Science Requirements

SCIENCE AREA	FREQ RANGE	NO. OF ANTENNAS	ANG. RESOLUTION
Cosmology			
– Integrated EoR, Dark Ages spectral signals	50-150, 20-50 MHz	1 or more	> steradian
– EoR power spectrum	50-150 MHz	> 1000	2 arcmin to ~ 2 degrees
– Dark Ages power spectrum	20-50 MHz	> 10,000	2-20 arcmin
– EoR tomography	50-150 MHz	> 100,000	1-10 arcmin
Extragalactic			
– Fossil radio lobes, AGN duty cycles	~ 10 MHz	~ 300	1 arcmin
Galactic			
– SNR as sites of cosmic ray acceleration	3-30 MHz	> 10,000	< arcmin
– Map emissivity of interstellar medium	1-30 MHz	~ 100	< 1 arcmin
– Extrasolar planets	1-30 MHz	~ 10,000	< 1 arcmin
Transient Sources			
– Fast transients & pulsars (<< 1 second)	> 100 MHz	~ 100	Arcmin
– Slow transients, ISS (> 1 second)	10-100 MHz	> 100	Arcmin
UHE Particles			
– Radio bursts from Moon	~ 10 MHz	1-100	Degrees
– Radio bursts from terrestrial atmosphere, ice caps	~ 10 MHz	10-100	Degrees
Solar System			
– Jupiter, Saturn LF emission	< 10 MHz	~ 10	Arcmin
– Interplanetary turbulence	1-30 MHz	~ 1000	Arcmin
Heliophysics			
– Track type II & type III bursts	0.1-30 MHz	~ 10-50	Degrees
– Map interplanetary magnetic field lines	0.1-30 MHz	~ 10-50	Degrees
Earth			
– Image magnetosphere response to CMEs	0.1-1 MHz	> 10	Degrees
– Auroral Kilometric Radiation	0.1-0.5 MHz	~ 10	Degrees