

Subject: Venus Upper Atmosphere Investigations
Science and Technical Interchange Meeting (STIM)

Duration: 1 Day – Jan 24, 2013 Location: NASA Glenn
Participants: All welcome, required are experts/representatives in the topic areas shown
Website: Registration and informational website will be online soon. Address is
<http://spaceflightsystems.grc.nasa.gov/SSPO/SP/VenusUpper/workshop.html>

Purpose(s):

- 1) Foster a science discussion on goals, objectives, priorities, and significance of the Venus upper atmosphere and how Venus upper atmosphere science would contribute to overall exploration of Venus.
- 2) Discuss the desired measurements and measurement requirements to achieve potential Venus upper atmosphere science
- 3) Discuss spacecraft concepts and technologies that could reach the Venus UA and collect and return the desired data

Draft Agenda

Introductions, review purposes and expected results	Kremic	(15-20 min)
Science case for upper atmosphere (UA) science (2.5 hrs)	TBD	(2.5 hrs)
-What we know today	TBD	
-What we / Decadal say we need to understand	TBD	
-Contribution to overall Venus exploration goals and relative priority of UA science	TBD	
Science Implementation	TBD	(2 hrs)
Measurements needed	TBD	
Types of instruments, durations, (In-situ – identify species e.g. MEMS chemical sensor, gas chromatograph, TBD names)	TBD	
Methodology, and expected results (Type and volume of data returned)	TBD	
Investigation characteristics	TBD	(2 hrs)
Vehicles concepts to maneuver in Venus UA UAVs, Balloons Potential characteristics – (Expected life in UA, trajectory, available power, comm.,)	(NorthrupG, GRC, Others)	
Summary and Next Steps (1 hrs)		
Recap	Limaye and Kremic	
Identify topics requiring further study		
Recap technology needs		
Outline for VeXAG report		

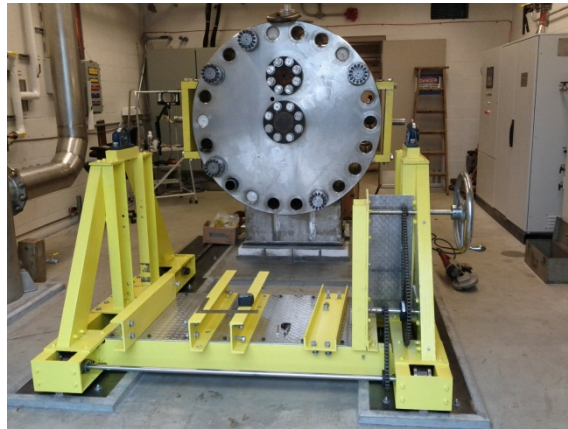
Opportunity to tour Glenn Extreme Environment Rig (GEER) afternoon of Jan 23rd.

GEER Update

GEER will accurately simulate Venus surface or atmosphere conditions including pressure, temperature and composition.

Phased approach; initial capability on CO₂ and N₂ closely followed by toxic and corrosive elements. Other capabilities designed in and added as needs dictate.

Integrated system testing scheduled for March, 2013.



Will make GEER available for viewing and questions on the afternoon of Jan 23rd, 2013 just prior to upper atmosphere meeting.