

SPACE MODELS TECHNICAL MEETING - MINUTES

Hotel Mövenpick in Lausanne
27th April, 2018

Present: Joze Cuden (SLO), delegate, SM SC Chairman,
Zoran Pelagic (SVK), alt. delegate, SM SC member,
Stuart Lodge (GBR), SM SC member,
Chris Flanigan (USA), observer,
Narve Jensen (NOR), 2nd CIAM Vice-President.

A G E N D A

1. Space Models rules changes proposals 2018,
2. Change of the SM SC Chairman,
3. Bids for future Category-1 SM events,
4. Any other business.

Item 1

Twenty-four proposals for the rules changes have been carefully discussed and considered. Conclusions and recommendations to the CIAM Plenary meeting are given in Annex.

Item 2

Joze Cuden informed the participants of SM TM that he will not stand for re-election of SM SC chairman. The reason is that the Olympic Committee of Slovenia excluded aeromodelling from the list of sports. This decision has extensive negative consequences, since it eliminates the financing of all aeromodelling activities within the NAC of Slovenia, including the participation of the delegates at the CIAM Meetings.

The new candidate for this post is Zoran Pelagic (SVK).

Item 3

EuSMCh 2019 shall be in Romania and for the next WSMCh 2020 the only bid came from Romania. The bid has been checked and recommended by SM SC Chairman.

Item 4

There were no issues discussed.

Lausanne, 27th April, 2018

Joze Cuden
CIAM Space Models SC Chairman

14.13 Section 4C Volume S – Space Models

Part Two – Space Model Specifications

a) 2.1 Weight

Ukraine

Replace the paragraph as shown below:

~~Gross or maximum weight, including space model engine or engines shall in no event exceed 1500 grams. It will be specified separately for each class in these rules.~~

Gross or maximum weight, including space model engine or engines shall in no event exceed 2500 grams. It will be specified separately for each class in these rules.

Reason: The existing limit of 1500 grams does not allow to build models - copies of much larger sizes and new carrier rockets. A new rule with a limit of 2500 grams will allow for a much larger number of space designers. Space simulation will become more attractive and understandable to viewers and sponsors.

SC votes: 7 / 9 / 1

TM votes: 0 / 5 / 0

Rejected

b) 2.3.1 Stages of Operation

Russia

Replace the final sentence with the new text shown below:

There shall be no more than three (3) operable stages. A stage is defined as a portion of the model airframe containing one or more space model engines that is designed to separate or which actually separates from the model while in flight. An un-powered part of the model is not considered to be a stage. The configuration of a model is considered to be that of the model at the instant of first motion on the launcher. ~~Engines ignited simultaneously are considered one stage regardless of the number of separated parts; for example Soyuz.~~

In the case of clusters/busters of a scale model of a prototype with cluster configuration (such as R7 family (Sputnik, Vostok, Soyuz), Space Shuttle, Delta, Ariane, etc.), the lower stage(s) are considered one (first) stage regardless of the number of separated parts, but only if the separation of those clusters/busters has been in accordance with the flight of the copied prototype and the remaining/continuing flight part is still powered after the busters/clusters separation.

Thus, for example, for a scale model of the Ariane AR 44P rocket: 2 side busters (if powered and separated during the flight) are considered a first stage, the remaining part (if still powered after separation) is considered a second stage (before the further stages separation).

Reason:

- Correction and elaboration of the term "model rocket stage";
- Fair equalization of cluster and tandem configuration and staging;
- Removal of the technically and logically incorrect statement «Engines are considered ... a stage»

SC votes: 6 / 8 / 3

TM votes: 0 / 5 / 0

Rejected

c) 2.4 Construction Requirements

Belarus

In rule 2.4.4, revise the sentence below the table regarding S1 models as follows:

2.4.4 ... In the case of Class S1 models, the smallest body diameter must be not less than ~~18 mm~~ **60% of the minimum diameter for the particular event class** for at least 75% of the overall length of each stage. An S1 sustainer stage may not have a boat tail.

Reason: Since there are different sizes in depending on the event Class, it will be logical to specify the smallest body diameter not in the absolute value, but in percentage. The value of 60% will be most suitable value.

SC votes: 13 / 4 / 0

TM votes: 0 / 0 / 5

Returned to SM SC

d) 2.4 Construction Requirements

Russia & USA

In rule 2.4.4, revise the sentence below the table regarding S1 models as follows:

2.4.4 ... In the case of Class S1 models, the smallest body diameter must be not less than ~~18 mm~~ **25 mm** for at least 75% of the overall length of each stage. An S1 sustainer stage may not have a boat tail.

Reason: Using current model sizes, an 18 mm diameter S1 sustainer stage flies to altitudes where the model is extremely difficult to see. This makes it very challenging for the Range Safety Officer (RSO) to assess if the recovery system of the model has deployed safely. The high altitude also makes it difficult for the competitor to see and successfully recover the model.

Increasing the minimum required diameter of the sustainer stage will reduce the apogee height, thereby improving visibility for the RSO and the competitor.

At the 2017 European Spacemodeling Championships, there were a very high number of flights where the RSO could not see the sustainer flight and recovery device deployment. The RSO had to declare "Model To Control" so that the model, if found, could be inspected after the flight. Many contestants were forced to do extensive ground searches to try to find their models including expensive altimeters. This is not a good way to run an FAI event.

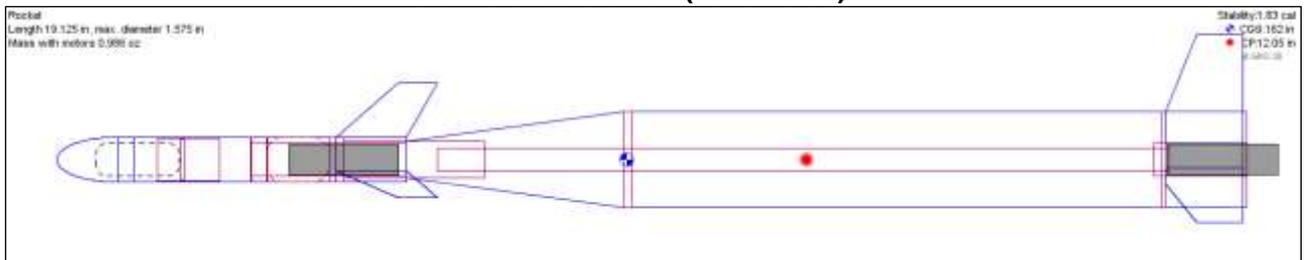
Supporting Data: As noted by Gerhard Wöbbeking¹, "such a pencil disappears in the sky up to total invisibility, even the ejected streamer remains invisible on descend in many cases." "Even worse, the invisibility of the second stage and the difficulty to retrieve the altimeter increasing with the height turns the sport upside down: The better the performance the more likely is no result. May the mediocre win!?"

The first illustration below shows a typical S1B model that conforms to the dimensions specified in the SM Code, 2015 version. The winning flights at the 2012 and 2014 World Spacemodeling Championships were approximately 700 meters altitude or above. At these altitudes, the sustainer cannot be seen.

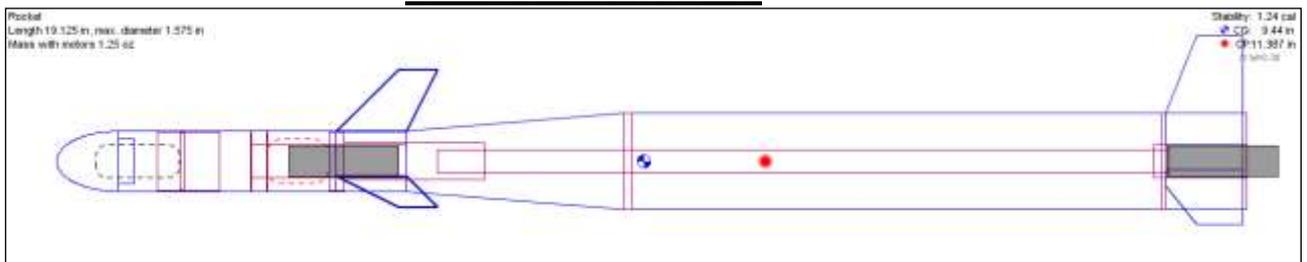
The second illustration shows an S1B model that has a 25 mm diameter sustainer. Altitude calculations predict that using a 25 mm sustainer will reduce the maximum altitude by ~20%. The sustainer is ~33% more visible. This will improve visibility for the contestant and the RSO, and will make it easier and more reliable to recover the model and its altimeter.

cont/...

18mm diameter sustainer (2013 rules)



24mm diameter sustainer



¹ Wöbbeking, Gerhard, "Remarks on the EuCh for Space Models 2015", October, 2015.

SC votes: 10 / 6 / 1	TM votes: 0 / 0 / 5	Returned to SM SC
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Part Four – General Rules for International Contests

e) 4.3.4 Assisted Launch

Ukraine

Replace the heading and paragraph as shown below:

~~4.3.4 Assisted Launch~~

~~A launcher must not impart to the model any velocity or change of momentum except that caused by the space model engine(s) contained in the model. A launch assisted by mechanical devices built into the launcher shall not be allowed.~~

4.3.4 Assisted Launch

4.3.4. Launch the tools

The initial installation should not provide a model with any velocity or pulse change, except that caused by the engine(s) of the space

model contained in the model. It is forbidden to use mechanical, pyrotechnic devices built into the launcher. In the categories of models S1, S2, S5 the start should be with the usual launch device (atmospheric electric ignition of the engine of the first stage). Any launchers for launching models classified as gas-dynamic devices (a pipe moving in relation to a fixed piston) or devices operating in accordance with the principle of a powdered battery are not allowed to participate in the competition. No part of the equipment launch design should lose contact with the ground.

Reason: This proposal is necessary to ensure equal opportunities for all athletes participating in the categories of models to flight altitude. It is sad to admit that not all athletes are guided by the principle of "fair play". In practice, some athletes use different tricks (mostly pyrotechnic) that allow them to take advantage of them. As an example, at one world championship, the S1B model is launched from a device that resembles a powder pressure accumulator (energy storage), the model flies at a height of 25-30 meters, while the engine of the first stage was not inflamed.

Technical Secretary's Note: This note is to request that the above proposal is corrected for English at the Technical Meeting.

SC votes: 13 / 4 / 0	TM votes: 0 / 0 / 5	Returned to SM SC
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f) **4.4.2 Model Marking and Identification** **USA**

Amend the first paragraph as shown below:

Each entry shall carry, prominently displayed upon its body, fins, or other exterior part, the competitor's FAI license number or FAI Unique ID number in letters and numbers approximately one (1) centimetre high except in classes S5 and S7 where it is ~~7 mm for the 1st stage and 4 mm for upper stages~~ **for each stage**. The name, national insignia, or international identification mark (see Section 4b, Annex B.2) of the competitor's nation must be displayed on the exterior of the model.

Reason: Large ID numbers are very unattractive on highly detailed space scale models. Past experience has been shown that 4 mm is satisfactory. This size requirement should be applied to all stages.

SC votes: 14 / 0 / 3	TM votes: 5 / 0 / 0	For approval
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g) **4.6 Disqualification** **Italy**

Add a new paragraph 4.6.5 as shown below:

4.6.5 In the S4 and S10 classes, the model must reach a stable flight within 30 s from the moment of reaching the apogee, otherwise the flight is disqualified.

In S3, S6 and S9 classes, the recovery system must deploy correctly within 30 s from the moment of reaching the apogee, otherwise the flight is disqualified.

Reason: In the duration competitions (S3/S4/S6/S9/S10) it is often seen that the stable flight occurs too late or the recovery system deploys properly too late and the flight is still considered valid. There are many instances where a parachute open or an S9 rotor rotates just a few meters from the ground and, thanks to the minimum weight of the models, the competitor is still credited for a VERY good flight time or maximum. This contradicts the spirit of the competition and above all requires a long stop of the launch sequence, as the RSO is obliged to follow the whole flight. This fact often prevents other competitors from fading moments of favourable thermic. Introducing a limit of 20 or 30 seconds to properly open the streamer, parachute, or acquire a rotation or a steady flight, from the moment of reaching the apogee, is an option to consider. After this time limit the flight would be disqualified.

SC votes: 11 / 5 / 1	TM votes: 0 / 5 / 0	Rejected
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Part Six – Payload Competitions (Classes S2 & S2/P)

h) 6.1 Class S2 (Payload Altitude Competition) Slovenia

Amend paragraphs 6.1.2. and 6.1.3. as shown below:

6.1.2. STANDARD FAI PAYLOAD SPECIFICATION

The Standard FAI space model payload is a ~~cylinder, sphere or ellipsoid~~ **cylindrical container made of any non metallic** modelling ~~or natural~~ materials according to paragraph 2.4.3. **The Standard FAI space model payload for use in the 1st and 2nd category events has the diameter of maximum 40 mm and weighs 28 grams (+/- 0,1 g). The organisers of these events must provide a sufficient amount of equal payloads for all competitors.** The organisers may define, by local rules, the sophistication of the payload (photo, movie camera or electronic equipment) and to add optional tasks.

6.1.3. PAYLOAD CARRYING REQUIREMENTS

The standard FAI space model payload or payloads carried in a model shall be completely enclosed and contained **ed** within the model, shall be removable from the model **for technical control purpose**, and shall not be capable of separating from the model in flight.

Reason: Dimensions and weight of the Standard FAI Payload were in previous editions of Sport Code precisely defined. Because the payloads were made of lead, they were potentially hazardous to persons and inventory. In accordance with the Sporting Code (paragraph 2.4.3) such payloads have become unsuitable for use. By supplementing the rule describing the permissible materials from which they can be manufactured, the essential information is missing. This is the minimum mass of the payload and, depending on the dimensions of the S2 models, also the appropriate diameter, which allows the installation of the payload in the model. Without this information it is not possible to run S2 competitions at the WSMCh and/or other open international events.

SC votes: 12 / 0 / 5	TM votes: 5 / 0 / 0	For approval, amended
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Part Eight – Boost/Glide Duration Competition (Class S4)

i) 8.1 Definition/Description

USA

Amend the second paragraph as shown below:

The model may use one channel of radio control to control a single function for **(rudder or** dethermaliser). ~~All models shall use~~ Spread spectrum 2.4 GHz radio systems **shall be used** to eliminate the need for transmitter impound.

Reason: Allowing one channel of radio control will increase the technical challenge of the event and make it more attractive to new participants. It will also help recover model and minimize the loss of models.

SC votes: 5 / 12 / 0	TM votes: 0 / 0 / 5	Returned to SM SC
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Part Nine – Scale Competition (Class S7)

j) 9.8. Conditions of Model for Judging

Russia

Amend the existing paragraph and add a new paragraph as shown below:

Models will be judged for scale qualities in flight condition minus space model motors. All clear plastic fins, launching lugs, and fittings and other flight items must be attached to the model for scale judging. **No part of the model may change its position on the model and** nothing may be added to or taken off the model between the scale judging and the flight except space model motors and recovery device packing.

Penalty should occur in the case of a model engine's protrusion beyond the model's outer contour. The protrusion of the engine beyond the model's outer contour (or the nozzle) must not exceed the engine's diameter. For exceeding the protrusion of the engine by more than 1 diameter, penalty points are awarded in the amount of 20 points.

This provision pertains only to engines in the launch configuration (of lower stage) of the model.

Reason: To reward the efforts of the modeller, aimed at closer correspondence of the model to the copied prototype.

SC votes: 5 / 8 / 4	TM votes: 0 / 5 / 0	Rejected
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k) 9.9 Maximum weight and impulse

Ukraine

Amend the first sentence in the paragraph as shown below:

9.9. MAXIMUM WEIGHT AND IMPULSE

Maximum allowable gross launching weight is limited to ~~4500 grams~~ **2500 grams.**

Maximum allowable total impulse is 160,00 Newton-seconds. Maximum engine size allowed is 80 Newton-seconds.

Reason: The existing limit of 1500 grams does not allow to build models - copies of much larger sizes and new carrier rockets. A new rule with a limit of 2500 grams will allow for a much larger number of space designers. Space simulation will become more attractive and understandable to viewers and sponsors.

SC votes: 7 / 8 / 2

TM votes: 0 / 5 / 0

Rejected

I) **9.11 Scale Judging**

Russia

Amend paragraph 9.11.4 'Degree of difficulty' as shown below. Note the consequential amendment to the table in Annex 1 'Scale Space Judge's Guide' which follows:

9.11.4. Degree of difficulty

150 points maximum. To be judged on the degree of difficulty involved in constructing the model up to 110 points. Factors to be considered include symmetry of model; number of external components; intricacy of paint pattern; degree of detailing; and degree of difficulty in adapting the model for flight conditions. A bonus of up to 40 points **maximum** for "originality **and novelty**" shall be awarded to a prototype that is the only one in the competition and a bonus of up to 20 points **maximum** shall be awarded if two prototypes of the same kind enter the competition. No bonus points shall be awarded if there are three or more models of the same kind. For "originality **and novelty**" points, prototypes with the same external appearance except for flight serial number/markings and colours/paint pattern shall not be considered unique vehicles (e.g., Saturn IB/Skylab flights, Soyuz-FG/TMA flights, etc.).

Maximum bonus points shall be halved if the same prototype has been entered the same competition type/level at least once during the last 15 years. Bonus points shall also be reduced if a similar prototype enters the competition. The value of the reduction depends on the prototype's degree of similarity - the higher the degree of similarity, the greater the reduction.

Example a): 2 "Saturn 1B", and 2 "Soyuz-FG" enter a European championship. Thus, the maximum bonus points for each model is 20. However, during the last 15 years both prototypes were presented at a European championship. Then the maximum bonus points are cut in half for each mentioned model, i.e. - 10 points.

Example b): Models "Saturn V" and "Soyuz-U2" enter the same ECh. Although the pairs "Saturn 1B" - "Saturn V"; and "Soyuz-FG" - "Soyuz-U2" are different prototypes, there is some similarity of the prototypes within both pairs:

- both Saturns have the same upper stages S-IVB;**
- both Soyuzes have a very similar external appearance.**

So bonus points for "Saturn 1B", and "Soyuz-FG" shall be reduced from value of 10 points. Yet there are different degrees of similarity, which shall be rated differently, so that the final bonus points for "Saturn 1B" shall be greater than for "Soyuz-FG".

ANNEX 1 SCALE SPACE MODELS JUDGE'S GUIDE

Table “FAI CATEGORY / SUB- CATEGORY / JUDGING CONSIDERATIONS / POINTS”

FAI CATEGORY	SUB- CATEGORY	JUDGING CONSIDERATIONS	POINTS
Degree of Difficulty	“Originality <u>and novelty</u> ”	Bonus points: <u>up to</u> 40 points <u>maximum</u> for a prototype of one kind in the competition; <u>up to</u> 20 points <u>maximum</u> if there are two of the same prototype; zero points if there are three models of the same prototype. <u>Maximum bonus points shall be halved if the same prototype has been entered the same competition type/level at least once during the last 15 years. Bonus points shall also be reduced if a similar prototype enters the competition. The value of the reduction depends on the prototype’s degree of similarity.</u>	(0-40)

Reason:

- To encourage modellers efforts to develop and build scale models of new prototypes;
- To award the real novelty of the model;
- Removing of the probability of unfair high level of bonus points that simply granted for the accidental concurrence of circumstances similar to "toss a coin", which doesn't reflect any actual novelty, craftsmanship and complexity of the model and its flight. Compare the currently existing FIXED value of 40 (!) bonus points to the MAXIMUM 50 points for such a technically complex flight SUB-CATEGORY as «RC Gliding Descent»;
- Consideration of the degree of similarity of the prototypes for bonus points.

SC votes: 4 / 5 / 8	TM votes: 0 / 5 / 0	Rejected
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m) 9.11 Scale Judging

Russia

Amend the last sentence in paragraph 9.11.7 as follows:

For World and Continental Space Modelling Championships, the judging scores results for static points and flight characteristics from each judge shall be anonymously published **after the competition**.

Reason: Amendment for unambiguous reading and interpretation.

SC votes: 11 / 2 / 4	TM votes: 5 / 0 / 0	For approval, amended
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Part Ten – Scale Altitude Competition (Class S5)

n) 10.1 Definition

Russia

Add a new paragraph as shown below:

This series of events involves altitude competition with scale space models and is a combination of the altitude competition (Part 5) and the scale competition (Part 9). The objective of the competition is to achieve the highest altitude with a scale space model.

For the scale judging of the models, consider that nothing may be added to or taken off the model between the scale judging and the flight except space model motors, recovery device packing and on-board devices for flight altitude measurement.

Reason: Clarification

Technical Secretary's Note: The word 'consider' could imply some choice. 'Consider that' may be left out of the sentence.

SC votes: 10 / 3 / 4	TM votes: 0 / 5 / 0	Rejected
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Part Eleven – Rocket Glider Duration Competition (Class S8)

o) 11.6 Sub-Classes

Ukraine

Delete the table and insert a new table as shown below:

Note: the change is a new line 5: 8D/P ... See also Item p) below.

11.6. SUB-CLASSES

CLASS	TOTAL IMPULSE	MAXIMUM	MINIMUM
MAXIMUM	(Newton-seconds)	WEIGHT	WING SPAN
FLIGHT TIME		(g)	(mm)
(sec)			
S8A	0,00 -2,50	60	500
180			
S8B	2,51- 5,00	90	650
240			
S8C	5,01- 10,00	120	800
300			
S8D	10,01- 20,00	300	950
360			
S8E & S8E/P	20,01 -40,00	300	1100
360			
S8F	40,01 80,00	500	1250
360			

11.6. SUB-CLASSES

CLASS	TOTAL IMPULSE	MAXIMUM	MINIMUM
MAXIMUM	(Newton-seconds)	WEIGHT	WING SPAN
FLIGHT TIME		(g)	(mm)
(sec)			
S8A	0,00 -2,50	60	500
180			
S8B	2,51- 5,00	90	650
240			
S8C	5,01- 10,00	120	800
300			
S8D	10,01- 20,00	300	950
360			

S8D/P	10,01- 20,00	300	4100 950
360			
S8E & S8E/P	20,01 -40,00	300	1100
360			
S8F	40,01 80,00	500	1250
360			

Reason: The introduction of a new subclass will allow organizers of the European and World Championships to be more flexible in selecting classes for competitions in radio-controlled models. This supplement does not contradict Section 4, paragraph 4.1. Competitions in this class will be interesting, because there will be more sportiness and mastery of piloting.

SC votes: 5 / 8 / 4	TM votes: 5 / 0 / 0	For approval, amended
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p) **11.7 Class S8E/P (S8D/P) Radio Controlled Rocket Glider Time** **Ukraine**
Duration and Precise Landing Competition

Amend the heading with the addition of (S8D/P) as shown above and add a new paragraph 11.7.6 at the end as shown below:

11.7.6 Class S8D/P

When conducting competitions in subclass S8D/P all requirements, with the exception of the minimum wingspan and total impulse (par,11.6), meet the requirements of class S8E/P.

Reason: The introduction of a new subclass will allow organizers of the European and World Championships to be more flexible in selecting classes for competitions in radio-controlled models. Competitions in this class will be interesting because there will be more sportiness and skill.

SC votes: 4 / 7 / 6	TM votes: 5 / 0 / 0	For approval
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q) **11.7 Class S8E/P Radio Controlled Rocket Glider Time** **Belarus**
Duration and Precise Landing Competition

In 11.7.4. 'Timing and Classification', delete 11.7.4.9, renumber and amend 11.7.4.10 and delete 11.7.4.11 as shown below:

11.7.4 Timing and Classification

~~11.7.4.9. The five competitors with the highest scores after four starts qualify for the final round.~~

~~There will be one final flight for a group consisting of all participants of the final round. If there is a frequency conflict, the competitor with the worst score in three qualifying flights must change the frequency of his radio.~~

11.7.4.9. The final classification will be determined by the sum of all flight scores of each competitor **in five rounds.**

When there is a tie, the best score of one round shall be used to determine the individual winner. If a further tie occurs, the second best score of one round shall decide the winner.

~~11.7.4.11. For Continental and World Championships, the number of initial rounds may be increased from three to five. The number of final rounds may be increased from one to two. The number of rounds shall be declared in the pre-contest bulletins.~~

Reason: This determination will solve many problems in organizing competitions and counting results. It will also simplify the organization of the starts.

SC votes: 8 / 5 / 4

TM votes: 0 / 5 / 0

Rejected

r) **11.7 Class S8E/P Radio Controlled Rocket Glider Time USA, Russia Duration and Precise Landing Competition**

In 11.7.4. 'Timing and Classification', insert a new 11.7.4.9, renumber and amend 11.7.4.9 as 11.7.4.10, renumber 11.7.4.10 and delete the existing 11.7.4.11 as shown below:

11.7.4.9. There shall be three initial rounds and one final round, except for Continental and World Championships which shall have four initial rounds and two final rounds.

~~11.7.4.9~~**11.7.4.10.** The five competitors with the highest scores after ~~four starts~~ **the initial rounds** qualify for the final round**(s)**.

~~There will be one final flight for a group consisting of all participants of the final round.~~ **All competitors in the final round(s) shall fly as a group.** If there is a frequency conflict, the competitor with the worst score in ~~three qualifying flights~~ **the initial rounds** must change the frequency of his/**her** radio.

~~11.7.4.10~~**11.7.4.11.** The final classification will be determined by the sum of all flight scores of each competitor.

When there is a tie, the best score of one round shall be used to determine the individual winner. If a further tie occurs, the second best score of one round shall decide the winner.

~~11.7.4.11. For Continental and World Championships, the number of initial rounds may be increased from three to five. The number of final rounds may be increased from one to two. The number of rounds shall be declared in the pre-contest bulletins.~~

Reason: Rule changes were introduced in the 2016/2017 cycle to attempt to provide flexibility to increase the number of initial and final rounds for World and Continental championships. However, the final wording was confusing, with some rules mentioning three rounds, four rounds, or five rounds.

The proposed changes clearly define the number of initial and final rounds for World Cup events and for Continental/World championships. This will allow better planning of events by contestants and contest directors.

SC votes: 8 / 5 / 4

TM votes: 5 / 0 / 0

For approval

Part Twelve – Gyrocopter Duration Competition (Class S9)

s) 12.1 General (consequential changes to 12.3.3 & 12.3.4) Russia, USA

Add a new sentence in 12.1 as shown below. Delete 12.3.3 & 12.3.4:

Gyrocopter Duration Competition presents an event where models use the principle of auto-rotation as the only mean of recovery. **During the flight, no part of the model other than ejection protectors or wadding may be detached or jettisoned.**

~~12.3.3. The entry may not separate into two or more unattached parts, and shall be disqualified if it does so.~~

~~12.3.4. The 50% requirement of Rule 2.4.3 applies.~~

Reason: Recovery wadding and ejection plugs are commonly used in S3 and S6 models. The proposed change will allow similar recovery protection to be used in S9 models. The sentence added to 12.1 is similar to the wording in Rule 7.1 for S3 and S6 models. With this sentence, Rule 12.3.3 is no longer needed and can be deleted. Dimension requirements for S9 models are defined in Rule 2.3.4. Rule 12.3.4 is not needed and can be deleted.

SC votes: 10 / 5 / 2	TM votes: 5 / 0 / 0	For approval
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Annex 1 – Space Models Judges’ Guide

t) Workmanship Judging

Russia, USA

Include instructions for judging a finless prototype:

Consider that surface textures should duplicate base material of prototype; that paint and other surface coatings should be uniform (unless this would deviate from prototype’s finish), thin, dust-free and of the proper texture; that colour demarcations and markings should be crisp ^{*} and precise.

Nose cone & transitions (0-40) _____

Body (0-40) _____

Fins * (0-20) _____

*** If prototype is finless, then 0-50 points each for “Nose cone & transitions” and “Body”, and check here ()**

Reason: Instructions for judging Workmanship for finless prototypes were included in older versions of the FAI Spacemodeling code.

These instructions may have been accidentally deleted from more recent versions due to a typographical error.

SC votes: 13 / 0 / 4	TM votes: 5 / 0 / 0	For approval
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Annex 2 – Space Modelling Judges and Organisers’ Guide

u) 4. Specific Events – d. Scale Events.

Russia

Insert references and examples:

d.5. Definition of a scale model prototype: A scale model prototype is defined as the first sub-class of a rocket family (according to NASA and Wikipedia this is defined as version). For example: Ariane is the name of a rocket family, which has flown five variants up to date, thus: Ariane 1, 2, 3, 4 and 5. These five variants are defined as scale model rocket prototypes.
[https://en.wikipedia.org/wiki/Ariane_\(rocket_family\)](https://en.wikipedia.org/wiki/Ariane_(rocket_family)):

(according to Wikipedia this is defined as a version). For example: The Union is the name of a family of rockets that has updated the options, thus: Soyuz 11A511 (1966-1975), Soyuz-L 11A511L (1970-1971), Soyuz-M 11A511M (1971-1976), Soyuz-U 11A511U (1973-2017), Soyuz-U2 11A511U2 or 11A511K (1982-1995), Soyuz-FG 11A511U-FG (2001-today), Soyuz-2.1a 14A14-1A, Soyuz-2.1b 14A14-1B, Soyuz-2-1v 14A15, Soyuz-2-ST 372-01B (2006-today). These variants are defined as prototypes of the scale model rocket.

([https://en.wikipedia.org/wiki/Soyuz_\(rocket_family\)](https://en.wikipedia.org/wiki/Soyuz_(rocket_family))):

Reason: Clarification.

Technical Secretary's Note: Advise that references are not included. What does the first sentence: 'according to Wikipedia this is defined as a version', refer to?

SC votes: 2 / 7 / 8

TM votes: 0 / 5 / 0

Rejected

Annex 3 – Space Models World Cup

v) 3. Contests.

Slovenia

Add a paragraph as follows:

Contests included in the World Cup must appear on the FAI Sporting Calendar and be run according to the FAI Sporting Code. The contests to be counted for a World Cup in one year are to be nominated at the CIAM Bureau Meeting at the end of the preceding year and are to be indicated on the FAI Contest Calendar.

The Bulletin No1 of each World Cup contest must be published not later than 30 days before the start of the competition by sending it to the Chairman of the Space Models Subcommittee and the World Cup Coordinator. In this bulletin all necessary data must be published: date and venue of the event, time schedule, names of the FAI jury, Scale Judges and Range Safety officer, offers for board and lodging. President of the FAI jury must be from another country. All officials (FAI jury, scale judges and RSO) can be selected only from the current list of FAI judges and experts.

Reason: Some organizers of the World Cup events often delay the publication of the newsletters of their competitions, causing problems to the potential participants of these competitions. The information in the

bulletin is incomplete and the selection of officials is not always in line with the sports regulations.

SC votes: 17 / 0 / 0	TM votes: 5 / 0 / 0	For approval, amended
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w) **4. Points Allocation.** **Belarus**

Add an exception to the scoring for final rounds in class S8E/P as follows:

4. Points Allocation

Points are to be allocated to competitors at each contest according to their placing and results as given in the following formula below:

...

Points are awarded only to competitors completing at least one flight in the contest.

Are not considered scores received by competitors in the final rounds in class S8E/P.

cont/...

Reason: Competitors, qualify for final round, have one official flight of more than other competitors and receive significantly more World Cup points, it's unequal conditions for competitors. In other classes scores received in additional rounds are not considered. Supporting Data: See results of any competitions in class S8E/P.

SC votes: 16 / 0 / 1	TM votes: 5 / 0 / 0	For approval
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Annex 4 – Space Models International Ranking

x) **7. Awards.** **Slovenia**

Amend the paragraph as follows:

The winner earns the title World Space Modeller of the Year. **The list of the best junior competitors will be announced separately.**

Certificates, medals or trophies may be awarded by the Subcommittee if available.

Reason: The additional rewarding of junior competitors contributes to the inclusion of young people in space modelling activities.

SC votes: 16 / 0 / 1	TM votes: 5 / 0 / 0	For approval
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