

SPACE RADIO MONITORING STATION LEEHEIM

Antenna Parameters

Parameter	Antenna 1				Antenna 2		Antenna 3			Antenna 4								Antenna 5
Frequency-Band (GHz)	1.5 - 1.8	2.1 - 2.3	4.3 - 8.5	10.7 - 12.75	3.2 - 4.2	17.7 - 22.0	0.13 - 0.25	0.25 - 0.5	0.5 - 1.0	1.0 - 2.0	1.9 - 3.3	3.2 - 4.4	4.3 - 7.3	7.2 - 10.1	9.9 - 12.75	12.5 - 17.7	17.3 - 26.5	17.7 - 21.2
Antenna Type	Full Motion Az/EI Cassegrain Beam Waveguide				Full Motion Az/EI Cassegrain		Full Motion Az/EI Planar Dipole Array			Full Motion, XY-Mount Prime Focus								King-Post Az/EI, Prime Focus
Antenna Size	12 m Ø				8.5 m Ø		4 m ²	2 m ²	2 m ²	7 m Ø								3 m Ø
Polarization	LX, LY	LX, LY	LX, LY RHC,LHC	LX, LY RHC,LHC	LX, LY, RHC, LHC		LX, LY	LX, LY	LX, LY	LX, LY, RHC, LHC						LX, LY	LX, LY	LX, LY
Polarization Adjustment	no	no	yes	yes	yes	yes	no			yes								yes
Antenna Gain (dBi)	44	47	49-56	61-62	48-51	63-65	8-11	10-14	14-18	34-39	40-45	45-47	47-50	51-54	54-56	56-57	58-59	47-50
G/T (dBK ⁻¹)	22	25	27-33	39-41	25-29	36-37	-			15-19	20-23	24-26	26-28	29-31	32-33	32-33	34-33	19-21
Angle Velocity	Az. 16°/s El. 3.5°/s				Az. 5°/s El. 5°/s		Az. 10°/s El. 10°/s			X axle: 3.5°/s Y axle: 3.5°/s								Az. 0.5°/s El. 0.5°/s
Acceleration	10°/s ²				5°/s ²		10°/s ²			3.5°/s ²								
Antenna Tracking	Monopulse-Track	no	Monopul. Track		Manually and Program-Track		Manually and Program-Track			Manually and Program-Track								Manually
	Manually and Program-Track																	
Level Uncertainty r _{rss} * Error	1.6 dB (95% Confidence Level)				1.6 dB (95% Confid. Level)		1.6 dB (95% Confidence Level)			1.6 dB (95% Confidence Level)								not applicable
Frequency Uncertainty	1*10 ⁻¹² (rubidium frequency standard)																	

* r_{rss} = root sum square