Systematics
Intro and Overview

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Note: the Systematics Working Group meets most Fridays at noon eastern. Please join if you're interested. Sign up for the email list (via your Membership Record!) and/or look at the CMB-S4 google calendar.

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Systematics Overview

Clear path+effort forward
Partial path forward, needs more scope or effort
Needs thought/effort
Not considered high priority but of interest

Jeff's talk

	SATs	LATs high-ell	TMA-LAT low ell
Beam + sidelobe effects			
T->P from near sidelobes and/or high-order beam mismatch	[Kirit + Clara's talk]	MMT on model (tbd)	?
T->P from monopole/dipole/quadrupole	Project out	Grin, Cyr-Racine, etal, impact on Neff	[small]
Ground pickup	B3/BA working on this	[stage-3 suggests not an issue]	Spillover-driven models. Others?
Time-constant mis-calibration	[could use MMT or similar]	MMT (isotropic model done for Neff)	[could use MMT or similar]
Beam width vs photon frequency	[small effect]		
Polarization calibration effects			
E->B from global pol angle miscalibration	[Colin's talk]	cross-calib SAT->SPLAT->CHLAT	cross-calib SAT->SPLAT
E->B from pol angle miscalibration wafer to wafer	[Colin's talk]	?	[smaller FOV than SATs => less?]
Band effects			
Band center calibration accuracy	[Colin's talk]	no science driven spec yet	same as SATs
CO-lne response	(Need to estimate possible effects)	?	same as SATs
Other			
EMI/RFI	?	?	?
Magnetic pickup	?	?	?
Readout crosstalk	[could use MMT or similar]	MMT and timestream sims	[could use MMT or similar]
Gain calibration misestimations, variations with el or time.	?	?	?
Data reduction driven systematics (filter/scan effects)	DC2/etc	DC2/etc	DC2/etc ?

Many systematic effects are related to calibrations => Johanna + Kirit's talk

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