

The Journal of *FAI Space Modelling*

The British Space Modelling Association

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Editorial *Off we go again!! First up, check out the calendar below, it's stellar. In fact, this interspace.. is a real mixture of FAI Space; Golden Jubilee of Space Modelling; NAR issues; Scale models from Jason Wentworth & Geoff Seabrook; humour from Alenka Čuden and sadness too, from Russia. And Yes...Space Modelling celebrates its Golden Jubilee 50th Anniversary as an FAI-CIAM activity, see Srdjan Pelagic' feature within...and congratulations on your 70th! We are honoured to have a novel contributor, NAR's Roy Houchin comes online with a super piece on the development of young people.*

But this issue of interspace.. is a little different - the Calendar apart - featuring relatively little 'real life' FAI Space Modelling. Strange, as there is so much in the melting pot at the moment, with proposed changes to the status quo. By the time of the next issue, there should be some concrete items to report, but somehow I've got my doubts. At times, I think that Space Modelling is happy where it stands and that there is a genuine fear that quantum changes could trigger a downward slide. But once more, we must take a firm grip on our own destiny: others will surely destroy it.

Space Travels 2012... *Where are we all off to then?!?*

YET ANOTHER global array to get the juices flowing! Time to book those holidays: time to start budgeting: time to start building for the new season. Enough from me, suffice to say 'Thank You..' to Srdjan Pelagic, who has overseen numerous drafts of what you see below...

19th World Space Modelling Championships ~ for Seniors & Juniors

31 August – 9 September 2012

Liptovsky Mikulas – Slovakia

Seniors ~ S1B-S3A-S4A-S5C-S6A-S7-S8E/P-S9A

Juniors ~ S1A-S3A-S4A-S5B-S6A-S7-S8D-S9A

7-8 April **7th Catalunya Cup** ~ Lleida-ESP
S4A-S6A-S8E/P-S9A WCs + S3A

14-15 April **Belarus Cup** ~ Grodno-BLR
S4A-S6A-S7-S8E/P-S9A WCs + S1A-S1B

21-22 April **Korolev Cup** ~ Mescherino-RUS
S4A-S6A-S7-S8E/P-S9A WCs + S1A-S1B

23 April **Veteranov Cup** ~ Mescherino-RUS
S12/P

28-29 April **Texas Cup** ~ Austin, Texas-USA
S4A-S6A-S8E/P-S9A WCs + S1B-S3A

5-6 May **1st Gemer Cup** ~ Roznava, Gemer-SVK
S4A-S6A-S7-S8E/P-S9A WCs

11-13 May **Kaspichan Cup** ~ Kaspichan-BUL
S4A-S6A-S7-S8E/P-S9A WCs

18-20 May **Krupka Cup** ~ Krupka-CZE
S4A-S6A-S7-S8E/P-S9A WCs

26-27 May **Buzau Cup** ~ Buzau-ROM
S4A-S6A-S7-S8E/P-S9A WCs

31 May-3 June **Polar Cup** ~ Murmansk-RUS
S4A-S6A-S7-S8E/P-S9A WCs

2-3 June **Krakow Cup** ~ Krakow-POL

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S4A-S6A-S7-S8E/P-S9A WCs + S1B-S8D

9-10 June **11th Stip Cup** ~ Stip-MKD

S4A-S6A-S7-S8E/P-S9A WCs

16-17 June **12th Sirmium Cup** ~ Sr Mitrovica-SRB

S4A-S6A-S7-S8E/P-S9A WCs

23-24 June **Great Lakes Cup** ~ Oswego-USA

S4A-S6A-S7-S8E/P-S9A WCs + S1B & S3A

30 June-1 July **Balcan Cup** ~ Dupnica-BUL

S4A-S6A-S7-S8E/P-S9A WCs

7-8 July **Liepaja Cup** ~ Liepaja-LAT

S4A-S6A-S7-S8E/P-S9A WCs

7-8 June **Vega Cup** ~ Zadovinek-SLO

S4A-S6A-S8E/P-S9A WCs

14-15 July **11th Belgrade Cup** ~ Lisciji Jarak-SRB

S4A-S6A-S7-S8E/P-S9A WCs

20-22 July **Zielona Gora Cup** ~ Z. Gora-POL

S4A-S6A-S7-S8E/P-S9A WCs

20-23 July **Impulse Cup** ~ Shostka-UKR

S4A-S6A-S7-S8E/P-S9A WCs

25-28 July **Yangel Cup** ~ Dnepropetrovsk-UKR

S4A-S6A-S7-S8E/P-S9A WCs

19th World Space Modelling Champs

18-21 Sept **Baikonur Cup**~Kosmodrom-RUS/KAZ

S4A-S6A-S7-S8E/P-S9A WCs + Juniors' S3A-S4A-S6A-S7-S9A-S12A/P

22-23 Sept **2nd Fenix Cup** ~ Vincovci-CRO

S4A-S6A-S7-S8E/P-S9A WCs

25-28 Sept **Cup of Korkyt Ata** ~ Korkyt Ata-KAZ

S4A-S6A-S7-S8E/P-S9A WCs

6-8 October **34th Ljubljana Cup** ~ Kamnik-SLO

S4A-S6A-S7-S8E/P-S9A WCs + S3A, Show Models, High Powers, sex and drinking (Open Internationals..)

Editor's note.. *Oh boy..will someone tell these guys there's an economic Black Hole looming (again..)!! Obviously check out the dates against the list to be found on www.fai.org/aeromodelling 'page.'*

50 Years of Space Modelling!!! *Srdjan Pelagic goes for Gold..*

HALF A CENTURY...can it really be?!?
It didn't take us – specifically J. Harry Stine – long, after Juri Gagarin rode Vostok into orbit on 12th April 1961, to come up with our own plot. Let's tune into Srdjan..

"I was silent for more than three weeks, because I considered we all deserve some winter vacation and escape from space modelling, following a very intensive and successful competition season in 2011. Now I hope we are all "refreshed" and our "batteries" reloaded and ready for 2012".

"This year - 2012 - is very important for Space Modelling. It is the 50th Anniversary of the Space Modelling as an FAI-CIAM activity and all our activities and documents should have symbol of this Anniversary to remind us and all those in connection with Space Modelling on this iconic 'Golden Jubilee' ".

"Now, information for you:

A. CIAM Bureau meeting was held in Lausanne from 2nd to 3rd December, 2011. There were almost 40 items with a lot of sub-items of which many related to Space Modelling. I was waiting for the official Minutes to inform you in detail, but because of a very big workload, CIAM Secretaries say it will appear with a delay, so I will send to you my short report on this issue.

B. FAI Office has published and posted at the FAI WEB site 2012 FAI Sporting Calendar –

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Aeromodelling - Space Models. You can find it and download at:

<http://www.fai.org/ciam-events/ciam-events-calendar-and-results>

"If you wish to get only SM events you should type in the box Enter Text: "Space Models". Also to see World Cups and Open Internationals it is necessary to select in box Select Category: 'Second category event'.

"In this list you will find several misprints in event dates and other data. I asked the FAI Office to make necessary corrections".

"This 2012 FAI Sporting Calendar - Space Models has: 1 World Championships – Senior & Junior, 23 World Cups, 8 Open International - Non World Cup Events and 1 Open National and International Series Events".

"I attach a list of necessary corrections sent to the FAI Office that can help you to make these corrections yourself immediately".

C. The FAI Office also has published and posted the list of the FAI Judges at:

<http://www.fai.org/ciam-about-us/ciam-officials-experts/101-ciam/34847-fai-aeromodelling-judges>

"If you wish to see only Space Modelling judges, you should select Judge S or Judge S7 from the menu. I call your attention that a lot of people in the FAI Office are very new and they used new designation S and old S7 depending on forms submitted from NACs. CIAM agreed several years ago that all Judges shall be Judges S - qualified for judging all SM classes at the international level. I will do my best to rectify this omission that has appeared this year for the second time".

D. The FAI Office has published and posted today the FAI Sporting Code, Section 4, Volume Space Models, 2012 Edition that is downloadable at:

<http://www.fai.org/ciam-documents>

...and select S - Space Models and then Sporting Code - S - Space Models

"There were no changes of the rules in this edition. There were only minor corrections of misprints and obsolete terms or cross references to Volume ABR that are clearly marked by duplicated, vertical, thick line next to corrected paragraph".

"You can also download there the Volume ABR if you go down to Section 4 - Aeromodelling (Volume ABR) that contains general rules for all aeromodelling disciplines and is also important for Space Modelling".

"I attach these two documents in order to save your time and to make sure that you have these documents important for both the organizers of the SM events and for the participants".

"That is all for now. You will receive much more information soon.

Ljubljana love affair... Alenka Čuden shrieks, "...check this out!"

THE EDITOR goes to Slovenia's capital a lot, not just for the legendary Ljubljana World Cup, but often following events elsewhere. Alenka Čuden – wife of Jože – has sent in something magic.

This is pretty typical of the stuff that goes on in Ljubljana and I suggest you turn up the sound and click on the following link..

<http://player.vimeo.com/video/29750720?title=0&byline=0&pyoumissortrait=0>

Good or What!?! Just to tell you, the guy in the *Iron Maiden* tee-shirt isn't Bruce Dickinson, that group's former lead singer! But he sings at least as well...whilst BD inhabits the Captain's seat in one of Europe's airlines and presents on TV. Luv it!!

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OBITUARY

JURIY SOLDATOV

by *Srdjan D. Pelagic, dipl.ing.*
CIAM Space Models SC Chairman

I HAVE RECEIVED SAD NEWS FROM RUSSIA'S LARISA IVANOVA AND ALEXEI KORIAPIN... YURIY SOLDATOV, A WELL-KNOWN RUSSIAN SPORTSMAN AND SPACE MODELLING OFFICIAL PASSED AWAY IN RECENT TIMES FOLLOWING A SERIOUS ILLNESS.

YURIY WAS A GREAT MAN IN EVERY SENSE AND A VERY AUTHORITATIVE SPACE MODELLING OFFICIAL. WE KNEW HIM AS AN OBJECTIVE AND RESPECTABLE CHARACTER WHO DEMANDED HARD WORK AND DISCIPLINE DURING COMPETITIONS, BUT WHO WAS ALWAYS A VERY PLEASANT FRIEND DURING DURING 'OFF-DUTY' HOURS. YURIY'S WORK HAS CONTRIBUTED VERY MUCH TO THE REPUTATION OF SPACE MODELLING EVENTS IN RUSSIA. HIS PASSING IS A MAJOR LOSS FOR SPACE MODELLING.

I HAVE ASKED LARISA AND ALEXEI TO EXTEND OUR MOST SINCERE CONDOLENCES TO YURIY'S FAMILY.

Design of the Month.. *Alaska*

comes online by Jason Wentworth

ALASKA is where James Jason Wentworth hangs out and it's a great place for original thinking. Once more Jason comes good with an S7-Scale related contribution. Here we go..

"Estes DOM - *Design Of the Month* - model rocket plans on the *JimZ Rocket Plans* website." See: www.spacemodeling.org/JimZ/eirp.htm

"..this is a small, but varied, source of scale plans. The Estes parts that are specified within, are available from *Estes Industries*." See:

www.estesrockets.com

"..and - particularly in the case of discontinued Estes parts - from *Balsa Machining Service*". See:

www.balsamachining.com

"..and *Semroc Astronautics*." See:

www.semroc.com

"..The DOM scale plans include the following:

Aerobee-Hi

www.spacemodeling.org/JimZ/eirp_32.htm

260 Space Booster

www.spacemodeling.org/JimZ/eirp_36.htm

ASP

www.spacemodeling.org/JimZ/eirp_37.htm

Jaguar JGD-2

www.spacemodeling.org/JimZ/dom0184.htm

Kamikaze Baka

www.spacemodeling.org/JimZ/eirp_70.htm

Tartar

www.spacemodeling.org/JimZ/eirp_83.htm

Harpoon

www.spacemodeling.org/JimZ/dom0184.htm

"I hope this information will be helpful."

Not content with this, Jason also includes:

"A new air-launched sounding rocket called *Star Lab* see: <http://starlab-suborbital.com/Suborbital.html>

"..is now undergoing testing in Florida, in preparation for its first flight, which is scheduled for next year.

The vehicle, which is designed to carry payloads of up to 32kg to altitudes between 80km (47 miles) and 120km (70 miles), will be launched from an *F-104 Starfighter* see: www.americaspace.org/?p=10050

"..The flights will originate from the Shuttle Landing Facility runway at Kennedy Space Center."

"In addition, a new company called *Generation Orbit* see: www.generationorbit.com

"..has been formed to launch 1kg - 10kg nanosatellites and 20kg - 30kg microsatellites from retired fighter jets and executive jets, respectively.

The air-launched SLV (Satellite Launch Vehicle) shown in the 'top' illustration here see:

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www.generationorbit.com/index.php/media/image-gallery

"..could be depicted in a Sport Scale model using Estes' plastic version of the BNC-20B nose cone (from their *Customizer Mini Launch Set* and their *Scrappy RTF* rocket), while the air-launched SLV shown in the 'bottom' image here see:

www.generationorbit.com/index.php/media/image-gallery/54-go-launcher-2-go2-image-1

"..and a better rendering here:

www.popsi.com/technology/article/2010-10/nanolauncher-wants-turn-retired-military-jets-next-gen-satellite-launchers

"..could be depicted using the BT-5 size plastic nose cone from the Estes *220 Swift* kit (this nose cone is also included in the *Customizer Mini Launch Set*)."

"..Recently, more has come my way. This is novel information on other air-launched sounding rockets. The **ALSOR** (**A**ir-**L**aunch**S**ounding **R**ocket) was launched from a *JF-104*, a modified

F-104 Starfighter equipped with attitude control thrusters for effective control at altitudes of around 100,000 feet (30,000m). The **ALSOR** vehicle used a Viper-1 rocket motor and five of the rockets were launched in 1959 - 1960. Peter Alway wrote an article on **ALSOR** (complete with color-keyed dimensioned drawings) for the Fall 1993 issue of '*Quest: The History of Spaceflight Magazine*,' and included it in his '*Rockets of the World: 2003 Supplement*' (available from ARA Press see:

http://www.arapress.com/rotw_sup2003.php

"...and NARTS see:

<https://blastzone.org/nar/narts/store.asp?groupid=1080035015601>

"..Below are three links to material on **ALSOR**:

http://space.skyrocket.de/doc_lau/alsor.htm

<http://www.nasa.gov/centers/dryden/multimedia/imagegallery/F-104/E-5071.html>

<http://www.astronautix.com/lvs/alsor.htm>

" ..The *Sparoair* was a two-stage, air-launched sounding rocket, both of whose stages were *Sparrow* missile rocket motors. It was produced in three

versions, which were flown from 1961 to 1965. Keith J. Scala's article '*A History of Air-Launched Space Vehicles*', in the Spring 1994 issue of '*Quest: The History of Spaceflight Magazine*' covers the *Sparoair* series. Also, these web sites contain documentation on the *Sparoair I, II* and *III* vehicles:

<http://en.wikipedia.org/wiki/Sparoair>

"..article contains additional links.

<http://astronautix.com/lvs/sparoair.htm>

<ftp://124.42.15.59/ck/2011-04/165/032/874/240/Design,%20development,%20and%20testing%20of%20a%20series%20of%20air-launched%20sounding%20rockets> ..pdf

http://space.skyrocket.de/doc_lau/sparoair.htm

"..The USAF *Jaguar* sounding rocket was a three-stage vehicle, launched from a *Martin B-57* bomber, which could boost a 35 pound (15kg) payload to an altitude of about 500 miles (300km). It was only flown twice, in 1960 and 1961. Here are links to information on the *Jaguar*:

[http://www.designation-](http://www.designation-systems.net/dusrm/app4/jaguar.html)

[systems.net/dusrm/app4/jaguar.html](http://www.designation-systems.net/dusrm/app4/jaguar.html)

http://www.spacearium.com/filemgmt_data/files/Sounding_Rockets_History.pdf

<http://www.rocketryonline.com/jimball/alway/eighteen/eighteen.htm>

"..The *Rockair* utilized a 2.75" (5cm) diameter *FFAR* (*Folding Fin Aircraft Rocket*). When fired upward from a US Navy *F2H-2 Banshee* fighter jet, it could reach altitudes up to 180,000 feet (50,000m). It was flown several times in 1955. The USAF's competing *Rockaire* used a larger rocket motor. Here are links to *Rockair* and *Rockaire*:

<http://www.astronautix.com/lvs/rockair.htm>

[http://www.designation-](http://www.designation-systems.net/dusrm/app4/rockaire.html)

[systems.net/dusrm/app4/rockaire.html](http://www.alibris.com/search/books/isbn/9786136242514)

<http://www.alibris.com/search/books/isbn/9786136242514>

<http://www.amazon.co.uk/Rockair-Lambert-M-Surhone/dp/6136242516>

"..I hope this information will be helpful."

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**National Association of
Rocketry... Educator's
Newsletter ~ February 2012**

by **Roy Houchin NAR**

THIS IS AMAZING! Roy Houchin sent me this in recent times and tells a story about Space Modelling beyond the realms of FAI. Anyone wanting to contact Roy should go to:

royhouchin@gmail.com or..

Houchin, Roy F Civ USAF AETC AWC/DEW"

roy.houchin@maxwell.af.mil

Over to Roy..."A wonderful movie was on TV recently about a group of kids that went to Space Camp where they trained as junior astronauts and launched model rockets. The drama in the movie was that this was a class of special needs students in 1988 that faced incredible obstacles in trying to make this improbable dream become an inspiring reality".

..More than a heartfelt Hollywood fantasy, this was the true story of a school in Grand Rapids, Michigan, led by teacher Mike Kersjes who wrote the book the movie is based on, A Smile as Big as the Moon. Such stories of inspiration and success reoccur in many forms when classrooms include space and rockets. NAR has been helping educators do this for decades and we can help you, too. Look at the stars on these dark winter nights and then launch rockets toward them on the upcoming bright spring days.

2012 Team America Rocketry Challenge (TARC) is Underway

Team registration is officially completed, the forms and payments are in, the team data is all recorded and there are 678 teams registered for TARC 2012, from 49 states plus DC and the US Virgin Islands. This is 76 more teams and one more state than last year. This year we're missing entries only from

Rhode Island. What matters more than how many teams register is how many fly, as this is where the learning and excitement occurs. Last year 339 teams submitted qualification flight results.

The TARC (<http://www.rocketcontest.org/>) is the world's largest rocket contest, sponsored by the Aerospace Industries Association (AIA) and the National Association of Rocketry in partnership with AAPT, DoD, NASA, and AIA member companies.

The Top 100 teams are invited to compete for a share of the \$60,000 prize package in a national fly-off on May 15, 2010. NASA invites the top 20 teams to participate in their Student Launch Initiative, an advanced rocketry program. AIA member companies, such as Lockheed Martin and Raytheon have sponsored additional prizes such as scholarship money and a trip to an international air show.

Key dates are approaching:

Feb. 1 - Complete first test flight (recommended)

Mar. 1 - First TARC qualification flight recommended (teams this year can have three official qualification flight attempts as long as one of them is on or before this date)

Mar. 15 - Complete first official flight attempt

Apr. 5 - Submit qualification form to AIA

Apr. 9 - Top 100 team selected

May 15 - National Finals at Great Meadow in The Plains, VA

The NAR website provides additional information:

<http://www.nar.org/TAchallenge.html>

There is a superb new teacher resource posted on the TARC website page:

http://rocketcontest.org/resources_educators.cfm

NAR member (and middle school teacher) Tom Sarradet built a whole STEM curriculum for middle school students based on using TARC, and posted it on this page.

NAR Scholarship Program and Robert L.

Cannon Award

Did you know that if you are NAR member between the ages of 17 and 22 attending college or a vocational school that you may be eligible to receive a scholarship?

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Are you a teacher or educator who uses model rocketry in the classroom? You are welcome to apply for a \$500 grant to use in your program.

In 2001, the NAR's scholarship and Robert L. Cannon educational awards were inaugurated at NARAM. Three NAR members received scholarships and two educators received Cannon award grants. For 2002, there were five Cannon awards and five scholarships presented to recipients. In 2003, there were four scholarships awarded to NAR members and three Cannon award winners. Since 2004, we have awarded 5 Cannon winners per year.

Deadlines for Scholarships and the Cannon award applications are May 1st and June 1st, respectively, of each year. Awards are announced at the annual meet (NARAM). You do not have to be present to receive an award.

Both of these programs are ongoing. See <http://www.nar.org/cannon.html> for details on how to apply. If you have questions concerning either program, please contact the Joyce Guzik, via email: jguzik@mindspring.com

Great Explorations in Math and Science (GEMS) Teacher Handbook (available for download)

The GEMS Teacher's Handbook is both an introduction to Great Explorations in Math and Science (GEMS) and a clear explanation of the elements included in all GEMS guides available from the Lawrence Hall of Science, University of California, Berkeley. For the teacher considering integrating GEMS into his or her curriculum for the first time, the handbook describes the philosophy behind the series, its alignment with the National Science Education Standards, its flexibility in diverse settings, and the structure of its teacher's guides. For all teachers, including those already familiar with GEMS, the book provides teaching strategies and tips that apply to all inquiry-based science and math activities.

The handbook includes concise discussions on numerous teaching concerns, including assessing student performance, integrating GEMS activities into

established curricula, and strategies for obtaining materials. It also provides techniques for handling particular challenges, such as what to do when you, the teacher, don't know the answer, or when students arrive at "wrong" conclusions. Full-page charts summarize the major skills, concepts, themes, and mathematics strands addressed in each of the GEMS guides. Recent editions of the handbook feature "blueprints" for building year-long curricula using GEMS and other activity-based programs.

GEMS Teacher's Guides are clearly organized, easy to use, and do not require any special background in math or science. Each classroom session includes an overview, materials list, and preparation steps, followed by clear, step-by-step instructions for effective classroom presentation. Background information is provided for the teacher, along with photographs, illustrations, and, often, examples of student work. Throughout each guide are comments on presentation strategies and practical advice to help the teacher, many suggested by teachers who tested the units.

<http://lawrencehalloffscience.org/gems/GEMSpdf/teacher's%20handbook.pdf>

American Institute of Aeronautics and Astronautics (AIAA) Foundation: Investing in theFuture of Aerospace

The AIAA is the professional society for the field of aerospace engineering. The AIAA Foundation has provided scholarships to over 500 college students at 130 universities. Additional information with deadlines is available at:

<http://www.aiaa.org/pdf/student/09ScholarshipFINAL.pdf>

Civil Air Patrol (CAP) promotes and supports aerospace education. CAP educational programs (for its own members and the general public) help prepare American citizens to meet the challenges of a sophisticated aerospace society and understand its related issues. CAP offers national standards-based educational products, including a secondary textbook, *Aerospace: The Journey of Flight*, and the middle-school-level *Aerospace Dimensions*.

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Aerospace Education Members can get classroom materials and lesson plans from CAP.

http://members.gocivilairpatrol.com/aerospace_education/index.cfm

How to Build a Model Rocket

NAR member Hans "Chris" Michielssen has developed and donated to the NAR some outstanding web pages of tutorial on "How to Build a Rocket" that go step-by-step through all the basic craftsmanship techniques of making a model rocket. This is a great complement to the 6-part NAR video on the AIA website on How to Build and Fly a Model Rocket. Thanks Chris!

Fun iPhone app: 3D Sun

Imagine holding the entire sun in the palm of your hand. Now you can. A new iPhone app developed by NASA-supported programmers delivers a live global view of the sun directly to your cell phone. Users can fly around the star, zoom in on active regions, and monitor solar activity.

The name of the app is "3D Sun" and it may be downloaded free of charge at Apple's app store. Just enter "3D Sun" in the Store's search box or visit:

<http://3dsun.org>

...for a direct link.

Real Time images used to construct the 3-dimensional sphere are beamed to Earth by the Solar-Terrestrial Relations Observatory (STEREO), a pair of spacecraft with a combined view of 87% of the solar surface. STEREO-A is stationed over the western side of the sun, while STEREO-B is stationed over the east...they rarely miss a thing!

Telescopes onboard the two spacecraft monitor the sun in the extreme ultraviolet (EUV) portion of the electromagnetic spectrum. "That's why the 3D sun looks false-color green," explains Lika Guhathakurta, STEREO program scientist at NASA Headquarters. "These are not white-light images."

Many users say their favorite part is the alerts. The app comes alive on its own when the sun grows active or when interesting events are afoot. For example, a recent alert notified users that a comet just discovered by STEREO-A was approaching the

sun. When the comet was destroyed by solar heating, the app played a movie of Comet STEREO's last hours.

<http://www.nasa.gov/topics/solarsystem/features/iphone-sun.html>

Don't have an iPhone? Get your daily Space weather report at www.spaceweather.com. It offers news and information about the Sun-Earth environment such as sunspots, solar conjunctions, aurora alerts and more.

Aviation History in February: 100 Years Ago

February 8, 1908: The U.S. War Department informed the Wright brothers that their proposal to build a heavier-than-air flying machine for \$25,000 had been accepted. The performance of the Wright brothers' Army Flyer exceeded expectations so much that the War Department paid them \$30,000, which included bonus money, for their efforts.

Space History in February: 45 Years Ago

February 14, 1963: NASA launched Syncom 1, the first communication satellite intended for geosynchronous orbit. Sadly, after about five hours of flight, NASA lost contact with the satellite and could not re-establish it. Persistence and determination pay dividends...Within twenty years the United States, Europe, Japan and Russia successfully put a total of 21 satellites into orbit.

Manufacturers

Looking for a special rocket to blend a history and science lesson? Look no further...Dr. Zooch has a *Friendship 7 Mercury Atlas* rocket for you! The Doctor also has a long list of other stand-off scale rockets you might find exciting as well!

Need a custom decal for your special classroom project? Check out Excelsior Rocketry...They have decals sets for older (classic) Estes, Centuri and Cox model rocket kits as well as kits of all types (scale, sport, futuristic, etc.).

Want something truly unique for your classroom rocketry demonstration? Art Applewhite has something for you...Check out his Cinco, Stealth, and Qubits kits! And don't be surprised to find something for free!

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V2 – A4...back with a ‘vengeance’... *All you ever wanted to know about an icon*

by **Geoff Seabrook**

THIS IS AWESOME! Many of us have built V2 rockets in various guises, Estes – and others - have produced excellent kits of it too. Geoff Seabrook goes live once more with a truly magical website. We publish this courtesy of *Southern England Rocket Flyers*. Over to Geoff (briefly..):

“While researching some scale model information I came across this web site:

<http://www.v2rocket.com>

“...It is an amazing resource of information on the V2 terror rocket program.”

Editor’s Note.. SUPER, absolutely super... so much information is available. All relevant to those who want to build V2 – A4 prototypes obviously, but also of use for builders of *WAC Bumpers*. Unique weapon though, it killed ~2,000 people in an array of target areas, but.... >20,000 forced labourers died building the things! It’s ever so slightly ‘kind’ to Werhner von Braun, Konrad Dannenberg and Walter Dornberger, whatever is claimed in the introduction. But well done Geoff. Not content with this, Geoff contributed the piece below on the *Black Knight* vehicle. But there’s much, much, more on this site than a rocket launch...

*“Turns out I’m not the only one who up-scaled one of Niels paper models and flew it. Nice model of a *Black Arrow* flying in the Isle of Wight.”*

*“In 2011 Chris Armstrong launched an upscaled version of my *Black Arrow* model It was launched as*

*the celebrations for the 40th anniversary of the *Black Arrow R3* flight that placed the *Prospero* satellite in orbit. One of the original engineers assisted Chris with the launch.”*

*Chris scaled up my 1:96 model to approximately 1:13 scale and fitted it to an Estes *Executioner* model rocket. Check out the link below..”*

<http://www.youtube.com/watch?v=Zsvobmr6s7w&feature=context&context=C3967752ADOEgsToPDskJp9hrABg0XU8PWOX8Uiqgt>

AWESOME!!

FAI Rools OK?!? ...surely a bit too much all in one go?!?

by **the Editor**

DIFFERENT...this issue is just a bit different. What’s missing?!? ...pages and pages of FAI Sporting Code rule change proposals – these would normally have been included. But trust me, there is no ‘space’ big enough!

www.fai.org/aeromodelling

..Crucially, interested parties should check out the FAI ‘page and plough through the array – it was a little late being published actually. What’s it all about?!? ...just about everything. No class escapes scrutiny, with some looking to get a major re-vamp. Are all the proposals good for Space Modelling? ..only time will tell, but the Big Deal is that we are not scared to make changes to make Space Modelling bigger & better. Whether some of these changes should be shelved to improve discussions on key issues is a moot point.

Editor’s comment.. Space Modelling is a successful activity and has grown significantly since the demolition of the Berlin Wall >20 years ago. More countries have come into the activity; more young people than just about any other FAI-

interspace..

