



SCIENCE

New Frontiers Program Status

Curt Niebur

Lead Program Scientist, NASA Headquarters

VEXAG Meeting

November 29, 2016



New Frontiers Program



- PSD issued the Homesteader NRA to mature technologies such that they can be included as part of a selectable, low risk mission concept proposal submitted in response to the NF AO.
- Eight out of 84 proposals selected for near-term tech dev.

PI	Institution	Proposal Title
Steve Squyres	Cornell	Sample Acquisition and Containment for Comet Surface Sample Return
Ryan Park	JPL	Advanced Pointing Imaging Camera (APIC)
Farzin Amzajerian	LaRC	Navigation Doppler Lidar Sensor
Stojan Madzunkov	JPL	Atmospheric Constituent Explorer System (ACES)
Chris Webster	JPL	TLS Risk Reduction for SP and VISE NF Missions
Elena Adams	APL	Planetary Object Geophysical Observer (POGO)
Scott Singer	Spectrolab	Active Tracking MEMS Micro-concentrator for LILT Missions
Lori Glaze	GSFC	Venus Entry Probe Prototype



New Frontiers Data Analysis Program



- The New Frontiers program finally has data to analyze!
- First ever New Frontiers Data Analysis Program is part of ROSES 2016.
- Focused on New Horizons this year, it will be expanded to cover other NF missions as data are archived in the PDS.
- New Horizons archiving schedule:
 - April 2016: P1 delivery of data downlinked through 7/31/15
 - Oct. 2016: P2 delivery of data downlinked through 1/31/16
- Recall that data must be in the PDS prior to proposal due date in order to be eligible for use in proposals



New Frontiers Mission Status



**New Horizons – Data
downlink completed in
Oct., flyby of 2014
MU69 in 2019**

**OSIRIS-REx – Launched
Sept. 8, 2016. Arrival in
2018. Sample return in
2023**



Juno – Now in Jupiter orbit!



New Frontiers 4 AO - Parameters



- The 4th New Frontiers AO (NF4) is scheduled for release in January 2017.
- A community announcement with key parameters was issued in January 2016.
- Some key elements from that announcement:
 - PI-Managed Mission Cost (PMMC) cap of \$850M (FY15\$) for phases A-D,
 - Foreign contributions may not exceed one-third of the PMMC, and the value of foreign contributions to the science payload may not exceed one-third of the total payload cost,
 - MMRTGs and RHUs are available and paid for under the PMMC,
 - Some technologies will be incentivized, and
 - Launch readiness date of 2024 (2025 if nuclear).
- NASA has not approved the issuance of the New Frontiers AO and this notification does not obligate NASA to issue the AO and solicit proposals.



New Frontiers 4 AO - Schedule



- August 2016: Draft AO released
 - *Comments for NASA's consideration were encouraged on this draft AO* as the final AO is prepared in Fall 2016.
 - 46 unique comments were received
- November 2016: 4th Community Announcement released with some information requested in draft AO feedback
- January 2017: Final AO targeted for release with proposals due 90 days later
- November 2017: Selection for competitive Phase A studies
- October 2018: Concept study reports due
- May 2019: Announcement of flight selection

- ***All dates are targets, not guarantees.***
- ***At this time NASA has not approved the issuance of the NF4 AO***



Items of Note in the Draft AO

- Some items were deferred to Step 2 in an effort to reduce workload on proposers (e.g., SEOs, TDOs, Student Collaborations, Communications Plan).
- Increased discussion of traceability of proposed science objectives to the Decadal Survey is required (Requirement 2).
- Technology incentives of \$10M for NEXT and \$20M for HEEET.
- Additional guidance provided on defining a threshold mission.
- A Deputy PI is required.
- Phase A studies budgeted at \$4M (RY\$)
- Medium performance LV is provided; increase in performance or size of LV is funded by PMCC.
- Expectations for level of detail in schedule are reduced.
- Heritage appendix limited to 30 pages.
- Clarification provided on Data Analysis Plan (Requirement B-16) and Data Archiving Plan (Requirement B-23)

Questions?



**Image of Jupiter acquired by the
JunoCam instrument on Juno**