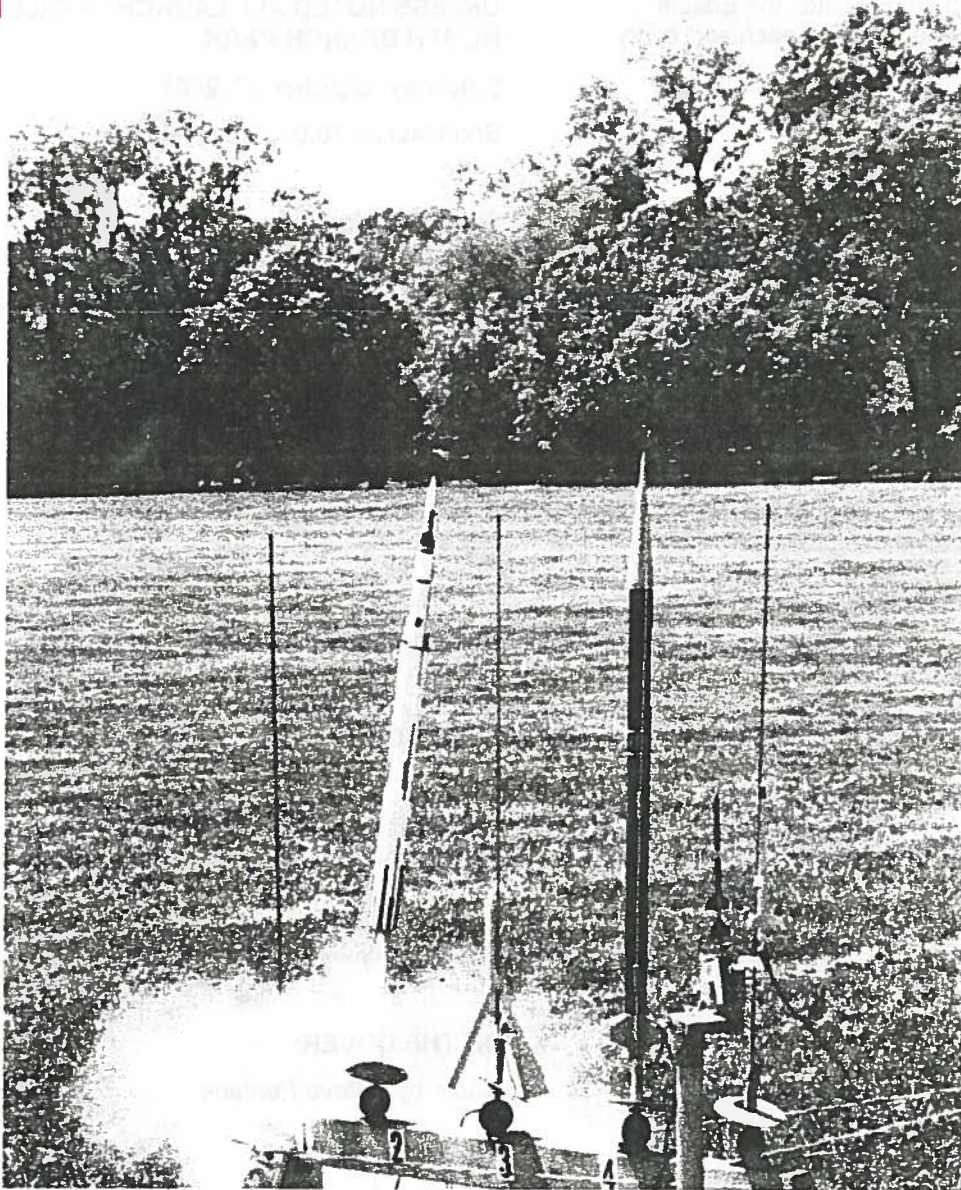
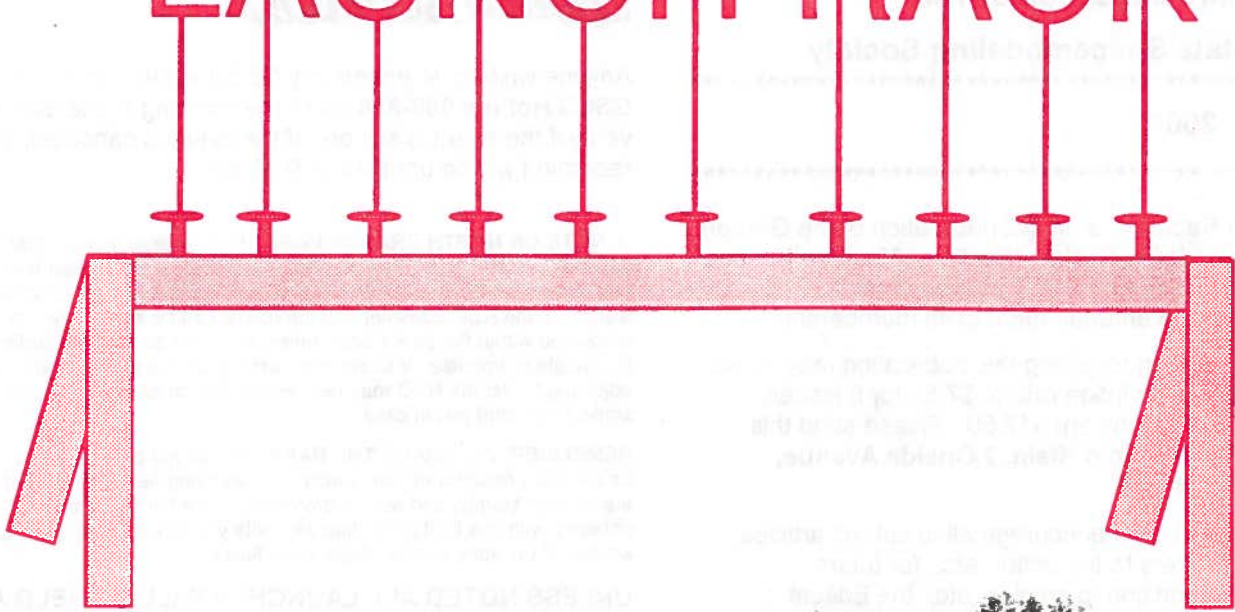


LAUNCH RACK



The Launch Rack

The Official Publication of The

Garden State Spacemodeling Society

JUL/AUG 2001

The Launch Rack is the official publication of the Garden State Spacemodeling Society (Section 439 of the National Association of Rocketry) and is published for the enlightenment and entertainment of its membership.

Others interested in receiving this publication may do so for the annual subscription rate of \$7.50 for 6 issues. Overseas subscriptions are \$17.50. Please send this money in USD to **Arnold Klein, 2 Oneida Avenue, Rockaway, NJ 07866.**

The Editors invite and encourage all to submit articles, photos, plans letters to the editor, etc., for future publication. In addition to articles, etc., the Editors welcome and encourage feedback on each and every issue. Please send material to:

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Visit the GSSS web site at www.robnee.com/gsss/

As an added note, we especially welcome e-mail attachments in ASCII (.txt), MS Works, or Adobe format as well as digital graphics and digital photos. Photos that work well when converted to black and white would be the best.

Non-copyrighted material published in The Launch Rack may be used by other publications provided proper credit is given to the original author and this newsletter.

Your Club Officers

President Jack Sarhage

Vice President Bob Gill

Vice President Steve Pantuck

Treasurer/Secretary Arnold Klein

Section Advisor Bob Zabriskie

LAUNCH SCHEDULE

Anyone wishing to attend any GSSS activity should call the **GSSS Hotline 908-658-9417** the morning of the event to verify if the event is still on. If the event is canceled, the recording will be updated at 9:00 am.

A NOTE ON NORTH BRANCH PARK. Please keep in mind that the park and weather conditions dictate what we allow to fly. Just because a rocket is under the one pound limit, do not assume it is an automatic launch. If the RSO does not feel the model can be safely flown or recovered within the park's boundaries, it will not be flown regardless of the weight or impulse. If some other activity shows up and starts using adjoining fields, the RSO may reduce impulse for all flights. So bring some small stuff just in case.

REMEMBER, WE SHARE THE PARK. We do not pay a fee and most of us are not a resident of that county. Rocket flying fields in New Jersey are in short supply, and we are protective of the fields we have. If you're unhappy with this limitation, then we invite you to help us in gaining legal access of privately owned, large, open fields.

UNLESS NOTED ALL LAUNCHES WILL BE HELD AT NORTH BRANCH PARK.

Saturday, October 27, 2001

Sport launch 10:00 am to 3:00 PM

Saturday, November 24, 2001

Sport launch 10:00 am to 3:00 PM

Saturday, December 29, 2001

Sport launch 10:00 am to 3:00 PM

IN THIS ISSUE:

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Alex Bruccoleri's NARAM R&D

GSSS History & The United States Spacemodeling Association

NARAM Results

ON THE COVER:

photo by: Steve Pantuck

The Launch Rack

Editorial - GSSS In Top 20 NAR Sections. What a Contest Year!

With the end of June and the end of NARAM so ends a glorious contest year where GSSS came back to being one of the top 20 competition sections in the US! The individual efforts of our NAR members combined to give the section 8559 points putting us at 9th at NARAM and 19th in the nation. About half of those points were scored at NARAM! Quite a few of our NAR members came out for our meets and Alex Bruccoleri did a tremendous job boosting our points entering every event at NARAM and placing in most of them.

Remember, when you view the NARAM scores in this issue that flyers who fly successfully in contest but do not score in the top 4 places in an event still get flight points. This means that if you try to fly competition and fly a successful flight but do not place, you can still score points for the yourself and your section. We had to condense the results list so that it would fit in the 10 page format of our bulletin. We decided only to cover the result from 1st in each event through the place that one of our GSSS members scored, not counting disqualifications.

Some New Contest Year's suggested resolutions:

1. Bring back the FunTests as dual GSSS/NAR meets. Hold at FunTest Open 2002 and Spring Challenge Meets for non-NAR GSSS members and NAR members. Everyone should tell us what events you want to fly. I have been hearing requests for more glider events. What do you say about that?
2. Hold rained out meets in Bridgewater at the next available monthly launch. If we held meets in April and May, if one of them gets rained out then we'll have June as the rain-out date. Let's hope that at least one has good weather.
3. Two requests to our administrators:
 - a. More prizes for the two contests.
 - b. Keep the 10-5 launch window for each open meet and the rain-out launch.
4. Score higher at Ramtech, the "mini-NARAM".
5. Have more even more fun with our club at contests!

Other Area Events:

Here is a list of upcoming contests in our area for the Contest Year starting 7/1/01, ending 6/30/02. This was taken from the website of the Northeast Contest Board of the NAR and the NARAM 44 website.

October 20-21, 2001 --- Steel City Smoke Trail 1 Regional Meet
Prospect, PA

1/2A Parachute Duration
1/2A Streamer Duration Multi-Round
A Payload
C Rocket/Glider Duration
E Flexwing Duration
Contact: Rod Schafer

December 02, 2001 --- CATO 54 Open Meet
Sterling, CT

G Streamer Duration Multi-Round
E Helicopter Duration Multi-Round
Contact: Jay Calvert

June 2002, Father's Day Weekend
RAMTECH 10

Editor - Events usually correspond to some of the NARAM events below.

August 4-9, 2002 -- NARAM 44

McGregor TX
National Association of Rocketry Annual Meet
9 competition events (and one Demo event)

	Weighting Factor
B Altitude:	11
E Eggloft Altitude:	20
1/2A Parachute Duration:	7
C Helicopter Duration:	22
B EggLoft Duration:	17
B Boost Glide Duration:	19
C Rocket Glide Duration:	22
Sport Scale:	20
Research & Development:	36

Pro Sport Scale: DEMO
Contest Director: Scott Hunsicker

For the latest info updates on NARAM go to <http://www.nar.com>.

Alex Bruccoleri's NARAM R&D Report

A Comparison of Fin materials: .008 in Carbon Accent Panel Vs. .02 in G10 Fiberglass

Summary

I compared .008" Carbon Accent panel fin material to .02" G10 Fiberglass. The Carbon Accent panels are 2.5 times less thin and lighter than the .02" G10 Fiberglass. They are also very flexible which may cause vibration which causes drag.

To test each fin material I built two booster sections, one that had the .008" Carbon Accent panel fins and the other that had the .02" G20 Fiberglass fins. I added weight to the Carbon Accent panel fin booster so that it matched the weight of the .02" G10 finned booster. I built one payload section that held an Adept ALT05 altimeter. The altimeter would give accurate measurements of the altitude of the rocket. The fins I used were 1.5 inches long and about 1 inch wide. This was to insure that plenty of vibration could occur. I used a streamer for recovery and used Estes B-6-4 as the motor for the experiment.

Flight #	Fiberglass	Carbon
1.	451 feet	426 feet
2.	476 feet	416 feet
3.	471 feet	411 feet
4.	381 feet	471 feet
5.	476 feet	436 feet
6.	396 feet	431 feet
Average	442 feet	432 feet
Average (dropping highest and lowest)	449 feet	427 feet
Median	461 feet	429 feet
Range	95 feet	60 feet

Mass of Booster's empty 15.8 grams

Both rockets flew straight.

The data shows no clear evidence that the vibrations of the fins made a significant difference in altitude. Estes motor variation was probably the main cause for the variation of altitude.

Editor's note: This should serve as an example for anyone who wondered about what R&D competition was like and who might like to try it out.

Some GSSS History - Our club's role in international rocketry

Submitted by Dr. Bob Kreutz

A description of the United States Spacemodeling Association

Purpose

The United States Spacemodeling Association is being established to provide organization and direction for modelers interested in FAI - International style competition and in support of the U.S. International Spacemodeling Team. It will be the general purpose of this association to:

- A) Promote international spacemodeling competition and activities in the United States.
- B) Serve as an information source on international spacemodeling and establish a forum for the discussion of FAI rule proposals and changes, technical developments, competition and related aspects of international spacemodeling.
- C) To unify and organize individuals interested in international spacemodeling and to provide representation for this cohesive body as a special interest group.

History

Since the inception of international competitions for spacemodeling in 1970 with G. Harry Stine, the United States Spacemodeling Team has been sponsored by the National Association of Rocketry (NAR). Primary representation of any nation to the world aeronautic organization, the Federation Aeronautique Internationale (FAI) is through that country's national aeroclub. In the United States, the National Aeronautic Association (NAA) is this representative and as most national aeroclubs, primarily regulates and records manned flight.

Aeromodeling representation, a subdivision of Aeronautics, is provided through the Academy of Model Aeronautics (AMA), the official US Aeromodeling organization. As a special interest group for model rocketry within the aeromodeling community, the NAR has been the advocate organization for Spacemodeling until 1992. During the 1992 World Spacemodeling Championship (WSMC), hosted by the United States in Melbourne, Florida, the NAR Board announced funding for the Internats Team was to be terminated and the organization would relinquish its position of representation. The duty fell to the AMA, which had been directing all other international aeromodeling efforts. Since that time AMA has been the host organization for FAI Spacemodeling and has represented the United States Spacemodeling community during FAI meetings in Paris, France, now Switzerland.

Rumor of the termination of NAR support was quite rampant at the 9th World Spacemodeling Championships in 1992. Members of the 1992 US Team and others interested in FAI competition and flying, met before the closing of the '92 WSMC and formed the International Spacemodeling Society (ISS). For the first time other than a World Championship, there was an established group whose entire purpose was dedicated to promoting international style competition in the United States. Elected at that time was the first President of the ISS and long time NAR member: Chuck Weiss. His goal was to insure continued communications and exchange between interested international style competitors. To this end, a technical newsletter was created: The Journal of the International Spacemodeling Society, and distributed bi-monthly to members of the society. Edited by Tim VanMilligan, members contributed and wrote articles in their particular fields of research and expertise. Communications through the newsletter and a unified camaraderie was the mainstay of the society. AMA began their financial support and representation of US Spacemodeling Teams, but the ISS continued as a separate entity without affiliation to preserve its unique identity. This was to later unravel.....

After 2 years, members' contributions to the newsletter finally dwindled. No permanent affiliation with a parent organization resulted in a lack of reports from the FAI sub-committee on spacemodeling and no direct input into the rules making process. On the home front in the US, this also resulted in no accessible insurance coverage for established flying sites. With the lack of technical and timely information submissions, Tim had to relinquish his position of editor and the JISS newsletter died. With it, went the cohesiveness of the ISS.

About this same time, there were serious questions as to whether the insurance coverage obtained through the NAR would continue. In NJ, Garden State Spacemodeling Society found increasing demand for site coverage, trying to maintain 3 club flying sites across northern New Jersey. The club board agreed that GSSS should dual-sanction with both NAR and AMA to maintain a site insurance source. NAR insurance DID continue without lapse and after 2 years, club support for the AMA sanction ceased. My own uncertainty led me to continue the AMA sanction for GSSS out of my personal funds. With only the minimal number of required GSSS members retaining their AMA membership, the GSSS "AMA club" became a separate entity and remained associated with AMA for a secondary source of site insurance, without the expanded membership roles of those members affiliated with only the NAR. In effect, 2 clubs, same name, the original maintaining a NAR sanction, the second an AMA sanction.

While site insurance through AMA was rarely being used by GSSS, it was a source of insurance for the US Spacemodeling Team practices and flyoffs, now under jurisdiction of AMA. Members of the US Spacemodeling Team, independent R/C rocket glider fliers and individuals interested in international style competition slowly filled the ranks of GSSS-AMA, gleaned the site insurance offered by AMA. As of the end of 1997, only modelers interested in US Team and international competition remained on the AMA-GSSS membership list. It was therefore decided, to change the old GSSS name to one reflective of the interests and affiliation of the membership: the United States Spacemodeling Association.

As stated: The United States Spacemodeling Association is being established to provide organization and direction for modelers interested in FAI - International style competition and in support of the U.S. International Spacemodeling Team. The web site will serve as the information hub of the association, in lieu of a club newsletter. Communications are available in the form of a list-server so that information can be disseminated among the entire membership in an open forum with rapid and timely exchanges. We ask for your support of these endeavors with a donation of \$10 to support continued development and refinement of the web site. Support will entitle you to membership in the USSA, an Association patch and access to the list-serve with a personal vanity e-mail: "your.name"@spacemodeling.org.

To that end, we welcome the old and the new!

Dr. Bob Kreutz

A note about USSA...

Although the United States Spacemodeling Association was the first Special Interest Group recognized by the NAR, it is an AMA sanctioned club. There is currently No requirement that one must first be an AMA or NAR member to join USSA. However, the AMA rules and regulations under which the club is sanctioned state: **Each and every member of the club who participates in club flying activities MUST [per the AMA Bylaws, Article III, Section 2. (b)] be an AMA member of the Junior, Senior, Open or Affiliate category, or is a current member of the Model Aeronautic Association of Canada (MAAC).** We therefore suggest and Highly Recommend to individuals interested in FAI competition flying, that they consider an AMA membership. Benefits of AMA membership include easy access to a FAI License, which is Required to compete in international contests and will be necessary to participate in World Cup events and the US Team Selection flyoffs. FAI Licenses may also be obtained through membership in the National Aeronautic Association (NAA).

NARAM-43 GSSS Standings - Edited to show all entries up to our GSSS member's place. Find our members by name or by section # = 439.

*** I/2A Flex-Wing Boost Glider Duration

Place	Contestant	NAR #	Section	Flight 1	Flight 2	Total	NAR Points
B Division							
1	Langford, Ellis	58002	205	78	204	282	994
2	Filler, Mike	57690	139	161	107	268	596
3	Buckley, Katyee	73418	551	NG	129	129	397
4	Bruccoleri, Alex	76171	439	56	47	103	198
Places 5 - 7 skipped.							

T Division

1	8-Ball Racing	T-008	139	637	54	691	994
2	Why Us? T-109	519	NG	461	481	596	
3	TTFKATBAH	T-069	581	209	86	295	397
4	Good,Bad,& Ugly	T-111	558	139	130	269	198
5	Newton's Grandparents	T-953	139	118	74	192	99
6	Grumpy Old Men	T-255	139	85	90	175	99
7	CHEDAR-1	T-087	558	102	57	159	99
8	Calvin & Hobbes	T-721	205	38	89	127	99
9	Hyperspace	T-005	439	52	59	111	99
Places 10 - 16 skipped.							

*** I/2A Boost Glider Duration

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
B Division							
1	Langford, Ellis	58002	205	40	99	139	994
2	Russell, Josh	75365	139	56	73	129	596
3	Johnson, James	59266	427	24	35	59	397
4	Filler, Mike	57690	139	31	24	55	198
5	Bock, Krysia	61741	205	25	20	45	99
6	Bruccoleri, Alex	76171	439	21	SEP	21	99
Places 7 - 8 skipped.							

C Division

1	Buckley, John	62317	551	48	147	195	994
2	Ring, Chad	50652	519	142	49	191	596
3	Iwamoto, Ross	20059	IND	44	119	163	397
4	Chrumka, Mark	58182	463	96	55	151	198
5	Kidwell, Chris	45225	139	53	81	134	99
6	Carey, Bruce	27552	555	44	57	101	99
7	Elliott, Adam	62456	117	NG	96	96	99
7	Wolf, Daniel	24516	558	20	76	96	99
8	Quin, James	54787	463	52	42	94	99
9	Edmonds, Robert	37700	205	44	48	92	99
9	Greene, Dale	12464	503	54	38	92	99
9	Taylor Jr,Chris	73586	439	51	41	92	99
Places 10 - 33 skipped.							

T Division

1	Snowball's Chance	T-700	205	375	18	393	994
2	Southern Cruetron	T-555	519	244	72	316	596
3	Drei Woebkenbergen	T-711	519	49	158	207	397
4	Moose & Squirrel	T-218	117	48	110	158	198
5	Murphy's Lawyers	T-999	139	68	46	114	99
6	Calvin & Hobbes	T-721	205	42	46	88	99
7	Bumblng Brothers	T-011	463	61	5	66	99
8	Grumpy Old Men	T-255	139	31	30	61	99
9	TTFKATBAH	T-069	581	17	38	55	99
10	Steely-Eyed Missile Men	T-732	IND	22	24	46	99
11	Hyperspace	T-005	439	NVB	35	35	99
Places 12 - 16 skipped							

*** A Streamer Duration

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
B Division							
1	Filler, Mike	57690	139	94	112	206	468
2	Bock, Krysia	61741	205	126	68	194	280
3	Bruccoleri, Alex	76171	439	67	78	145	187
4	Langford, Ellis	58002	205	57	83	140	93
5	Russell, Josh	75365	139	91	48	139	46
6	Stroup, Adrienne	79392	571	30	101	131	46
7	Leveron, Matthew	65486	519	101	SEP	101	46
8	Miller, Pierre	64378	117	59		59	46
9	Buckley, Katyee	73418	551	58	SEP	58	46
--	Flynn, Stephen	68814	439	44 NR		0	46

T Division							
1	Newton's Grandparents	T-953	139	149	136	285	468
2	Drei Woebkenbergen	T-711	519	157	122	279	280
3	CHEDAR-1	T-087	558	114	101	215	187
4	Jeckyll & Hyde	T-001	IND	152	SEP	152	93
5	Good, Bad, & Ugly	T-111	558	84	49	133	46
6	Grumpy Old Men	T-255	139	21	109	130	46
7	Boris & Natasha	T-917	427	33	95	128	46
8	Over 40 Victims of Fate	T-503	503	SEP	124	124	46
9	TMJ	T-617	139	24	99	123	46
10	Southern Cruetron	T-555	519	52	68	120	46
11	TTFKATBAH	T-069	581	53	63	116	46
12	Bumbling Brothers	T-011	463	56	27	83	46
13	Illudium Q36	T-036	117	80	SEP	80	46
14	Ho Ho	T-207	205	37	41	78	46
15	Hyperspace	T-005	439	51	24	75	46

Places 16 - 17 skipped

*** D Helicopter Duration

Place	Contestant	NAR #	Section	Flight 1	Flight 2	Total	NAR Points
B Division							
1	Langford, Ellis	58002	205	183	95	278	1345
2	Buckley, Katyee	73418	551	81	97	178	807
3	Russell, Josh	75365	139	69	69	138	538
4	Leveron, Matthew	65486	519	56	48	104	269
5	Bock, Krysia	61741	205	90		90	134
6	Flynn, Stephen	68814	439	18	37	55	134
--	Filler, Mike	57690	139	99 NR	114 NR	0	134
--	Bruccoleri, Alex	76171	439	NDP	NDP	0	0

T Division							
1	CHEDAR-1	T-087	558	140	75	215	1345
2	Southern Cruetron	T-555	519	NDP	198	198	807
3	Grumpy Old Men	T-255	139	102	74	176	538
4	TTFKATBAH	T-069	581	133	42	175	269
5	Bumbling Brothers	T-011	463	53	80	133	134
6	Newton's Grandparents	T-953	139	62	50	112	134
7	Ho Ho	T-207	205	91	NDP	91	134
8	Over 40 Victims of Fate	T-503	503	84	UNS	84	134
9	Good, Bad, & Ugly	T-111	558	SEP	78	78	134
10	Snowball's Chance	T-700	205	49	UNS	49	134
11	Hyperspace	T-005	439	44	SEP	44	134
11	TMJ	T-617	139	NDP	44	44	134

Places 12 - 13 skipped

*** A Altitude

Place	Contestant	NAR #	Section	Flight 1	Flight 2	Total	NAR Points
A Division							
1	Wolf, Sarah	53453	558	325		325	585
2	Langford, Fritz	69886	205	313	304	313	351
3	Sanders, Jasmine	pend 27	IND	280		280	234
4	Wolf, Mary	46379	558	272	224	272	117
5	Clark, Samuel	79584	IND	267		267	58
6	Humphrey, Michael	75192	IND	266	248	266	58
7	Chambers, Randy	76048	482	257	221	257	58
8	Bittle, Kris	74626	139	UNS	244	244	58
9	Hocheimer, Andrew	74538	205	237	227	237	58
10	Bittle, Kindra	76125	139	225	234	234	58
11	Filler, Matthew	71947	139	UNS	188	188	58
12	Beever, Mark	78630	503	147		147	58
13	Flynn, Daniel	75281	439	146		146	58

Places 14 - 15 skipped

B Division							
1	Langford, Ellis	58002	205	338		338	585
2	Bruccoleri, Alex	76171	439	315	315	315	351
3	Leveron, Matthew	65486	519	255	277	277	234
4	Filler, Mike	57690	139	270	261	270	117
5	Stroup, Adrienne	79392	571	227	257	257	58
6	Flynn, Stephen	68814	439	219		219	58

Places 7 - 11 skipped

T Division							
1	Jeckyll & Hyde	T-001	IND	425	28	425	585
2	Calvin & Hobbes	T-721	205	370	373	373	351
3	Grumpy Old Men	T-255	139	323	277	323	234
4	Ho Ho	T-207	205	299	313	313	117
5	Why Us?	T-109	519	304		304	58
6	CHEDAR-1	T-087	558	295	291	295	58
7	Over 40 Victims of Fate	T-503	503	250	273	273	58

8	TMJ	T-617	139	268	UNS	268	58
9	Good, Bad, & Ugly	T-111	558	242	265	265	58
10	Bumbling Brothers	T-011	463	95	253	253	58
11	Steeley-Eyed Missile Men	T-732	IND	252		252	58
12	Snowball's Chance	T-700	205	245	170	245	58
13	Illudium Q36	T-036	117	241		241	58
14	Hyperspace	T-005	439	237		237	58

Places 15 - 21 skipped

*** B Super-Roc Altitude

Place	Contestant	NAR Number	Section	Flight 1	Flight 2	Total	NAR Points
B Division							
1	Leveron, Matthew	65486	519	39872 (224 m)		39872	877
2	Bruccoleri, Alex	76171	439	35600 (178 m)	31000 (155 m)	35600	526
3	Filler, Mike	57690	139	CR	24200 (121 m)	24200	351
4	Johnson, James	59266	427	21546 (114 m)		21546	175
5	Miller, Pierre	64378	117	15600 (78 m)		15600	87
6	Buckley, Katye	73418	551	2610 (18 m)	UNS	2610	87

C Egg Lofting Altitude

Place	Contestant	NAR #	Section	Flight 1	Flight 2	Total	NAR Points
A Division							
1	Wolf, Sarah	53453	558	315		315	1053
2	Humphrey, Michael	75192	IND	268	NR	268	631
3	Hochheimer, Andrew	74538	205	264	NR	264	421
4	Langford, Fritz	69886	205	241	NR	241	210
5	Wolf, Mary	46379	558	227	NR	227	105
6	Clark, Samuel	79584	IND	205	UNS	205	105
7	Filler, Matthew	71947	139	179	UNS	179	105
8	DeMar, Steven	59438	566	161		161	105
9	Saindon, Candace	73209	IND	144	156	156	105
10	Clark, Abby	79589	IND	150	UNS	150	105
11	Ha, Zachery	79498	503	EGG	141	141	105
12	Saindon, Eric	73210	IND	131	EGG	131	105
13	Ha, Christopher	79497	503	126	EGG	126	105
14	Flynn, Daniel	75281	439	106	UNS	106	105

Places 15 - 16 skipped

B Division

1	Filler, Mike	57690	139	287		287	1053
2	Bruccoleri, Alex	76171	439	281	254	281	631
3	Leveron, Matthew	65486	519	280	NR	280	421
4	Langford, Ellis	58002	205	251	NR	251	210
5	Russell, Josh	75365	139	173	179	179	105
6	Bock, Krysia	61741	205	145	168	168	105
7	Buckley, Katye	73418	551	136		136	105
8	Johnson, James	59266	427	63	66	66	105

T Division

1	Grumpy Old Men	T-255	139	UNS	315	315	1053
2	CHEDAR-1	T-087	558	EGG	300	300	631
3	Over 40 Victims of Fate	T-503	503	234	277	277	421
4	Jeckyll & Hyde	T-001	IND	229	270	270	210
5	Calvin & Hobbes	T-721	205	262	213	262	105
6	Good, Bad, & Ugly	T-111	558	219	259	259	105
7	Ho Ho	T-207	205	SHR	248	248	105
8	Murphy's Lawyers	T-999	139	228	UNS	228	105
9	TTFKATBAH	T-069	581	206	146	206	105
10	TMJ	T-617	139	196	197	197	105
11	Hyperspace	T-005	439	194	166	194	105

Places 12 - 16 skipped

*** Sport Scale

Place	Contestant	NAR Number	Section	Prototype	Static	Flight 1	Flight 2	Total	NAR Points
B Division									
1	Langford, Ellis	58002	205	Ariane 4		750	160	910	1170
2	Filler, Mike	57690	139	Terrier Sandhawk		705	94	799	702
3	Miller, Pierre	64378	117	Ariane 1		700	90	790	468
4	Bruccoleri, Alex	76171	439	Mercury-Redstone	637	87	102	739	234

Places 5 - 9 skipped

C Division

1	Feveryear, Glenn	24931	503	Astrobee 1500		748	104	852	1170
2	Chrunka, Mark	58182	463	Aerobee 150A		710	125	835	702
3	Campbell, Tom	60603	IND	Bumper-WAC		700	120	820	468
4	Foster, Steve	72814	473	PA-2		713	90	803	234
5	Schafer, Rod	36564	473	Jayhawk		680	90	770	117
6	Duffy, James	73627	585	Mercury Little Joe 675		91		766	117
7	Morrow, Richard	3575	142	Talos		670	85	755	117
8	Kidwell, Chris	45225	139	WRESAT		660	90	750	117

9	Brown, Krista	62024	519	M100B	575	48	97	672	117
11	DeMar, John	52094	566	Astrobee D	570	100		670	117
12	Giovannone, Vincent	44085	471	Black Brant II	565	94		659	117
13	DeMarco, Alex	76979	471	Delta III	540	108		648	117
14	Howie, Mike	62842	139	NOTS Project Pilot	535	110		645	117
15	Carey, Bruce	27552	555	Nike Apache	555	87		642	117
16	Freed, Richard	24586	473	Black Brant II	530	100		630	117
17	Buckley, John	62317	551	Lacrosse	530	98		628	117
18	Taylor Jr, Chris	73586	439	Sidewinder	520	100		620	117

Places 19 - 33 skipped

*** Research and Development

Place	Contestant	NAR Number	Section	Project	NAR Points
B Division					
1	Langford, Ellis	58002	205	Rotation! Optimization of Rotor Design for Helicopter Duration	2106
2	Leveron, Matthew	65486	519	Linear Radial Slits for Optimization of Parachute Performance	1263
3	Brucocoleri, Alex	76171	439	Comparison of Fin Materials: 0.008" Carbon Panel vs 0.02" G10 Fiberglass	642

Final 2001 National Point Standings- All Sections

Plac	Section	Number	Pre-NARAM	NARAM	Total Points
1	NARHAMS	139	51133	26802	77935
2	NOVAAR	205	28839	21274	50113
3	Launch Crue	519	37035	12001	49036
4	WOOSH	558	34500	13308	47808
5	PSC	473	16530	6543	23073
6	CRASH	482	18184	1452	19636
7	HUVARS	463	11702	4522	16224
8	AARG	585	15756	216	15972
9	NASA/Houston	365	15643	0	15643
10	CSAR	113	10472	3817	14289
11	SPAAR	503	7118	5355	12473
12	SLRA	551	8395	3600	11995
13	DARS	308	11994	0	11994
14	ASTRE	471	7197	4214	11411
15	SCRA	430	10648	0	10648
16	IND	0	0	10112	10112
17	UROC	523	9851	0	9851
18	SOAR	571	9276	104	9380
19	GSSS	439	4246	4313	8559
20	Syracuse	566	6564	1524	8088
21	Challenger	498	7317	0	7317
22	CATO	581	4972	1936	6908
23	NIRA	117	993	3987	4980
24	KCAR	505	4707	0	4707
25	MARS	136	2780	1140	3920
26	SMASH	500	3742	0	3742
27	SOLAR	596	3096	0	3096
28	KOSMO	427	1545	1364	2909
29	NASA	554	2010	0	2010
30	Rocketeers for Christ	597	1691	0	1691
31	COSROCS	515	1670	0	1670
32	SCAM	282	1602	0	1602
33	SEARS	572	1380	0	1380
34	REDROCK	579	1372	0	1372
35	CIA	527	1155	0	1155
36	BAYNAR	359	456	640	1096
37	GAMMA	494	810	0	810
38	LUNAR	534	746	0	746
39	North Shore	142	0	594	594
40	OREO	555	0	454	454
41	SOJARS	593	180	233	413
42	Vikings	203	308	0	308
43	ROC	538	144	0	144
44	CMASS	464	0	99	99
45	HARA	403	60	0	60

**DIRECTIONS TO NORTH BRANCH
PARK LAUNCH SITE**

North Branch Park is very near the traffic circle junction of NJ Routes 22, 28, 202, and 206, near Somerville. Follow 202 South from the circle for 2 miles, past Ortho Pharmaceutical and Harris Corp. under railroad trestle marked "4H is Tops", to right turn onto Milltown Road. Make first left after firehouse and 4H Center on right; follow path to open field. Monthly launches from 10-4.

FROM NORTH
NJ Turnpike South to Exit 10, 287 North to Exit 13, 202/206 South to Circle

FROM SOUTH
202 North to Milltown Rd.; or 206 North to Circle

FROM EAST
287 North to Exit 13, 202/206 South to Circle

FROM WEST
Rt. 78 or Rt. 80 East to 287 South to Exit 13, 202/206 South to Circle

GSSS MEMBERSHIP APPLICATION

Name _____

Address _____

City _____ State _____

Zip _____ Birthdate _____

Phone Number _____

NAR number _____ GSSS number _____

Membership Category (Check One)

() Junior (Under 16)\$5.00

() Leader (16 through 20)\$7.00

() Senior (21 or over)\$10.00

() Family Plan (Deduct \$2.00 for each additional family member, only one Launch Rack will be sent.)

I pledge to abide by the NAR/HIA Safety Code and GSSS Constitution and Bylaws in all my non-professional rocketry activities.

Signed _____ Date _____

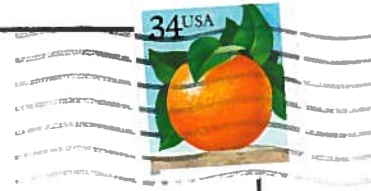
Send this application along with check for dues payable to: Arnold Klein, 2 Oneida ave Rockaway N.J. 07866

GARDEN STATE SPACEMODELING SOCIETY -- NAR SECTION #439

Robert Zabriskie
3 Peachtree Road
Basking Ridge, NJ 07920

TO:

Robert Nee
222 Willow Avenue - #2A
Hoboken NJ 07030



THE LAUNCH RACK
NEWSLETTER OF NEW JERSEY'S SPACEMODELING SOCIETY