**January 1999 Meeting Minutes (1/9/1999)**

The first MASA meeting of 1999 was held on Monday, January 4th at the Science Museum of Minnesota in St. Paul.  The meeting began at 7 pm as Russ Durkee discussed a few items of club business.  In particular, all continuing MASA members are reminded that they should pay their dues for 1999.  ([Link to Membership Application](file:///C:\Users\Carol\Desktop\MASA%20Club%20and%20website%20info\Website%20-%20old%20files%20from%20Alan\masa\mem_app.htm))  MASA members who have paid for NAR individual insurance for 1999 should contact Russ Durkee.  He needs to list at least 5 NAR members with insurance in order to apply for NAR section insurance for the year.  Remember, the NAR insurance runs by calendar year (January to December) and not by the expiration date on your NAR membership card.  See the last issue of the Model Rocketeer for more information about NAR individual insurance.

Thanks to generous donations by MASA members, we were able to give a holiday card and gift to the sod farm owners expressing our gratitude for allowing us to use their fields.

MASA member (and camcorder nut extraordinaire) Carl Persson has compiled two video tapes of local rocket activities in 1998.  The first tape contains footage from a number of MASA launches this summer and fall.  The second tape contains footage from Minnesota Tripoli launches in June, July, September, and October.  Carl has done a great job on these tapes, and he is offering copies for sale at $10. per tape plus S&H.  If you're interested in a great video record of Minnesota rocketry in action, Carl can be contacted at (612) 519-1206.

Alan Estenson is looking for a volunteer or two to assist him with a presentation about model rockets for the Anoka County 4-H project workshop on February 6.  This is a one hour presentation  with questions and answers about model rockets.  The workshop will be held at the Bunker Hills Activity Center which is just a few miles from the Blaine launch site.  If you have a few hours that morning and are willing to help, please contact Alan.

The evening's highlight was a presentation (multimedia extravaganza!) by Ted Cochran about the Saturn V.  Ted showed us various resources available on the Web that contain detailed information about the components and versions of the Saturn V rocket.   These could be great sources for those of us who have a new Estes Saturn V kit to build; you could create a competition-level masterpiece by using the available info on the Internet.  Ted also discussed the good-and-bad about the new Estes kit and compared it to the previously available Estes and Centuri kits.  It's time to tear the shrinkwrap off the box and start building; the MASA Apollo 11 Commemorative Launch is scheduled for July 17!

Useful sites for those interested in modeling or just learning more about the Saturn V.

John Duncan's [The Apollo Saturn Reference Page](http://www.thebest.net/jduncan/index.html)

[Corway's Apollo Site](http://www.calweb.com/~ccorway/saturn-v/saturn-v.htm) (down?)

[Knudson's FAQ, modeling details, and photos](http://www.ninfinger.org/~sven/models/models.html)

[NASA Apollo History](http://www.ksc.nasa.gov/history/apollo/apollo.html)

[Jim Stuckman's Review of the Estes 30th Anniversary Apollo 11 Saturn V](http://blackhawk1.raven-villages.net/~EMRR/reviews/est_saturn_v.html)

[Plans for Estes #K-36 Saturn V (jimz)](http://www.dars.org/jimz/k-36.htm)

[Plans for Estes #2001 Saturn V (jimz)](http://www.dars.org/jimz/est2001.htm)  
*(Alan Estenson)*

**February 1999 Meeting Minutes (2/6/1999)**

The February 1999 MASA meeting convened at 7 pm on Monday, February 1 at the Science Museum in St. Paul.  A total of 8 members were in attendance.  A reminder was made that the next MASA launch is scheduled for Saturday, February 27.  The expected article on MASA did not make it into the new January/February issue of Sport Rocketry magazine, so we will have to look for it in the next issue.  However, we did note that Russ Durkee appeared in a NARCON photo on page 9.  (The back of his head also appears in a photo on page 12.)

Speaking of NARCON, Russ announced that he will be attending and will have extra room in his car if a few other MASA members are interested in going along.  In a nutshell, NARCON is the NAR annual convention.  It will be held on March 26-28 in Champaign, Illinois.  For more info on NARCON, see page 3 of the newest issue of The Model Rocketeer or page 44 of the new issue of Sport Rocketry.

In an attempt to bring more MASA members out to the meetings, Russ discussed having a special meeting which would consist of a launch pad building session.  A prototype pad was on display at the meeting.  A nominal fee would be charged to cover materials.  The pad would be sufficient for rockets up to 1 pound for member's private use or to bring along to club launches.  It would be great to see some of the "mystery names" on the MASA membership list at some meetings.  Usually, it's the same 8 to 10 people at every meeting...

Damian Kostron is looking for any submissions for the newsletter, MASA Planet.   [Your webmaster would also welcome any submissions of material for the web site.]

The last hour of the meeting was spent in a boost-glider building session.  Plans were provided from an article in the Fall 1995 issue of Sport Rocketry magazine.  Building supplies were brought by the members in attendance with some body tubes and nose cones donated by Damian.  Everyone had a lot of fun as we sanded up a storm of balsa dust and then performed test glides of our creations in the courtyard.

The next MASA meeting will be on Monday, March 1.  
*(Alan Estenson)*

**March 1999 Meeting Minutes (3/2/1999)**

The March 1999 MASA meeting convened at 7 pm on Monday, March 1 at the Science Museum in St. Paul.  The most important announcement regarded the March launch date.   Due to various conflicts, including NARCON, the March MASA launch will be held on the 20th instead of the 27th.  Details of the launch pad building session discussed during the February meeting are still being worked out, and a date has not yet been set.

Russ Durkee brought the members present up to date on the known BATF situation with regards to larger rocket motors.  Ted Cochran briefly discussed his continuing adventures in acquiring a LEUP and researching the pertinent state and local regulations.

The majority of the evening was spent in an informal rocket building "kit bash".  Everyone brought along miscellaneous parts, components, and building supplies.  Pieces were then modified, traded, bought & sold, and given-away.   The scent of CA and kicker soon filled the room.  Mark Thell made a BT-20 based rocket with H-pattern fins, reminiscent of a TIE fighter.  Christopher Kvidera made a 3 foot rocket from BT-5 with three rakish fins.  Ted Cochran & company built an Estes Mini-Cobra 2 stager and worked on constructing replacement Commanche-3 lower stages.  Alan Estenson concocted a sci-fi creation from an Estes SR-71 kit, dubbing it the RQ-70 (because it's one step better...)  Damian Kostron constructed a recreation of an old Centuri kit and received some friendly ribbing for working from photocopies of the original instructions.  [Instructions?  We don't need no stinkin' instructions.]  Damian did then redeem himself by whipping up a small rocket with some outlandish number of fins on it.  Russ Durkee created an interesting craft with an old Crusader nose cone at the front and a joined, swept wing/tail at the rear.   [Reminiscent of designs the Navy has proposed for carrier-borne reconn/patrol/AEW to replace planes like the A-6, if that helps...]

The next MASA meeting will be on Monday, April 5.  
*(Alan Estenson)*

**April 1999 Meeting Minutes (4/6/1999)**

The April 1999 MASA meeting convened at 7 pm at the Science Museum in St. Paul with a very good turnout of MASA members both new and old.

One of the highlights of the meeting was the news of the MASA article in Sport Rocketry magazine.  Damian reports that MASA has already added several new members as a result of the article.  MASA currently has about 40-45 paid members.

The next launch is scheduled for Saturday, April 24 starting at about 11 am.

Several schools have contacted Russ with requests for rocket launch demos.  Russ hasn't made any promises yet, but if you have time and are willing to help, please contact him by email or phone.

The May meeting will be held at Damian Kostron's home so that we can hold a launch pad building session.  For a nominal fee to cover materials, you will be able to build a launch pad capable of holding up to a one pound rocket.  The launch pad will, of course, then belong to you, but we hope that you'll bring it along with you to club launches.  If you have any good ideas about launch pad design, please forward them to Russ.

Also in May, we will be resuming the MASA weekday evening launches.  We hope to hold two of these launches per month throughout the summer in addition to the normal Saturday launch..  These launches will typically start about 5 pm and go until just before sunset (or until the mosquitoes come out in swarms.  [*The bugs, not the rockets*.])  These "informal launches" will not be posted on the web site, but MASA members will be notified of a launch a few days in advance by email or phone.  We tend to get some nice, calm summer evenings here in Minnesota that are just perfect for flying a few rockets...

The remainder of the evening was spent in general discussion and show-and-tell centered around our topic:  computer programs for rocket stability and performance prediction.   Using a couple laptop computers, rockets that MASA members had brought to the meeting were analyzed for stability and performance.  The data were entered into several different programs, including VCP, WRASP, WINROC, and Rocksim, and the varying results compared.

*(Alan Estenson)*

**May 1999 Meeting Minutes (5/3/1999)**

The May MASA meeting convened at 7 pm at Damian Kostron's residence in Woodbury.   Taking advantage of Damian's garage and workshop, a good turnout of MASA members constructed large, four-legged PVC launch pads with a swiveling launch rod mount.   These turned out to be quite substantial pads, capable of taking up to a 1/4" launch rod.  Quite a bargain for those who participated, each pad cost its' builder only $15 to cover the materials.  A total of 6 pads were constructed in less than an hour's time.  These pads will be a welcome addition as their new owners will (hopefully) bring them to upcoming MASA launches.  (Photos have now been posted to the web site.)

Carl Persson showed the videotape of his latest sci-fi epic featuring the launch of his "Saturn 7."  Ted Cochran brought along his recently-completed multi-pad launch controller and the payload bay for his PML Tethys complete with Olsen altimeter.

Another topic of discussion later in the evening was the rapid growth of the club, the club launches, and the inevitable wear-and-tear that we inflict on our sod-farm launch site.  As shown at the recent April launch, more and more cars and people are coming to our regular launches.  Although we have a good relationship with the landowner, we feel that we should have more than one regular launch site.  That way, we might alternate between locations and avoid imposing overly on any one site (or landowner).   If you know of any potential, possible launch sites, please pass the info on to Russ Durkee.

*(Alan Estenson)*

**MASA 1999 Summer Picnic (7/12/1999)**

On Friday evening, July 9th, MASA members, spouses and kids gathered at Mark and Deb Thell's home for the annual MASA summer picnic.  Most get-togethers might have a sign or balloons in the front yard to mark the spot, but not for this group - a Saturn 1b hung from a tree in the front yard.  The good-sized group enjoyed tasty food (as Mark manned the grill) and pleasant conversation.  For dessert, we ate cake as Christopher Kvidera endured a rousing rendition of "Happy Birthday".  (As compensation, Chris got to pick a rocket kit out of the selection of door prizes.  :-)

After everyone had eaten their fill, it was time for door prizes.  Some prizes were donated by Hub Hobby Center while the rest had been acquired at the recent going-out-of-business sale at Wheels and Wings.  Becky Martens won a rtf R2-D2 while Ann Martens won a rtf Royal Starship and Marge Martens won a Fat Boy kit.  Lee Grimm won a rtf Naboo Fighter, Bradley Grimm a Dynamic Carrier kit, and Nancy Grimm a Superbird kit.  Deb Thell won a Stealth Interceptor kit (but we told Mark that he wasn't allowed to steal it from her!)  Rounding off the door prizes, Kent won a Satellite Drone.

Wrapping up the evening, we sat and "chewed the fat" for a while around a "campfire" in the back yard.

*(Alan Estenson)*

**August 1999 Meeting Minutes (8/24/1999)**

The August 3 meeting convened at 7pm at the Minnesota Science Museum.  The gathering drew a typical MASA membership with several prospective new members.  This meeting was scheduled as a "Show and Sell", with more for show than for sale.   Damian Kostron had the usual assortment of tubes and KosRox goodies for sale while Ed Eastman passed around some vintage Rocket Magazines.  Drooling started when Lee Grimm shared an old Estes Gemini Titan kit he brought in.  
  
A brief mention was made to a MASA newsletter being published within the next week or so.   Also, if members have not been receiving e-mails recently, they should contact an officer with their current e-mail address.  This would also be included in the newsletter.  
  
The meeting also hosted a flurry of Rocketry related questions ranging from "what do I use as a filler?" to "how the field situation going?".  The results of the evening were very entertaining.

*(Damian Kostron)*

**September 1999 Meeting Minutes (9/7/1999)**

The September MASA meeting started at 7pm at the Science Museum of Minnesota in St. Paul.  There were about 22 people in attendance.  Russ started off the meeting by reminding us that this was our last meeting in the "old" museum.  Hopefully, we will be able to start meeting at the "new" museum in January, but for the next few months, the meeting locations will be moving around.  If any MASA members have room to host a meeting in their home, basement, or garage, or if you know of another good location, please talk to a MASA officer.

Russ reminded us that we are still searching for good launch sites.  For present, we will continue having modroc launches at the White Bear Lake site.  However, due to the sheer numbers of people coming to the MASA Saturday launches, we will not be able to have those launches at the Blaine sod farm location.  Because they typically have a smaller attendance, some of the informal summer evening launches may be held at Blaine.

Russ announced that he would like to form a group of volunteers within MASA that would actively assist in this search for a good flying field.  Our ideal site would be a sod farm of size and location that would allow flights of at least "H" impulse.  If you have any suggestions, or if you would be able to join the launch site search group, please contact MASA President Russ Durkee.

Ideas & topics are being solicited for MASA meetings for next year.  If you have an idea for a building project that could be completed in a meeting's time, an idea for a field trip or tour, or if you would be willing to do a short presentation on a rocketry topic, please contact a MASA officer.  Your ideas and volunteer efforts are needed to continue making MASA meetings an interesting and worthwhile experience.

The next launch will be on Saturday, September 25th at White Bear Lake.

Following the "official" business, Alan Estenson passed along some rocketry news and then showed two rockets that he'd brought:  a 2.6" Blossom (V2) and a scratchbuilt triple ring-tail rocket.

The activity for the meeting was to construct streamer duration rockets to be flown at the next launch.  For the occasion, Damian Kostron created a special run of KosRox "Streadur" (streamer duration) kits.  Each kit contained a length of bt-20, a balsa nose cone, screw eye, shock cord, balsa fin material, clay, launch lug, motor block and MASA decal.  The rules were that the rocket could only be constructed from what was in the kit, the rocket must be flown on an A8-3, and you had to provide your own streamer material.  Some sample fin templates were included, but most people dreamed up their own designs.  21 free kits were distributed, and a whole flock of rockets resulted in a fairly short time.  The next launch will be interesting as we see the results of more than 20 different efforts to build the best streamer duration rocket from the same components.

*(Alan Estenson)*

**October 1999 Meeting Minutes (10/7/1999)**

The October MASA meeting started at 7pm at Russ and Brenda's place in Minneapolis.  Russ started the meeting by reminding us that the next launch will be on October 23rd.  The site hasn't been determined yet, but if all else fails, it will be in White Bear Lake.

We are still looking for good launch sites!  If you know of any possibilities, please contact Russ!  Currently, one new site is being investigated that is out between Elk River and Rogers.  The property is owned by the local VFW; it is a fairly good-sized field (covered with soccer fields, of course...) with a parking lot and (most important) porta-potties.  It looks as if we may be able to use this site, but it isn't yet locked-in.

The November launch will be held on the 3rd Saturday, the 20th, as the normal 4th Saturday is on the weekend after the Thanksgiving holiday.

The location of the November meeting hasn't been determined yet.  Watch your email for an announcement.

Ted Cochran brought along several custom rockets that he has built for the MicroMaxx motors.  They included a tiny version of his level 2 Tethys, an itsy-bitsy Viking sounding rocket, and a Titan 3a that he's currently building.  Ted also showed us his altimeter bay with provision for dual-deployment that he retrofitted to meet the new NAR specs for level 3 projects.  Russ showed us a couple different altimeters.  Several newly built rockets were passed around for inspection by those present.

Our feature for the night was a demonstration of the RockSim program by Robert Rech.  Rob showed everyone how easy it is to create, analyze, and simulate a rocket in this program.  He also illustrated the flexibility of the program by showing us various rocket designs of his own creation.  [Thanks Rob!]

*(Alan Estenson)*

**November 1999 meeting minutes (11/6/1999)**

Meeting in the lunchroom at [Aero Systems Engineering](http://www.aerosysengr.com) (ASE) in Plymouth, the November MASA meeting started at about 7 pm.  Alan Estenson kicked off the meeting by talking about rocket news and the new stuff displayed at the National Model and Hobby Show in Chicago the previous week.

To begin the "official" part of the meeting, Russ Durkee announced that the November launch will be held at the new site in Elk River.  [Directions and more information will be forthcoming.]  As the field is used for soccer, any summer launches held in Elk River next year will have to be on Sunday afternoons instead of Saturday mornings.  We are still looking for more launch sites; your assistance would be greatly appreciated!

No definite word yet on whether we will be able to hold MASA meetings at the new Science Museum in St. Paul next year.

Nominations were held for MASA officers.  Since our current officers were willing to serve for another year, and since there were no other nominations,  Alan Estenson moved that no vote was necessary and Art Gibbens seconded it.  [And so ended our near-brush with Robert's Rules of Order.  #shudder#]

Damian Kostron gave us a treasurer's report.  The gist of it was that the finances look OK.

Mollie Frisvold was awarded a gift certificate for winning the A8-3 special streamer duration competition at the last launch.  Mollie's time of over 49 seconds severely outclassed all other competitors.

The next hour or so was spent as Alan Estenson gave a tour of the ASE FluiDyne Aerotest Lab's test facilities, model shops, and wind tunnels.  [If anyone was bored, they hid it well.]

In December, the regular meeting will be replaced by the MASA Holiday Party.  [Note - the party ended up being cancelled]

*(Alan Estenson)*