

## **PACS Commissioning Phase Timeline**

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## 8 PACS Commissioning Phase Time-Line

### 8.1 Overview

This document is an addendum to the PACS Commissioning Phase Plan.

Table 1 lists the Operational Days allocated to PACS CoP MTL observations.

Table 1: Operational Days of Commissioning Phase allocated to PACS MTL observations.

#	PACS OD	start date	Day Of Year (DOY) 2009
01	OD0026	08-Jun-2009	159
02	OD0027	09-Jun-2009	160
03	OD0028	10-Jun-2009	161
04	OD0029	11-Jun-2009	162
05	OD0031	13-Jun-2009	164
06	OD0032	14-Jun-2009	165
07	OD0033	15-Jun-2009	166
08	OD0034	16-Jun-2009	167
09	OD0038	20-Jun-2009	171
10	OD0039	21-Jun-2009	172
11	OD0040	22-Jun-2009	173
12	OD0041	23-Jun-2009	174
13	OD0045	27-Jun-2009	178
14	OD0046	28-Jun-2009	179
15	OD0053	05-Jul-2009	186
16	OD0060	12-Jul-2009	193

The ESA Project Herschel Commissioning Phase timeline reference is CW27\_02, issue 1, the final version.

## 8.2 Model COP Timeline

In this section a graphical and tabular overview of all calibration AORs scheduled by the PACS ICC for the COP delivery to HSC and Project is given per Operational Day. There may be some deviations in time wrt. the final schedule produced by HSC.

The PACS COP MTL commanding up to OD0060 comprises 261 AORs with a total duration of 157.32 h.

**8.2.1 OD0026**

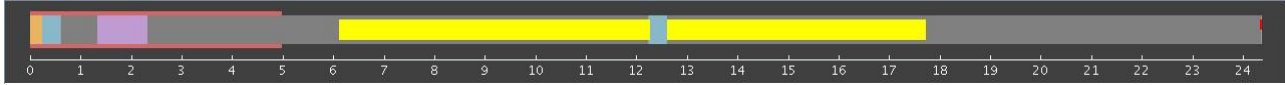


Figure 1: Timeline for OD0026 as displayed in the Mission Planning System.

Table 2: Timeline for PACS COP OD0026. PACS FFT (H\_COP\_PAC\_FFT\_01) and SPT SPEC (H\_COP\_PAC\_SSPT\_01) dark.

Calibration AOR	duration (s)	absolute start time
CPFFT_IST403_nStdSPECsetup_CSOFF_na_0001	359	2009-06-08T16:09:45Z
CPSPTSPEC_IST502_nStddarkcurrent_na_na_0001	1344	2009-06-08T16:15:44Z
CPSPTSPEC_IST503_nStdSAFEMode_na_na_0001	13	2009-06-08T16:38:08Z
CPFFT_IST404_nStdSpecHK_Setup_na_0001	4	2009-06-08T16:38:21Z
CPFFT_IST404_nStdSpecGraDiaghk_SINCOSSetup_na_0001	5	2009-06-08T16:38:25Z
CPFFT_IST404_nStdCONFgrating_Slow_na_0001	261	2009-06-08T16:38:30Z
CPFFT_IST404_nStdSpecGra_Healthcheck_na_0001	226	2009-06-08T16:42:51Z
CPFFT_IST404_nStdDiaghk_Reset_na_0001	4	2009-06-08T16:46:37Z
CPFFT_IST405_nStdSAFEMode_na_na_0001	13	2009-06-08T16:46:41Z
CPFFT_IST405_nStdSpecthermal_na_na_0001	8205	2009-06-08T16:46:54Z
CPFFT_IST405_nStdSAFEMode_na_na_0002	13	2009-06-08T19:03:39Z
CPFFT_IST408_nStdSPECsetup_nominal_na_0001	359	2009-06-08T19:03:52Z
CPFFT_IST408_nStdSpec_datarate_na_0001	691	2009-06-08T19:09:51Z
CPFFT_IST408_nStdCREsetup_capa00_na_0001	9	2009-06-08T19:21:22Z
CPFFT_IST408_nStdSPECspusetup_default_na_0001	9	2009-06-08T19:21:31Z
CPFFT_IST408_nStdFilDiagSetup_na_na_0001	5	2009-06-08T19:21:40Z
CPFFT_IST408_nStdConfSpec_fitw_na_0001	4	2009-06-08T19:21:45Z
CPFFT_IST408_nStdSpec_Filturns_na_0001	1070	2009-06-08T19:21:49Z
CPFFT_IST408_nStdDiaghk_Reset_na_0001	4	2009-06-08T19:39:39Z
CPFFT_IST408_nStdSpecspu_reset_na_0001	4	2009-06-08T19:39:43Z
CPFFT_IST408_nStdBckgrd_Adj01_na_0001	961	2009-06-08T19:39:47Z
CPFFT_IST408_nStdBckgrd_Adj02_na_0001	356	2009-06-08T19:55:48Z
CPFFT_IST408_nStdBckgrd_Adj03_na_0001	356	2009-06-08T20:01:44Z
CPFFT_IST408_nStdBckgrd_Adj04_na_0001	356	2009-06-08T20:07:40Z
CPFFT_IST408_nStdBckgrd_Adj05_na_0001	356	2009-06-08T20:13:36Z
CPFFT_IST407_nStdFlashHeat_Diaghk_na_0001	5	2009-06-08T20:19:32Z
CPFFT_IST407_nStdCREsetup_capa1212_na_0001	9	2009-06-08T20:19:37Z
CPFFT_IST407_nStdSPECspusetup_default_na_0001	9	2009-06-08T20:19:46Z
CPFFT_IST407_nStdGramove_abs_na_0001	4	2009-06-08T20:19:55Z
CPFFT_IST407_nStdSpecFlash_IST_na_0001	644	2009-06-08T20:19:59Z
CPFFT_IST407_nStdGramove_abs_na_0002	4	2009-06-08T20:30:43Z
CPFFT_IST407_nStdSpecFlash_IST_na_0002	644	2009-06-08T20:30:47Z
CPFFT_IST407_nStdSpecspu_reset_na_0001	4	2009-06-08T20:41:31Z
CPFFT_IST407_nStdDiaghk_Reset_na_0001	4	2009-06-08T20:41:35Z
CPFFT_IST409_nStdSPEC_fovscan_na_0001	1470	2009-06-08T20:41:39Z
CPFFT_IST410_nStdWaveCalNoChopEng_FilA_na_0001	1584	2009-06-08T21:06:09Z
CPFFT_IST410_nStdWaveCalNoChopEng_FilB_na_0001	1584	2009-06-08T21:32:33Z

Table 2: Timeline for PACS COP OD0026 continued.

Calibration AOR	duration (s)	absolute start time
CPFFT_IST406_ynStdCREsetup_capa12_na.0001	9	2009-06-08T21:58:57Z
CPFFT_IST406_nStdSPECspusetup_default_na.0001	9	2009-06-08T21:59:06Z
CPFFT_IST406_nStdSpecHeat_FFT_na.0001	1122	2009-06-08T21:59:15Z
CPFFT_IST406_nStdSpecspu_reset_na.0001	4	2009-06-08T22:17:57Z
CPFFT_IST411_nStdSAFEMode_na_na.0001	13	2009-06-08T22:18:01Z
RWL SOPS window		
CPFFT_IST412_nStdBOLO_cooler_na.0001	8542	2009-06-08T22:40:14Z
CPFFT_IST413_nStdPhotothermal_na_na.0001	5544	2009-06-09T01:02:36Z
CPFFT_IST413_nStdSAFEMode_na_na.0001	13	2009-06-09T02:35:00Z
CPFFT_IST414_nStdPHOTsetup_nominal_na.0001	2282	2009-06-09T02:35:13Z
CPFFT_IST414_nStdPHOTspusetup_default.0001	9	2009-06-09T03:13:15Z
CPFFT_IST414_nStdFilDiagSetup_na_na.0001	5	2009-06-09T03:13:24Z
CPFFT_IST414_nStdConfPhot_ftw_na.0001	4	2009-06-09T03:13:29Z
CPFFT_IST414_nStdPhot_Filturns_na.0001	1069	2009-06-09T03:13:33Z
CPFFT_IST414_nStdDiaghk_Reset_na.0001	4	2009-06-09T03:31:22Z
CPFFT_IST414_nStdPhotspu_reset_na.0001	4	2009-06-09T03:31:26Z
CPFFT_IST414_nStdPhot_datarate_na.0001	506	2009-06-09T03:31:30Z
CPFFT_IST415_nStdPhot_saturation_na.0001	345	2009-06-09T03:39:56Z
CPFFT_IST416_nStdSAFEMode_na_na.0001	13	2009-06-09T03:45:41Z

8.2.2 OD0027

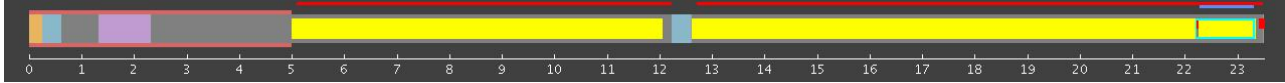


Figure 2: Timeline for OD0027 as displayed in the Mission Planning System.

Table 3: Timeline for PACS COP OD0027. PACS Chopper AutoOpt1 (H.COP\_PAC\_CHP5\_01, SPT SPEC (H.COP\_PAC\_SSPT\_01, w/o dark), SPT PHOT & Bolo Bias 0 (H.COP\_PAC\_PTBO\_01) and trial for sneak preview on OD00032.

Calibration AOR	duration (s)	absolute start time
CPMechChop_231A_nStd_OpenLoopFullRange_na.0001	1182	2009-06-09T15:26:01Z
CPMechChop_232A_nStd_PidFinetuning_na.0001	13045	2009-06-09T15:45:43Z
CPSPTSPEC_IST503_nStdSPECsetup_default_na.0001	359	2009-06-09T19:23:08Z
CPSPTSPEC_IST503_nStdDiaghk_SINCOS_na.0001	5	2009-06-09T19:29:07Z
CPSPTSPEC_IST503_nStdGraSlewTime_Cal_na.0001	673	2009-06-09T19:29:12Z
CPSPTSPEC_IST503_nStdDiaghk_reset_na.0001	4	2009-06-09T19:40:25Z
CPSPTSPEC_IST504_nStdChopper_Perf_na.0001	352	2009-06-09T19:40:29Z
CPSPTSPEC_IST505_nStdQuickFullSpectrum_CS1_na.0001	3475	2009-06-09T19:46:21Z
CPSPTSPEC_IST505_nStdQuickFullSpectrum_CS2_na.0001	3475	2009-06-09T20:44:16Z
CPSPTSPEC_IST506_nStdWaveCalEng_short_na.0001	683	2009-06-09T21:42:11Z
CPSPTSPEC_IST508_nStdReadouts_perRamp_na.0001	153	2009-06-09T21:53:34Z
CPSPTSPEC_IST508_nStdReadouts_perRamp_na.0002	153	2009-06-09T21:56:07Z
CPSPTSPEC_IST508_nStdReadouts_perRamp_na.0003	153	2009-06-09T21:58:40Z
CPSPTSPEC_IST508_nStdReadouts_perRamp_na.0004	153	2009-06-09T22:01:13Z
CPSPTSPEC_IST508_nStdReadouts_perRamp_na.0005	153	2009-06-09T22:03:46Z
CPSPTSPEC_IST508_nStdReadouts_perRamp_na.0006	153	2009-06-09T22:06:19Z
CPSPTSPEC_IST509_nStdSpec_bias_na.0001	1139	2009-06-09T22:08:52Z
CPSPTSPEC_IST510_nStdcre_setup_na.0001	9	2009-06-09T22:27:51Z
CPSPTSPEC_IST510_nStdspusetup_025_na.0001	9	2009-06-09T22:28:00Z
RWL SOPS window		
CPSPTSPEC_IST510_nStdTime_Constant_na.0001	2194	2009-06-09T23:03:01Z
CPSPTSPEC_IST510_nStdSpecspu_reset_na.0001	4	2009-06-09T23:39:35Z
CPSPTSPEC_IST511_nStdSpecCS_Perf_na.0001	3905	2009-06-09T23:39:39Z
CPSPTSPEC_IST514_nStdSAFEMode_na_na.0001	13	2009-06-10T00:44:44Z
CPSPTPHOT_IST516_nStdBOLO_cooler_na.0001	8542	2009-06-10T00:44:57Z
CPSPTPHOT_IST517_nStdPHOTsetup_nominal_na.0001	2282	2009-06-10T03:07:19Z
CPSPTPHOT_IST518_nStdCal_recipes_na.0001	1729	2009-06-10T03:45:21Z
CPSPTPHOT_IST519_nStdChopscan_phot_na.0001	1381	2009-06-10T04:14:10Z
CPSPTPHOT_IST520_nStdlowfreq_ddcs_na.0001	3649	2009-06-10T04:37:11Z
CPSPTPHOT_IST520_nStdlowfreq_direct_na.0001	3741	2009-06-10T05:38:00Z
CPSPTPHOT_IST521_nStdTimeconst_fluxchange_na.0001	961	2009-06-10T06:40:21Z
CPSPTPHOT_IST524_nStdTestPattern_na_na.0001	71	2009-06-10T06:56:22Z
CPPhotBol_110A_nStd_VrIVhBlind_na.0001	5186	2009-06-10T06:57:33Z
CPPhotSetup_na_nStd_orbitepi_na.0001	13	2009-06-10T08:23:59Z
CPPhotSetup_Trial_orbitpro_na.0001	807	2009-06-10T08:24:12Z
CPPhotBol_Trial_StdScan_grn_direct_M51.0001	3932	2009-06-10T08:43:38Z
CPPhotSetup_na_nStd_orbitepi_na.0002	13	2009-06-10T09:46:10Z

**8.2.3 OD0028**

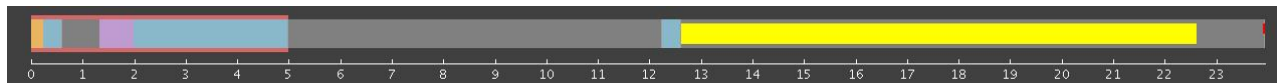


Figure 3: Timeline for OD0028 as displayed in the Mission Planning System.

Table 4: Timeline for PACS COP OD0028. PACS Initial Ge:Ga Bias & Curing, part 1 (H\_COP\_PAC\_GEB1\_01).

Calibration AOR	duration (s)	absolute start time
RWL SOPS window		
CPSpecGeGa_na_nStdCPBlock101_SpecSetup_na_0001	359	2009-06-10T22:33:27Z
CPSpecGeGa_na_nStdCPBlock102_SpuSetupReset_na_0001	2109	2009-06-10T22:39:26Z
CPSpecGeGa_na_nStdCPBlock103_ParametersLoop_na_0001	32710	2009-06-10T23:14:35Z
CPSpecGeGa_na_nStdCPBlock104_Curing4mA_na_0001	746	2009-06-11T08:19:45Z
CPSpecGeGa_na_nStdCPBlock107_EnterSafeMode_na_0001	13	2009-06-11T08:32:11Z



**8.2.4 OD0029**



Figure 4: Timeline for OD0029 as displayed in the Mission Planning System.

Table 5: Timeline for PACS COP OD0029. PACS Initial Ge:Ga Bias & Curing, part 2 (H\_COP\_PAC\_GEB1\_02).

Calibration AOR	duration (s)	absolute start time
CPSpecGeGa_na_nStdCPBlock101_SpecSetup_na_0002	359	2009-06-11T21:26:53Z
CPSpecGeGa_na_nStdCPBlock102_SpuSetupReset_na_0002	2109	2009-06-11T21:32:52Z
RWL SOPS window		
CPSpecGeGa_na_nStdCPBlock105_ParametersLoop_na_0001	2566	2009-06-11T22:30:01Z
CPSpecGeGa_na_nStdCPBlock104_Curing4mA_na_0002	746	2009-06-11T23:12:47Z
CPSpecGeGa_na_nStdCPBlock105_ParametersLoop_na_0002	35222	2009-06-11T23:25:13Z
CPSpecGeGa_na_nStdCPBlock106_Curing2mA_na_0002	986	2009-06-12T09:12:15Z
CPSpecGeGa_na_nStdCPBlock107_EnterSafeMode_na_0002	13	2009-06-12T09:28:41Z

**8.2.5 OD0031**

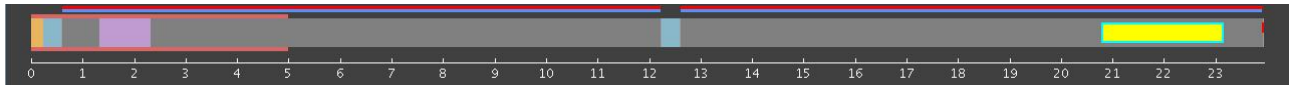


Figure 5: Timeline for OD0031 as displayed in the Mission Planning System.

Table 6: Timeline for PACS COP OD0031. PACS bolometer cooler recycling in preparation of sneak preview (H\_COP\_PAC\_SNKP) on OD0032.

Calibration AOR	duration (s)	absolute start time
CPPhotCooler_117_nStd_na_na_0001	8532	2009-06-14T06:32:58Z

8.2.6 OD0032



Figure 6: Timeline for OD0032 as displayed in the Mission Planning System.

Table 7: Timeline for PACS COP OD0032. PACS bolometer sneak preview (H\_COP\_PAC\_SNKP) right after cryo-cover opening.

Calibration AOR	duration (s)	absolute start time
CPPhotSetup_na_nStd_orbitpro_na_0001	2272	2009-06-14T12:57:27Z
CPPhotBol_prePreview_na_grn_direct_na_0001	4006	2009-06-14T13:35:29Z
CPPhotSetup_na_nStd_orbitepi_na_0003	13	2009-06-14T14:42:15Z
CPPhotSetup_Preview_orbitpro_grn_na_0001	772	2009-06-14T14:42:28Z
CPPhotBol_Preview_StdScan_grn_direct_M51_0001	3932	2009-06-14T15:00:37Z
CPPhotBol_Preview_StdScan_grn_direct_M51X_0001	3932	2009-06-14T16:05:00Z
CPPhotSetup_Preview_orbitepi_na_0001	13	2009-06-14T17:07:32Z
CPPhotSetup_Preview_orbitpro_grn_na_0002	772	2009-06-14T17:07:45Z
CPPhotBol_Preview_StdScan_grn_direct_M51_0002	3932	2009-06-14T17:21:40Z
CPPhotBol_Preview_StdScan_grn_direct_M51X_0002	3932	2009-06-14T18:26:03Z
CPPhotSetup_Preview_orbitepi_na_0002	13	2009-06-14T19:28:35Z
CPPhotSetup_Preview_orbitpro_grn_na_0003	772	2009-06-14T19:28:48Z
CPPhotBol_Preview_StdScan_grn_direct_M51_0003	3932	2009-06-14T19:42:43Z
CPPhotBol_Preview_StdScan_grn_direct_M51X_0003	3932	2009-06-14T20:47:06Z
CPPhotSetup_Preview_orbitepi_na_0003	13	2009-06-14T21:49:38Z
RWL SOPS window		
CPPhotSetup_Preview_orbitpro_grn_na_0004	772	2009-06-14T22:19:28Z
CPPhotBol_Preview_StdScan_grn_direct_M51_0004	3932	2009-06-14T22:33:23Z
CPPhotBol_Preview_StdScan_grn_direct_M51X_0004	3932	2009-06-14T23:37:46Z
CPPhotSetup_Preview_orbitepi_na_0004	13	2009-06-15T00:40:18Z
CPPhotSetup_Preview_orbitpro_blu_na_0001	772	2009-06-15T00:40:31Z
CPPhotBol_Preview_StdScan_blu_direct_M51_0001	3932	2009-06-15T00:54:26Z
CPPhotBol_Preview_StdScan_blu_direct_M51X_0001	3932	2009-06-15T01:58:49Z
CPPhotSetup_Preview_orbitepi_na_0005	13	2009-06-15T03:01:21Z
CPPhotSetup_Preview_orbitpro_blu_na_0002	772	2009-06-15T03:01:34Z
CPPhotBol_Preview_StdScan_blu_direct_M51_0002	3932	2009-06-15T03:15:29Z
CPPhotBol_Preview_StdScan_blu_direct_M51X_0002	3932	2009-06-15T04:19:52Z
CPPhotSetup_Preview_orbitepi_na_0006	13	2009-06-15T05:22:24Z
CPPhotSetup_Preview_orbitpro_blu_na_0003	772	2009-06-15T05:22:37Z
CPPhotBol_Preview_StdScan_blu_direct_M51_0003	3932	2009-06-15T05:36:32Z
CPPhotBol_Preview_StdScan_blu_direct_M51X_0003	3932	2009-06-15T06:40:55Z
CPPhotSetup_Preview_orbitepi_na_0007	13	2009-06-15T07:43:27Z
CPPhotSetup_Preview_orbitpro_blu_na_0004	772	2009-06-15T07:43:40Z
CPPhotBol_Preview_StdScan_blu_direct_M51_0004	3932	2009-06-15T07:57:35Z
CPPhotBol_Preview_StdScan_blu_direct_M51X_0004	3932	2009-06-15T09:01:58Z
CPPhotSetup_Preview_orbitepi_na_0008	13	2009-06-15T10:04:30Z

The initial position, on which the prePreview is executed, is RA = 171.39404 deg (11:25:34), DEC= 59:45:43.

**8.2.7 OD0033**

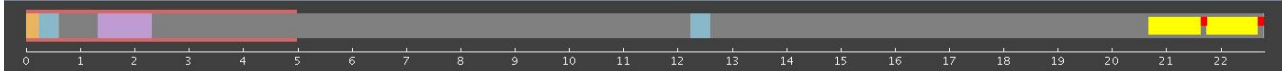


Figure 7: Timeline for OD0033 as displayed in the Mission Planning System.

Table 8: Timeline for PACS COP OD0033. PACS Telescope Background measurement 1 (H\_COP\_PAC\_TELB.01), 1 day after cryo cover opening with  $110\text{ K} < M1+M2 \text{ temperature} < 120\text{ K}$ .

Calibration AOR	duration (s)	absolute start time
CPSpecMisc_IST408_nStdSPEC_orbitprologue_na_0001	2459	2009-06-16T07:27:49Z
CPSpecMisc_IST410_nStdBckgrd_Adj01_na_0001	961	2009-06-16T08:08:48Z
CPSpecMisc_IST410_nStdWaveCal_FilA_DarkField_0001	1584	2009-06-16T08:32:37Z
CPSpecMisc_IST410_nStdWaveCal_FilB_DarkField_0001	1584	2009-06-16T09:00:37Z
CPSpecMisc_IST416_nStdSAFEMode_na_na_0001	13	2009-06-16T09:27:01Z

**8.2.8 OD0034**

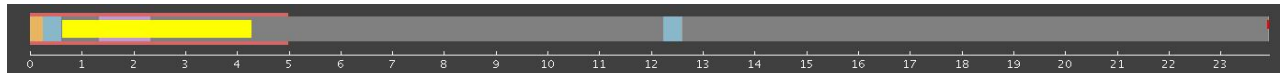


Figure 8: Timeline for OD0034 as displayed in the Mission Planning System.

Table 9: Timeline for PACS COP OD0034. PACS Chopper PID Optimisation Loop & Fine Tuning (H\_COP\_PAC\_CHP6\_01). The measurement CPMechChop\_231A\_nStd\_Synch2SpecDet\_na\_0001 has been added to enable proper DECMEC synchronization. Note that a missing orbit epilogue AOR has to be recovered by the time tagged TC sequence HRPCSSF in the MTLUU.

Calibration AOR	duration (s)	absolute start time
CPMechChop_231A_nStd_Synch2SpecDet_na_0001	63	2009-06-16T10:12:15Z
CPMechChop_232A_nStd_PidFinetuning_na_0002	13045	2009-06-16T10:13:18Z

**8.2.9 OD0038**

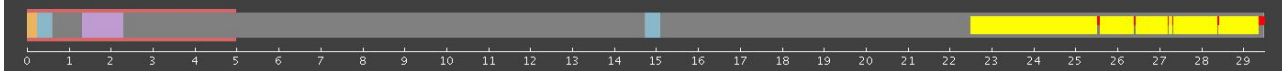


Figure 9: Timeline for OD0038 as displayed in the Mission Planning System.

Table 10: Timeline for PACS COP OD0038. PACS Filler - SIAM Check & Telescope Background(#2) (H\_FIL\_PAC\_SIAC), with 90 K < M1+M2 temperature < 97 K. Note: Photometer prologues get an OD tag as long as telescope is cooling down and bias voltages have to be adjusted.

Calibration AOR	duration (s)	absolute start time
CPPhotCooler_117_nStd_na_na_0002	8542	2009-06-21T07:50:34Z
CPPhotSetup_na_nStd_orbitpro_OD38_na_0001	2580	2009-06-21T10:12:56Z
CPPhotFPG_M51_SIAM_check_map	1430	2009-06-21T10:55:56Z
CPPhotFPG_M51_SIAM_check_map_xscan	1695	2009-06-21T11:19:46Z
CPPhotFPG_SIAM_check_PS_blu_HIP77619	292	2009-06-21T11:48:01Z
CPPhotFPG_SIAM_check_scan_blu_HIP78574_xscan	1098	2009-06-21T11:52:53Z
CPPhotFPG_SIAM_check_scan_blu_HIP78574	1098	2009-06-21T12:11:11Z
CPPhotFPG_SIAM_check_PS_blu_HIP78574	351	2009-06-21T12:29:29Z
CPPhotFPG_SIAM_check_PS_blu_HIP80704	404	2009-06-21T12:35:20Z
CPPhotFPG_SIAM_check_PS_blu_HIP81835	159	2009-06-21T12:42:04Z
CPPhotSetup_na_nStd_orbitepi_na_0004	13	2009-06-21T12:44:43Z
CPSpecMisc_IST408_nStdSPEC_orbitprologue_na_0002	2459	2009-06-21T12:44:56Z
CPSpecMisc_IST410_nStdBckgrd_Adj01_na_0002	1233	2009-06-21T13:25:55Z
CPSpecMisc_IST410_nStdWaveCal_FilA_DarkField_0002	1680	2009-06-21T13:46:28Z
CPSpecMisc_IST410_nStdWaveCal_FilB_DarkField_0002	1584	2009-06-21T14:14:28Z
CPSpecMisc_IST416_nStdSAFEMode_na_na_0002	13	2009-06-21T14:40:52Z

**8.2.10 OD0039**

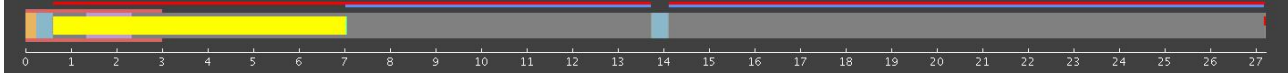


Figure 10: Timeline for OD0039 as displayed in the Mission Planning System.

Table 11: Timeline for PACS COP OD0039. PACS Coarse Ge:Ga Bias Adjustment (H\_COP\_PAC\_GEB2\_01).

Calibration AOR	duration (s)	absolute start time
CPSpecGeGa_na_nStdCPBlock201_SpecSetupFlex_na_0001	385	2009-06-21T15:27:21Z
CPSpecGeGa_na_nStdCPBlock202_SpuSetupReset_na_0001	2109	2009-06-21T15:33:46Z
CPSpecGeGa_na_nStdCPBlock203_ParametersLoop_na_0001	15126	2009-06-21T16:08:55Z
CPSpecGeGa_na_nStdCPBlock203b_SpecSetupFlex_na_0001	385	2009-06-21T20:21:01Z
CPSpecGeGa_na_nStdCPBlock204_FovScan_na_0001	686	2009-06-21T20:27:26Z
CPSpecGeGa_na_nStdCPBlock205_Chop23_na_0001	807	2009-06-21T20:38:52Z
CPSpecGeGa_na_nStdCPBlock206_FovScan_na_0002	686	2009-06-21T20:52:19Z
CPSpecGeGa_na_nStdCPBlock207_Chop23_na_0002	807	2009-06-21T21:03:45Z
CPSpecGeGa_na_nStdCPBlock208_Curing_na_0001	2096	2009-06-21T21:17:12Z
CPSpecGeGa_na_nStdCPBlock209_EnterSafeMode_na_0001	13	2009-06-21T21:52:08Z

**8.2.11 OD0040**

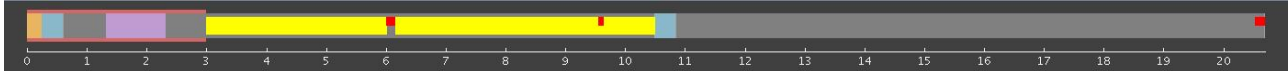


Figure 11: Timeline for OD0040 as displayed in the Mission Planning System.

Table 12: Timeline for PACS COP OD0040. PACS Bolometer Biases for Pointing Activities Part 1 (H-COP\_PAC\_BOL1.01). Note: Photometer prologues get an OD tag as long as telescope is cooling down and bias voltages have to be adjusted.

Calibration AOR	duration (s)	absolute start time
CPPhotCooler_117_nStd_na_na_0003	8542	2009-06-22T21:03:09Z
CPPhotSetup_na_nStd_orbitpro_OD40_na_0001	2844	2009-06-22T23:25:31Z
CPPhotBol_111A_nStd_lowGainCSs_DarkField_0001	12532	2009-06-23T00:12:55Z
CPPhotBol_721A_nStd_firstBackGrd_DarkField_0001	3011	2009-06-23T03:41:47Z
CPPhotSetup_na_nStd_orbitepi_na_0005	13	2009-06-23T04:31:58Z



### 8.2.12 OD0041



Figure 12: Timeline for OD0041 as displayed in the Mission Planning System.

Table 13: Timeline for PACS COP OD0041. PACS Fillers Engineering 2 (H\_FIL\_PAC\_ENG\_2), Engineering 3 (H\_FIL\_PAC\_ENG\_3), Spectrometer first light, Photometer Field-of-View Scan, Timings of Scan Maps Investigation, SSO Tracking Verification, Temperature Sensor Drop-out Investigation. Note: Photometer prologues get an OD tag as long as telescope is cooling down and bias voltages have to be adjusted.

Calibration AOR	duration (s)	absolute start time
CPSpecFiller_nStd_orbitpro_na_na_0001	2459	2009-06-23T17:45:01Z
CPSpecFiller_nStd_PacsLineSpec_1stLIGHT_N6543_0001	16194	2009-06-23T18:35:59Z
CPSpecFiller_nStd_orbitepiCSon_na_na_0001	13	2009-06-23T22:55:54Z
slot for additional RWL SOPS window		
CPPhotSetup_na_nStd_orbitpro_OD41_na_0002	173	2009-06-24T00:01:01Z
CPPhotFiller_nStd_TempSensorDrop_dHK_na_na_0001	5	2009-06-24T00:03:54Z
CPPhotFiller_StdScan_Preview_045_blu_NGC6543_0001	380	2009-06-24T00:05:02Z
CPPhotFiller_StdScan_Preview_135_blu_NGC6543_0001	380	2009-06-24T00:11:22Z
PVPhotFPG_264B_StdScani45_blu_Mrk273_HIP66738_0001	3024	2009-06-24T00:23:22Z
CPPhotFPG_scan_blu_lowSpeed_HIP78574_0001	1132	2009-06-24T01:12:30Z
CPPhotFPG_scan_blu_highSpeed_HIP78574_0001	1102	2009-06-24T01:26:58Z
CPPhotFPG_scan_blu_GammaDra_0001	1364	2009-06-24T01:49:18Z
CPPhotFPG_scan_blu_GammaDra_xscan_0001	1126	2009-06-24T02:08:04Z
CPPhotBol_317A_nStd_FOV_DarkField_0001	1667	2009-06-24T02:30:33Z
RWL SOPS window		
PVPhotFPG_261E_StdPS_blu_18Melpomene_0001	4196	2009-06-24T03:36:53Z
PVPhotFPG_261E_StdScani45_blu_18Melpomene_0001	2189	2009-06-24T04:33:00Z
CPPhotBol_110A_nStd_VrIVhBlind1p6_filler_0001	2821	2009-06-24T05:08:26Z
CPPhotBol_110A_nStd_VrIVhBlind1p8_filler_0001	2821	2009-06-24T05:55:27Z
CPPhotBol_110A_nStd_VrIVhBlind2p0_filler_0001	2821	2009-06-24T06:42:28Z
CPPhotBol_110A_nStd_VrIVhBlind2p2_filler_0001	2821	2009-06-24T07:29:29Z
CPPhotBol_110A_nStd_VrIVhBlind2p4_filler_0001	2821	2009-06-24T08:16:30Z
CPPhotBol_119A_nStd_glitchVrI_na_0001	5025	2009-06-24T09:03:31Z
CPPhotSetup_na_nStd_orbitepi_na_0006	13	2009-06-24T10:27:16Z

**8.2.13 OD0045**



Figure 13: Timeline for OD0045 as displayed in the Mission Planning System.

Table 14: Timeline for PACS COP OD0045. PACS Coarse Ge:Ga Bias Adjustment 3, (H\_COP\_PAC\_GEB3\_01).

Calibration AOR	duration (s)	absolute start time
CPSpecGeGa_na_nStdCPBlock3301_SpecSetupFlex_na_0001	385	2009-06-27T17:34:41Z
Slew to dark sky field position + wait time	633	2009-06-27T17:58:24Z
CPSpecGeGa_na_nStdCPBlock3302_SpuSetupReset_na_0001	2109	2009-06-27T18:06:20Z
CPSpecGeGa_na_nStdCPBlock3303_ParameterLoop_na_0001	21942	2009-06-27T18:41:29Z
CPSpecGeGa_na_nStdCPBlock3304_ParameterLoop_na_0002	7350	2009-06-28T00:47:11Z
RWL SOPS window		
CPSpecGeGa_na_nStdCPBlock3305_ParameterLoop_na_0003	7350	2009-06-28T03:11:41Z
CPSpecGeGa_na_nStdCPBlock3306_ParameterLoop_na_0004	7350	2009-06-28T05:14:11Z
CPSpecGeGa_na_nStdCPBlock3307_ParameterLoop_na_0005	21942	2009-06-28T07:16:41Z
CPSpecGeGa_na_nStdCPBlock3308_Curing_na_0001	3146	2009-06-28T13:22:23Z
CPSpecGeGa_na_nStdCPBlock3309_EnterSafeMode_na_0001	13	2009-06-28T14:14:49Z

8.2.14 OD0046

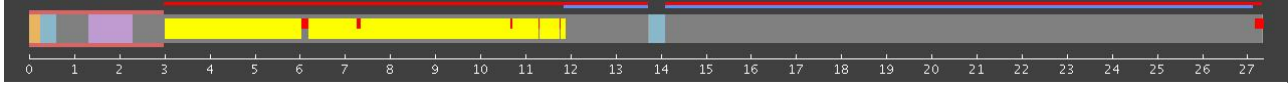


Figure 14: Timeline for OD0046 as displayed in the Mission Planning System.

Table 15: Timeline for PACS COP OD0046. PACS Bolometer Biases for Pointing Activities 2, (H\_COP\_PAC\_BOL2\_01). Note: Photometer prologues get an OD tag as long as telescope is cooling down and bias voltages have to be adjusted.

Calibration AOR	duration (s)	absolute start time
CPPhotCooler_117_nStd_na_na_0004	8542	2009-06-28T17:33:17Z
CPPhotSetup_na_nStd_orbitproCSoff_OD46_na_0001	2272	2009-06-28T19:55:39Z
CPPhotBol_317A_nStd_FOV_DarkField_0002	1381	2009-06-28T20:44:16Z
CPPhotSetup_na_nStd_setCSstemp_na_0001	2104	2009-06-28T21:07:17Z
CPPhotBol_322A_nStd_calBlock_DarkField_0001	134	2009-06-28T21:42:47Z
CPPhotBol_322A_nStd_calBlock_DarkField_0002	134	2009-06-28T21:45:13Z
CPPhotBol_111B_nStd_lowGainTel_DarkField_0001	9865	2009-06-28T21:54:04Z
CPPhotBol_322A_nStd_calBlock_DarkField_0003	134	2009-06-29T00:38:59Z
CPPhotBol_322A_nStd_calBlock_DarkField_0004	134	2009-06-29T00:41:25Z
CPPhotBol_317A_nStd_FOV_DarkField_0003	1381	2009-06-29T00:43:57Z
CPPhotBol_322A_nStd_calBlock_DarkField_0005	134	2009-06-29T01:07:16Z
CPPhotBol_322A_nStd_calBlock_DarkField_0006	134	2009-06-29T01:09:42Z
CPPhotBol_119A_nStd_glitch_DarkField_0001	1802	2009-06-29T01:15:03Z
CPPhotBol_322A_nStd_calBlock_DarkField_0007	134	2009-06-29T01:45:24Z
CPPhotBol_322A_nStd_calBlock_DarkField_0008	134	2009-06-29T01:47:50Z
CPPhotFiller_StdScan_Preview_045_grn_NGC6543_0001	497	2009-06-29T01:52:32Z
CPPhotFiller_StdScan_Preview_135_grn_NGC6543_0001	497	2009-06-29T01:58:52Z
CPPhotFiller_StdScan_Preview_045_blu_NGC6543_0002	497	2009-06-29T02:05:12Z
CPPhotFiller_StdScan_Preview_135_blu_NGC6543_0002	497	2009-06-29T02:11:32Z
CPPhotBol_322A_nStd_calBlock_DarkField_0009	134	2009-06-29T02:19:19Z
CPPhotBol_322A_nStd_calBlock_DarkField_0010	134	2009-06-29T02:21:45Z
CPPhotSetup_na_nStd_orbitepi_na_0007	13	2009-06-29T02:23:59Z

**8.2.15 OD0053**

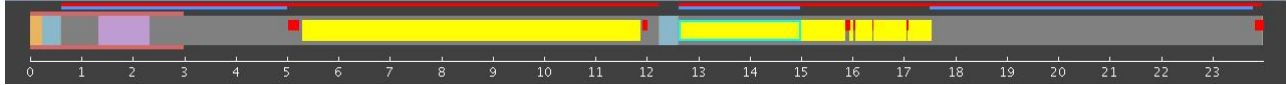


Figure 15: Timeline for OD0053 as displayed in the Mission Planning System.

Table 16: Timeline for PACS COP OD0053. PACS Coarse Ge:Ga Bias Adjustment 4 (H\_COP\_PAC\_GEB4.01) and PACS SIAM Update & Checks (H\_COP\_CAL\_SIAC.01) extended by PACS Filler Engineering 5 (H\_FIL\_PAC\_ENG5). Note: Photometer prologues get an OD tag as long as telescope is cooling down and bias voltages have to be adjusted.

Calibration AOR	duration (s)	absolute start time
Slew	717	2009-07-05T19:32:11Z
CPSpecGeGa_na_nStdCPBlock4401_SpecSetupFlex_na_0001	385	2009-07-05T19:36:39Z
CPSpecFiller_nStd_TempSensorDrop_dHK_na_na_0001	5	2009-07-05T19:43:04Z
CPSpecGeGa_na_nStdCPBlock4402_SpuSetupReset_na_0001	2109	2009-07-05T19:43:09Z
CPSpecGeGa_na_nStdCPBlock4403_BufferTrans_na_0001	3600	2009-07-05T20:18:18Z
CPSpecGeGa_na_nStdCPBlock4404_BufferTrans_na_0001	3600	2009-07-05T21:18:18Z
CPSpecGeGa_na_nStdCPBlock4405_BufferTrans_na_0001	3600	2009-07-05T22:18:18Z
CPSpecGeGa_na_nStdCPBlock4406_BufferTrans_na_0001	3600	2009-07-05T23:18:18Z
CPSpecGeGa_na_nStdCPBlock4407_BufferTrans_na_0001	3600	2009-07-06T00:18:18Z
CPSpecGeGa_na_nStdCPBlock4408_Curing_na_0001	3128	2009-07-06T01:18:18Z
CPSpecGeGa_na_nStdCPBlock4409_EnterSafeMode_na_0001	13	2009-07-06T02:10:26Z
Slew	322	2009-07-06T02:19:14Z
RWL SOPS window		
CPPhotCooler_117_nStd_na_na_0005	8542	2009-07-06T02:56:06Z
CPPhotSetup_na_nStd_orbitpro_OD53_na_0001	2272	2009-07-06T05:18:28Z
CPPhotFPG_OD53_SIAM_check_PS_blu_HIP95413	222	2009-07-06T05:57:23Z
CPPhotFPG_OD53_scan_blu_highSpeed_HIP95413	602	2009-07-06T06:01:05Z
CPPhotFPG_OD53_SIAM_check_PS_blu_HIP81835	500	2009-07-06T06:15:45Z
CPPhotFPG_OD53_scan_blu_PI_Hercules	1355	2009-07-06T06:23:16Z
CPPhotFPG_OD53_SIAM_check_PS_blu_HIP80704	380	2009-07-06T06:44:40Z
CPPhotFPG_OD53_SIAM_check_PS_blu_HIP78574	350	2009-07-06T06:50:30Z
CPPhotFPG_OD53_scan_blu_highSpeed_HIP78574	965	2009-07-06T06:54:12Z
CPPhotFPG_OD53_scan_blu_lowSpeed_HIP78574	755	2009-07-06T07:10:17Z
CPPhotFPG_OD53_SIAM_check_PS_blu_HIP77619	293	2009-07-06T07:24:03Z
CPPhotFPG_OD53_SIAM_check_PS_green_HIP77619	222	2009-07-06T07:28:20Z
CPPhotFPG_OD53_ScanMap_PSF_green_HIP77619	1126	2009-07-06T07:32:02Z
CPPhotSetup_na_nStd_orbitepi_na_0008	13	2009-07-06T07:49:45Z

**8.2.16 OD0060**

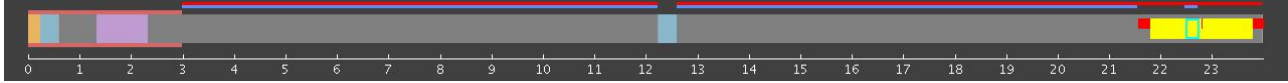


Figure 16: Timeline for OD0060 as displayed in the Mission Planning System.

Table 17: Timeline for PACS COP OD0060. PACS Telescope Background(#3) (H\_FIL\_PAC\_ENG7), with M1+M2 temperature < 85 K.

Calibration AOR	duration (s)	absolute start time
CPSpecMisc_IST408_nStdSPEC_orbitprologue_na_0003	2459	2009-07-13T11:59:55Z
CPSpecMisc_IST410_nStdBckgrd_Adj01_na_0003	961	2009-07-13T12:40:54Z
CPSpecMisc_438A_nStdSlewCal_FilA_DarkField_0001	130	2009-07-13T12:57:48Z
CPSpecMisc_IST410_nStdWaveCal_FilA_DarkField_0003	1584	2009-07-13T13:01:30Z
CPSpecMisc_438A_nStdSlewCal_FilB_DarkField_0001	126	2009-07-13T13:28:13Z
CPSpecMisc_IST410_nStdWaveCal_FilB_DarkField_0003	1584	2009-07-13T13:31:55Z
CPSpecMisc_IST416_nStdSAFEMode_na_na_0003	13	2009-07-13T13:58:19Z