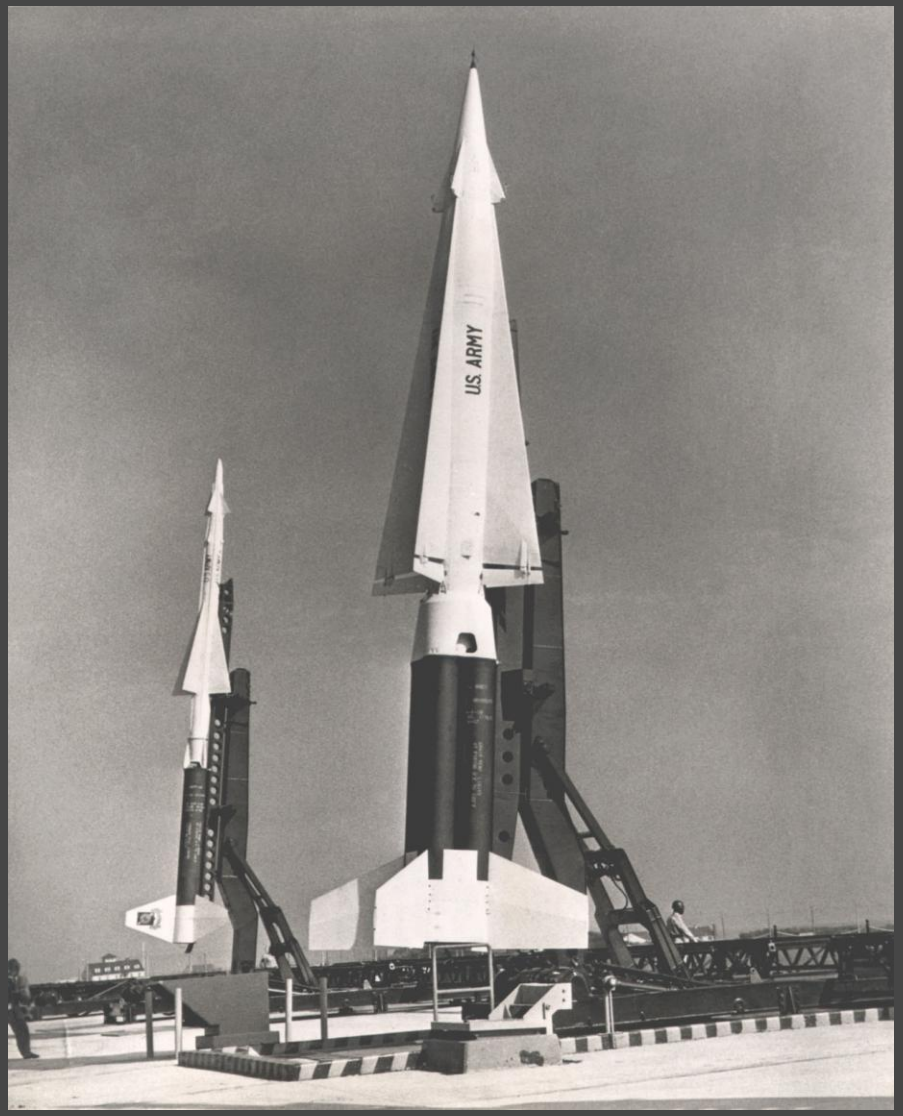


WSGC
2013 REGIONAL ROCKET DESIGN COMPETITION

13-NOV-2012

Welcome Teams

- Teams competing in 2013
  - **15 Total**

- Regional entries include:

Illinios	4
Minnesota	5
Ohio	2
Wisconsin	4

What you need to know

- Registration Fees
- Supplied to Teams
- Schedule
- Competition Parameter Illustration
- Flight Safety
- 4 Aspects of Competition
- Q & A

Supplied by to Teams

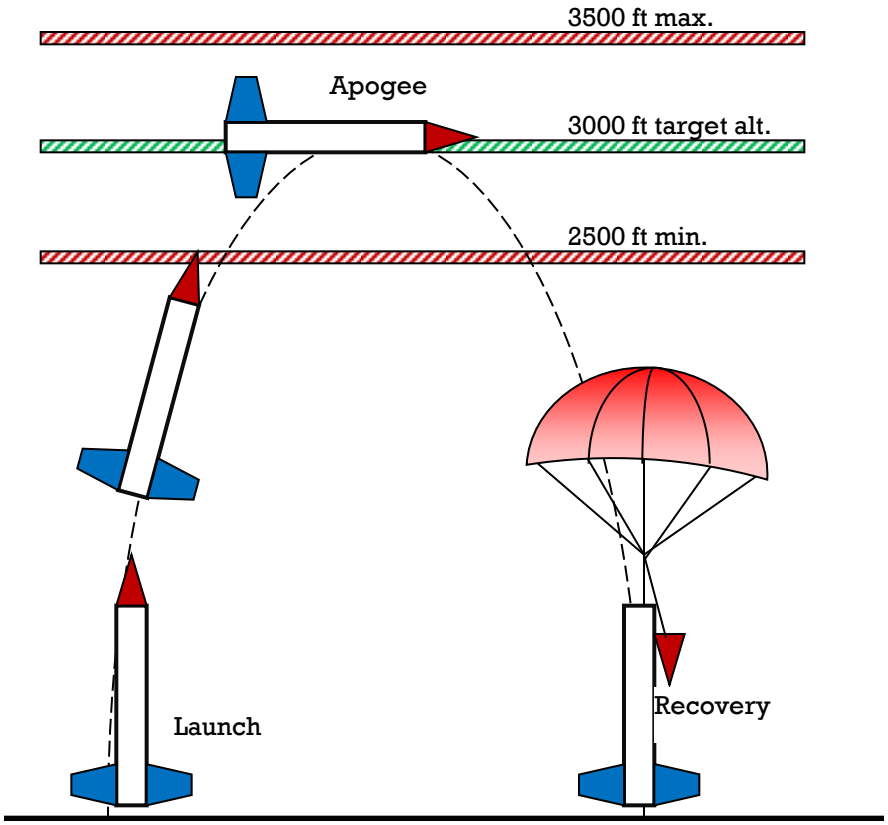
- $375 - Registration Fees
- Registration Fees Cover: (on Launch Day):
  - Competition Flight Data Recorder (to monitor altitude and acceleration only)
  - Motor/Motor Fuel
  - Motor Case
  - Launch Fee

Timetable

Activity	Date
Informational Telecom	13-Nov-2012
Registration Fees Due	11-Jan-2013
Each Team Provides Any Required Interim Report	
to Your State Space Grant	
Flight Readiness Reports Due to WSGC	12-Apr-2013
Design Presentations	26-Apr-2013
Launch	27-Apr-2013
Post Flight Performance Report	13-May-2013
Announcement of Winning Teams	31-May-2013

Dates are subject to change or may be rescheduled due to weather or other factors.

2013 Competition



Constraints	
Rocket Motor	Ceseroni I540
Max Length	72 in.
Max Body Tube Dia	4 in.
Max Weight	7.5 lb.
Min. Alt Max. Alt	2500 ft. 3500 ft.

Safety Reviews

- Each team must go through a safety review through their State Space Grant prior to coming to launch
- Each team will go through a safety review as part of their oral presentation
- On day of launch:
  - Each rocket must be examined for flight safety by the Range Safety Officer (RSO)
  - **Tripoli RSO has final word on flight safety!**

4 Aspects to Competition

- Flight Readiness Report (25%)
- Oral Presentation (20%)
- Flight (40%)
- Post Flight Performance Report (15%)

4 Aspects to Competition

Flight Readiness Report (25%)

- Communicate the engineering and design effort involved
- Analysis of predicted performance
- Analysis of non “pre-qualified” components
- SHOW the design and construction
  - (pictures, diagrams, etc.)
- 25 page MAX.
- Due April 12, 2013

4 Aspects to Competition

Oral Presentation (20%)

- Communicate the design and engineering effort involved
- Organization and presentation important
- VISUAL AIDS
- Rocket Appearance
- 10 minutes (7 for presentation, 3 for Q&A)
- Friday evening before launch

4 Aspects to Competition

Launch (40%)

- Successful flight requires:
  - Launch
  - Attain at least 2500ft but not exceed 3500ft at apogee
  - Electronically deploy recovery parachute
  - Safely land all parts of rocket together
  - Recover in re-flyable condition

4 Aspects to Competition

Launch cont.

- Flight Scoring:
  - Successful flight
  - Accuracy to 3000ft
  - Flights with apogees betwee 2500 ft and 3500 ft score:

$$Flight\ Score = 100 - |30000 - 10\ Alt|^{\frac{1}{2}}$$

  - Teams that fly safely and recover in flyable condition will receive no less than **15** points

4 Aspects to Competition

Post Flight Performance Report (15%)

- Compare actual performance to predicted
- Discuss differences

Model Rocket Demonstration Flight

- Purpose
  - Demonstrate a minimum knowledge of rocketry
- How
  - Purchase a model rocket flight kit
  - Assemble
  - Successfully fly
  - Record flight with before and after photos in the field
  - Email photos along with flight date and location
- Must be completed before funds will be released

Comments or Questions?