FEDERATION AERONAUTIQUE INTERNATIONALE
INTERNATIONAL AEROMODELING COMMISSION
SPACE MODELS TECHNICAL MEETING

MINUTES ON THE SPACE MODELS TECHNICAL MEETING

PRESENT:

Srdjan Pelagic (SRB), SM SC Chairman, Delegate,
Jordi Roura (ESP), SM SC member,
Esther Roura (ESP), WSMC2008 Organizer,
Oleg Krasnov (RUS), SM SC member,
Mike Francies (GBR), SM SC member,
Glenn Pearson (USA), SM SC member,
Bedrich Pavka (CZE), observer,
Alexey Koryapin(RUS), delegate
Andrey Ponomarenko(RUS),observer
Neus Missé(ESP), oraganizer
Mehmet Arslan(TUR),delegate
Mihail Zanciu(ROU), delegate
Bill Stine(USA),observer
Stefan Buran(SLO),member
Andrija Ducak (SRB), organizer
Dragana Spasojevic(SRB),organizer
Zeljko Ovuka(SRB),member
Ellis Langford(USA), observer
Janko Pelagic(SRB),observer

AGENDA:
1. Proposals for the SM SC rules changes on the CIAM Plenary Meeting 2008 Agenda
2. Bureau Proposals,
3. Organization of the SM events on the FAI Contest Calendar 2008,
4. Future SM World and Continental Championships.
5. FAI Prizes

Item 1 – The following proposals were discussed, amended and voted on:

1) a)Volume ABR, Section B– B.2.3 CChs and B.2.4 WChs – delete last sentence – ALL AGREED.
2) a)Section C Volume S – 2.1. Weight – Max weight increase to 2 kg (changed to 1,5kg) - ALL AGREED.
3) b)2.2 – Propellant and Total Impulse – Increase to 200 grams (stays 125g) and 160 Ns-ALL AGREED.
4) c) 2.2.4 – Delete: S4 must eject its engines. ALL AGREED.
5) d) New 2.2.8 – Construction requirements – models shall have good appearance and to be in bright color. WITHDRAWEN
6) e) 3.12.1 – Static measuring equipment – introduce an absolute measuring error of 0.05 Ns for motors to 5 Ns. ALL AGREED.
7) f) 4.3.2 - Flight permission and launch – Definition of launch. WITHDRAWN.
8) g) 4.4 – Disqualifications – Group all reasons for DQ at one place. DEFERRED.
9) h) New 4.6.5 – Disqualifications (GBR) – exception for S4 – it must eject its engines. DEFERRED
10) i) New 4.9.2 – Electronic altitude measurement – Definition of the electronic and radar measurement of altitude. Amend with the USA amendment which reads:

i. **4.9.2.1.1 Altitude determination by electronic altimeter is a proven and accurate measurement technique that is very often used in the United States. It should be**

accepted in international competition. However, the rules as written are inadequate and must be changed to be accepted.

There is a very wide diversity of designs available for electronic altimeters today. These have important differences in the measurement technique used (inertial vs barometric), data resolution and accuracy, method of post-flight data display, and data sampling rate. Some designs are unsuitable for use in spacemodels, or inaccurate when used.

Just as it was not possible to establish competition without technical and testing standards for rocket motors, it is not possible to establish electronic altitude measurement as an acceptable means for judging competition on an international basis without uniform technical and testing standards for the altimeter devices.

It is proposed that requirements be established as follows for electronic altimeters used in Spacemodeling competition, as part of approving their use:

- **Must use barometric measurement technique**
- **Records as the flight altitude the difference between peak altitude achieved and the altitude of the pad from which it was launched**
- **Data readout resolution of 1 meter or better**
- **Measurement accuracy 2 percent of recorded altitude or 2 meters, whichever is greater**
- **Data sampling rate of 10 samples per second or greater**
- **Data readout of peak altitude by audio or visual means directly from the altimeter, with no external device needed**
- **Capable of being zeroed of all previous flight data before flight**

4.9.2.1.2 The proposal to accept radar tracking as a basis for competition altitude measurement should be deferred and not included in the rules until this technique is demonstrated at a World Cup. Previous experience in attempting this in the United States with small spacemodels indicates that this is difficult technically and has poor reliability and accuracy due to the small radar cross-section of small spacemodels even with reflective surfaces, and the rapid acceleration and deceleration of these models in flight.

ALL AGREED.

11) j) 8.1 – Definition – Description S4 – Delete the last sentence – S4 must not eject its engines (see c). ALL AGREED.
12) k) 8.1 – Definition – Description S4 (GBR) – S4 must have classic design – not a flying wing shape. WITHDRAWN.
13) l) 11.1 – S8E/P – corrected text – flex-wings are not allowed. ALL AGREED.
14) m) 11.7.1 – S8E/P – Purpose (GBR) – Landing area changed to a circle of r=10 m. ALL AGREED.
15) n) 11.7.3 – S8E/P – Obligation of the organizer to prepare circular landing areas. ALL AGREED.
16) o) 11.7.4.6 – S8E/P (GBR) – additional points for landing – Max=100 and deduct 10 points ffor each meter from the center of the circle. ALL AGREED.
17) p) 11.7.5.4 (GBR) – picture of the organization of the launching area with circles. ALL AGREED.
18) q) S9 Gyrocopter shall rotate around its role axes (shroud line not body axes). ALL AGREED.
19) r) 14.1 – Record attempts shall be allowed AT the events in the FAI Contest Calendar WCh, CCh, WCup and OpInt) in all classes not only in classes for that event if time, weather and technical conditions allow it. ALL AGREED.

20) s) Annex 2 – General Judging Criteria – RSO is in charge for DQ in WChs, CChs and WCups. TK in smaller competitions. In Scale Models judges shall give points regardless if the RSO announce DQ. If a protest is upheld – points stay. ALL AGREED.
21) t) 7.5 – New class S6A/P – New provisional class flown in groups of 5 with a target time of 240 sec. Point allocation like in S8E/P. Best 5 go to the final flight. ALL AGREED.
22) u) 10.5 New class S5F/P – New provisional class of scale altitude models with 80 Ns total impulse, electronic altitude measurements and Min length of 1,5 m with upper stage diameter of Min 30 mm. ALL AGREED.

Item 2 – Bureau Proposals

Section A - A.3.1 – Treasurer – ALL AGREED
A.7.1 - Time table for proposals - ALL AGREED

Section B – B.2.5 - World Cup – ALL AGREED
B.5.4 – Results – ALL AGREED
B.7.4 – Additional fee-ALL AGREED

All other Bureau proposals submitted to the Plenary Meeting just before it on Volume ABR present clarification and improvement of the rules and are acceptable for Space Models TM.

Item 3 – Contest Calendar

Contest Calendar 2008 – Space Models is considered and found fully coordinated. Judges list is OK. World Cups shall be this year administered by Srdjan Pelagic, with assistants who he shall select to obey timing for results list to be distributed on time.

The organizers of the 17th WSMCH (Esther Roura) in Spain informed TM on preparations for this event.

Item 4 – Future Space Models Championships

2009 - 12th EUSMCH – awarded to SERBIA.
2010 – 18th WSMCH - firm bids from POLAND and SERBIA. To be awarded at this Plenary meeting.
2011 – 13th EUSMCH – firm offer from ROMANIA.
2012 - 19th WSMCH – offers invited
2013 - 14th EUSMCH – offers invited

Also are invited offers for Asian and American Continental Championships for 2011 and 2013.

Item 5 – FAI Prizes

Space Models TM fully supports the posthumous nomination of G. HARRY STINE (USA) who invented spacemodelling and made it an air sport and FAI activity for the FAI Gold Aeromodelling Medal. On the occasion of the 50th Anniversary of Spacemodelling in the World and 45th Anniversary of SM as the FAI activity we invite all CIAM delegates to vote for Harry as a sign of acknowledgement for all he has done

Lausanne, 28 March, 2008

Srdjan D. Pelagic, dipl.ing.
CIAM Space Models S/C Chairman