

2013 European SpaceModeling Championships Review



September, 2013

Contest Overview

- We were warmly welcomed by all the teams
 - Especially in light of many of the European teams that did not attend
 - The US made up 10% of the competitors
- Bulgaria, while still a second world country, has made great strides since 1978 (Chris) and 1985 (Matt) visited
- The Russians, and the Poles are the teams to beat, but expect the Bulgarians, the Serbians, and the Ukrainians to be right behind.
- We learned a lot that will help us better prepare for 2014
- We had a lot of fun
- We are looking forward to returning



*2013 European Championships Team
Above, Left to Right:*

*Steve Kristal, Katie Steele, Chris Flanigan,
Emma Kristal, Matt Steele, Stoil Avramov,
James Duffy.*

*At left: Alyssa Stenberg, Jon Stenberg, and
Zack Stenberg*



Contest Participants

№	Country	Seniors	Juniors	TM	TMA	Help-Sup	TK	Total
1	BELARUS	3						3
2	BULGARIA	12	13					25
3	CROATIA		1			1		2
4	GERMANI	1						1
5	ITALY	1						1
6	LITHUANIA	4						4
7	POLAND	11	9	1		1	2	24
8	ROMANIA	5	5				2	12
9	RUSSIA	14	9	1		3	2	29
10	SERBIA	5	3			1		9
11	SLOVAKIA	1				1		2
12	SLOVENIA	11	5				1	17
13	UKRAINE	7	8	2		2	2	21
14	USA	4	4			2		10
Total		79	57	4	0	11	9	160



Contest Schedule

№	Data	Competition Day	Schedule	Seniors		Juniors		Fly-offs		Start – end
								Seniors	Juniors	
1	24.08.2013	Saturday	Arrival of participants, registration at reception of the hotel Shumen, city Shumen, accommodation, training, engine testing, turn – in of S5 and S7, TM meeting,							
2	25.08.2013	Sunday	Official training 9.30 – 16.00 Engine testing OPENING CEREMONY – 19.00							
3	26.08.2013	Monday	Contest flights	S4	S6	S3	S1	S6,S4	S3	08.00-18.30
4	27.08.2013	Tuesday	Contest flights	S3	S1	S9	S6	S3	S6,S9	08.00-18.30
5	28.08.2013	Wednesday	Contest flights	S9	S5	S5	S4	S9	S4	08.00-18.30
6	29.09.2013	Thursday	Contest flights	S8E/P	S7	S7	S8D		S8D	08.00-18.30
7	30.08.2013	Friday	Reserve Day – Excursion CIAM Space Models Subcommittee Meeting from 17.00 to 19.00 PRIZE AWARDING CEREMONY AND BANQUET – 20.00							
8	31.08.2013	Saturday	Departure of participants after breakfast 11.00							



- We can expect to a similar schedule for 2014
- Scale turn in was delayed until Sunday morning

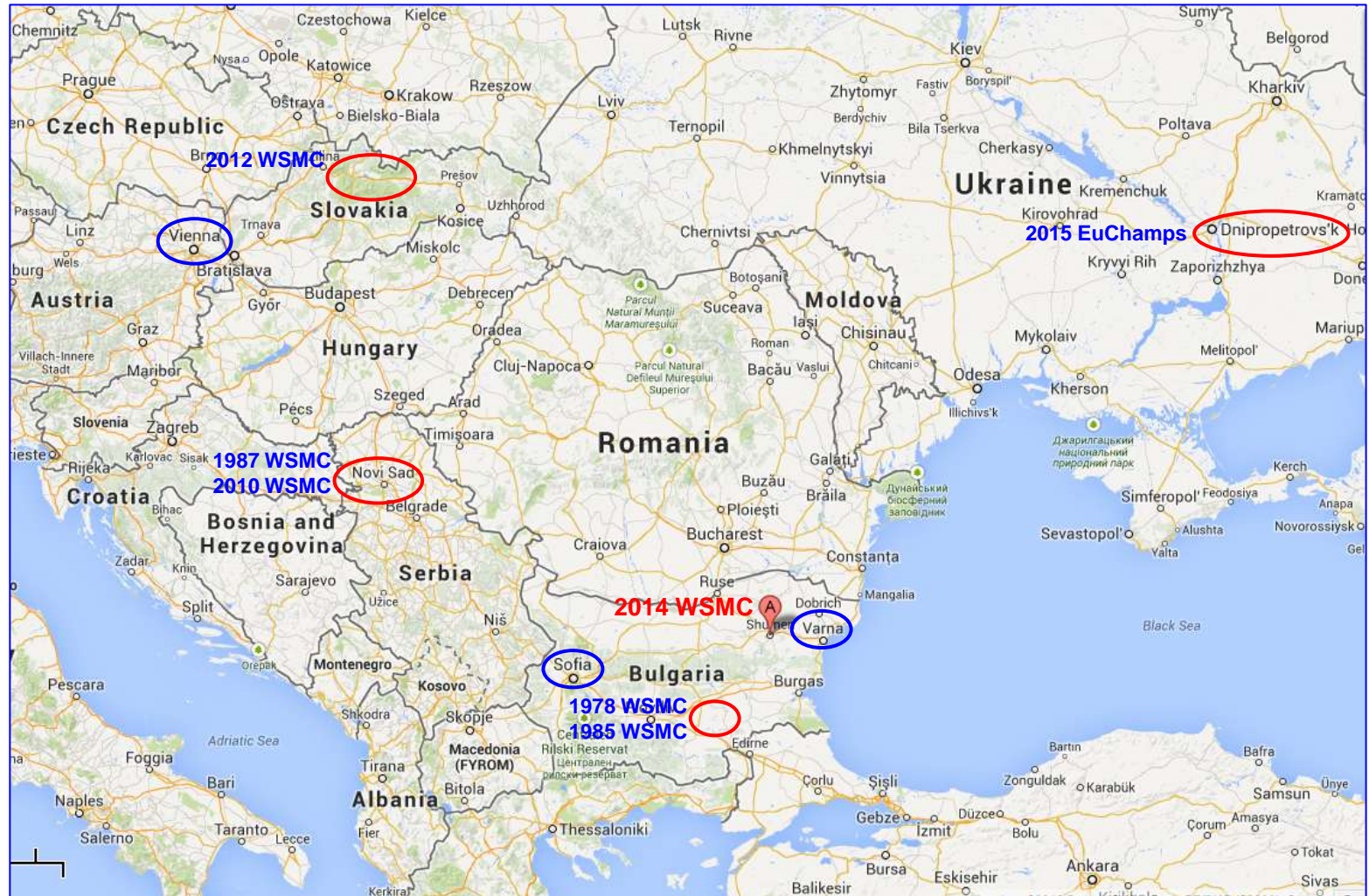
A Typical Day

26.08.2013 Monday	- breakfast		6.00 - 7.15	Tavern
	- transport to contest site		7.15 - 8.00	
	- registration of models S4A and S6A, (seniors) S3A and S1A (juniors)		8.00 - 11.30 8.00 - 11.30	Contest site
	- contest flight S4A (seniors)	1 flight	08.30 - 09.30	Contest site
	- contest flight S3A (juniors)	2 flight	09.30 - 10.30	
		3 flight	10.30 - 11.30	
	- lunch		12.00 - 13.00	Contest site
	- registration of models S6A and S3A, (seniors) S1A and S9A (juniors)		12.30 - 16.00 12.30 - 16.00	Contest site
	- contest flight S6A (seniors)	1 flight	13.00 - 14.00	Contest site
	- contest flight S1A (juniors)	2 flight	14.00 - 15.00	
		3 flight	15.00 - 16.00	
	- fly off S6A, S3A, S4A		16.30 - 17.00	Contest site
	- awards ceremony in classes S4A,S3A,S6A,S1A		17.15	Contest site
- transport to Hotel		18.15	Contest site	
- diner		19.30 - 20.30	Tavern	

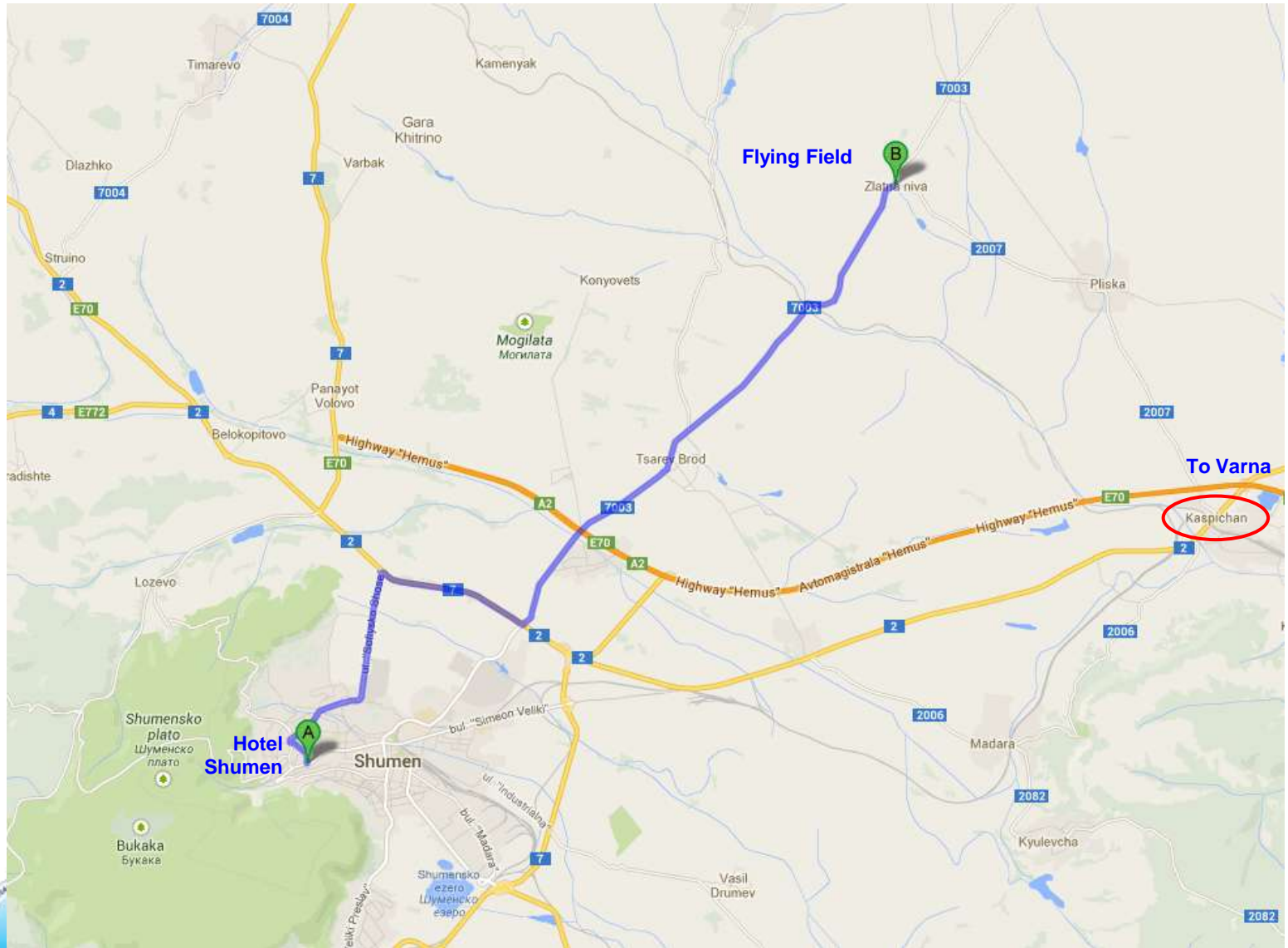
- We can expect to a similar schedule for 2014
- Be sure to take steps to avoid getting too tired, as these four days will be long and hard.



Contest Location



Contest Location



Contest Location



Engine Testing Observations

- We hope to have motors from the following countries available:
 - Bulgaria
 - Germany
 - Ukraine
 - Serbian
- Our ejection charges are “more powerful” than other countries
- We need to tailor the ejection charges in the motors for each event before we submit them
 - S9 needs more than the “stock” amounts we got in the motors
- One batch of engines should be smaller or equal to 20 pcs. and all team managers should have this in mind.
- One “batch” is defined as the engines required for one engine class in an event regardless of delay length. Maximum three batches are allowed per an engine class per an event.
- Every country has their own “basement bomber” motor manufacturer
 - Our Polish motor purchase was lost in a fire
- The Russians and the Poles tried to submit “hot” batches
 - Lots of nozzle drilling to bring them in spec
 - This really slowed the testing process

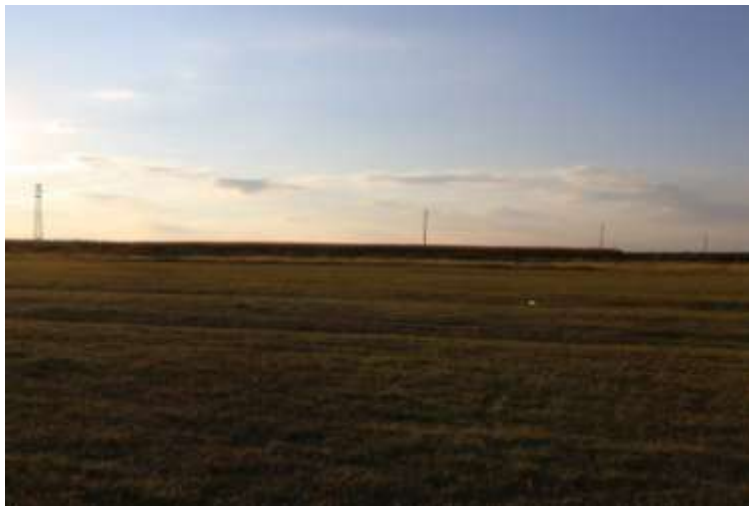


Altimeter Observations

- There is a new altimeter prep process
 - When you pick up your altimeter, the timer starts the watch and tracks the 3 minute prep time for you.
 - We didn't seem to have problems with the length of time – everything is fairly close
 - However, it means the altitude teams need to work together, as only two timers/pad assistants are available – you could miss a flight if you are third in line in the team and the first two people run late into the round
- The new Adrels seemed to work better
 - They aren't any easier to find, however; true to form, I lost two of them!
- The Bulgarians purchased the altimeters, rather than let Adrel run the data
 - Problems were encountered when bad data was posted
 - An independent (and experienced) person then was put in place to review data



Field



Field Hazards



Recovery



- Plan on tall corn, sunflowers, and stinging nettles
- Long pants are mandatory to protect your legs

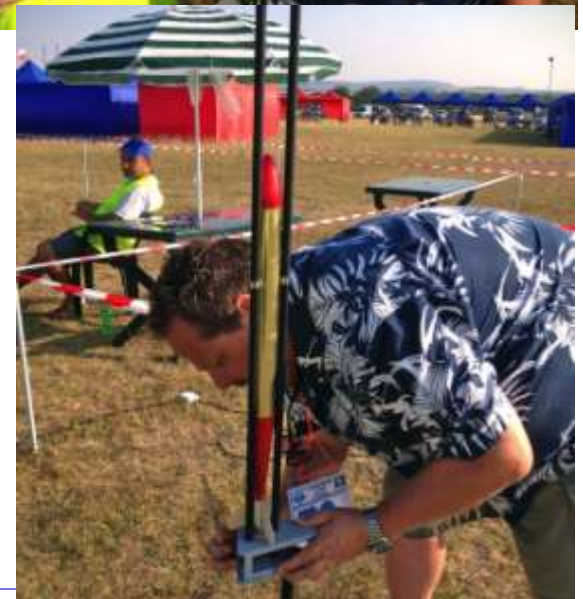
S1 Observations

- Most of the models look the same
- Half seemed to fly from pistons, half from towers
- Only saw the Serbians try delayed staging
- Saw some “mid body” streamer attach methods
- It seemed like there were lots of failures for Junior S1



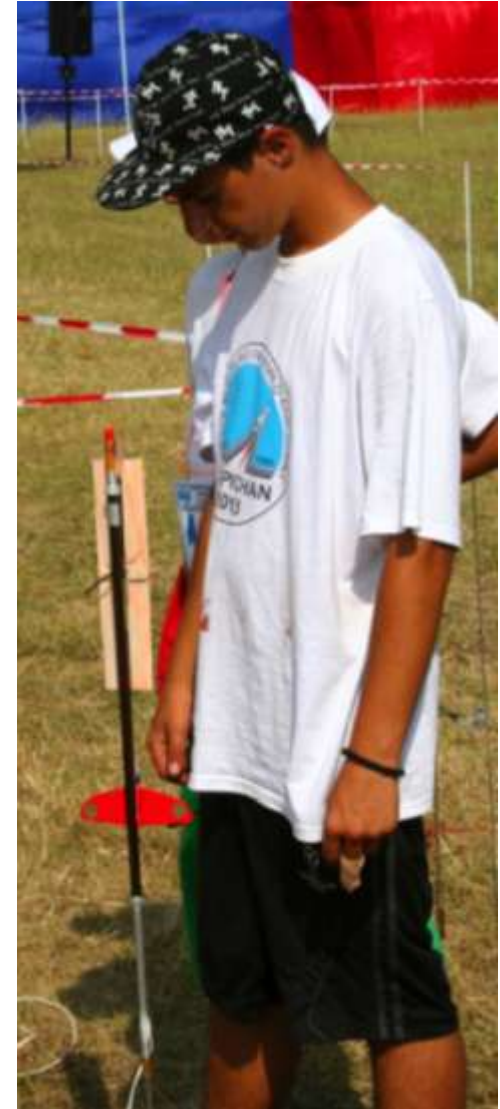
S3 Observations

- The field is a huge thermal generator
- Five minutes difference in launching was the difference between a short flight (James) and a flyaway max (Steve)
- Dethermalizers on at least one model are going to be required to medal
- Sunflowers are not fun to frolic in
- The bright shirts work really well – when people wear them!
- In some areas, there are no landmarks on the horizon to use for a recovery line – will need shoot and go compass – is there an app for that?
- At least one country used a tiny (US made) radio tracker to help on recovery
- Long rods with flags help triangulate in corn fields
- Most of the teams were flying 1 meter Mylar chutes
- Flying Estes A3-4Ts in this event is not a terrible disadvantage



S4 Observations

- Swing flop wings are the standard design
- Estes A10-3T motors are a poor choice for this event – they only get about half the altitude of the European A motors
- Chris flew his “18 gram” S4A models from the 2012 WSMC. Most of the European models were much lighter.



S4 Observations



S5 Observations

- Bumper Wacs are still the winning prototypes
- The new scoring rules emphasize altitude over static points more than the old system
 - Only 105 points between first and last in static
- A mix of tower and pistons were used for launch
- The corn field ate a lot of the S5C upper stages
- These things are nearly impossible to see at ejection, despite the use of Mylar streamers
- Originality can add 40 points to static score



S6 Observations

- Venus Rocketry models are heavy compared to the competition; Chris's "composite paper" models (pictured at right) were considerably lighter
- Few pistons used – due to delicate airframes
- Most countries are using Mylar streamers
- A1-5 motors seemed to work best



S7 Observations

- There was a wider variety of model than in the past;
 - Originality can add 40 points to static score
- A Cyclone 3 won the Junior event
- Spiders are used for cluster ignition (and we saw one misfire!)
- Senior S7 was flown in exceedingly windy conditions and suffered a large number of failures
 - At the end of the first round of flying, Matt was in 3rd place!
- Chris's Saturn 1B was larger than most, and judged out well.



S7 Observations



S7 Observations



S7 Observations



S7 Observations

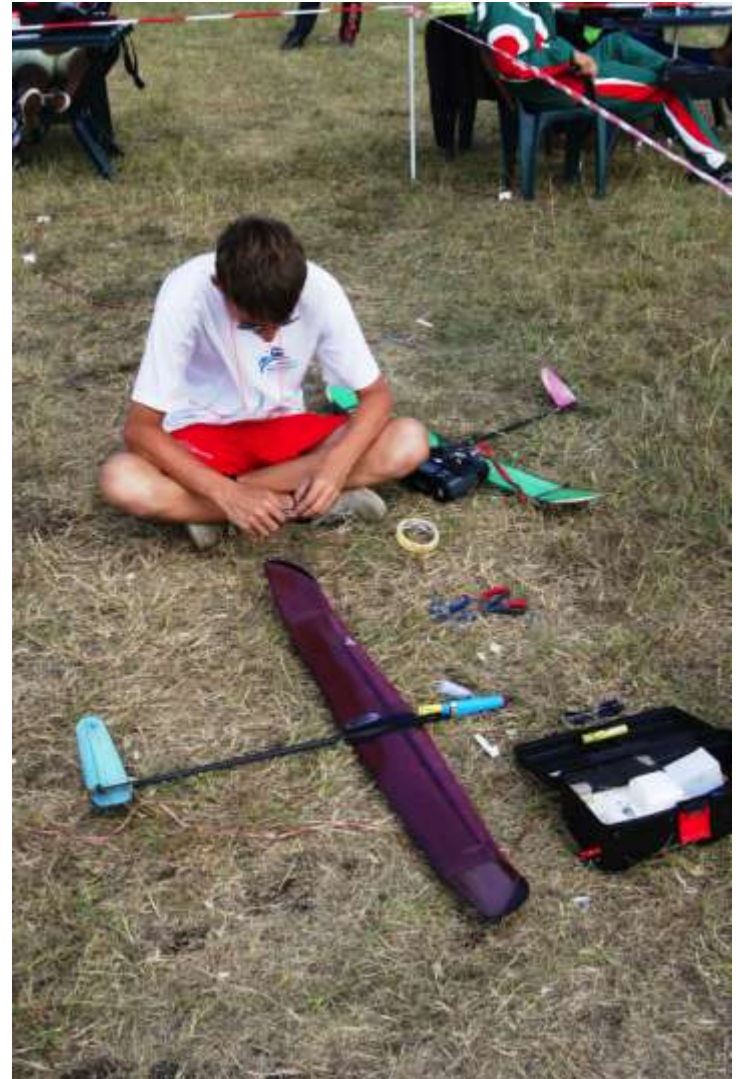


S8 Observations

- S8D was scored as a 360 max PLUS 60 points for landing – best score = 420
- Model had to land and stay inside box
- Box was maybe 40m x 40m
- Our light S8D designs are suboptimal for the new target “hard landing” format. Not only are they harder to deal with in the wind as you get close to landing, but things break. This caused 2 DQs as the control lines broke due to hard landings but it wasn't detected (add that to the checklist!).
- No one besides the US picked air for their Junior S8 flyers
- Plan on flying in wind
- Plan on radio impound the day of the radio control events
 - if you have something that needs to be checked in beforehand- CHECK IT IN. Do NOT be late!



S8 Observations



S8 Observations



S9 Observations

- Most models used flop rotors
- Best ones spun up quickly



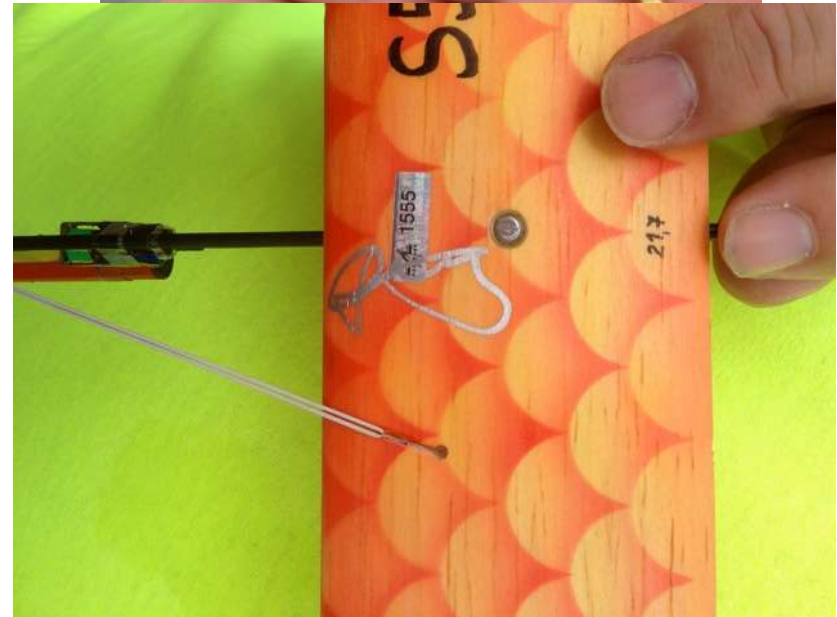
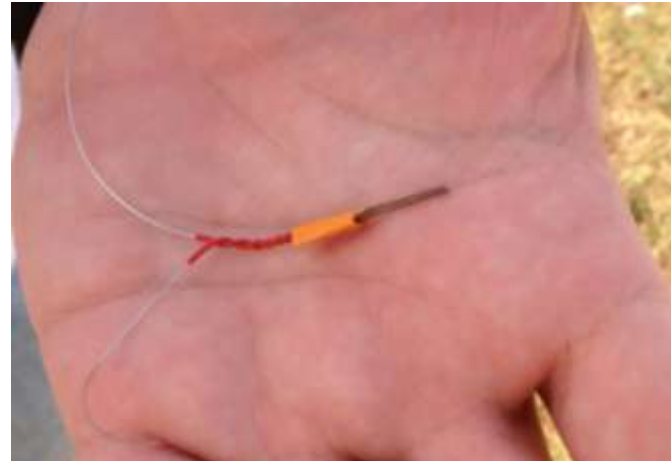
General Contest Observations

- **Be ready! Be on time!**
- **Be prepared before you leave**
 - Know how you are going to transport models & gear
- **Be ready the day of the meet**
 - Get a good night's sleep the night before your event
 - Have as much done as possible before the round opens
- **Be ready at the start of the round**
 - You need to plan on a 20 minute window to prep and fly
- **Plan for wind**
 - Wind was a constant 8-12 mph for most of the meet
 - The weather can change very quickly, even in a round
- **Thermals are challenging to pick as a result of the variable weather**
- **We design, they practice**



Lessons Learned

- Develop and use a checklist!
- Get your rest!
- Our motors from 2010/2012 are now in storage in Bulgaria
- We want to have a video record each S8D and S8E landing. There was a major problem involving the top Polish flyer.
- 10mm motor igniters – two approaches worked well
 - Q2G2 with wick
 - Solar igniter with foam
- At right is a Ukrainian model that finished in 3rd place (only because Emma brought it back and they got a third flight).
- There are those who think we don't win because of motors.
- Look at this picture and resolve to step up your game.
- We lose because the world is filled with incredible modelers who can produce stuff like this.



Always Be Aware of Your Surroundings!



Prep for 2014 WSMC



Travel

- Varna is likely the airport you want to fly in to



Logistics

- Plan your transport box – remember most airlines have a 50 lb. limit
- Wheeled luggage is great!
- Plan your packing
- Plan your transportation
- If you rent a car, **ONLY** rent one in Bulgaria
 - Crossing borders is **EXPENSIVE**
 - Crossing borders may invite damage and vandalism
 - It is not like driving from state to state in the US
- Google Maps works well in Bulgaria
- The radios that Chris had worked well



Food & Accommodations

- Food was good
 - Fresh, large quantities
- Bring a washcloth
- Cold shower, hot food or hot food, cold shower
- Limited elevator service, stairs not an alternative
- Electrical adapters
- Wi-Fi Vampires



Hotel Shumen



Uniforms

- Katie noticed that a lot of the teams have a sports jacket and a professional team jacket.
 - She wondered if the team wanted a sports jacket in addition to the traditional white team jacket.
 - She wanted to design a lighter fleece jacket for the US Team to casually wear and trade without having to worry about losing patches from past years.



Design “A”

- Here are some conceptual designs. These are not final, and I'm open to suggestions. I feel it would be best to decide on one design and one color, for team unity.
- Please note that these jackets are **OPTIONAL**, but we do need a minimum order of 6 jackets.
- Orders of 6 start at \$58 per jacket, and orders of 10 start at \$48. Orders of 20 means the jackets will be around \$42.
- All options are available in Navy and Red, and sizes small through 2XL. They appear to be a fleece mix.



Design "B"

Designs in multiple locations may increase price, and cannot be printed across the zipper.



Design "C"

Need more space?
Call 800-293-4232
for help with using
multiple design
areas.



Seeing Bulgaria

- The the region has a rich history – read up on it before you go
 - This area of Europe was repeatedly conquered, reconquered over thousands of years.
 - The result is a mix of rich cultural influences
 - There is truly some outstanding regional food
 - There are some very interesting place to visit.



A Sincere Note of Thanks!

- The Avramov family went out of their way to make our stay better, both flying-wise and comfort-wise
 - Stoil flew in the European style, so we learned a lot from him
 - Dmitri flies S8E/P
 - Albena is a former member of the Bulgarian team as well and really knows the other events.
 - We even saw her old range box from 1985!
- We never lacked for translators – this was very comforting
- This family is a GREAT addition to our team – we owe them a great deal of thanks!



Summary

- Have fun!



Questions?

