

## Predicted METOP-A (blue) and Aqua (red) overpasses of SGP CART Site during JAIVEx and ARM radiosonde launch schedule

#	Year	Overpass Time (UTC)					Satellite Azimuth	Satellite Elevation	Viewing Zenith	Solar Zenith	Relative Azimuth	Satellite Direction	JAIVEx Flight	Sonde 1 launch time	Sonde 2 launch time
		Mo	Day	Hr	Min	Sec									
1	2007	4	14	3	38	52	256.96	83.39	6.61	119.14	52.85	ascend		2:38	3:33
	2007	4	14	9	1	9	288.05	40.89	49.11	122.11	117.45	descend			
	2007	4	14	15	58	42	99.9	48.28	41.72	43.6	18.75	descend			
	2007	4	14	20	4	21	260.16	49.31	40.69	34.39	35.82	ascend			
2	2007	4	15	3	18	16	73.54	62.98	27.02	115.64	127.8	ascend		2:18	3:15
	2007	4	15	8	6	15	99.98	50.28	39.72	128.62	68.94	descend			
	2007	4	15	15	37	58	96.94	30.51	59.49	47.04	16.55	descend			
	2007	4	15	17	17	56	291.72	30.05	59.95	31.19	147.63	descend			
	2007	4	15	19	9	27	72.06	41.65	48.35	28.08	129.16	ascend			
	2007	4	16	2	57	43	70.41	39.97	50.03	111.98	128.43	ascend			
	2007	4	16	4	37	53	265.05	22.63	67.37	126.66	59.82	ascend			
	2007	4	16	8	48	59	286.21	55.29	34.71	123.14	116	descend			
	2007	4	16	16	57	26	288.55	46.39	43.61	33.53	152.77	descend			
3	2007	4	16	19	52	7	258.53	67.64	22.36	32.21	37.84	ascend		18:52	19:47
	2007	4	17	2	37	14	67.19	26.14	63.86	108.24	128.68	ascend			
	2007	4	17	4	17	7	262.07	35.48	54.52	123.82	57.63	ascend			
	2007	4	17	7	53	60	98.2	37	53	129.14	70.99	descend			
	2007	4	17	9	31	27	292.83	20.37	69.63	116.58	118.83	descend			
4	2007	4	17	16	36	52	285.41	73.38	16.62	36.29	156.95	descend		15:36	16:31
	2007	4	17	18	57	18	70.21	31.34	58.66	26.65	125.36	ascend			
	2007	4	17	20	35	1	264.59	23.28	66.72	38.36	28.99	ascend			
	2007	4	18	3	56	24	259.1	56.57	33.43	120.76	55.9	ascend			
5	2007	4	18	8	36	47	284.22	75.27	14.73	124.07	114.63	descend		7:36	8:31
6	2007	4	18	16	16	15	102.5	71.93	18.07	39.38	19.51	descend	Yes	15:16	16:11
7	2007	4	18	19	39	53	74.2	89.29	0.71	30.11	142.3	ascend	Yes	18:39	19:34
8	2007	4	19	3	35	45	258.12	88.87	1.13	117.48	52.54	ascend		2:35	3:30
	2007	4	19	7	41	43	96.46	27.62	62.38	129.49	73.05	descend			
	2007	4	19	9	19	19	290.92	26.62	63.38	117.84	117.75	descend			
	2007	4	19	15	55	34	99.46	44.9	45.1	42.72	16.86	descend			
	2007	4	19	17	35	17	294.51	21.14	68.86	27.95	143.51	descend			
	2007	4	19	18	45	10	68.32	23.9	66.1	25.46	121.09	ascend			
	2007	4	19	20	22	43	262.84	31.04	58.96	35.94	30.02	ascend			
	2007	4	19	20	22	43	262.84	31.04	58.96	35.94	30.02	ascend			
9	2007	4	20	3	15	9	73	58.63	31.37	114.01	126.36	ascend	Yes	2:15	3:10
10	2007	4	20	8	24	34	102.53	81.09	8.91	124.93	67.21	descend	Yes	7:24	8:19
	2007	4	20	15	34	49	96.47	28.47	61.53	46.3	14.71	descend			
	2007	4	20	17	14	50	291.22	32.07	57.93	29.9	149.62	descend			

11	2007	4	20	19	27	41	74.9	66.57	23.43	28.17	137	ascend		18:27	19:22
	2007	4	21	2	54	37	69.91	37.36	52.64	110.4	127	ascend			
	2007	4	21	4	34	44	264.59	24.26	65.74	124.9	60.78	ascend			
	2007	4	21	7	29	24	94.7	20.73	69.27	129.72	75.2	descend			
	2007	4	21	9	7	11	289.05	35.06	54.94	119.03	116.54	descend			
	2007	4	21	16	54	19	288.04	49.75	40.25	32.4	154.82	descend			
	2007	4	21	20	10	27	261.09	41.79	48.21	33.54	31.47	ascend			
	2007	4	22	2	34	9	66.68	24.51	65.49	106.65	127.26	ascend			
	2007	4	22	4	13	59	261.61	38.07	51.93	122.11	58.7	ascend			
	2007	4	22	8	12	20	100.84	59.56	30.44	125.63	69.03	descend			
12	2007	4	22	16	33	45	284.79	78.58	11.42	35.3	158.86	descend	Yes	15:33	16:28
	2007	4	22	19	15	30	73.03	48.87	41.13	26.4	133.73	ascend			
13	2007	4	23	3	53	17	258.66	60.87	29.13	119.08	57.03	ascend		2:53	3:48
	2007	4	23	8	55	1	287.22	46.95	43.05	120.12	115.21	descend			
14	2007	4	23	16	13	7	102.08	66.96	23.04	38.52	17.47	descend	Yes	15:13	16:08
	2007	4	23	19	58	11	259.32	57.11	32.89	31.25	33.19	ascend			
15	2007	4	24	3	32	38	75.75	85.64	4.36	115.8	124.41	ascend		2:32	3:27
	2007	4	24	8	0	5	99.16	43.51	46.49	126.21	70.91	descend			
	2007	4	24	15	52	26	98.98	41.79	48.21	42.01	14.92	descend			
	2007	4	24	17	32	12	293.99	22.54	67.46	26.62	145.49	descend			
	2007	4	24	19	3	20	71.2	36.41	53.59	24.81	129.81	ascend			
	2007	4	25	3	12	3	72.6	54.59	35.41	112.38	125.22	ascend			
16	2007	4	25	8	42	51	285.48	63.88	26.12	121.12	113.73	descend		7:42	8:37
	2007	4	25	15	31	41	96.02	26.57	63.43	45.63	12.93	descend			
	2007	4	25	17	11	44	290.73	34.25	55.75	28.78	151.91	descend			
17	2007	4	25	19	45	57	257.44	77.98	12.02	29.06	35.24	ascend		18:45	19:40
	2007	4	26	2	51	31	69.42	34.95	55.05	108.84	125.69	ascend			
	2007	4	26	4	31	36	264.13	26	64	123.17	61.56	ascend			
	2007	4	26	7	47	49	97.39	32.26	57.74	126.68	72.84	descend			
	2007	4	26	9	25	21	291.93	23.06	66.94	114.86	116.73	descend			
	2007	4	26	16	51	13	287.6	53.41	36.59	31.45	157.16	descend			
	2007	4	26	18	51	12	69.34	27.61	62.39	23.46	125.26	ascend			
	2007	4	26	20	28	50	263.78	26.59	63.41	35.47	25.93	ascend			
	2007	4	27	2	31	3	66.16	22.99	67.01	105.14	125.89	ascend			
	2007	4	27	4	10	51	261.16	40.87	49.13	120.43	59.65	ascend			
18	2007	4	27	8	30	39	284.04	86.09	3.91	122.01	111.88	descend		7:30	8:25
19	2007	4	27	16	30	38	284.31	83.95	6.05	34.5	161.08	descend	Yes	15:30	16:25
20	2007	4	27	19	33	45	75.81	78.33	11.67	26.99	141.93	ascend	Yes	18:33	19:28
21	2007	4	28	3	50	9	258.12	65.48	24.52	117.41	58.08	ascend		2:50	3:45
	2007	4	28	7	35	33	95.65	24.19	65.81	127	74.75	descend			
	2007	4	28	9	13	14	290.04	30.2	59.8	116.1	115.67	descend			
22	2007	4	28	16	9	59	101.45	62.27	27.73	37.84	15.54	descend		15:09	16:04
	2007	4	28	18	39	5	67.43	21.12	68.88	22.37	120.14	ascend			
	2007	4	28	20	16	34	262.02	35.55	54.45	32.99	27.18	ascend			

23	2007	4	29	3	29	31	75.24	80.23	9.77	114.21	123.26	ascend	Yes	2:29	3:24
24	2007	4	29	8	18	26	101.94	70.53	19.47	122.79	69.38	descend	Yes	7:18	8:13
	2007	4	29	15	49	17	98.54	38.91	51.09	41.39	13.01	descend			
	2007	4	29	17	29	6	293.48	24.04	65.96	25.47	147.85	descend			
	2007	4	29	19	21	34	74.07	57.66	32.34	25.04	138.47	ascend			
	2007	4	30	3	8	56	72.08	50.85	39.15	110.82	124.02	ascend			
	2007	4	30	9	1	5	288.17	40.03	49.97	117.25	114.51	descend			
	2007	4	30	15	28	32	95.55	24.79	65.21	45.14	11.11	descend			
	2007	4	30	17	8	38	290.23	36.6	53.4	27.78	154.24	descend			
	2007	4	30	20	4	18	260.3	48.2	41.8	30.61	28.75	ascend			
	2007	5	1	2	48	25	68.93	32.73	57.27	107.28	124.53	ascend			
	2007	5	1	4	28	27	263.67	27.86	62.14	121.52	62.31	ascend			
	2007	5	1	8	6	12	100.07	51.45	38.55	123.49	70.99	descend			
	2007	5	1	16	48	6	287.11	57.35	32.65	30.61	159.45	descend			
	2007	5	1	19	9	24	72.21	42.56	47.44	23.3	134.53	ascend			
	2007	5	2	2	27	58	65.65	21.56	68.44	103.65	124.63	ascend			
	2007	5	2	4	7	42	260.69	43.91	46.09	118.78	60.43	ascend			
	2007	5	2	8	48	56	286.33	54.05	35.95	118.32	113.27	descend			
25	2007	5	2	16	27	31	288.09	89.42	0.58	33.81	167.52	descend	Yes	15:27	16:22
26	2007	5	2	19	52	4	258.38	66.09	23.91	28.28	30.67	ascend	Yes	18:52	19:47
27	2007	5	3	3	47	1	257.91	70.36	19.64	115.83	58.75	ascend		2:47	3:42
	2007	5	3	7	53	57	98.34	37.83	52.17	124.04	72.73	descend			
	2007	5	3	16	6	52	101.08	57.87	32.13	37.27	13.41	descend			
	2007	5	3	18	57	15	70.35	31.99	58.01	21.78	129.84	ascend			
	2007	5	3	20	34	59	264.72	22.79	67.21	35.18	22.19	ascend			
28	2007	5	4	3	26	24	74.6	74.97	15.03	112.66	122.1	ascend	Yes	2:26	3:21
29	2007	5	4	8	36	45	284.52	73.6	16.4	119.3	111.91	descend	Yes	7:36	8:31
	2007	5	4	15	46	9	98.06	36.26	53.74	40.97	11.08	descend			
	2007	5	4	17	26	1	292.97	25.63	64.37	24.45	150.3	descend			
30	2007	5	4	19	39	51	254.61	88.91	1.09	26.09	31.2	ascend		18:39	19:34