



# T.H.O.R.

## The Heartland Organization of Rocketry

### THOR's Hammer

The official newsletter of The Heartland Organization of Rocketry!

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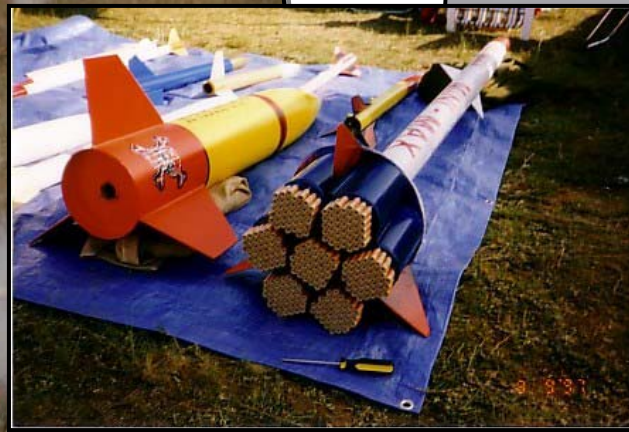
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Winter 2008

---FREE---

Volume 15 Number 1



A look back at nearly two decades of THOR History.

## Club Officers

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**NAR SECTION #562 LEADER – Greg Rothman**

**Newsletter Editor - Richard Burney**

## THOR Rocketry Hotline

**(402) 505-3721**

## Internet Links of Interest

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

THOR's official web page. Has information on our club, launch dates, and history.

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

Home page for the Tripoli Rocketry Association.

<http://www.nar.org/index.html>

Home page for the National Association of Rocketry.

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

Rocketry Online is an excellent source of model and high power rocketry related news and information.

<http://www.the-rocketman.com/>

Producer of some very excellent parachutes and rocket gear. Ky has been a long time supporter of THOR.

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

Giant Leap Rocketry has been THOR's main vendor at our high power launches since 2002.

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

Home page for the K.L.O.U.D.Busters Tripoli Prefecture of the state of Kansas.

## January - April 2008 Calendar

### January

**Event:** January Meeting.  
**When:** Tuesday the 8<sup>th</sup>, 7:00 to 9:00 PM.  
**Where:** La Vista Community Center.

### February

**Event:** February Meeting.  
**When:** Tuesday the 5<sup>th</sup>, 7:00 to 9:00 PM.  
**Where:** La Vista Community Center.

### March

**Event:** Low Power Launch.  
**When:** Sunday the 2<sup>nd</sup>, Noon to ?  
**Where:** 1100 Lincoln Road, Papillion, NE.  
**Fee:** Free.  
**Description:** Low power sport flying.

**Event:** March Meeting and Auction.  
**When:** Tuesday the 4<sup>th</sup>, 7:00 to 10:00 PM.  
**Where:** La Vista Community Center.  
**Description:** Besides being the March meeting, this is also THOR's annual auction where members can auction off and bid on rocketry related goods... it's eBay the old fashion way! 10% of the money made from each member's auction, unless arranged differently, will go to the club.

**Event:** NARCON.  
**When:** Friday March 14<sup>th</sup> through Sunday the 16<sup>th</sup>.  
**Where:** Rochester, MN.  
**Description:** NAR's annual convention.  
**For More Information:** <http://www.narcon2008.org/>

**Event:** High Power Launch.  
**When:** Saturday the 22<sup>nd</sup>, 10:00 AM to 4:00 PM.  
**Where:** Pickrell, NE.  
**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.  
**Fee:** \$5.  
**Description:** High power and low power sport flying.  
**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

### April

**Event:** April Meeting.  
**When:** Tuesday the 1<sup>st</sup>, 7:00 to 9:00 PM.  
**Where:** La Vista Community Center.

**Event:** Low Power Launch.  
**When:** Sunday the 6<sup>th</sup>, Noon to ?  
**Where:** 1100 Lincoln Road, Papillion, NE.  
**Fee:** Free.  
**Description:** Low power sport flying.

**Event:** Fire on the Farm 11.  
**When:** Experimental day on Friday the 18<sup>th</sup>. High power commercial flying on Saturday the 19<sup>th</sup> and Sunday the 21<sup>st</sup>, 10:00 AM to 4:00 PM (Noon to 5:00 on Friday).  
**Where:** Pickrell, NE.  
**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.  
**Fee:** \$10 for 1 day, \$15 for 2; EX day is free.  
**Description:** THOR's annual three-day, high power, spring launch.  
**For More Information:** Final details will be set by the April meeting.

## Editor's Hammer

By Richard Burney, Secretary and Newsletter Editor

### A look back...

A little over a year ago I took the THOR history page from our website that had been originally written by **Bruce Lee** back in the mid 1990's and did a major facelift to it. Besides updating the historical points and facts that Bruce had recorded, I added information to it about the **Omaha Rocket Club**, the merger of ORC and **Tripoli Nebraska** into THOR, and I created an timeline of many of the major events that have happened with this club since 1998. After a few months of work the PDF of this new page was posted up on our website on the newsletter page last spring.

Besides the 2008 calendar, my parting gift as THOR newsletter editor is the inclusion of the most recent edit of this history page along with pictures taking us back through our club's history. When I took over this newsletter with the March/April 2000 issue I included in that issue a historical timeline of many of my achievements in the hobby up to that point; kind of ironic that I am ending it with a similar article.

As being one of the few members left from the mid 1990's back when ORC and Tripoli Nebraska were separate entities, I have had the unique privilege of experiencing nearly the full history of this club and of nearly everything that I detail in this particular article. The time I have had with this club has been a great one: I have met lots of great people, experienced this hobby to a level like I had never imagined, took part in some great group projects, saw some places I didn't expect to see, and live out to a certain extent a dream of mine to be involved in some form of aviation/aerospace journalism. On the negative end though there's always been that dark ominous cloud of the ATF and government regulation, seeing several people in the club I know die, and in all honesty there have been some people who have rubbed me the wrong way in this hobby (though that always seems to happen in any group, job, or organization). But the good has outweighed the bad and I am glad to have been part of THOR through so much of its existence.

### And a look forward...

As I have already mentioned, this is my final issue of **THOR's Hammer**. It's been a great run, but I am looking forward to doing more building and flying again and I hope to spend more of my time on other pursuits. I am really looking forward to LDRS 27 down in Argonia and I hope to do my Level 3 either there or at another launch.

As I close this final "Editor's Hammer", I would like to say thanks to all who have supported my eight years as editor with pictures, articles, and those who have steered me towards articles online. I would also like to say "thanks" to those who have expressed their appreciation towards the work I have done. Finally, I would like to say thanks to **Barry Conner** and his wife for agreeing to take the torch from me and hope they are able to continue telling THOR's story. †



A step back through time of my own. Here I am behind Mark Uhlenkamp's house launching my Estes Shadow on Saturday 12/7/96. (Unknown)



At LDRS 18 on Monday 8/2/99 – then TRA president Bruce Kelly (left), myself, and Alan Shepard's oldest daughter Laura Shepard-Churchley. (Earl Cagle Jr.)



Coffee anyone? My most recent picture. (Burney)

## THOR 2008 Events Calendar

Compiled by Richard Burney, Secretary

Below is the events calendar for 2008. As the year progresses, the calendar will be updated to reflect all changes, additions, and/or subtractions.

### January

**Event:** January Meeting.

**When:** Tuesday the 8<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

### February

**Event:** February Meeting.

**When:** Tuesday the 5<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

### March

**Event:** Low Power Launch.

**When:** Sunday the 2<sup>nd</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** March Meeting and Auction.

**When:** Tuesday the 4<sup>th</sup>, 7:00 to 10:00 PM.

**Where:** La Vista Community Center.

**Description:** Besides being the March meeting, this is also THOR's annual auction where members can auction off and bid on rocketry related goods... it's eBay the old fashion way! 10% of the money made from each member's auction, unless arranged differently, will go to the club.

**Event:** NARCON.

**When:** Friday March 14<sup>th</sup> through Sunday the 16<sup>th</sup>.

**Where:** Rochester, MN.

**Description:** NAR's annual convention.

**For More Information:** <http://www.narcon2008.org/>

**Event:** High Power Launch.

**When:** Saturday the 22<sup>nd</sup>, 10:00 AM to 4:00 PM.

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$5.

**Description:** High power and low power sport flying.

**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

### April

**Event:** April Meeting.

**When:** Tuesday the 1<sup>st</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** Low Power Launch.

**When:** Sunday the 6<sup>th</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** Fire on the Farm 11.

**When:** Experimental day on Friday the 18<sup>th</sup>. High power commercial flying on Saturday the 19<sup>th</sup> and Sunday the 21<sup>st</sup>, 10:00 AM to 4:00 PM (Noon to 5:00 on Friday).

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$10 for 1 day, \$15 for 2; EX day is free.

**Description:** THOR's annual three-day, high power, spring launch.

**For More Information:** Final details will be set by the April meeting.

### May

**Event:** Low Power Launch.

**When:** Sunday the 4<sup>th</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** May Meeting.

**When:** Tuesday the 6<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** High Power Launch.

**When:** Saturday the 17<sup>th</sup>, 10:00 AM to 4:00 PM.

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$5.

**Description:** High power and low power sport flying.

**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

**Event:** National Sport Launch.

**When:** Saturday the 24<sup>th</sup> through Sunday the 26<sup>th</sup>.

**Where:** Orangeburg, SC.

**Description:** NAR's annual sport launch.

**For more information** <http://www.nsl2008.org/>

### June

**Event:** Low Power Launch.

**When:** Sunday the 1<sup>st</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** June Meeting.

**When:** Tuesday the 3<sup>rd</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** Nebraska Heat 11.

**When:** Experimental day on Friday the 20<sup>th</sup>. High power commercial flying on Saturday the 21<sup>st</sup> and Sunday the 22<sup>nd</sup>, 10:00 AM to 4:00 PM (Noon to 5:00 on Friday).

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$10 for 1 day, \$15 for 2; EX day is free.

**Description:** THOR's annual three-day, high power, summer launch.

**For More Information:** Final details will be set by the June meeting.

### July

**Event:** July Meeting.

**When:** Tuesday the 1<sup>st</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** Low Power Launch.

**When:** Sunday the 6<sup>th</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** High Power Launch.

**When:** Saturday the 19<sup>th</sup>, 10:00 AM to 4:00 PM.

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.  
**Fee:** \$5.

**Description:** High power and low power sport flying.

**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

**Event:** NARAM 50.

**When:** ?.

**Where:** Maryland(?).

**Description:** NAR's week of model rocketry competition. Typically there is a lot of sport and some high power flying, too.

**For More Information:** <http://www.narhams.org/naram50/>

### August

**Event:** Low Power Launch.

**When:** Sunday the 3<sup>rd</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** August Meeting.

**When:** Tuesday the 5<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** High Power Launch.

**When:** Saturday the 16<sup>th</sup>, 10:00 AM to 4:00 PM.

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$5.

**Description:** High power and low power sport flying.

**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

**Event:** LDRS 27.

**When:** High power commercial flying from Thursday the 28<sup>th</sup> through Sunday 31<sup>st</sup>. Experimental flying on Monday September 1<sup>st</sup> and Tuesday the 2<sup>nd</sup>.

**Where:** Argonia, KS.

**Description:** Large and Dangerous Rocket Ships number 27 hosted by the KLOUDBusters !

**For More Information:** <http://www.ldrs27.org/>

### September

**Event:** September Meeting.

**When:** Tuesday the 9<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** Low Power Launch.

**When:** Sunday the 7<sup>th</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** Balls 17

**When:** TBA.

**Where:** Black Rock Desert, NV.

**Description:** The big, national, experimental high power rocket launch of the year!

**For More Information:** <http://www.ahpra.org/b2k.html>

**Event:** High Power Launch.

**When:** Saturday the 20<sup>th</sup>, 10:00 AM to 4:00 PM.

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$5.

**Description:** High power and low power sport flying.

**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

### October

**Event:** Low Power Launch.

**When:** Sunday the 5<sup>th</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** October Meeting.

**When:** Tuesday the 7<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** Bob 3.

**When:** Experimental day on Friday the 17<sup>th</sup>. High power commercial flying on Saturday the 18<sup>th</sup> and Sunday the 19<sup>th</sup>, 10:00 AM to 4:00 PM (Noon to 5:00 on Friday).

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$10 for 1 day, \$15 for 2; EX day is free.

**Description:** THOR's new annual three-day, high power, fall launch.

**For More Information:** Final details will be set by the October meeting.

### November

**Event:** Low Power Launch.

**When:** Sunday the 2<sup>nd</sup>, Noon to ?

**Where:** 1100 Lincoln Road, Papillion, NE.

**Fee:** Free.

**Description:** Low power sport flying.

**Event:** November Meeting.

**When:** Tuesday the 4<sup>th</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** High Power Launch.

**When:** Saturday the 15<sup>th</sup>, 10:00 AM to 4:00 PM.

**Where:** Pickrell, NE.

**Ceiling:** 15,000' MSL (13,650' AGL). Window to 23,000' MSL possible with 72+ hour advance notice.

**Fee:** \$5.

**Description:** High power and low power sport flying.

**For More Information:** Check the rocketry hotline for any delays or cancellations if weather looks questionable.

### December

**Event:** December Meeting.

**When:** Tuesday the 2<sup>nd</sup>, 7:00 to 9:00 PM.

**Where:** La Vista Community Center.

**Event:** Christmas Party.

**When:** Friday the 5<sup>th</sup>.

**Where:** Denis Gilbert's house.

**Fee:** Free... but make sure to bring food and drinks.

**Description:** THOR's annual Christmas party!

**For More Information:** Final details for the party will be determined ahead of time. A map for directions to Denis' house is posted on the THOR web page. †

## History of The Heartland Organization of Rocketry

By Richard Burney and Bruce Lee  
Pictures by Richard Burney

*Note: Bruce Lee originally wrote the opening historical information below back in the 1990's. At first it was written for the original separate web page for Tripoli Nebraska. When THOR came into existence in early 1998, Bruce added some THOR relative historical points. Since many more things have happened in this club and hobby during the subsequent nine years (1998-2007), I have gone back through and have significantly updated the THOR/ORC/Tripoli Nebraska story and will try to update and maintain it in the future. - Richard Burney*

### The Tripoli Nebraska Prefecture...

Tripoli Nebraska was formed in October 1991. There were 3 Tripoli members in Nebraska at the time: Kevin Urbom, Bruce Lee and Mike Pazderka. Kevin called Bruce and said, "Let's form a prefecture." Mike and Bruce worked together, talked it over, talked with Kevin and decided to go for it. All we had to do was get someone certified. So, Mike and Bruce decided to go to Danville and get certified. Bruce certified on a NCR Katana and Mike certified on a LOC Heavy Duty Beauty. There they met Dennis LaMothe and Art Markowitz who ran HQ at the time and after Bruce and Mike were certified they set up Tripoli Nebraska. *(Note: the biggest motor flown at this Danville was an I motor).* There were over 100 flyers in attendance and there was one "J" motor flight planned with much anticipation. In those days a J motor was rare to see fly.

Bruce Lee became Prefect. Kevin couldn't make it to Danville, but he wanted to become certified. So the first official launch of Tripoli Nebraska was held in late November 1991 at Beaver City, Nebraska. It was 40 degrees and there was 6 inches of snow on the ground. There were 2 members in attendance, Kevin and Bruce and there were a total of 4 flights. Kevin's first attempt at certifying was on a LOC Mini-Magg, which had a tangled chute and busted a fin. Kevin epoxied the fin back on *(5 minute epoxy takes a while to set up at 40 degrees)* and flew it again to get his certification. Bruce launched his NCR Katana twice, the second flight with a cluster of 7 motors, an H73 and 6 D12-0's. This flight led to Bruce's first *High Power Rocketry* magazine article, "Clustering for Beginners, Part 1."

Out of the original group of three, Kevin Urbom went on to become the last volunteer Tripoli corporate lawyer. Bruce Lee went on to become the

"Tripoli Report" editor, national board member, Tripoli national Secretary, then Tripoli national Treasurer and President of The Heartland Organization of Rocketry. Kevin dropped out of Tripoli in 1993.

In the spring of 1992 Tripoli Nebraska doubled with the addition of 3 new members; David and Mick Neville, and Scott Meinhardt. Bruce and Mike traveled back to spring Danville and got to be good friends with Rocket R & D *(before it was sold to Gary Buck)*. David and Mick Neville went to a KLOUDBusters launch and got their certifications. Tony Cochran was the next to join in 1992. Tony would later become the first member of THOR to become a lifetime member.

The next Tripoli Nebraska launch was moved to Arapahoe, Nebraska airport in the summer of 1992. All of the members mentioned so far were in attendance except for Mike Pazderka. This launch started out with a visit from the police, which gave us all a scare, until we found out the sheriff was a friend of Kevin's. The rocketry world got the first view of the now famous "Dr. Mario" rocket of Bruce Lee. It had a perfect flight on a J800 AeroTech reload.

There were 2 more Arapahoe launches and the end of using the Arapahoe launch site with Kevin dropping out of Tripoli. A memorable, but sad, moment at the second to last launch there with Scott Meinhardt getting sick with Tony and Bruce having to take him to the hospital.

Tripoli Nebraska just kept growing. In 1993 we picked up new members from Iowa and Kansas. With the loss of Kevin Urbom we had no launch site for 1993 so we traveled. Two launches in Kansas, LDRS 12 in Kansas and 2 launches at Danville. At LDRS 12, Bruce Lee was made editor of the "Tripoli Report."

In 1994 we picked up Mike Collins from South Dakota, who went on to form the rocket motor dealership "Midwest AeroModeler." *(With increasing federal regulations setting in, Mike would later dissolve Midwest AeroModeler in the early 2000's).* Mike Haigh joined from Iowa and we had a new launch site at Harlan, Iowa which served through 1994.

In 1995 we found, thanks to member Perry Lambert, our first really good launch site at Exeter, Nebraska. Then with the addition of Mark Uhlenkamp to the group we had a second really good launch site in Westside, Iowa. Also, Bruce Lee ran for and won a seat on the Tripoli Board of Directors and became the national Secretary.

In 1996 with the addition of Larry Drake, we had another excellent launch site in Pickrell, Nebraska and Bruce Anderberry set up a launch site for one launch in Axtell, Nebraska. Now we had a problem most prefectures wish they had, too many good launch sites. They covered our geographic area pretty well with a 5-hour driving spread between the 2 farthest launch sites, Axtell to Westside.



**Bruce Lee prepares a motor reload while his Husker themed *Big Red* sits on display at our very first launch at our Pickrell site, 9/28/96.**

The selection of Hartsel, Colorado as the launch site for LDRS 16 in 1997 started the planning for the first group project for Tripoli Nebraska in late 1996. This was the beginning for the now famous "Nebraska Heat" project and really brought the group closer with all of the planning and construction and kicked off our first actual Tripoli Nebraska group meeting which wasn't held at a launch.



**Group picture with the Nebraska Heat rocket at LDRS 16 at Hartsel, CO, 8/9/97.**

1997 saw the biggest turnout of Tripoli Nebraska members at an LDRS and the successful flight of *Nebraska Heat* which also proved to be a first for anyone to airstart an M class motor in a cluster. Mark Uhlenkamp replaced Bruce Lee as the Tripoli Nebraska Prefect. Larry Drake flew the world

record for a successful cluster consisting of 269 motors. Bruce Lee certified level 3 with "Super Mario." Another great launch site was tested at Breda, Iowa in November.

## **The Omaha Rocket Club...**

In 1994, John Carroll (*a former engineer of Estes Industries and manager of the then new La Vista, Nebraska HobbyTown*), Jim Piunti and several others in the Omaha area formed a local model rocketry club – the Omaha Rocket Club (*very early on it was the Omaha Model Rocket Club*). Throughout the next few years, ORC would hold launches on almost a weekly basis at several different fields in the Papillion/La Vista area. A monthly meeting was held the first week of each month (*originally the first Wednesday, then later the first Tuesday*) at the La Vista HobbyTown from 1994 to the fall of 1996. Business meetings were held at the La Vista Summer Kitchen Café and at other restaurants and locations. During 1994 and 1995, Jim Piunti was the editor of ORC's newsletter.

1996 was a major year in the future development of the club. ORC saw the first time use of the soccer fields south of 66<sup>th</sup> and Harrison. A few years later, those soccer fields became the primary sport model rocketry field for THOR and would remain so until 2006. After a nearly half year hiatus of the club newsletter, Bruce Lee took on the responsibility of editing the club newsletter. Starting in October, ORC's monthly meeting was moved to the La Vista Community Center; this remains the club meeting place to this very day. It was also in the fall of 1996 that ORC achieved the status of NAR Section making it apparently the first NAR Section to exist in the state of Nebraska.

## **The Heartland Organization of Rocketry...**

Though Tripoli Nebraska and the Omaha Rocket Club were totally separate entities, the borders between both groups blurred during this time. Many members of Tripoli Nebraska had become involved with ORC and vice versa. Both organizations' activities were planned to work around each other. Though it was a Tripoli Nebraska project, the *Nebraska Heat* rocket was opened for ORC members to be involved. It was quite clear that both the NAR and Tripoli groups were pretty much becoming one organization.

By the end of 1997, the ball got rolling to bring both Tripoli Nebraska and ORC under one umbrella group. After a number of names were suggested, the acronym of **THOR – The Heartland Organization Rocketry** – was picked along with a logo created by Arley Davis. Though this was now one big club, the Tripoli Nebraska Prefecture and

the ORC NAR Section would continue to exist to serve the needs of THOR's Tripoli and NAR members. (Note: eventually ORC would be replaced by THOR as the NAR section name). New officer positions were created and filled. Model and high power rocketry was about to enter a new era in southeast Nebraska/southwest Iowa!

## THOR Yearly Highlights...

Below are some of the key highlights and events that have taken place since THOR came into existence in early 1998. This list will be added to and expanded as time goes by.

### 1998

#### THOR Officers:

**President** – Rob Skiba, David Fields, Larry Drake

**Vice President** – David Fields, Bruce Lee

**Treasurer** – Larry Drake

**Secretary** – Bruce Lee

**Tripoli Nebraska Prefect** – Mark Uhlenkamp

**NAR Section #562 Leader** – Arley Davis

**Newsletter Editor** – Bruce Lee

#### Highlights

As the result of numerous peoples' efforts, **Tripoli Nebraska** and the **Omaha Rocket Club** are brought under one umbrella organization – **The Heartland Organization of Rocketry (THOR)**.

Tripoli Nebraska member **Bruce Furan** died from Multiple Sclerosis around the beginning of the year.



**Spectators and tents can be seen along the flight line from the first Fire on the Farm, 4/4/98.**

THOR's first regional launch, **Fire on the Farm**, was held at our launch site at Breda, Iowa. Besides being THOR's first regional launch, the **Iowa Society of Amateur Rocketeers (I-SOAR)** also was heavily involved in running this event. Fire on the Farm was held on Saturday April 4<sup>th</sup> though Sunday

the 5<sup>th</sup>. A total of 182 flights were done by 55 registered flyers.



**Lanie Cross of the Des Moines area I-SOAR group at the first Fire on the Farm.**

Another regional launch, **Nebraska Heat**, was held on the weekend of October 17<sup>th</sup> and 18<sup>th</sup> at our Pickrell site. The first Nebraska Heat launch was dedicated to the memory of Bruce Furan.

### 1999

#### THOR Officers:

**President** – Bruce Lee

**Vice President** – Arley Davis

**Treasurer** – Larry Drake

**Secretary** – Richard Burney

**Tripoli Nebraska Prefect** – Mark Uhlenkamp

**NAR Section #562 Leader** – Arley Davis

**Newsletter Editor** – Bruce Lee

#### Highlights

**Fire on the Farm 2** was held on the weekend of April 17<sup>th</sup> and 18<sup>th</sup> at the Breda site. 212 flights were done by 64 flyers making this the biggest and most successful launch in THOR's history.

With **LDRS 18** being held at Argonia, Kansas it was a guarantee that there would be a large THOR turnout. For this LDRS, **Bruce Lee** led up the effort for what (to date) has been THOR's only group project ever – a 1/3<sup>rd</sup> scale **Mercury Redstone**

which represented Alan Shepard's Freedom 7 flight. The THOR Mercury Redstone was powered by a P13,000 made by John Johnson. The rocket was flown on Monday August 2<sup>nd</sup> (EX day for LDRS). Due to a flaw in the motor design, the motor catoed, severely damaging the rocket. Parts of the rocket ended up in the hands of some the team members while the main bulk of the remaining rocket went into storage; what was left of the Mercury Redstone was disposed of in September 2006.



**THOR's original 1/3<sup>rd</sup> scale Mercury Redstone nearing final assembly on the pad at LDRS 18.**

In August, THOR conducted its first experimental launch day. During these early EX days before all the rules were finalized by Tripoli, some of our EX events took place after the end of a commercial flying day.

**Nebraska Heat 2** was held the weekend of October 16<sup>th</sup> and 17<sup>th</sup> at the Pickrell site. This would be the last Nebraska Heat launch held in the fall.

## **2000**

### **THOR Officers:**

**President** – Bruce Lee

**Vice President** – Lyle Woodrum

**Treasurer** – Larry Drake

**Secretary** – Richard Burney

**Tripoli Nebraska Prefect** – Mark Uhlenkamp  
**NAR Section #562 Leader** – Arley Davis  
**Newsletter Editor** – Richard Burney, Bruce Lee

### **Highlights**

Starting with the March/April newsletter, **Richard Burney** assumed the role of newsletter editor from Bruce Lee.

**Fire on the Farm 3** was held at our Breda site on Friday April 14<sup>th</sup> through Sunday the 16<sup>th</sup>. Though this was suppose to have been our first three-day launch incorporating an experimental/research day, some very odd weather made it otherwise. Friday reached a record high of 80+ degrees, but 30+ MPH winds made things unflyable. The next day the high was 40 degrees cooler and the cloud ceiling was only about 1,000 feet up limiting pretty much everything under J motors; a total of 69 flights happened none the less. Sunday was a complete wash out.

**Nebraska Heat 3** was held at our Pickrell site on Friday June 2<sup>nd</sup> through Sunday the 4<sup>th</sup>. This would not only mark the first Nebraska Heat to be held during the summer/late spring months, but also the first fully complete three-day launch. A total of over 87 flights took place over the three-day event.

One of Tripoli Nebraska's original members **Scott Meinhardt** passed away on Wednesday August 16<sup>th</sup> as a result of brain cancer. Scott was just 34 years old.

On September 29<sup>th</sup>, **Ky Michaelson** and his **CSXT** team made their first attempt at sending a private civilian rocket into space. After reaching 3,203 MPH and an altitude of 8 miles up, the rocket came apart. Besides Ky, numerous other THOR members including **Bruce Lee** and **Tony Cochran** were involved in this and the next two attempts.

## **2001**

### **THOR Officers:**

**President** – Bruce Lee

**Vice President** – Arley Davis

**Treasurer** – Larry Drake

**Secretary** – Richard Burney

**Tripoli Nebraska Prefect** – Mark Uhlenkamp

**NAR Section #562 Leader** – Arley Davis

**Newsletter Editor** – Richard Burney

### **Highlights**

THOR's very own **Bruce Lee** and **Ky Michaelson** appeared in an episode of TLC's **Junkyard Wars**, "**Sky Rockets**", on Wednesday January 24<sup>th</sup>. Bruce Lee was part of the **Long Brothers** team while Ky was one of the judges.



Lanie Cross (center) along with Fred Gruis (behind Lanie) and Tim Covey raise Lanie's rocket into position for the first flight of Fire on the Farm 4, 4/20/01.

**Fire on the Farm 4** was held at our Breda site on Friday April 20<sup>th</sup> through Sunday the 22<sup>nd</sup>. 5 flights and several static motor burns were conducted on the EX day. 51 flights were held on Saturday. Sunday was a wash out.

**Nebraska Heat 4** was held at our Pickrell site on Friday June 22<sup>nd</sup> through Sunday the 24<sup>th</sup>.

**September 11<sup>th</sup>** – as a result of the terrorist attacks that took place on this date, all high power model rocketry in the country would be prohibited during the next several weeks.

On October 15<sup>th</sup>, a fire destroyed **AeroTech's** main production facility. This would result in a severe shortage of AeroTech motors over the next few years. During this time, motors manufactured by companies such as **Cesaroni** and **Animal Motor Works** would become popular alternatives.

## 2002

### THOR Officers:

**President** – Bruce Lee

**Vice President** – Arley Davis

**Treasurer** – Larry Drake

**Secretary** – Richard Burney

**Tripoli Nebraska Prefect** – Kevin Trojanowski

**NAR Section #562 Leader** – Arley Davis, Bruce Lee

**Newsletter Editor** – Richard Burney

### Highlights

**Fire on the Farm 5** was held on Friday April 12<sup>th</sup> through the 14<sup>th</sup>. A total of around 140 flights were made. This would mark the very last launch held at the farm fields near Breda, IA and the last time that we would hold a launch of any sort in Iowa. All of THOR's high power launches have been held at its Pickrell site ever since.



Tony Cochran and his rocket *Woody* at Fire on the Farm 5, 4/14/02. Years later, Kevin Trojanowski would build a rocket by the same name, though his was truly a wooden rocket.

**LDRS 21** was held south of Amarillo, TX from Thursday July 11<sup>th</sup> through Tuesday the 16<sup>th</sup>. A fair number of THOR's members made the trip to this first LDRS hosted by the **POTROCS**. **Kevin Trojanowski's** famous *Lusty Cornmaiden* made its maiden flight there.

**Nebraska Heat 5** was held on Friday August 2<sup>nd</sup> through Sunday the 4<sup>th</sup>. Since 2000, this has marked the only Nebraska Heat launch since 2000 to be held in a month other than June.

The second attempt of **Ky Michaelson's CSXT** took place on September 19<sup>th</sup>. This time the rocket suffered a cato immediately after takeoff resulting in the destruction of the vehicle.

On the evening before Thanksgiving, THOR member **Candy Davis** died as a result of an accidental electrocution. Candy was just 22 years old. Though Candy's involvement in the club was initially through her father Arley, Candy came to many of our launches and was involved with our group projects. She was one of the very few female members of our group at that time. She was both Level 1 and 2 Certified. She is survived by her son **Jacob** and her daughter **Necia**.

## 2003

### THOR Officers:

President – *Bruce Lee*

Vice President – *Greg Rothman*

Treasurer – *Larry Drake*

Secretary – *Richard Burney*

Tripoli Nebraska Prefect – *Kevin Trojanowski*

NAR Section #562 Leader – *Bruce Lee*

Newsletter Editor – *Richard Burney*

### Highlights

**Fire on the Farm 6** was held on Friday April 25<sup>th</sup> through Sunday the 27<sup>th</sup>. Well over a hundred flights would be conducted over this weekend. This would be the first Fire on the Farm held at our Pickrell site.

**Nebraska Heat 6** was held on Friday June 13<sup>th</sup> through Sunday the 15<sup>th</sup>.



Larry Mills and his PML AMRAAM 4 at Nebraska Heat 6. Larry was famous for his collection of AMRAAM air-to-air missiles.

LDRS 22 was held from Thursday July 17<sup>th</sup> through Tuesday the 22<sup>nd</sup>. As typical with Argonia held, KLOUDBuster run LDRS's, there was a sizable number of THOR members there. Notable THOR rockets flown included **Stumpy** (world's tallest model rocket), 316-D11-powered **Maxie D**, the twin M1419 powered porta-potty **Our Stinkin' Rocket**, and the second Level 3 attempt of Kevin's **Lusty**

**Cornmaiden**. First TV shot the three-episode program, **Rocket Challenge**, during LDRS 22. Many of the above mentioned rockets appeared in the program and some of THOR's members were part of a team in the "**From the Ground Up**" contest.



Ky Michaelson and Bruce Lee's **Our Stinkin' Rocket** a few days before its flight at LDRS 22.

## 2004

### THOR Officers:

President – *Bruce Lee*

Vice President – *Greg Rothman*

Treasurer – *Larry Drake*

Secretary – *Richard Burney*

Tripoli Nebraska Prefect – *Kevin Trojanowski*

NAR Section #562 Leader – *Bruce Lee*

Newsletter Editor – *Richard Burney*

### Highlights

Starting with the January/February issue, THOR's newsletter finally had an actual name – **THOR's Hammer**. The name paid tribute to the THOR team and its rocket involved with one of the contests at LDRS XXI.

**Fire on the Farm 7** was held on Friday April 30<sup>th</sup> through Sunday May 2<sup>nd</sup>. A total of about 100 flights took place.

History was made on Monday May 17<sup>th</sup> when **Ky Michaelson's CSXT/GoFast** rocket became the first private amateur rocket to go into space reaching an altitude of over 70 miles. This was Ky's third attempt. Once again, multiple THOR members including Ky, **Bruce Lee**, and **Tony Cochran** were involved.

**Nebraska Heat 7** was held on Friday June 18<sup>th</sup> through Sunday the 29<sup>th</sup>. A total of over 140 flights took place.

THOR's October launch was changed to be a two-day launch covering Saturday October 17<sup>th</sup> through Sunday the 18<sup>th</sup>. About 125 flights took place over this weekend.



**Rick Bosworth** prepares his specially modified Halloween ornament, *Boo Goes Boom*, at the October 2004 launch, 10/17/04.

## **2005**

### **THOR Officers:**

**President – Bruce Lee**

**Vice President – Greg Rothman**

**Treasurer – Thomas Kernes**

**Secretary – Richard Burney**

**Tripoli Nebraska Prefect – Kevin Trojanowski**

**NAR Section #562 Leader – Bruce Lee**

**Newsletter Editor – Richard Burney**

### **Highlights**

**Fire on the Farm 8** was held on Friday April 15<sup>th</sup> through Sunday the 17<sup>th</sup>. A total of about 119 flights took place over the three-day weekend.



**Andrew (left) and George Wimmer** prepare to raise a clustered rocket of theirs' at **Fire on the Farm 8**, 4/16/05.

May - **Andrew Wimmer** leads up a team from West Point/Beemer Junior/Senior High School at this year's **Team America Rocket Challenge**. Andrew's team placed 66<sup>th</sup> out of 100 contestants.

**Nebraska Heat 8** was held on Friday June 17<sup>th</sup> through Sunday the 19<sup>th</sup>. A total of about 67 flights took place. Though not many flights, there were four M flights and numerous K and L flights.

**Kevin Trojanowski** and a team from THOR built and flew a 1/5<sup>th</sup> scale **Delta III** at **AIRFest 11** at Argonia, Kansas on September 5<sup>th</sup>.

The now multi-day October launch was expanded to cover a research day; this year's launch ran from Friday October 14<sup>th</sup> through Sunday the 16<sup>th</sup>. A total of about 151 flights took place.

## **2006**

### **THOR Officers:**

**President – Bruce Lee**

**Vice President – Greg Rothman**

**Treasurer – Thomas Kernes**

**Secretary – Richard Burney**

**Tripoli Nebraska Prefect – Kevin Trojanowski**

**NAR Section #562 Leader – Bruce Lee**

**Newsletter Editor – Richard Burney**

### **Highlights**

**Fire on the Farm 9** was held on Friday April 21<sup>st</sup> through Sunday 23rd.

April – Lincoln member **Scott Frasier** passed away from cancer.

May – **Andrew Wimmer** (West Point/Beemer Junior/Senior High School) and **David Austerberry** (Benson High) both led separate teams in 2006's **Team America Rocket Challenge**. Andrew's Team placed 3<sup>rd</sup> while David's team placed 21<sup>st</sup>.

**Nebraska Heat 9** was held on Friday June 16<sup>th</sup> through Sunday the 18<sup>th</sup>.

**LDRS 25** was held at the **POTROCS'** field south of Amarillo, Texas from Thursday June 29<sup>th</sup> through Tuesday July 4<sup>th</sup>. Like the last Amarillo LDRS, quite a few members from THOR were in attendance. This would mark the second flight for the 1/5<sup>th</sup> scale **Delta III** by **Kevin Trojanowski** and his team.



1/5<sup>th</sup> scale Delta III at LDRS 25, 7/3/06.

THOR's multi-day high power launch in October was finally given a name: **Bob**. Yes, just Bob. The first Bob launch was held on the weekend of Friday 20<sup>th</sup> through Sunday the 22<sup>nd</sup>. Friday turned out to be a decent day for flying. Saturday was cancelled due to forecasted bad weather. Sunday was primarily a day for Lincoln area scouts and their families to fly.

THOR member **Mark Havel** passed away on November 25<sup>th</sup> as the result of a brain hemorrhage. Mark was just 43 years old.

## **2007**

### **THOR Officers:**

**President** – *Greg Rothman*

**Vice President** – *Nathan Warner*

**Treasurer** – *Thomas Kernes*

**Secretary** – *Richard Burney*

**Tripoli Nebraska Prefect** – *Kevin Trojanowski*

**NAR Section #562 Leader** – *Greg Rothman*

**Newsletter Editor** – *Richard Burney*

### **Highlights**

**Fire on the Farm 10** was held on the weekend of Friday April 20<sup>th</sup> through Sunday the 22<sup>nd</sup>. Due to bad weather all weekend, only research flying took place on Friday with the next two days being cancelled. With a total of less than 10 flights, this was the worst multi-day high power launch in THOR's history.

A new field for low power sport flying was discovered in the form of a former golf driving range on Lincoln Road west of 84<sup>th</sup> Street in Papillion. The first launch to take place there was on Sunday April 29<sup>th</sup>. Starting in June, THOR returned to its tradition of having a low power sport launch on the first Sunday of the month.

**Nebraska Heat 10** was held on the weekend of Friday June 15<sup>th</sup> through Sunday the 17<sup>th</sup>. A total of 55 flights took place.

**LDRS 26** was held at the Jean Dry Lake near Las Vegas, NV from Thursday July 12<sup>th</sup> through Tuesday the 17<sup>th</sup>. Though a long distance away, a fair number of THOR's members made the long drive out.

**Bob 2** was held the weekend of Friday October 19<sup>th</sup> through Sunday the 21<sup>st</sup>.

After nine years as secretary and eight years as the club's newsletter editor, **Richard Burney** retired from both positions at the end of the year. Richard's run as secretary not only made him the longest running officer for a single position in the club, but also the last club officer left from the 1990's. Besides being newsletter editor for eight years, Richard was a heavy contributor to the ORC and THOR newsletters between 1996 and 2000. The hard work Richard put into **THOR's Hammer** resulted in the newsletter being a runner-up for **NAR's LAC Award** in 2004 and 2005.

## **2008**

### **THOR Officers:**

**President** – *Greg Rothman*

**Vice President** – *Nathan Warner*

**Treasurer** – *Thomas Kernes*

**Secretary** – *Barry Conner*

**Tripoli Nebraska Prefect** – *Kevin Trojanowski*

**NAR Section #562 Leader** – *Greg Rothman*

**Newsletter Editor** – *Barry Conner* ✦



<http://spaceplace.nasa.gov/en/kids/>

## Ultraviolet Surprise

by Patrick L. Barry and Tony Phillips

How would you like to visit a universe full of exotic stars and weird galaxies the likes of which astronomers on Earth have never seen before?

Now you can. Just point your web browser to [galex.stsci.edu](http://galex.stsci.edu) and start exploring.

That's the address of the Galaxy Evolution Explorer image archive, a survey of the whole sky at ultraviolet wavelengths that can't be seen from the ground. Earth's atmosphere blocks far-ultraviolet light, so the only way to see the ultraviolet sky is by using a space telescope such as NASA's Galaxy Evolution Explorer.

About 65% of the images from the all-sky survey haven't been closely examined by astronomers yet, so there are plenty of surprises waiting to be uncovered.

"The Galaxy Evolution Explorer produces so much data that, beyond basic quality control, we just don't have time to look at it all," says Mark Seibert, an astronomy postdoc at the Observatories of the Carnegie Institution of Washington in Pasadena, California.

This fresh view of the sky has already revealed striking and unexpected features of familiar celestial objects. Mira is a good example.

Occasionally visible to the naked eye, Mira is a pulsating star monitored carefully by astronomers for more than 400 years. Yet until Galaxy Evolution Explorer recently examined Mira, no one would have guessed its secret: Mira possesses a comet-like tail 13 light-years long.

"Mira shows us that even well-observed stars can surprise us if we

look at them in a different way and at different frequencies," Seibert says.

Another example: In April, scientists announced that galaxies such as NGC 1512 have giant ultraviolet spiral arms extending three times farther out into space than the arms that can be seen by visible-light telescopes. It would be like looking at your pet dog through an ultraviolet telescope and discovering his ears are really three times longer than you thought!

The images from the ultraviolet space telescope are ideal for hunting new phenomena. The telescope's small, 20-inch primary mirror (not much bigger than a typical backyard telescope) offers a wide field of view. Each image covers 1.2 degrees of sky—lots of territory for the unexpected.

If someone combing the archives does find something of interest, Seibert advises that she or he should first search astronomy journals to see whether the phenomenon has been observed before. If it hasn't, email a member of the Galaxy Evolution Explorer science team and let them know, Seibert says.

So what are you waiting for? Fire up your web browser and let the discoveries begin!

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.* ✦

**Astronomers looking at new ultraviolet images from the Galaxy Evolution Explorer spacecraft were surprised to discover a 13-light-year long tail on Mira, a star that has been extensively studied for 400 years.**



## THOR Meeting Minutes

Compiled by Richard Burney, Secretary

### THOR Meeting Minutes 11/6/07

**Attendance:** *Richard Burney, Trey Marcotte, Robert Marcotte, Arley Davis, Jacob Davis, Soren Johnson, Donald Johnson, John McAtee, Denis Gilbert, Doug Buhrman, Kevin Trojanowski, Lisa Rothman, and Greg Rothman.*

**Meeting starts at 19:13.**

**Kevin Trojanowski** shows the work that has progressed on his **Woody** rocket which is all-wooden in construction.

Christmas party is still on for December 7<sup>th</sup> at **Denis Gilbert's** house.

**John McAtee** got his Level 1 Certification at the **Bob 2** launch in October. After the first flight ended with the 29mm motor mount failing and the motor going out the top of the rocket (no damage to the rocket), John successfully flew his Minie Magg on a 38mm H.

**Arley Davis** does his usual show-and-tell; includes the new Estes digital camera rocket and some various new and classic kits. Arley passes around his **Estes Scrambler** that he built about 10 years ago and describes his finishing techniques for low power rockets.

**Richard Burney** plans on getting out the fall newsletter this month. The winter 2008 newsletter will be his final issue.

**Greg Rothman** does an introduction to mid power rocketry (E-G motors) including what it takes to convert Estes kits for these larger motors.

**Treasurer's Report** - \$493 down to \$300 after paying for the porta-potty. After other incoming monies, club balance close to \$500. Several club expenditures are coming up.

All club officers, except secretary and newsletter editor, are running uncontested for 2008. (*Editor's note: Barry Conner would later announce running for secretary a few weeks later.*)

Discussion and vote made and passed to shorten the club meetings to two hours with the exception of the March meeting (annual auction).

**Meeting adjourned at 20:45.**

### THOR Meeting Minutes 12/4/07

**Attendance:** *Richard Burney, Daniel Pfile, Arley Davis, John McAtee, Barry Conner, Denis Gilbert, Doug Buhrman, Greg Rothman, Lisa Rothman, Bill Richardson, Kevin Trojanowski, Doug Holverson, Robert Marcotte, and Trey Marcotte.*

**Meeting starts at 19:10.**

**Daniel Pfile** is introduced to the club. Daniel worked with **Greg Rothman** on joint projects at Offutt AFB.

A general discussion takes place about fiberglass – where to get it, pricing, etc.

**Barry Conner** talks about some of his most recent flights in particular three flights on his LOC V-2 at our November launch. After having some premature ejections on the first two flights, Barry had one flight using an AeroTech I211. In the case of this flight however the ejection charge went off way later and the parachute deployed just before the rocket hit the ground. Other than a lengthy zipper the rocket was okay.

**Jon McAtee** talks about what he wants to do for his Level 2 flight.

**Doug Holverson** shows his 1970's vintage **Centuri Evel Knievel Skycycle** model rocket based off of Knievel's famous attempt to fly over the Snake River Canyon in Idaho. The real Evel Knievel passed away this past weekend.

Now that he has room again, **Arley Davis** has started building some new rockets. One of the first ones was the **Estes Stealth** kit from the 1980's. Arley had also recently finished building the two-stage **Estes Longshot**.

**Robert Marcotte** shows his **Sky Ripper** 38mm hybrid hardware (H, I and J cases) and on of the reloads re recently purchased.

**Richard Burney** talks about what he's been up to. This is his last night as secretary. His last two newsletters are being simultaneously worked on.

**Greg Rothman** shows the new Estes video/still shot camera model rocket kit. Shows on his laptop a flight he recorded recently. Greg demonstrates the **Rocket Altitude Simulation Program** – WRASP – which is a free download at [www.wrasp.com](http://www.wrasp.com). Greg shows his large WAC Corporal which he has simulated in the software.

Motion made and passed for all office positions. **Barry Conner** is the new secretary. Barry will also be the new newsletter editor once Richard wraps up his final issues. Barry's wife will also assist.

The calendar for 2008 is tentatively planned to match the 2007 calendar. Richard will double check to make sure no dates conflict with any holidays, etc.

THOR Christmas party at **Denis Gilbert's** will now take place on Friday the 14<sup>th</sup>.

**Meeting adjourned at 20:42.** ✨



### What is THOR?

The Heartland Organization of Rocketry (THOR) is both an officially sanctioned Prefecture of the Tripoli Rocketry Association (Tripoli Nebraska #46) and Section (#562) of the National Association of Rocketry. THOR strictly adheres to the safety guidelines established by both rocketry associations.

THOR has been actively involved in the hobby of model rocketry (low power, high power, and experimental) in southeast Nebraska and southwest Iowa since the early 1990's. THOR members, along with their projects, have appeared on national television programs such as *Master Blasters* (The SciFi Channel), *Rocket Challenge* (The Discovery Channel), *Extreme Machines* (The Learning Channel), *Junkyard Wars* (TLC), and *Ripley's Believe It Or Not* (TBS).

### When and where does THOR meet?

Meetings are usually held the first Tuesday of the month at the **La Vista Community Center at 8116 Parkview St., La Vista, NE** – turn east at the Sinclair Gas Station on 84<sup>th</sup> St. and go a block east (look for the big US flag). Visitors are welcome to attend.

### When and where does THOR fly?

From March through November, THOR conducts at least one high power launch (1/4A – N class) each month. High power launches are held east of Pickrell, NE which is 30 miles south of Lincoln. THOR conducts at least 3 three-day high power rocketry events each year. A low power sport launch is held the 1<sup>st</sup> Sunday each month at the old golf range on West Lincoln Street just west of 84<sup>th</sup> Street (South Washington Street) in Papillion, NE.

### THOR's Hammer...

*THOR's Hammer* is the official newsletter of THOR. On average, it is published on a quarterly basis. *THOR's Hammer* is available, in PDF format, through its website (<http://www.nerocketry.org/>) or is mailed to those without Internet access. Members are welcomed to contribute articles and pictures to the newsletter.

### For additional information...

For any additional questions or to check on the status of an upcoming launch, call THOR locally at **(402) 505-3721** (there is a voice mail option at the end of the message). Interested parties may also write their inquiries to the address at the right and are also welcome to contact any of THOR's officers.

## THOR Membership Application Personal Information

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_

E-mail: \_\_\_\_\_

### Hobby Information

How long have you been in model rocketry: \_\_\_\_\_

Do you belong to a national rocketry organization - enter your membership number to the applicable organization:

NAR# \_\_\_\_\_ TRA# \_\_\_\_\_

Are you certified for high power rocketry – check mark your applicable TRA and/or NAR Certification Level:

Level 1 \_\_\_\_\_ Level 2 \_\_\_\_\_ Level 3 \_\_\_\_\_

### Membership Rates

Half year membership rates will be divided by 2 and will add \$1. Write you check payable to "The Heartland Organization of Rocketry" or "THOR". Mail check and form to the below address or bring to the next meeting.

Family Membership - \$36  
Senior Membership (18 and over) - \$24  
Junior Membership (18 and under) - \$12  
Correspondence Membership (members over 50 miles away from Omaha) - \$10

I agree to comply with THOR's policies as pertains to the safety guidelines set forth by Tripoli and the NAR. Failure to do so or conduct deemed unbecoming may result in expulsion from the club.

Signature: \_\_\_\_\_

Dated: \_\_\_\_\_

**The Heartland Organization of Rocketry**  
**625 Walnut Street**  
**Hickman, NE 68372**

Membership in The Heartland Organization of Rocketry is open to all interested parties.