

SATELLITE EARTH STATION
FREQUENCY COORDINATION DATA
03/01/2002

Company	SKYTOWER	
Earth Station Name, State		SIMI_UAV_CC, CA
Call Sign		HELIOS
Latitude (DMS) (NAD83)		34 16 25.3 N
Longitude (DMS) (NAD83)		118 42 4.4 W
Ground Elevation AMSL (Ft/m)		980.00 / 298.69
Antenna Centerline AGL (Ft/m)		10.01 / 3.05
Transmit Antenna Type:	FCC32	FCC Reference
		32-25LOG(THETA)
3.0 GHz Gain (dBi) / Diameter (m)		0.5 / 1.0
3 dB / 15 dB Half Beamwidth		20.00 / 20.00
Operating Mode		TRANSMIT ONLY
Modulation		DIGITAL
Emission / Transmit Band (MHz)		05M0G8W / 2110.0000 -
2200.0000		
Max. Available RF Power (dBW)/4 kHz)		-30.50
(dBW)/MHz)		-6.50
Max. EIRP (dBW)/4 kHz)		-30.00
(dBW)/MHz)		-6.00
(dBW)		10.00
Max permissible Interference Power		
3.0 GHz, 20% (dBW/4 kHz)		-154.0
3.0 GHz, 0.0025% (dBW/4 kHz)		-131.0
Range of Satellite Arc (Geostationary)		
Degrees Longitude		90.0 W / 90.0 W
Azimuth Range (Min/Max)		135.8 / 135.8
Corresponding Elevation Angles		39.8 / 39.8
Radio Climate		A
Rain Zone		4
Max Great Circle Coordination Distance (Mi/Km)		
3.0 GHz		76.7 / 123.4
Precipitation Scatter Contour Radius (Mi/Km)		
3.0 GHz		62.1 / 100.0

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 Antenna Model FCC Reference 32-25LOG(THETA)
 Objectives: Transmit -154.0 (dBW /4 kHz) TX Power -30.5 (dBW/4 kHz)

Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	3.0 GHz	
			Antenna Gain (dBi)	Distance (Km)
0	2.83	124.96	0.00	100.0
5	2.61	121.38	0.00	100.0
10	2.48	117.74	0.00	100.0
15	3.03	114.23	0.00	100.0
20	2.88	110.37	0.00	100.0
25	3.49	106.64	0.00	100.0
30	2.65	102.54	0.00	100.0
35	3.10	98.65	0.00	100.0
40	4.15	94.72	0.00	100.0
45	4.04	90.66	0.00	100.0
50	4.12	86.60	0.00	100.0
55	4.46	82.51	0.00	100.0
60	4.82	78.41	0.00	100.0
65	4.89	74.36	0.00	100.0
70	4.74	70.40	0.00	100.0
75	3.74	66.77	0.00	100.0
80	3.91	62.91	0.00	100.0
85	3.93	59.19	0.00	100.0
90	3.07	56.03	0.00	100.0
95	1.94	53.29	0.00	100.0
100	1.82	50.25	0.00	100.0
105	2.90	46.61	0.00	100.0
110	3.67	43.34	0.00	100.0
115	3.27	41.30	0.00	100.0
120	3.79	38.88	0.00	100.0
125	4.46	36.73	0.00	100.0
130	4.46	35.74	0.00	100.0
135	3.82	35.97	0.00	100.0
140	4.19	35.80	0.00	100.0
145	4.58	36.23	0.00	100.0
150	4.95	37.27	0.00	100.0
155	5.76	38.49	0.00	100.0
160	5.89	40.78	0.00	100.0
165	5.47	43.85	0.00	100.0
170	7.02	45.92	0.00	100.0
175	6.05	49.87	0.00	100.0
180	5.71	53.56	0.00	100.0

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Azimuth (Deg)	Horizon Elevation Angle	Antenna Disc. Angle	3.0 GHz	
			Antenna Gain (dBi)	(Km)
Distance	(Deg)	(Deg)		
185	5.61	57.27	0.00	100.0
190	5.57	61.06	0.00	100.0
195	5.79	64.87	0.00	100.0
200	5.75	68.85	0.00	100.0
205	5.22	72.99	0.00	100.0
210	2.92	77.41	0.00	100.0
215	3.12	81.35	0.00	100.0
220	2.81	85.36	0.00	100.0
225	2.64	89.36	0.00	100.0
230	1.40	93.28	0.00	100.0
235	0.87	97.14	0.00	111.6
240	0.61	100.96	0.00	123.4
245	0.61	104.77	0.00	123.1
250	0.62	108.53	0.00	122.8
255	0.63	112.22	0.00	122.5
260	0.63	115.83	0.00	122.4
265	0.63	119.34	0.00	122.3
270	0.63	122.72	0.00	122.2
275	0.63	125.94	0.00	122.3
280	0.63	128.97	0.00	122.4
285	0.63	131.76	0.00	122.5
290	0.71	134.34	0.00	118.6
295	0.73	136.55	0.00	117.6
300	1.00	138.60	0.00	105.6
305	1.42	140.37	0.00	100.0
310	1.75	141.59	0.00	100.0
315	2.32	142.53	0.00	100.0
320	3.02	143.04	0.00	100.0
325	2.71	141.97	0.00	100.0
330	2.77	140.73	0.00	100.0
335	2.36	138.59	0.00	100.0
340	1.93	136.08	0.00	100.0
345	1.94	133.59	0.00	100.0
350	2.49	131.15	0.00	100.0
355	2.60	128.13	0.00	100.0