Achieving Science Goals with CubeSats
Swartwout, 2013: The First One Hundred CubeSats: A Statistical Look
Key Elements of Charge

- Review the current state of scientific potential and technological promise of CubeSats
- Review the potential of CubeSats as platforms for obtaining high-priority science data
  - From recent decadal reviews
  - Science priorities in 2014 NASA Science plan
- Provide a set of recommendations on how to assure scientific return on future federal agency support of CubeSat programs
Committee Actions

- Develop summary of status, capability, availability and accomplishments in government, academic and industrial sectors
- Recommend any potential near-term investments that could be made to
  - A) improve the capabilities that have a high impact and return
  - B) enable the science communities’ use of CubeSats
- Identify a set of sample priority science goals that describe near-term science opportunities
Work Plan

- Ad Hoc Committee has ~ 15 scientists and engineers
- Initial information gathering symposium of 1-3 days, and other input processes such as town hall meetings at conferences
- Meet as committee to further gather input and synthesize what is learned about
  - Status quo of CubeSats in research, innovation, education
  - Funding sources, programs, etc.
  - Enabling technologies, etc.
  - Evolutionary path of CubeSats, etc.
  - Limitations, barriers of this technology, etc.
  - Many more
- Anticipated completion Spring of 2016
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Approach

- First meetings are focused on collecting data
  - CubeSat launches, successes etc.
  - Publication numbers, characteristics, etc.
  - Policy issues
  - Best science ideas for CubeSats today
  - Type of science addressed by CubeSats

- Then, integration towards findings and recommendations
Meetings

- **Meeting #1:** June 20-21, 2015 in DC
  - NSF, NASA, DOD, USGS, NOAA statements
  - Policy issues: debris and communications
- **Meeting #2:** September 2-3, 2015 in Irvine
  - Community symposium
  - Science focus
  - Committee-only meeting on September 4
- **Meeting #3:** October 22-23, 2015
  - Focus on integration, recommendation
- **Meeting #4:** October 30, 2015
  - Policy focus
- **Meeting #5:** January 16-17, 2016 ISSI forum
  - International focus
What we want to learn this week

- The current state of scientific potential and technological promise of CubeSats
- The potential of CubeSats as platforms for obtaining high-priority science data
  - From recent decadal reviews
  - Science priorities in 2014 NASA Science plan
- Ideas on how to assure scientific return on future federal agency support of CubeSat programs. What are challenges that limit scientific return?
Inputs

- Talk to moderators and note takers. They will try to find you also at your posters.

- Or by Email to
  - Thomas Zurbuchen (thomasz@umich.edu)
  - Abby Sheffer (ASheffer@nas.edu)