

SKA-Mid: Delivery of observing modes and ODPs to the astronomy community

AA2 SV 2029	AA* SV 2031	Cycle 0 2032		Cycle 1 2033			Cycle 2 2034			Cycle 3 2035		
Science Verification (SV)		AA* SV	Shared risk	AA* SV	Shared risk	Standard ops	AA* SV	Shared risk	Standard ops	AA* SV	Shared risk	Standard ops
Single subarray		4 subarrays		16 subarrays			Full drift scanning capabilities				Full drift scanning capabilities	
Both sidereal and non-sidereal tracking		Drift scanning capped at a few mins			Drift scanning capped at a few mins		Wide area scanning				Wide area scanning	
Calibrated and averaged visibilities, gridded visibilites, image cubes (excluding SKA008)	Full BW (up to 5 GHz)	Limited support for PLDP generation tests	Multiple pointings processed independently (i.e. no joint deconvolution)	Improved PSS machine learning for improved triggering	Source finding (& associated image cutouts)	Multiple pointings processed independently (i.e. no joint deconvolution)	Autocorrelation processed data products	Improved PSS machine learning for improved triggering	Improved source finding (& associated image cutouts)		Autocorrelation processed data products	Improved PSS machine learning for improved triggering
800 MHz BW (and up to 5 GHz from 2030) FoV	8h max integration, up to 16 images (either in time i.e. 30min, or pointings)	Limited joint deconvolution	Use of SKA008 possible for appropriate projects	Fast imaging	Limited PLDP generation	Use of SKA008 possible for appropriate projects	Autocorrelation processed data products	Fast imaging	Full PLDP generation		Autocorrelation processed data products	Fast imaging
Single pointing	Zoom resolution (up to 0.21 kHz)	Limited support for PLDP generation tests	50h max integration	Transient buffer triggered by fast imaging (limited by butter latency, prehaps less than 10 seconds)	Joint deconvolution	50h max integration		Transient buffer triggered by fast imaging (limited by butter latency, prehaps less than 10 seconds)	Joint deconvolution			Transient buffer triggered by fast imaging (limited by butter latency, prehaps less than 10 seconds)
40 channel max	Continuum subtraction	Limited joint deconvolution			Source finding (& associated image cutouts)				Improved source finding (& associated image cutouts)			
4h max integration	4h max integration, up to 8 images (either in time i.e. 30min, or pointings)		16k channel max		64k channel max	16k channel max			64k channel max			
		Transient buffer triggered by PSS observations	Multiple pointings processed independently (i.e. no joint deconvolution)		Joint deconvolution	Multiple pointings processed independently			Joint deconvolution			
Calibrated and averaged visibilities, gridded visibilities, image cubes (excluding SKA008)	PSS 200 beams fully processed		Use of SKA008 possible for appropriate projects		Limited PLDP generation	Use of SKA008 possible for appropriate projects			Full PLDP generation			
Resolution up to 13.4 kHz	VLBI 4 beams		12h max integration		Transient buffer triggered by PSS observations	12h max integration			Transient buffer triggered by PSS observations			
Single pointing	PST 8 beams, full processing		PSS full basic capability			PSS full basic capability						
Full FoV, 4k channel max, up to full BW			VLBI full basic capability			VLBI full basic capability						
Early continuum subtraction implementation			PST full 16 beam capability			PST full 16 beam capability						
4h max integration												
PST at least one beam, full processing												
9 PSS beams, fully processed												
1 VLBI beam												

Telescope mode

Observatory Data Products (ODPs) and their capabilities

Continuum

Spectral

Beamformed

Transient