



Maryland Tripoli Report



©Unknown Provided by Sean McAndrew

*Cover: D.Bullis Monster on a K1700
4/5/98*

Editor's corner:

Editor Bob Utley

You were expecting two launch reports in this month's newsletter. They are here, but, not the Maryland Tripoli launches. I have included the RATS VII and Battle Park.

For Internet users, you can view this newsletter on-line at:

<http://www.erols.com/robertu>

Treasurer report:

Treasurer David Weber

The report for May 14, 1998 is \$2,314.77. In the June report I did not get the exact amount. I do know it is over \$2000.00.

Meeting summary:

May 14, 1998

Lost the Sod Farm! The summer schedule for flying at the Sod Farm is dead. The board of directors for the farm elected to hire a new/different insurance company, which now states that the land can not be used by the public.

The rest of the meeting we discussed ways to secure another field, how to approach the owners and some suggestions on possible locations.

Sad for all, but remember we still have Higgs Farm in the winter months.

June 11, 1998

Getting a late start, everyone was wondering if Dave had found a new field. The room came to a hush once Dave walked in. "It's going to rain, and rain hard on July 18 & 19" ALL RIGHT! Dave found a field. We are invited to Delaware to help the Delaware Prefect conduct a launch.

We still have not found a field for Maryland during the summer. Dave, Art, Neil and several others are still looking.

Art reviewed the liability of the club. He handed out a document, to show anyone who owns a field what is covered and how we conduct launches.

So for now we are still looking for a field, but with NYPOWER, Whitakers, Orangeburg, and LDRS all coming up in the next two months, looking for a field is more for next summer. Keep looking, there is one out there with our name on it.

Upcoming launches:

July 18 & 19. Dagsboro, Delaware. Directions at back of newsletter, page 10.

Launch summary:

Summary of RATS VII and Battle Park 98.

RATS VII, April 18 & 19, big field and many flyers. The weather started out cloudy and by mid-day the skies were blue.

There were 10 M flights and 7 worked.

The Air Force put on an air show with some A-10 Worthogs. Out on a training mission, 4 flew by at high altitudes and about an hour later 2 came in for a better look. Seemed to me about 700 ft off the deck. Check us out they did, 3 passes over the field half rolls and all.

Fred Wallace put up his beautiful Yellow Jacket. The Darnell's tried a cluster flight again, nice straight flight up, just no chutes on the way down. Neil McGilvray put up his "Where's the Beef" on a K550. Great flight up and down.

If I forgot any other members, I am sorry. There were many flyers and I did not get to see everyone there.

By early evening the clouds rolled in and it looked as if rain was coming soon. Sunday was a bust, one flight and rain.

Bob Utley

BATTLE PARK, May 4 & 5. I was not sure I should go, it was raining hard at my house. We had some rockets to fly, so I pressed on.

Easy to find. Once I turned off the interstate and looked in the direction I thought it would be, I saw a nice straight flight in the distance. The sky was blue and calm.

Dave Bullis, Dave Lucas, Neil McGilvray, Fred Wallace, Bob Booker, Ivan and Jeanie Barnsley, Mark and James Darnell, and Kathy Gilliand were all there.

I watched Mark, James, Ivan and Jeanie wear a path to the launch pads. I am amazed how fast they are on turn-around. Should work for NASA on the shuttle. They had many flights and each one was interesting to watch. They are always doing something different, all of them worth watching. Jeanie with her cluster C's and D's, Ivan's Hummer, James with high altitude and Mark with high power.

Mid-day there was some rain, but only for about 10 minutes.

Dave Bullis was building motors most of the time. Bullis never did put anything up.

Fred Wallace put up a couple of flights, the big one got away. The rain came at the end of the second day and Fred was just 20 feet shy of the pad when the rain came down hard.

Neil McGilvray put up one, sorry do not remember the details.

On Sunday the weather was about the same, mostly blue sky's. Every now and then some dark clouds would roll in. One did stop to wet us down around 2:00 PM. Then, around 4:00 PM the rain came with no end in sight.

Kathy Gilliand launched the Equinox, Tweedy Bird and her Initiator.

I got to put up a couple and should have won a prize for spot landing. Put my last flight down on the double yellow line in the middle of the road.

Bob Utley



©R. Utley 98
F. Wallace Yellow Jacket, H123 at RATS VII



©R. Utley 98
N. McGilvray Where's the Beef, K550 at RATS VII



©R. Utley 98
M&J Darnell cluster at RATS VII



©R. Utley 98
CATO at RATS VII



©P. Parson 98
K. Mitchell T/S on a L952 on 4/5/98



©B.Booker 98
B. Utley sandhawk H123 at BP



©B.Booker 98
Nice V2 at BP



©E. Miller 98
B. Utley T/S spot landing special BP

Rocketry

by Joey Walter

A.P. Burning Out Of Control,
Just Push The Button And Let It Roll.

Four Fins On A Body Tube Plain As Can Be,
Right Out In Front For Everyone To See.

The Power Keeps Getting Higher And Higher
'Cause They All Know They Can Find A Buyer.

When You Feel The Weight Of The Rocket In Your Hand
You'll Know Then You Are A Rocket Man

Neil McGilvray worked on a program to find the maximum liftoff weight for many motors. The next page is the results of that program.

If you do not see a motor you want to use then the formula is as follows:

Average Impulse/4.45/5

Average Impulse is the Total Impulse divided by the burn time.

4.45 is to convert ns to lbs

5 is the weight ratio of 5:1

For example:

38mm H240W Total Impulse=230ns

Burn time = 1.87 seconds

$230\text{ns}/1.87=123\text{ns}$

Average Impulse= 123ns

$123\text{ns}/4.45= 27.64\text{lbs}$

$27.64\text{lbs}/5=5.53\text{lbs}$

This is the maximum weight the rocket should weigh on the scale of the RSO table. Of course the rocket can weigh less, which will give higher altitude, a.k.a. out of sight. If the rocket weighs more, it could not gain enough altitude for the chute to open completely.

Just remember this is a guide line to follow. It is not the last word on flying the rocket, the RSO is.

Tech tips:

Want to know how to tie tubular nylon to a quick link? Go to a shoe repair shop and have them sew the end into a loop. From the members of the June 11 meeting, thanks.

Maximum Rocket Weight Based on 5:1 Thrust To Weight Ratio

Calculations based on Aerotech Reloaded Motor System - RMS

RMS Hardware Designation	Total Impulse Letter	Average Impulse N	Reload Kit Designation	Total Impulse N-sec	Burn Time Calculated Sec.	Loaded Motor Weight Grams	Loaded Motor Weight lbs.	Average Impulse lbs.	Maximum Weight W/Motor lbs.
RMS-29/180	G	75	J	155	2.07	227.9	0.50	16.85	3.37
RMS-29/180	H	128	W	175	1.37	214.5	0.47	28.76	5.75
RMS-29/180	H	238	T	175	0.74	202.1	0.44	53.48	10.70
RMS-29/240	H	97	J	200	2.06	281.5	0.62	21.80	4.36
RMS-29/240	H	180	W	230	1.28	263.6	0.58	40.45	8.09
RMS-29/240	H	220	T	220	1.00	238.6	0.52	49.44	9.89
RMS-38/240	H	73	J	180	2.47	293.3	0.65	16.40	3.28
RMS-38/240	H	123	W	230	1.87	293.3	0.65	27.64	5.53
RMS-38/240	H	242	T	230	0.95	279.1	0.61	54.38	10.88
RMS-38/360	H	112	J	280	2.50	384.8	0.85	25.17	5.03
RMS-38/360	I	161	W	350	2.17	384.8	0.85	36.18	7.24
RMS-38/360	I	357	T	350	0.98	363.5	0.80	80.22	16.04
RMS-38/480	I	154	J	360	2.34	476.3	1.05	34.61	6.92
RMS-38/480	I	211	W	460	2.18	476.3	1.05	47.42	9.48
RMS-38/480	I	300	T	440	1.47	440.5	0.97	67.42	13.48
RMS-38/600	I	195	J		0.00		0.00	43.82	8.76
RMS-38/600	I	284	W		0.00		0.00	63.82	12.76
RMS-38/600	I	435	T		0.00		0.00	97.75	19.55
RMS-38/720	J	350	W		0.00		0.00	78.65	15.73
RMS-54/825	J	90	W		0.00		0.00	20.22	4.04
RMS-54/825	J	180	T	800	4.44	840.9	1.85	40.45	8.09
RMS-54/825	J	275	W	850	3.09	822.9	1.81	61.80	12.36
RMS-54/825	J	460	T	850	1.85	832.9	1.83	103.37	20.67
RMS-54/1280	J	135	W		0.00		0.00	30.34	6.07

Maximum Rocket Weight Based on 5:1 Thrust To Weight Ratio

Calculations based on Aerotech Reloaded Motor System - RMS

RMS Hardware Designation	Total Impulse Letter	Average Impulse N	Reload Kit Designation	Total Impulse N-sec	Burn Time Calculated Sec.	Loaded Motor Weight Grams	Loaded Motor Weight lbs.	Average Impulse lbs.	Maximum Weight W/Motor lbs.
RMS-54/1280 J		415	W	1280	3.08	1198.9	2.64	93.26	18.65
RMS-54/1280 J		800	T	1280	1.60	1133.9	2.49	179.78	35.96
RMS-54/1706 K		185	W		0.00		0.00	41.57	8.31
RMS-54/1706 K		550	W	1700	3.09	1515.1	3.33	123.60	24.72
RMS-54/1706 K		1100	T	1500	1.36	1368	3.01	247.19	49.44
RMS-98/2560 K		458	W		0.00		0.00	102.92	20.58
RMS-98/5120 L		952	W		0.00		0.00	213.93	42.79
RMS-98/7680 M		1419	W		0.00		0.00	318.88	63.78
RMS-98/10240M		1939	W		0.00		0.00	435.73	87.15

Important News:

See Calendar of coming events in the area .

Performance Hobby

In last month's issues Ken's web page was incorrect. <http://www.web2.com/perfhobbies/> is the correct location. Performance Hobby is now a distributor for Transolve line of electronics. Almost anything you could need he should have. Phone: (202) 723-8257

Next issues:

- Launch Summary July & August?
- The trip to LDRS
- Events for September & October
- Pictures of our Launches ?



©R. Utley 98

A-10 Fly over at RATS VII



©R. Utley 98

Bomarc M flight at RATS VII



©R. Utley 98

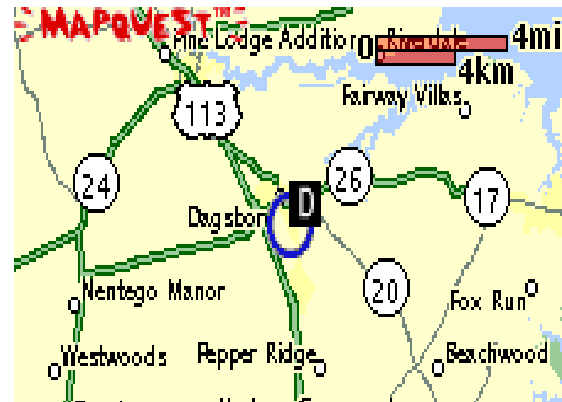
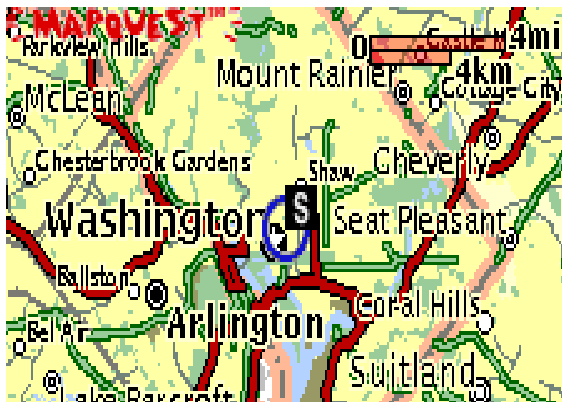
YOBATF M flight at RATS VII

KEEP THE POINTY END UP
AND THE FIERY END DOWN
D. bullis

Copyright 1998, M.T.R.(#68)

Dagsboro, Delaware directions Launch July 18-19, 1998

- Go 50 east across bay bridge
- Continue on 50 at 301/50 split
- Take 404 and stay on it some 60 miles until you reach 113
- Take 113 south then take 20 south/east
- This will bring you "smack" in the middle of "Dagsboro".
- At the closed down Gulf Station hang a left turn go about 1- 1 1/2 miles
- field is on your left next to chicken coupes- lots of them.



Rocket Calendar August 1998

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																																	
						1																																																																																																	
2	3	4	5	6	7	8																																																																																																	
SPAAR Denve..		LDRS XVII				NARAM 40																																																																																																	
9	10	11	12	13	14	15																																																																																																	
LDRS XVII		NARAM 40				Cobleskill																																																																																																	
16	17	18	19	20	21	22																																																																																																	
Cobleskill																																																																																																							
23	24	25	26	27	28	29																																																																																																	
						Whitakers, NC																																																																																																	
30	31	<table border="1"> <thead> <tr><th colspan="7">July</th></tr> <tr><th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th></tr> </thead> <tbody> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td></td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr> <tr><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td></tr> <tr><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td></tr> <tr><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td></td></tr> </tbody> </table>		July							S	M	T	W	T	F	S		1	2	3	4			5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		<table border="1"> <thead> <tr><th colspan="7">September</th></tr> <tr><th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th></tr> </thead> <tbody> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td></td></tr> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr> <tr><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td></tr> <tr><td>27</td><td>28</td><td>29</td><td>30</td><td></td><td></td><td></td></tr> </tbody> </table>		September							S	M	T	W	T	F	S		1	2	3	4	5		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
July																																																																																																							
S	M	T	W	T	F	S																																																																																																	
	1	2	3	4																																																																																																			
5	6	7	8	9	10	11																																																																																																	
12	13	14	15	16	17	18																																																																																																	
19	20	21	22	23	24	25																																																																																																	
26	27	28	29	30	31																																																																																																		
September																																																																																																							
S	M	T	W	T	F	S																																																																																																	
	1	2	3	4	5																																																																																																		
6	7	8	9	10	11	12																																																																																																	
13	14	15	16	17	18	19																																																																																																	
20	21	22	23	24	25	26																																																																																																	
27	28	29	30																																																																																																				
SPAAR Denve..																																																																																																							
Whitakers, NC																																																																																																							

Last Minute:

Whitaker's, June 27 & 28. Great day for flying. 90 degrees plus, little wind and very clear.

Saturday, started out with Kathy's "2 the Stars" rocket, which is a Binder Sentinel for her Level 2. Pat told me that Binder copied his fin design for this rocket. Got it on the first try with a J180. Very straight and high, about 3000 feet. All three of us, Kathy, Ed Miller and I lost sight of it half way down. Kathy and I spent the next hour looking for it, and my reload case. We circled the field behind the tree line. Nowhere in sight. We decided to drive around at the end of the day to continue to look for it.

While I was in the field Dave Bullis sent his Level 3 up - Perfect! I wish I had my camera with me, but I believe Sean got it on video. More on this in the next newsletter.

Ken lent me a reload case so I could try for Level 2 with my Terrier/Sandhawk. This was a J275 to H73, 4" to 2.5". The flight was great for the first second to second and a half. The forward closure failed. Fire and smoke came out the booster, falling to the ground within 10' of Kathy. The second stage lit, but the platform was not stable so it was at a bad angle for flight. Boy, what a mess. When it was all said and done, the booster was burned, the second stage fin section had lawn darts but the electronics was ok, only lost a 30" chute and 15' of shock cord. As Ed Miller said, "This should be interesting no matter what happens". That it was. Sean will have the video of the crash and burn

at the next meeting. Call the fire department, I will try it again at Dagsboro. Finally, yes Neil, you were right, but I had to try.

After thinking about what I may have done wrong for an hour, I decided to try again. Hey, I could not go home with Kathy at Level 2 and not me. So I loaded up my 4" sandhawk and lit it up. It went to 2100" on a J275, and no one had a camera on it. Got my Level 2, good thing, I was out of rockets.

At the end of the day, Kathy and I drove around the launch area and next to the side of a dirt road was her rocket, dusty, but all there.

A complete report of this launch in the next newsletter.

Bob Utley

MEMBERSHIP UPDATE:

Bob Booker email address
kevsdad@toad.net
John Courley is really John Gourley
Neil McGilvray moved to
5764 Stevens Forest Rd
Apt 103
Columbia, MD 21045
410-884-4151
TRA 5393 L2