5.0   SUPPLEMENTARY MATERIAL

5.1   COORDINATE SYSTEMS

This section contains the various coordinate systems that will be used in performing ST SOP functions. The coordinate systems and the associated figures are as follows:

1.   Navigation base coordinate system (Figure 5.1–1)

2.   Body axis coordinate system (Figure 5.1–2)

3.   Aries mean of 1950 Cartesian coordinate system (Figure 5.1–3)

4.   IMU cluster coordinate system (Figure 5.1–4)

5.   Star tracker coordinate system (Figure 5.1–5)

6.   COAS coordinate system (Figure 5.1–6)

5.2   SHUTTLE STAR CATALOG

This section contains the parametric data associated with 100 predefined navigation stars that have been selected for use with the Shuttle ST. The stars are listed in Table 5.2–1. The parameters listed for each star include (1) the star number, (2) IDT and SSST predicted magnitudes, (3) the star unit vector components in M50 coordinates (epoch 2005), and (4) the common name. Star data for the catalog stars (unit vectors) are required to be available to the ST SOP whenever ST SOP functions are being performed. The star catalog contains 110 entries which presently are ordered as follows:

1	Other orbiting vehicle
2	Center of earth
3	Earth site
4	Center of sun
5	MEDABLE STAR (manually entered data)
6–10	Unassigned
11–110	Navstars (mission independent)

Entries 1 through 5 are used to support the universal pointing spec functions.

Entries 1 through 60 are available in OPS 2, 3, and 8.

NAV STARS 61 through 110 are available in OPS 2 and 8 only.

Unit vector components of stars 101-110 are K-Load parameters and can be changed by uplink in OPS 2.

Table 5.2-2 contains the parametric data of 849 stars that have been approved for uplink capability according to the criteria specified in JSC-27022, "Shuttle Star Catalog Uplink Capability". The parameters listed for each star include (1) the star number, (2) IDT and SSST predicted magnitudes, (3) the star unit vector components in M50 coordinates (epoch 2005) and (4) the Skymap name, if available.

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Name
11	-1.2	-0.8	-0.17832207	0.94125671	-0.28677002	SIRIUS
12	-0.4	-0.1	-0.06034819	0.60343258	-0.79512717	CANOPUS
13	0.4	0.8	0.20519417	0.96812469	-0.14363125	RIGEL
14	0.3	0.7	0.11952813	-0.77077704	0.62579212	VEGA
15	0.8	1.3	-0.43097192	-0.24950595	-0.86718509	HADAR
16	0.7	1.2	0.49110034	0.21831070	-0.84330356	ACHERNAR
17	1.7	2.0	-0.45429068	-0.04734275	-0.88959465	ACRUX
18	0.5	0.3	0.14161225	0.68080206	0.71864770	CAPELLA
19	1.2	1.7	-0.91893789	-0.34610246	-0.18911963	SPICA
20	0.3	-0.3	-0.78805309	-0.51818631	0.33234812	ARCTURUS
21	0.8	0.9	-0.40751776	0.90844446	0.09304804	PROCYON
22	1.1	1.4	0.45016200	-0.87992095	0.15196478	ALTAIR
23	0.6	-0.6	0.03259720	0.99113628	0.12878779	BETELGEUSE
24	1.8	2.4	0.16213895	0.98063616	0.10983478	BELLATRIX
25	1.6	2.0	-0.85830865	0.46750225	0.21153699	REGULUS
26	1.5	1.8	0.83225657	-0.24291443	-0.49833882	FOMALHAUT
27	1.6	1.9	0.45307092	-0.54126344	0.70835064	DENEB
28	2.0	2.4	0.59576015	-0.32649842	-0.73380421	AL NA IR
29	2.1	2.6	-0.58103162	-0.28829966	0.76110811	ALKAID
30	1.1	-0.1	-0.35619493	-0.82249138	-0.44343331	ANTARES
31	1.9	2.2	-0.32931554	0.78151528	0.52989163	CASTOR
32	1.1	0.2	0.35526295	0.89106705	0.28246724	ALDEBARAN
33	2.2	2.7	0.31656450	-0.44501485	-0.83770442	PEACOCK
34	2.0	2.3	-0.26078787	0.23350980	-0.93672987	MIAPLACIDUS
35	2.2	2.7	0.20219131	-0.87289990	-0.44403202	NUNKI
36	2.1	2.5	0.07495073	-0.82158235	-0.56514142	KAUS AUSTRALIS
37	2.3	2.8	0.87592386	0.02219762	0.48193843	ALPHERATZ
38	2.7	3.2	0.47977073	0.11446368	0.86989546	NAVI
39	2.2	2.6	-0.14518190	0.94804966	0.28306193	ALHENA
40	2.2	2.2	0.41427024	0.49697197	0.76249526	MIRFAK
41	2.5	2.8	-0.96491928	0.05699471	0.25628574	DENEBOLA
42	2.5	2.9	-0.53499327	-0.71369430	0.45213122	ALPHECCA
43	2.4	2.7	-0.11632329	-0.96899192	0.21799897	RASALHAGUE
44	2.7	3.0	-0.53027933	0.14495217	0.83533987	MERAK
45	2.4	2.4	0.01507040	0.00776003	0.99985632	POLARIS

Table 5.2-1.   Orbiter Star Catalog (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Name
46	2.7	3.1	-0.58773612	0.02252910	0.80873895	PHECDA
47	2.8	3.3	-0.95335843	-0.05505503	-0.29677710	GIENAH
48	2.9	3.3	-0.65310866	-0.74019374	-0.15988216	ZUBENESCHEMALI
49	2.4	1.6	-0.19811113	-0.18284260	0.96297485	KOCHAB
50	2.2	1.6	-0.29512575	0.41571808	-0.86027860	AVIOR
51	2.2	1.4	-0.11794993	-0.33944810	-0.93320030	ATRIA
52	2.4	1.9	0.78696044	0.47454258	0.39433818	HAMAL
53	2.5	2.1	-0.69285107	-0.41504028	-0.58966003	MENKENT
54	2.4	2.0	0.93441741	0.16936987	-0.31333360	DIPHDA
55	2.3	1.5	-0.77178538	0.61870987	-0.14678359	ALPHARD
56	2.4	1.4	-0.52885318	0.50119057	-0.68492505	SUHAIL
57	3.2	3.5	0.54610526	0.52907757	-0.64949670	ACAMAR
58	3.2	3.4	0.79617355	-0.53551156	-0.28166477	DENEB ALGEIDI
59	2.6	1.6	0.85567644	-0.22384962	0.46659316	SCHEAT
60	2.6	1.8	0.81181910	-0.55935608	0.16754260	ENIF
61	1.9	2.4	0.11458898	0.99318016	-0.02150661	ALNILAM
62	1.9	2.3	0.14068485	0.86693918	0.47814666	EL NATH
63	2.4	3.0	-0.38907721	0.66168632	-0.64092912	NAOS
64	2.3	2.8	0.06282522	0.98374030	-0.16824984	SAIPH
65	2.1	2.4	-0.54168668	-0.12467690	0.83128287	ALIOTH
66	2.7	2.2	-0.25941520	-0.78525992	-0.56220157	EPSILON SCORPII
67	2.5	3.0	-0.58552119	-0.45877181	-0.66835122	ETA CENTAURI
68	2.0	2.5	-0.36010472	0.57634016	-0.73359158	REGOR
69	2.4	2.8	0.52397439	0.54690297	0.65295327	BATEN KAITOS
70	2.2	1.8	-0.84631863	0.40710777	0.34352298	ALGIEBA
71	2.8	3.3	-0.60111267	-0.32097512	-0.73187330	ZETA CENTAURI
72	2.7	3.1	-0.30610241	0.81745302	-0.48792609	ALUDRA
73	3.2	3.7	0.10295631	0.92716944	0.36021775	ZETA TAURI
74	3.0	3.5	-0.41074200	0.14713840	-0.89980070	THETA CARINAE
75	2.9	3.2	-0.35879265	-0.91556748	-0.18167009	ZETA OPHIUCHI
76	2.5	3.0	-0.54631757	-0.24524685	-0.80086896	EPSILON CENTAURI
77	3.0	3.5	0.96530631	0.04492224	0.25722698	ALGENIB
78	3.0	3.5	-0.45471939	-0.60233174	-0.65606916	GAMMA LUPI
79	2.8	3.2	0.93572707	-0.24081303	0.25772841	MARKAB
80	3.1	3.6	0.39963028	0.65528951	0.64100803	EPSILON PERSEI
81	2.9	3.3	0.07995252	0.82419123	-0.56063928	PHACT

Table 5.2-1.   Orbiter Star Catalog (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Name
						Table 5.2-1. Orbiter Star Catalog (2005)
82	2.7	3.1	-0.21860612	-0.93772094	-0.26998296	SABIK
83	2.9	3.3	0.01280814	0.79632294	0.60473608	THETA AURIGAE
84	3.2	3.7	-0.08984194	-0.63863746	-0.76424513	ALPHA ARAE
85	2.7	3.2	-0.44252220	0.36946979	-0.81710842	KAPPA VELORUM
86	2.8	3.0	0.35181628	-0.30206175	0.88599323	ALDERAMIN
87	2.9	3.2	-0.91396267	0.19651867	0.35503894	ZOZCA
88	3.2	3.7	-0.06939918	0.86289122	-0.50060213	ZETA CANIS MAJORIS
89	2.9	3.2	0.12208503	0.94396450	-0.30663703	ARNEB
90	3.2	3.5	0.45387813	0.71923694	0.52601603	ZETA PERSEI
91	3.4	3.9	0.26512235	-0.20709268	0.94171267	ALPHIRK
92	2.3	1.4	0.78104875	0.23483775	0.57863121	MIRACH
93	3.1	3.4	-0.75852325	-0.26768448	-0.59412751	IOTA CENTAURI
94	3.1	3.6	-0.76030539	-0.18138548	0.62372672	COR CAROLI
95	2.3	1.4	0.63880378	-0.23344408	-0.73309862	BETA GRUIS
96	3.2	3.5	0.30830730	-0.63623698	0.70721221	DELTA CYGNI
97	2.5	1.9	0.64133329	0.37335250	0.67029808	ALMACH
98	3.1	3.4	-0.71465595	-0.64404827	-0.27288953	ZUBENELGENUBI
99	3.3	3.7	0.66989364	-0.42301798	-0.61016251	GAMMA GRUIS
100	3.2	3.6	-0.24264016	-0.27473638	-0.93040081	GAMMA TRI AUSTR
101	2.6	3.0	-0.47114980	-0.79485983	-0.38238163	DSCHUBBA
102	2.5	1.7	-0.01238391	-0.62247755	0.78253967	ETAMIN
103	3.1	3.3	-0.98528242	-0.16969931	-0.02051090	ARICH
104	3.3	3.7	0.26406882	-0.93460184	0.23830035	ZETA AQUILAE
105	3.3	3.7	-0.24048891	0.88308784	-0.40289074	OMICRON-2 CANIS MAJORIS
106	2.8	2.3	0.73231561	0.07643439	-0.67666212	ANKAA
107	3.2	3.3	-0.47472542	0.77919393	-0.40925859	RHO PUPPIS
108	3.3	3.6	0.69948775	0.43104581	0.57001438	BETA TRIANGULI
109	3.3	3.4	0.26804536	-0.89358349	-0.36008364	PI SAGITTARII
110	3.2	3.1	-0.29321158	-0.79870792	0.52544517	ZETA HERCULIS

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
101	2.6	3.0	-0.47114980	-0.79485983	-0.38238163	7	DLT	SCO
102	2.5	1.7	-0.01238391	-0.62247755	0.78253967	33	GAM	DRA
103	3.1	3.3	-0.98528242	-0.16969931	-0.02051090	29	GAM	VIR
104	3.3	3.7	0.26406882	-0.93460184	0.23830035	17	ZET	AQL
105	3.3	3.7	-0.24048891	0.88308784	-0.40289074	24	OMI2	CMA
106	2.8	2.3	0.73231561	0.07643439	-0.67666212		ALF	PHE
107	3.2	3.3	-0.47472542	0.77919393	-0.40925859	15	RHO	PUP
108	3.3	3.6	0.69948775	0.43104581	0.57001438	4	BET	TRI
109	3.3	3.4	0.26804536	-0.89358349	-0.36008364	41	PI	SGR
110	3.2	3.1	-0.29321158	-0.79870792	0.52544517	40	ZET	HER
111	5.1	4.5	0.21909006	-0.00091662	-0.97570421		THT	OCT
112	2.7	2.8	0.51674908	0.01478988	0.85600914	11	BET	CAS
113	4.3	3.9	0.69401921	0.02087345	-0.71965383		EPS	PHE
114	5.3	4.4	0.98878969	0.05141436	-0.14018385			
115	5.0	4.2	0.93882434	0.04927275	0.34085342	89	CHI	PEG
116	3.9	3.4	0.98473324	0.07265303	-0.15818335	8	IOT	CET
117	4.6	4.6	0.41897689	0.03247465	-0.90741598		ZET	TUC
118	5.2	4.1	0.93437223	0.07865230	-0.34750877		T	CET
119	3.2	3.1	0.21475452	0.02237022	-0.97641183		BET	HYI
120	4.3	4.5	0.71600201	0.07448853	-0.69411280		KAP	PHE
121	5.0	4.1	0.83081459	0.09264120	-0.54878477		ETA	SCL
122	5.4	4.5	0.94723365	0.10560292	0.30264902	47	TV	PSC
123	5.7	4.8	0.75898675	0.08644000	-0.64534273			
124	4.5	4.8	0.45536339	0.06023154	0.88826592	15	KAP	CAS
125	5.3	4.4	0.70885021	0.10608234	0.69733630			
126	3.9	4.4	0.58652918	0.08811356	0.80512081	17	ZET	CAS
127	4.8	4.5	0.86360880	0.13636223	0.48537118	30	EPS	AND
128	3.6	3.0	0.84987422	0.13710674	0.50883745	31	DLT	AND
129	2.6	2.1	0.54789864	0.09085394	0.83159644	18	ALF	CAS
130	5.0	4.6	0.68018530	0.11677236	-0.72367960		MU	PHE
131	5.1	4.8	0.96582989	0.17755196	-0.18880656	17	PHI1	CET
132	4.4	4.0	0.89628250	0.17696537	0.40664596	34	ZET	AND
133	5.4	4.7	0.25018606	0.05191921	-0.96680470		LAM	HYI
134	4.7	3.9	0.97187644	0.19812952	0.12728267	63	DLT	PSC
135	3.9	3.8	0.52580658	0.10742156	0.84379384	24	ETA	CAS
136	5.0	4.1	0.97557019	0.21829451	-0.02470433	20		CET

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
137	5.6	4.7	0.95320499	0.22671452	-0.20000192	22	PHI3	CET
138	4.2	4.5	0.76385260	0.18331784	0.61880835	37	MU	AND
139	4.8	4.5	0.89359113	0.21671632	0.39310167	38	ETA	AND
140	4.7	4.3	0.95701050	0.25795181	0.13263392	71	EPS	PSC
141	3.7	3.4	0.65587178	0.18761413	-0.73118612		BET	PHE
142	4.2	4.6	0.54270899	0.16150444	-0.82424709		ZET	PHE
143	3.8	3.3	0.94281391	0.27966315	-0.18135722	31	ETA	CET
144	4.6	4.1	0.06742098	0.01856578	0.99755186			
145	5.1	4.7	0.89324572	0.27634712	0.35460450	84	PSI	PSC
146	4.9	4.4	0.82863955	0.25692168	0.49734067	83	TAU	PSC
147	5.0	4.6	0.86785200	0.27792116	0.41181638	85	PHI	PSC
148	4.0	3.6	0.92724494	0.34446029	-0.14684662	45	THT	CET
149	5.2	4.7	0.90362251	0.34308527	-0.25643489	46		CET
150	3.0	3.3	0.46825198	0.17638088	0.86581168	37	DLT	CAS
151	5.1	4.7	0.35262623	0.13251395	0.92633406	36	PSI	CAS
152	3.6	2.8	0.67381345	0.26608486	-0.68932886		GAM	PHE
153	5.1	4.5	0.92297687	0.37094083	0.10255046	98	MU	PSC
154	4.3	4.0	0.60298207	0.24725432	-0.75847078		DLT	PHE
155	4.0	3.7	0.89394257	0.36483357	0.26031354	99	ETA	PSC
156	5.1	4.7	0.47561144	0.19856261	0.85695195	39	CHI	CAS
157	4.5	4.5	0.69074487	0.29976549	0.65803660	50	UPS	AND
158	3.9	3.3	0.60810676	0.26730880	0.74749727	51		AND
159	4.8	4.1	0.90467358	0.41622054	0.09124785	106	NU	PSC
160	5.3	4.6	0.90380602	0.42238477	-0.06874431			
161	4.3	4.7	0.57663847	0.27046983	0.77093070		PHI	PER
162	3.9	3.8	0.86746152	0.41206324	-0.27877301	52	TAU	CET
163	4.7	4.3	0.89029550	0.42825003	0.15484130	110	OMI	PSC
164	5.6	4.8	0.89489516	0.43393222	-0.10423761			
165	4.1	3.6	0.87391163	0.45006018	-0.18364176	55	ZET	CET
166	3.8	3.8	0.77289264	0.40330636	0.48987850	2	ALF	TRI
167	4.2	4.6	0.83693117	0.43933272	0.32639389	5	GAM1	ARI
168	5.0	4.7	0.88389195	0.46486652	0.05132379	111	XI	PSC
169	4.6	3.7	0.60775593	0.32190968	-0.72595240		PSI	PHE
170	3.6	4.1	0.39612140	0.20791826	0.89434771	45	EPS	CAS
171	3.0	3.3	0.82692528	0.43912268	0.35123475	6	BET	ARI
172	5.1	4.8	0.33100210	0.17911779	-0.92647419		ETA2	HYI

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
173	4.1	3.9	0.54273043	0.29492642	-0.78642360		CHI	ERI
174	5.3	4.3	0.80968621	0.44114338	-0.38704103	56		CET
175	3.2	3.4	0.41190461	0.23122092	-0.88140313		ALF	HYI
176	4.2	3.4	0.81147959	0.45751120	-0.36357169	59	UPS	CET
177	5.4	4.6	0.61332544	0.35303350	-0.70654034		CHI	PHE
178	4.1	4.4	0.86636415	0.49746880	0.04402218	113	ALF	PSC
179	4.3	4.6	0.26560134	0.15197401	0.95202932	50		CAS
180	4.8	4.5	0.83308127	0.53249121	0.14976217	65	XI1	CET
181	5.1	4.3	0.60658238	0.38670529	0.69463431	60		AND
182	3.8	4.3	0.51523427	0.34340074	-0.78524491		PHI	ERI
183	4.3	4.7	0.69375241	0.46065320	0.55363004	9	GAM	TRI
184	3.3	2.6	0.82574476	0.56126233	-0.05594808	68	OMI	CET
185	4.4	4.7	0.29430789	0.20769984	-0.93286850		DLT	HYI
186	5.5	4.5	0.82070265	0.57134802	0.00293263	69		CET
187	5.0	4.1	0.52227082	0.37348429	0.76664377	65		AND
188	5.4	4.6	0.64447694	0.49027540	0.58675336	14		TRI
189	4.3	4.8	0.77462047	0.63242326	0.00198687	82	DLT	CET
190	4.4	4.8	0.28219802	0.23434530	-0.93029380		EPS	HYI
191	4.5	4.1	0.58900335	0.48858466	-0.64370807		IOT	ERI
192	3.8	4.1	0.76301954	0.64421926	0.05275146	86	GAM	CET
193	4.5	4.6	0.50091824	0.42331825	0.75490567	13	THT	PER
194	4.9	4.4	0.65749037	0.57627286	0.48540292	39		ARI
195	4.9	4.5	0.62842048	0.56090497	-0.53895576		BET	FOR
196	3.9	4.3	0.66432281	0.59313157	0.45482979	41		ARI
197	5.1	4.4	0.18686968	0.17238507	-0.96714172		NU	HYI
198	4.6	4.8	0.58600905	0.52502203	0.61720763	16		PER
199	3.9	3.0	0.42048104	0.37540729	0.82599337	15	ETA	PER
200	4.8	3.9	0.60880680	0.55022788	0.57149239	17		PER
201	4.4	4.2	0.44696732	0.41208005	0.79398378	18	TAU	PER
202	4.3	3.8	0.71628431	0.67965138	-0.15814799	3	ETA	ERI
203	5.3	4.7	0.58948315	0.56901493	0.57335122	24		PER
204	2.7	1.8	0.70651538	0.70443236	0.06790484	92	ALF	CET
205	4.4	4.7	0.64637573	0.64737022	-0.40386905	11	TAU3	ERI
206	3.3	3.2	0.42031956	0.42459628	0.80190365	23	GAM	PER
207	3.6	2.6	0.54748515	0.55699531	0.62451279	25	RHO	PER
208	5.2	4.8	0.38713604	0.39314295	0.83400498			

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
209	5.5	4.6	0.69023185	0.71526990	-0.10940275			
210	4.5	4.4	0.44865232	0.47098285	0.75953028		IOT	PER
211	4.2	3.8	0.48927191	0.51616074	0.70298726	27	KAP	PER
212	5.0	4.5	0.52670204	0.56507047	0.63504356	28	OMG	PER
213	4.7	4.3	0.64039237	0.69140734	0.33444506	57	DLT	ARI
214	4.3	4.3	0.58997717	0.64367372	-0.48745367		ALF	FOR
215	5.1	4.3	0.54473813	0.62441900	0.55978681			
216	3.9	3.0	0.60458858	0.70348450	-0.37360702	16	TAU4	ERI
217	4.7	4.6	0.47260154	0.55425500	-0.68516361			
218	4.7	3.9	0.57075099	0.66418963	0.48279958			
219	4.6	4.7	0.31515102	0.39267466	0.86399447			
220	4.5	4.0	0.60007329	0.76881655	0.22098225	5		TAU
221	4.1	3.9	0.59844224	0.78352130	-0.16721620	18	EPS	ERI
222	4.7	4.7	0.59375100	0.80463821	0.00413533	10		TAU
223	5.0	4.6	0.44925363	0.61437389	-0.64862616			
224	5.3	4.4	0.26345081	0.36863782	0.89145938			
225	4.9	4.4	0.45246193	0.65205084	-0.60836494			
226	3.3	3.7	0.38809788	0.55096234	0.73879668	39	DLT	PER
227	3.9	3.6	0.56202481	0.80898091	-0.17227303	23	DLT	ERI
228	4.2	3.7	0.23724963	0.35045359	-0.90603250		BET	RET
229	4.1	4.5	0.48215333	0.69616857	0.53186228	38	OMI	PER
230	4.2	4.2	0.41868181	0.60797397	0.67459113	41	NU	PER
231	4.6	3.7	0.54723152	0.80961269	-0.21228508	26	PI	ERI
232	4.6	4.7	0.51091083	0.76235708	-0.39721758	27	TAU6	ERI
233	3.4	2.5	0.14654527	0.22566663	-0.96311944		GAM	HYI
234	4.6	4.2	0.43989468	0.67465364	-0.59273530			
235	4.5	3.4	0.23162884	0.34638964	0.90904471			
236	4.9	4.8	0.52995783	0.84629668	-0.05409831	32		ERI
237	5.3	4.5	0.25565746	0.41255871	0.87431949			
238	3.2	2.3	0.50158594	0.83229246	-0.23601018	34	GAM	ERI
239	4.3	4.7	0.41939057	0.69601310	0.58281842	46	XI	PER
240	3.7	4.2	0.49613802	0.84148548	0.21389073	35	LAM	TAU
241	4.2	4.6	0.49553886	0.86258055	0.10196091	38	NU	TAU
242	4.7	4.3	0.45765469	0.80676860	0.37373334	37		TAU
243	4.3	4.7	0.32439151	0.59143170	0.73822672	48		PER
244	4.2	3.8	0.33415054	0.65826612	-0.67455847		ALF	HOR

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap	Name	

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
245	5.2	4.7	0.44650817	0.87644553	-0.18020456	39		ERI
246	3.8	3.5	0.20574714	0.41168285	-0.88779803		ALF	RET
247	5.1	4.7	0.34748452	0.67816476	0.64757012	52		PER
248	4.5	4.2	0.30412563	0.59187440	0.74645314	51	MU	PER
249	4.6	4.8	0.27534090	0.55664971	-0.78379110		GAM	DOR
250	4.8	4.4	0.22376864	0.45681627	-0.86095673		EPS	RET
251	3.8	4.3	0.36375490	0.74584806	-0.55802602	41		ERI
252	4.0	3.7	0.41881234	0.86781721	0.26737523	54	GAM	TAU
253	4.2	3.8	0.40301685	0.86480531	0.29948154	61	DLT	TAU
254	4.2	3.4	0.34273430	0.75346712	-0.56108867	43		ERI
255	5.1	4.7	0.39445613	0.88365714	0.25210002	73	PI	TAU
256	3.9	3.5	0.37799776	0.86623483	0.32673370	74	EPS	TAU
257	5.2	4.6	0.38543166	0.92273267	-0.00261632	45		ERI
258	3.5	4.0	0.21194786	0.53070527	-0.82062782		ALF	DOR
259	4.1	4.6	0.36657374	0.92843715	-0.06023409	48	NU	ERI
260	4.6	4.0	0.27830314	0.69950151	0.65821349	58		PER
261	5.6	4.7	0.16695319	0.43586456	-0.88439172		R	DOR
262	4.3	3.8	0.34756479	0.90406196	-0.24873819	53		ERI
263	4.5	3.6	0.32859519	0.88183971	-0.33820692	54		ERI
264	4.3	4.7	0.32912625	0.94248156	-0.05834741	57	MU	ERI
265	3.6	3.7	0.31028737	0.94307436	0.11971841	1	PI3	ORI
266	3.9	4.4	0.30535135	0.94736653	0.09621440	3	PI4	ORI
267	2.9	2.1	0.23888996	0.80304779	0.54593574	3	IOT	AUR
268	4.8	4.0	0.27571723	0.96081323	0.02859973	10	PI6	ORI
269	3.4	3.4	0.19189754	0.69639065	0.69153119	7	EPS	AUR
270	4.4	4.1	0.13011884	0.47694201	0.86924991	10	BET	CAM
271	4.9	4.4	0.20159199	0.78822589	-0.58142980		GAM	CAE
272	5.3	4.5	0.15754076	0.62806712	-0.76204501		ETA2	PIC
273	3.5	2.7	0.22617300	0.89619394	-0.38168337	2	EPS	LEP
274	3.1	3.4	0.23510723	0.96781430	-0.08977784	67	BET	ERI
275	5.4	4.6	0.21290380	0.93745825	0.27539789			
276	3.6	4.0	0.20497326	0.93784492	-0.28005868	5	MU	LEP
277	4.8	4.3	0.21330920	0.97575999	0.04890421	17	RHO	ORI
278	5.2	4.6	0.07746992	0.37901829	-0.92214074		THT	DOR
279	3.8	4.3	0.19293280	0.97383574	-0.12008695	20	TAU	ORI
280	4.9	4.3	0.16339224	0.81949576	0.54929925	16		AUR

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
281	4.5	4.2	0.16548116	0.97670206	-0.13663481	29		ORI
282	3.6	4.1	0.16506521	0.98536227	-0.04259898	28	ETA	ORI
283	5.3	4.5	0.13378263	0.78370744	0.60655161	21	SIG	AUR
284	3.3	3.0	0.13776902	0.92462197	-0.35509704	9	BET	LEP
285	4.2	3.8	0.10823414	0.80682068	-0.58079752		EPS	COL
286	4.3	3.0	0.12669312	0.93949318	0.31827883	119		TAU
287	4.1	4.2	0.05385440	0.45825136	-0.88718960		BET	DOR
288	5.3	4.8	0.08762283	0.99583148	0.02533563	51		ORI
289	4.0	4.0	0.07106309	0.92134937	-0.38218500	13	GAM	LEP
290	3.9	4.2	0.06453957	0.96449123	-0.25610800	14	ZET	LEP
291	4.2	4.5	0.03807915	0.62704581	-0.77805111		BET	PIC
292	4.9	4.4	0.02688435	0.55594001	-0.83078754		GAM	PIC
293	3.5	3.0	0.03821848	0.81036870	-0.58467248		BET	COL
294	4.9	4.0	0.04291175	0.79439297	0.60588645	31	UPS	AUR
295	4.2	3.8	0.04407177	0.93321461	-0.35660646	15	DLT	LEP
296	5.1	4.4	0.04428416	0.99850039	0.03218502	56		ORI
297	5.0	4.6	0.01236553	0.45232177	-0.89176909			
298	4.1	4.2	0.02486051	0.96924026	-0.24485764	16	ETA	LEP
299	4.3	3.8	0.00762971	0.73348567	-0.67966209		ETA	COL
300	4.1	3.7	0.01167233	0.58368695	0.81189488	33	DLT	AUR
301	4.9	4.3	0.01066061	0.99850253	-0.05365677			
302	4.5	4.7	0.00158285	0.98585274	0.16760626	61	MU	ORI
303	5.4	4.7	-0.00487593	0.89661612	-0.44278184			
304	4.6	4.4	-0.00432592	0.91866838	0.39500593	1		GEM
305	5.5	4.5	-0.02273967	0.94434406	-0.32817252	19		LEP
306	5.2	4.3	-0.02008616	0.41300123	-0.91050894		ETA2	DOR
307	4.3	3.7	-0.05382147	0.99258243	-0.10901082	5	GAM	MON
308	3.5	2.6	-0.04775555	0.92249125	0.38305260	7	ETA	GEM
309	4.7	4.4	-0.04625045	0.86900241	0.49264156	44	KAP	AUR
310	4.8	4.4	-0.05267694	0.81623569	-0.57531247		KAP	COL
311	5.4	4.4	-0.02765487	0.47583043	0.87910216	1		LYN
312	5.1	4.2	-0.07612640	0.99579456	-0.05097024			
313	4.3	4.0	-0.07377785	0.83147675	-0.55063894		DLT	COL
314	2.2	2.7	-0.08497229	0.94763210	-0.30785242	2	BET	CMA
315	3.1	2.1	-0.08025156	0.92012316	0.38331848	13	MU	GEM
316	4.9	3.7	-0.05978460	0.64914226	0.75831400	46	PSI1	AUR

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
317	5.5	4.6	-0.05118028	0.52077724	0.85215705	5		LYN
318	4.0	4.5	-0.11403494	0.98597459	-0.12186115	11	BET	MON
319	5.5	4.8	-0.10554237	0.78459734	-0.61095648			
320	3.4	3.9	-0.11484827	0.72045508	-0.68392569		NU	PUP
321	5.1	4.3	-0.15586654	0.95726702	-0.24360926			
322	5.1	4.6	-0.11451731	0.72792216	0.67602893	50	PSI2	AUR
323	5.4	4.6	-0.16956428	0.97269440	-0.15847256			
324	5.3	4.5	-0.12198796	0.70181866	0.70183296	55	PSI4	AUR
325	3.3	2.6	-0.16047083	0.89061743	0.42549936	27	EPS	GEM
326	5.1	4.3	-0.19150813	0.97134318	0.14077308	17		MON
327	5.2	4.1	-0.19368390	0.96867130	-0.15544278			
328	4.8	4.4	-0.19598453	0.97966083	0.04306648	18		MON
329	3.6	3.9	-0.09731779	0.46111231	-0.88198905		ALF	PIC
330	4.2	4.7	-0.17534536	0.82544562	-0.53655711	13	KAP	CMA
331	4.8	4.5	-0.12543502	0.58054716	-0.80450671			
332	3.3	2.7	-0.13398455	0.62104278	-0.77223960		TAU	PUP
333	5.4	4.8	-0.15244678	0.72924318	0.66705649	58	PSI7	AUR
334	5.3	4.6	-0.17545122	0.80718077	-0.56362760			
335	3.9	4.2	-0.17760265	0.80956335	0.55952165	34	THT	GEM
336	4.0	3.0	-0.20552483	0.88924970	-0.40864962	16	OMI1	CMA
337	4.4	3.6	-0.21946115	0.95330366	-0.20748236	14	THT	CMA
338	5.1	4.1	-0.15683341	0.64171574	-0.75073576			
339	4.8	4.5	-0.11968816	0.50877771	0.85253738	15		LYN
340	1.7	2.2	-0.21423271	0.84882362	-0.48332474	21	EPS	CMA
341	5.5	4.7	-0.09749116	0.36430926	-0.92616102			
342	4.9	4.2	-0.05121645	0.21825167	0.97454763			
343	3.6	2.6	-0.22779409	0.85422498	-0.46734306	22	SIG	CMA
344	5.4	4.4	-0.25539685	0.96181171	-0.09844123			
345	5.4	4.7	-0.25760948	0.94713107	0.19125922			
346	4.2	4.0	-0.24670314	0.90267557	0.35258243	43	ZET	GEM
347	2.3	2.2	-0.25592561	0.85907851	-0.44326763	25	DLT	CMA
348	4.0	3.7	-0.09959789	0.32007329	-0.94214295		GAM1	VOL
349	4.8	4.2	-0.25220212	0.82547819	0.50495529	46	TAU	GEM
350	5.2	4.4	-0.22662869	0.73870573	0.63478601	63		AUR
351	5.3	4.5	-0.22026979	0.67771328	-0.70155964			
352	4.9	4.4	-0.29350369	0.87082891	-0.39435085			

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
No.								
353	4.4	4.2	-0.12400204	0.35578625	-0.92630429		DLT	VOL
354	2.9	2.0	-0.25792672	0.75576629	-0.60190624		PI	PUP
355	3.9	4.1	-0.30603902	0.87469350	0.37583427	55	DLT	GEM
356	5.4	4.5	-0.31641235	0.88135656	0.35084731	56		GEM
357	5.6	4.8	-0.30805973	0.82976068	-0.46539920			
358	4.2	3.8	-0.31172558	0.82698242	0.46789661	60	IOT	GEM
359	3.5	2.7	-0.27202629	0.67635700	-0.68450194		SIG	PUP
360	4.9	4.3	-0.36236365	0.90811445	0.20981117	6		CMI
361	5.1	4.7	-0.32422914	0.79487440	-0.51288415			
362	5.1	4.2	-0.04492807	0.12230371	0.99147530			
363	5.1	4.2	-0.37648509	0.89235102	-0.24893499			
364	5.2	4.5	-0.24421503	0.55880984	-0.79252166			
365	4.3	3.5	-0.35112940	0.81884234	0.45409841	69	UPS	GEM
366	5.3	4.4	-0.38952838	0.86886102	0.30552932	74		GEM
367	5.3	4.3	-0.01669751	0.04728365	0.99874193			
368	4.3	3.9	-0.41242246	0.89612677	-0.16390401	26	ALF	MON
369	4.3	3.9	-0.13009707	0.27136401	-0.95364371		ZET	VOL
370	5.6	4.7	-0.38394194	0.81346663	0.43687598	76		GEM
371	4.0	3.7	-0.38964190	0.82216880	0.41499114	77	KAP	GEM
372	5.2	4.4	-0.41251493	0.85308356	0.31949940	81		GEM
373	5.5	4.6	-0.34502570	0.71273895	0.61070488			
374	5.4	4.5	-0.36631232	0.74869493	0.55251351	80	PI	GEM
375	4.1	3.7	-0.35285914	0.67427013	-0.64872969			
376	3.7	4.2	-0.29165420	0.52885504	-0.79702583		CHI	CAR
377	4.6	4.5	-0.44254498	0.80911404	-0.38663730	11		PUP
378	5.3	4.3	-0.24431390	0.42843927	-0.86991408			
379	5.3	4.7	-0.48857669	0.87033084	-0.06178221	27		MON
380	4.9	4.1	-0.49489078	0.86867975	-0.02187710	28		MON
381	4.7	4.1	-0.49825844	0.86595272	0.04317884			
382	5.3	4.5	-0.36622759	0.60313106	-0.70859740			
383	4.7	4.4	-0.52215351	0.85141408	-0.04949513	29	ZET	MON
384	5.1	4.8	-0.52012316	0.82496022	-0.22116178	19		PUP
385	3.8	3.0	-0.54390842	0.82330039	0.16229631	17	BET	CNC
386	5.1	4.3	-0.47985180	0.68905418	-0.54308985			
387	4.5	3.6	-0.41558419	0.59673699	0.68643626	31		LYN
388	5.5	4.8	-0.53390162	0.74231732	-0.40486300			

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
No.								
389	4.1	3.7	-0.24104818	0.32816402	-0.91334777		BET	VOL
390	3.8	3.5	-0.28960175	0.39097938	0.87365093	1	OMI	UMA
391	5.6	4.7	-0.57395355	0.75654584	0.31339386	31	THT	CNC
392	5.3	4.7	-0.40028361	0.50684375	-0.76346738			
393	4.5	4.8	-0.46136228	0.57032818	-0.67961063			
394	4.8	4.2	-0.62861925	0.77528884	0.06136002	5	SIG	HYA
395	5.3	4.5	-0.62032853	0.75486959	-0.21298924	6		HYA
396	4.4	4.1	-0.52061445	0.63074203	-0.57543469		BET	PYX
397	5.0	4.4	-0.27067281	0.33467502	0.90262332	4	PI2	UMA
398	3.8	4.3	-0.38682036	0.46568593	-0.79593129		OMI	VEL
399	3.9	4.4	-0.54347298	0.63868978	-0.54471321		ALF	PYX
400	5.0	4.8	-0.64195268	0.75685009	-0.12277904			
401	4.5	4.2	-0.48056689	0.55964823	-0.67516614			
402	4.3	3.9	-0.61598499	0.72221743	0.31458619	47	DLT	CNC
403	2.3	2.6	-0.37944436	0.43910563	-0.81437597		DLT	VEL
404	4.7	4.4	-0.63833556	0.73423647	-0.23113744	12		HYA
405	4.4	4.0	-0.57317411	0.66126140	0.48394710	48	IOT	CNC
406	3.8	3.7	-0.65209189	0.74937000	0.11498160	11	EPS	HYA
407	4.3	3.7	-0.59455433	0.65800853	-0.46209298		GAM	PYX
408	4.1	4.5	-0.33932131	0.35784414	-0.86994748			
409	3.5	3.1	-0.68045103	0.72495302	0.10690890	16	ZET	HYA
410	4.9	4.8	-0.52903194	0.53732101	-0.65681910			
411	4.4	4.4	-0.51958420	0.53167111	0.66884833			
412	4.3	4.6	-0.28744041	0.28329674	-0.91494315		ALF	VOL
413	4.1	3.6	-0.48824707	0.47802731	-0.73014018			
414	5.3	4.8	-0.71427783	0.69375560	0.09225155	18	OMG	HYA
415	5.0	4.5	-0.56022878	0.54407166	0.62460366			
416	4.8	3.9	-0.65346671	0.62090733	-0.43296113		KAP	PYX
417	5.3	4.4	-0.62483933	0.58457477	0.51754048		RS	CNC
418	4.2	4.7	-0.34505589	0.31580300	-0.88385796			
419	4.1	4.6	-0.74175839	0.66922265	0.04399463	22	THT	HYA
420	5.5	4.6	-0.40551591	0.36468202	0.83819083	17		UMA
421	4.5	3.6	-0.40549690	0.35627445	-0.84180804			
422	5.3	4.3	-0.53934926	0.47494516	-0.69536283			
423	4.1	4.5	-0.60202950	0.52455070	0.60200252	38		LYN
424	3.4	2.5	-0.62587284	0.53455611	0.56791984	40	ALF	LYN

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
No.								
425	4.9	4.0	-0.68813468	0.58112178	-0.43447455		THT	PYX
426	5.1	4.8	-0.67497453	0.56123559	-0.47898225		LAM	PYX
427	4.8	4.2	-0.69052933	0.57052388	0.44460290	1	KAP	LEO
428	5.1	4.6	-0.72252304	0.57974064	-0.37664472			
429	4.8	4.0	-0.63787548	0.50206069	-0.58399480		EPS	ANT
430	4.0	4.1	-0.60293019	0.46804783	-0.64606997		PSI	VEL
431	3.4	2.5	-0.43381759	0.33379108	-0.83689056		N	VEL
432	4.1	4.2	-0.35382987	0.27737822	0.89323331	23		UMA
433	5.6	4.8	-0.64402745	0.50091712	0.57819605	8		LMI
434	4.6	3.7	-0.72648998	0.56317222	0.39376306	4	LAM	LEO
435	5.4	4.7	-0.77956541	0.60207915	0.17256438	6		LEO
436	4.0	3.1	-0.36670868	0.27889633	-0.88754807		R	CAR
437	3.6	3.6	-0.48861254	0.37685851	0.78691514	25	THT	UMA
438	5.0	4.7	-0.63922968	0.48534911	0.59650788	10		LMI
439	4.4	4.7	-0.41259569	0.30812255	-0.85721951			
440	5.0	4.8	-0.27073132	0.20757840	0.94000838	24		UMA
441	4.6	3.8	-0.11662792	0.08939785	0.98914405			
442	5.0	4.4	-0.80567506	0.58622975	0.08498455			
443	4.2	3.6	-0.81224761	0.58309371	-0.01598567	35	IOT	HYA
444	3.9	4.0	-0.80263169	0.57000681	0.17571171	14	OMI	LEO
445	5.6	4.6	-0.79638649	0.55241866	0.24617510	16	PSI	LEO
446	4.5	4.3	-0.38552202	0.26035559	-0.88520491		L	CAR
447	3.4	3.2	-0.75512705	0.51408307	0.40681904	17	EPS	LEO
448	5.4	4.5	-0.44584104	0.30355488	0.84206900			
449	3.3	3.5	-0.35438039	0.23488974	-0.90511952		UPS	CAR
450	5.1	4.2	-0.81400128	0.54456388	0.20211901		R	LEO
451	4.2	4.4	-0.42781081	0.27937439	0.85960913	29	UPS	UMA
452	4.5	4.2	-0.81400373	0.52322040	-0.25226640	39	UPS1	HYA
453	4.9	4.4	-0.58213396	0.37177929	-0.72311839			
454	4.2	3.7	-0.75627370	0.48222009	0.44216950	24	MU	LEO
455	5.2	4.7	-0.76403073	0.47776745	-0.43358425			
456	5.2	4.3	-0.80404331	0.49995351	-0.32180870			
457	3.8	4.2	-0.49866009	0.30228848	-0.81237909		PHI	VEL
458	4.9	4.0	-0.85169497	0.50383945	0.14408846	29	PI	LEO
459	3.8	4.2	-0.83759920	0.46138485	0.29249205	30	ETA	LEO
460	4.6	3.9	-0.86326501	0.47239394	0.17781307	31		LEO

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
461	4.0	3.6	-0.86357912	0.45851469	-0.20975076	41	LAM	HYA
462	3.6	4.0	-0.30819335	0.15611021	-0.93842765		OMG	CAR
463	4.2	4.5	-0.66437898	0.33625405	-0.66748317			
464	3.8	4.0	-0.81951084	0.40897865	0.40142053	36	ZET	LEO
465	3.8	4.1	-0.65286808	0.32524019	0.68409216	33	LAM	UMA
466	4.8	3.9	-0.52027009	0.24890985	-0.81692283			
467	3.3	2.4	-0.67523902	0.31720082	0.66590983	34	MU	UMA
468	5.2	4.7	-0.68010491	0.31650519	-0.66127284			
469	4.1	3.3	-0.87497807	0.39111450	-0.28538188	42	MU	HYA
470	4.5	3.8	-0.78589549	0.34639434	-0.51222967		ALF	ANT
471	4.2	4.4	-0.47941897	0.20836480	-0.85249138			
472	4.6	4.3	-0.73134509	0.32184197	0.60129203	31	BET	LMI
473	3.6	4.0	-0.44205298	0.18256529	-0.87821357			
474	4.1	4.5	-0.91133098	0.37665365	0.16615617	47	RHO	LEO
475	5.3	4.4	-0.84981793	0.34493363	-0.39853516	44		HYA
476	4.3	3.5	-0.18819782	0.07329760	-0.97939218		GAM	CHA
477	4.7	3.7	-0.50237833	0.19875468	-0.84149426			
478	5.1	4.2	-0.82911257	0.32295793	-0.45636664			
479	4.2	4.4	-0.62423903	0.24218799	-0.74274532			
480	5.3	4.6	-0.33131761	0.12137980	0.93567921			
481	4.7	3.7	-0.46671275	0.16613387	-0.86866492			
482	3.1	2.8	-0.61894274	0.21124731	-0.75649485		MU	VEL
483	3.5	2.9	-0.91344705	0.30049704	-0.27443762		NU	HYA
484	4.2	3.8	-0.78673386	0.24606972	0.56612677	46		LMI
485	5.4	4.7	-0.54947096	0.17179753	0.81765963	44		UMA
486	5.0	4.6	-0.76743267	0.22590895	-0.60001020		IOT	ANT
487	4.5	4.0	-0.91553586	0.25689018	-0.30951820	7	ALF	CRT
488	5.2	4.7	-0.96139056	0.26671143	0.06777318	58		LEO
489	4.9	4.0	-0.96438373	0.26166671	-0.03865946	61		LEO
490	2.2	1.7	-0.45351317	0.12015326	0.88311324	50	ALF	UMA
491	5.0	4.6	-0.45346533	0.11206073	-0.88420110			
492	4.3	3.7	-0.50534369	0.12028460	-0.85449363			
493	3.4	2.9	-0.69093993	0.16316005	0.70425905	52	PSI	UMA
494	3.6	4.0	-0.94130708	0.20173962	0.27063278	70	THT	LEO
495	4.8	3.9	-0.89836724	0.18871915	0.39663759	72		LEO
496	5.4	4.6	-0.97976725	0.19613436	0.03984279	75		LEO

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
497	4.2	4.2	-0.83389752	0.16402670	0.52698213	53	XI	UMA
498	3.8	3.1	-0.81966034	0.16014101	0.55001071	54	NU	UMA
499	3.9	3.5	-0.95100293	0.18128467	-0.25045816	12	DLT	CRT
500	4.1	4.6	-0.57525873	0.10476003	-0.81123531		PI	CEN
501	4.3	4.7	-0.97774420	0.17877874	0.10979272	77	SIG	LEO
502	5.3	4.5	-0.79830490	0.13796176	-0.58623872			
503	4.3	4.4	-0.96832519	0.16495711	0.18744458	78	IOT	LEO
504	5.1	4.2	-0.96956064	0.16190114	-0.18368501	14	EPS	CRT
505	4.4	4.7	-0.94136243	0.15595030	-0.29919271	15	GAM	CRT
506	5.0	4.2	-0.98899982	0.14005212	-0.04758941	87		LEO
507	4.0	3.1	-0.34516317	0.04781479	0.93732392	1	LAM	DRA
508	3.4	3.8	-0.45491442	0.05292023	-0.88896137		LAM	CEN
509	4.7	4.3	-0.99371664	0.11151735	-0.00954536	91	UPS	LEO
510	5.6	4.7	-0.98377068	0.10391495	0.14627687	1	OMG	VIR
511	5.5	4.7	-0.84251425	0.07656033	-0.53320563			
512	5.1	4.8	-0.94780408	0.07364900	-0.31023095	27	ZET	CRT
513	4.3	3.5	-0.99031270	0.07234362	0.11852068	3	NU	VIR
514	4.1	3.5	-0.66663842	0.04835683	0.74381102	63	CHI	UMA
515	4.5	4.2	-0.48515309	0.03375637	-0.87377742			
516	5.3	4.4	-0.89353591	0.05379282	-0.44575768			
517	5.3	4.5	-0.34237100	0.01864946	-0.93937974			
518	4.0	4.0	-0.99802573	0.05171547	0.03563912	5	BET	VIR
519	4.8	4.2	-0.70752397	0.03513056	-0.70581561			
520	5.3	4.5	-0.23783432	-0.00222359	-0.97130319		KAP	CHA
521	4.5	4.2	-0.98759166	-0.01141070	0.15662857	9	OMI	VIR
522	4.5	4.7	-0.43302753	-0.00805521	-0.90134470		ETA	CRU
523	4.4	4.6	-0.91002283	-0.02317366	-0.41390993	1	ALF	CRV
524	3.3	2.7	-0.92443328	-0.03044043	-0.38012694	2	EPS	CRV
525	4.2	4.7	-0.61394125	-0.02418768	-0.78898105		RHO	CEN
526	3.0	3.5	-0.52215660	-0.02844414	-0.85237516		DLT	CRU
527	3.6	3.9	-0.53922475	-0.03055124	0.84160756	69	DLT	UMA
528	4.3	3.5	-0.37893669	-0.02452415	-0.92509759		EPS	MUS
529	4.3	4.7	-0.44163429	-0.03030943	-0.89668305		ZET	CRU
530	5.2	4.3	-0.57404084	-0.04092175	-0.81780347			
531	5.5	4.5	-0.65073728	-0.04936788	0.75769638	3		CVN
532	4.2	4.5	-0.99711544	-0.07559493	-0.00679698	15	ETA	VIR

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
533	5.1	4.8	-0.94768599	-0.07534983	0.31018328	11		COM
534	3.9	3.1	-0.49648429	-0.04043738	-0.86710332		EPS	CRU
535	4.7	4.2	-0.87345295	-0.09350749	0.47784547	15	GAM	COM
536	5.5	4.6	-0.51627801	-0.05587326	-0.85459651			
537	4.1	4.6	-0.63947585	-0.07094488	-0.76553083		SIG	CEN
538	3.2	3.6	-0.95331843	-0.11392614	-0.27965121	7	DLT	CRV
539	1.9	1.0	-0.54282648	-0.06756922	-0.83712234		GAM	CRU
540	4.1	4.6	-0.30882106	-0.03989483	-0.95028309		GAM	MUS
541	4.7	4.6	-0.74044655	-0.10180304	0.66436063	8	BET	CVN
542	3.1	2.8	-0.91086140	-0.12702309	-0.39267880	9	BET	CRV
543	5.6	4.7	-0.49802699	-0.07468973	0.86393898		T	UMA
544	2.9	3.4	-0.35663962	-0.05357249	-0.93270476		ALF	MUS
545	5.0	4.4	-0.97828478	-0.15782372	-0.13435238	26	CHI	VIR
546	5.1	4.7	-0.48079745	-0.09060525	-0.87213789		IOT	CRU
547	3.3	3.8	-0.37059562	-0.07067221	-0.92610168		BET	MUS
548	5.4	4.8	-0.93936315	-0.18322559	0.28987110	27		COM
549	5.7	4.8	-0.38205313	-0.07692530	0.92093317	7		DRA
550	1.4	2.0	-0.49912051	-0.09878183	-0.86088377		BET	CRU
551	4.6	3.9	-0.64455090	-0.14367889	-0.75093975			
552	5.0	4.1	-0.96189421	-0.22095478	-0.16105438	40	PSI	VIR
553	4.3	4.7	-0.53220326	-0.12198060	-0.83778304		MU1	CRU
554	3.6	2.7	-0.97133110	-0.22896134	0.06397342	43	DLT	VIR
555	5.0	4.1	-0.92401886	-0.23230914	0.30368011	36	COM	
556	5.3	4.7	-0.82950377	-0.21406744	0.51584748	37	COM	
557	3.2	2.9	-0.94780377	-0.25249982	0.19470966	47	EPS	VIR
558	4.0	3.5	-0.31041574	-0.08150980	-0.94709990		DLT	MUS
559	4.7	4.8	-0.91112135	-0.27650483	0.30561898	42	ALF	COM
560	5.1	4.3	-0.37793359	-0.12612579	-0.91720144			
561	5.0	4.0	-0.94208553	-0.32015056	0.09989230	60	SIG	VIR
562	3.4	3.1	-0.87067526	-0.30065578	-0.38926942	46	GAM	HYA
563	4.9	4.7	-0.40746316	-0.14957459	-0.90088912			
564	5.5	4.7	-0.91153257	-0.35020216	-0.21556164	68		VIR
565	5.1	4.7	-0.89751640	-0.34800404	-0.27084589	69		VIR
566	5.2	4.3	-0.85486889	-0.34093304	-0.39110591		R	HYA
567	4.2	3.7	-0.71885557	-0.29092741	-0.63135403			
568	4.9	4.0	-0.91988638	-0.37800320	-0.10451137	74		VIR

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
569	3.7	4.0	-0.92027560	-0.39122566	-0.00594163	79	ZET	VIR
570	4.9	3.9	-0.52191488	-0.24016416	0.81849009	83		UMA
571	5.2	4.3	-0.89832279	-0.41402721	-0.14696133	82		VIR
572	4.6	4.7	-0.75742575	-0.36468063	-0.54158496	1		CEN
573	5.1	4.7	-0.56401710	-0.27350075	-0.77915470			
574	4.4	3.6	-0.73929095	-0.37076293	-0.56212431	2		CEN
575	4.3	3.5	-0.85807938	-0.43278169	0.27640511	5	UPS	BOO
576	5.2	4.5	-0.83013632	-0.42001199	0.36669281	6		BOO
577	4.9	4.0	-0.37531900	-0.19531599	0.90608350	10		DRA
578	4.9	4.0	-0.73002036	-0.37834319	0.56914559			
579	3.1	3.1	-0.83604245	-0.44593023	0.31965489	8	ETA	BOO
580	5.3	4.6	-0.77731333	-0.42331152	0.46539375	9		BOO
581	5.1	4.6	-0.39290691	-0.21333497	-0.89448999			
582	4.0	4.5	-0.65264635	-0.35886620	-0.66728389		PHI	CEN
583	3.9	4.3	-0.36840931	-0.21923380	0.90344403	11	ALF	DRA
584	3.6	3.2	-0.76844249	-0.45953963	-0.44533073	49	PI	HYA
585	5.5	4.6	-0.61250805	-0.37509209	0.69580156			
586	5.4	4.5	-0.55092820	-0.33897822	0.76260860	13		BOO
587	5.1	4.4	-0.17897089	-0.11292146	0.97735263	4		UMI
588	5.1	4.1	-0.81468759	-0.50959645	-0.27675907			
589	5.4	4.5	-0.29214899	-0.18814346	0.93768385			
590	4.5	3.9	-0.82995818	-0.52988448	-0.17433258	98	KAP	VIR
591	4.5	4.5	-0.83112364	-0.54692616	-0.10052495	99	IOT	VIR
592	5.4	4.5	-0.42221637	-0.27667705	-0.86323991		R	CEN
593	5.2	4.8	-0.67314673	-0.45354000	0.58410183			
594	3.8	4.3	-0.57735965	-0.39012944	-0.71725508		IOT	LUP
595	5.2	4.6	-0.79151643	-0.54082899	0.28461508	20		BOO
596	4.3	4.7	-0.65342373	-0.44699472	-0.61092810		PSI	CEN
597	5.1	4.5	-0.72598415	-0.50926088	-0.46216920	51		HYA
598	4.5	4.5	-0.49807958	-0.36011758	0.78881687	23	THT	BOO
599	4.6	4.0	-0.09395872	-0.06493789	-0.99345600		DLT	OCT
600	4.5	3.8	-0.19456184	-0.14608691	0.96995067	5		UMI
601	3.9	3.3	-0.68369174	-0.52303740	0.50891795	25	RHO	BOO
602	3.4	3.6	-0.62052589	-0.47638263	0.62290224	27	GAM	BOO
603	4.3	4.8	-0.51037353	-0.40781681	-0.75710257		RHO	LUP
604	0.6	0.5	-0.38162815	-0.30831488	-0.87137930		ALF	CEN

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
No.								
605	4.1	4.4	-0.74683728	-0.61982772	0.24093085	30	ZET	BOO
606	2.5	3.0	-0.52340403	-0.43373029	-0.73343456		ALF	LUP
607	4.2	4.7	-0.60965085	-0.50633496	-0.60987765			
608	3.6	3.8	-0.32850785	-0.27179643	-0.90454922		ALF	CIR
609	4.3	4.4	-0.76139023	-0.64130712	-0.09492152	107	MU	VIR
610	4.4	3.7	-0.62644708	-0.52838411	-0.57303951			
611	5.0	4.6	-0.72405224	-0.62334539	0.29527762	35	OMI	BOO
612	4.0	4.4	-0.75502781	-0.65466607	0.03667891	109		VIR
613	4.1	3.4	-0.14748608	-0.12546411	-0.98107421		ALF	APS
614	4.7	4.0	-0.65938011	-0.59022022	-0.46568010	58		HYA
615	5.0	4.8	-0.69834851	-0.63482673	0.33061213	37	XI	BOO
616	4.8	3.9	-0.29012998	-0.28205840	0.91447671			
617	3.9	3.6	-0.53686032	-0.53712978	0.65059403	42	BET	BOO
618	5.1	4.3	-0.64002251	-0.63955369	0.42584300	41	OMG	BOO
619	4.8	4.4	-0.70540899	-0.70767666	0.03989857	110		VIR
620	3.5	2.5	-0.63722801	-0.64355577	-0.42400051	20	SIG	LIB
621	4.9	4.3	-0.62292491	-0.63549672	0.45618907	43	PSI	BOO
622	4.1	4.6	-0.47993070	-0.48710846	-0.72965188		PI	LUP
623	5.4	4.7	-0.66804734	-0.69075205	-0.27672072	21	NU	LIB
624	4.3	4.8	-0.48717999	-0.51097766	-0.70820723		LAM	LUP
625	3.8	3.5	-0.41939130	-0.45238066	-0.78705951		ZET	LUP
626	3.9	3.5	-0.55394373	-0.62332625	0.55191550	49	DLT	BOO
627	4.4	4.7	-0.34578156	-0.38936049	-0.85371747		BET	CIR
628	5.2	4.6	-0.29728435	-0.33425634	-0.89436833		EPS	CIR
629	4.7	4.3	-0.57182716	-0.65078568	-0.49949143	2		LUP
630	3.8	3.0	-0.52320287	-0.61594912	-0.58895283		PHI1	LUP
631	3.6	4.1	-0.46010797	-0.54481875	-0.70105148		EPS	LUP
632	3.7	3.2	-0.32312675	-0.39835457	0.85843039	12	IOT	DRA
633	5.4	4.4	-0.60786796	-0.74709832	0.26896215	9	TAU1	SER
634	4.1	4.2	-0.54372671	-0.68204817	0.48905169	3	BET	CRB
635	5.4	4.4	-0.42823433	-0.53794338	-0.72610762			
636	5.2	4.3	-0.46168584	-0.59698444	0.65609127	52	NU1	BOO
637	5.5	4.7	-0.12945289	-0.17310516	0.97635882	15	THT	UMI
638	5.0	4.6	-0.59470884	-0.78534866	-0.17189787	37		LIB
639	4.2	4.4	-0.58994812	-0.78578391	0.18575481	13	DLT	SER
640	5.3	4.4	-0.46271040	-0.62198455	0.63169162	6	MU	CRB

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
No.								
641	4.3	3.9	-0.57985907	-0.77460872	-0.25247730	38	GAM	LIB
642	4.5	4.0	-0.24314685	-0.32302677	-0.91462195		EPS	TRA
643	4.6	3.9	-0.43750116	-0.59484534	-0.67435284		OMG	LUP
644	3.9	4.4	-0.51229299	-0.70238616	-0.49417565	40	TAU	LIB
645	5.1	4.7	-0.48414737	-0.66996219	-0.56280723	3	PSI1	LUP
646	5.3	4.6	-0.53411700	-0.74411302	-0.40126654	42		LIB
647	5.0	4.1	-0.54377966	-0.76984327	-0.33413323	43	KAP	LIB
648	5.5	4.6	-0.45824103	-0.65066118	-0.60552059			
649	4.1	4.5	-0.51149003	-0.73480102	0.44547212	8	GAM	CRB
650	4.0	4.3	-0.53906565	-0.79831320	0.26852236	28	BET	SER
651	4.3	3.4	-0.52237113	-0.79284659	0.31388323	35	KAP	SER
652	3.8	4.2	-0.54738922	-0.83492118	-0.05719847	32	MU	SER
653	4.1	4.3	-0.54166465	-0.83671359	0.08068317	37	EPS	SER
654	4.2	4.6	-0.45497780	-0.69909252	-0.55160207	5	CHI	LUP
655	5.0	4.2	-0.50439317	-0.78464659	0.36044036	38	RHO	SER
656	4.5	4.2	-0.51149231	-0.81051127	-0.28538937	46	THT	LIB
657	3.2	3.4	-0.24040416	-0.37988136	-0.89325024		BET	TRA
658	4.3	4.3	-0.50217437	-0.82076125	0.27234513	41	GAM	SER
659	4.1	4.6	-0.45735774	-0.74481496	-0.48587505	5	RHO	SCO
660	4.5	3.9	-0.46045051	-0.76261915	0.45430976	13	EPS	CRB
661	3.1	3.6	-0.46362503	-0.77023765	-0.43793354	6	PI	SCO
662	3.6	4.1	-0.40208643	-0.67449770	-0.61917635		ETA	LUP
663	4.4	4.4	-0.25794833	-0.45090027	0.85448909	13	THT	DRA
664	5.1	4.8	-0.32858320	-0.56644158	-0.75576254		ETA	NOR
665	4.6	4.6	-0.48443205	-0.85284861	-0.19487131		XI	SCO
666	5.2	4.8	-0.37945956	-0.70722119	0.59653049	16	TAU	CRB
667	3.0	2.1	-0.45419954	-0.88872210	-0.06225597	1	DLT	OPH
668	4.2	3.8	-0.20409433	-0.39572108	-0.89540512		DLT	TRA
669	3.6	3.3	-0.43823723	-0.89531867	-0.07970325	2	EPS	OPH
670	4.1	4.6	-0.29607955	-0.62237685	0.72455776	22	TAU	HER
671	4.4	4.0	-0.28138380	-0.57739483	-0.76644528		GAM2	NOR
672	5.0	4.7	-0.39449253	-0.82357768	-0.40754809	19	OMI	SCO
673	3.2	3.5	-0.38814315	-0.81507431	-0.43011482	20	SIG	SCO
674	4.1	4.3	-0.40002568	-0.85502509	0.33001750	20	GAM	HER
675	5.3	4.4	-0.34916341	-0.75283673	0.55796215	20	NU1	CRB
676	4.9	4.5	-0.39296711	-0.85408674	-0.34075312	4	PSI	OPH

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
No.								

Table 5.2-2. Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
677	5.4	4.4	-0.39920395	-0.90755443	-0.13031177			
678	5.3	4.5	-0.29339752	-0.68289407	0.66900940	30	G	HER
679	3.2	2.9	-0.36306874	-0.85597941	0.36807654	27	BET	HER
680	4.1	4.5	-0.38891732	-0.92054996	0.03648409	10	LAM	OPH
681	4.7	4.4	-0.37359148	-0.88301122	-0.28411369	8	PHI	OPH
682	5.1	4.3	-0.37388245	-0.90544421	0.20095446	29		HER
683	3.0	3.5	-0.32767596	-0.81888202	-0.47123317	23	TAU	SCO
684	4.4	3.5	-0.30270229	-0.75950398	-0.57578210			
685	5.1	4.3	-0.23129186	-0.61357316	0.75500467	42		HER
686	5.2	4.6	-0.14526360	-0.40219132	0.90395831	18		DRA
687	3.9	3.6	-0.26197334	-0.73148419	0.62952430	44	ETA	HER
688	4.6	4.2	-0.07821356	-0.20323809	-0.97600047		BET	APS
689	5.4	4.6	-0.32417611	-0.93390218	0.15078649	43		HER
690	4.6	4.4	-0.04063053	-0.13089192	0.99056371	22	EPS	UMI
691	4.0	3.1	-0.16478602	-0.48867574	-0.85676227		ETA	ARA
692	5.4	4.8	-0.27431495	-0.86580456	0.41848987	51		HER
693	5.6	4.7	-0.24673051	-0.82552314	-0.50757817			
694	3.6	3.1	-0.27486935	-0.94735578	0.16420676	27	KAP	OPH
695	3.3	2.4	-0.15806508	-0.53768392	-0.82819770		ZET	ARA
696	4.3	3.6	-0.16658154	-0.57705885	-0.79953341		EPS1	ARA
697	4.2	4.6	-0.22773259	-0.82636893	0.51502646	58	EPS	HER
698	5.1	4.3	-0.26478608	-0.96158740	-0.07237405	30		OPH
699	5.2	4.3	-0.24752352	-0.93748365	0.24465590			
700	3.4	3.9	-0.09119439	-0.40003544	0.91195133	22	ZET	DRA
701	3.7	3.8	-0.16227441	-0.71092666	-0.68428817		ETA	SCO
702	3.4	2.6	-0.19980479	-0.94754559	0.24947024	64	ALF1	HER
703	3.5	3.8	-0.18482072	-0.88805598	0.42094878	65	DLT	HER
704	3.4	2.7	-0.16189759	-0.78350530	0.59992384	67	PI	HER
705	4.7	4.5	-0.18509047	-0.87520981	-0.44693322	36		OPH
706	5.1	4.6	-0.19919061	-0.97993697	-0.00682903	41		OPH
707	5.3	4.4	-0.18625007	-0.96408026	0.18936780			
708	5.2	4.3	-0.17276781	-0.93464811	0.31077997			
709	5.1	4.6	-0.07112002	-0.37238198	-0.92535053		ZET	APS
710	3.5	4.0	-0.16158652	-0.89214829	-0.42185450	42	THT	OPH
711	4.5	4.7	-0.14546089	-0.90093251	-0.40885418	44		OPH
712	4.6	3.8	-0.15588318	-0.98507940	0.07293154	49	SIG	OPH

	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
No.								
713	4.7	4.8	-0.13511554	-0.85695488	-0.49736518	45		OPH
714	3.2	2.8	-0.08160740	-0.60552917	0.79162785	23	BET	DRA
715	4.7	3.9	-0.12215269	-0.88931336	0.44068182	76	LAM	HER
716	3.9	4.3	-0.07124613	-0.48499707	-0.87160876		DLT	ARA
717	4.7	4.2	-0.09151757	-0.77608794	-0.62394875			
718	2.3	2.4	-0.08370967	-0.72692942	-0.68159101		THT	SCO
719	3.9	4.1	-0.10615269	-0.95837458	-0.26504673	55	XI	SER
720	4.0	4.5	-0.06639099	-0.69107398	0.71972841	85	IOT	HER
721	2.6	3.1	-0.07102018	-0.77381967	-0.62941183		KAP	SCO
722	3.1	2.6	-0.08255371	-0.99336983	0.08000790	60	BET	OPH
723	4.0	3.4	-0.03571860	-0.42580730	-0.90410858		ETA	PAV
724	3.8	3.7	-0.05990002	-0.88306173	0.46541805	86	MU	HER
725	3.4	3.5	-0.05306785	-0.76296791	-0.64425443		IOT1	SCO
726	4.1	4.4	-0.06367080	-0.99683923	0.04751392	62	GAM	OPH
727	3.6	3.1	-0.04715087	-0.79693945	-0.60221616			
728	4.1	3.6	-0.01746954	-0.54609906	0.83753843	32	XI	DRA
729	4.2	3.5	-0.01897393	-0.79571143	0.60537865	91	THT	HER
730	5.2	4.7	-0.02141244	-0.71493246	-0.69886557			
731	4.1	3.8	-0.01589267	-0.87233639	0.48864777	92	XI	HER
732	5.1	4.1	-0.01876277	-0.74627044	-0.66537838			
733	3.7	3.4	-0.01603395	-0.98536343	-0.16971098	64	NU	OPH
734	5.2	4.3	-0.01553308	-0.86369379	-0.50377749			
735	5.0	4.4	-0.00907152	-0.95751773	0.28823168	93		HER
736	4.3	4.6	-0.00811080	-0.99865778	0.05115511	67		OPH
737	4.7	4.8	-0.00249795	-0.92980453	0.36804523	95		HER
738	4.4	4.2	0.01282645	-0.99897129	0.04349533	70		OPH
739	3.4	3.0	0.00974317	-0.86219861	-0.50647668	10	GAM	SGR
740	5.4	4.5	0.01584712	-0.92565135	0.37804556	98		HER
741	3.9	4.3	0.00765610	-0.64143932	-0.76713557		THT	ARA
742	3.3	2.5	0.04973719	-0.79938766	-0.59875335		ETA	SGR
743	4.1	4.5	0.02138054	-0.87642786	0.48105829	103	OMI	HER
744	5.0	4.7	0.01885547	-0.87890669	-0.47662092			
745	4.9	4.5	0.02278976	-0.69471546	-0.71892354		EPS	TEL
746	5.2	4.2	0.03730007	-0.85280865	0.52088973	104		HER
747	4.2	4.4	0.04384106	-0.93208828	-0.35956834	13	MU	SGR
748	4.8	3.9	0.05794219	-0.88862434	-0.45496097			

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
749	5.5	4.7	0.06794713	-0.90797235	0.41348446	105		HER
750	4.7	4.2	0.06381448	-0.80606840	0.58837186	1	KAP	LYR
751	4.0	4.0	0.02857512	-0.29589396	0.95479329	44	CHI	DRA
752	3.0	2.3	0.06727461	-0.86470321	-0.49775745	19	DLT	SGR
753	3.7	3.3	0.08134073	-0.99538005	-0.05101217	58	ETA	SER
754	5.2	4.3	0.05780806	-0.65223235	0.75581161			
755	5.3	4.5	0.06416248	-0.77798750	-0.62499490			
756	4.6	3.8	0.03869928	-0.47529076	-0.87897728		XI	PAV
757	5.1	4.8	0.09004359	-0.98368110	-0.15576790		ZET	SCT
758	5.1	4.5	0.09124569	-0.93178301	-0.35136113	21		SGR
759	5.2	4.6	0.04662542	-0.41155224	0.91019274	42		DRA
760	3.7	4.2	0.07039523	-0.69109733	-0.71932537		ALF	TEL
761	3.2	2.8	0.09783158	-0.89761484	-0.42978666	22	LAM	SGR
762	4.5	4.1	0.07125450	-0.65080182	-0.75589667		ZET	TEL
763	5.0	4.7	0.09625624	-0.73273742	-0.67366951		THT	CRA
764	4.2	3.5	0.13978612	-0.97963950	-0.14410513		ALF	SCT
765	5.5	4.7	0.11393733	-0.71962514	-0.68495105			
766	4.4	3.9	0.05134683	-0.31350979	-0.94819571		ZET	PAV
767	3.4	3.9	0.16435739	-0.87536152	-0.45467445	27	PHI	SGR
768	4.6	4.6	0.17675775	-0.91989299	0.35007654	110		HER
769	5.2	4.6	0.17082614	-0.87762294	0.44787990			
770	3.7	4.1	0.17459360	-0.81733431	0.54907349	10	BET	LYR
771	5.0	4.5	0.11144110	-0.49781317	0.86009472	47	OMI	DRA
772	5.6	4.7	0.14486922	-0.67091310	-0.72724722			
773	5.2	4.7	0.07650620	-0.31251711	0.94682620	52	UPS	DRA
774	4.5	3.5	0.18260205	-0.77926473	0.59950227	12	DLT2	LYR
775	4.3	3.4	0.16769325	-0.70100746	0.69315764	13	R	LYR
776	4.4	4.7	0.23171640	-0.97010405	0.07215007	63	THT1	SER
777	4.6	4.6	0.08649335	-0.37610480	-0.92253134		KAP	PAV
778	3.9	3.3	0.22064784	-0.90600481	-0.36120605	37	XI2	SGR
779	5.4	4.8	0.11609871	-0.48215906	-0.86835691		OMG	PAV
780	4.4	4.0	0.23919056	-0.93585207	0.25878326	13	EPS	AQL
781	2.9	3.2	0.22216588	-0.83746318	-0.49929725	38	ZET	SGR
782	4.2	3.8	0.24689304	-0.89494140	-0.37164999	39	OMI	SGR
783	3.7	4.1	0.27290608	-0.95814694	-0.08646798	16	LAM	AQL
784	5.6	4.7	0.27269026	-0.95159555	0.14179536		R	AQL

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
					Table 5.2-2. Orbiter Uplinkable Stars (2005)			
785	3.7	3.1	0.24324969	-0.85090862	-0.46560080	40	TAU	SGR
786	5.0	4.5	0.21213375	-0.72931334	-0.65046239		DLT	CRA
787	4.5	3.9	0.22130602	-0.74010324	-0.63503609		BET	CRA
788	3.5	3.1	0.11876986	-0.36251294	0.92437984	57	DLT	DRA
789	4.8	4.2	0.09433273	-0.27205514	0.95764677	60	TAU	DRA
790	4.7	4.1	0.25194397	-0.74615393	0.61626175	21	THT	LYR
791	4.2	3.8	0.19455229	-0.56540518	0.80154001	1	KAP	CYG
792	5.3	4.7	0.30270604	-0.89549039	-0.32629129	43		SGR
793	4.3	4.5	0.32058688	-0.89572386	-0.30806300	44	RHO1	SGR
794	4.2	4.6	0.24092951	-0.67060883	-0.70159587		BET1	SGR
795	4.2	4.7	0.26057054	-0.71178068	-0.65228157		ALF	SGR
796	3.7	3.9	0.35376796	-0.93385329	0.05259524	30	DLT	AQL
797	4.7	3.9	0.33560855	-0.84533615	0.41566055	6	ALF	VUL
798	4.1	4.4	0.23368068	-0.57515369	0.78395891	10	IOT	CYG
799	5.2	4.1	0.37432700	-0.92592071	-0.05049880	36		AQL
800	4.8	4.3	0.38623121	-0.91368272	0.12652801	38	MU	AQL
801	5.1	4.7	0.35693399	-0.78868810	0.50056888	12	PHI	CYG
802	3.0	2.1	0.43058868	-0.88399398	0.18206600	50	GAM	AQL
803	4.1	3.4	0.42023542	-0.85068550	0.31581065	7	DLT	SGE
804	4.2	4.0	0.15470247	-0.30243086	0.94053321	63	EPS	DRA
805	4.3	3.2	0.38375480	-0.74800176	0.54150311		CHI	CYG
806	5.3	4.3	0.35723981	-0.69516193	0.62380254	19		CYG
807	5.4	4.8	0.27732221	-0.53631550	0.79715624	20		CYG
808	4.3	4.0	0.46140544	-0.88705771	0.01528511	55	ETA	AQL
809	4.5	4.1	0.34835951	-0.65642879	-0.66913892		IOT	SGR
810	4.1	3.9	0.46994389	-0.87590698	0.10926892	60	BET	AQL
811	5.2	4.3	0.24973433	-0.45536005	0.85456421			
812	4.3	3.9	0.39244784	-0.71960357	0.57284849	21	ETA	CYG
813	4.8	4.0	0.42359171	-0.78112177	-0.45871433	59		SGR
814	3.7	2.8	0.45933908	-0.82411339	0.33142831	12	GAM	SGE
815	4.2	4.6	0.14009304	-0.25571868	-0.95654686		EPS	PAV
816	5.4	4.5	0.21536547	-0.36947909	0.90393745	64		DRA
817	5.4	4.5	0.24893630	-0.44203995	-0.86176064			
818	4.8	3.8	0.44071153	-0.76650813	-0.46716018	62		SGR
819	4.8	4.2	0.19318397	-0.32600468	0.92541931	67	RHO	DRA
820	5.1	4.3	0.39429423	-0.68125143	-0.61678890			

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
821	5.3	4.8	0.42681412	-0.73068606	-0.53284856			
822	5.1	4.2	0.30879084	-0.51613729	-0.79890582		XI	TEL
823	4.0	3.8	0.20681081	-0.34411253	-0.91586890		DLT	PAV
824	3.5	3.9	0.53253027	-0.84624130	-0.01694616	65	THT	AQL
825	3.5	3.3	0.54797260	-0.79577363	-0.25781844	9	BET	CAP
826	4.8	4.1	0.49190557	-0.69049211	0.53032966	39		CYG
827	4.4	4.5	0.51817279	-0.69170691	0.50302932	41		CYG
828	5.3	4.8	0.59761565	-0.80001142	-0.05326594	69		AQL
829	4.3	4.7	0.60010227	-0.77627427	0.19306870	2	EPS	DEL
830	4.8	3.9	0.50371113	-0.64497649	0.57470029	47		CYG
831	5.1	4.2	0.62223220	-0.78138859	-0.04752852	70		AQL
832	4.0	3.9	0.60689836	-0.75475995	0.24902167	6	BET	DEL
833	3.5	3.1	0.42097983	-0.52894394	-0.73688146		ALF	IND
834	4.7	4.4	0.62833388	-0.77762230	-0.02236254	71		AQL
835	4.0	4.5	0.61003243	-0.74452794	0.27117997	9	ALF	DEL
836	5.3	4.3	0.60130372	-0.73462450	-0.31426212	15	UPS	CAP
837	5.3	4.7	0.59029791	-0.68685060	0.42401017	30		VUL
838	3.8	4.0	0.25812955	-0.30634354	-0.91625475		BET	PAV
839	3.8	3.5	0.31191384	-0.35791235	0.88011846	3	ETA	CEP
840	4.6	4.2	0.56391613	-0.65103250	0.50808983	52		CYG
841	4.5	4.6	0.58979543	-0.68368115	-0.42979231	16	PSI	CAP
842	4.7	4.3	0.63189215	-0.72476902	0.27463098	12	GAM2	DEL
843	4.1	4.4	0.64986523	-0.74121450	-0.16815542	2	EPS	AQR
844	4.6	3.7	0.65694143	-0.74844775	-0.09085110	3		AQR
845	5.1	4.3	0.45696741	-0.51626655	-0.72432702		ZET	IND
846	4.3	3.4	0.59805048	-0.65932417	-0.45566134	18	OMG	CAP
847	4.0	3.4	0.35307623	-0.38222046	-0.85395825		BET	IND
848	4.2	4.6	0.52283142	-0.54469228	0.65571154	58	NU	CYG
849	5.1	4.8	0.59204005	-0.60126459	-0.53662787		GAM	MIC
850	3.9	3.0	0.51786499	-0.50399897	0.69123143	62	XI	CYG
851	4.4	4.7	0.68381346	-0.66531137	-0.29959962	23	THT	CAP
852	4.8	3.9	0.48826637	-0.46791451	0.73664914	63		CYG
853	4.7	3.8	0.65139850	-0.62792582	-0.42589806	24		CAP
854	4.9	4.6	0.71319617	-0.67163019	-0.20065919	13	NU	AQR
855	3.6	3.2	0.64042260	-0.58271210	0.50030540	64	ZET	CYG
856	5.2	4.4	0.24683969	-0.22878438	-0.94166229		OMI	PAV

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

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No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component		Skymap Name	
857	4.1	4.2	0.58874913	-0.52638285	0.61342934	65	TAU	CYG
858	5.5	4.5	0.71929126	-0.64208725	-0.26522452	29		CAP
859	4.3	4.3	0.74411895	-0.66224825	0.08783075	8	ALF	EQU
860	4.5	4.0	0.72111414	-0.60627562	0.33529728	1		PEG
861	4.7	4.4	0.73094829	-0.61624621	-0.29318118	32	IOT	CAP
862	4.6	4.7	0.31938462	-0.26246175	-0.91055329		GAM	PAV
863	5.6	4.7	0.26962751	-0.21770264	-0.93803335		SX	PAV
864	3.3	3.1	0.78646111	-0.60933896	-0.10092053	22	BET	AQR
865	4.4	4.1	0.56124913	-0.42256887	0.71164244	73	RHO	CYG
866	4.1	4.2	0.77738302	-0.55791527	-0.29052743	40	GAM	CAP
867	5.3	4.4	0.59536847	-0.42379765	0.68259207	75		CYG
868	4.2	3.8	0.17348974	-0.12603224	-0.97673803		NU	OCT
869	4.9	4.5	0.26655667	-0.18454325	0.94598696	11		CEP
870	5.5	4.6	0.81484074	-0.57184711	0.09500237	7		PEG
871	3.8	2.2	0.42995629	-0.29557035	0.85309774		MU	CEP
872	4.7	4.2	0.78794733	-0.54082104	0.29436645	9		PEG
873	4.5	4.6	0.74522006	-0.51035652	0.42916580	10	KAP	PEG
874	4.7	4.7	0.40332580	-0.27203761	0.87368406	10	NU	CEP
875	5.1	4.7	0.47126028	-0.27210202	-0.83897213		EPS	IND
876	5.1	4.4	0.86976486	-0.48627499	0.08393880	22	NU	PEG
877	3.4	3.0	0.87291360	-0.48777567	-0.00983578	34	ALF	AQR
878	5.5	4.7	0.62092859	-0.34417417	0.70426687			
879	4.8	4.1	0.67062186	-0.37515892	-0.63993914		LAM	GRU
880	4.2	4.2	0.79336093	-0.43660613	0.42420929	24	IOT	PEG
881	5.3	4.5	0.72524129	-0.39577872	-0.56336868		UPS	PSA
882	4.7	4.7	0.74066264	-0.39480582	0.54364254	29	PI	PEG
883	3.8	4.2	0.87756106	-0.46811895	0.10368813	26	THT	PEG
884	3.6	2.7	0.46969458	-0.24681289	0.84762633	21	ZET	CEP
885	4.8	4.1	0.68744199	-0.35128807	0.63562583			
886	4.6	4.7	0.48928794	-0.24598992	0.83671158	23	EPS	CEP
887	4.4	3.6	0.70967600	-0.35465598	0.60875209	1		LAC
888	4.6	4.2	0.88654230	-0.44103641	-0.13974847	43	THT	AQR
889	3.2	2.5	0.44158416	-0.21755549	-0.87044416		ALF	TUC
890	5.4	4.6	0.14494414	-0.07182460	-0.98682948		EPS	OCT
891	4.1	4.5	0.90423565	-0.42607405	-0.02861448	48	GAM	AQR
892	4.8	4.4	0.56007642	-0.25646337	0.78774421	3	BET	LAC

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
893	5.2	4.8	0.91314410	-0.40021966	0.07740850	35		PEG
894	4.0	4.1	0.91750979	-0.39768395	-0.00482198	55	ZET1	AQR
895	4.5	3.6	0.62182486	-0.26573781	0.73669346	5		LAC
896	4.1	4.4	0.59272489	-0.24782547	0.76632874	7	ALF	LAC
897	5.0	4.1	0.43003483	-0.17890881	-0.88490772		NU	TUC
898	4.3	4.7	0.92845191	-0.37139447	-0.00657253	62	ETA	AQR
899	5.5	4.6	0.51536937	-0.19612027	0.83422494			
900	4.8	4.1	0.67396943	-0.25090349	0.69484721	11		LAC
901	3.7	4.1	0.92222939	-0.34036146	0.18343126	42	ZET	PEG
902	3.4	3.1	0.81497787	-0.29399120	0.49937986	44	ETA	PEG
903	5.0	4.3	0.88925737	-0.31972905	-0.32710038	66		AQR
904	5.2	4.7	0.55771102	-0.19591721	-0.80658221		ETA	GRU
905	4.5	4.7	0.13677515	-0.04907541	-0.98938575		BET	OCT
906	4.3	3.9	0.86855600	-0.29854645	0.39557615	47	LAM	PEG
907	4.6	4.6	0.92545725	-0.31772583	0.20634722	46	XI	PEG
908	3.8	4.1	0.58890850	-0.19831687	-0.78349039		EPS	GRU
909	4.2	3.4	0.92198364	-0.30427302	-0.23950803	71	TAU	AQR
910	3.9	3.5	0.38774601	-0.12620611	0.91308545	32	IOT	CEP
911	3.9	3.6	0.86604848	-0.28308527	0.41209557	48	MU	PEG
912	5.2	4.3	0.69676307	-0.22041913	0.68259551	15	LAC	
913	3.9	3.0	0.94479805	-0.29786458	-0.13650395	73	LAM	AQR
914	3.6	3.9	0.91884966	-0.28094086	-0.27710563	76	DLT	AQR
915	4.6	4.3	0.80503544	-0.24158333	-0.54180756	23	DLT	PSA
916	5.1	4.0	0.62332163	-0.18394299	0.76002310			
917	5.3	4.6	0.52935621	-0.14688031	0.83558852			
918	4.5	4.2	0.57957306	-0.16091496	-0.79887511		ZET	GRU
919	3.9	4.3	0.71685658	-0.19336880	0.66986950	1	OMI	AND
920	5.0	4.6	0.62508442	-0.16181462	0.76360035	3		AND
921	4.9	4.6	0.88631801	-0.22097376	-0.40695329	86		AQR
922	4.7	4.8	0.70047430	-0.17443438	-0.69203208		THT	GRU
923	5.1	4.4	0.87860484	-0.21632769	0.42574154	56		PEG
924	4.8	4.6	0.24983238	-0.05963035	0.96645124	33	PI	CEP
925	4.0	3.5	0.90580047	-0.21418119	-0.36558436	88		AQR
926	4.3	3.9	0.68241177	-0.15896562	-0.71347327		IOT	GRU
927	4.5	3.6	0.97195971	-0.20777253	-0.11011311	90	PHI	AQR
928	4.6	4.2	0.96626585	-0.19968872	-0.16264907			

Table 5.2-2.   Orbiter Uplinkable Stars (2005)

No.	IDT Mag.	SSST Mag.	X Component	Y Component	Z Component	Skymap Name		
						Table 5.2-2. Orbiter Uplinkable Stars (2005)		
929	5.3	4.4	0.97060856	-0.19634539	-0.13916720	92	CHI	AQR
930	4.1	3.8	0.97910657	-0.19645505	0.05249512	6	GAM	PSC
931	4.4	4.5	0.51211747	-0.10297857	-0.85271983		GAM	TUC
932	5.0	4.1	0.64701496	-0.12746350	0.75174776	8		AND
933	4.8	4.3	0.82516096	-0.15991071	-0.54179143		GAM	SCL
934	5.4	4.8	0.96355380	-0.16750286	0.20858298	66		PEG
935	5.2	4.2	0.46311483	-0.07623895	0.88301318	4		CAS
936	4.8	4.8	0.90759341	-0.14824649	0.39280679	68	UPS	PEG
937	4.7	4.2	0.98303587	-0.14945107	0.10632429	10	THT	PSC
938	5.0	4.6	0.96601908	-0.14167097	0.21618620	70		PEG
939	5.5	4.6	0.91830169	-0.11698262	0.37820242	71		PEG
940	5.3	4.6	0.85009683	-0.10637317	0.51577139	72		PEG
941	4.2	3.8	0.68831057	-0.07500978	0.72152761	16	LAM	AND
942	3.6	3.2	0.21782287	-0.02168690	0.97574734	35	GAM	CEP
943	4.5	4.6	0.99080858	-0.09802708	0.09321506	17	IOT	PSC
944	5.6	4.7	0.94541021	-0.08695519	-0.31406739	103		AQR
945	5.2	4.3	0.98119939	-0.08228327	0.17457726	77		PEG
946	5.2	4.8	0.52318555	-0.03519125	0.85149190	5	TAU	CAS
947	5.3	4.4	0.94550041	-0.04152875	0.32296182	81	PHI	PEG
948	4.9	4.0	0.90711636	-0.01898612	0.42045146	84	PSI	PEG
949	4.4	4.5	0.99330332	-0.01408422	0.11467410	28	OMG	PSC