

Interstellar Mission Profile for SGC Navigator - Report - Printable

ver 4.3

Start: GJ 581 (Wolf 562) (BD-07 4003) in Librae [X -15.555] [Y 13.120] [Z -2.760]	Dest: HD 37124 in Tauri [X 96.087] [Y -9.655] [Z 36.566]
Mission Start Date: Tuesday, July 1, 2025	
Mission Type: Rendezvous	Earth date arrival: Friday, February 18, 2146
Ship Type: Dark Energy Gravity Drive	Ship date arrival: Tuesday, October 21, 2025
Type 2: Rendezvous with a coasting leg (Top speed is reached before mid-point)	

Start Position:				Start Date:	1-July-2025		
Star System	GJ 581 (Wolf 562) (BD-07 4003)			Earth Polar			
Primary Star:				RA hours:	inactive		
Type:	M2.5 V	Planets:	1e, 2g, 2? & debris	RA min:	inactive		
Binary:	Red dwarf 3 planets 2? Debris			RA sec:	inactive		
Type:	0			dec. degrees	inactive		
Rank from Earth:	127	Abs Mag:	11.5740757	dec. minutes	inactive		
				dec. seconds	inactive		
				Galactic SGC			
Stats		Distance l/y		Sector	X	Y	Z
	Earth to Start Position:	20.53580975		Tau	-15.5552379	13.12015642	-2.75962873

Destination				Arrival Date (Earth time):	18-February-2146			
Star System	HD 37124			Earth Polar				
Primary Star:				RA hours:	inactive			
Type:	G4V	Planets	3	RA min:	inactive			
Binary:	B C			RA sec:	inactive			
Type:	0			dec. degrees	inactive			
Rank from Earth	7953	Abs Mag:	5.07	dec. minutes	inactive			
				dec. seconds	inactive			
Course Headings SGC decimal				Galactic SGC				
RA: (0 <360)	348.4696898	dec: (0-180)	70.95840934	Sector	X	Y	Z	
				Destination: Apparent position Start of Mission	Alpha ++	96.08354062	-9.6575291	36.54917366
				Destination: Real position Start of Mission	Alpha ++	96.08431901	-9.65705176	36.55278426
				Destination: Real position End of Mission	Alpha ++	96.08722352	-9.65527061	36.56625691

Shifts in distances of Destination	Distance l/y	X	Y	Z
Change in Apparent vs. Real position at Start of Mission	0.003724265	-0.00077839	-0.00047734	-0.0036106
Change in Real positions, Start to End of Mission	0.013896801	-0.00290451	-0.00178115	-0.01347265

Stats	Distance l/y				
	Start to Destination:	120.537482			
	Earth to Destination:	103.2528776	Annual shifts of Destination		
	Accuracy improvement after mission profile iterations:	0.068455105	XAS	YAS	ZAS

Notes	3.05297E-05			1.87219E-05	0.000141613
Sub-light velocities are within normal space physics. Warning: Acceleration G-Force is at 10.1 which is greater than your safe setting of 1.2. Increase Time to top speed (days) to make it acceptable to your crew. Mid-Point Mission Speed is 0.9999 c. Annual Shifts are within acceptable values.	Proper Motion of Destination (if available)				
	Proper Motion				inactive
	Angle of Proper Motion				inactive
	Radial Motion km/sec				inactive

Mission Parameters:	
Distance traveled by Starship l/y:	120.537482
Stellar positions adjusted to start date from Epoch 2000:	Auto Adjusted
Number of years Auto Adjusted to start date:	25.5
Mission Start Date:	01-Jul-2025
User input top speed (1=c):	0.999999
Actual top speed matches User input - No adjustment needed.	0.999999
Days until top speed:	35
G force experienced in acceleration and deceleration legs:	10.1

G Force

Earth G High G Extreme G

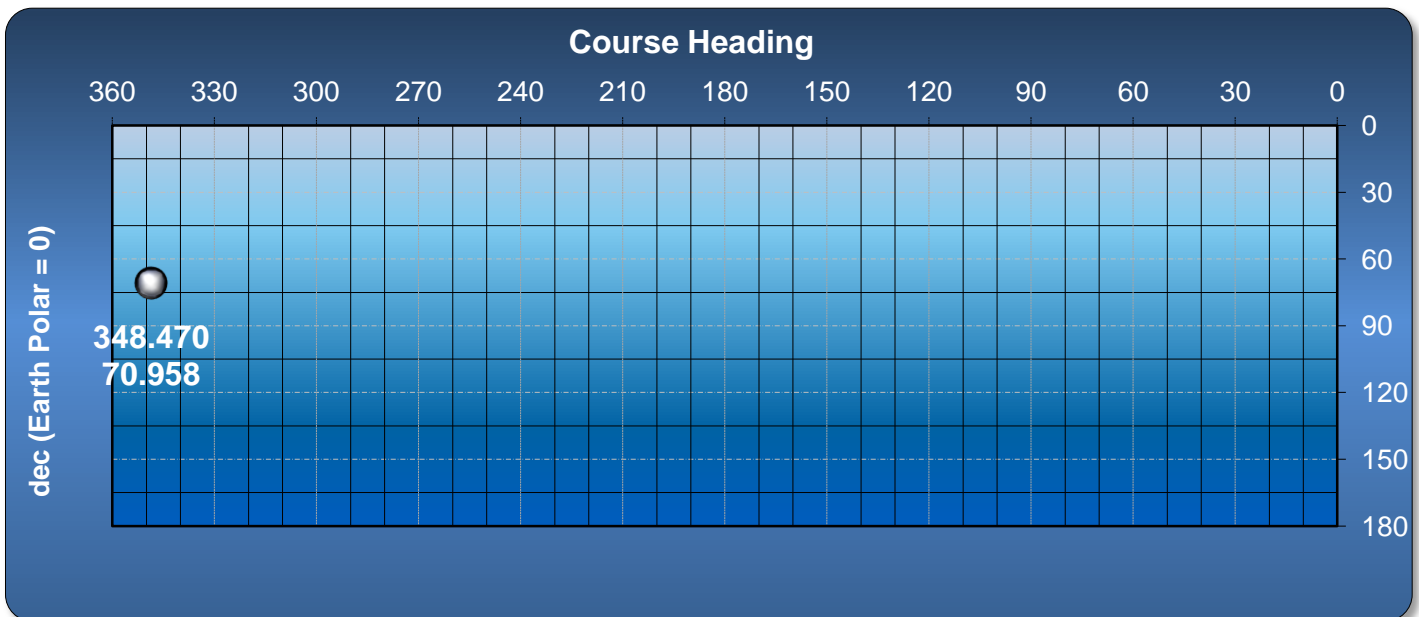
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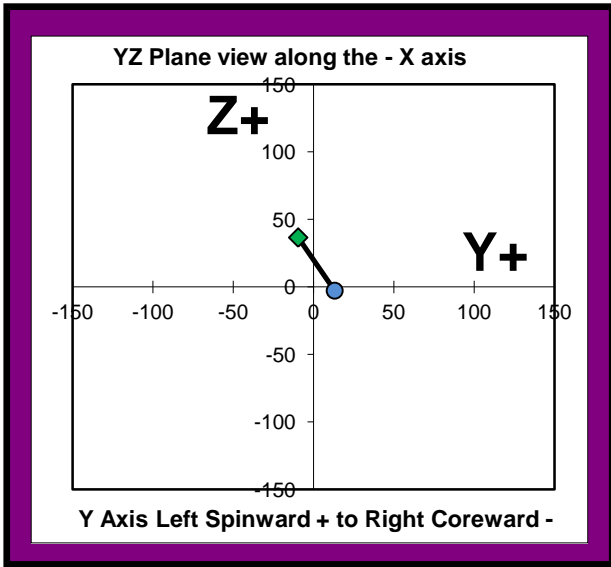
'New Mission Start Date'
ON: Stellar movement now based on new mission start date. Valid Dates 01/01/1900 to 12/31/9999

Warning: Acceleration G-Force is at 10.1 which is greater than your safe setting of 1.2. Increase Time to top speed (days) to make it acceptable to your crew.

Destination Notes	Destination motion:	Total change /c	k/sec	1/c
	Towards Start position:	7.67866E-05	23.02004483	
	Destination actual speed		43.79103507	0.000146071

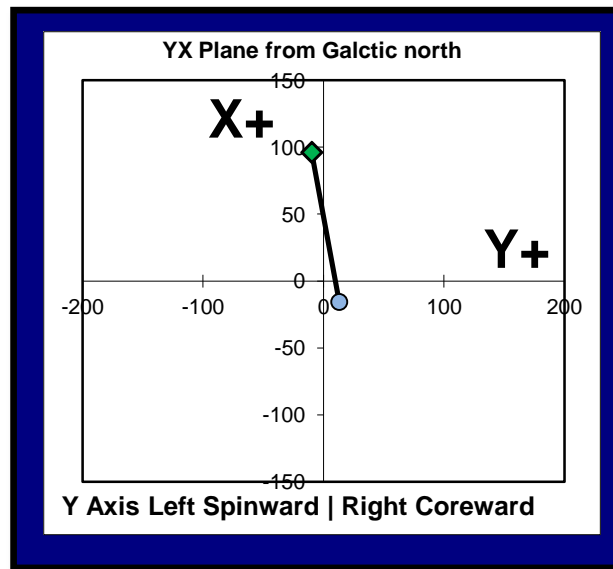
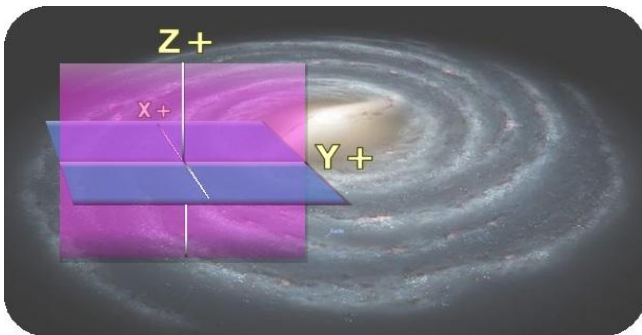
Mission duration								
	Arrival date	Years	Days	Hours	Min	Years spent coasting:	Years to retroburn	
Earth time	18-Feb-2146	120	231	9	37	120.44	120.54	
Ship time	21-Oct-2025	0	112	9	28	0.17	0.17	
Onboard clock runs for the coasting leg of the mission (100% = no slowing):						0.14%		
Ship time mission duration slows, compared to Earth Time:						120.3 years slower		





Course Heading	
dec 0 North to 180 South	RA degrees
	348.4696898
70.95840934	39.32588564
X & Y to RA degrees and declination Z	

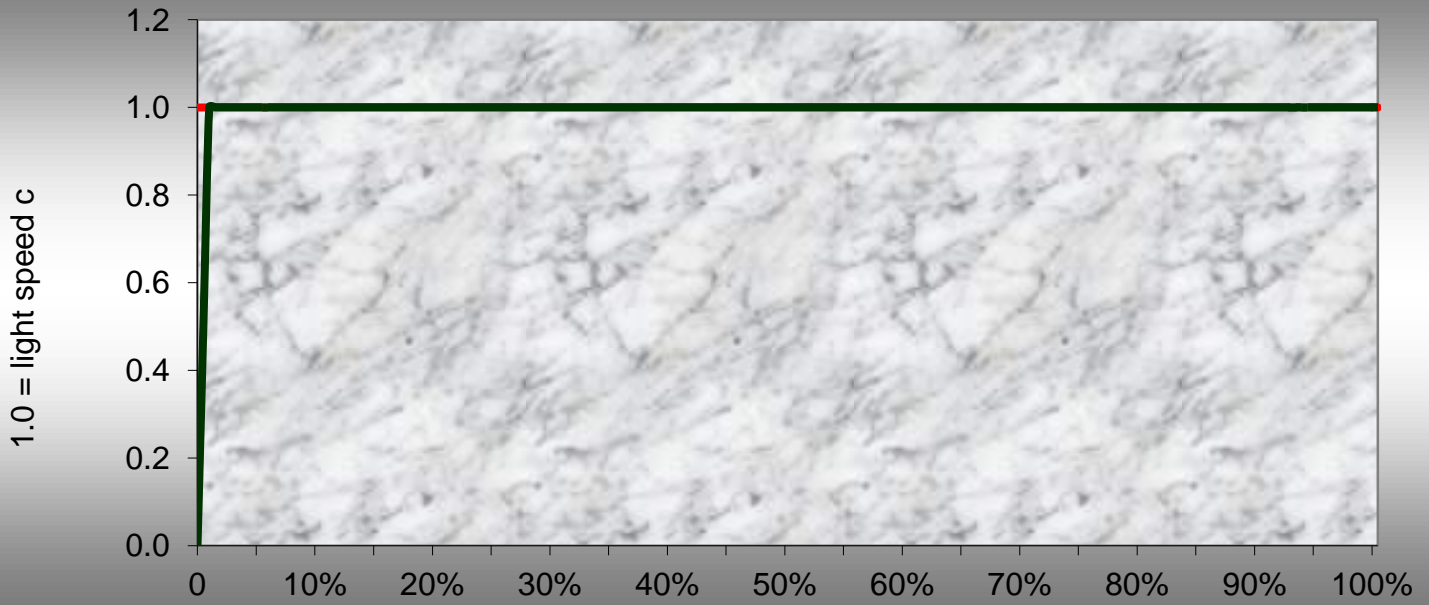
Circle = Start Position = Tau Sector
 Diamond = Destination = Alpha ++ Sector



	Twin Paradox Earth Time	Dilation at Top Speed 0.999999 Ship Time
	1 hour	9.18 seconds
	1 day	3 minutes,
	1 month	
	1 year	0 days, 22 hours, 55 minutes,
1 Way & Round Trip		
1 Way	120 years, 231 days, 8 hours,	112 days, 9 hours,
Round Trip	241 years, 97 days, 17 hours,	179 days, 18 hours,

Both twins start at 20 years old. After a round trip, Earthbound Alice will be 261. Space traveling, Celeste, will be still age 20... That's a super speedy Starship! What do one of these ships cost?

Mission Profile

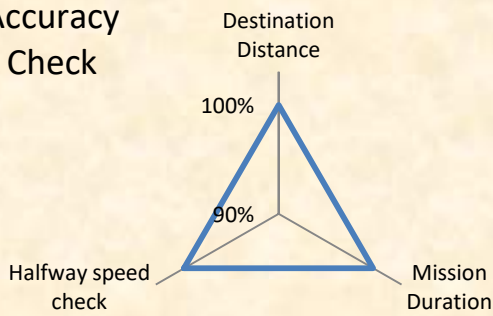


Top speed = 0.999999 c

Start: GJ 581 (Wolf 562) (BD-07 4003) in Librae [X -15.555] [Y 13.120] [Z -2.760]

Dest: HD 37124 in Tauri [X 96.087] [Y -9.655] [Z 36.566]

Accuracy Check



Accel. leg travel l/y	0.047912341
Accel. leg % mission	0.0397%
Acceleration slope	84.52635211
Years to reach first l/y	1.047913389
Coasting leg travel l/y	120.4416573
Coasting leg % mission	99.9205%
Average mission speed /c	0.999204654
Earth date arrival	Friday, February 18, 2146
Ship date arrival	Tuesday, October 21, 2025
Destination Distance	99.9603%
Mission Duration	100.0000%
Halfway speed check	100.0000%

Sensor Range Report
Range 8 ly

				Distance at mission start
Star	Type	Star #2 or info	Alerts	
1 GJ 581 (Wolf 562) (BD-07 4003)	M2.5 V	Red dwarf 3 planets 2? Debris	Start	0.00
2 GJ 555 (BD-11 3759)	M3.5Ve			4.31
3 2MASSW J1507476-162738	L5V	Brown dwarf		4.88
4 GJ 570D	T8	Brown dwarf		5.23
5 GJ 570B (HD 131976)	M1.5V			5.23
6 GJ 570A (HD 131977)	K4V	By Draconis variable, (Red dwarfs) B,C,D		5.27
7 WISEP J154151.66-225025.2 (WISE 1541-2250)	Y0.5	Brown dwarf		5.78
8 Wolf 1061 BD-12.4523	M3.5 V	BY Draconis variable		8.42
9 CD-25 10553A	M1.5V	Red dwarf, B		9.29
10 Lalande 25372 / Wolf 498 (HD 119850)	M1.7V	Flare star, PM		11.01
11 FL Vir (Wolf 424 A)	M5.3 V	(flare star) B (1ly in 9700AD)		14.43
12 Ross 128 (FI Vir)	M4.5 V	Flare star		16.54
13 CD-25 10553B	M1.5V	PM		8.08
14 CN Leo Wolf 359	M6.5	Red dwarf		18.93
15 Lalande 21185 (BD+36°2147) (HD 95735)	M2.1 V	B flare star?		19.94
16 AD (BD + 20 2465) GJ 388	M4.5 eV	Red dwarf		23.52
17 WISE 0855-0714	Y	Rogue Planet or sub Brown dwarf. Temp. -48 to -13 Celsius		22.38
18 GJ 3622 (LHS 292) (Luyten Palomar 731-58)	M 6.5 V	Red dwarf		20.02
19 WX UMa (GJ 412)	M6	flare star, B		22.87
20 Gliese 412 (BD+44 2051 A) (LHS 38)	M2	B Halo population - Red dwarf		22.87
21 DX Cnc (G 51-15)	M6.6 V	Flare star		26.03
22 Groombridge 1618 (GJ 380)	K6VeFe-1	Flare star		25.41
23 alpha Cmi Procyon	F5 IV-V	B		27.48
24 EI - G Sep-38 Cnc (GJ 1116) (LHS 2076)	M7V	B (LP426-40)		29.35
25 Luyten BD+5 1668	M3.7V	Red dwarf		28.59
26 2MASS J09373487+2931409	T6.0	Brown dwarf		28.59
27 LP 368-128	M6 V	PM		31.01
28 Wolf 294 (AC + 33 25644) (HD 265866) (GJ 251)	M4	Red dwarf, PM		34.24

	First in Sensor Range		Closest Approach to Star			Last in Sensor Range		Ship time Within Range
	Ship Time	Earth Time	Distance	Earth Time	Ship Time	Earth Time	Ship Time	
1	0.00	0.00	0.00	0.00	0.00	7.84	0.02	0.02
2	0.00	0.00	3.85	1.81	0.00	8.44	0.02	0.02
3	0.00	0.00	4.88	0.00	0.00	3.62	0.01	0.01
4	0.00	0.00	5.02	1.81	0.00	7.24	0.02	0.02
5	0.00	0.00	5.04	1.21	0.00	7.24	0.02	0.02
6	0.00	0.00	5.00	1.81	0.00	7.84	0.02	0.02
7	0.00	0.00	5.77	0.60	0.00	6.03	0.02	0.02
8	0.60	0.00	7.37	4.22	0.01	7.24	0.02	0.02
9	1.81	0.00	6.24	6.63	0.02	11.46	0.03	0.02
10	3.62	0.01	5.88	9.65	0.02	14.48	0.04	0.03
11	6.63	0.02	3.57	13.87	0.04	21.11	0.05	0.04
12	8.44	0.02	2.79	16.29	0.04	23.52	0.06	0.04
13	10.25	0.03	6.19	5.43	0.01	10.25	0.03	0.00
14	10.86	0.03	3.24	18.70	0.05	25.94	0.07	0.04
15	12.06	0.03	3.30	19.90	0.05	26.54	0.07	0.04
16	16.29	0.04	5.11	22.92	0.06	28.95	0.07	0.03
17	16.89	0.04	6.63	21.71	0.06	25.33	0.06	0.02
18	17.49	0.04	7.97	18.70	0.05	18.70	0.05	0.00
19	18.10	0.05	7.12	21.71	0.06	25.33	0.06	0.02
20	18.10	0.05	7.12	21.71	0.06	25.33	0.06	0.02
21	18.10	0.05	1.95	25.94	0.07	33.17	0.08	0.04
22	20.51	0.05	7.28	24.13	0.06	27.14	0.07	0.02
23	21.11	0.05	6.03	27.14	0.07	31.97	0.08	0.03
24	22.32	0.06	4.69	28.95	0.07	34.98	0.09	0.03
25	22.92	0.06	6.26	27.75	0.07	32.57	0.08	0.02
26	24.13	0.06	7.16	27.75	0.07	30.76	0.08	0.02
27	25.33	0.06	6.40	30.16	0.08	34.98	0.09	0.02
28	26.54	0.07	3.70	34.38	0.09	41.02	0.10	0.04

Sensor Range Report
Range 8 ly

				Distance at mission start
Star	Type	Star #2 or info	Alerts	
29	Ross 986:00:00 AC+38 23616	M4.5	B	34.68
30	A Aur (Gl 268 - QY)	M5Ve	B	34.91
31	YZ Cmi	M4	By Draconis variable	33.57
32	GJ 299 Ross 619	M4 V	Red dwarf	34.69
33	GJ 1093	M5.0Ve	PM	40.80
34	ISE 0607+2429	L8	Brown dwarf discovered in 2012	42.70
35	Gliese 232 (Ross 64)	M4.5	PM	44.29
36	2MASS J0727182+171001	T7.0	Brown dwarf	43.42
37	chi 54 Ori	G0V	B	46.52
38	GJ 239 (HD 260655)	M0Ve		48.60
39	GJ 1083 (V* V780 Tau)	M7V		51.19
40	GJ 233 (HD 45088)	K2Ve	By Draconis variable	63.97
41	LHS 6097	M5.0V	PM	Warning - Mission flies within 1 light year of star 70.50
42	V* V1386 Ori	K0V	BY Draconis variable	68.14
43	UCAC4 576-020498	M3.0Ve	PM	73.11
44	37 Gem	G0 V		72.68
45	LSPM J0557+1708E		0 PM	83.44
46	G 100-49	M4	PM	83.54
47	2MASS J05500772+1610556		0 PM	83.52
48	G 100-19		0 PM	87.12
49	71 Ori	F5.5IV-V	PM	84.02
50	2MASS J05251524+2102394		0 PM	86.53
51	G 100-38	M3.5	PM	Warning - Mission flies within 1 light year of star 91.03
52	UCAC4 562-024010		0 PM	91.00
53	LSPM J0610+2234	M6V		90.19
54	GJ 9188	M0.0Ve	PM	90.52
55	G 100-46	M4V	PM	111.69
56	UCAC3 221-30478	M2.5V	Star	111.94

	First in Sensor Range		Closest Approach to Star			Last in Sensor Range		Ship time Within Range
	Ship Time	Earth Time	Distance	Earth Time	Ship Time	Earth Time	Ship Time	
29	27.75	0.07	4.63	34.38	0.09	40.41	0.10	0.03
30	27.75	0.07	4.61	34.38	0.09	41.02	0.10	0.03
31	29.56	0.08	7.43	32.57	0.08	35.59	0.09	0.02
32	31.36	0.08	7.71	33.78	0.09	35.59	0.09	0.01
33	32.57	0.08	2.43	41.02	0.10	48.25	0.12	0.04
34	35.59	0.09	4.42	42.22	0.11	48.86	0.12	0.03
35	36.19	0.09	2.16	44.03	0.11	51.87	0.13	0.04
36	38.00	0.10	6.38	42.82	0.11	47.65	0.12	0.02
37	40.41	0.10	5.57	46.44	0.12	51.87	0.13	0.03
38	41.02	0.10	3.65	48.25	0.12	55.49	0.14	0.04
39	45.84	0.12	6.25	50.67	0.13	55.49	0.14	0.02
40	57.30	0.15	5.16	63.94	0.16	69.36	0.18	0.03
41	62.13	0.16	0.74	70.57	0.18	78.41	0.20	0.04
42	62.73	0.16	6.14	68.16	0.17	72.98	0.19	0.03
43	65.75	0.17	3.18	72.98	0.19	80.22	0.20	0.04
44	66.95	0.17	5.86	72.38	0.18	77.81	0.20	0.03
45	77.21	0.20	5.53	83.24	0.21	88.67	0.23	0.03
46	77.21	0.20	5.54	83.24	0.21	88.67	0.23	0.03
47	77.81	0.20	6.27	83.24	0.21	88.06	0.22	0.03
48	80.22	0.20	4.27	86.86	0.22	93.49	0.24	0.03
49	80.82	0.21	7.52	83.84	0.21	86.25	0.22	0.01
50	81.43	0.21	6.62	86.25	0.22	90.48	0.23	0.02
51	82.63	0.21	0.64	91.08	0.23	98.92	0.25	0.04
52	85.05	0.22	5.70	91.08	0.23	95.90	0.24	0.03
53	86.25	0.22	7.26	89.87	0.23	92.89	0.24	0.02
54	88.67	0.23	7.85	90.48	0.23	91.68	0.23	0.01
55	106.16	0.27	5.90	111.59	0.28	116.41	0.30	0.03
56	106.76	0.27	6.41	111.59	0.28	116.41	0.30	0.02

Sensor Range Report
Range 8 ly

				Distance at mission start
Star	Type	Star #2 or info	Alerts	
57 HD 37124	G4V	has three planets (b, c & d)	Destination	120.53
58 LP 914-54 (LHS 3003)	M7.0Ve	Flare		8.09
59 Wolf 629 GL 644B	M3.5V	A,C		8.57
60 HD 152751 GJ 644	M3.5Ve	B,C		8.58
61 GJ 644 C	M7V	A,B		8.59
62 ksi Boö (Nekkar) Meres	G8V			10.23
63 37 ksi Boö B	K4 Ve			10.27
64 NLTT 40406	M5.5V	PM		10.52
65 36 Oph	K1	B C		11.53
66 GJ 588 (CD-40 9712)	M3 V	PM Red dwarf		11.59
67 GJ 595	M3	SB		11.70
68 SDSS J150319.64+252522.4	T5.5	Brown dwarf		11.95
69 GJ 1207	M3.5V	Flare star		12.80
70 Gliese 518 (Wolf 489)	DZ9	White dwarf		13.05
71 Gliese 514 (BD+11 2576)	M1V			13.42
72 GL 673 (HD 157881)	K7V			13.73
73 70 Oph	K0 V	B,BY Draconis variable		13.99
74 2MASS J15404341-5101357	M7V			14.15
75 Gliese 667A (HD 156384)	K4	B, C with 5 planets		14.56
76 61 Virginis (61 Vir) (HD 115617) (HIP 64924) (LHS 349)	G5V	nearby star, has three planets (b, c & d) + dust		14.72
77 BD-17 3725 Crv	A2	Border area with Virginis		14.73
78 12 Oph	K1V	By Draconis variable		14.77
79 OGLE BLG-LPV-225466		0 Mira-type variable star		14.81
80 Gliese 618A (CD-37 10765A)	M3V	PM		14.91
81 2MASS J14162408+1348263	L7	Brown dwarf		15.06
82 Gliese 618B (CD-37 10765B)	M5	PM		15.22
83 GJ 674 (CD -46 11540)	M3 V			15.27
84 GJ 682 (CD-44 11909)	M3.5	Red dwarf PM		15.30

	First in Sensor Range		Closest Approach to Star			Last in Sensor Range		Ship time Within Range
	Ship Time	Earth Time	Distance	Earth Time	Ship Time	Earth Time	Ship Time	
57	112.19	0.29	0.06	120.63	0.31	120.63	0.31	0.02
58	Never	Never	Out of range			Never	Never	0.00
59	Never	Never	Out of range			Never	Never	0.00
60	Never	Never	Out of range			Never	Never	0.00
61	Never	Never	Out of range			Never	Never	0.00
62	Never	Never	Out of range			Never	Never	0.00
63	Never	Never	Out of range			Never	Never	0.00
64	Never	Never	Out of range			Never	Never	0.00
65	Never	Never	Out of range			Never	Never	0.00
66	Never	Never	Out of range			Never	Never	0.00
67	Never	Never	Out of range			Never	Never	0.00
68	Never	Never	Out of range			Never	Never	0.00
69	Never	Never	Out of range			Never	Never	0.00
70	Never	Never	Out of range			Never	Never	0.00
71	Never	Never	Out of range			Never	Never	0.00
72	Never	Never	Out of range			Never	Never	0.00
73	Never	Never	Out of range			Never	Never	0.00
74	Never	Never	Out of range			Never	Never	0.00
75	Never	Never	Out of range			Never	Never	0.00
76	Never	Never	Out of range			Never	Never	0.00
77	Never	Never	Out of range			Never	Never	0.00
78	Never	Never	Out of range			Never	Never	0.00
79	Never	Never	Out of range			Never	Never	0.00
80	Never	Never	Out of range			Never	Never	0.00
81	Never	Never	Out of range			Never	Never	0.00
82	Never	Never	Out of range			Never	Never	0.00
83	Never	Never	Out of range			Never	Never	0.00
84	Never	Never	Out of range			Never	Never	0.00