



# Briefing Sheet: Satellite Team

## Practice Data Answers

### Instructions

Before the Mission Begins, your team should practice analysing satellite data. You should be able to:

- Receive hourly updates of the positions of available satellites in both latitude and longitude.
- Plot the reported position of the satellite on the tracking map.
- Using the speed of the satellite, calculate when to make an observation.
- Using the wavelength that the satellite receives on, calculate the corresponding frequency.
- Prepare and send a set of instructions via the Communications Officer each five minutes to be relayed over the geostationary satellite network, to the satellite.
- Plot the location of the image returned by the satellite and report the success (or otherwise) of the observation to the Communications Officer

### The information and tools you will need:

- Satellite Tracking Work Sheet
- Satellite Tracking Map
- Calculator, Clear Ruler, Compass, Pencil

### Practice with sample data

In the table below we give you some sample data. The first two rows are an example. Using the tools above you should fill in the rest of the sheet. For detailed instructions, refer to the “Satellite Tracking Instructions”

### Satellite Practice Data from Aug 28th

This data is fictitious. However, it represents the types of data that you will be receiving on Mission Day.

**Satellite Tracking Data Sheet**

	A	B	C		D		E	F	G		H	I
	OBS	Time	Latitude		Longitude		Heading	Wavelength	Time to Target		Observation Time	Frequency
		GMT	Deg	N/S	Deg	E/W	(N/S)	(m)	Min.	Sec.	GMT	GHz
Practice Data	1	00:00:00	1.5	N	61.1	W	N	0.0017964	4	17	00:04:17	167.0
	2	01:00:00	21.75	N	61.8	W	S	0.0016484	1	24	01:01:24	182.0
	3	02:00:00	35.75	N	60.8	W	S	0.0017121	5	21	02:05:21	175.2
	4	03:00:00	9.5	N	61.6	W	N	0.0017355	2	2	03:02:02	172.9
	5	04:00:00	10.5	S	60.2	W	N	0.0017811	7	40	04:07:40	168.4
	6	05:00:00	9.25	S	60.3	W	N	0.0017093	7	19	05:07:19	175.5
	7	06:00:00	35.25	N	60.8	W	S	0.0016568	5	12	06:05:12	181.1
	8	07:00:00	36	N	60.8	W	S	0.0016922	5	25	07:05:25	177.3
	9	08:00:00	3.75	N	61.2	W	N	0.0017579	3	39	08:03:39	170.7
	10	09:00:00	29.25	N	61.3	W	S	0.0017127	3	31	09:03:31	175.2
	11	10:00:00	12.25	S	60.1	W	N	0.0017336	8	10	10:08:10	173.1
	12	11:00:00	12	N	61.8	W	N	0.0017151	1	20	11:01:20	174.9