InSight and Mars 2020 Archive Status

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InSight Archives

Instrument		Team Rep	PDS Curator
HP3 / RAD	Heat Flow and Physical Properties Package / Radiometer	Matthias Grott, Troy Hudson, Nils Mueller (DLR)	Geosciences (lead node)
SEIS	Seismic Experiment for Investigating the Subsurface	Philippe Lognonné (IPGP), Renee Weber (MSFC)	Geosciences
IDA	Instrument Deployment Arm	Ashitey Trebi-Ollennu, Julie Costillo (JPL)	Geosciences
IDC, ICC	Instrument Deployment Camera, Instrument Context Camera	Justin Maki, Payam Zamani (JPL)	Imaging
APSS / TWINS	Auxiliary Payload Sensor Subsystem / Temperature and Wind for InSight	Don Banfield (Cornell), Luis Mora (CAB)	Atmospheres
MAG	Magnetometer	Chris Russell (UCLA)	PPI
RISE	Rotation and Interior Structure Experiment	Sami Asmar (JPL)	Geosciences
SPICE		NAIF	NAIF

The InSight DAWG is led by Sue Smrekar, Project Scientist, and Susie Slavney. It meets monthly.

InSight Archive Development Schedule

Start	End	Task
7/23/2014	1/30/2015	Teams prepare first drafts of SISs, PDS labels
2/1/2015	3/31/2015	Teams prepare review-ready EDR SISs, sample products, PDS labels
5/1/2015	6/30/2015	PDS conducts EDR peer reviews
	8/1/2015	EDR peer reviews are complete
	8/18/2015	GDS 4.0 freeze
	3/8/2016	Launch
	9/20/2016	Landing

- Camera archive schedule is different due to delay in instrument delivery. Peer reviews probably to occur in fall 2015.
- The RDR schedule is TBD; some teams may do RDRs at the same time as EDRs.

InSight Archive Development Status

Heat Flow and Physical Properties Package / Radiometer (HP^3/RAD)

- SIS nearly complete; describes raw, calibrated and derived data products; includes detailed instrument descriptions.
- Draft label examples for all products types are in progress.
- Team is working to define instrument-specific label parameters to be included in InSight Mission Dictionary.
- **Work is on target for peer review starting early May.**

Seismic Experiment for Investigating the Subsurface (SEIS)

- Draft SIS describes raw data. Calibrated and derived data are TBD.
- **Worked with PDS MC and DDWG to allow SEED as a supplementary format, with the archive format being ASCII tables.**
- Draft labels are in progress for raw data in ASCII table format and in SEED format. Waiting for more example data products.
- Team is working on instrument description and instrument-specific label parameters for InSight Mission Dictionary.
- Work is on schedule. Peer review to start mid-May.

InSight Archive Development Status

Instrument Deployment Arm (IDA)

- **EAR review cleared raw data to be archived in CSV table format.**
- Archive will include CSV table of data in physical units and algorithms for deriving higher level products.
- With recent EAR clearance work on SIS and labels can proceed, with peer review likely in fall 2015.

Rotation and Interior Structure Experiment (RISE)

- **Worked with RS Advisor and Engineering Node to solve issue of PDS4 label for raw DSN TRK-2-34 files: Team will reformat files so that all records of the same type are grouped together, to allow file to be described by PDS4 label.**
- Working with DDWG on how to label DSN ancillary ionospheric and tropospheric data.
- Working with Engineering Node to help define a content validation tool to verify that labels correctly describes data files.
- Archive documentation will include standard DSN SIS documents and an overall InSight-specific SIS. Drafts have been delivered to PDS. Peer review to begin mid-May.

InSight Archive Development Status

Auxiliary Payload Sensor Subsystem / Temperature and Wind for InSight (APSS/TWINS)

- Draft SIS and labels for raw data products are in progress.
- Work is on schedule for peer review beginning early June.

Magnetometer (MAG)

- SIS is in progress. Similar to SISes for other magnetometer archives. Peer review to begin late May.

Instrument Deployment Camera, Instrument Context Camera (IDC/ICC)

- Draft Camera SIS and Camera Archive Bundle SIS are in progress.
- Detailed analysis of PDS4 attributes to describe the camera products is underway. Updates for Geometry, Imaging, and InSight mission dictionary are being worked.
- MIPL still waiting for camera telemetry specs from Lockheed in order to update code that had been based on Phoenix camera. Working with Justin Maki to understand the limited test data that are available.
- Color camera hardware is scheduled for delivery June or July; more test data will come later. Delay will push peer review back to fall 2015.

Issues

- PDS4 tools are needed:
  - Bulk label generation from template
  - Content validation to determine whether label correctly describes data product

Mars 2020 Instrument Teams

Instrument Team	PDS Node
PIXL (Planetary Instrument for X-ray Lithography) Abigail Allwood, JPL	**Geosciences (lead node)**
RIMFAX (Radar Imager for Mars' Subsurface Exploration) Svein-Erik Hamran, Forsvarets Forskning Institute, Norway	
SHERLOC (Scanning Habitable Environments with Raman & Luminescence for Organics and Chemicals) Luther Beegle, JPL	
SuperCam Roger Wiens, LANL	
Mastcam-Z Jim Bell, ASU	**Imaging**
Engineering Cameras Justin Maki, JPL	
MOXIE (Mars Oxygen ISRU Experiment) Michael Hecht, MIT	**Atmospheres**
MEDA (Mars Environmental Dynamics Analyser) José Antonio Rodríguez-Manfredi, INTA (Spain)	
SPICE	**NAIF**

Mars 2020 Archive Development Status

- DAWG kickoff meeting held April 16 with Deputy Project Scientist, some Instrument PIs, representatives from teams, PDS nodes, and IDS (aka MIPL).
- Co-chaired by Nicole Spanovich, Mars 2020 Science Manager, and Susie Slavney, Geosciences Node.
- Will meet every 2 months at first; later monthly.
- Short term goals to complete by Project PDR this fall:
  - Draft Archive Plan
  - ICDs for each team-PDS partnership