



The Newsletter of the Northern Illinois Rocketry Association

Nov/Dec 2007

## In Time For The Holidays! Official NIRA Missile T.O.W.



**Now Available in Festive Holiday Colors!**



### THE LEADING EDGE

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### NIRA OFFICERS

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*President*

**Rick Gaff**  
*Secretary/Treasurer*

**Bob Kaplow**  
*Range Safety Officer*

**Marty Schrader**  
*NIRA Webmaster*

Visit our web site & message board;

<http://www.nira-rocketry.org/>  
<http://groups.yahoo.com/group/nirarocketry/>

The Leading Edge is published bi-monthly for members of the Northern Illinois Rocketry Association (NIRA) NAR Section#117. Dedicated to the idea that rocketry is fun!



#### Contributors this issue;

Articles Adam Elliot, Joe Charaska  
Bob Kaplow  
Photographs Rick Gaff, Tony Lentini,  
Joe Charaska

## T Minus One Meeting Calendar

### NIRA

- Jan 25 Monthly meeting Helen Plum Library. Events include voting for new officers, voting on changes to our bylaws, membership renewal, and brainstorming for NIRACon.
- Mar 7 Monthly meeting Helen Plum Library

### NIRACon

Bob Kaplow is coordinating NIRACon this year, and we are looking for club members to step up with presentation ideas. If you are interested in giving a talk or a demonstration, be sure to contact Bob Kaplow. Also, because of our meeting schedule, NIRACon will double as our February meeting.

### Elections

This year's officer candidates are Jim Basile for President, Angel Kennedy for Vice-President, Rick Gaff for Secretary Treasurer, and Bob Kaplow for Range Safety Officer.

### All The News That Fits To Print

## Space Shuttle Delay

Last week, the scheduled launch of the space shuttle *Discovery* was aborted two hours before liftoff. What caused the delay?

- ▶ Crew members forgot to pack extra air
- ▶ Danger gauge, when tapped, went from "none" to "extreme"
- ▶ One of the astronauts was randomly flagged by security and detained for several hours before being allowed to board
- ▶ Waiting for liquid-oxygen prices to drop below \$300 a barrel
- ▶ Crew grounded for sneaking girls on board
- ▶ Moody robot arm in payload bay pinching people again
- ▶ Funding ran dry in middle of countdown
- ▶ Stupid driver's-side window wouldn't roll up
- ▶ NASA remembered it really didn't have any reason to launch a shuttle into space

Reprinted from 'The Onion'

## Model Of The Month



### October Winners

**Bob Kaplow** and **Marty Schrader** shared Adult honors with their tying models, Bob's duct tape finished **Big Daddy** and Marty's scratch biplane glider, **Scrap Heap III**.

Junior fell to **Angel Cooper**, whose unfinished **Mean Machine** was, nonetheless, pretty straight (no easy task).

Junior went to **Jon Mitchell** and his modified **Cosmos Mariner**.



### November Winner

**Anthony Lentini** and his upscale **Tasmanian Devil**.

### December Winner

**Don Kennedy** and his scratch built **Tardis**.

## Scout Launch Report

Hi All,

NIRA hosted another successfully Mike Ugorek Memorial Scout Launch on Nov. 17th, 2007 at East Branch. About 30 Cub Scouts, accompanied by their parents, braved the breezy cold drizzle to launch their Estes Skywriters on B6-4 engines. The scouts began to arrive at the field in waves starting at 12:30 pm with the last group of scouts arriving around 2:30 pm. 7 NIRA members volunteered to staff the event: Marc, Rick, Joe, Joey, Kris, Marty, and Adam. Even though Pack 101 supplied plenty of hot chocolate and the youthful exuberance of the scouts, 2 NIRA members became chilled to the bone and left the field early. Thankfully, we had enough NIRA members in attendance to let our fellow, weather weary members retire to their heated abodes and still manage to see the event to its conclusion at about 3:30 pm.

Pack 101 was able to launch 73 flights. Scout Ben Colletti had a exceptional day, launching his Skywriter 10 times; an amazing accomplishment considering that his cardboard craft became more sodden with each successive launch and successful recovery.

I am very grateful to all the NIRA volunteers were able to create time in their schedules this Saturday and introduce the sport of Model Rocketry to group of today's youth. The event was still a lot of FUN even with the less than ideal weather conditions. It is this kind of volunteerism and selflessness that will preserve and advance the sport for future generations and I applaud you all.

A photo show from the event can be found at [ScoutLaunch071117](#) and the Cubmaster's feedback is attached.

Best Regards,

Joe Charaska

NIRA Scout Liaison







## Changes to the Club Bylaws

Bob Kaplow

The major changes in this bylaws revision are fixes to allow us to remove a disruptive member (see Section 3B Discipline) or officer (Section 5F Removal); and to make it possible to change the bylaws again if ever necessary (Section 7 Amendments). In either case, rather than a 50% vote of all members, we will require an 80% supermajority of members actually voting. As our membership roster is dominated by people who come to an occasional launch but never attend a meeting, getting half the registered members to vote is a virtual impossibility.

Other minor changes are to recognize the web site along with the newsletter as official means of communication; and to codify our policy of allowing absentee ballots for elections, but NOT allowing proxy voting.

These issues have been discussed at several club meetings, and other than slightly adjusting the percentages for the voting, they have the support of all the active members. We strongly urge all NIRA members to VOTE in the January election, and to VOTE FOR these changes. The club needs them to be able to operate in the future, should we ever have the problem we had this past summer.

There will be a special election issue of the newsletter in January, and elections will be held at the NIRA meeting on January 18th. If you can't come to the meeting, a mail in ballot will be included in the election issue.

### Bylaws of the Northern Illinois Rocketry Association

#### Section 1: Name

The name of this organization shall be the Northern Illinois Rocketry Association, hereinafter "the Association".

#### Section 2: Purpose

The purpose of the Association is to promote safe, educational and recreational sport rocket activities in northern Illinois.

#### Section 3: Membership

##### Article A: Membership Classes

Association membership shall be in three (3) classes: Individual, Family and Honorary. Individual and Family Member dues shall be established at any regularly scheduled business meeting by majority vote of those members present. Honorary Memberships may be offered by nomination of names at any regularly scheduled business meeting, publication in the Association's newsletter and/or web site, and majority vote of those members present at the Association's following regularly scheduled business meeting.

##### Article B: Discipline

Association membership shall not be denied for any reason, other than non-payment of dues, commission of a felony, repeated misconduct, conduct detrimental to the Association, or deliberate and willful violations of sport rocketry Safety Codes. Members accused of the commission of any offense other than nonpayment of dues shall have the right to review the allegations against them at a regularly scheduled business meeting and to provide evidence in their own defense. Any expulsion shall be made only after the member has been heard, and only then by 80% vote of all members voting.

#### Section 4: Meetings

Meetings shall be held at monthly intervals at a time and location to be published in each issue of the Association's newsletter and/or web site. The lesser of 50% of the members or 10 members shall constitute a quorum.

#### Section 5: Officers

##### Article A: Terms of Office

All officers shall be elected at the first regularly scheduled business meeting of the year and serve a term of one year. Votes may be cast in person at the meeting or by absentee ballot; proxy votes cast by others are not permitted. Terms shall begin at the conclusion of the meeting in which the new officers have been elected. In the case of special elec-



tions to complete an unexpired term, the term of office shall be until the next regularly scheduled election.

Article B: President

The President shall preside at all business meetings, shall represent the Association at all official functions and in all official interactions with other organizations, and shall be an ex-officio member of all committees.

Article C: Vice President

The Vice President shall assume the duties of the president when the President indicates he is unable to perform those duties. The Vice President shall execute those duties until the next election can be held, but in no case will a new election be delayed longer than ninety (90) days.

Article D: Secretary-Treasurer

The Secretary-Treasurer shall maintain the Association's mailing list, maintain and balance the Association's financial accounts, and maintain all official correspondence.

Article E: Safety Officer

The Safety Officer shall establish and enforce the Association's range safety and operational procedures, including execution of qualification tests where required by sport rocketry Safety Codes. The Safety Officer may appoint other members to assist in the execution of these duties. The Safety Officer or his designated alternates must possess the appropriate required qualifications to administer any qualification tests.

Article F: Removal

An officer can be removed from office for the same reasons and by the same procedures as defined in article 3B: Discipline.

Section 6: Committees

Article A: Terms of Office

All committee chairmen shall be appointed by the President, ratified at the second regularly scheduled business meeting of the year by majority vote of those members present and serve a term of one year. In the case of special elections to complete an unexpired term, the term of office shall be until the next regularly scheduled election.

Article B: Communications Committee

The Communications Committee shall prepare and distribute a regular publication to all current members of the Association and be responsible for the club web site.

Article C: Equipment Committee

The Equipment Committee shall create and maintain all material necessary to support the range operations of the Association.

Article D: Events Committee

The Events Committee shall suggest and coordinate the scheduling of the Association's educational and recreational activities.

Article E: Special Committees

At any regularly scheduled meeting, a majority of members present and voting may establish any special committee to further the purpose of the Association.

Section 7: Amendment

These By-Laws may be amended provided that the proposed amendment has been published in the Association's newsletter for at least two issues, and that such amendments receive 80% vote of all members voting.



# October Launch



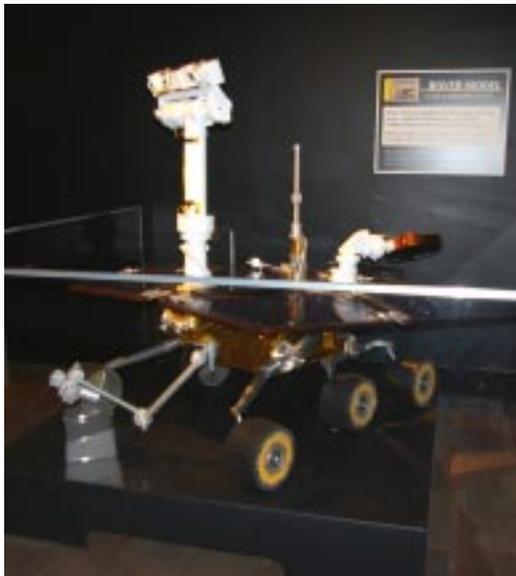
# November Launch



## Museum of Science & Industry Trip



The Mitchels try their hand in the flight simulator.



The Mars Rover model.



Rick takes a giant leap.



Scale models of past, present, and future launch vehicles.



The U505 is one of the crowning jewels of the museum.



The Star Wars exhibit includes an X-Wing, the Millenium Falcon, models of Luke's landspeeder, and models of deep space craft which may someday travel to the stars.



The day was fun and very educational.



Rick learned you should never tease stormtroopers.



## Competition Rocketry And NIRA

Adam Elliot

For some time now, NIRA has been slowly regaining some of its "lost skills" that it once had a lifetime ago. Defying gravity? Back then it was no problem. Hang time? Piece of cake. Following the rules? Well, most of the time.

Competition rocketry is a fun and exciting way to do rocketry in ways you might not normally. It is definitely a way to broaden the scope of the hobby. This yearning has recently led NIRA to host three NAR sanctioned meets.

This means that three times several brave rocketeers have put their skills and their rockets to the test. It is done primarily not to earn their standing in the NAR and respect of their peers but mostly to learn new stuff and have fun. And what a great learning fun it is.

People have asked their friendly contest director several times to learn more about competition rocketry and the best way to do so is to actually go out and fly something.

It all started back in November when the first contest that NIRA has hosted in a long time finally happened. The October 2006 meet consisted of 1/4A Super-Roc Duration, B Boost Glider Duration, and A Streamer Duration. It went pretty well considering it was held on a cold day in November because the original date was scrubbed.

Both your friendly contest director and several contestants were on their toes, one because it was their first time doing any such thing and the other because of rusty contest directing skills. There are, in fact, more things to keep track of when flying a contest aside from flying rockets.

But that's all okay. There were more to come.

One of the most memorable flights of this meet was Marc Mitchell's day-glo orange Deltie glider flight which went way, way over by the tracks. Your friendly contest director thought for sure it would never be seen again, but sure enough Marc returned it after some time searching but unfortunately did not get marked as returned, voiding his points for the event. We aren't sure exactly why he didn't receive points for this flight as it was several months ago. Live and learn.

As this was a small meet it was inevitable that certain age divisions would have to be combined here and there. This was the case for B Boost Glider. Sadly, only one person flew 1/4A Super-Roc Duration, nullifying the event.

### B Boost Glider Duration (19)

A & C division	score	points
1. Pat Butler	67	190
2. Jimmy Basile	45	114
5. Marc Mitchell	NR	19

### A Streamer Duration (8)

A Division	score	points
1. Jon Mitchell	37	80
2. Katie Mitchell	26	48
3. Joey Charaska	17	32

C Division	score	points
1. Pat Butler	85	80
2. Adam Elliott	51	48
3. Marc Mitchell	27	32
4. John Hojek	13	16

### 1/4A Super-Roc Duration (13)

C Division	score	points
Name		
Adam Elliott	297	0
No points awarded because there were no other entries.		

### October 2006 Meet standings

A Division	points
1. Jimmy Basile	114
2. Jon Mitchell	80
3. Katie Mitchell	48
4. Joey Charaska	32

C Division	points
1. Pat Butler	270
2. Marc Mitchell	51
3. Adam Elliott	48
4. John Hojek	16

Happily, everyone who flew something won something, a common occurrence at these kinds of meets. A big hats off cheer for all those who participated!



That first contest was so popular that people were clamoring for more. Naturally their wishes were granted with Learning Curve I in April of 2007. This time we decided to get some more involvement and smoother operation. It was also made more challenging with events that were closer in weight than the horribly lopsided October meet.

The events were Random Duration, A Streamer Duration Multi-Round, and 1/2A Super-Roc Duration.

Scratching your head? It's easy. Random Duration is an event where you get one shot at hitting a target time. This time is not known in advance but drawn on the field at the start of the day. Like we said, you only get one chance, no practice flights are allowed. This must also be your first flight of the day.

A Streamer Duration, didn't we do that last time? But wait! It's Multi-Round this time! What's that, you ask? Easy, it's a slightly different way of doing things. See, normally you are allowed two official flights and your times are added together for your score. In Multi-Round, however, you are allowed three official flights with up to two models. Your times are still all added together, but there's another feature called a Max. A Max is a predetermined amount of time (according to motor size) where your time stops for an individual flight. In A Streamer that time is 120 seconds. Anything beyond that time is called a Max and not recorded. A Max tends to be a very long length of time and rarely achieved. No Maxes were recorded during this meet.

Then there was 1/2A Super-Roc Duration. The primary goal of Super-Roc events is to use the longest rocket possible and not have any kind of structural failure. Different motor classes require different lengths of rockets. In this case it was 50-100cm. Since your score is the length of the model times the duration, history has shown that using a longer one gives the contestant more points. When it works, that is. With 1/2A motors and a length of only 100cm, there wasn't much to worry about.

In Random Duration the target to achieve was 45 seconds. Both Marc Mitchell and Pat Butler put up flights of 36 seconds to tie for first place. When ties happen in NAR contests, equivalent points are awarded with no losses of other placings. This little fact sure made Jon Mitchell happy because otherwise he wouldn't have won a ribbon for 4th place!

Pat Butler clearly led the way in both A Streamer Duration and 1/2A Super-Roc Duration. In the former two of his three flights were 50 seconds or more. In the latter he

launched his 98cm model for times of 18 and 36 seconds each.

Random Duration, 45 seconds (10)

A & C Division	score	points
1. Marc Mitchell	20	100
1. Pat Butler	20	100
2. Marty Schrader	44.4	60
3. Adam Elliott	62.2	40
4. Jon Mitchell	75.6	20

A Streamer Duration - Multi-Round (12)

A & C Division	score	points
1. Pat Butler	132	120
2. Adam Elliott	47	72
3. Marc Mitchell	46	48
4. John Hojek	41	24
5. Jon Mitchell	17	12

1/2A SuperRoc Duration (13)

A & C Division	score	points
1. Pat Butler	5292	130
2. Marc Mitchell	560	78
3. Adam Elliott	357	52
4. Joey Charaska	312	46

Learning Curve I Meet Results

A Division	points
1. Jon Mitchell	32
2. Joey Charaska	26

C Division

1. Pat Butler	350
2. Marc Mitchell	226
3. Adam Elliott	164
4. Marty Schrader	60
5. John Hojek	24

Again, it was a great time.

Gaining momentum and knowledge, NIRA members clamored for more, although those doing the most clamoring were flying the least, but oh well. We're here to provide educational fun and we're going to do it, like it or not!

Learning Curve II, our first sanctioned meet of the new contest year (if this confuses you, you're not alone – the NAR contest year starts July 1st), was held at the July launch. Unfortunately it was sparsely attended because some of our



best people were preparing for NARAM, which was two weeks later.

Nevertheless, we had enough to make a good meet as well as something we don't see very often. . . . B Divisioners!

Learning Curve II was actually an Open meet, a different classification from the previous two, which were Sectional meets. An Open meet allows for more points to be earned.

A fun and simple event is Open Spot Landing. This is where you may use pretty much any model and motor combination but the trick is to land it as close as possible to a specific spot on the field. Kind of like target practice, however you are allowed only one chance. Also like Random Duration held at Learning Curve I it must be your first flight of the day with no practicing allowed.

1/2A Helicopter Duration is a new and fun event in the Learning Curve series. This usually involves models that deploy helicopter blades instead of streamers and parachutes as their recovery devices. A popular example of this is the Estes Skywinder, but that model doesn't fly very well at all on 1/2A motors. Apogee Rockets makes a few good kits for this type of event. Only three people entered this event and the A and C divisions had to be combined. All but Katie flew only one flight but Katie's didn't rotate properly on her second flight.

Once again, B Boost Glider Duration made the scene on our field. There were no record smashing flights on this day, that's for sure but the goal is to have fun, and that was definitely accomplished. Four persons of rocketry entered this time but the A and C divisions had to be combined again. Adam Elliott had a 44 second flight while Jon Mitchell had a 40 second flight but his second flight didn't glide, allowing dad Marc to slip by.

Getting back to Open Spot Landing, if your model lands more than 50 meters from the spot (which tells you something about the difficulty here) it is marked as FAR, being over the limit. When this happens you can't place but still get points for flying the event.

The goal of Open Spot Landing may be to hit the right spot, but only so hard. Hugh managed to prang his model near the marker.

So far it's been a terrific ride for everyone and we hope to see all of you go for a ribbon or trophy in the future.

Open Spot Landing (4)

A & B Division	Distance (m)	Points
1. Katie Mitchell	39.20	80
2. Jenna Butler	39.89	48
5. Jon Mitchell	FAR	8
5. Angel Cooper	FAR	8

C Division

1. Adam Elliott	8.65	80
2. Don Kennedy	20.75	48
5. Marc Bonem	FAR	8
5. Marc Mitchell	FAR	8
— Chris Cantine	UNST	0
— Hugh	PRNG	0

1/2A Helicopter Duration (19)

A & C Division	Score	Points
1. Marc Bonem	15	380
2. Katie Mitchell	12	228
3. Adam Elliott	11	152

B Boost Glider Duration (19)

A & C Division	Score	Points
1. Adam Elliott	74	380
2. Marc Mitchell	59	228
3. Jon Mitchell	40	152
4. Tony Lentini	34	76

Learning Curve II Meet results

A & B Division	Points
1. Katie Mitchell	308
2. Jon Mitchell	160
3. Jenna Butler	48
4. Angel Cooper	8

C Division

Points	
1. Adam Elliott	612
2. Marc Bonem	388
3. Marc Mitchell	236
4. Tony Lentini	76
5. Don Kennedy	48
— Chris Cantine	0
— Hugh	0