

Total Power SBs

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based on presentation by Daniel Espada

Total Power SBs

- Two SBs for the TP array:
 - Short observation of an amplitude calibrator (configured as “Science”)
 - OTF map of the science target
- The TP array SBs will be executed near in time, and processed together.(? – this may be incorrect)

OT: Cal and Science SBs

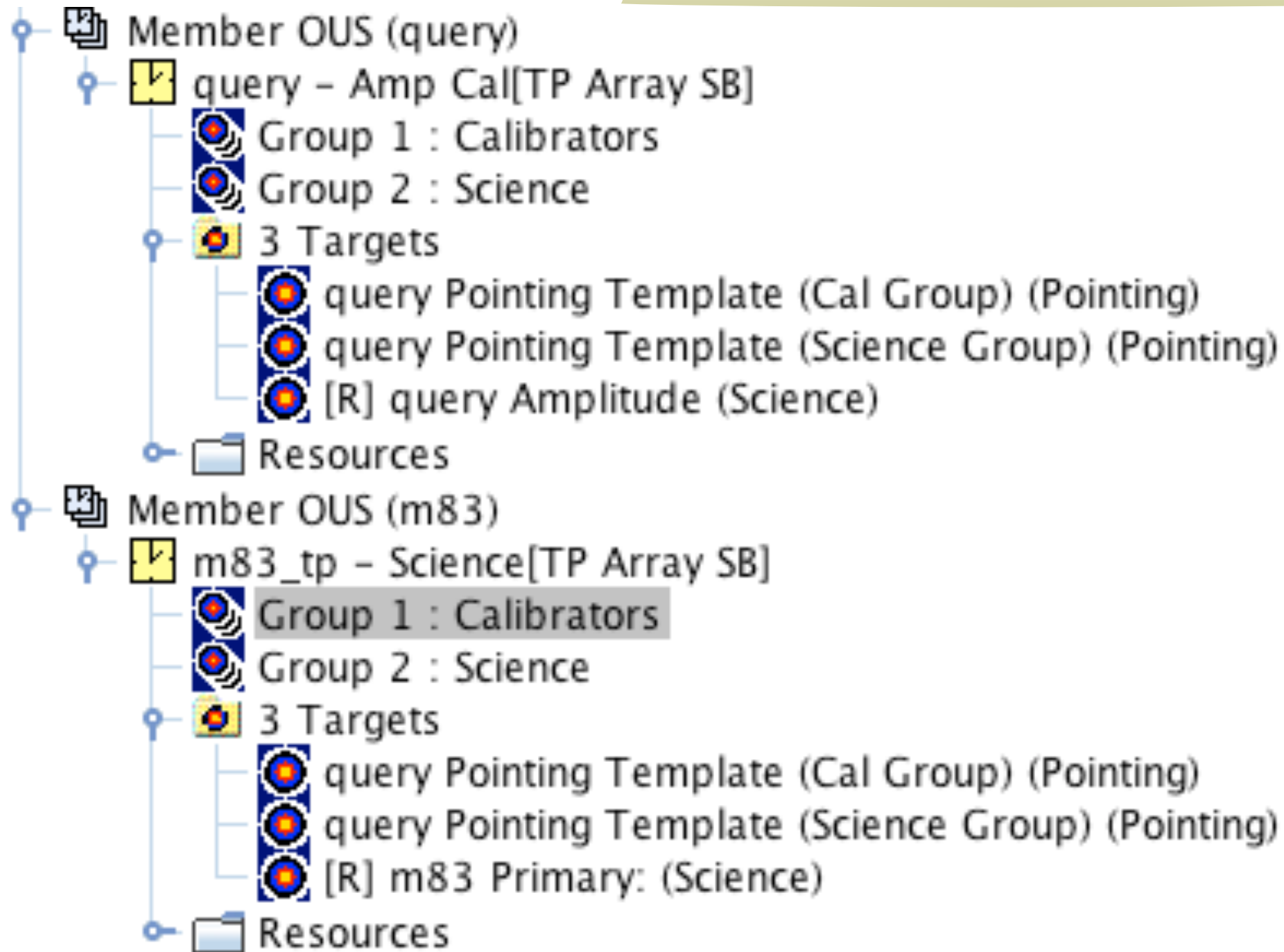
- Calibrator SB + Science SB (run back2back ?)
 - [Group1]
 - Pointing
 - [Group2]
 - Calibrator SB : OTF raster map on a calibrator (planet/qso), using same mapping strategy as science SB → in situ measure of Jy/K conversion (i.e, η_A (η_{mb})), and beam shape(?)
 - Science SB : Science target map
- Expert script being developed!

8Jy @b3, and higher at high freq. bands.
QSO not good at b6,7,9

OT: Cal and S

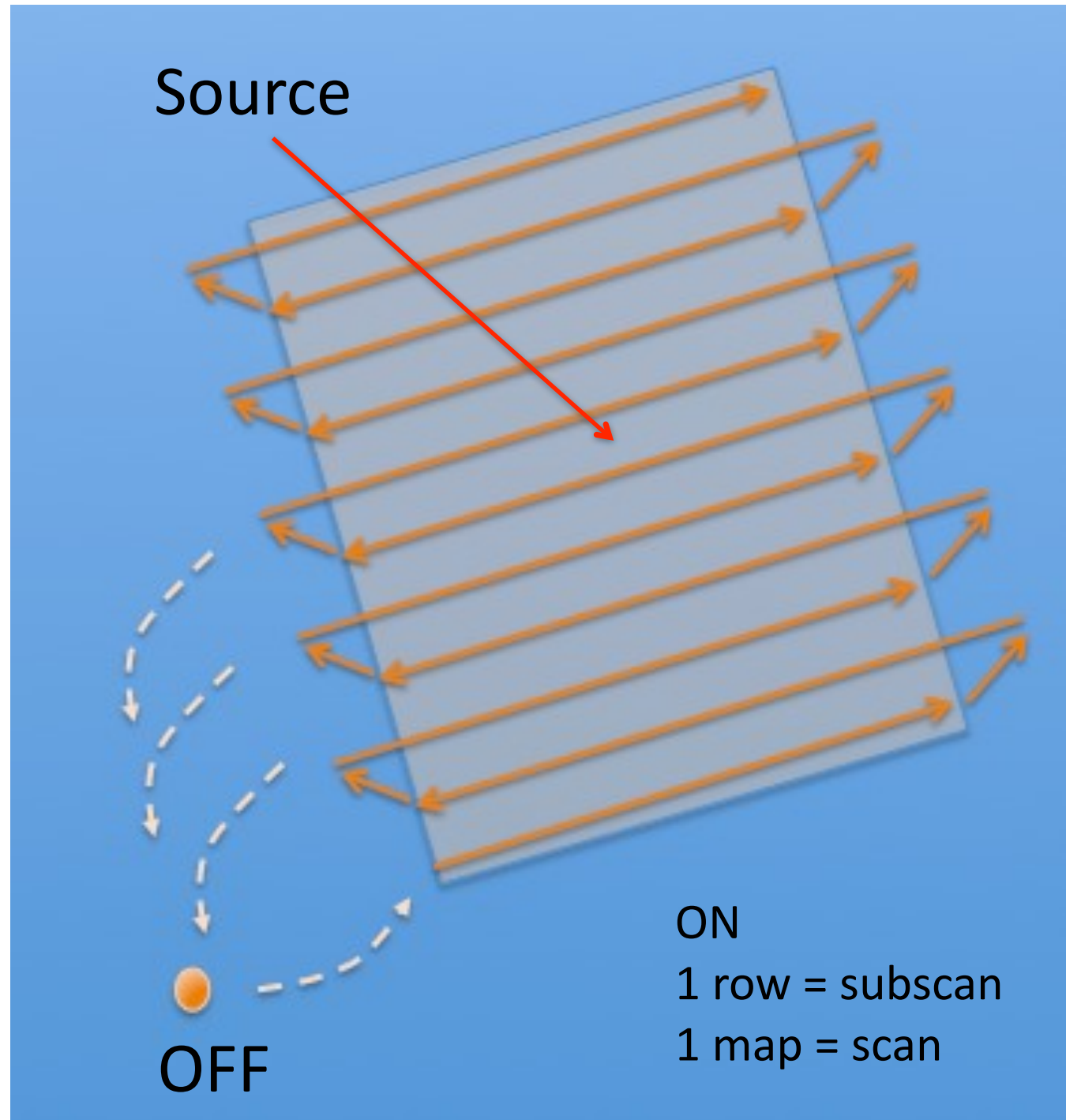
in Atm Cal, only one pointing is needed

likely also the case for Science SB



- a. off position?
- b. ra (or az) scan and del. (el) scan in a SB: still not decided
currently only one direction supported in OT
- c.

and its calibration



Cal SB

- OFF coordinate system
 - only RELATIVE with AzEl or J2000
- Mapping Size: 5 beams
- Orthogonal step is 1/3 beam
- Subscan duration \leftrightarrow 1 row
- Integration time on source \leftrightarrow 1 map

Cal SB: OTF map

scan velocity is not a variable,
it is calculated from Lat (and long) length and sub scan duration (i.e., obs. duration of a row)

since the orthogonal step is 1/3 beam, and mapping size (i.e., lat length) is 5 beams, that means at least 15 measurements are required. Therefore the sub-scan duration should be at least 15 x dump time (which is the time duration of a measurement)

for the TDM mode, dump time is 0.096 sec, and suggested sub-scan duration is 2.4 sec.

- Member OUS (qu...
- query - Amp...
- Group 1 :
- Group 2 :
- 3 Targets
 - query
 - query
 - [R] qu
- Resource

- 3 Field Sources
 - Pointing Template (Cal Group) query
 - Pointing Template (Science Group) query
 - Amplitude query
- 2 Instrument Setup
 - B3 Pointing Setup[ACA SB] (4 BBCs)
 - TDM Cal Setup (topo)[ACA SB] (4 BBCs)
- 3 Observing Parameters
 - Science Params
 - PointingCalParameters (Cal Group)
 - PointingCalParameters (Science Group)

Offset(Latitude)	0.00000	deg
Lat. length	306.57500	arcsec
Orthogonal step	20.43800	arcsec
Long. length	306.57500	arcsec
Scan Direction	longitude	
Unidirectional Scan	<input type="checkbox"/>	
Scan Velocity	106.450 arcsec/s	arcsec/s
Orientation	0.00000	deg
Scanning Coordinate System	azel	
Setup Mosaic (Optional)		

5x beam

dump time * velocity < 1/3 beam

Cal SB: Observing Parameters

- Member OUS (query)
 - query - Amp Cal[TP Array SB]
 - Group 1 : Calibrators
 - Group 2 : Science
 - 3 Targets
 - query Pointing Template (Cal Group) (Pointing)
 - query Pointing Template (Science Group) (Pointing)
 - [R] query Amplitude (Science)
 - Resources
 - 3 Field Sources
 - Pointing Template (Cal Group) query
 - Pointing Template (Science Group) query
 - Amplitude query
 - 2 Instrument Setup
 - B3 Pointing Setup[ACA SB] (4 BBCs)
 - TDM Cal Setup (topo)[ACA SB] (4 BBCs)
 - 3 Observing Parameters
 - Science Param ←
 - PointingCalParameters (Cal Group)
 - PointingCalParameters (Science Group)

Observing Parameters

- BandpassCal
- OpticalPointing
- RadiometricPointing
- Holography
- FocusCal
- AtmosphericCal
- DelayCal
- SidebandRatioCal
- Science
- PhaseCal
- PointingCal
- AmplitudeCal
- PolarizationCal

The integration time here is unlikely correct.
It should be $\text{sub-scan time} \times \text{mapping size} / \text{orthogonal size}$
as mentioned in next page

Integration Time on Source: 14.40000 s

Sub Scan Duration: 2.88000 s

Adjust subscanduration to a correct value: ADJUST Subscan

Force Atmospheric Calibration:

Advanced Parameters: ? +

Other Notes

- Delete TP SBs whose main science goal is continuum because it has not been offered in cycle 1.
- OFF position needs to be checked
- Check the number of executions and total observing time