shall be in the	PO Resolution: Reject Rationale: See comment #163 and 256. Concurrence: Concur Rationale:	11/18/08: Defer. Refer to Comment #148. 12/11/08: Accept; see comment #148. 9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				same phase within ±100 milliradians, with the same carrier phase (within ±100 milliradians) as C/A-code carrier phase. Rationale: NAV IPT informed by E. Wang that implementation of phase relation would not be dictated to GPS III contractor		
252	Steve Brown LMCO	Page: Para: 3.2.1.6	Critical	Comment: Suggested Change: From: [Alternative 4. Carriers of the two L1C components defined in Section 3.1 shall be in the same phase within ±100 milliradians, with the same carrier phase (within ±100 milliradians) of P(Y)-code carrier phase. Referring to the phase of the L1CP and L1CD carrier when L1CPi(t) equals zero as the "zero phase angle", the L1CD and L1CP values shall control the respective signal phases in the following manner: when L1CPi(t) $\oplus$ L1CDi(t) equals one (where $\oplus$ indicates exclusive or) a 180-degree phase reversal of the L1CP and L1CD carrier occurs; when L1CPi(t) $\oplus$ L1CDi(t) equals zero the L1CP and L1CD carrier phase is not changed.] To: [Alternative 4. Carriers of the two L1C components defined in Section 3.1 shall be in the same phase within ±100 milliradians, with the same carrier phase (within ±100 milliradians) of P(Y)-code carrier phase. Rationale: NAV IPT informed by E. Wang that implementation of phase relation would not be dictated to GPS III contractor	PO Resolution: Reject Rationale: See comment #163 and 256. Concurrence: Concur Rationale:	11/18/08: Defer. Refer to Comment #148. 12/11/08: Accept; see comment #148. 9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.
231	Thomas Nagle GPC	Page: 8 Para: 3.2.1.7.1	Substantive	Comment: : It is believed that "the chip transitions of two modulating signals (i.e., that containing the L1CP-code and that containing the L1CD-code) shall be such that the average time difference between the transitions does not exceed 10	PO Resolution: A/C Rationale: 9/2/09: Updated language from Mike Deelo, Bud Bakeman, and Jack Holmes: "All transmitted signals for a particular SV shall be	11/18/08: Request better rationale for proposed change. Action assigned to GPC for followup. 8/13/09: Purvis to followup and gather better rationale. What's the risk if the reqt

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				nanoseconds 95% of the Suggested Change: From: "On the L1 channel, the chip transitions of two modulating signals (i.e., L1CD/L1CP) shall be such that the average time difference between the transitions shall not exceed 10 nanoseconds 95% of the time..." To: "On the L1 channel, the chip transitions of two modulating signals (i.e., L1CD/L1CP) shall be such that the average time difference between the transitions shall not exceed 2 nanoseconds 95% of the time..." Rationale: The L1CP-code and the L1CD-code can be synchronized with the same flip-flop register/registers connecting to the same clock driver line. With today technology, less than 10 ns (two-sigma) is readily achievable. It is believed that this requirement can b	coherently derived from the same on-board frequency standard. On the L1 channel, the chip transitions of the two modulating sign Concurrence: Concur Rationale:	isn't tightened? 9/1/09: email sent requesting concurrence based on latest l
253	Scott Thomason A5P	Page: 5 Para: 3.2.1.6	Adminstrative	Comment: Suggested Change: From: "L1CP and L1CD To: L1CD and L1CP Rationale: Consistency with earlier paragraphs	PO Resolution: Reject Rationale: Concurrence: Concur Rationale:	5/06/09: Concur
256	Thomas Nagle GPC	Page: Para: 3.2.1.6	Critical	Comment: Phase continuity is not specified in the interface specification. Request GPS Wing formally commence Technical Interface Meetings (TIMs) with participation by government only stakeholders and their direct support government contractors to support the evo	PO Resolution: A/C Rationale: Karl Kovach has developed some continuity language to replace 3.3.1.5. Need to discuss the implementation at the next ICWG. 7/1/09: While a satellite is broadcasting standard L1CP code and standard L1CD code signals with data which	9/11/09: Signed memo by Madden - using language from July version. 9/30/09: Changed to language suggested by LM (Concurred to by ICWG). LM believed previous language could be construed to violate their SV design.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: To: Insert the following paragraph after paragraph 3.2.1.6 3.2.1.6.1 Phase Continuity While a satellite is broadcasting standard L1CP code and standard L1CD code signals, there shall be no discontinuities that exceed 10 degrees (TBR) as measured ov Rationale: Most precision GPS positioning, velocity determination and timing systems as well as applications using carrier phase require phase continuity.	indicates L1C signal h Concurrence: Concur Rationale: (05/11/09) GPC rejects absence of PO's recognition of GPC's follow-on comment submitted for this CRM for review cycle March 2009. First, request for the Civil's to be involved in TIMs with Karl Kovach to coordinate, facilitate and lastly expedite an int	
273	Charlton MITRE	Page: Page 7 Para: 3.2.1.6	Adminstrative	Comment: line 2 Suggested Change: From: To: either delete "a" or delete "information" Rationale: readability	PO Resolution: Reject Rationale: Will delete 'information". Concurrence: Concur Rationale:	Concur (05/05/09)
274	Charlton MITRE	Page: Page 7 Para: 3.2.1.6	Adminstrative	Comment: line 3 Suggested Change: From: To: add "the" before "L1Cp" and make "signal" plural to read "signals" Rationale: readability	PO Resolution: Reject Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
275	Charlton MITRE	Page: Page 7 Para: 3.2.1.6	Adminstrative	Comment: line 5 Suggested Change:	PO Resolution: Reject Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: delete extra space before closing square bracket and add period at the end of the sentence, inside bracket Rationale: grammar	Concurrence: Concur Rationale:	
276	Charlton MITRE	Page: Page 8 Para: 3.2.1.6	Adminstrative	Comment: line 2, "Alternative 4" Suggested Change: From: To: change "of" to "as" so that text reads "… (within +/- 100 milliradians) as P(Y)-code carrier phase.]" Rationale: readability - make consistent with style of Alternate 3	PO Resolution: Reject Rationale: This is temporary text; currently TBR. Concurrence: Concur Rationale:	Concur (05/05/09)
349	Rhonda Slattery Aerospace	Page: Para: 3.2.1.6	Critical	Comment: Since IIIA is at PDR, isn't this defined? If not when will it be? Is Lockheed carrying four options? Suggested Change: From: To: Insert Lockheed's PDR design. Rationale: Carrying four answers just complicates the user design.	PO Resolution: Reject Rationale: Decision has not yet been made by Space IPT and no date has been provided for closure. Concurrence: Concur Rationale:	Concur (05/06/09) 9/11/09: Signed memo by Madden - using language from July version. 9/30/09: See comment #163 and 256.
258	Thomas Nagle GPC	Page: Para: 3.2.1.8.3	Substantive	Comment: Section 3.2.1.8.3 is a brief description of the space service volume group delay differential. It is listed as TBD, waiting for the values by the Block IIIA Space Contractor. IS-GPS-200E (3.3.1.7.3) and IS-GPS-705A (3.3.1.7.3) contains the same requir	PO Resolution: Reject Rationale: Will change IS –GPS-800 to read "GPSIII". See Action Item # 22 for IS-GPS-800 (in reference to TBDs). 9/6/09: The group delay differential between the radiated L1 with respect to the Earth coverage signal	Concur (05/21/09) 9/9/09: Comment OBE now with updated changes. 9/30/09: OBE. See comment 346.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: To: Change "Block IIIA" to "Block III" or modify 200E and 705A to reflect "Block IIIA" instead of "Block III". In addition, resolve the TBDs. Rationale: Consistency and completion.	for users of the Space Service Volume are provid Concurrence: Concur Rationale:	
176	Thomas Nagle GPC	Page: Para: 3.2.1.7.1	Substantive	Comment: The L1C signal shall be clocked coherently with the clock of the P-code signal, NOT the transitions. Suggested Change: From: The L1C signal shall be clocked coherently with the P-code signal transitions. To: The L1C signal shall be clocked coherently with the P-code signal clock. Rationale: Clarity. The P-code signal is clocked at around 10.23 MHz. The L1C signal is clocked at around 1.023 MHz. The L1C signal clock will use the same P-code signal clock but the clock enable-strobe will happen at every 10 P-code chips, a counter of 10 P-cod	PO Resolution: Reject Rationale: The intent is for every N transitions to align, however with the selection of TMBOC, the relationship is more complex. We need to consider how to best state the desired relationships. Concurrence: Concur Rationale:	11/18/08: Staekholders agree to leave original text unchanged. Comment rejected.
257	Thomas Nagle GPC	Page: Para: 3.2.1.7.1	Substantive	Comment: Please provide the further clarification of "On the L1 channel, the chip transitions of the two modulating signals (i.e., L1CD/L1CP) shall be such that the average time difference between the transitions shall not exceed 10 nanoseconds 95% of the time fo Suggested Change: From: To: Please clarify.	PO Resolution: Reject Rationale: Please provide more information on the changes. Concurrence: Concur Rationale:	(05/11/09) GPC withdraws comment. 8/13/09: Change to Reject and Concur.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Need requirement clarification from ICWG.		
277	Charlton MITRE	Page: Page 8 Para: 3.2.1.7.1	Adminstrative	Comment: last line Suggested Change: From: To: add period at end of paragraph Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
278	Charlton MITRE	Page: Page 9 Para: 3.2.1.8	Adminstrative	Comment: line 6 Suggested Change: From: To: Change "The uncertainty (variation) of this delay, as well as the group delay differential, between the reference signal and the signals of L1C, are defined in the following subsections." to read "The allowable uncertainty (variation) of this delay and Rationale: readability/grammar	PO Resolution: Reject Rationale: This is a statement of fact. 05/01/09: Defer. After speaking to the commenter, the ICC POC believes the sentence can be removed altogether. Will bring to next ICWG for input. Concurrence: Concur Rationale:	Concur (05/05/09)
350	Rhonda Slattery Aerospace	Page: Para: 3.2.1.8.1	Critical	Comment: This value is larger than the SS-SS-800 Suggested Change: From: To: Use value from SS-SS-800 Rationale: Consistency across baseline	PO Resolution: Reject Rationale: The comment is incomplete. The commenter must be more specific. Concurrence: Rationale: The requirements do exist in both the SS and CS specifications. They are the requirements for the errors between two signals. If you don't understand the comment, please call the commenter for clarification before rejecting.	11/16/09: Please rereview. The value was changed at the ICWG.
233	Thomas Nagle	Page: 9	Substantive	Comment: Normally, the group delay differential	PO Resolution: Reject	11/18/08: refer to disposition of comment

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	GPC	Para: 3.2.1.8.3		includes a bias component and a random component. It is unclear how "an additional 3.5 nanoseconds (two sigma) accuracy degradation may apply to the signal" applies. Suggested Change: From: "If this bias term is not applied to the signal, an additional 3.5 nanoseconds (two-sigma) accuracy degradation may apply to the signal." To: "If this bias term is not applied to the signal, an additional 1.75 nanoseconds may apply to the absolute value of the mean differential delay with respect to the Earth-coverage signal." Rationale: Clarity	Rationale: Defer to discussion at Public ICWG. Concurrence: Concur Rationale:	246. Section removed - comment OBE. Stakeholders concur. 9/30/09: OBE. See comment 346.
232	Thomas Nagle GPC	Page: 9 Para: 3.2.1.8.3	Substantive	Comment: Please specify that the group delay differential in this section is an addition to the terrestrial group delay differential. The additional bias of group delay differential for SSV users, with respect to EC users, is specified as "values", given by the Bl Suggested Change: From: "The group delay differential between the radiated L1 with respect to the Earth-coverage signal for users of the Space Service Volume are given as values by the Block IIIA Space Contractor (TBD)." To: "An additional group delay differential between the radiated L1 with respect to the Earth-coverage signal for users of the Space Service Volume is given as a value by the Block III Space Contractor (TBD). This bias value may be different for other SVs.	PO Resolution: Reject Rationale: Defer for discussion at Public ICWG. Concurrence: Concur Rationale:	11/18/08: refer to disposition of comment 246. Section removed - comment OBE. Stakeholders concur. 9/30/09: OBE. See comment 346.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Clarity		
225	Kawakami GPD	Page: 19 Para: 3.2.1.8.3	Adminstrative	Comment: using both "degrees" and "°" Suggested Change: From: To: decide which one will be used and then consistently use it throughout the document Rationale: Consistency	PO Resolution: Reject Rationale: For the port to DOORS, we are converting symbols to words as much as possible. However, in some cases like equations, will likely leave the symbols as is - will try and be as consistent as possible, but must also be pragmatic with approach. Concurrence: Concur Rationale:	9/30/09: OBE. See comment 346.
351	Rhonda Slattery Aerospace	Page: Para: 3.2.1.8.3	Substantive	Comment: Why is the space contractor for IIIA TBD? Suggested Change: From: To: Remove 1st TBD or clarify where it applies Rationale: The Space contractor is Lockheed, not TBD.	PO Resolution: Accept Rationale: Currently this is a placeholder until the TBD has been resolved. 05/05/09: Accept. The ICC POC re-evaluated comment. 9/30/09: Updated real time in ICWG. Concurrence: Rationale: The IIIA contractor has been resolved – it's Lockheed. Do not need a TBD. (05/06/09)	9/10/09: sent email for concurrence 9/30/09: OBE. See comment 346.
259	Thomas Nagle GPC	Page: Para: 3.2.1.8.3	Substantive	Comment: Please provide the values for the SSV group delay differential. Suggested Change: From: To: Please provide the values. Rationale: Requirement.	PO Resolution: Reject Rationale: See Action Item # 22 for IS-GPS-800. The action was for GPC to determine the best location for these values. Concurrence: Concur Rationale: GPC Rejects PO's Resolution. Comment should be noted as a deferral until Action #22 is satisfied. (05/21/09)	8/13/09: Change non-concur to concur. Bill Notley to let comment originator know. 9/30/09: OBE. See comment 346.
346	Martin/Wang/Yi Aerospace	Page: Para: 3.2.1.8.3	Substantive	Comment: 9/30/09: Discussed real time in ICWG. Since IS-GPS-800 only applies to the L1C signal, SSV group delay differential (as defined in the IS-GPS-200 and IS-GPS-705 pertaining to multiple signals)	PO Resolution: Accept Rationale: Currently this is a placeholder until the TBD has been resolved.	(0513/09) Accept. Consistency in needed among the civil specs. 9/30/09: Updated real time ICWG.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				does not apply. Suggested Change: From: The group delay differential between the radiated L1 with respect to the Earth coverage signal for users of the Space Service Volume are given as values by the Block IIIA Space Contractor (TBD). The details are provided in TBD To: (Remove whole paragraph) 9/30/09: 3.2.1.8.3 Space Service Volume Group Delay Differential Not applicable. See Sections 3.2.1.7.1 (Signal Coherence) and 3.5.3.9.1 (Inter-Signal Group Delay Differential Correction). Rationale: CRM disposition: reviewers concurred to remove section. Update likely when language in other user interface specifications are resolved 9/30/09: Updated real time in ICWG. Since IS-GPS-800 only applies to the L1C signal, SSV group delay differential (as	9/30/09: Updated real-time in ICWG: Not applicable. See Sections 3.2.1.7.1 (Signal Coherence) and 3.5.3.9.1 (Inter-Signal Group Delay Differential Correction). Concurrence: Concur Rationale:	
224	Steve Brown LMCO	Page: 9 Para: 3.2.1.9	Critical	Comment: Suggested Change: From: The SV attitude error shall be less than 0.5 degeree. To: <DELETE> Rationale: The original text with 14.3 degrees allows for up to 0.5 degree pointing error. LM historical performacne for IIR/IIR-M has been much better than that with less than 0.1 degree pointing error. Redline allows LM to take advantage of better pointing error	PO Resolution: Accept Rationale: Accept change. The requirements should be independent of implementation (e.g SV attitude error). Concurrence: Concur Rationale: 11/18/08: Accept deletion. See comment 222 for disposition.	
223	Steve Brown	Page: 9	Critical	Comment:	PO Resolution: A/C	9/30/09: Language discussed and agreed to

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	LMCO	Para: 3.2.1.9		Suggested Change: From: The SV shall provide signals with the following characteristic: the off-axis power gain shall not decrease by more than 2 dB from the Edge-of-Earth (EOE) to nadir, nor more than 10 dB from EOE to 20 degrees off nadir, and no more than 18 dB from EOE to 23.5 degrees off nadir; the power drop off between EOE and ±23.5 degrees off nadir shall be in a monotonically decreasing fashion. To: The SV shall provide signals with the following characteristic: the off-axis power gain shall not decrease by more than 2 dB from the Edge-of-Earth (EOE) to nadir, nor more than 19 dB from EOE to 23.5 degrees off nadir; the power drop off between EOE and Rationale: New text added for GPS III specific requirements.	Rationale: Defer. Space IPT (Soon Yi) has action to provide angular range required independent of pointing error. 9/11/09: Added clarifying language to the requirement: "the off-axis relative power (referenced to peak transmitted power) " Concurrence: Concur Rationale: 11/18/08: required modification - replace "18 dB" with "19.5 dB". Leave in "20 degrees off nadir" requirement. Changes made in real time during ICWG. Stakeholders concur. Secondary issue. Some discussion on changing this to a power spec. Antenna gai	at ICWG.
140	Bakeman, Holmes, Wang, Wishner Aerospace	Page: Para: 3.2.1.9	Critical	Comment: Recommend adding a new requirement for signal combining. Suggested Change: From: To: When a signal combining technique is used that affects receiver correlation output of the components of the combi ned output, the received RF signal power level of each component of the combined output shall be referenced to the output of the receiver's c Rationale: Due to the addition of L1C in GPS III, new code combining techniques are needed in the SV which may cause loss of correlation power, and	PO Resolution: A/C Rationale: 14 Jan 2008: defer until after ATP. 9/3/2009: Changed to "A/C". The combining implementation is out scope for this interface document. However we can add the following text: "The combining loss is compensated by increasing the SV transmitted power and t Concurrence: Rationale:	5/22/08: continued discussion of Aerospace additions to the comment. Mike Jeffris to get together with Soon Yi to finalize wording. ICWG community declares that the new clarification of the signal power definition is not an issue. It has been agreed th

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				therefore S/N, in the user receivers. This loss of correlation power must be compensated by increased signal RF power		
234	Thomas Nagle GPC	Page: 10 Para: 3.2.1.9	Substantive	Comment: Please provide information on "received minimum RF signal strength" for orbital users such as "LEO, MEO, or GEO" users and the off-axis angle relative to nadir. Suggested Change: From: To: Add "The received minimum RF signal strength is for GEO orbital users at a 23.5 deg off-axis angle relative to nadir." Rationale: Clarity	PO Resolution: A/C Rationale: 9/30/09: Changed "ellipticity" to "axial ratio" for consistency: For orbital users, the minimum effective received signal power is measured at the output of a 0 dBi ideal right-hand circularly polarized (i.e. 0 dB axial ratio) user receiving antenna (in g Concurrence: Concur Rationale:	11/18/08: Stakeholders concur with proposed change. 9/30/09: Cleaned up real time during ICWG.
248	Thomas Nagle GPC	Page: Para: 3.2.1.9	Substantive	Comment: This paragraph states variously that the received signal power is 1. measured at the antenna output and 2. measured at the correlation outputs of a receiver. Describing a receiver 'without combining loss" is confusing. Suggested Change: From: To: Specify powering in a manner parallel to the SS-SYS-800C definition of received power. Rationale: Remove inconsistency by specifying power at the receiver antenna.	PO Resolution: Reject Rationale: The signal power is measured at the antenna output, but the measured power should include any loss from combining multiple signals into a signal amplifier. The document states that the effective received power is "referenced to a receiver whose correlati Concurrence: Rationale:	11/18/08: comment deferred - GPC to follow up. 8/13/09: Mike Munoz to help develop proper verbiage. Do not want to just specify power at the antenna because ultimately all we care about is what the user sees. Need to clarify up "combining" language. 9/8
228	Kawakami GPD	Page: 9 Para: 3.2.1.9	Adminstrative	Comment: changed the numerical precision "23.5" was changed to "23" Suggested Change: From: "23"	PO Resolution: A/C Rationale: OBE. Value is 23.5 Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: "23.0" Rationale: Numerical precision.		
219	Chris Sedgwick 2SOPS	Page: Para: 3.2.1.9	Adminstrative	Comment: IS-GPS-800 states "For orbital user, the minimum effective received signal power is measured at the output of a 0 dBi ideal righthand circularly polarized (i.e. 0 dB ellipticity) user receiving antenna (in geosynchronous orbit) at 23.5 degrees off nadir a Suggested Change: From: To: Recommend aligning IS-GPS-800 with IS-GPS-200 for consistency unless there is a technical reason why there is a difference. If so, please provide. Rationale:	PO Resolution: Defer Rationale: Defer until all antenna area coverage language can be uniformly described across all documents. IS-GPS-800 specifies 23.5 degrees to account for up to 0.5 degrees of pointing error; IS-GPS-200 specifies the required coverage area to include pointing erro Concurrence: Concur Rationale:	27 Aug 08: concur from 50th SW.
279	Charlton MITRE	Page: Page 9 Para: 3.2.1.9	Adminstrative	Comment: line 1 Suggested Change: From: To: change wording to "The SV shall provide a worst-case L1C signal strength at EOL in order to meet …" Rationale: clarity/readability	PO Resolution: Reject Rationale: Will provide alternative language. Concurrence: Concur Rationale:	Concur (05/05/09)
280	Charlton MITRE	Page: Page 10 Para: 3.2.1.9	Adminstrative	Comment: 3rd para, line 1 Suggested Change: From: To: insert comma following "attitude"	PO Resolution: A/C Rationale: Will not insert the comma, but will remove "attitude". Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: grammar/readability		
343	M. Jeffris MITRE	Page: Para: 3.2.1.9	Critical	Comment: Clarify wording and change numerical value in second paragraph. Suggested Change: From: To: The terrestrial user's maximum received signal power level resulting from these factors is not expected to exceed -154 -153.3 dBW total for the composite L1C signal. For purposes of establishing user receiver dynamic range for receiver design and test, t Rationale: Raising the max power ensures receivers are designed with adequate but reasonable margins to provide fault free operation and to support potential future power increases.	PO Resolution: Reject Rationale: Commenter needs to provide traceability of the new values. 9/3/2009: Changed to "Reject". Based on information from Mike Munoz: Per Public ICWG discussion, typical receivers have a dynamic range in excess of 90dB, the difference between "not expected to Concurrence: Rationale:	8/27/09 - check with Karl to see if these values contradict any agreed-upon values with the rest of the stakeholders.
281	Charlton MITRE	Page: Page 11 Para: 3.2.2.1.1	Adminstrative	Comment: 3rd para, line 4 Suggested Change: From: To: change punctuation at end of line with equation for Wi to a period instead of a comma. Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
282	Charlton MITRE	Page: Page 11 Para: 3.2.2.1.1	Adminstrative	Comment: 4th para, line 2 Suggested Change: From: To: change wording to "The expansion sequence is composed of the seven bit values …" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
283	Charlton MITRE	Page: Page 12 Para: 3.2.2.1.2	Adminstrative	Comment: line 2 Suggested Change: From: To: change wording to "…truncated to 1800-bit long sequences …" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
284	Charlton MITRE	Page: Page 12 Para: 3.2.2.1.2	Adminstrative	Comment: para 2, line 6 Suggested Change: From: To: "The sequence S2 is added to the S1 Sequence to …" Rationale: readability	PO Resolution: Reject Rationale: The word "sequence" does not need to be capitalized. 05/01/09: Accept. Spoke to commenter. The word 'sequence' will not be capitalized and the 2nd 'the' will be added to the sentence. Concurrence: Concur Rationale:	Concur (05/05/09)
183	Thomas Nagle GPC	Page: Figure 3.2-2 Para: 3.2.2.1.2	Substantive	Comment: : Please label m0 and m11 on this figure as discussed in the NOTES section of Table 3.2-3. Suggested Change: From: To: Label m0 = 1 and m11 = 1 on figure 3.2-2. Rationale: Clarity and consistency.	PO Resolution: A/C Rationale: Accept with comment. Added note to Figure 3.2-2: "For S1 polynomial, m11 is equal to 1" Clarified note in Table 3.2-3: "1, m10, …, m1, 1" Clarified column in Table 3.2-3: "mi,j" to "mij" Concurrence: Rationale:	11/18/08: GPC to follow up and clarify comment or withdraw. 8/13/09: Add clarifying note at the bottom of the figure that m11 =1.
93	John Clark (for Raj Aggarwal) GPV	Page: Para: 3.2.2.2	Substantive	Comment: There is a statement that the SVs are capable of turning off or on the NSCP and NCSD codes but there doesn't seem to be any provision/constraint that says that the output signal levels of the P/Y and M code signals will remain constant when this happens. Suggested Change:	PO Resolution: Reject Rationale: Outside of scope of this document. Concurrence: Rationale:	9/1/09: sent email requesting concurrence. 9/8/09: John Clark has no recollection of comments. Sent email to Raj Agarwal.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: Rationale:		
285	Charlton MITRE	Page: Page 21 Para: 3.2.3	Adminstrative	Comment: line 1 Suggested Change: From: To: add "the" before the second L1C to read "… content of the L1C message …" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
188	T. Nagle GPC	Page: Para: 3.2.3.1	Substantive	Comment: It is stated that "Multiple frames (i.e. superframe) are required to broadcast a complete data message set to users. However, no definition is given on how superframe is made of frames. In addition, it is desirable from receiver perspective to specify a Suggested Change: From: To: Rationale: Specify how superframe is composed of frames and provide time constraints for frames within a superframe if appropriate	PO Resolution: Defer Rationale: Will be added to the upcoming ICWG agenda. 9/30/09: Must wait so we can add in results from the fall out of SVN-49 anomaly. Concurrence: Rationale:	11/18/08: Remove superframe concept. Changes made in real time during ICWG. Action assigned to Mike Munoz to create a similar table to IS-200 Table 30-XII. Comment to remain open. 8/13/09: Mike Munoz to create table.
236	Thomas Nagle GPC	Page: 22 Para: 3.2.3.1	Adminstrative	Comment: Specify as SV time epoch. Suggested Change: From: Subframe 1 provides 9-bit TOI data that corresponds to the time epoch …"	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: Subframe 1 provides 9-bit TOI data that corresponds to the SV time epoch … Rationale: Clarity		
286	Charlton MITRE	Page: Page 23 Para: 3.2.3.2	Adminstrative	Comment: line 3 Suggested Change: From: To: change "a" to "an" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
287	Charlton MITRE	Page: Page 23 Para: 3.2.3.2	Adminstrative	Comment: para 2, line 1 Suggested Change: From: To: change to "… the 52 UE-received soft decisions … " Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
288	Charlton MITRE	Page: Page 25 Para: 3.2.3.3	Adminstrative	Comment: first equation Suggested Change: From: To: add period following "otherwise" in symbol definitions for first equation Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
289	Charlton MITRE	Page: Page 25 Para: 3.2.3.3	Adminstrative	Comment: polynomial definition Suggested Change: From:	PO Resolution: Accept Rationale: Concurrence: Concur	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: add period following polynomial definition Rationale: grammar	Rationale:	
290	Charlton MITRE	Page: Page 25 Para: 3.2.3.3	Adminstrative	Comment: second to last line Suggested Change: From: To: make "the" lower case in second to last line Rationale: grammar	PO Resolution: Reject Rationale: The word is correctly punctuated. Concurrence: Concur Rationale:	Concur (05/05/09)
291	Charlton MITRE	Page: Page 25 Para: 3.2.3.3	Adminstrative	Comment: m(X) equation Suggested Change: From: To: end line with m(X) equation with a comma Rationale: grammar	PO Resolution: A/C Rationale: A period will be placed after the equation. Concurrence: Concur Rationale:	Concur (05/05/09)
220	Dr. Pam Neal SE&I	Page: Para: 3.2.2.2	Substantive	Comment: Clarify wording to avoid confusion and make document consistent with IS-GPS-200. Suggested Change: From: The non-standard codes, used to protect the user from a malfunction in the SV, are not for utilization by the user and, therefore, are not defined in this document. To: The non-standard codes, used to protect the user from receiving anomalous NAV data, are not for utilization by the user and, therefore, are not defined in this document. Rationale: This statement was changed in IS-GPS-200 to reflect the fact that the cause of anomalous NAV signals is not limited to a malfunction in the	PO Resolution: A/C Rationale: 9/30/09: changed real time in ICWG from "receiving" to "tracking" Concurrence: Concur Rationale:	11/18/08: Stakeholder concur.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				SV.		
293	Charlton MITRE	Page: Page 28 Para: 3.2.3.5	Adminstrative	Comment: last line Suggested Change: From: To: delete extra "space" between "last" and "column" Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
303	Charlton MITRE	Page: Page 33 Para: 3.4.1	Adminstrative	Comment: line 2 Suggested Change: From: To: insert "with" before "zero time-point" Rationale: readability	PO Resolution: A/C Rationale: The sentence will read as: "…(UTC), as realized by the U.S. Naval Observatory (UTC(USNO)), zero time-point…". Concurrence: Concur Rationale:	Concur (05/05/09)
304	Charlton MITRE	Page: Page 33 Para: 3.4.1	Adminstrative	Comment: para 2, line 2 Suggested Change: From: To: delete second "shall" and change "relate" to "relates" Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
305	Charlton MITRE	Page: Page 33 Para: 3.4.1	Adminstrative	Comment: last line Suggested Change: From: To: delete comma between "weeks" and "thereafter"	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: grammar		
306	Charlton MITRE	Page: Page 33 Para: 3.4.3	Adminstrative	Comment: second line Suggested Change: From: To: add blank line following definition of speed of light to be consistent with format elsewhere in document Rationale: consistency	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
308	Charlton MITRE	Page: Page 34 Para: 3.5.2	Adminstrative	Comment: line 1 Suggested Change: From: To: insert "word" after "9-bit data" Rationale: clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
237	Thomas Nagle GPC	Page: 29 Para: 3.2.3.5	Substantive	Comment: The last section/paragraph is confusing. Suggested Change: From: To: Delete "The above described block interleaver…less than or equal to z." Rationale: First paragraph and figure 3.2-6 already understandable.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	11/18/08: Stakeholders concur with proposed change.
192	Thomas Nagle GPC	Page: Para: 3.5.3	Substantive	Comment: At the bottom of the page it is stated that "The clock parameters in a data set shall be valid during the interval of time in which they are transmitted and shall remain valid for an additional period of time after transmission of the next data set has st	PO Resolution: A/C Rationale: Defer to PSICA Working Group. 9/9/09: Use Vimal Gopal's language: The clock parameters of subframe 2 describe the SV time scale during the period of validity. The parameters are applicable during the time in which	11/18/08: comment deferred; action assignedf to PSICA WG. 8/13/09: Jeffris to follow up with PSICA WG 8/26/09: Bob Castro to propose language in email to PSICA WG. 9/30/09: See comment 264.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: The IS should provide a value for the duration of the "additional period of time" that the clock parameters will be valid. Will the URAoc continue to bound (with integrity) the clock parameters during this period when the integrity status flag is set? To: Rationale: Spec should provide a value for the duration that the clock parameters from a previous data set will remain valid after the transmission of a new data set.	they are transmitted. Beyond that time, Concurrence: Rationale:	
263	Thomas Nagle GPC	Page: Para: 3.5.3	Adminstrative	Comment: Section 3.5.3, paragraph 4, last sentence states Suggested Change: From: "The eight LSBs of toe for each data set shall be different from the eight LSBs of toe transmitted during the previous six hours by the SV." The word for should not be within the subscript of " To: Change Rationale: Clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/21/09)
309	Charlton MITRE	Page: Page 44 Para: 3.5.3	Adminstrative	Comment: para 2, line 1 Suggested Change: From: To: change second "of" to "in" Rationale: readability	PO Resolution: Reject Rationale: Language is correct as is. Concurrence: Concur Rationale:	Concur (05/05/09)
310	Charlton MITRE	Page: Page 44 Para: 3.5.3	Adminstrative	Comment: para 3, line 4	PO Resolution: Accept	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: To: delete extra space following semi-colon Rationale: grammar	Rationale: Concurrence: Concur Rationale:	
311	Charlton MITRE	Page: Page 44 Para: 3.5.3	Adminstrative	Comment: para 5, line 1 Suggested Change: From: To: change second "of" to "in" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
312	Charlton MITRE	Page: Page 44 Para: 3.5.3	Substantive	Comment: para 5, lines 3 and 4 Suggested Change: From: To: quantify "… shall remain valid for an additional period of time after transmission of the next data set has started." Rationale: for this line to mean something, it requires clarification of how long it shall remain valid, unless any duration is acceptable	PO Resolution: A/C Rationale: Concurrence: Rationale:	Concur (05/05/09) 8/27/09 - Bob Castro to propose language. Make sure Michael Tran is involved. 9/30/09: See comment 264.
264	Thomas Nagle GPC	Page: Para: 3.5.3	Substantive	Comment: The last sentence states that "The clock parameter in a data set shall be valid during the interval of time in which they are transmitted and shall remain valid for an additional period of time after transmission of the next data set has started." Suggested Change: From:	PO Resolution: A/C Rationale: Will provide alternative language. Low priority. 8/13/09 - will resolve prior to ICWG 9/9/09: Use Vimal Gopal's language: The clock parameters of subframe 2 describe the SV time scale during the period of validity. The parameters are applicable during t	8/13/09 - will resolve prior to ICWG. Mike Munoz to look into. 9/30/09: discussed at ICWG. Chris Hegarty felt that verbiage was still a little vague, but others argued that it added clarity. In the end, ICWG members concurred change.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: Please specify the value for "the additional period of time". Rationale: Requirement.	Concurrence: Rationale: GPC Rejects PO's Resolution. PO is actually deferring with an additional action to be supported by the PO. This is actually accept, deferred.	
262	Thomas Nagle GPC	Page: Figure 3.5-2 Para: 3.5.2	Substantive	Comment: Would be good to include ISCs for L1C/A, L2C, L5I5, and L5Q5? Suggested Change: From: To: Add the ISCs for these signals. Rationale: Not yet implemented per - 11/18/08: Need to determine location (which message) to include the ISCs. This information needs to be included in this revision of the document.	PO Resolution: Accept Rationale: Duplicate of comment #191. Concurrence: Concur Rationale: (05/11/09) GPC rejects PO resolution and provides the below input in follow-up: These parameters are 13-bits each, so all four together require 52 bits. Suggestion is to place the four parameters together in Subframe 3, Page 1, beginning at bit 177 (177	8/25/09 - Karl Kovach reviewed recommended bits and "concurs" 8/25/09 - Working meeting GPC "Concur"
243	Thomas Nagle GPC	Page: 48 Para: 3.5.3.4	Substantive	Comment: Relates to comment 239 and 238. Suggested Change: From: To: Reword this section to describe L1, L2, and L5 signal health. Rationale: Consistency with IS-GPS-200 and IS-GPS-705.	PO Resolution: Reject Rationale: Defer to ICWG discussion. Concurrence: Rationale:	11/18/08: Stakeholder concur with proposed change. Change pending assignment of additional health bits (see CRM #239). Language describing health bits will be similar if not identical to IS-GPS-200. 9/1/09: Changed to Reject because L2 and L5 health bi
313	Charlton MITRE	Page: Page 48 Para: 3.5.3.4	Adminstrative	Comment: para 2, last line Suggested Change: From: To: add period to end of line Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
165	Thomas Nagle	Page: Figure	Substantive	Comment: ICD does not define the Integrity Status	PO Resolution: Accept	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	GPC	3.5-1 Para: 3.5.2		Flag. Suggested Change: From: To: Modify figure 30-1 to show the Integrity Status Flag as shown in the attached draft PIRN-800-XXX(ISF). Rationale: The Integrity Status Flag is an authenticated requirement specified in SS-SYS-800, SS-CS-800, and SS-SS-800. Failure to include the ISF in this ICD before the next OCX RFP will result in cost impact to the OCX program.	Rationale: Accept comment and will incorporate into document. However, a working group will be created to discuss further. Concurrence: Concur Rationale:	
355	Chris Sedgwick 2SOPS	Page: SV Accuracy URA data Para: 3.5.3.5	Adminstrative	Comment: Are URAoe negative URA values unique only to L1C? If so, recommend stating so in IS-GPS-800 because IS-GPS-200 (20.3.3.3.1.3 SV Accuracy) makes no reference to negative URA values (same applies for page 54 URA information as well). Suggested Change: From: To: Awaiting response Rationale:	PO Resolution: Reject Rationale: Negative URA index values apply to CNAV and CNAV-2 type messages. See IS-GPS-200 section 30.3.3.1.1.4. Concurrence: Concur Rationale:	Concur, 1 May 09
314	Charlton MITRE	Page: Page 50 Para: 3.5.3.6.1	Adminstrative	Comment: line 3 Suggested Change: From: To: Investigate whether these are truly generated onboard the SV as implied here. If they are generated by the CS, uploaded, and then transmitted as part of the nav message, this should be changed back to "CS" versus "SV."	PO Resolution: Defer Rationale: Need to determine if the users need this information or if the information can be removed. Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Insure document reflects actual operation		
244	Thomas Nagle GPC	Page: 53 Para: 3.5.3.7.1	Adminstrative	Comment: Clarify the dual frequency users. Suggested Change: From: "…the dual-frequency users must apply additional terms to the SV clock correction equations." To: "…the dual-frequency (L1C and L2C) users must apply additional terms to the SV clock correction equations." Rationale: Clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	See comment 352.
315	Charlton MITRE	Page: Page 53 Para: 3.5.3.7.1	Adminstrative	Comment: line 5 Suggested Change: From: To: make "users" singular … "user" Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
191	Thomas Nagle GPC	Page: Figure 3.5-2 Para: 3.5.2	Substantive	Comment: Would be good to include ISCs for L1C/A, L2C, L5I5, and L5Q5. Suggested Change: From: To: Rationale: In case the data channels in the L2C and L5 are RFI-interfered, but their receivers still track their pilot channels. The navigation parameters of the SV on L1C signal can be used.	PO Resolution: Accept Rationale: This is a good candidate for the ICWG. Concurrence: Concur Rationale: See comment #262.	11/18/08: Need to determine location (which message) to include the ISCs. This information needs to be included in this revision of the document. Action assigned to Karl K. and Chris H. to determine location. 8/13/09: Kogus to follow up with Hagerty. see
200	Thomas Nagle	Page:	Substantive	Comment: No guidance is provided for determining	PO Resolution: Accept	11/18/08: comment deferred; action

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	GPC	Para: 3.5.3.8		the overall URA from URAoc and URAoe. Is URA = URAoc + URAoe? Are both URAoc and URAoe integrity assured when the integrity status flag is set? These issues should be described in the IS. Suggested Change: From: To: Rationale: Provide clarification on how the overall URA should be computed from the individual clock and ephemeris URAs.	Rationale: Defer to PSICA Working Group. New Section 3.5.3.10 will address this concern. Concurrence: Rationale:	assigned to PSICA WG. 8/13/09: Jeffris to follow up with PSICA WG 8/26/09: Change to "reject" as New Section 3.5.3.10 will address this concern.
240	Thomas Nagle GPC	Page: Figure 3.5-4 Para: 3.5.2	Substantive	Comment: Mislabeled T_oa Suggested Change: From: T_oa To: t_oa Rationale: Correction	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	11/18/08: Stakeholders concur with proposed change.
198	Thomas Nagle GPC	Page: Para: 3.5.3.8	Substantive	Comment: Correction to the second equation. Suggested Change: From: + URAoc1 (t – top) + … To: + URAoc1 (t – top - 93,600) + … Rationale: Correction	PO Resolution: Reject Rationale: This equation is identical to the one found in IS-GPS-200 and will require community discussion before making a revision. Concurrence: Concur Rationale:	11/18/08: comment was withdrawn. 9/1/09: updated to "Reject" and "concur"
316	Charlton MITRE	Page: Page 55 Para: 3.5.3.8	Adminstrative	Comment: throughout page Suggested Change: From: To: Add period following each instance where "N"	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				is defined. Rationale: grammar		
353	Rhonda Slattery Aerospace	Page: Para: 3.5.3.8	Critical	Comment: Where do errors that do not fall cleanly into clock or ephemeris get added to UDRA (e.g., ISC errors, and all the other components of the URE)? Suggested Change: From: To: Clarify what errors are included in clock and ephemeris UDRA to show users that all errors are covered as described in the 800 specifications. Rationale: Current definition of UDRA does not cover all the IIIA and OCX errors.	PO Resolution: Accept Rationale: Will forward to the space IPT for resolution. Concurrence: Rationale: This is in the requirement set for OCX block 1, as well as GPS III SS. We need to know this data today, and it's not just a SV problem. (05/06/09)	9/9/09: Sent email to Rhonda for concrrence. Proposed adding UDRA in the definitions. 9/30/09: Email to Kogus corrects the original CRM (from UDRA to URA). Language incorporated in to section 3.5.3.8 answers this question.
318	Charlton MITRE	Page: Page 56 Para: 3.5.3.9	Adminstrative	Comment: line 2 Suggested Change: From: To: Change wording throughout document, in each instance used, to read "The bit lengths, scale factors, ranges, and units of these parameters are given …" Rationale: Standardize wording throughout document to match that used in para 3.5.4.1.1. Many variations in current document.	PO Resolution: A/C Rationale: Will need to verify that the proposed language is appropriate for each situation. Concurrence: Concur Rationale:	Concur (05/05/09)
319	Charlton MITRE	Page: Page 56 Para: 3.5.3.9.1	Adminstrative	Comment: line containing "ISCL1CD = tL1P(Y) - tL1CD." Suggested Change: From:	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: change period at end of "ISCL1CD = tL1P(Y) - tL1CD" to a comma and delete comma following "where" on next line. Delete "is" following parentheses. Rationale: grammar/readability		
320	Charlton MITRE	Page: Page 57 Para: 3.5.3.9.2	Adminstrative	Comment: Suggested Change: From: To: delete colon, change beginning of second sentence to "and the" and delete comma after "where" Rationale: grammar/readability	PO Resolution: A/C Rationale: Will delete colon after each"relationship" and add period following each equation on page. Will Add "for the preceding equations, the following definitions apply:" for consistency. Will line up equal signs for readability. Concurrence: Concur Rationale:	Concur (05/05/09)
246	Thomas Nagle GPC	Page: 58 Para: 3.5.3.9.3	Substantive	Comment: There are errors in the "PR" equations. Suggested Change: From: "… + SSV_L5 - …" To: "… + C SSV_L5 - …" in the 2nd, 4th, 6th, and 8th equations. Rationale: SSV_L5 is the delay bias, therefore, need to convert to the range by multiplying by the speed of light, c.	PO Resolution: Reject Rationale: Defer. Need LM input. Concurrence: Concur Rationale:	11/18/08: Action to GPSW/GPC to determine where the equations and parameters should be located. Remove these equations and SSV discussion from this document. Provide a reference/pointer to the <TBD> location for this information. Stakeholders concur. V
322	Charlton MITRE	Page: Page 57 Para: 3.5.3.9.3	Adminstrative	Comment: Suggested Change: From: To: Delete colon after each "relationship" and add period following each equation on page. Delete "where" and replace with "For the preceding equations, the following definitions apply:"	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: grammar/readability		
323	Charlton MITRE	Page: Page 57 Para: 3.5.3.9.3	Adminstrative	Comment: Suggested Change: From: To: delete "where" in final definition Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
324	Charlton MITRE	Page: Page 59 Para: 3.5.4	Adminstrative	Comment: para 2, line 1 Suggested Change: From: To: change "pages" to singular and "begin" to "begins" Rationale: grammar/readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
325	Charlton MITRE	Page: Page 59 Para: 3.5.4	Adminstrative	Comment: para 2, line 2 Suggested Change: From: To: change "… bits 9 through 14 of subframe 3." to "… bits 9 through 14 of the page." Rationale: clarity	PO Resolution: A/C Rationale: The sentence wiil read as follows: "Each subframe 3 page is identified by a 6-bit page number provided in bits 9 through 14". Concurrence: Concur Rationale:	Concur (05/05/09)
327	Charlton MITRE	Page: Page 59 Para: 3.5.4	Adminstrative	Comment: throughout document Suggested Change: From: To: make all usage in document consistent with respect to "subframe x page y" … currently it is	PO Resolution: A/C Rationale: Will need to verify that the proposed language is appropriate for each situation. Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				capitalized in some places and not in others, it appears with commas in some places and not in others, etc. Rationale: consistency, various formats currently used throughout document		
326	Charlton MITRE	Page: Page 59 Para: 3.5.4.1	Adminstrative	Comment: line 1 Suggested Change: From: To: change first line to read "As depicted in Figure 3.5-2, subframe 3 page 1 contains the UTC …" Rationale: readability/clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
328	Charlton MITRE	Page: Page 60 Para: 3.5.4.1.1.1	Adminstrative	Comment: line 5 Suggested Change: From: To: change period at end to colon and place period after equation Rationale: grammar	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
330	Charlton MITRE	Page: Page 62 Para: 3.5.4.2.1	Adminstrative	Comment: line 2 Suggested Change: From: To: add hyphen to read "GPS-like" Rationale: grammar/readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
331	Charlton MITRE	Page: Page 62 Para: 3.5.4.2.1	Adminstrative	Comment: line 9 Suggested Change:	PO Resolution: Accept Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: make "the number of bits, the …" match the language used in 3.5.4.1.2 Rationale: consistency throughout document	Concurrence: Concur Rationale:	
247	Thomas Nagle GPC	Page: 62 Para: 3.5.4.2.1.1	Substantive	Comment: In the equation, term "WN" is not defined in the CNAV-2 message types. Suggested Change: From: "WN" To: "WNn" Rationale: Correction	PO Resolution: Reject Rationale: Need ICWG discussion. WN and WNn are both used in this document. Per this document, WN is defined in section 20.3.3.5.2.4 of IS-GPS-200. WNn is not defined, but assumed from the context to be the 13 MSBs of WN. Concurrence: Concur Rationale:	11/18/08: comment was withdrawn.
332	Charlton MITRE	Page: Page 63 Para: 3.5.4.2.2	Adminstrative	Comment: line 3 Suggested Change: From: To: make "the number of bits, the …" match the language used in 3.5.4.1.2 Rationale: consistency throughout document	PO Resolution: A/C Rationale: Also change "contain" to "account" for readability. Concurrence: Concur Rationale:	Concur (05/05/09)
241	Thomas Nagle GPC	Page: Figure 3.5-5 Para: 3.5.2	Substantive	Comment: Mislabeled T_oa Suggested Change: From: T_oa To: t_oa Rationale: Correction	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	11/18/08: Stakeholders concur with proposed change.
242	Thomas Nagle GPC	Page: 44 Para: 3.5.3	Substantive	Comment: Reaplce "will" with "shall" in the fourth paragraph.	PO Resolution: Accept Rationale: Defer for ICWG discussion.	11/18/08: Stakeholder concur with proposed change with some modification - add some language relating to timeframe

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CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: Any change in the subframe 2 ephemeris and clock data will be accomplished with a simultaneous change in the toe value. The SV will assure … To: Any change in the subframe 2 ephemeris and clock data shall be accomplished with a simultaneous change in the toe value. The SV shall assure … Rationale: Tighten specs for new message type and new signal/system.	Concurrence: Concur Rationale:	constraints. Changes made in real-time during ICWG.
334	Charlton MITRE	Page: Page 65 Para: 3.5.4.3	Adminstrative	Comment: undefined acronym Suggested Change: From: To: Define "Midi" at first use in text or in acronym listing Rationale: readability/clarity	PO Resolution: Reject Rationale: Midi is not an acronym. 05/01/09: Defer. Will bring to ICWG for definition. Concurrence: Concur Rationale:	Concur (05/05/09)
356	Chris Sedgwick 2SOPS	Page: Para: 3.5.4.3.4	Adminstrative	Comment: The following statement reads incomplete and may leave the user in question of how to apply the information Suggested Change: From: "For each health indicator, a "0" signifies that all navigation data are valid and "1" signifies that some or all navigation data are invalid." To: Reword sentence to add specific information on what "some" refers to (i.e Subframe 1, 2, 3…) Rationale:	PO Resolution: Reject Rationale: Need to verify whether or not "some" can be consistently tied to a specific subframe, etc. Concurrence: Concur Rationale:	Concur, 1 May 09 9/30/09: The "some" in this context refers to any of the data in the message that might be important for users.
336	Charlton	Page: Page 66	Adminstrative	Comment: line 4	PO Resolution: Accept	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	MITRE	Para: 3.5.4.3.5		Suggested Change: From: To: make "the number of bits, the …" match the language used in 3.5.4.1.2 Rationale: consistency throughout document	Rationale: Concurrence: Concur Rationale:	
337	Charlton MITRE	Page: Page 69 Para: 3.5.4.4.1	Adminstrative	Comment: line 2 Suggested Change: From: To: add "as depicted in" before "Figure" Rationale: readability/clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
205	Thomas Nagle GPC	Page: Para: 3.5.4.4.4	Substantive	Comment: The IS states that User Differential Range Accuracy (UDRA) and UDRA-dot enable users to estimate the accuracy obtained after corrections are applied. Will these parameters be integrity assured? Suggested Change: From: To: Rationale: If UDRA and UDRA-dot are to be integrity assured, then the IS should state so.	PO Resolution: Reject Rationale: Defer to PSICA Working Group. UDRA is not integrity assured. 3.5.3.10 explains how URA is assured when status flag is on. Concurrence: Rationale:	11/18/08: comment deferred; action assigned to PSICA WG. 8/13/09: Jeffris to follow up with PSICA WG 8/26/09: Changed to "reject" based on PSICA WG position: UDRA is not integrity assured. 3.5.3.10 explains how URA is assured when status flag is on.
338	Charlton MITRE	Page: Page 70 Para: 3.5.4.4.4.1	Adminstrative	Comment: line 1 Suggested Change: From: To: replace "of" before "Figure" with "as depicted	PO Resolution: A/C Rationale: Pages may shift upon accepting/rejection of changes to the document. Will make changes prior to finalization of the document. Concurrence: Concur	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				in Rationale: readability/clarity	Rationale:	
339	Charlton MITRE	Page: Page 72 Para: 3.5.4.5	Adminstrative	Comment: line 1 Suggested Change: From: To: add "as depicted in" before "Figure" and add the word "the" so as to read "The specific contents of the text message will be …" Rationale: readability/clarity	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
340	Charlton MITRE	Page: Page 73 Para: 3.5.5.1	Adminstrative	Comment: last line Suggested Change: From: To: delete "a" from "… set of a newly uploaded …" Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
265	Thomas Nagle GPC	Page: Para: 6.2.1	Critical	Comment: Definition of URA should be expanded to be consistent with the expanded definition in the GPS III SS-SYS-800, SS-SS-800, and SS-CS-800 specifications. Suggested Change: From: 6.2.1 User Range Accuracy. User range accuracy (URA) is a statistical indicator of the ranging accuracies obtainable with a specific SV. URA is a one-sigma estimate of the user range errors in the navigation data for the transmitting satellite. It includes all errors for which the Space and Control Segments are responsible. It does not include any errors introduced in the user set or the transmission media. While the URA may vary over	PO Resolution: Accept Rationale: Language needs to be ERB/CCB approved at the requirements level prior to or concurrent with changes being made to the interface document. Will coordinate with the Requirements lead. Concurrence: Rationale: (05/11/09) GPC rejects with PO's resolution. Why didn't PO coordinate with "Requirements Lead", a Wing level and local entity, prior to deferring our input? ERB and CCB are forthcoming, and isn't the objective of the CRM review process to get all commen	8/13/09: Use the same definition being developed by SYS-800 team.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				a given subframe fit interval, the URA index (N) reported in the NAV message corresponds to the maximum value of URA anticipated over the fit interval. To: The term "overbound" means that for each value of range error, the cumulative probability on the Gaussian distribution defined by the URA is greater than or equal to the corresponding probability on the URE distribution, out to and including a specified v Rationale: Definition of URA should be consistent between the GPS III specifications and the interface documents. The current definition of URA in this document lacks specificity.		
166	Thomas Nagle GPC	Page: Para: 3.5.3.10	Substantive	Comment: ICD does not define the Integrity Status Flag. Suggested Change: From: To: Add paragraph 3.5.3.10 to describe the Integrity Status Flag as shown in the attached draft PIRN-800-XXX(ISF). Rationale: The Integrity Status Flag is an authenticated requirement specified in SS-SYS-800, SS-CS-800, and SS-SS-800. Failure to include the ISF in this ICD before the next OCX RFP will result in cost impact to the OCX program.	PO Resolution: Accept Rationale: 5/22/08: Accept comment and will incorporate into document. However, a working group will be created to discuss further. 02/19/09: Integrity Flag was incorporated; see comment #196. Concurrence: Concur Rationale:	
226	T. Kawakami GPD	Page: 108 Para: 6.3.1	Critical	Comment: The description of the additional PRN sequences is not consistent between IS-GPS-200, IS-GPS-705 and IS-GPS-800. When the previous version of IS-GPS-800 was approved, the ICC assured that all three of the public ISs would contain the same description. T	PO Resolution: Defer Rationale: Defer for ICWG discussion. Concurrence: Concur Rationale:	11/18/08: comment is in work. Action to Mike Munoz. Will remain open. 9/30/09: This will be resolved with the new constellation expansion language to be provided by Karl.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: To: Decide which description will be used and then consistenly use it. Additionally, recommend consultation with M. Dash (GPA) for discussions from previous CCB and ICWG meetings pertaining to additional PRN sequences. Rationale:		
344	Kawakami GPD	Page: Para: 6.3.1	Critical	Comment: The description of the additional PRN sequences is not consistent between IS-GPS-200, IS-GPS-705 and IS-GPS-800. When the previous version of IS-GPS-800 was approved, the ICC assured that all three of the public ISs would contain the same description. Suggested Change: From: To: decide which description will be used and then consistenly use it. Additionally, recommend consultation with M. Dash (GPA) for discussions from previous CCB and ICWG meetings pertaining to additional PRN sequences. Rationale:	PO Resolution: Reject Rationale: Duplicate of comment #226 Concurrence: Concur Rationale:	Concur (04/30/09)
341	Charlton MITRE	Page: Page 108 Para: 6.3.1.1	Adminstrative	Comment: title Suggested Change: From: To: change "Codes" to "Code" in title Rationale: grammar/readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur (05/05/09)
196	Thomas Nagle	Page:	Critical	Comment: SS-SYS-800 states that the system is to	PO Resolution: Accept	8/13/09 - Mike Munoz to generate top-level

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	GPC	Para: 3.5.3.10		provide an integrity assurance URA with an integrity status flag. There is no mention of an integrity assured URA in this section nor is there mention of an integrity status flag. Since the L1C signal is expected Suggested Change: From: To: Add an integrity Status Flag to subframe 2. Add material concerning integrity assured URA. 9/9/09: Add: x.x.x.x Integrity Assurance In this mode of operation, the L1C message will contain information that allows users to operate under an integrity assure Rationale:	Rationale: Defer. This is a SYS-800 effectivity 40 requirement; this CCB is focused on effectivity 15. Only the identification of the Integrity Status Flag bits within the message is needed for effectivity 15. However, the bits have not been vetted with the communi Concurrence: Rationale: 11/18/08: Integrity Status Flag information has been added to section 3.5.3.10. Need section title – currently "reserved." Change to "Integrity Status Flag." May need to move this information to 3.5.3.5. Action assigned to Karl Kovach to coordinate pro	verbiage (something along the lines of "URA is integrity-assured...") to add into section 3.5.3.5. 9/10/09: sent email for concurrence to GPC. 9/30/09: Updated real time in ICWG and added "enhanced level" for clari
352	Rhonda Slattery Aerospace	Page: Para: 3.5.3.7.1	Substantive	Comment: 3.5.3.9 discusses both L1/L2 and L1/L5. Why did you limit this paragraph to only L1/L2? Suggested Change: From: To: Add back L1/L5 or remove limiting addition. Rationale: Correctness	PO Resolution: A/C Rationale: The sentence will read as "...(L1/L2 and L1/L5)...". Concurrence: Concur Rationale:	Concur (05/06/09)
235	Thomas Nagle GPC	Page: Figure 3.2-2 Para: 3.2.2.1.2	Adminstrative	Comment: Add "m11" to S1 polynomial to matched labels on this figure. Suggested Change: From: "… + x11 To: "… + m11x11 Rationale: Clarity	PO Resolution: Reject Rationale: Reject. Note that m11 is always one, if it wasn't there would be no 11th state. Adding m11 to the equation implies that m11 could have a value of zero. Concurrence: Concur Rationale:	9/30/09: Removed a comma from table 3.2-3 for consistency with the notes section at the bottom of the table

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
199	Thomas Nagle GPC	Page: Para: 3.5.3.8	Substantive	Comment: The paragraph is not clear whether the URA accounts for errors in the inter-signal group delay differential corrections. Suggested Change: From: To: 9/1/09: JP Fernow recommends adding the following language: "Clock-related URA (URAoc) accounts for signal-in-space contributions to user range error that include, but are not limited to, the following: the net effect of clock parameter and code phase e Rationale: Recommend that the IS make clear whether the URA terms account for errors in the inter-signal group delay differential corrections.	PO Resolution: A/C Rationale: Defer to PSICA Working Group. Concurrence: Rationale:	11/18/08: comment deferred; action assigned to PSICA WG. 8/13/09: Jeffris to follow up with PSICA WG 8/26/09: JP fernow to work with Karl Kovach to develop language giving examples of what failures are included. 9/8/09: Emailed Purvis for concurrence.
239	Thomas Nagle GPC	Page: Figure 3.5-1 Para: 3.5.2	Substantive	Comment: Would be good to add "L2 and L5 health bits"? Suggested Change: From: To: Add "L2 and L5 health bits." Rationale: Consistency with messages from L2c and L5 signals in IS-GPS-200 and IS-GPS-705, respectively.	PO Resolution: Reject Rationale: Need ICWG discussion. Not clear on the OPSCON, between SIS health and NSC usage. How are the health bits used in the field? 9/1/09: See Figure 3.5-5. Subframe 3, Page 4 – Midi Almanac for L1, L2, and L5 health bits. Concurrence: Concur Rationale:	11/18/08: Stakeholders concur with proposed change. Add two bits for L2 and L5 health bits. Additional bit assignments will need to be taken back through ICWG.
238	Thomas Nagle GPC	Page: Figure 3.5-1 Para: 3.5.2	Substantive	Comment: "Bit 33 indicates the L1C health" can complicate the integrity issues. Message from L2c and L5 signals as well as legacy message use a general "L1 health" for all signals modulated with L1 RF carrier. What to do when L1 health flag and L1C health flag a Suggested Change:	PO Resolution: Reject Rationale: Need ICWG discussion. The general L1 flag makes sense if all users must receive L1C/A, but does not makes sense for the newer signals which can be acquired stand-alone. 9/1/09: Figure 3.5-5 illustrates health bits for L1, L2, and L5	11/18/08: Stakeholders concur with proposed change. Change L1C health flag to L1 health flag. 9/1/09: Figure 3.5-5 illustrates health bits for L1, L2, and L5.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: Use "L1 health" for Bit 33. Rationale: Integrity issues arise with different L1 health flag and L1C health flag.	Concurrence: Concur Rationale:	
345	Kawakami GPD	Page: Para: 3.5.4.2.2	Critical	Comment: Confirm with John Berg (Aerospace) that ECEF to ECI equations, values and descriptions are correct and reflect what will be implemented by GPSIII and OCX. There is ongoing work within multiple groups that will require CNAV and MNAV messages to be updat Suggested Change: From: To: Rationale:	PO Resolution: Reject Rationale: Commenter must provide information that proves that the equations are incorrect and provide Was/Is suggested language. If there is concern, then a separate meeting (e.g. – TIM) should be created to address concern. 04/30/09: PO Resolution Update - Accep Concurrence: Concur Rationale:	Concur (04/30/09) 8/27/09 - change from "Defer" to "Reject" because of new tech note insertion in IS-GPS-200 (which the IS-GPS-800 points to).
261	Thomas Nagle GPC	Page: Figure 3.5-1 Para: 3.5.2	Substantive	Comment: Would be good to add "L2 and L5 health bits"? Suggested Change: From: To: Add "L2 and L5 health bits" Rationale: Not yet added per - 11/18/08: Stakeholders concur with proposed change. Add two bits for L2 and L5 health bits. Additional bit assignments will need to be taken back through ICWG.	PO Resolution: Reject Rationale: Duplicate of comment #239. The resolution was accepted but stakeholders agreed that the bit assignments would need to go through the ICWG prior to adding the bits to the document. Concurrence: Concur Rationale:	Concur (05/21/09)
354	Rhonda Slattery Aerospace	Page: Para: 3.5.4.2.2	Critical	Comment: Coordinate transformations in the user equipment are using the technical note 21 conventions. OCX and all SVs are switching to the technical note 32 conventions.	PO Resolution: Reject Rationale: The commenter is encouraged to present the coordinate transformations at the Public ICWG. 05/05/09: Accept with comment. Will incorporate	9/9/09: Sent email to Rhonda for concrrence. Tech note updates to be made to IS-GPS-200 and IS-GPS-800 just points to that document.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change: From: To: At least insert a note to inform users that this is coming. Preferably, incorporate both sets of equations along with the note and a defined switchover notice. Rationale: Complete update for IIIA and OCX	suggested change upon finalization of technical note 32 conventions. 9/9/09: no updates necessary for IS-GPS-800 as Concurrence: Concur Rationale: This is in the requirement set for OCX block 1. Even without the technical details, the data contained in the ICD is incorrect and needs to be fixed. (05/06/09)	
342	David Lee A5P	Page: Figure 3.5-4 & 3.5-5 Para: 3.5.2	Adminstrative	Comment: Unexplained character in row 1, starting bit 28 Suggested Change: From: To: Check font/symbol Rationale: Clarity	PO Resolution: Reject Rationale: The ICC POC was unable to find any unusual characters in the figure. If the commenter would like to resubmit the comment, then he/she should provide more specific detail. 05/05/09 – Accept with comment. The ICC POC will ensure that the final PDF vers Concurrence: Concur Rationale:	
267	Thomas Nagle GPC	Page: Para: 6.2.1	Substantive	Comment: The definition of URA in this section is inconsistent with that in SS-SYS-800C. Here URA is defined as "with a specific SV" while SS-SYS-800C (SYS1065) defines URA as "with a specific signal and SV". Suggested Change: From: Change "with a specific SV" to "with a specific signal and SV". To: Rationale: Consistency and correctness.	PO Resolution: Accept Rationale: Project Officer Resolution: Accept Concurrence: Concur Rationale:	Concur (05/21/09) 8/13/09: See comment 265.
269	M Dash GPA	Page: Para: Gen	Critical	Comment: As part of the 200/705/800 ICWG comments I submitted was the following: "Comment: There is no document identifying the	PO Resolution: Reject Rationale: Duplicate of GPC comment #268	8/13/09: team maintains position to reject comment due to SE&I resource limitations.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				requirements redundantly repeated in 200/705/800 documents. Suggested Change: Provide a document of some kind identifying common/redund Suggested Change: From: To: Rationale: It's critical that changes to IS-GPS-200 originate in the IS-GPS-200 ICWG process, and not first initiated as part of a change to 705 or 800. The only way to ensure this does not happen is to modify the wording in 705 and 800 to refer to 200 to the maxim	Concurrence: Non-concur Rationale:	
266	T. Nagle GPC	Page: Para: NEW	Critical	Comment: Add new paragraph (3.5.1.1) that describes the OCX assumptions regarding UE correlation characteristics used to make pseudorange measurements and a disclaimer that UE using different correlation characteristics may experience small additional User Range E Suggested Change: From: NEW To: The pseudorange-related parameters provided in this navigation message are defined at zero age of data assuming that the UE is making pseudorange measurements using a signal correlation function with the following characteristics: an early-late discrimin Rationale: This is consistent with the assumptions and definition of URE in the GPS III -800 series of specifications. At this time, the Control Segment is not required to account for multiple UE correlation	PO Resolution: Defer Rationale: Project Officer Resolution: The OCX assumptions do not belong in the document. However, will add as a placeholder until a better document is identified pending ICWG approval. Concurrence: Rationale: (05/11/09) GPC notes that PO resolution is actually a rejection of GPC's comment, and will be worked again at a later date and within a different document. GPC thus recommends the PO to reject our comment, while GPC in advance of this recommended action	8/13/09: Change from "Accept with change" to "Defer". Mike Munoz to look for best place to capture a placeholder for OCX assumptions. 9/30/09: Accepted by ICWG, but this will get incorporated into the next IRN with the following modification: The correc

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				characteristics or provide multiple sets of data, there		
292	Charlton MITRE	Page: Page 26 Para: 3.2.3.3	Adminstrative	Comment: extraneous white space at bottom of page Suggested Change: From: To: eliminate extraneous white space at bottom of page Rationale: readability	PO Resolution: A/C Rationale: Pages may shift upon accepting/rejection of changes to the document. Will make changes prior to finalization of the document. Concurrence: Concur Rationale:	Concur (05/05/09)
317	Charlton MITRE	Page: Page 55 Para: 3.5.3.9.1	Adminstrative	Comment: extraneous white space on page Suggested Change: From: To: eliminate extraneous white space on page Rationale: readability	PO Resolution: A/C Rationale: Pages may shift upon accepting/rejection of changes to the document. Will make changes prior to finalization of the document. Concurrence: Concur Rationale:	Concur (05/05/09)
321	Charlton MITRE	Page: Page 57 Para: 3.5.3.9.3	Adminstrative	Comment: extraneous white space at bottom of page and format errors Suggested Change: From: To: delete extraneous white space at bottom of page and delete colon after each "relationship" and add period following each equation on page Rationale: grammar/readability	PO Resolution: A/C Rationale: Pages may shift upon accepting/rejection of changes to the document. Will make changes prior to finalization of the document. Concurrence: Concur Rationale:	Concur (05/05/09)
333	Charlton MITRE	Page: Page 63 Para: 3.5.4.3.4	Adminstrative	Comment: extraneous white space on page Suggested Change: From:	PO Resolution: A/C Rationale: Pages may shift upon accepting/rejection of changes to the document. Will make changes prior to finalization of the document.	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				To: eliminate extraneous white space on page Rationale: readability	Concurrence: Concur Rationale:	
335	Charlton MITRE	Page: Page 65 Para: 3.5.4.3.5.1.1	Adminstrative	Comment: extraneous white space on page Suggested Change: From: To: eliminate extraneous white space on page Rationale: readability	PO Resolution: A/C Rationale: Pages may shift upon accepting/rejection of changes to the document. Will make changes prior to finalization of the document. Concurrence: Concur Rationale:	Concur (05/05/09)
158	Thomas Nagle GPC	Page: Para: 6.3.1	Substantive	Comment: Suggested Change: From: To: Remove all tables documenting PRN codes and develop a new document for all PRN codes (Example attached) Rationale: the title of the interface document is Space Segment to user. Many of the documented codes are not part of from the space segment and when doing this make sure all text is identical for all signals unless there is some unique requirement that must be met.	PO Resolution: A/C Rationale: 5/22/08: : ICWG consensus has determined to remove the 2nd paragraph from section 6.3.1 and still leaving the table 6.3-1 below. Recommendation to place a reference to the Public approved PRN. Some members did not agree and more discussion is needed. Concurrence: Concur Rationale:	11/18/08: Karl Kovach provided approach at ICWG and has action to product language for IS. 8/13/09: Ben Kogus to follow up with Karl Kovach. 9/1/09: Kogus, Gopal and Kovach discussed. Decided the "reference to the Public-approved PRNs" would not be feas
329	Charlton MITRE	Page: Table 3.5-3 Para: 3.5.4.1.1.1	Adminstrative	Comment: table placement Suggested Change: From: To: move Table 3.5-3 to top of page 60 so as to appear immediately after reference in para 3.5.4.1.1	PO Resolution: Reject Rationale: The paragraph applies to para 3.5.4.1.1.1 also; no need to move the Table. Concurrence: Concur Rationale:	Concur (05/05/09)

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Table should appear as soon after reference in text as practical		
171	Thomas Nagle GPC	Page: Para: Gen	Adminstrative	Comment: Please change "NAV" or "CNAV" appropriate instances throughout the document to "CNAV-2". For example, in section 3.2.1.8.2 (last sentence), CNAV-2 message should be used in place of NAV message. Suggested Change: From: Corrections for the bias components of the group delay differential are provided to users in the CNAV-2 message To: Rationale: Correction	PO Resolution: Defer Rationale: Reject as Substantive; Accept as Administrative. "NAV" was used as an abbreviation for navigation and to refer to legacy navigation messages; the two meanings have been clarified. Concurrence: Concur Rationale:	
94	John Clark (for Raj Aggarwal) GPV	Page: Para: Gen	Substantive	Comment: I did not see any mechanism to ensure that position solutions derived from L1 C/A and L1C would be identical (or at least consistent) and, in fact, in a more general sense, that the geodesy used in the two systems (GPS and Galileo) must be nearly identica Suggested Change: From: To: Rationale:	PO Resolution: Reject Rationale: Outside of scope of this document. Concurrence: Rationale:	9/1/09: sent email requesting concurrence. 9/8/09: John Clark has no recollection of comments. Sent email to Raj Agarwal.
227	Kawakami GPD	Page: viii Para: 3.2.1.8.3	Adminstrative	Comment: 3.2.1.8.3 is not listed in the table of contents Suggested Change: From: To: include 3.2.1.8.3	PO Resolution: A/C Rationale: The table of contents will be changed upon ICWG acceptance of the new paragraph. 2/19/09: TOC has been updated. Concurrence: Concur	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Correctness	Rationale:	
357	Bruce Peetz Stuart Riley Ann Cignaner Trimble 408 481-8052 408 481-8696 408 481-8096 External	Page: Para: 3.2.1.6	Substantive	Comment: Explicitly fix phase relationships of L1C and C/A signals. Suggested Change: From: To: Restore language from previous draft to this paragraph that reads "Carriers of the two L1C components shall be in the same phase (within +/- 100 milliradians) as the C/A code-carrier phase." Rationale: Fixing the phase between L1C and C/A components is essential to allow precision users to adopt L1C over time by mixing networks of receivers. Failure to fix the phase will impede, or possibly prevent such a transition from occurring. The current -200 an	PO Resolution: Reject Rationale: 9/30/09: Ann Cignar mentioned she would "withdraw" the comment if the chnages as described Concurrence: Rationale:	8/31/09: received comment.
358	M. Jones/ITT/ 280.451.7248 Raytheon (OCX)	Page: Para: 3.5.3.7.1	Substantive	Comment: Time scale primary pair, clarity and consistency with CS-800. Suggested Change: From: The algorithms defined in paragraph 20.3.3.3.3.1 of IS-GPS-200 allow all users to correct the code phase time received from the SV with respect to both SV code phase offset and relativistic effects. However, since the SV clock corrections of equations in paragraph 20.3.3.3.3.1 of IS-GPS-200 are currently estimated by the CS using dual frequency L1 P(Y) and L2 P(Y) code measurements, the single-frequency L1 user and the dual-frequency (L1C and L2C) users must apply additional terms to the SV clock correction equations. These terms are described in paragraph 3.5.3.9. In addition, users shall use toe, provided in bits 39 through 49 of subframe 2, to replace toc in	PO Resolution: New Rationale: Concurrence: Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				the algorithms in paragraph 20.3.3.3.3.1 of IS-GPS-200. To: Rationale: SS-CS-800 stipulates the primary signal pair should be selectable (i.e., other than just L1 P(Y) and L2 P(Y)),.		
359	M. Jones/ITT/ 280.451.7248 Raytheon (OCX)	Page: Para: 3.5.3.6.1	Adminstrative	Comment: SS algorithm implementation specific info not appropriate for UE ICD Suggested Change: From: The ephemeris parameters are Keplerian in appearance; however, the values of these parameters are produced by the SV via a least squares curve fit of the predicted ephemeris of the SV APC (time-position quadruples: t, x, y, z expressed in ECEF coordinates). To: Rationale: Details of algorithm are subject to SS contractor design trades and not needed for UE to do its job.	PO Resolution: New Rationale: Concurrence: Rationale:	
361	Steve Brown LMCO	Page: Para: 3.2.1.7.2	Critical	Comment: LM cost impact. Was previously 10 nanoseconds and then changed to 1 nanosecond for unclear reasons. 1 nanosecond has a huge cost impact so LM proposed 5 nanoseconds. Suggested Change: From: 1 nanosecond To: 5 nanoseconds Rationale: LMCO study shows 1 ns cost prohibitive.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
362	Karl Kovach Aerospace	Page: Para: 3.2.1.8.2	Substantive	Comment: Since IS-GPS-800 only applies to the L1C signal, group delay differential (as defined in the IS-	PO Resolution: Accept	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				GPS-200 and IS-GPS-705 pertaining to multiple signals) does not apply. Suggested Change: From: The reference for group delay differential for GPS signals is the L1 P(Y) signal. The group delay differential between the radiated signals (i.e. L1 P(Y) and L1CD; L1 P(Y) and L1CP) is specified as consisting of random plus bias components. The mean differential is defined as the bias component and will be either positive or negative. For a given navigation payload configuration, the absolute value of the mean differential delay shall not exceed 15.0 nanoseconds. The random variations about the mean shall not exceed 1.0 nanoseconds (two sigma). The random variation requirement shall be valid for signal measurement/averaging times of 10 milliseconds to 1 day. Corrections for the bias components of the group delay differential are provided to users in the navigation message. To: Not applicable. See Sections 3.2.1.7.1 (Signal Coherence) and 3.5.3.9.1 (Inter-Signal Group Delay Differential Correction). Rationale: Deleted Group Delay Differential requirement and replaced with N/A since this is covered in the signal coherence section.	Rationale: 9/30/09: Implemented real time at ICWG. Concurrence: Concur Rationale: 9/30/09: Implemented real time at ICWG.	
363	Steve Brown LMCO	Page: 16 Para: 3.2.1.3	Critical	Comment: Suggest change to LM text. LM text produces no cost or schedule impact Suggested Change: From: 3.2.1.3 Carrier Phase Noise (TBR) The phase noise spectral density of the unmodulated carrier shall not exceed the magnitude of a straight line (on a log-log plot)	PO Resolution: A/C Rationale: See comment 138. Concurrence: Concur Rationale:	9/30/09: see comment 138.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				between -30 dBc/Hz at 1 Hz and -6070 dBc/Hz at 1 x 10 ^4Hz, and another straight line between -60 dBc/Hz at 10 Hz and -90 dBc/Hz at 10 KHz. (The the one-sided integrated phase noise spectrum between 1 Hz and 10 KHz, when integrated as linear values, multiplied by two and square rooted, is equal to .034 radians rms.) Also, the spurskHz shall not exceed -40 dBc0.01 radians rms. To: The phase noise spectral density of the unmodulated carrier shall be better than -60dBc/Hz at 10Hz off carrier with a -10dB/decade slope to 1KHz with a slope between 1KHz to 100KHz that allows the phase noise integrated between 10 Hz and 100 KHz to remain Rationale:		
364	Steve Brown LMCO	Page: 18 Para: 3.2.1.8.1	Critical	Comment: Update with 1.5 ns and updated text from other Iss Suggested Change: From: 3.2.1.8.1 Group Delay Uncertainty The effective uncertainty of the group delay shall not exceed 1.0 nanoseconds (two sigma). The uncertainty requirement shall be valid for signal measurement/averaging times of 10 milliseconds to 1 day. To: 3.2.1.8.1 Group Delay Uncertainty The effective uncertainty of group delay shall not exceed 1.5ns (two sigma), when including consideration of the temperature and antenna effect changes during a vehicle orbital revolution. Rationale:	PO Resolution: A/C Rationale: 9/30/09: Changed real time during ICWG: The effective uncertainty of the group delay shall not exceed 1.5 nanoseconds (95% probability). Also, remove second sentence as it was ICWG consensus that it was extraneous and did not provide value. Concurrence: Rationale:	May 09: comment recieved through TIM meetings 9/11/09: Vimal emailed out study. Rhonda to review. 9/30/09: 95% probability works when a large number of samples is used. Two sigma is preferable when there is a small number of samples. With this measure
365	Steve Brown LMCO	Page: 19 Para: 3.2.1.8.2	Substantive	Comment:	PO Resolution: Reject	10/14/2009: Email from Steve Brown withdrawing comment.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Suggested Change:	Rationale: Typo. No proposed chnages.	
				From: 3.2.1.8.2 Group Delay Differential The reference for group delay differential for GPS signals is the L1 P(Y) signal. The group delay differential between the radiated signals (i.e. L1 P(Y) and L1CD; L1 P(Y) and L1CP) is specified as consisting of random plus bias components. The mean differential is defined as the bias component and will be either positive or negative. For a given navigation payload configuration, the absolute value of the mean differential delay shall not exceed 15.0 nanoseconds. The random variations about the mean shall not exceed 1.0 nanoseconds (two sigma). The random variation requirement shall be valid for signal measurement/averaging times of 10 milliseconds to 1 day. Corrections for the bias components of the group delay differential are provided to users in the navigation message. To: 3.2.1.8.2 Group Delay Differential The reference for group delay differential for GPS signals is the L1 P(Y) signal. The group delay differential between the radiated signals (i.e. L1 P(Y) and L1CD; L1 P(Y) and L1CP) is specified as consisting of random Rationale:	Concurrence: Concur Rationale: Comment withdrawn.	
366	Steve Brown LMCO	Page: Para: 3.2.1.6	Critical	Comment: This new requirement may not be compatible with current GPS III baseline. Could result in cost or schedule impact Suggested Change: From: 3.2.1.6.2 Phase Continuity While a satellite is broadcasting standard L1CP code and standard L1CD code signals with data	PO Resolution: Reject Rationale: Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				which indicates L1C signal health is OK, there shall be no intentional discontinuities in the respective L1CP or L1CD carrier phase other than those attributable to the binary state of the modulating signals. To: Do not add to document Rationale:		
367	Steve Brown LMCO	Page: Para: 3.2.1.9	Substantive	Comment: Include the 99.5% requirement from SS-SS-800D Suggested Change: From: 3.2.1.9 Signal Power Levels The SV shall provide an L1C signal strength at End-of-Life (EOL), worst-case, in order to meet the minimum effective received signal levels specified in Table 3.2-1. For terrestrial users, the minimum effective received signal power is measured at the output of a 3 dBi linearly polarized user receiving antenna (located near ground) at worst normal orientation, when the SV elevation angle is higher than 5 degrees and assuming 0.5 dB atmospheric loss. For orbital users, the minimum effective received signal power is measured at the output of a 0 dBi ideal right-hand circularly polarized (i.e. 0 dB ellipticity) user receiving antenna (in geosynchronous orbit) at 23.5 degrees off nadir and using 0 dB atmospheric loss. The received signal levels are observed within the in-band allocation defined in Para. 3.2.1.1. The effective received signal power is referenced to a receiver whose correlation outputs are calibrated against an RF signal without combining loss. The combining loss is compensated by increasing the SV transmitted power and thus should be transparent to the users if the users measure signal	PO Resolution: A/C Rationale: Added note to table 3.2-1 and added asterik to orbital values: * Over 99.5% of the solid angle inside a cone with a 23.5 degree half-angle with its apex at the SV and measured from 0 degrees at the center of the Earth. Concurrence: Concur Rationale: 9/30/09: Real time at ICWG.	9/30/09: Changed real time at ICWG to be consistent with other public interface documents.

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				performance at the correlator outputs. Measuring the actual received power at the antenna will result in a measurement that is slightly higher than the true "useful" power. To: 3.2.1.9 Signal Power Levels The SV shall provide an L1C signal strength at End-of-Life (EOL), worst-case, in order to meet the minimum effective received signal levels specified in Table 3.2-1 over 99.5% of the solid angle indise a cone. For terrestrial Rationale:		
368	Ben Kogus SE&I	Page: Para: 2.1	Adminstrative	Comment: Aesthetic formats Suggested Change: From: To: Formatting Changes: -Left align "None" -Add parantheses to document dates -Lower case "c" on "Current" Rationale: ICC discretion	PO Resolution: Accept Rationale: ICC discretion Concurrence: Concur Rationale: ICC discretion	
369	Ben Kogus SE&I	Page: Para: Cover Page and Table of Contents	Adminstrative	Comment: Update Cover Page and Table of Contents Suggested Change: From: To: Update Cover Page and Table of Contents Rationale: Accuracy.	PO Resolution: Accept Rationale: ICC discretion Concurrence: Concur Rationale: ICC discretion	
370	Ben Kogus SE&I	Page: Para: 3.1	Adminstrative	Comment: Correct subscript Suggested Change:	PO Resolution: Accept Rationale: ICC discretion	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: L1Cp To: L1Cp Rationale: Accuracy.	Concurrence: Concur Rationale: ICC discretion	
371	Ben Kogus SE&I	Page: Para: 3.2.1.1	Adminstrative	Comment: Delete extraneous spaces and add comma after "clock rates" and "…located in SV" Suggested Change: From: The nominal frequency of this source -- as it appears to an observer on the ground -- is 10.23 MHz. The SV carrier frequency and clock rates -- as they would appear to an observer located in the SV -- are offset to compensate for relativistic effects. To: The nominal frequency of this source as it appears to an observer on the ground is 10.23 MHz. The SV carrier frequency and clock rates, as they would appear to an observer located in the SV, are offset to compensate for relativistic effects. Rationale: ICC discretion	PO Resolution: Accept Rationale: ICC discretion Concurrence: Concur Rationale: ICC discretion	
372	Steve Brown LMCO	Page: Para: 3.2.1.1	Adminstrative	Comment: SV clock rate updated to reflect all significant digits Suggested Change: From: 1.02299999954 MHz To: 1.02299999954326 MHz Rationale: SV clock rate updated to reflect all significant digits	PO Resolution: Accept Rationale: Accuracy. Concurrence: Concur Rationale: Accuracy.	
373	Ben Kogus SE&I	Page: Para: 3.2.1.9	Adminstrative	Comment: Delete "attitude errors, mechanical alignment errors" Suggested Change:	PO Resolution: Accept Rationale: Accuracy. Concurrence: Concur	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: To: Delete "attitude errors, mechanical alignment errors" Rationale: TIM discussions highlighted the fact other factors listed are more accurate to describe reasons for higher signal levels.	Rationale: Accuracy.	
187	Thomas Nagle GPC	Page: Para: 3.2.3.1	Adminstrative	Comment: The first sentence states that subframes, frames and superframes are shown in Figure 3.2-3, but there are no superframes illustrated in this figure. To fix this problem recommend that sentence be split into two parts: The first two sentences would be " Suggested Change: From: To: Replace first sentence of this paragraph with "The message modulated onto the L1CD signal consists of subframe, frame and superframe. Subframe and frame are shown in Figure 3.2-3." Rationale: Clarity.	PO Resolution: A/C Rationale: The message modulated onto the L1CD signal consists of subframes and frames, as shown in Figure 3.2-3. A frame is divided into three subframes of varying length. Multiple frames are required to broadcast a complete data message set to users. Concurrence: Concur Rationale:	
374	Ben Kogus SE&I	Page: Para: 3.2.3.3	Adminstrative	Comment: Remove 1), 2), 3), 4), 5), a), b) for clarity. Suggested Change: From: To: Remove 1), 2), 3), 4), 5), a), b) for clarity. Rationale: readability	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur
375	Ben Kogus SE&I	Page: Para: 3.2.3.5	Adminstrative	Comment: Improve readability. Suggested Change:	PO Resolution: Accept Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				From: After reading out the last (38th) symbol in Column 1, Column 2 symbols are read out from top to bottom and this process continues until the last symbol (38th) of the last column (46th) is read out. To: After reading out the last symbol of the 38th row in Column 1, Column 2 symbols are read out from top to bottom and this process continues until the last symbol in the 38th row of the last column (46th) is read out. Rationale: Readability.	Concurrence: Concur Rationale:	
376	Ben Kogus SE&I	Page: Para: 3.4.2	Adminstrative	Comment: Remove a., b., c., d. for clarity. Suggested Change: From: To: Remove a., b., c., d. for clarity. Rationale: Readability.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur
377	Ben Kogus SE&I	Page: Para: 3.5.3.4	Adminstrative	Comment: insert comma Suggested Change: From: subframe 3 pages 3 and 4. To: subframe 3, pages 3 and 4. Rationale: Readability.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur
378	Ben Kogus SE&I	Page: Para: 3.5.3.6.1	Adminstrative	Comment: Action performed by SV, not the CS Suggested Change: From: CS via least squares To: SV via least squares	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Accuracy.		
379	Ben Kogus SE&I	Page: Para: 3.5.4.1.1	Adminstrative	Comment: Fix Capitalization errors Suggested Change: From: Page Subframe To: page subframe Rationale: Accuracy.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur
380	Ben Kogus SE&I	Page: Para: 3.5.4.1.2	Adminstrative	Comment: insert comma Suggested Change: From: subframe 3 pages 1 To: subframe 3, pages 1 Rationale: Readability.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur
381	Ben Kogus SE&I	Page: Para: 3.5.4.2	Adminstrative	Comment: insert comma and "as depicted.." Suggested Change: From: Subframe 3 page 2, Figure 3.5-3, To: Subframe 3, page 2, as depicted in Figure 3.5-3, Rationale: Readability.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur
382	Ben Kogus SE&I	Page: Para: 3.5.4.3.5.1.1	Adminstrative	Comment: improve readability Suggested Change: From: of the subframe 2 To: in subframe 2 Rationale: Readability.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	Concur

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
401	B. Carroll A5P	Page: 136 Para: 6.3.2	Substantive	Comment: Suggested Change: From: 6.3.7 Pre-Operational Use. Before Initial Operational Capability (IOC) is declared for any new signal or group of signals (e.g., L2C, L5, M, L1C, etcetera), the availability of and/or the configuration of the broadcast signal or group of signals may not comply with all requirements of the relevant IS or ICD. For example, the pre-IOC broadcast of L2C signals from the IIR-M satellites did not include any NAV or CNAV data as required by IS-GPS-200. Pre-IOC use of any new signal or group of signals is at the users own risk. To: 6.3.7 Pre-Operational Use. Before any new signal or group of signals (e.g., L1C, L2C, L5, or M) is declared operational, the availability of and/or the configuration of the broadcast signal or group of signals may not comply with all requirements of th Rationale: AFSPC/A3 does not declare IOC or FOC on signals, only capabilities. Both the decision and declaration that signals are operational (monitoring in place, trained crews, etc.) will be made by USSTRATCOM/ JFCC SPACE.	PO Resolution: Accept Rationale: The intent of the paragraph is preserved even with this newly suggested language. This comment is almost administrative in nature. Concurrence: Concur Rationale:	
402	B. Bakeman Aerospace	Page: Para: 3.2.1.8.1	Adminstrative	Comment: Suggested Change: From: The effective To: Add the phrase, "when including consideration of the temperature and antenna during a vehicle orbital revolution. Rationale: To clarify requirement to be consistent	PO Resolution: Reject Rationale: Currently, the language in the IS-GPS-200, 705 is consistent with 800. Concurrence: Concur Rationale:	

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				with IS-200 and IS-800.		
403	Soon Yi Aerospace	Page: Para: 3.2.1.6.2	Substantive	Comment: Suggested Change: From: 3.2.1.6.2 Phase Continuity While a satellite is broadcasting standard L1CP code and standard L1CD code signals with data which indicates L1C signal health is OK, the CS/SS will not command an operation causing an intentional phase discontinuity. This does not apply to phase discontinuities caused by signal modulation. To: 3.2.1.6.2 Phase Continuity While a satellite is broadcasting standard L1CP code and standard L1CD code signals with data which indicates L1C signal health is OK, there will not be any commanded operation causing an intentional phase discontinuity. This d Rationale: The original text is ambiguous and confusing in that it identifies Space Segment (SS) but appears to not impose any requirement (i.e. "will"). If such is the case, then the text should not even mention SS (to avoid confusion) since the SS has no responsi	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
404	Soon Yi Aerospace	Page: Para: 3.2.1.8.2	Critical	Comment: Suggested Change: From: Not applicable. See Sections 3.2.1.7.1 (Signal Coherence) and 3.5.3.9.1 (Inter-Signal Group Delay Differential Correction). To: Revert back to the original text in the baseline IS-GPS-800 with an appropriate update for the random variation requirement.	PO Resolution: A/C Rationale: Originally had rejected this comment, however, spoke with the commentor and we agreed to remove all references to group delay differential in the document and replace with ISC as appropriate. Concurrence: Concur Rationale:	Will discuss at next ICWG

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				"The reference for group delay differential for GPS signals is the L1 P(Y) signal. The group delay differential between the radia Rationale: The rationale ("NA for IS-GPS-800 since it only covers one signal, L1C") for deleting this requirement is not correct. This requirement specifies the delay requirement between L1P(Y) and L1C_D (and others) which is irrelevant to the stated rationale for		
405	Soon Yi Aerospace	Page: Para: 3.2.1.8.3	Substantive	Comment: Suggested Change: From: 3.2.1.8.3 Space Service Volume Group Delay Differential Not applicable. See Sections 3.2.1.7.1 (Signal Coherence) and 3.5.3.9.1 (Inter-Signal Group Delay Differential Correction). To: Either identify and specify the "new" requirement or delete this paragraph. Rationale: This paragraph was not in the original baseline IS-GPS-800. It is unclear why a new paragraph is being added and then not specify any requirement associated with this paragraph. The other referenced paragraph 3.2.1.7.1 is for signal coherence requiremen	PO Resolution: Defer Rationale: Originally, had rejected this, however spoke with the commentor. Commentor stated that this section may be in conflict with SS-SS-800D. The ICC is unable to find evidence of such a conflict, however, will agree to review further. Disposition changed to Concurrence: Non-concur Rationale:	Will discuss at next ICWG
406	T Tam Aerospace	Page: Para: 3.2.1.7.1	Adminstrative	Comment: Suggested Change: From: All transmitted signals for a particular SV shall be coherently derived from the same on-board frequency standard. On the L1 carrier, the chip transitions of the two modulating signals, L1Cd and L1Cp, shall be such that the average time	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				difference between them, and between each and the transitions of L1P(Y) and C/A, do not exceed 10 nanoseconds. The variable time difference shall not exceed 1 nanosecond (95% probability), when including consideration of the temperature and antenna effect changes during a vehicle orbital revolution. Corrections for the bias components of the time difference are provided to the US in the CNAV-2 message using parameters designated as ISCs (reference paragraph 3.5.3.9.1 To: All transmitted signals for a particular SV shall be coherently derived from the same on-board frequency standard. On the L1 carrier, the chip transitions of the two modulating signals, L1Cd and L1Cp, shall be such that the average time difference betwee Rationale: It is the temp and antenna effects that are inlcuded not the 'consideration" of the temp and antenna FOR CLARITY		
407	John Fong Aerospace	Page: all Para:	Adminstrative	Comment: Suggested Change: From: No page numbers on pages To: Add page number to each page Rationale: Hard to find specific page without page numbers	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
408	John Fong Aerospace	Page: 5 Para: Under Section 3.2.1.6	Adminstrative	Comment: Suggested Change: From: Missing entry - Section 3.2.1.6.1 Phase Relationship P. 17 To: Add missing "Section 3.2.1.6.` Phase	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Relationship" to Table of Contents Rationale: Missing TOC entry		
409	John Fong Aerospace	Page: 5 Para: Under Section 3.5.3.9	Adminstrative	Comment: Suggested Change: From: Missing entry - Section 3.5.2.9.10 Integrity Assurance P. 164 To: Add missing "Section 3.5.3.10 Integrity Assurance" to Table of Contents Rationale: Missing TOC entry	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
410	John Fong Aerospace	Page: 17 Para: Section 3.2.1.6.1	Adminstrative	Comment: Suggested Change: From: Text following Section 3.2.1.6.1 heading should start on a new line To: Start text of Section 3.2.1.6.1 on a new line, Rationale: Consistancy with other paragraphs	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
411	John Fong Aerospace	Page: 19 Para: Table 3.2-1	Substantive	Comment: Suggested Change: From: The Signal Strength values have varying number of significant digits which implies differing degrees of accuracy involved for each spec number. Some have 5 significant digit, implying a measurement accuracy of .01 dB. Two others have only 3 significant digits, implying a measurement accuracy of 1 dB. There should be great consistency in these values or the required accuracy added for each spec value. To: Decide to what accuracy the RF signal strength	PO Resolution: Defer Rationale: This is a valid point and will be considered for the next revision. Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				values should be specified to. Rationale: The number of significant digits implys a measurement accuracy, which should be the same for all the of the RF signal strength.		
412	T. Nagle GPC	Page: Para: 3.2.1.6	Critical	Comment: Suggested Change: From: 3.2.1.6.2 Phase Continuity while a satellite is broadcasting standard L1CP code and standard L1CD code signals with data which indicates L1C signal health is OK, the CS/SS will not command an operation causing an intentional phase discontinuity. This does not apply to phase discontinuities caused by signal modulation. To: 3.2.1.6.2 Phase Continuity while a satellite is broadcasting standard L1CP code and standard L1CD code signals with data which indicates L1C signal health is OK, the CS/SS will not command an operation causing an intentional phase discontinuity. This do Rationale: We're really not as concerned about what the "phase relationship" is, as long as it is defined and constant. "Phase continuity" is, however, critical to many precision GPS users. The important point is that it is not enough to set a satellite unhealthy wh	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
413	T. Nagle GPC	Page: Para: 3.2.1.6.1	Adminstrative	Comment: Add a <return> after "Phase Relationship" to create a section title and an editorial change to L1 P(Y)-code carrier. Suggested Change: From: … as the P(Y)-code carrier. To: … as the L1 P(Y)-code carrier.	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
				Rationale: Clarity		
414	T. Nagle GPC	Page: Para: 3.2.1.7.1	Adminstrative	Comment: Suggested Change: From: On the L1 carrier, the chip transitions of the two modulating signals, L1Cd and L1Cp, shall be such that the average time difference between them, and between each and the transitions of L1P(Y) … To: On the L1 carrier, the chip transitions of the two modulating signals, L1CD and L1CP, shall be such that the average time difference between them, and between each and the transitions of L1 P(Y) … Rationale: Editorial	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
415	T. Nagle GPC	Page: Para: 3.2.1.8.1	Critical	Comment: Suggested Change: From: The effective uncertainty of the group delay shall not exceed 1.5 nanoseconds (95% probability). To: The effective uncertainty of the group delay shall not exceed 1.0 nanoseconds (two sigma). The uncertainty requirement shall be valid for signal measurement/averaging times of 1 to 24 hours. Rationale: Relaxation of this spec to lower than current performance (although better than previous spec) would be harmful to precision users. We don't know where the 10 millisecond to 1 day validity interval comes from. We'd be ok with a 1 hour to 24 hour validity	PO Resolution: Defer Rationale: This will be considered for the next revision. Concurrence: Concur Rationale:	
416	T. Nagle	Page:	Adminstrative	Comment:	PO Resolution: Reject	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	GPC	Para: 3.3.1.5.1		Suggested Change: From: +/- 100 milliradians To: +/- 5.7 degrees Rationale: Signal phasing (quadrature) is described in terms of degrees	Rationale: This may be true, however, this unit (milliradians) has been used since the inception of the document and could add confusion if it is changed. Concurrence: Concur Rationale:	
417	T. Nagle GPC	Page: 60 Para: 3.5.3.8	Critical	Comment: Provide a more clear and direct definition for the term URAocb used in equation calculating URAoc. Following the words "where, " insert the words "URAocb = " and include the clear and direct definition. Suggested Change: From: To: Rationale: Use of the term URAocb without a succinct definition results in ambiguity for readers and inconsistent application of the algorithm. The current discussion is unclear and ambiguous.	PO Resolution: Reject Rationale: The section goes on to state, "The user may use the upper bound value in the URAocb range corresponding to the broadcast index, thereby calculating the maximum URAoc that is equal to or greater than the CS predicted URAoc, or the user may use the lower bo Concurrence: Concur Rationale:	
418	M. Dash GPA	Page: Para:	Critical	Comment: IS-GPS-800 needs to be scrubbed for interface parameters that are common with IS-GPS-200, and in all cases where this occurs get modified to refer to IS-GPS-200. Suggested Change: From: To: Rationale:	PO Resolution: Reject Rationale: This will be considered for the next revision. Concurrence: Non-concur Rationale:	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
419	R. Hilario GPV	Page: Para:	Substantive	Comment: Many of the statements in the requirements section, Section 3, contain statements that are rather descriptive as opposed to being prescriptive. Therefore, a lot of material in Section 3 tend to sound like a tutorial rather than requirements. Revise state Suggested Change: From: To: Rationale: Distinguishes those that are requirements. See also para. 4.6.6 of MIL-STD-961E.	PO Resolution: Defer Rationale: The comment is true. The ICC agrees that a "restructuring" of the interface documents may significantly enhance the document. However, such a task is a major effort and cannot be done in this review. Concurrence: Concur Rationale:	
420	R. Hilario GPV	Page: Para: 6.1	Adminstrative	Comment: GPSW definition needs to be corrected. Suggested Change: From: To: Global Positioning Systems Wing Rationale:	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	
421	R. Hilario GPV	Page: Para:	Adminstrative	Comment: Define all "TBDs"(revision page and Approval page, for example) then delete TBD from the Acronyms list in section 6.1. Suggested Change: From: To: Rationale: Define requirements and include in the acronyms list only those used in the document.	PO Resolution: Defer Rationale: The SSV group delay parameters will be included as part of the next revision. Concurrence: Concur Rationale:	
422	R. Hilario	Page:	Adminstrative	Comment: Provide headers or footers to indicate,	PO Resolution: Accept	

CID	Originator/Org.	Page/Para	Importance	Comment	PO Resolution & Concurrence	Notes
	GPV	Para:		as a minimum, page number and the document number. Suggested Change: From: To: Rationale: Specmanship	Rationale: Concurrence: Concur Rationale:	
423	K. Kovach Aerospace	Page: Para: 3.5.3.9.1	Adminstrative	Comment: Suggested Change: From: Inter-Signal Group Delay Differential Correction The correction terms, TGD, ISCL1CP, and ISCL1CD, are initially provided by the CS to account for the effect of SV group delay differential between L1 P(Y) and L2 P(Y), between L1 P(Y) and L1CP, and between L1 P(Y) and L1CD, respectively, based on measurements made by the SV contractor during SV manufacture. To: Inter-Signal Correction The correction terms, TGD, ISCL1CP, and ISCL1CD, are initially provided by the CS to account for the effect of SV inter-signal biases between L1 P(Y) and L2 P(Y), between L1 P(Y) and L1CP, and between L1 P(Y) and L1CD, respectively Rationale:	PO Resolution: Accept Rationale: Concurrence: Concur Rationale:	