

The Journal of *FAI Space Modelling*
The British Space Modelling Association

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Editorial 'HALF A CENTURY OF
WORLD SPACE MODELLING'

... a new book by Romania's Ioan Radu. The Editor received a copy in recent times and a review is featured within. This is just an amazing 'history book'!

Last time we checked out the *World Space Modelling Champs*, from Day 1. This time it's the turn of the *European Champs* and naturally, Mr Radu's wondrous tome proved invaluable! What's very interesting, is how difficult it was to get FAI to sanction early *European Champs* as 'Official'.

For the first time in a bit, we've a *Firkin Funnies* to tickle your fancy. An attempt to lighten up the content – a *New Year's resolution*. Then, there's a gentle introduction into what is likely to be the best *World Cup* year ever...

...*World Cup*?!! We're off to a great start once more. The *Belarus Cup*, *Korolev Cup* and *Veteranov Cup* are reported in these pages. Belarus was a really stellar start to 2013 and of the rest of the year is as good...well! Enough of me, let's get started..

30 Years of European
Champs.. *When did it all start
then...and have we lost any!?!*

by the Editor

LAST time we chased down the '*lost World Championships*', getting there after a bit of a struggle. Continental Championships are next in line and having "*Half a Century of World Space Modelling*" to hand, this was surely going to be much easier..

..Or at least, that was the plan. Going back to the lesson learned last time, the Editor started at the *Beginning*. Unfortunately, that's where all the debates begin too..

After a number of years of 'rehearsals', it was decided that a formal *European Space Modelling Championships* should be set up. Several international competitions - including those with the title of "*European Criterium*", in 1971-72-73-76-78, took place prior to the 1st *European Space Modelling Champs*. More details are shown below...please note, the Editor has named countries what they were called at the time:

1979 1st European Space Modelling Champs (Lerida/Lleida, Spain) took place and was the *FIRST Official - FAI sanctioned* - European Championships. Bulgaria, Czechoslovakia, West Germany, Poland, Union of Soviet Socialist Republics (USSR) and Spain kicked things off.

'*Championships of Socialistic Countries*' ~ these came online in the 1970s, continuing for many years. These were surely the *European* – even *World* – Championships, by any other name! The water's slightly muddy then...Then, taking things onward:

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1981 'European Space Modelling Champs' ~
Yambol, Bulgaria.

The event attracted teams from, Bulgaria, Czechoslovakia, Poland, Romania, West Germany, USSR and Spain. A good event, by all accounts, just a shame that **FAI did not see fit to ratify it as 'official'!** No World Champs in 1982, with Poland coming to rescue, at Nowy Sacz, in 1983, leaving the next European Champs to be'...

1984 'European Space Modelling Champs' ~
Suceava, Romania.

Teams entered from Bulgaria, Czechoslovakia, Romania, West Germany, USSR, Spain and a representative from the Netherlands. All was sweetness and light, asking why **FAI didn't ratify this 'Champs as 'Official' either!! ..**

1988 2nd European Space Modelling Champs ~
Suceava, Romania.

Romania's political troubles were starting to simmer, but the event still attracted Bulgaria, Czechoslovakia, Yugoslavia, Poland, Romania, West Germany, USSR and Spain. But yes, great news was...**FAI declared these continental championships Official!**

1991 3rd European Space Modelling Champs ~
Yambol, Bulgaria.

The keen-eyed reader will spot two countries very eager to please...Bulgaria and Romania.. No surprise then, that the next European Champs was carded for Bulgaria! Nations in the contest were, Bulgaria, Switzerland, France, Czech & Slovak Federative Republics, Yugoslavia, Poland, Romania, West Germany, USSR and Spain.

World Cup ~ *Another watershed moment in Space Modelling's history. 1992 saw the start of the World Cup! Gentle intro...S8E-RC Rocket Glider duration – we weren't to see /P Spot Landing and the other classes for a time yet.. Medallists were: 1st Stefan Mokran (CSFR); 2nd Jiri Taborsky (CSFR); 3rd Hans Stoll (SUI). A slightly more formal World Cup agenda came into play throughout the 1990s.*

1993 4th European Space Modelling Champs ~
Suceava, Romania.

Not to be outdone, Romania came back to host the 1993 edition! And they weren't disappointed, with the paradigm shifts in Eastern Europe releasing some novel nations into the mixer...Czech Republic, France, France, Slovakia, Latvia, Poland, Romania, Germany, Russia, Ukraine and Spain.

1995 5th European Space Modelling Champs ~
Liptovsky Mikulas, Slovakia.

Time for a change, as 1995 came around. The novel state of Slovakia successfully tendered for the European Champs; Liptovsky Mikulas the venue. Great startlist... Czech Republic, France, France, Italy, Yugoslavia, Slovakia, Latvia, Lithuania, Slovenia, Macedonia, Netherlands, Poland, Romania, Germany, Russia and Ukraine. Crucially too, this was the first Continental Champs to feature *Juniors* as a separate entity, as well as a massive contingent of supporters.

World Cup ~ *1995 saw S6A-Streamer duration and S7-Scale added to S8E-RC Rocket Glider duration.*

1997 6th European Space Modelling Champs ~
Ankara-Golbasi, Turkey.

Every so often something 'different' happens; every so often, someone has a 'stellar' idea. And this was the **1st World Air Games (WAG)**, featuring *full-size Aviation, Model Aircraft and Space Models!* The hosts were to be Turkey and the event – in all its glory – was MASSIVE! Space Modelling hosted the Open European Champs there, with Turkey, Switzerland, Czech Republic, Spain, Italy, Slovakia, Latvia, Lithuania, Slovenia, Macedonia, Kazakhstan, Poland, Romania, Germany, Russia and Ukraine coming to the rampa – in a hot desert near Ankara!

1999 7th European Space Modelling Champs ~
carded for Yugoslavia. This did not take place because of the complex and ongoing political situation in the region.

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2001 8th European Space Modelling Champs ~

Ankara, Turkey

Repeat of the WAG, featuring, Turkey, Yugoslavia, , Spain, Slovakia, Slovenia, Macedonia, Poland, Romania, Russia and Ukraine.

2003 9th European Space Modelling Champs ~

Sremska Mitrovica, Yugoslavia

Great Britain featured a team – albeit only Juniors – at a European Champs for the very first time!

Teams... Turkey, Spain, Slovakia, Slovenia, Macedonia, Poland, Romania, and Great Britain.

2005 10th European Space Modelling Champs ~

Buzau, Romania

Things really coming together now. This one featured Czech Republic, Germany, Italy, Latvia, Lithuania, Russia, Serbia & Montenegro, Spain, Slovakia, Slovenia, Poland and Romania. Super event.

2007 11th European Space Modelling Champs ~

Kosice, Slovakia

The Champs of FIVE classes only! No details of the teams, but a goodish event nonetheless.

2007 1st Space Modelling Championships of Asia ~

Kosmodrom Baikonur, Kazakhstan/Russia

An innovation...another continent comes on board!

2009 12th European Space Modelling Champs ~

Irig, Serbia

Seniors and Juniors in most classes...and we were back to EIGHT classes. Your Editor honoured to judge S5-Scale Altitude & S7-Scale at this one!

2011 13th European Space Modelling Champs ~

Buzau, Romania

This one was slightly smaller than anticipated.

2013 14th European Space Modelling Champs ~

Kaspichan, Bulgaria

We'll just have to see!?

The above dovetails nicely with the World Champs' array last time. Alexander Mituriev is again to be credited with contributing a significant amount to this review. Next time will see a detailed review of Space Modelling's World Cup.

Space, Scale and Politics...

Alaska comes online!

by **James Jason Wentworth**

SOUTH –v- North Korea's 'space race' went up another notch [or three – Ed] recently! On one hand, a very exciting 'head-to-head' between two neighbours...on the other, just a bit scary for the civilised world!

"Please find below some contemporary news from the world of real rockets. South Korea's *KSLV-1* finally orbited a satellite..

<http://www.spaceflightnow.com/news/n1301/30kslv/>)

...Shortly following, [10th February '13 – Ed] North Korea detonated their third atomic bomb and the obvious fear is that they might use the *Unha-3* satellite vehicle to launch similar nuclear warheads at their adversaries. But now for something completely different..

ADVENT LAUNCH SERVICES

Here are links - here and also below - to information on *Advent Launch Services*:

www.adventlaunchservices.com

a private spacecraft company that is developing a family of delta-winged, water-launched & water-landing reusable spacecraft--orbital as well as suborbital. I am helping them. The vehicles are all of a common, scale-able design. They all use pressure-fed LOX/liquid methane rocket engines that have unique "2-D" rectangular exhaust nozzles. Movable flaps (like those used with the similar "2-D" nozzles of modern jet fighters) provide both thrust vector control and altitude compensation - like that of an aerospike rocket engine - in space, attitude control is maintained by cold-gas thrusters using residual gaseous methane from the fuel tank. Also:

Their smallest, suborbital space tourism vehicle (I've provided its specifications below--they are from here:

www.secretprojects.co.uk/forum/index.php?topic=11

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[041.0](#)) is 35' long. Their orbital vehicle uses three stages, each one of which is an up-scaled version of the suborbital craft and uses multiple LOX/liquid methane rocket engines. Below - above the specifications for the suborbital vehicle - are more links to *Advent Launch Services'* designs:

www.google.com/#sclient=psy-ab&hl=en&tbo=d&site=&source=hp&q=Advent+Launch+Services&og=Advent+Launch+Services&gs_l=hp.12...0.0.1.24155.0.0.0.0.0.0.0.0.les%3B..0.0...1c.dkg5FhbT07U&bav=on.2,or.r_gc.rpw.&bvm=bv.1357700187,d.cGE&fp=27a6744d958f4d5d&biw=792&bih=377)

..Here are the suborbital craft's specifications:

Vehicle Specifications

- * Name: Advent
- * Length: 35 feet
- * Diameter: 4.75 feet (12 ft wingspan)
- * GTOW: 12,600 lbm
- * Dry Weight: 4,100 lbm
- * Crew Capsule: 8 feet long, 4.5 feet in diameter
- * Crew Environment: Cabin pressurized to 1 Bar with no pressure suits needed.
- * Payload Capacity: 600 lbm
- * No. of Engines: 1
- * Propulsion System: Pressure fed
- * Fuel: Liquid Methane
- * Oxidizer: Liquid Oxygen
- * Total Thrust: 18,900 lbf
- * Reaction Control System: Cold gas methane

Mission Specifications

- * Alt. at Ignition: From within the ocean
- * Orientation at Ignition: Vertical
- * Max. Acceleration Force on Ascent: 4.6 g
- * Altitude at Engine Cut-off: 145,000 feet
- * Time at Engine Cut-off: 97 seconds
- * Max. Speed: 3,600 feet/second
- * Max. Altitude: 105 kilometres
- * Time in Weightless Conditions: 220 seconds
- * Re-entry Method: Aerodynamic controlled glide
- * Acceleration Forces on Descent: 5.2 g
- * Landing Method: Winged rocket designed to glide down to ocean surface for a safe, controlled, horizontal landing
- * Total Duration: 13 minutes
- * Landing Distance from Takeoff Location: 0 kilometers
- * Time between Missions: approx. 4 hours

I hope the information presented above is useful to enthusiasts.

Book Review..

HALF A CENTURY OF WORLD SPACE MODELLING

IOAN N. RADU ISBN: 978-973-0-12391-3
PRICE ~ €10 [EUROPE] \$13.30 [USA & WORLD]

by the Editor.. Oh boy...this is exciting! ..Not just the history of FAI Space Modelling, this tome redefines the history of *Model Rocketry*...in fact, *Rocketry* generally. Mr Radu is brave enough to take things back to the earliest days of gunpowder in China, the first use of rockets in conflicts and the development of rocket modelling in the 20th century. I'll list the chapter headings/sub-headings..

Ch1 *Generalities ~ history from Day 1 in China!*

Ch2 *1900-1957 ~ organisation of Aviation sports, FAI and National Aero Clubs*

Ch3 *G. Harry Stine ~ the Pioneer, motors, model kits, the 'Trade etc*

Ch4 *International Modelling ~ FAI-CIAM, Books/journals from across the World*

Ch5 *First FAI events ~ genesis, World records, events, international champions*

Ch6 *World Activity Builds up ~ World Champs rehearsals, 1st World Champs*

Ch7 *New Chief of CIAM Space Models sub-Committee ~ continued developments etc.*

Ch8 *Howard Kuhn...the Moderniser ~ World Champs events, Junior Worlds etc*

Ch9 *Otakar Saffek...the Traditionalist ~modeller, Chair of SM sub-ctte etc ~ FAI now 90 years old*

Ch10 *Srdjan Pelagic...the Continuer ~ innovative developments ~ plenty more*

Ch11 *Participation of women ~ lots more*

Ch12 *FAI-Commission International d'Aero Modelisme ~ what's it all about*

Ch13 *Statistics ~ lots & lots of them!*

Appendix *Photo gallery*

Appendix *Collections of badges & logos..*

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...Not even scratched it! What's amazing is how much is covered and in so much detail. So many people have contributed so much; so many books have been published; so many journals featuring Space Modelling...awesome! Mr Radu handles the issue of 'when does a rocket become a model rocket' quite superbly...very relevant to early 20th century developments. His coverage post-WW2 is graphic, remembering that we were then in the Communist era and describes the action brilliantly.

Faults...there is just so much information, from so many global sources. At times, the presentation seems just a little cluttered. Also, the terms 'Jet' and 'Rocket' are interchanged. But really, this is nothing in the context of this synergistic concatenation of historical moments.

A few words on the Author are relevant. Ioan Radu is a former teacher of Mathematics, with a passion for aeronautics, astronautics, aeromodelling and space modelling. Many times an international champion, winning Gold at the 1st World Champs, in Yugoslavia, 1972. Ioan has written several other books and contributed across the spectrum of topics. Awarded FAI's Paul Tissandier Diploma in 2002. And...Mr Radu has just published the greatest book on Space Modelling's history ever written...WELL DONE! Readers will recall 'The Missing World Champs..' in the last issue, had Mr Radu's book been available, my researches would have been so much easier!

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Firkin 'Punny'... *Time for some 'funny punny' stuff*

by **Pavel Černoč & Tove Carolina Nessle**

WHAT'S a 'Pun'?!? It's the use of one word in the English Language, where another *should* be used...often producing a completely different meaning. Pornography is one thing... *Punography* completely different. Over to Carolina's contribution, sent by Pavel.

PUNOGRAPHY..

I tried to catch some fog, but mist..

When chemists die, they barium..

Jokes about German sausage are the Wurst..

A soldier who survived mustard gas and pepper spray is now a seasoned veteran..

I know a guy who's addicted to brake fluid. He says he can stop anytime..

How does Moses make his tea? Hebrews it..

I stayed up all night to see where the Sun went. Then it dawned on me..

The girl said she recognised me from the vegetarian club, but I'd never met herbivore..

I'm reading a book about anti-gravity. Just can't put it down..

I did a theatrical performance about puns. It was a play on words..

They wrote to me saying I had Type A blood, but it was a Type O..

A dyslexic man walks into a bra..

PMS jokes just aren't funny. Period..

Why were the Indians here first? They had reservations..

School trip to the Coca Cola factory. Hope there's no pop quiz..

Energiser Bunny arrested. Charged with battery..

I didn't like my beard at first. Then it grew on me..

How do you make holy water? Boil the hell out of it..

What do you call a dinosaur with an extensive vocabulary? A Thesaurus..

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When you get bladder trouble, urine trouble..
What does a clock do when it's hungry? It goes back four seconds..
I wondered why the baseball was getting bigger.
Then it struck me..
Broken pencils are pointless.

Belarus Cup ~ Grodno-BLR : *12-14 April '12 ...Brilliant!*

5-4-3-2-1... WE'RE Off! Belarus, Russia, Latvia, Lithuania, Germany and Czech Republic made the pilgrimage to Grodno for the first World Cup of the season. . Sports Directors, Yauheni Chashevich and Anton Raubot were pleased with the outcome. Actually this was the best start the World Cup has ever seen! RSO Denis Prydannikov (UKR) had a tough time. Podiums:

S4A-Boost Glider World Cup (30 starters)

1 Vladimir MINKEVICH	BLR 110 180 180 = 470s
2 Aliaksandr LIPAI	BLR 106 170 180 = 456s
3 Valery HRABOUSKI	BLR 180 77 153 = 410s

S6A-Streamer Duration World Cup (43 starters)

1 Vladimir PASIUKOV	BLR 130 105 174 = 409s
2 Anton MAMCHYTS	BLR 170 84 143 = 397s
3 Kirill STROKOV	RUS 180 110 84 = 374s

S9A-Gyrocopter Duration World Cup (39 starters)

1 Vladimir KHOKHLOV	RUS 180 180 180=540+171s
2 Gintoras JUCEVICIOUS	LTU 180 180 180=500+135s
3 Henning LOHSE	GER 149 148 180 = 477s

S7-Scale World Cup (14 starters)

1 Mikhail NORITSIN	RUS <i>Ariane L-01</i> 506+180 = 686pt
2 Kirill ZHABRAVETS	BLR <i>Soyuz</i> 508 + 83 = 592pt
3 Aliaksandr LIPAI	BLR <i>T-T'hawk</i> 395 + 55 = 450pt

Skud-A, Jupiter C, Meteor, Nike Cajun, Kosmos, Dragon 3
+ the above...one helluva hall!

S8E/P-RC Rocket Glider World Cup (7 starters)

1 Grigory SERGIENKO	RUS 1000 1000 1000+1000=4000
2 Alexei EZHOV	RUS 938 921 1000+ 977 =3830
3 Kirill STROKOV	RUS 1000 1000 748+ 980 =3728

S1A-Altitude Juniors

1 Mykolas TREIKAUSKAS	LTU 310m
2 Danil SHARBROWSKI	BLR 145m
3 Andrei SURHINEVICH	BLR 142m

S1B-Altitude Seniors

1 Maksin TIMOFEEV	LTU 600m
2 Alexander KOZLOV	CZE 598m
3 Dmitri KOROTIN	RUS 371m

FAI Jury comprised, Andrius Bukauskas (LTU), Aleksandras Timofejevas (LTU) and Vladimir Panachenko (UKR) and had little to rule on; S7-Scale Judges Anatoly Kochethov (BLR), Yuriy Osinchenko (BLR) and Alexei Vasilev (BLR) had a marvellous time judging what was a super hall. Great start guys!

Korolev Cup ~ Stupino-RUS : *20 April '12...not at all bad, in fact, SUPER!*

JUST a bit smaller than 2012's edition, but teams from Belarus, Russia, Czech Republic made sure it would never be second rate and the weather was fairly friendly. Enough of me...let's check out some podiums:..

S4A-Boost Glider World Cup (10 starters)

1 Gennady POLTAVETS	RUS 180 168 180 = 528s
2 Vadim SAVERIN	RUS 180 154 144 = 478s
3 Anatoli ZEMLYANUKHIN	RUS 180 149 112 = 441s

S6A-Streamer Duration World Cup (21 starters)

1 Anatoli ZEMLYANUKHIN	RUS 180 99 100 = 379s
2 Kirill STROKOV	RUS 118 96 120 = 334s
3 Sergei IVANOV	RUS 136 92 100 = 328s

S7-Scale World Cup (4 starters)

1 Mikhail NORITSOV	RUS <i>Ariane L-01</i> 503+185 = 688pt
2 Roman KHOROSH	RUS <i>T-Tomahawk</i> 429+90 = 519pt
3 Dimitri KOROTIN	RUS <i>Meteor 1</i> 292+83 = 375pt

S8E/P-RC Rocket Glider World Cup (10 starters)

1 Kirill STROKOV	RUS 1000 986 988+969 = 3943pt
2 G. SERGIENKO	RUS 841 1000 1000+1000 =3841pt
3 Andrey EZHOV	RUS 873 965 1000+915 = 3753pt

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S9A-Gyrocopter Duration World Cup (24 starters)

1 Vladimir KHOKHLOV RUS 143 180 180 = 503s
2 Anatoli ZEMLYANUKHIN RUS 180 180 132 = 492s
3 Mikhail NORITSIN RUS 180 110 180 = 470s

S1B-Altitude (4 starters)

1 Alexander KOZLOV CZE 523m
2 Alexei EZHOV RUS 490m
3 Roman KHOROSH RUS 452m

RSO was Vladimir Zherzdev and the **FAI Jury** comprising Vladimir Minakov, Alexei Koriapin (both **RUS**) and Vladimir Minkevich (**BLR**) had little to rule on. **S7-Scale Judges** were Oleg Khorosh, Vladimir Sedov (both **RUS**) and Aleksandr Zagorodny (**UKR**)

Veteranov Cup...22nd April '13

IT'S always great to have one of the classes outside the normal range in play. The *Veteranov Cup* has featured **S12A/P-Triathlon** for some years now – **S3-Parachute**, **S6-Streamer** and **S9-Gyrocopters** feature one after the other. **Podiums:**

S12A/P-Triathlon Seniors (9 starters)

1 Konstantin GRIVCHENKO RUS
S9A-240/1000 S6A-90/608 S3A-240/1000 = 2626pts
2 Vladimir SEDOV RUS
S9A-240/1000 S6A-70/472 S3A-217/904 = 2376pts
3 Kerop OGANESYAN RUS
S9A-188/783 S6A-57/385 S3A-240/1000 = 2169pts

S12A/P-Triathlon Juniors (4 starters)

1 Vitali MAYBORODA RUS
S9A-216/900 S6A-133/726 S3A-240/1000 = 2626pts
2 Alexander KOZLOV CZE
S9A-240/1000 S6A-90/524 S3A-240/1000 = 2524pts
3 Evgeni KIPER RUS
S9A-106/441 S6A-183/1000 S3A-173/720 = 2161pts

FAI Jury for this 'mini classic' was made up of, Vladimir Minakov, Alexei Koriapin (both **RUS**) and Vladimir Minkevich (**BLR**) and the **RSO** Vladimir Zherzdev (**RUS**).

Ringpiece... *That's about all for now*

PHEW...we've covered some ground in this one! ...and the prospects for 2013 seem even more exciting. For the Editor, the next commitment is 'at home'...running the 2013 *United Kingdom Aerospace Rocketry Challenge (UKAYRoC) Finals*, at Farnborough, 7-8th May '13. 2012's edition was brilliant and just shows what can be done when you let school kids loose with rockets! ..Just shows what **WE** should be doing with **S2/P-Payload Space Models**. I reckon it's time to go..

BE SURE TO HAVE A GREAT 2013!

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