Survey Management Plan requirements vs. Science Verification and Commissioning verification matrix

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Science Verification

- Science Verification - the two mini-surveys:
  - Optimize the survey operations procedures
  - Test (some of) the observing strategies expected to be implemented by the 6 VISTA Public Surveys
  - Verify/minimize overheads
  - Test phase 2 tools P2PP & SADT
  - Test phase 2 verification tools
  - Provide real data for phase 3 input/test
  - Experience the full end-to-end process of survey data and test the data-flow system
  - Fulfill the goals of the science verification policy by providing the community with a complete and scientifically exciting set of new data

Commissioning and Paranalization

- Characterize the telescope and the instrument
- Obtain all the parameters needed for the smooth running of the operations
- Optimize the performance
- Define and test the calibration plan - validity interval of the calibrations
- Provide feedback for the technical requirements and optimization of the scheduled Public Surveys
- Incorporate the operations into the daily Paranal Science Operations workflow
- Train observatory staff

Survey Management Plans

- Input to ESO for the scheduling of the survey
- Observing strategies adopted by the surveys
  - Need to implement time links, concatenations, and groups of OBs
  - Tiling pattern
  - Jitter pattern
  - Overlaps of adjacent tiles
  - Number of filters/OB
- Input for the definition of templates and phase 2 tools
- Calibration needs

SMP vs. SV + commissioning matrix I

Observation / Calib requirement	VMC	VVV	VHS	Ultra VISTA	VIDEO	VIKING	Comm	SV Orion	SV N4945
Tiling overlaps			x				x		
Cross-talk	x	x	x				x		
Persistence / bright magnitude limit	x	x	x				x	x	x
linearity	x	x	x	x	x	x	x		
Light leaks: day time calibrations dark/flat							x		
Optimal filter sequences			x				x		
overheads		x	x				x	x	x

SMP vs. SV + commissioning matrix II

Observation / Calib requirement	VMC	VVV	VHS	Ultra VISTA	VIDEO	VIKING	Comm	SV Orion	SV N4945
Background vs. twilight distance				x		x	x		
Background vs. moon distance /moon screen				x			x		
Large galaxy in field			x						x
Crowded fields	x	x						x	
Deep fields >6h				x					x
2MASS --> VIRCAM	x	x	x	x	x	x	x	x	x

SMP vs. SV + commissioning matrix III

Observation / Calib requirement	VMC	VVV	VHS	Ultra VISTA	VIDEO	VIKING	Comm	SV Orion	SV N4945
Contiguous mapping	x	x	x		x	x		x	
Broad bands Illumination	x	x	x	x	x		x	x	x
NB illumination				x					x
NB photometry				x					x
NB/Broad Band Fringing				x	x		x		x
Combine 6 paw->tile	x	x	x		x	x		x	x
Special calibration		ZY	Y	NB				ZY	NB
Repeat for variability	x	x	x					x	

SMP vs. SV + commissioning matrix IV

Observation / Calib requirement	VMC	VVV	VHS	Ultra VISTA	VIDEO	VIKING	Comm	SV Orion	SV N4945
Jitter pattern 2		x	x				x	x	
Jitter pattern 3						x	x		x
Jitter pattern 4						x	x	x	
Jitter pattern 5	x				x		x		x
>1 filter/OB	x	x			x	x	x	x	
Time links	x	x						x	
Concatenations	x	x	x	x				x	
Groups of OBs			x	x	x	x			x