



VEXAG Update

NASA PSS Meeting

5 April 2013

Lori S. Glaze, NASA GSFC
VEXAG Chair



- Activities Oct. 2012 – Mar. 2013
 - November: VEXAG General Meeting
 - January: Glaze replaced Limaye as Chair
 - January: Upper Atmosphere Science and Technology Interchange Meeting (UA STIM)
 - February: VEXAG Newsletter published
 - February: Draft update of Goals, Objectives and Investigations distributed for comment
 - March: VEXAG Town Hall meeting at LPSC
 - April: Overhaul of VEXAG Web site



- Slight restructuring of VEXAG:
 - Three long-term Focus Groups
 - Goals and Exploration Sites
 - Technology Development
 - Early Career Scholars
 - Three 1-year Topical Analysis Groups for 2013
 - Venus Exploration Roadmap
 - Competed Missions and ROSES
 - International Collaborations
 - Added two “Members at Large”



- Executive Committee:

Lori Glaze (GSFC)	Chair
Pat Beauchamp (JPL)	Lead Technology FG
Gordon Chin (GSFC)	Lead Competed Missions TAG
David Crisp (JPL)	Member at Large
Robert Grimm (SwRI)	Member at Large
Robert Herrick (U Alaska)	Lead Goals FG
Stephanie Johnston (U Maryland)	Lead Early Career Scholars FG
Sanjay Limaye (U Wisconsin)	Lead International TAG, Past Chair
Sue Smrekar (JPL)	Past Chair
Ellen Stofan (Proxemy)	Lead Roadmap TAG



- Findings from November meeting encourage PSD support of:
 - 1) Entry Technology development sponsored by STMD; consider incentivizing new entry technologies for Discovery-13 and New Frontiers-4
 - 2) Participating Scientist programs for Venus Express and Akatsuki
 - 3) Access to NASA assets capable of unique observations (Hubble, Goldstone, balloon-borne); continue to support investigators proposing to use these assets for Venus studies
 - 4) Follow-up conference on Comparative Climatology of Terrestrial Planets; proposed meeting would be at Ames in 2014 or 2015
 - 5) International Venus Exploration Working Group (chartered through COSPAR); consider official NASA involvement in this international group



- Resolutions from November Meeting :
 - 1) **Update Goals, Objectives, Investigations Document**
 - 2) **Prepare an integrated Venus Exploration Roadmap**
 - 3) Endorse a range of Discovery class missions that address high priority investigations identified by VEXAG
 - 4) Encourage study of the Decadal Venus Climate Mission concept
 - 5) Encourage Advanced Stirling Radioisotope Generator (ASRG) validation with the planned M-1 Mission*
 - 6) Endorse planetary observations from stratospheric balloons
 - 7) Endorse the January 2013 Upper Atmosphere Science and Technology Interchange Meeting (UA STIM)

* VEXAG is concerned about rumors of a possible ASRG-only Discovery call that would effectively eliminate Venus as a destination.



- Top priority for 2013 is to update Goals, Objectives and Investigations for Venus Exploration – Led by Robbie Herrick
- Last updated in 2009
- Goal is to complete revision well before Discovery AO
- In parallel, a separate document of “Technologies for Venus Missions” will be prepared as a companion



- Goals, Objectives, Investigations (GOI) Schedule:
 - ✓ – Early March: Draft of prioritized list (based on Nov mtg) made available for comment
 - ✓ – Mid March: Town hall at LPSC for comments
 - Early April: Assess comments, revise list
 - May – June: Write draft supporting text
 - July: Final list and draft text made available for comment
 - August: Revise supporting text
 - September: Post final draft
 - November: VEXAG meeting: Approve final GOI document
 - November: Hold technology workshop



- 2nd Priority for 2013 is to prepare an integrated Venus Exploration Roadmap – Led by Ellen Stofan
- Roadmap will
 - Start with Decadal Roadmap (focused on New Frontiers and larger missions)
 - Build on the Goals, Objectives and Investigations for Exploration
 - Allow for international involvement
 - Indicate how a range of Discovery class missions are consistent with exploration goals
- Goal is to complete Roadmap prior to Discovery and New Frontiers AOs



- Roadmap Schedule

- ✓ – March 11: First meeting
- ✓ – March 20: Town hall at LPSC for comments
- March – May: seek community input via web and PEN announcement
- April – June: Telecons to review input and coordinate with technology Focus Group
- October: Finalize draft for discussion at November VEXAG
- November: Review by full VEXAG
- December: Final Roadmap completed



- Venus mission status
 - Venus Express:
 - Extended mission approved through 2014;
 - Expected to operate well into 2015.
 - Venus Express still hoping to demonstrate aerobraking
 - Coordinated observation campaigns for mesospheric sulfur chemistry (Sep-Oct 2013), and south polar dynamics (Dec 2013 – Jan 2014)
 - Akatsuki continues on a schedule that includes a Venus Fly by in November 2015 and possible Venus Orbit Insertion in 2016 (6 day orbit in equatorial plane)
 - There is some interest among international agencies to discuss a Venus mission study with NASA



- Upcoming Activities
 - May 7: Comparative Climatology Symposium at NASA HQ; follow-up to successful meeting held last June in Boulder; intended to inform headquarters program managers about key issues in terrestrial climate studies that may fall between disciplines
 - November 19-20: VEXAG meeting at NASA HQ; Objective is to finalize revised Goals, Objectives, and Investigations Document, and the Venus Exploration Roadmap
 - November 20-21: VEXAG Technology Workshop
 - Early-Mid 2014: Venus Exploration Sites Workshop
 - 2014/15: Comparative Climate of the Terrestrial Planets II