



Informant

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Chris Deem launches the first rocket of the Millennium on January 1, 2001. Photo by Jonathan Sivier

New Year's Day Launches

By Jonathan Sivier

On January 1, 2000 we began a new tradition by holding a launch on the first day of the New Year. The weather cooperated for the occasion with temperatures in the 50's. We had quite a few CIA members flying with us that day.

The following year was not as nice. New Year's Day 2001 saw a high temperature around 20 degrees and several inches of snow on the ground. Only two members were hardy, or foolish, enough to brave the elements and fly some rockets. Chris Deem flew the first rocket of the year, as is traditional, and Jonathan Sivier also flew a couple of rockets.

This past New Year's Day was somewhere in between the two previous events. The temperature was in the mid-twenties, but there was no snow and very light winds. Four members made it out to welcome in the New Year by flying some rockets. As usual Chris flew the first rocket of the year. Jonathan flew the first composite motor of the year, flying his Stark Fist on an Aerotech F20. Also flying were Robert Brunner and Gary Buck. Gary distinguished himself by losing the first rocket of the year when he flew a Centuri Nike Smoke on an Aerotech E25. He also had the first CATO of the year when the D21 he first tried to fly it on blew up. Luckily the rocket wasn't damaged, but he then put the E25 into it and when it took off we quickly lost sight of it. It was last seen heading in the direction of Parkland College.

We have held this launch for 3 years in a row now so I guess it has become a tradition. As Chris says, "If you do something twice it

becomes a tradition. If you do it three times it becomes a sacred tradition.” So we’ll probably be holding this launch next year and for many years to come.



Steve McQueen’s 22-foot rocket takes off on an Aerotech K1100 at GARLO 1992. Photo by Jonathan Sivier.

10th Anniversary of the CIA

By Jonathan Sivier

The year 2002 marks the 10th anniversary of the Central Illinois Aerospace. John Page organized the first meeting at the Champaign Public Library in March of 1992. We held our first launch on May 2nd. GARLO 1992 was held on July 3rd and was the first big launch organized by the club. It was also our first real high power launch in Rantoul.

Over the years we have held well over 100 launches, hosted NARCON three times, flown rockets at the Rantoul air shows and marched in the Champaign-Urbana 4th of July parade. We have presented a program on model rocketry at the Parkland Planetarium’s World of Science evening and served as judges at the Illinois State Science Fair. We have held build and fly

workshops at the park district and for Cub Scouts, grade school classes and 4H groups. We have helped the University of Illinois with their Illinois Aerospace Institute summer program for high school kids and their AAE 199 class for freshman Aeronautical and Astronautical Engineering students.



The Death Star Drag Race at GARLO 2001. Photo by Jonathan Sivier.

Highlights of 2002

Our normal schedule is as follows:

- 1st Tuesday: Membership meeting at Springer Cultural Center, 301 N. Randolph St., Champaign
- 3rd Tuesday: Business meeting at Garcia’s Pizza in a Pan, 108 E. Green St., Champaign.
- 2nd Saturday: Rocket launch at Dodds Park

4th Saturday: Rocket launch at Rantoul Aviation Center. In December, January and February, the launch will be at Dodds Park instead.

In general we follow this formula, with some occasional exceptions for special events. Here are some highlights of the coming year.

Meeting Topics

We have scheduled topics for most of the monthly meetings this year. However some months are still open and we are always looking for ideas for topics at future meetings.

February 5: Rocketry videos. Bring your favorite rocket-related tapes to view with the group.

March 5: Annual membership meeting and election of club officers. Meeting program: Rocketry computer programs. Bring software to demonstrate.

April 2: "Show and tell" about your current rocketry projects.

June 4: Meet at Beckman Institute for a tour and demonstration of the flight simulation lab.

July 2: GARLO follow-up.

August 6: Annual Swap Meet. Bring your surplus rocket related equipment and supplies to buy, sell and trade with other members.

October 1: Introduction to model rocketry for new members, and rocket building workshop.

November 5: Introduction to mid-power rocketry for new members, and rocket building workshop.

Special Events

May 11: Build & Fly Workshop at Champaign Park District Leonhard Center. 9 a.m. to noon.

June 29: GARLO 2002: Rockets of the Corn. Special contests: flying food or food container based odd-rocs and D Altimeter Altitude.

August 10: Annual Nostalgia Launch: prizes for oldest rocket and/or motor flown.

September 14: Annual Night Launch.

CIA Contests

By Chris Deem

Back in the last century, when we formed this rocket club, we decided to be a full service club. In other words we would support all phases of rocketry, low, mid and high power, sport flying and contest flying. As such, I was elected to be the Contest Director.

As an NAR Section, all of our contests are sanctioned by the NAR, and follow the rules set forth in the NAR Sporting Code (called the Pink Book). Copies of the Pink Book are available from the NAR at www.nar.org, or NARTS. We originally tried to hold three contests per year, and have since added a fourth contest.

Contests and Approximate Dates

The Rocketeer Who Went Out in the Cold:

This is our newest contest, we first tried it in late January of 2001, but the weather didn't cooperate, so we are trying again on February 23rd this year.

Illinois Missile Crisis: We used this name for the first contest we had, and we try to an IMC contest every year in either May or June.

Insurrection: The NAR contest year runs from July 1st to June 30th, but NARAM, the national contest, isn't held until mid August. We try to hold this contest after the new contest year has started, but before NARAM.

The Missiles of October: We try to hold this one in October (as you probably guessed). However the weather is often uncooperative, so we try holding it in late September to early November.

Events

We lean heavily towards duration events, spot landing and Drag Race. Altitude events would require building two tracking stations (which wouldn't be that hard) and six to eight people to man the stations. Two per station, with at least one extra crew so everyone could fly and not have to man the trackers all day. If there is enough interest, and more importantly, enough people, I can build the trackers. We also do some craftsmanship events, like Plastic Model Conversion and Sport Scale, and we need volunteers to judge those events.

The contest sanction form has to be sent in at least 30 days before the contest, so 5 or 6 weeks beforehand, I ask everybody at a club meeting what events they would like to have. The only thing I've ever insisted on is that at least one event be one that can be competed in with any rocket that meets the definition of a model rocket. That way people can compete without having to build a special purpose model, and those that come to a launch not knowing that we are having a contest can still compete if they so desire. If you have any suggestions for events, please let me know and we can include them in an upcoming contest.

We usually start our contests at 10 a.m., to allow enough time for the contest and sport flying. We don't have a separate launch for a contest, it's part of a regularly scheduled launch, and you can fly the contest events at any time, and in any order you want. The only exception

is Precision Duration, which must be the first contest flight made.

Why Compete?

Competition can be both fun and educational. The events we fly typically have a certain amount of luck involved. Thus a beginner has a good chance of beating a more experienced competitor. This means that you don't get discouraged as easily.

The NAR competition community is fairly small, 300-400 people tops, and every year they list everyone who has competed in any contests all year long. So, if you finish above last place in just one event, you can brag about beating a nationally ranked competitor. This is a little bit of ego gratification that is easily accomplished.

Most of our events can be flown with rockets that you probably already have, so the initial costs are pretty much nonexistent. Some people have started competing at the sectional level, and found that they really enjoy it and go on to become top ranked at the national level. The rest of us are happy to just keep it at the laid-back local level of our sectional contests. First, Second, and Third place winners receive a ribbon, hand lettered by me, commemorating their glorious performance.

Each event sets a goal that must be attained, whether it's longest duration, closest to a set point on the field, or best model. You are testing your abilities against other modelers, who probably won't laugh at you if you don't do well, unlike some other more competitive activities.

At the end of every contest year, the NAR adds up all the points earned by every NAR member at every contest. Not only is every individual member ranked, but every section is also ranked according to how many points their members have earned. So, the more people we have competing, the more we have listed and the higher our section will be ranked. A little

free publicity for the club in the rocketry community.

I would like to urge all of you to give it a try at one of our contests. You don't have to enter all the events; just the ones you think look interesting. Give it a try, you might be pleasantly surprised. If you have any questions, or wish to suggest events for a contest, please feel free to contact me.

Other Clubs

Tripoli Central Illinois

The Tripoli Central Illinois folks launch from November to April at the Tuscola Airport on various Sundays. They have a 10,000' waiver. Newcomers are always welcome. They do require that people who fly motors larger than G be NAR or Tripoli members with insurance.

Contact: Don Reasor

Phone: 217-253-2586

Email: Don.Reasor@netcare-il.com

http://www.tripoli.org/launchad/TRA_Central_IL.html

NIRA

NIRA holds regular launches in the Chicago area. They usually hold MRFF, the Midwest Regional Fun Fly, in the middle of June.

<http://www.NIRA-rocketry.org/>

Indiana

There are various clubs in Indiana who hold regular launches. They will be hosting CIRFF-2 at the Academy of Model Aeronautics in Muncie, Indiana on May 25th and 26th from 9:00 am to 5:00 pm.

<http://www.indyrocks.org/>

St. Louis

The St. Louis Rocketry Association holds model and high power launches approximately monthly.

<http://www.stlouisrocketry.org/>

Vendors

Here are local places to get rocketry supplies.

Hobby Lobby: next to County Market near the corner of Mattis and I-72.

Leisure Time Pet & Hobby: 807 N. Mattis.

Rocket R&D: 217-344-2449

<http://www.rocketrd.com/>

Slot and Wing Hobbies: Just north of I-74 on the east side of Prospect.



Some of the kits offered by ARG.

ARG New to the US Market

ARG - ADVANCED ROCKETRY GROUP LIMITED in Canada celebrates its 22 years of service to the rocketry community by finally venturing into the US market. Look to ARG for a new and exciting line of rocket kits in the next few months. <http://www.uk-air.com/arg/>

Ask The Experts

This section will be devoted to answering technical questions posed by CIA members. If you have a question you would like to have answered in a future edition of the Informant send them to: Jonathan Sivier, 5 The Summit,

Champaign, IL, 61820 or by email to j-sivier@uiuc.edu.

To get us started here are a couple of rules-of-thumb to use to figure out how large of a parachute to use in your rocket. These come from CIA member Mark Page.

Descent Rate: This equation gives the descent rate (in fps) given the parachute diameter in inches and the rocket's weight in ounces. The constant '105' represents all of the various constants in the formula, acceleration due to gravity, air resistance, and conversion factors for the units, etc.

$$\text{Rate} = (105 * \text{SQRT}(\text{Weight}))/\text{Diameter}$$

This equation can be rearranged to determine the parachute size needed for a chosen descent rate.

$$\text{Diameter} = (105 * \text{SQRT}(\text{Weight}))/\text{Rate}$$

Parachute Size: Substituting a descent rate of 15 fps, we get a simple equation that can be used to calculate the required parachute size for a typical safe descent rate for model rockets.

$$\text{Diameter} = 7 * \text{SQRT}(\text{Weight})$$

If you have your own rules-of-thumb feel free to submit them for future editions of the Informant.

Call For Submissions

This is our 3rd attempt at a newsletter for the Central Illinois Aerospace. We hope to be able to do at least 2 issues per year to start with. If things go well we may be able to increase this in the future. However to be successful we need everyone's help. If you have something to share with the other members we would love to hear from you. Possibilities for submission include: reports on launches or other events, technical articles, rocket plans, contest and flying tips and hints, reviews of models or motors, books

software or other items of interest to rocketeers and photos taken at launches. If you have something in mind to submit for the next issue, in July or August of 2002, contact Jonathan Sivier at j-sivier@uiuc.edu or phone him at 217-359-8225.

CIA Officers

Here is the contact information for the officers of the CIA.

President: Alan Carroll, 217-359-3221, amc@cisco.com

Vice President: Chris Deem, 217-356-9808, chrisdeem@pdnt.com

Director of Operations: Greg Smith, 217-352-9655, gd-smith@uiuc.edu

Secretary and Treasurer: Jonathan Sivier, 217-359-8225, j-sivier@uiuc.edu

NAR Liaison: Jeff Deem, 217-328-2858, jdbectec@aol.com

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