

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 2015-2016 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 2016 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, 2015, in which they list their team members, team name, and a committed faculty adviser. (Note – institutions not planning to assemble a student team until spring 2016 still need to submit a Notice of Intent to Compete by Oct. 1, 2015, at least naming a faculty adviser.) New: teams are required to consult with a mentor with high-power rocketry experience. Informational telecons will be held from 7 to 8 p.m. CST on both Sept. 22, 2015 (for teams planning to spend a full academic year on this project) and on Jan. 21, 2016 (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 two competition motors (up to \$100 total) per rocket. All states sponsoring more than one rocket team will be expected to provide one judge.

***Competition goals:** Student teams will design and construct a high-power rocket with an active drag system that will reach an apogee of at least 3000 ft above ground level and be recovered safely and in flyable condition, predict its flight performance (both with and without the drag system engaged), and construct a non-commercial on-board data collection package for the rocket that will characterize its coefficient of drag over time and use an on-board video camera to document the state of the drag system (e.g. engaged/deployed, disengaged/retracted).*

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_2015_2016/

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. 22, 2015 (repeated Jan. 21, 2016) 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: Oct. 1, 2015**
- **\$400 Registration Fee Due: Jan. 29, 2016 (must pay more if 2 motors are more than \$100)**
- **Launch Competition Dates: Sunday (mid-afternoon & evening) and Monday (all day, including the evening), May 15-16, 2016**
- **Alternate (Rain) Date: Tuesday (all day), May 17, 2016**