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SPIRE Calibration Product Details

The following tables give details of each SPIRE calibration product. The link in the first column goes to a technical note describing the derivation of the contents of each calibration product. Note that this page is a work in progress!

Photometer Calibration Products

Name (& link to document)	Product Description	Dependency	Additional information
SCalPhotApertureEfficiency	Photometer Aperture Efficiency		
SCalPhotBeamProf	Photometer Beam Profiles	arrayName	
SCalPhotBolPar	Bolometer Parameter Table		<i>see also the updated BoDAC spreadsheet</i>
SCalPhotBsmOps	BSM Operations Table	time	
SCalPhotBsmPos	BSM Position Table		
SCalPhotChanMask	Channel Mask Table	time	<i>some updates made since document written</i>
SCalPhotChanGain	Channel Gain Table		additional information on JFET gains
SCalPhotChanNoise	Detector Noise Spectrum	biasMode, time	
SCalPhotChanNum	Channel Number Mapping Table		
SCalPhotChanRelGain	Channel Relative Gains Table		<i>see also this document</i>
SCalPhotChanTimeConst	Channel Time Constants		<i>Numbers from the updated BoDAC spreadsheet (NaN replaced with median value for array) - see also the document for the BolPar product</i>
SCalPhotChanTimeOff	Channel Time Offset Table		
SCalPhotColorCorrAperture	Aperture Correction Product	apertureCorrectionType	
SCalPhotColorCorrBeam	Beam corrections with spectral index and temperature		
SCalPhotColorCorrHfi	SPIRE-Planck HFI cross-calibration colour correction		
SCalPhotColorCorrK	Colour Correction Product	source type	
SCalPhotDetAngOff	Detector Angular Offset Table	aperture	
SCalPhotElecCross	Electrical Crosstalk Matrix		
SCalPhotFluxConv	Flux Conversion and Non-linearity Correction Coefficients	biasMode, time	<i>described in Bendo et al. (2013)</i>
SCalPhotInstModeMask	Instrument Mode Mask Table	time	
SCalPhotLpfPar	Low Pass Filter Parameter Table		
SCalPhotOptCross	Optical Crosstalk Matrix		<i>no crosstalk: cal file not used</i>
SCalPhotPcalModel	PCAL Response Model		
SCalPhotRadialBeamCorr	Beam correction product		

SCalPhotRsrF	Photometer RSRF		
SCalTelemMask	Telemetry Mask Table	time	<i>no unreliable telemetry (empty product)</i>
SCalPhotTempDriftCorr	Temperature Drift Correction Coefficients	biasMode, time	

Spectrometer Calibration Products

Name (& link to document)	Product Description	Dependency	Additional information
SCalSpecBandEdge	Spectral Band Edges		
SCalSpecBeamParam	Spectrometer Beam Parameters & Point source flux conversion	res, time	
SCalSpecBeamProf	Spectrometer Beam Profiles	arrayName	<i>derivation described in Makiwa et al. (2013)</i>
SCalSpecBolPar	Bolometer Parameter Table		<i>see also the updated BoDAC spreadsheet</i>
SCalSpecBolPhase	Bolometer Phase Table	time	
SCalSpecBrightGain	Bright Mode Gain Table	time	<i>see also Lu et al. (2014)</i>
SCalSpecBsmOps	BSM Operations Table	time	
SCalSpecBsmPos	BSM Position Table		
SCalSpecChanGain	Channel Gain Table		<i>additional information on JFET gains</i>
SCalSpecChanMask	Channel Mask Table	time	
SCalSpecChanNum	Channel Number Mapping Table		
SCalSpecChanTimeConst	Channel Time Constants		
SCalSpecChanTimeOff	Channel Time Offset Table		
SCalSpecDetAngOff	Detector Angular Offset Table	aperture	
SCalSpecElecCross	Electrical Crosstalk Matrix		<i>no crosstalk: cal file not used</i>
SCalSpecInstRsrF	Spectrometer Instrument RSRF	res, time	<i>derivation described in Fulton et al. (2014)</i>
SCalSpecLpfPar	Low Pass Filter Parameter Table		
SCalSpecNonLinCorr	Non-linearity Correction Coefficients	biasMode, time	
SCalSpecOpdLimits	Interferogram OPD Limits		
SCalSpecOptCross	Optical Crosstalk Matrix		<i>no crosstalk: cal file not used</i>
SCalSpecPcalModel	PCAL Response Model		
SCalSpecPhaseCorrLim	Band Limits for Phase Correction		
SCaTelemMask	Telemetry Mask Table	time	<i>no unreliable telemetry (empty product)</i>
SCalSpecSmecStepFactor	SMEC Step Factor to convert from MPD to OPD		
SCalSpecSmecZpd	Optical Encoder and LVDT DC at ZPD	time	
SCalSpecTeleModel	Telescope Model Coefficients		<i>derivation described in Hopwood et al. (2014)</i>
SCalSpecTeleRsrF	Spectrometer Telescope RSRF	jiggld, res, time	<i>derivation described in Fulton et al. (2014)</i>
SCalSpecTempDriftCorr	Temperature Drift Correction Coefficients	biasMode, time	<i>not actually used in the pipeline</i>
SCalSpecLrCorr	Empirical LR Correction for SLW	res	<i>Introduced in spire_cal_14_0</i>
SCalSpecOpdCorr	Empirical OPD Correction		<i>Introduced in spire_cal_14_0</i>
SCalSpecExtCorr	Empirical Extended Source Calibration Correction		<i>Introduced in spire_cal_14_0</i>

Spectrometer Calibration Products that are no longer used

Name	Product Description	Additional information
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SCalSpecFluxConv	Flux Conversion	<i>removed in 5_0 and replaced with SCalSpecTeleRsrf</i>
SCalSpecInterRef	Reference Interferogram	<i>removed in 5_0 when telescope subtraction was moved to the spectral domain</i>
SCalSpecNlp	Non-linear phase product	<i>replaced with SCalSpecNonLinPhase in 5_0</i>
SCalSpecNonLinPhase	Non-linear phase product	<i>removed in 6_0 as no longer needed</i>
SCalSpecNomPcal	Nominal PCAL values	<i>removed in 11_0 when bright mode calibration was updated</i>
SCalSpecSpatialCorr	Spatial Correction Coefficients	<i>briefly introduced in 11_0 for semi-extended correction, but removed in 12_0</i>

Attachments

	Attachment	History	Action	Size	Date	Who	Comment
	BSMCalibrationReport4march25.pdf	r1	manage	6780.2 K	2014-04-09 - 13:35	EdwardPolehampton	Description of Phot and Spec BSM calibration products
	BolometerPhase_TN003266.pdf	r1	manage	148.5 K	2014-04-07 - 14:14	EdwardPolehampton	Description of the SpecBolPhase calibration product
	ChannelNumberMappingDescription_TN003224.pdf	r1	manage	40.0 K	2014-04-07 - 13:58	EdwardPolehampton	Description of the Phot and Spec ChanNum calibration products
	ChannelTimeOffDescription_TN003223.pdf	r1	manage	25.7 K	2014-04-07 - 14:00	EdwardPolehampton	Description of the Phot and Spec ChanTimeOff calibration products
	Channel_Gain_Calibration_Product_TN003208.pdf	r1	manage	160.1 K	2014-04-09 - 13:05	EdwardPolehampton	Description of Phot and Spec ChanGain calibration products
	Detector_Operation_Matrix_TN003202.pdf	r1	manage	47.7 K	2014-04-09 - 13:12	EdwardPolehampton	Description of Phot and Spec ChanMask calibration product
	Filter_profiles_TN002962v2.pdf	r1	manage	5104.9 K	2014-04-07 - 14:04	EdwardPolehampton	Description of the PhotRsrf calibration product
	InstrumentModeMask_TN003225.pdf	r1	manage	645.9 K	2014-04-07 - 16:36	EdwardPolehampton	Description of the PhotInstModeMask calibration product
	LS_SPIRE_UCF_DOC_003255.pdf	r1	manage	312.4 K	2014-04-09 - 13:00	EdwardPolehampton	Description of the SpecSmecStepFactor calibration product
	NotesOnPFM5LoadCurves_v5.pdf	r1	manage	251.0 K	2014-04-07 - 16:35	EdwardPolehampton	Notes for the Phot and Spec BolPar calibration products
	PFM5_CalFile_v4.xls	r1	manage	118.0 K	2014-04-09 - 13:25	EdwardPolehampton	BODAC spreadsheet giving pre-launch bolometer parameters (BolPar and

	Photometer_Gain_Check_10October2006_v2_1.pdf	r1	manage	248.4 K	2014-04-09 - 13:06	EdwardPolehampton	ChanTimeConst Check of Phot JFET gains (ChanGain calibration product)
	SCalSpecChanTimeConst_derivation_draft_0_2.pdf	r1	manage	749.7 K	2014-04-07 - 14:16	EdwardPolehampton	Description of the SpecChanTimeConst calibration product
	SCal_Low_Pass_Filter_Parameters_Draft_03.pdf	r1	manage	747.1 K	2014-04-07 - 14:02	EdwardPolehampton	Description of the Phot and Spec LpfPar calibration products
	ScalSpecNonLinCorr_V1.6_TechnicalNote.pdf	r1	manage	65.1 K	2014-04-09 - 13:34	EdwardPolehampton	Description of SpecNonLinCorr calibration product
	SpecBandEdge_TN003259_issue3.0.pdf	r1	manage	686.9 K	2014-08-11 - 13:20	EdwardPolehampton	Description of the SpecBandEdge and SpecPhaseCorrLim products
	SpecBrightGain_TN003265_v2.pdf	r1	manage	584.2 K	2014-04-11 - 15:02	EdwardPolehampton	Description of the SpecBrightGain calibration product
	Spectrometer_Gain_Check_10_October.pdf	r1	manage	115.9 K	2014-04-09 - 13:06	EdwardPolehampton	Check of Spec JFET gains (ChanGain calibration product)
	TechNote_SCalPhotChanNoise_v4.pdf	r1	manage	107.3 K	2014-04-09 - 13:33	EdwardPolehampton	Description of the PhotChanNoise calibration product
	tempcor_calib_technote_v3.0.0.pdf	r1	manage	383.6 K	2014-04-09 - 13:32	EdwardPolehampton	Description of PhotTempDriftCorr calibration product

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