

National Space Grant Directors Meeting Fall 2012

**NATIONAL SPACE
GRANT STUDENT
SATELLITE PROGRAM**

Flight Projects Survey

- Why: communicate to key players to build opportunities; ascertain progress; assist new programs
- What: same questions as in 2008 survey plus additional key questions
- When: summer 2012, focused on FY 2011 activity; if your state hasn't responded, still would like a response
- Who: Results requests - ask Angela
- Where: <http://spacegrant.montana.edu/survey.htm>

Survey Results

- 41 states responded
- Comparison between 2008 to 2012
- Priority, tracking statistics
- Number of projects by category
- Ballooning statistics
- CubeSat statistics

Survey: Comparison

Comparison of surveys 2008 to 2012

	2008	2012
<i># of responses</i>	51	41
% Conosrtia engaged in flight project	86%	93%
# of student-led projects	200	264
# of Insitutiouns of Higher Ed	180	179
# of Industry partners	90	93
# of college students	2200	2565
# of precollege students	?	7632
# of precollege educators	115	223
NASA SG investment	\$1.7M	\$2.3M
non-NASA SG funding	\$2.7M	3.7M

Survey: Priority, tracking

- On a scale of 1 to 5, with 1 being the most important, average priority amongst all programs was 2.4, or the top 1/3
- 27% of longitudinally tracked students who went on to an advanced degree or STEM employment participated in a student-led flight project

Survey: # of projects

Number of projects by category

Goundstation	45
Aircraft design, testing, payloads	82
Small balloon flights	91
Small balloon payloads	91
Large balloon payloads	14
Rocketry	86
Sounding rocket payloads	26
Pico/nano Sats	49
MicroSats	5
SmallSats	1
ISS, etc. experiments	14
Beyond LEO	3

Survey: Ballooning

- 61% do ballooning
- Of the states that do ballooning:
 - Tracking
 - Nearly all use GPS-Ham radio for tracking
 - 32% also use 900 MHz unrestricted band
 - 24% also use Spot
 - Communication with the FAA
 - 72% notify the FAA days prior to flight
 - 52% file a NOTAM
 - 28% communicate with the FAA verbally during flight
 - 32% communicate with the FAA via the internet

Survey: CubeSats

- 64% do CubeSats
- Of the states that do CubeSats:
 - Locations for building
 - 40% clean room on campus; 8% clean room off campus
 - 84% science lab on campus; 8% science lab off campus
 - Testing
 - 6 states have testing available for a negotiated fee
 - Several states work with NASA centers for testing
 - On-line support materials
 - Two states (LA, AL) have materials now
 - Two states have materials in development

Launch Opportunities

- CubeSat Launch Initiative (CSLI) opportunity now open; proposals due November 12th
- From the first three launch initiatives, 64 payloads made the short list for launch opportunities between 2011 and 2014.
- CSLI remains the most cost effective way to launch
- Expected to launch at least 30 CubeSats a year for the next several years
- ELaNa 4&5 anticipated to launch in summer 2013
- University CubeSat challenges have reversed

Launch Opportunities

- High Altitude Student Platform (HASP)
 - RockSat
 - ISS payloads
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- Nanosat launch Centennial Challenge still open but under review
 - aimed at getting CubeSats primary payload status
 - Asked us for information about Space Grant needs (survey helped!) - see us as a key player

Future NSGSSP work

1. Clearinghouse web page with launch opportunities, links to active groups, on-line course and tutorial materials
2. Space Grant collaborative project - 12U
CubeSat? Swarm? Mars? Asteroid?