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| Investigation: FIELDS |
| Progress accomplished this period: | September 2013 Reporting Period |
| 1. | Project Management and Product Assurance |
|  | a. | Project Management* Supported review of cost change proposal submitted to SwRI 31 July. Submitted requested cost delta information referenced to previous contract modification.
* Supported SwRI efforts to expand the IS SE team ranks for upcoming 24/7 observatory testing
* Supported the following PERs:
	+ SDP SNs 17&18
	+ EDI GDU SN4
* Supported the following TRRs:
	+ SDP SNs 17&18 vibration and TV tests
	+ EDI GDU SN4 vibration test
* Supported the following FRBs
	+ None
* Supported the following Acceptance Reviews or PSRs
	+ None
* Received delivery of the following flight hardware items at UNH
	+ None
* Delivery of the following flight hardware items from UNH to FIELDS partners
	+ Ship SDP door assemblies SNs 1 & 18 to LASP for rework
* Delivery of the following flight hardware items from UNH or LASP to the IS and Observatories
	+ None
* CDRL and contract deliverable submissions this month:
	+ None
* Prioritized and coordinated the efforts of the UNH team, subcontractors, foreign partners, outside vendors and in-house workshops to optimize schedule performance.
* Attended Mag team and E-Field team meetings
* Supported processing of NCRs
* Supported TV testing
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|  | b. | Product Assurance |
|  |  | Turco / Salwen* Staking FIL9 PWA
* Support SDP FM15/16 TV test
* Staking of FM8 EDI sensor PWAs
* Source inspection of Parylene coating of FM8 EDI sensor PWAs
* Support HVOCs assembly and testing
* Support SDP FM17/18 TV testing
* Outgas certification of SDP FM17/18
* EIDP review and uploading
* SDP 15, 16 TVAC testing support
* SDP 17, 18 TVAC testing support
* EDI HVOC parts fabrication inspections
* SDP 2 Thermal Hardware kitting
* SDP 2 inventory review
* EDI 9 Thermal Hardware kitting
* EDI HVOC assembly kitting
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| 2. | Systems Engineering and FIELDS I&T |
|  |  | Rau, Dors, Needell* Supported SDP 17/18 PER
* Performed SDP 15-18 In-Rush
* Performed SDP 15-16 EMI testing
* Performed SDP SN15-16 FIELDS testing (Magnetics)
* Supported EDI GDU SN4 PER
* Performed EDI GDU SN4 EMI and FIELDS testing (FIT)
* Continued support of SDP commissioning plan development and MRT-8 planning
* Continued FIELDS verification entry into DOORS
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| 3. | Post-Delivery Support (UNH) |
|  |  | * Supported OBS-1 Post Vibe functional
* Supported OBS-2 Pre TV mag boom deploy and magnetometer functional
* Supported OBS-2 TB/TV test planning including procedure review
* Electrically integrated SDP 13/14 on OBS-4
* Performed OBS-4 SDP 11-14 functional testing
* Submitted ADP Observatory Simulator S2M procedure to MIS
* Supported and reviewed WOA and procedure development at IS/OBS levels
* Reviewed test data
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| 4. | Science and Science Data Processing  |
|  |  | SWT and SWG * Continued work on drafts of FIELDS Instrumentation papers
* Prepared for SWT and SWG meetings in early October
* Attended Mag Team and E-Field team meetings

Science data processing activities (Compiled by Chutter)* UNH efforts (FIELDS and EDI), Chutter:
	+ Worked on creating L1A CDF files following MMS CDF guidelines for all (except EDI) FIELDS science packets
* LPP efforts (SCM):, Mirioni
	+ Bessel filter (5th order, 6.5kHz) response included in calibration software.
	+ Calibration software tested with EMI data (Obs#1&#3).
* UCLA efforts (Fluxgate Calibration), Leinweber
	+ Developing inflight calibration and inflight calibration procedures
* IRFU efforts (SDP):, Khotyaintsev
	+ Implemented Matlab classes to support EPOCH\_TT2000 time to be used on MMS.
	+ Testing reading/writing CDF files from Matlab using the NASA CDF patch for Matlab.
* GSFC efforts (Fluxgate), Bromund
	+ Worked on coordinate system definitions
* LASP efforts (ADP/DSP), Goodrich
	+ No input this month
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| 5. | Magnetometers |
|  | a. | DFG  |  |
|  |  |  | * Attended the Mag Team meeting at APL 30 Sep
* Tuning and calibration tests at IWF with FM3 (spare) electronics and Flight Spare Sensor are complete. Calibration at TU-BS is planned when IWF support is available (Nov or Dec).
 |
|  | b. | AFG |  |
|  |  |  | Science* Draft of magnetometer paper prepared
* Supported Magnetometer Team meeting at APL September 30

Prelaunch Preparations* Ken Bromund (GSFC) and Hannes Leinweber (UCLA) met wrt coordinate systems and processing flow
* Hannes Leinweber developing inflight calibration and inflight calibration procedures
* Louise Lee converting analysis software to modern languages like Python
* Support SODAWG

Engineering: Post-delivery Activity* Kitted parts being maintained for spares
* Watching over activities in assessing LM6142
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|  | c. | SCM | * SCM FMS => SENSOR S/N FM4 + PREAMP S/N FM3
	+ - Sensor and Preamp ready for delivery, bakeout complete
		- Harness bake out will end up on Friday 4th of Oct.
		- ADP is still in progress
		- NCR (Sensor Vibration) => MMS-SCM-NC-PRE-140 still in preparation
* NCR and alignment measurements report to be completed (MMS-SCM-NC-TRI-623-LPP and MMS-SCM-PR-TRI-622).
	+ - SCM Assembly drawing document (MMS-SCM-TN-TRI-656-LPP-1.1-Assembly drawing.pdf) sent to UNH
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| 6. | EDI |
|  |  | Ship Set 4 - GDU SN 4* Completed GDU Assembly
* Performed Baseline FFT in Vacuum
* PER
* EMC Test
* FIT Test
* Vibration
* Started Detector Characterization

Sensor* Ship Set 3 - SN 7
	+ Final Assembly
* Ship set 3 - SN 8
	+ Sent boards out for Parylening; boards are back in-house and inspected
* Ship set 1 - SN 9
	+ Performed MCP Supply Board BLT

Gun - UNH efforts* Populated HV-FIL board SN 10
* Delivered HV-FIL board SN 9 to IWF

Gun - IWF efforts* Ship set 3 - SN 7
	+ Finished board level tests
	+ Assembled lower three boards with HV stack
	+ Started stack testing; anomaly found that was caused by test setup (HV probe capacitance causing off-resonance operation with high power consumption) resulting in possible overstress of two resistors (R20 and R46) on HV-FIL board SN8; NCR was issued in PIMS (PFR-10160.53-116);
		- HV-FIL board SN9 will be used in Gun SN7 to speed up recovery;
		- HV-FIL board SN8 will be repaired (R20 and R46)
* Ship set 4 - SN 6
	+ Diagnosed problem with insufficient HV stack output; R20 has increased resistance (700 Ohms instead of 20 Ohms); Very likely caused by the same test setup problem as reported for Gun SN7 (HV-FIL SN8) above;
		- HV-FIL board SN7 will be repaired
* Ship set 3 - SN 8 and ship set 1 - SN 9
	+ Populated LV side of BEAM boards

Optics* Continued work on ship set 4 and Flight Spare

Software* Continued implementation and testing of electric field mode

HVOCs (UNH)* Shipped the first group of opto-isolators to IWF.
	+ Of this shipment of 38 devices, 26 were installed in Gun SN7, 12 remain at IWF.
* Completed build, test and data review of 45 opto-isolator devices (batch-2, 545- 590). Of these 45 devices 43 devices were screened.
	+ All passed screening except for 3 devices, which were removed for excessive leakage.
	+ Based on revised selection criteria, 39 devices were selected and assigned to specific positions in the subsequent Guns.
	+ 39 devices are waiting paper work to be shipped to IWF.
* Prepared kits for next 45 HVOC's (batch-3, 591- 635). Began assembly.
* Prepared for screening of the batch-3 devices.
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| 7. | SDP/BEB/LVPS  |

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|  | a. | SDP/BEB/LVPS (KTH/IRFU/Oulu)KTH/IRFU: LVPS, SDP BEB’s, ADP BEB’s and SDP Preamp/Boom Cable Assemblies:* Done.

KTH/Oulu/IRFU: Sphere / Yo-Yo Mechanism:* No new developments.

KTH/IRFU/Oulu Management:* Supported project as needed.
* Attended E-Field Team meeting at UNH and SWT meeting at APL

KTH Product Assurance (OHB Sweden):* Completed all subcontracted tasks. No further activity planned.
 |
|  | b. | SDP/BEB/LVPS (UNH)LVPS, * No activity

AEB, S-BEB’s, Preamp/Cable Assemblies, GSE:* Done for all flight units

FM SDP:* A busy and productive month…
* FM13 & FM14 have successfully completed Cho-foiling, cleaning, final UV inspection and bagging and have been shipped to GSFC.
* Completed final assembly, FFT, PER, VIBE, Post Vibe FFT and TVAC testing for FM 15, 16
* Completed Integration of FM's 17 & 18
* Conducted FM 17, 18 FFT, PER, VIBE, Post Vibe FFT and TVAC
* Completed CE01/03, chassis leakage and magnetic testing for FM 17, 18.
* Returned door assemblies SNs 1 and 18 to LASP. LASP will use parts from each to assemble and test a qualified flight spare door assembly (SN19) to use for the Flight Spare SDP (SN2).
* Spare FM2 kit is largely complete with the Outer Cylinder final drilling and tapping now complete; QA will follow in October.
* Sent out RWC parts for plating at PFE for flight spare FM2 SDP, parts complete and in house.
 |
|  | c.  | SDP (LASP)* Received and inspected two SDP Door assemblies from UNH
* Generated work orders and assembly travelers for reassembly of the flight spare SDP Door and an EM SDP Door.
* Work will start on the SDP Doors when Bill Vermeer returns from a high altitude balloon launch in early October. LASP expects to meet the planned Oct. 15th delivery date.
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| 8. | ADP |
|  | a. | LASP ADP Post-Delivery Support Activities at Goddard* LASP made two post-delivery support trips to Goddard in September. The accomplishments during these trips are outlined below.
	+ Obs #1
		- Performed +Z ADP RE post-vibration/acoustics deployment test.
		- Inspected the condition of the +Z ADP RE after vibration and acoustic tested. The RE was found to be in good condition. The results of this inspection were used to help retire the ADP RE vibration loads risk.
		- Removed +Z ADP RE from Obs #1 and stored it in its shipping container.
	+ Obs #2
		- Performed post-acoustics -Z RE Launch Latch release test.
	+ Obs #3
		- Installed the +Z ADP Boom canister and Launch Latches. Self-locking screws were used on the ADP Launch Latches in order to avoid the low running torque issue encountered on Obs #4.
	+ Obs #4
		- Installed -Z ADP RE (SN02) on Obs #4.
		- A PR was generated during the -Z ADP RE installation due to low running torque measured on the ADP Launch Latch fasteners. An FRB was convened. The agreed upon disposition of was use-as-is.
		- Performed -Z ADP RE STM and LPT.
		- Performed -Z ADP LL release test.
		- Performed the –Z ADP RE Functional test. The functional was performed during the second September post-delivery support trip due to the delay caused by the low running torque PR.
	+ Further investigated ADP inner guard gold discoloration issue for ADP RE SN01 (+Z Obs #4). An informal experiment was performed on a spare nonflight guard. Discoloration similar to that seen on the Obs #4 +Z guard resulted. These results will be used to support a use-as-is disposition of the PR.

Axial Electronics Box (AEB)* No activity
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| 9. | DSP, Thermal, Systems Engineering, Product Assurance and Management (LASP) |
|  |  | DSP - No activities this month.Thermal – No activities this month.Systems Engineering and Program Management* Moved expenses incurred in the September reporting period in order to support reporting on the new Phase-D Science Support work package.
* Supported program as needed

Quality Assurance, Parts, and Materials Engineering* Supported program as needed.
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| 10. | CEB  |
|  | a. | Hardware |
|  |  |  | * No activity. CEB hardware activities are complete.
 |
|  | b. | CDPU Software,  |
|  |  |  | * Software is stable
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| 11. | GSE (Mello, Chutter, Bodet) |
|  |  | GSE Hardware* No activity

FIELDS Simulator* No activity

GSEOS & GSE Software* Support OBS/FIELDS testing
* Telemetry screen improvements
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| 12. | Commissioning and Mission Operations (Needell) |
|  |  | * Participated in MRT8 planning telecons.
* Delivered MRT8 Scripts to SOC and supported dry-runs on IS Flatsat
* Assisted SOC in developing MRT9 RTS loads for Region of Interest transitions.
* Supported MRT9 Dry run on Observatory 4
* Participated in biweekly Commissioning telecons.
* Participated in SWT/Commissioning TIM at APL
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| 13. Problems encountered and updates this period |

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|  |  | SDP* Stopped deployment do to erroneous torque trip on SN 18 (PFR-10160.53-115-OP)
	+ Approximately 30 sec into the 19m segment cold deployment of the SN 17&18 TV test, a torque trip error occurred which stopped the deployment. Note: There were no anomalous mechanical data. TV test of SDP SNs 17&18 was completed.
	+ During analysis of the FSW data, a BEB Timeout was reported indicating that the CDPU did not receive a response from the BEB as expected. This is similar to what was seen with FM3 during the FM3 & FM4 TV testing as reported in PFR-10160.53-61-CL. We have reviewed the data and find this to be an error in the communications between the EM CEB and the SDP, we have continued with deployments.
	+ Impact ‘0’

EDI* Off-resonance HV supply operation (Gun SN7) (PFR-10160.53-116-IP)
	+ During a test of the partially assembled board stack (lower three boards and HV stacks) the HV supply input current was 95 mA instead of the typically nominal 9.6 mA.
	+ Caused by test setup (HV probe capacitance causing off-resonance operation with high power consumption) resulting in possible overstress of two resistors (R20 and R46) on HV-FIL board SN8;
	+ The HV-FIL board SN8 was removed and replaced with SN9; Gun testing resumed.
	+ HV-FIL board will be repaired (R20 and R46)
* Red Limit Violation of MCP supply current housekeeping monitor (EDI GDU FM4) (PFR-10160.53-117-IP)
	+ During detector characterization tests, the MCP current monitor had a single-sample red limit violation. This type of violation has occurred on other units referenced in NCRs 53-83, 53-88, and 53-105.
	+ UNH is investigating while GDU SN4 testing continues.
* [UPDATE] Failure of HV supply (Gun SN6) (PFR-10160.53-113-OP)
	+ During final integration test of the FM6 gun electronics, in two cases a failure of the HV supply has been observed. The high voltage output of the stack reaches only 60% of the nominal value.
	+ As of 8 Oct 2013:
		- Diagnosed problem with insufficient HV stack output; R20 has increased resistance (700 Ohms instead of 20 Ohms); Very likely caused by test setup (HV probe capacitance causing off-resonance operation with high power consumption) resulting in overstress of two resistors (R20 and R46) on HV-FIL board.;
		- The HV-FIL board will be repaired
* Board-level test failure SN6 Gun Beam Board - damaged LVDS chip (PFR-10160.53-110-OP)
	+ The LVDS driver chip was damaged during board-level test on the SN6 Beam board due to a missing ground between the EGSE and the +/-5.2V power supply of the test board.
	+ Proposed Actions/Corrections:
		- Replace the part and inspect. DONE.
		- Correct the test setup and confirm. DONE.
		- Resume board level testing of the Beam Board. DONE.
		- Provide analysis assessing risk, if any, to other components on the board.
	+ UPDATE:
		- SN6 Gun has been placed back in cleanroom environment. Testing will resume when time is available.
		- Awaiting NCR details and analysis from IWF.
* EDI GDU SN2 open work (PFR-10160.53-101-IP)
	+ GDU SN2 exhibited problems during the Gun calibration and component level TV test. See PFR-10160.53-56 [Thermal Vacuum Com Locks and Fold-Backs (EDI GDU SN2)] and PFR-10160.53-47 [GDE fold-back during SN2 Gun Calibration]. The unit was delivered to GSFC to participate in I&T, but needs to be returned to UNH and IWF for rework.
	+ Rework plan:
		- -Install new UNH-built optocouplers on DEFL1 and DEFL2 board and in any other gun HV amplifiers that have exhibited LED current trends.
		- -Remove 27 Ohm resistor from GUN25V supply line in GDE/Gun harness
		- -Install 20 Ohm resistor on HV-FIL board in Gun
	+ Retest plan:
		- -Gun calibration at IWF
		- Sensor stand-alone vacuum testing at UNH
		- GDU integration and environmental testing
* EDI GDU SN3 open work (PFR-10160.53-103-IP)
	+ GDU SN3 exhibited problems during the component level TV and vacuum tests. See PFR-10160.53-81 [GDE Converter Fold Back and Comm Locks observed during TV test (GDU SN FM3)] and PFR-10160.53-83 [Sensor FPGA reset (EDI GDU FM3)]. The unit was delivered to GSFC to participate in I&T, but needs to be returned to UNH and IWF for rework.
	+ Rework plan: Install new UNH-built optocouplers on DEFL1 and DEFL2 board and in any other gun HV amplifiers that have exhibited LED current trends.
	+ Retest plan:
		- Gun calibration at IWF
		- Sensor stand-alone vacuum testing at UNH
		- GDU integration and environmental testing
* EDI GDU SN5 open work (PFR-10160.53-106-IP)
	+ GDU SN5 exhibited problems during the component level TV and vacuum tests. PFR-10160.53-105 [Red Limit Violations on GDU SN5] and PFR-10160.53-96 [Converter Foldbacks (GDU FM5)]. The unit was delivered to GSFC to participate in I&T, but needs to be returned to UNH and IWF for rework.
	+ Rework plan: Install new UNH-built optocouplers on DEFL1 and DEFL2 board and in any other gun HV amplifiers that have exibited LED current trends.
	+ Retest plan:
		- Gun calibration at IWF
		- Sensor stand-alone vacuum testing at UNH
		- GDU integration and environmental testing
* UPDATE: Anomalously low LED current of channel D5 in Gun FM4 (PFR-10160.53-104-IP)
	+ Cause: intermittent contact of HV feedback resistor solder pad to board.
	+ Corrective action: reflowed the solder in two joints.
	+ Subsequent Gun test and calibration performed successfully.
	+ Waiting for successful GDU T/V test before closing
* [UPDATE] Negative Current spikes seen on Plate 7 Optocoupler during calibration (GUN SN4) (PFR-10160.53-85-AP)
	+ Three opto-couplers (HVOC 204, 210, 229) and one transistor (Q5, 2N2222) were replaced and submitted to GSFC for DPA. DPA results for HVOC 229 still pending.
	+ Successful Gun re-calibration performed.
	+ Waiting for successful GDU T/V test before closing. Risk of latent damage unknown -> opened risk on GDU SN4 (ID: 121)
* [UPDATE] Failure to set the Wehnelt voltage (EDI Gun SN4, Q4 on HV-FIL board SN4) (PFR-10160.53-78-IP)
	+ Damage of transistor Q4 on HV-FIL board.
	+ Suspected cause: arc or ESD.
	+ Successful BLT of board SN4 after replacement of Q4, but board SN4 was not used for Gun SN4. Board SN5 was used with Gun SN4.
	+ No impact on other Gun boards seen, but risk of latent damage unknown -> opened risk on GDU SN4 (ID: 121)
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| 14. Issues and concerns |
|  |  | From FIELDS PM* The Gun/GDE continues to be the critical path for GDU and FIELDS. UNH will continue to coordinate support with IWF. UNH will provide support of testing and assembly activities on site at IWF as needed. In addition, UNH and IWF have now agreed that UNH will assemble the Gun boards to be used in the refurbishment of GDU SNs 3 and 5. The intent is to have assembled and tested boards to be used as replacements and avoid rework of the boards currently in these Guns. The parts needed to assemble these boards are available or on order. These boards will employ UNH-built HVOCs.

From LASP* LASP continues to provide ADP post-delivery support and is starting to ramp up Phase-D science activities per the proposal submitted to UNH in July. Since the proposal has not been accepted by SwRI and LASP has not received a contract modification from UNH, some of these activities are outside LASP’s contractual scope of work.

Data Processing (Chutter)* DSP digital filters responses are needed for SCM calibration software.
* Conversion of TT2000 (64 bits long integers) to double precision floating point numbers introduces errors (tenths of nanoseconds). This conversion is needed to correct for leap seconds and also for tplot variable timing.
* PROBLEM?: In preliminary input test files, time resolution varies (hundreds of nanoseconds).
	+ Mark Chutter : This may come from a change in temperature during data acquisition which changes the clock frequency.
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NCR Summary: Provided separately (Excel file)

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| Activities planned for next reporting period |
|  |  | Management |
|  |  |  | * Attend MMS SWT meeting at APL
* Begin discussion of science data algorithm topics as part of the weekly FIELDS team meetings.
* Continue to support SwRI review of the FIELDS cost change proposal submitted 31 July.
* Continue to push open NCRs to closure. Support FRBs as needed.
* Continue to prioritize and coordinate the work of the UNH team and its FIELDS partners.
* Closely monitor status and schedule performance of team members. Identify schedule risks and provide assistance for mitigation if warranted. Work to minimize schedule slippage.
* Support/staff T/V testing as needed
* Update the Gun and GDE schedule.
* Receive delivery of the following items at UNH
	+ SDP Door Assembly SN19 (from LASP, for flight spare SDP SN2)
* Delivery of the following flight hardware items from UNH to FIELDS partners
	+ BGS SN11 and HV&Fil SN10 to IWF
* Prepare and conduct the following PERs
	+ None
* Support the following TRRs
	+ GDU SN4 TV test
* Prepare and conduct the following PSRs or Acceptance Reviews.
	+ PSR: SDP Ship Set #4 (SNs 15, 16, 17 & 18)
	+ AR: EDI GDU SN4 (PSR planned fore early Nov)
* Make or coordinate delivery of the following to GSFC IS or S/C teams
	+ SDP SNs 15, 16, 17 & 18
	+ EDI GDU SN4
	+ Maheu hats (GSE for EDI TV)
* CDRL and contract deliverable submissions:
	+ None planned
 |
|  |  | Product Assurance, Configuration Management, Parts, Materials, Facilities |
|  |  |  | Turco/Salwen* EDIP uploading as necessary
* Support EDI testing as needed
* HVOC assembly as needed
* EDI sensor FM9 inspection support
 |
|  |  | Systems Engineering & FIELDS I&T |
|  |  |  | Rau, Dors, Needell* Perform SDP 17-18 EMI testing
* Perform SDP SN17-18 FIELDS testing (Magnetics)
* Perform SDP SN15-18 Acceptance Test and CPT
* Perform EDI GDU SN04 Acceptance Test and CPT
* Release EMI and FIT test reports for SDP SS4 and GDU SN04
* Continue submitting FIELDS verification material for closure
 |
|  |  | Post-Delivery Support (UNH) |
|  |  |  | IS and Observatory Support (FIELDS)* Support OBS-1 ADP RE re-installation and testing
* Support OBS-2 TV test preparation including personnel scheduling
* Support OBS-2 TB preparation and testing
* Support AFG and SCM magnetometer integration onto OBS-3 boom
* Support OBS-4 CPT/Functional
* Support OBS-4 Acoustics
* Deliver SDP SN15-18 and GDU SN04 to GSFC
* Submit ADP Observatory Simulator Test procedure and to MIS
 |
|  |  | Science |
|  |  |  | SWT and SWG* Support science telecons as needed
* Continue preparation FIELDS Instrumentation papers

Science data processing activities* UNH:
	+ Have sample L1A CDF packets for all (except EDI) FIELDS science packets with correct sample timing by November 1, meta data will not be fully populated
* LPP:
	+ Writing of the piece of software to write output CDF file.
	+ Digital filter response will be included in the calibration software if provided.
* UCLA:
	+ Continue developing inflight calibration and inflight calibration procedures
* GSFC
	+ Awaiting L1A data files
* LASP
	+ Awaiting L1A data files
* IRFU:
	+ Test different options for running Matlab at SDC, interact with Lon Riesberg (SDC) on this issue.
	+ Outline the detailed processing pipeline for SITL/QuickLook products.
	+ Get test L1 files from Mark Chutter and start implementing actual code for production of SITL/QuickLook data.
 |
|  |  | AFG |
|  |  |  | * Support SWT at APL
* Resume work with Ken Bromund when GSFC reopens
* Continue developing inflight calibration procedures
* Continue software analysis activities
* Continue to support SODAWG
* Develop milestones for prelaunch preparations
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|  |  | DFG |
|  |  |  | * Attend the SWT meeting at APL
* Remote support of DFG functional testing at Goddard
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|  |  | SCM |
|  |  |  | * Complete the FM Spare bake-out
* NCR (FM Spare sensor vibration) => MMS-SCM-NC-PRE-140
* FM Spare ADP
* Organization of the FM Spare (with the harness) delivery to UNH
* NCR alignment measurements report (MMS-SCM-NC-TRI-623-LPP and MMS-SCM-PR-TRI-622).
* Support (remotely) UNH team for the preparation of s/c EMI testing
 |
|  |  | EDI |
|  |  |  | Ship Set 4 - GDU SN 4* Detector Characterization
* Thermal Vacuum Test
* Magnetics Testing
* FIELDS Level Testing
* Pre-Ship Inspections
* Acceptance Review
* Shipment to GSFC

Ship Set 3 - GDU SN 7* Start GDU Assembly

Sensor* Ship set 1 - SN 9
	+ DC Beta Test of HV Capacitor and Preamplifier Board
* Ship set 3 SN 7
	+ Sensor Electrical Test and Vacuum Test
* Ship Set 3 SN 8
	+ Final Assembly

Gun - UNH efforts* Board Level test of HV-FIL board SN10

Gun - IWF efforts* Ship Set 3 - SN 7
	+ Complete Gun assembly; calibrate gun, deliver to UNH
* Ship Set 3 - SN 8 and ship set 1 - SN 9
	+ Populate HV sides of boards (DEFL1, DEFL2, OPT\_DEFL, BEAM)
* Repair HV-FIL boards SN 7 and SN 8

Optics* Deliver Optics SN 7 to UNH. Support integration with Sensor.
* Continue work on ship set 4 and Flight Spare

Software* Continue implementation and testing of electric field mode

HVOCs (UNH)* Continue assembly of the 3rd batch of 45 HVOCs
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|  |  | SDP/LVPS/BEBs/Preamp/Probe (KTH/ Oulu/IRFU) |
|  |  |  | SDP:* Prepare for and participate in the PSR for the ship set 4 SDPs: FM 15-18.

S-BEB’s & Preamp & Probe:* Complete testing of probes F1 and F2 (one is designated for the flight spare)

A-BEBs and LVPS:* Done
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|  |  | SDP/LVPS/BEBs/Preamp/Probe (UNH) |
|  |  |  | UNH SDP:* Prepare for and conduct the PSR for the fourth and final SDP ship set: FM 15-18.
* Begin assembly of flight spare SDP (SN2)

LVPS* Do final test of FM5 LVPS before placing in storage
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|  |  | ADP/SDP/DSP (LASP) |
|  |  |  | QA/Parts/Materials* Support the project as necessary.

DSP – No activity plannedADP* Support I&T at Goddard as needed
* Complete guard gold plating discoloration investigation. A use as-is disposition will be recommended.

AEB – No activity plannedSDP* Perform SDP Door reassembly for the new flight spare and new EM.
* Deliver 2 SDP Door assemblies and build documentation to UNH.

Thermal – No activity plannedSystems and Program Management* Focus on EIDP and verification tasks during government shutdown
* Support any UNH requests for cost justification with the FIELDS proposal to SwRI
 |
|  |  | CEB Hardware and Software |
|  |  |  | * All flight hardware is delivered. Flight spare kits are complete. No further activity is planned.
* CEB flight software is stable.
 |
|  |  |  |  |
|  |  | GSE (Mello, Chutter, Bodet) |
|  |  |  | GSE hardware* No planned activity

GSEOS & GSE Software* Support OBS/FIELDS testing
* Telemetry screen improvements
* Create SDP Commissioning TLM screen

FIELDS Simulator (FS)* No planned activity
 |
|  |  | Commissioning and Mission Operations (Needell) |
|  |  |  | * Continued support for MRT8 planning.
* Deliver Low Voltage Commissioning Activities Template to SOC
* Support additional MRT9 dry run planned for late October
* Develop/test scripts for SDP/ADP commissioning activities (DAC settings)
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|  |  |  |

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