August 28, 2014

Competition Announcement: Unique NASA Opportunity to Design, Build, and Launch High-Power Rockets

The Minnesota Space Grant Consortium (MnSGC) announces its intention to run a **Space Grant Midwest High-Power Rocket Competition** (formerly called the Space Grant Great Midwest Regional Rocket Competition and previously run by the Wisconsin Space Grant Consortium) during the 2014-2015 academic year. This competition is an opportunity for teams of college students to design and construct high-power rockets to be launched in May of 2015 from a Tripoli MN launch site near Minneapolis, MN.

No previous experience in high-power rocketry is necessary to compete!

Up to twenty teams sponsored by their state's Space Grants will be allowed to take part in this competition. Interested teams from any state, not just those in the Space Grant Midwest Region, are required to garner local Space Grant "sponsorship" (this might or might not involve financial support, depending on the state) then submit a non-binding "Notice of Intent to Compete" to the MnSGC by October 1, 2014, in which they list their team members, their team name, and a committed faculty adviser. (Note – institutions not planning to assemble a student team until spring 2015 still need to submit a Notice of Intent to Compete by Oct. 1, 2104, at least naming a faculty adviser.) Teams are also encouraged to work with a mentor with high-power rocketry experience. Informational telecons will be held from 7 to 8 p.m. CST on both Sept. 23, 2014 (for teams planning to spend a full academic year on this project) and on Jan. 22, 2015 (for teams working on this project just for the spring semester). A registration fee of $400 per team will be charged to cover costs, including one competition motor and two Altimeter Two data loggers per rocket. States sponsoring more than one rocket team will be expected to provide one judge.

Competition goals: In this competition student teams will design and construct a high-power "boosted dart" (essentially a 2-stage rocket with no motor in the upper stage which drag-separate after motor burn-out) that will be recovered safely and in flyable condition, predict its flight performance, collect down-looking on-board video from the dart (during the ascent) and construct a non-commercial on-board data collection package to characterize dart rotation in the X, Y, and Z axes over time, to compare with the video record.

The competition will include two written reports about the design, analysis, simulation, build, and test flight results of the rocket, an oral presentation, plus assessment of competition flight data results. These will be scored by a panel of professional engineers from both academia and industry. Scoring of the pre-competition reports and the post-flight report will focus on the system design and its performance. More details about the competition motor, reports, deadlines, etc. are in the competition handbook – posted and discussed in the informational telecons.

http://www.aem.umn.edu/mnsgc/Space_Grant_Midwest_Rocketry_Competition_2014_2015/

Logistical questions may be directed to James Flaten, MN Space Grant, U of MN, flate001@umn.edu. Technical questions may be directed to Gary Stroick, Tripoli MN, president@offwegorocketry.com.

IMPORTANT DATES:

- **Informational telecon: Sept. 23, 2014 (repeated Jan. 22, 2015) from 7 to 8 p.m. CST**
  (contact James Flaten, MN Space Grant, for call-in information)
- **Garner your state's Space Grant sponsorship and submit a (Non-binding) "Notice of Intent to Compete" due: 1 October 2014**
- **$400 Registration Fee Due: 30 January 2015**
- **Launch Competition Dates (tentative): Tuesday (late afternoon & evening) and Wednesday (all day, including the evening), 19-20 May 2015**
- **Alternate (Rain) Date: Thursday (all day), 21 May 2015**