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

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