14.12 Section 4C Volume S – Space

a) Part Thirteen: Class S10 Flex Wing Duration Competition **Switzerland & Ukraine**

Delete Class S10: Flex-Wing Duration Competition – and all references throughout the Space Volume and also in Volume CIAM General Rules:

~~Part Thirteen – Class S10 Flex-Wing Duration Competition~~

2.4.7 Models in Classes S4 **and** S8 ~~and S10~~ must fly and land without separation of any part in flight.

11.1.2 ~~Any model that qualifies for flex-wing rules 13.1.1 or 13.2 is not eligible for this event.~~

Reason: This class is no longer performed and will be deleted.

Subcommittee votes: 17	YES: 9	NO: 6	ABS.: 2

b) S11/P Rocket Powered Aircraft and Spaceships Competition (Provisional) **Switzerland**

Delete Class S11/P: Rocket Powered Aircraft and Spaceships Competition (Provisional) – and all references throughout the Space Volume and also in Volume CIAM General Rules:

~~11.8 CLASS S11/P~~: The whole of the section 11.8.1 – 11.8.8.4 will be deleted. No renumbering as a consequence.

Reason: This class was never performed.

Subcommittee votes: 17	YES: 11	NO: 4	ABS.: 2

c) 1.3 Classification of Space Models **Switzerland**

Delete this section and replace with the reference as shown below:

~~S1 Altitude Models~~
~~S2 Payload Models~~
~~S3 Parachute duration models~~
~~S4 Boost-glider duration models~~
~~S5 Scale-altitude models~~
~~S6 Streamer duration models~~
~~S7 Scale models~~
~~S8 Rocket glider duration models~~
~~S9 Gyrocopter duration models~~

~~S10 Flex-wing duration models~~

~~Each class, except class S7 has been subdivided related to engine size. Refer to the rules applicable to each particular class.~~

See CIAM General Rules: B.2.2 Classification of space models

Reason: Simplification. The definition exists twice and must be changed twice. The CIAM General Rules are valid.

Subcommittee votes: 17	YES: 9	NO: 6	ABS.: 2

Part Two – Space Model Specifications

d) 2.2 Propellant **Croatia**

Modify the paragraph by deleting the existing text and replacing it as shown below:

2.2 Propellant

~~No more than 200 g of propellant materials shall be contained in its space model engines nor shall their total impulse exceed 160 Newton-seconds (Ns).~~

No more than 125 g of propellant material shall be contained in its space model engines nor shall their total impulse exceed 80 Newton-seconds (Ns).

Reason: From a safety point, **125** g of propellant is enough for 80 Ns engines.

Subcommittee votes: 17	YES: 5	NO: 8	ABS.: 4

e) 2.4 Construction Requirements **Croatia**

Modify sub-paragraph 2.4.3 with the addition of a sentence as follows:

2.4.3 Construction shall be of any modelling material without substantial metal parts. A substantial metal part is a nose cone, body tube, fins, any hard, sharp and external pointed part or any internal heavy metal part that can cause injuries to persons or damages to property. **Nose cones must be made from soft or deformable material, which in the event of impact will mitigate this impact.**

Reason: In the event of a model fall without a parachute or streamer, the soft head (nosecone) of the model mitigates the impact.

Subcommittee votes: 17	YES: 6	NO: 10	ABS.: 1

n/a) 2.4 Construction Requirements **Space Subcommittee**

This 2021 proposal is a compilation of similar proposed rule changes related to changing dimensions of S1 and S5 (S1 is to be changed and S5 is to remain as such). This proposal takes into account the following 2020 Agenda proposals from ***f)*** *to* ***n)****. This proposal is submitted by Joze Cuden – Coordinator of the Altitude Classes Working Group for the Space Subcommittee.*

Technical Secretary Note: This proposal has been delineated n/a to avoid changing the item numbers of the many proposals which follow.

2.4.4 Minimum dimensions of subclasses of classes ~~S1,~~ S2, S3, S6, S9 and S10 must not be less than:

Event Class	Minimum diameter (mm) (for at least 50% of the overall length)	Minimum Overall Length (mm)
A/2	30	350
A	40	500
B	40	500
C	50	650
D	60	800
E	70	950
F	80	1100

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

The minimum dimensions of Class S1 must not be less than:

Event Class	**Minimum diameter (mm) (for at least 50% of the overall length)**	**Smallest body diameter of each stage (mm) must be not less than: (for at least 20% of the minimum overall length)**	**Minimum overall length (mm)**
A	**40**	**24**	**500**
B	**50**	**30**	**650**

The minimum dimensions of Class S5 must not be less than:

Event Class	Minimum diameter (mm) of each stage	Minimum overall length (mm)
A	20	400
B	25	500
C	30	600
D	40	800
E	50	1000
F	60	1500

Class S5 models shall have a minimum diameter of an enclosed airframe equal or larger than that in the table above for at least 50% of the overall length of each stage.

Reason: Models fly too high and judges have problems with model visibility.

Enlarging models should cause models to fly lower.

In larger models, there should be no problem placing GPS or other location system in the future.

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

f) 2.4.4 Minimum dimensions of Class S5 **Slovak Republic**

Modify the table with the minimum dimensions as shown below, deleting sub-classes S5D, S5E and S5F, with a consequential change to 10.5:

The minimum dimensions of Class S5 must not be less than:

Event Class	Minimum **external** diameter (mm) of each stage	Minimum overall length (mm)
~~A~~	~~20~~	~~400~~
~~B~~ **A**	25	500
~~C~~ **B**	30	600
~~D~~ **C**	~~40~~ **50**	~~800~~ **1000**
~~E~~	~~50~~	~~1000~~
~~F~~	~~60~~	~~1500~~

Reason: The current S5 models are reaching high altitudes of 600+metres. The proposal will lower to altitudes to a half. Also with this it is reduced to only the classes which are flown in competition.

Technical Secretary Note: Items 'g' and 'h' which follow also propose changes to this table.

Subcommittee votes: 17	YES: 5	NO: 9	ABS.: 3

g) 2.4.4 Minimum dimensions of Class S5 **Poland**

Modify the table with the minimum dimensions as shown below:

The minimum dimensions of Class S5 must not be less than:

Event Class	Minimum diameter (mm) of each stage	Minimum overall length (mm)
A	~~20~~ **30**	~~400~~ **450**
B	~~25~~ **40**	~~500~~ **600**
C	~~30~~ **50**	~~600~~ **750**
D	~~40~~ **60**	~~800~~ **900**
E	~~50~~ **70**	~~1000~~ **1050**
F	~~60~~ **80**	~~1500~~ **1200**

Reason: Models fly too high and judges have problems with model visibility. Enlarging models should cause models to fly lower. In addition, the models will become more spectacular. In larger models, there should be no problem placing

GPS or other location system in the future.

Subcommittee votes: 17	YES: 3	NO: 11	ABS.: 3

h) 2.4.4 Minimum dimensions of Class S5 **Bulgaria**

Modify the table with the minimum dimensions as shown below:

The minimum dimensions of Class S5 must not be less than:

Event Class	Minimum diameter (mm) of each stage	Minimum overall length (mm)
A	~~20~~ **30**	~~400~~ **1000**
B	~~25~~ **40**	~~500~~ **1000**
C	~~30~~ **45**	~~600~~ **1000**
D	~~40~~ **50**	~~800~~ **1000**
E	~~50~~ **60**	~~1000~~ **1000**
F	~~60~~ **60**	~~1500~~ **1500**

Reason: The models will become more attractive and visible to the viewers. The safety of the competitors will be improved.
The timekeeper factor - "I see / I don't see" will decrease and disappear.
The models will not be much larger in length and this will facilitate their transportation and hence the additional cost.
In the height classes, the models will be visible due to the smaller height and will not lose altimeters which also reduces the cost to the competitor.

Technical Secretary Note: This is the first of a number of related changes proposed by Bulgaria, which will follow in the appropriate section.

Subcommittee votes: 17	YES: 1	NO: 13	ABS.: 3

i) 2.4.4 Minimum dimensions of subclasses S1, S2, S3, S6, and S9 ~~and S10~~ **Switzerland**

Technical Secretary Note: The items i), j), k), l), m) and n) also propose changes to this section of the Volume. They will be dealt with together.

Change the heading. Delete the table and replace it as shown below. Additionally delete the sentence below the table and replace it as shown below:

Event Class	Minimum diameter (mm) (for at least 50% of the overall length)	Minimum Overall Length (mm)
~~A~~	~~40~~	~~500~~
~~B~~	~~40~~	~~500~~
~~C~~	~~50~~	~~650~~
~~D~~	~~60~~	~~800~~
~~E~~	~~70~~	~~950~~
~~F~~	~~80~~	~~1100~~

Event Class	Minimum diameter (mm) (for at least 50% of the overall length)	Minimum Overall Length (mm)
A/2	**40**	**500**
A	**60**	**500**
B	**80**	**650**

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

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

Reasons: New Engine Class A/2
In order to reduce the too high starting heights there are two solutions:
With the current models a reduction of the engine power to A/2.
With the current motors an increase in diameter, a longer length results in transport problems. A short thick rocket is more unstable and has to be stabilized with bigger fins or more weight in the nose cone. This should produce more weight and with the greater drag, this will result in less launch height.
A diameter of 50mm reduces the starting height too less.

*Note: Switzerland previously proposed to delete Model Class S10. Supporting data to this proposal is contained in **Annex 7i**. See also Item ao (7.44), av (8.4), bt (12.5)*

Subcommittee votes: 17	YES: 1	NO: 15	ABS.: 1

j) 2.4.4 Minimum dimensions of subclasses S1, S2, S3, S6, S9 and S10 Croatia

Delete the table (shown in Item 'h') and replace it as shown below. Additionally add an explanatory sentence to the one below the table as shown below:

Event Class	**Minimum diameter (mm) in the minimum length (mm)**	**Minimum Overall Length (mm)**
½-A, A, B	**40 250**	**500**
C	**50 325**	**650**
D	**60 400**	**800**
E	**70 475**	**950**
F	**80 550**	**1100**

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

The length of model is the distance between the top of the model and the bottom – the nozzle of the mounted engine.

Reason: Dimension of the model may remain and the minimum diameter should be constant – one value and not a percentage of (variable) length of model.

Technical Secretary Note: It is not clear from the submitted proposal, whether the sentence above is a reason or was intended to follow the added sentence in the proposal.

See Croatia's related proposals: Items t (4.2), an (7.4), az (8.4)

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

k) 2.4.4 Minimum dimensions of subclasses S1, S2, S3, S6, S9 and S10 Ukraine

Delete the table (shown in Item 'h') and replace it as shown below. Additionally delete the sentence below the table and replace it as shown below:

Event Class	Minimum diameter (mm) (for at least 50% of the overall length)	Minimum Overall Length (mm)
A/2	**40**	**500**
A	**50**	**650**
B	**60**	**850**

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

In the case of Class S1 models, the smallest diameter of the body shall be at least 60% of the diameter of the first stage and shall be at least 75% of the total length of each stage. At the reference stage S1 there can be no boat tail.

3.1.2 All space modelling events shall be divided into sub-classes according to total impulse as follows:

Event Class	Total Impulse
A/2	0**.**00 to 1.25 Newton-seconds (N~~S~~**s**)
A	**1.26** to 2.50 N~~S~~**s**
B	2.51 to 5.00 N~~S~~**s**

… (no further changes)

Reason: The introduction of new classes of models of rockets in adults and juniors will give a powerful impetus to the development of new technologies, will make rocket sports for the spectators and sponsors more attractive. It will allow the organizers of European and World Championships to be more flexible in the choice of rocket model classes, depending on the size of the flying field. Reducing the overall momentum for racing in radio-controlled models will be interesting because more athleticism and skill.

Technical Secretary Note: This is the first of a number of related changes proposed by Ukraine for the above reason, which will follow in the appropriate section. See Items s (4.1), ap (7.4), aw (8.4), bv (12.5)

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

l) 2.4.4 Minimum dimensions of subclasses S1, S2, S3, S6, S9 and S10 Russia

Modify the section. Retain the existing table (shown above in Item 'h'), but delete the sentence below the table and replace it as shown below:

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

S1 models shall have:

- two stages;

- minimum diameter of an enclosed airframe equal or larger than that in the table above for at least 50% of the overall length of each stage;

- the smallest body diameter must be not less than 18 mm for at least 75% of the overall length of each stage;

- S1 second stage may not have a boat tail.

Reason: Using the same diameter of the first and second stages of the S1 model will significantly reduce the flight altitude of the model. The larger size of the second stage facilitates visibility for the RSO. Also, the diameter of the second step of 40 mm facilitates the search for a model.

Subcommittee votes: 17	YES: 1	NO: 15	ABS.: 1

m) 2.4.4 Minimum dimensions of subclasses S1, S2, S3, S6, S9 and S10 Bulgaria

Delete the table (shown in Item 'h') and replace it as shown below. Additionally delete the sentence below the table and replace it as shown below:

Event Class	Minimum diameter (mm) of each stage	Minimum overall length (mm)
A	**50**	**500**
B	**50**	**500**
C	**60**	**650**
D	**70**	**800**
E	**70**	**950**
F	**80**	**1100**

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

For Class S1 models, the diameter of the first stage is 50 mm with a length of 200 mm. Second stage with diameter 20mm and length 300mm. Stage S1 may have no boat tail.

Reason: The models will become more attractive and visible to the viewers. The safety of the competitors will be improved.
The timekeeper factor - "I see / I don't see" will decrease and disappear.
The models will not be much larger in length and this will facilitate their transportation and hence the additional cost.

In the height classes, the models will be visible due to the smaller height and will not lose altimeters which also reduces the cost to the competitor.

Subcommittee votes: 17	YES: 1	NO: 15	ABS.: 1

n) 2.4.4 Minimum dimensions of subclasses S1, S2, S3, S6, S9 and S10 Italy

Modify the table with the two additional rows as shown below:

Event Class	Minimum diameter (mm) of each stage	Minimum overall length (mm)
A/2	**40**	**500**
A3/4	**40**	**500**
A	40	500
B	40	500
C	50	650
D	60	800
E	70	950
F	80	1100

Reason: The present proposal intends to meet the need to facilitate the recovery of the S1, S3, S4, S6 and S9 models normally used in competition by reducing the available total impulse of the engine.
This allows for a more rational, efficient and cheaper approach instead of increasing the size of the models.
Two new classes of engines that can be used in competition are introduced: A/2 and A3/4, endowed respectively with 50% and 75% of the total impulse of the class A, the least powerful to date.

Consequential Amendments:

3.1.2 All space modelling events shall be divided into sub-classes according to total impulse as follows:

Event Class	Total Impulse
A/2	0.00 to 1.25 Newton-seconds (N~~S~~**s**)
A3/4	**1.26 to 1.88 Ns**
A	~~0,00~~**1.89** to 2.50 N~~S~~**s**
B	2.51 to 5.00 N~~S~~**s**
C	5.01 to 10.00 N~~S~~**s**
D	10.01 to 20.00 N~~S~~**s**
E	20.01 to 40.00 N~~S~~**s**
F	40.01 to 80.00 N~~S~~**s**

3.1.4 In space modelling competitions usage of engines of the following total impulse is allowed:

Engine Class	Total Impulse
A/2	1.25 Ns

A3/4	**1.88 Ns**
A	2.50 Ns

4.2 NUMBER OF MODELS

The number of models eligible for entry is as follows:
Class S1A, B, C, D, E, F ..... Two (2) only
Class S2C, E, F ..... Two (2) only
Class S3**A/2, A3/4,** A, B, C, D ..... Two (2) only
Class S4**A/2, A3/4,** A, B, C, D, E, F ..... Two (2) only
Class S5A, B, C, D, E, F ..... One (1) only
Class S6**A/2, A3/4,** A, B, C, D ..... Two (2) only
Class S7 ..... One (1) only
Class S8A, B, C, D, E (E/P), F ..... Two (2) only
Class S9**A/2, A3/4,** A, B, C, D ..... Two (2) only
Class S10**A/2, A3/4,** A, B, C, D ..... Two (2) only

See also Items aq (7.4), ba (8.4), bu (12.5)

Consequential Amendments in CIAM General Rules:

B.2.2 Classification of space models
Each class, except class S7, is divided into subclasses defined as follows according to total impulse (in Newton-seconds):
A/2 - 0.00 to 1.25 Ns
A3/4 - 1.26 to 1.88 Ns
A - ~~0.00~~**1.89** to 2.50 Ns

C.10.2 Class S - Space models
Class S3**A/2, A3/4,** A, B, C, D ..... Two (2) only
Class S4**A/2, A3/4,** A, B, C, D, E, F ..... Two (2) only
Class S6**A/2, A3/4,** A, B, C, D ..... Two (2) only
Class S9**A/2, A3/4,** A, B, C, D ..... Two (2) only
Class S10**A/2, A3/4,** A, B, C, D ..... Two (2) only

Subcommittee votes: 17	YES: 3	NO: 13	ABS.: 1

o) 2.4.7 Construction Requirements **Croatia**

Modify the following sub-paragraph with one deletion as shown below:

2.4.7 Models in Classes ~~S4,~~ S8 and S10 must fly and land without separation of any part in flight.

Reason: Without Class S4.

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

Part Three – Space Model Motor Standards

p) 3.9 Modifications — USA

Modify the following section with additional text as shown below:

A space model engine shall not be altered in any manner to change its published and established performance characteristics or dimensions **and shall not be used for any purposes except those recommended by the manufacturer.**

Reason: Part of an overall set of proposals to enhance safety by implementing language similar to the Model Rocket Safety Code of the U.S. National Association of Rocketry. This language is intended to prevent space model engines from being used unsafely in ways that they were not designed for or intended to be used for, which is flight propulsion of a space model through the air. It is identical to language in the U.S. Model Rocket Safety Code.

Subcommittee votes: 17	YES: 9	NO: 5	ABS.: 3

q) 3.10 Certification for FAI Contests — Croatia

Modify the following section by deleting text and replacing it as shown below:

A space model motor used in a space model in FAI competition or for the purpose of establishing or surpassing FAI space model performance records shall be of a type previously tested and certified ~~for such use by a National Airsports Control~~ **by an internationally accredited institution. In Europe, such motors are in the pyrotechnical class P1 and must be CE marked for marketing.**

3.13 Space Models Motor Testing Standards

In addition to the FAI regulation, it is necessary for the testing of model motors to be issued by an internationally authorized pyrotechnical institution.

A space model motor type may be certified by a National Airsports Control if the performance of a randomly selected sample meets the following standards:

3.13.4 Static tests shall be conducted with the test motor at a temperature of 20 degrees Centigrade, +/- 5 degrees Centigrade. **The Organizer must provide a thermochamber with constant temperature 20º +/- 5º C.**

Technical Secretary Note: The first proposal in this section deleted the possibility for the NAC to test and certify space model motors. Consequential changes are needed in 3.11 Static Testing and 3.13 shown above, for this proposal to be acceptable. Also note, that in the 2020 Volume the term 'space model engine' was changed to 'space model motor' throughout.

Reason: None given.

Subcommittee votes: 17	YES: 2	NO: 13	ABS.: 2

Part Four – General Rules for International Contests

r) 4.1 World Championship Events for Space Models **Switzerland**

Modify the following sections (4.1 and 4.2) by deleting all text and replacing it with a reference as shown below:

~~The following event categories are recognised as World Championships for Space Models:~~

~~a) Altitude models – S1, S2, or S2/P~~
~~b) Parachute duration models – S3~~
~~c) Boost Glider duration models – S4~~
~~d) Scale Altitude models – S5~~
~~e) Streamer duration models – S6 or S6/P~~
~~f) Scale – S7 or S11~~
~~g) Rocket Glider duration and precision landing models – S8~~
~~h) Gyrocopter duration models – S9~~

~~The events and total impulse classes shall be selected by the contest organiser. One event is required for each category. Different events and total impulse classes may be selected for Senior and Junior classes.~~

See CIAM General Rules C.15.2.2 Class S Space Models

4.2 Number of Models

~~Class S1A, B, C, D, E, F ..... Two (2) only~~
~~Class S2C, E, F ..... Two (2) only~~
~~Class S3A, B, C, D ..... Two (2) only~~
~~Class S4A, B, C, D, E, F ..... Two (2) only~~
~~Class S5A, B, C, D, E, F ..... One (1) only~~
~~Class S6A, B, C, D ..... Two (2) only~~
~~Class S7 ..... One (1) only~~
~~Class S8A, B, C, D, E (E/P), F ..... Two (2) only~~
~~Class S9A, B, C, D ..... Two (2) only~~
~~Class S10A, B, C, D ..... Two (2) only~~

~~For classes S1, S2, S3, S4, S6, S8, S9 and S10 one (1) additional model may be processed and flown by the competitor on there being a tie for first place at the end of the third round.~~

See CIAM General Rules C.10.2 Class S Space Models

Reason: Simplification. The definition exists twice and must be changed twice. The CIAM General Rules are valid.

Subcommittee votes: 17	YES: 8	NO: 8	ABS.: 1

s) 4.1 World Championship Events for Space Models **Ukraine**

Make the following deletions and additions to the tables as shown below:

The following event categories are recognised as World Championships for Space Models:

a) altitude models – S1, ~~S2,~~ **or S2/P**

b) parachute duration models – S3 **or S12P**

c) boost glider duration models – S4

d) scale altitude models – S5

e) streamer duration models – S6 **or S6A/P**

f) scale – S7 ~~or S11~~

g) rocket glider duration and precision landing models – S8

h) gyrocopter duration models – S9

4.2 Number of Models

The number of models eligible for entry is as follows:

Class S1A, B, C,~~ D, E, F~~ ..... Two (2) only

~~Class S2C, E, F ..... Two (2) only~~

Class S3**A/2,** A, B, ~~C, D~~ ..... Two (2) only

Class S4**A/2,** A, B, ~~C, D, E, F~~ ..... Two (2) only

Class S5A, B, C~~, D, E, F ..... One (1) only~~

Class S6**A/2,** A, B, ~~C, D~~ ..... Two (2) only

Class S7 ..... One (1) only

Class S8~~A, B, C,~~ D, **D for, P ,E for P** ~~(E/P), F~~ .....Two (2) only

Class S9**A/2,** A, B, ~~C, D~~ ..... Two (2) only

Class S10**A/2,** A, B, ~~C, D~~ ..... Two (2) only

Class S2/P, ... One (1) only

Class S6A/P, ... Two (2) only

Class S12/P, ... One (1) only

Reason: The introduction of new classes of models of rockets in adults and juniors will give a powerful impetus to the development of new technologies, will make rocket sports for the spectators and sponsors more attractive. It will allow the organizers of European and World Championships to be more flexible in the choice of rocket model classes, depending on the size of the flying field. Reducing the overall momentum for racing in radio-controlled models will be interesting because more athleticism and skill.

Technical Secretary Note: This is the second of a number of related changes proposed by Ukraine for the above reason, which will follow in the appropriate section. See also Items k (2.4.4), 7.4, 8.4, 11.1.3, 11.6, 11.7, 12.5. CIAM General Rules will be amended to agree with successful proposals.

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

t) 4.2 NUMBER OF MODELS, STARTS AND MAXIMUM DURATION Croatia

Replace the current table (see Item 'r' above for the current table) with the table shown below. Note there is also a new heading proposed:

The number of models eligible for entry is as follows:

Class S1A,B,C,D,E,F ……Two(2) only

Class S3A/2 Three (3) only, five (5) starts, max 240 s

Class S4A/2…… .Three(3) only, five (5) starts, max 120 s

Class S5A,B,C,D,E,F……. One (1) only
Class S6A/2 ……Three (3) only, five (5) starts, max 120 s
Class 7 …… One(1) only
Class 8A,B,C,D,E(E/P) F… Two (2) only
Class S9A/2…… Three (3) only, five (5) starts, max 120 s
Class S10A/2 Three (3) only, five (5) starts, max 180 s

Reason: The number of models and startings is a subject to the agreement. It should be considered in the writing of this sporting code. To consider this problem should take a long time. At the first world championship won the competitor with one longest flight of two start (I know, I was one of the competitors). It's now funny. Polygons, sports airports are less and less available, and you should consider how the competition has more startings with a lower maximum flight duration and the result of the sum of all these flights. I hope we will enjoy the implementation of this proposal.

Technical Secretary Note: See Croatia's related proposals: Items j (2.4.4), an (7.4), az (8.4)

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

u) 4.3.4 Assisted Launch **USA**

Delete the current 4.3.4 and replace it with the text shown below:

4.3.4 Assisted Launch

A launcher shall not impart any velocity change or change of momentum except for that caused by the space model engine(s) contained in the space model. A launcher shall not include any stored energy feature (pyrotechnic, chemical, mechanical, pneumatic, etc.) that imparts velocity change or change of momentum to the rocket. No part of the launcher shall loose contact with the launcher assembly.

Pressurization (piston) launchers that use the exhaust gas from the space model motor(s) contained in the space model to accelerate the space model may be used unless prohibited for an event. No other materials or devices may be added to or included in the launcher to augment the pressure produced by the space model motor(s) contained in the space model.

For the S1, S2, and S5 events, pressurization (piston) launchers shall not be used. For these events, the nozzle(s) of the space model motors(s) contained in the model must be exposed to the atmosphere.

Reason: Rule 4.3.4 was significantly modified during the 2018 rules revision cycle. The 2018 rule change (submitted by Ukraine) had a Technical Secretary's Note saying "This note is to request that the above proposal is corrected for English at the Technical Meeting." The correction for English was not made in 2018. The proposed change corrects for English while keeping the intent of the 2018 rule update. *The word 'motor' has been substituted for 'engine'.*

Subcommittee votes: 17	YES: 11	NO: 5	ABS.: 1

v) 4.3.5 Launching Procedure **USA**

Modify 4.3.5 'Launching Procedure' by deleting some text and making further additions to the paragraph as shown below:

4.3.5 Launching Procedure

Launching or ignition must be conducted by remote electrical means **with a launch system that has a safety interlock in series with the launch switch and a launch switch that returns to the "off" position when released. When launching all persons shall be** at a safe distance that depends on the space model class, weather conditions and number of spectators. **This distance shall be no less than 3 meters; for rockets containing clusters of multiple motors shall be at least 10 meters; and for rockets where safety or stability is in question shall be a distance and direction as determined by the Range Safety Officer.** ~~It shall be announced by the Range Safety Officer before the beginning of competition in a particular class of the model and must be fully under the control of the person launching the model~~. All persons in the vicinity of the launching must be advised that a launching is imminent before a space model may be ignited and launched, and a minimum five (5) second "count down" must be given before ignition and launching of a space model. **If a space model does not launch when the button of the electrical launch system is pressed, the launch system's safety interlock shall be removed or the system shall be disconnected from the battery before anyone approaches the space model.**

Reason: The additional specifications for the electrical launch system and for the procedure for approaching a space model that has misfired are taken from the U.S. Model Rocket Safety Code, where they have been for 40 years. The stand-off distances from a space model launch are made precise because currently they are not precise and so no stand-off distance is currently being observed by competitors. This is not a safe practice. The U.S. safety code requires a minimum stand-off of 5 meters, and a wait time of 60 seconds after a misfire, but the engines used by most people in the U.S. are much larger than those used in FAI competition and therefore require a greater stand-off and a wait time.

Subcommittee votes: 17	YES: 8	NO: 7	ABS.: 2

w) 4.3.5 Launching Procedure **Croatia**

Add a sub-paragraph to 4.3.5 after the existing as shown below:

For one stage space models with D motor or smaller, except class S2, a minimum safe distance of a least 4 metres from the model is required. These models can be launched near vertical elevation, 80º – 90º with direction in a safe, empty place.

For multistage or cluster space models, class S2 and space models with stronger space motor (than D), the safe distance is 8 metres. These models must be launched with elevation 65º – 80º in a safe, empty place.

Reason: From a safety standpoint, the possibility of fall exist within the radius of the longest range of the model used. Firing the rocket in vertical directions, threatens

the area around the launcher. This can be reduced using smaller elevations in safe direction. For heavier and less accurate path models, it is advisable to use lower elevations.

Subcommittee votes: 17	YES: 3	NO: 12	ABS.: 2

x) 4.3.7 Hazard **USA**

Modify 4.3.7 'Hazard' by deleting some text and making further additions to the paragraph as shown below:

4.3.7 Hazard

A space model in flight **shall not be launched into clouds or near** ~~create a hazard to~~ aircraft and shall not be used as a weapon against ground or air targets. **Space models shall not eject any materials such as recovery device protection that are not flameproof and shall use containment tubes for fuse-type dethermalizers, so that the space models do not present a fire hazard upon landing. Launch devices shall have a means to prevent the motor's exhaust from directly hitting the ground, and any dry grass close to the launch pad shall be cleared before launch. No attempt shall be made to recover space models from power lines, tall trees, or other dangerous places.**

Reason: These hazard-prevention requirements are all similar to requirements that have been in the U.S. safety code for many years. Ejection of flammable materials such as tissue parachute protectors that are burning when they land on the ground; landing of duration models with dethermalizer fuses still burning and exposed in a way that makes them able to touch grass; and the spray of rocket exhaust directly onto dry grass on the ground have all been sources of launch site fires in the U.S.. 7 people have died in the U.S. in the last 30 years while trying to recover space models from electric power lines.

Subcommittee votes: 17	YES: 11	NO: 5	ABS.: 1

y) 4.3.8 Launch Site **USA**

Move the existing 4.3.8 'Thermal Creation and Protection' to a new paragraph 4.3.9 and rename 4.3.8 ('Launch Site' is a suggestion), then add the text as shown below:

4.3.8

Space models shall be launched outdoors, in an open area free of hazards to the safety of fliers or spectators and whose size is appropriate to the power of the models and to the weather conditions, as determined by the RSO.

Reason: This is a completely new paragraph. There is no requirement in the current space model code to fly from a launch site that is safe (free of dangerous ditches, lakes, tall dry vegetation that may catch fire) and large enough to support the types of models being flown in the weather conditions at the time of launching. The U.S. Model Rocket Safety Code has a table of minimum launch site sizes, but these are for guidance to individual hobbyists who are flying by themselves. They do not match well with the types of models that are flying in FAI competition. There are too

many factors to consider in deciding whether it is safe to fly space models at a particular place on a particular day than can be accounted for in code language, so this decision is best left to the Range Safety Officer but it should be specified as a responsibility of that person.

Subcommittee votes: 17	YES: 14	NO: 2	ABS.: 1

z) 4.4.2 Model Marking and Identification **Switzerland**

Delete this section and replace with the reference 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 4 mm for each stage. The name, national insignia, or international identification mark of the competitor's nation must be displayed on the exterior of the model.~~

~~A light coloured area of minimum dimensions 1 cm by 3 cm must be provided for the organiser's processing mark except in classes S5 and S7 where the mark shall be put on interior of the model.~~

See CIAM General Rules C.11.2 Class S Space Models

Technical Secretary Note: The section in the General rules Volume is virtually the same as that in the Space Volume, allowing this deletion, except for the following inconsistency, which must be addressed for this proposal to be acceptable.

Space Volume: … in letters and numbers approximately one (1) centimetre high except in classes S5 and S7 where it is 4 mm for each stage.

CIAM General Rules Volume: b) The letters and numbers must be 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.

Reason: Simplification. The definition exists twice and must be changed twice. The CIAM General Rules are valid.

Subcommittee votes: 17	YES: 11	NO: 5	ABS.: 1

aa) 4.4.2 Model Marking and Identification **Poland**

Add the following text at the end of this section:

4.4.2 Model Marking and Identification

…

A light coloured area of minimum dimensions 1 cm by 3 cm must be provided for the organiser's processing mark except in classes S5 and S7 where the mark shall be put on interior of the model **during scale judging.**

Reason: If the model is not marked during scale judging, it is possible to mark and fly with a different model.

Subcommittee votes: 17	YES: 13	NO: 1	ABS.: 3

ab) 4.6.5 Disqualification **Slovak Republic**

Modify the following section by deleting text and replacing it as shown below:

In the S4 and S10 classes, the model must reach a stable flight within 30 s ~~from the moment of reaching the apogee~~ **of the model's first motion on the launching device**, 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~~ **of the model's first motion on the launching device**, otherwise the flight is disqualified.

Reason: The apogee of a model rocket is a difficult to determine parameter as praxis has shown. 30s from the model's start is easy and precisely measurable.

Subcommittee votes: 17	YES: 16	NO: 1	ABS.: 0

ac) 4.6.5 Disqualification **Croatia**

Modify the first sub-paragraph of 4.6.5 by deleting the text and replacing it 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 S4 and S10 classes, the model must fly a minimum of 20 seconds. Shorter flights will be disqualified.

Reason: From a safety standpoint, the possibility of fall exist within the radius of the longest range of the model used. Firing the rocket in vertical directions, threatens the area around the launcher. This can be reduced using smaller elevations in safe direction. For heavier and less accurate path models, it is advisable to use lower elevations.

Subcommittee votes: 17	YES: 0	NO: 17	ABS.: 0

ad) 4.8 Timing and Classification **Croatia**

Modify the following section: 4.8.1 by deleting text and replacing it as shown below:

4.8.1 The timing of flights is limited to a maximum determined by the individual class and size of engine used. The total flight time is taken from the ~~model's first motion on the launching device~~ **time at which the model or any part of the model leaves the launching device** to the end of the flight.

Reason: It is the intention to change this to agree with 4.5.1 'Definition of Official Flight' … therefore the actual words from 4.5.1 have been substituted by the Technical Secretary for the words given in the proposal: ***the model live the launcher.***

Subcommittee votes: 17	YES: 8	NO: 5	ABS.: 4

ae) 4.8 Timing and Classification **Slovak Republic**

Modify the following section: 4.8.3 by deleting text and replacing it as shown below:

In order to decide the winner when there is a tie, additional deciding flights shall be made immediately after the last flight of the event has been completed. ~~The maximum time of flight in each additional round shall be increased by two (2) minutes on the maximum time of flight of the previous round~~. **There shall be no more than two fly-off rounds to determine the winner. The maximum time of flight in the first fly-off round shall be increased by two (2) minutes on the maximum time of flight of the previous round. The second fly-off round will be timed to the completion of the flight for final results.** There shall be only one attempt for each additional flight. The times of the additional flights shall not be included in the final figures of classification for teams, they are for the purpose of determining the winner and for awarding the prizes attached to the title. The organiser will decide the time during which all competitors must launch their models. In the case of a tie in the team classification, the best individual score (classification) will be used.

~~There shall be no more than two fly-off rounds to determine the winner. The second fly-off round will be timed to the completion of the flight for final results.~~

Reason: Clarification of the fly-off rule. The current text is making two different statements in one paragraph. The amended paragraph states clearly the intention of a fly-off rule and also the procedure.

Subcommittee votes: 17	YES: 17	NO: 0	ABS.: 0

af) 4.8 Timing and Classification **Serbia**

Add a new paragraph 4.8.12. as follows:

4.8.12. Electronic altimeters produced and approved in accordance with the provisions of the Sporting Code Volume EDIC – Electronic Devices in Competition – Section 2 - Technical Guidance Notes and Technical Specification for Altimeters Used in Space Modelling Competition V.1.0, which register the whole space model's flight trajectory and have time scale recording to at least 1/100th of a second, which is equivalent to quartz controlled electronic stopwatches with digital readout required for timing in paragraph 4.8.8 of these rules, can be used for timing in space models contests. Qualified personnel and procedure of calibration, preparation for flight and readout of data is the same as for altitude measurements.

Reason: Space models contests are very good participated so it is not easy to provide necessary number of qualified time keepers and stopwatches. If time keepers with little experience are engaged, errors in timing are not rare. Therefore it is better to rely on new technology which proved as accurate and reliable in last ten years in altitude measurements. This shall also make contest cheaper which is very important for good participation of sportsmen at all levels of contests.

Subcommittee votes: 17	YES: 12	NO: 5	ABS.: 0

ag) 4.9.1. Triangulation Method **Serbia**

*Delete the entire section. Replace it with the following paragraph and a new Annex 7. For the text of **ANNEX 7 – TRIANGULATION METHOD**, refer to **Annex 7k**:*

Triangulation Method is described in Annex 7 of these rules. It is the oldest method for space models altitude measurements, is simple and cheap and is acceptable for lower levels of contests, but because of its slow procedure of tracking and results calculation as well as its limited accuracy, may be used only in Category 2 contests when and where electronic altimeters are not available. It is suitable for contests with smaller number of competitors and shall not be used for record attempts. It is also suitable as an educational tool for juniors.

Reason: Triangulation Method was used for decades but since 2010 is mostly replaced with electronic altimeters which are much more precise, quicker, efficient and require smaller crew for the measurement process. However, this method is still useful where spacemodelling is just being introduced and where electronic altimeters are not available yet. It is also good as the educational tool for juniors, but because of its limited accuracy (+/- 10%) may not be used for record attempts.

Subcommittee votes: 17	YES: 15	NO: 0	ABS.: 2

ah) 4.10.1. Special Contest Organisation Requirements **Croatia**

*Modify the following section: 4.10.1 by deleting text and replacing it as shown below. See **Annex 7p – Launch Boxes and Safety Code** for diagrams of the proposed launch boxes:*

4.10.1 Provide a starting line divided in two sectors for seniors and juniors (if both classifications exist in an event). Each sector shall be composed of the launch boxes ~~5 x 7~~ **9 x 9** metres marked by plastic, marking ribbon. The whole launching area shall be protected by marking ribbons ~~of~~ **from** the access of non-authorised persons. **The launcher must be mounted only in the central line of boxes. The minimum safe distance from the launcher to competitors who start the model must be 5 metres. The launch box must be empty of other competitors, helpers or timekeepers, when the RSO makes the 5 second countdown.**

Reason: Increasing the space around the launcher, makes it easier to maintain the safety distance of all present – competitors, helpers and judges.

Subcommittee votes: 17	YES: 3	NO: 8	ABS.: 6

ai) 4.10.7 Special Contest Organisation Requirements **Serbia**

Modify the following section: 4.10.7 by deleting text and replacing it as shown below:

4.10.7 Provide ~~at least two altitude measuring devices (theodolites~~) **the necessary number of CIAM approved electronic altimeters with software** for altitude classes S1, S2 and S5 with proven qualified personnel. ~~and an appropriate radio communication system for data transfer from the tracking stations to the computer centre~~. ~~In the case of electronic altitude measurements~~ **A**ll electronic altimeters shall be impounded prior to the beginning of the competition and supervised by a special official qualified and equipped with the relevant devices to check and calibrate impounded equipment when necessary. **If electronic altimeters are not available, Triangulation Method (Annex 5) can be used in Category 2 contests if the organizer provides at least two altitude measuring devices (theodolites) for altitude classes S1, S2 and S5 with proven qualified personnel and an appropriate radio communication system for data transfer from the tracking stations to the computer centre.**

Reason: Electronic altimeters are in regular practice for altitude measurements for last ten years at the FAI SM Championships and should have priority in the rules over mostly obsolete Triangulation Method. However this method should still be preserved in the rules to be used as an auxiliary method in areas where spacemodelling is just starting its activity and electronic devices are not available.

Subcommittee votes: 17	YES: 13	NO: 0	ABS.: 4

aj) 4.10.10 Special Contest Organisation Requirements **Serbia**

Add a new sub-paragraph to this section as follows:

4.10.10 The organizer of a space models international contest listed in the FAI Contest Calendar shall provide and use a software approved by CIAM to produce uniform documentation of the contest. This relates to bulletins, results lists, jury reports and other accompanying documentation required by CIAM. Requirements for this software are given in Annex 2 Chapter 5.d.

Reason: The organizers of Cat 1 and Cat 2 spacemodelling contests send bulletins, results and jury reports to the FAI office and/or World Cup coordinator which are very different from one to the other contest. This makes problems in WCup and SM International Ranking and cause errors in calculations and presentation of the final results. Modern technology also allows on-line registration and a number of possible statistical analysis and presentations but inputs must be of the same kind. Therefore a software approved by CIAM and available to and used by everyone is of a great importance.

Technical Secretary Note: See also the following proposals: Items ak) and al).

Subcommittee votes: 17	YES: 10	NO: 3	ABS.: 4

Annex 2 – Space Modelling Judges and Organisers' Guide

ak) 5. Organisers' Tasks **Serbia**

Add a new paragraph 5. d. Contest Documentation Software as follows:

d. Contest Documentation Software - The organizer of a space models international contest listed in the FAI Contest Calendar shall provide and use to produce documentation of the contest, a software approved by CIAM. It shall contain:

Basic version: Templates for Bulletins 0 to 3, list of the contest officials, result tables for individuals and teams for all space models classes, template for jury report, contest calendar for the current year.

Advanced version: Basic version with its on-line presentation, on-line registration of participants, on-line presentation of the results in real time during the contest with automatic sorting of placings, downloadable pdf versions of the presented documents after the contest and downloadable excel versions of result tables.

Sophisticated version: Advanced version completed with checking of on-line registrations in the FAI data base, selecting contests per year, per country and per class, some statistical calculations and presentations etc.

This software shall have a tutorial for those who use it. The updated version if needed shall be approved by CIAM at the end of preceding year for the next year.

Reason: In the proposal for a new paragraph 4.10.10 are given reasons for such software approved by CIAM. This proposal gives guidelines what such software shall fulfil. Some of these requirements are already realized in existing software in different countries, but no one is approved and is not mandatory for application, which is very important. Basic version is prepared by Space S/C some ten years ago in "classic form". It requires inclusion in more modern versions. Advanced version is partly realized and tested in different contests in Ukraine and Serbia. Sophisticated version gives direction for future development. All this should be in incorporated in one system to be used by everyone.

Subcommittee votes: 17	YES: 8	NO: 5	ABS.: 4

al) 5. Organisers' Tasks **Ukraine**

Add a new paragraph 5. d. Contest Documentation Software as follows:

d. Contest Documentation Software - The organizer of a space models international contest listed in the FAI Contest Calendar must use contest automation software approved by CIAM.
Such a software must have the following features:

- **Be available online on the Internet;**
- **Be able to display event data online including list of the contest officials, competition schedule, organizers details, event location, entry fees, accommodation and board information, contacts, payment**

options, transfer information, display of registered teams and participants;

- **Be able to maintain on-line registration of participants and teams;**
- **Be able to process entry fee payments online;**
- **Be able to validate FAI ID of participants online and retrieve name, date of birth, licenses, country, sport, and validity);**
- **Be able to automatically populate participants data based on information retrieved by their FAI ID;**
- **Provide way to input contest results manually;**
- **Provide API(application programming interface) to retrieve contest results from third-party systems;**
- **Provide customizable templates and generate downloadable PDF documents:**
  - **Bulletins 0 to 3;**
  - **List of contest officials;**
  - **Jury reports;**
- **Provide customizable templates and generate downloadable PDF and Excel documents:**
  - **Results for individuals and teams for all space model classes;**
- **Be able to display individual and team results in real time during contest;**
- **Be able to publish news, photos and videos;**
- **Be able to submit contest results to the FAI database;**
- **Be able to pull Cat 1 and Cat 2 spacemodelling contests from the FAI database;**
- **Display all Cat 1 and Cat 2 spacemodelling contests, sort competitions by years, countries, dates, classes of models;**
- **This software shall have a tutorial for those who use it.**

Reason: The proposal for the new paragraph 4.10.10 explains why we need such software that is approved by CIAM. This proposal gives detailed requirements for what such software should fulfill. The availability of the system online on the Internet makes it a multi-tool for all space modelling competitions and be readily accessible at all times. The ability to work with the API will allow the program to receive information from third-party programs and calculate it (upload data in Excel format, receive flight data from altimeter software, etc.). With such program functionality, competitions such as the World Cup stage can be held using one laptop or even one tablet. Similar software has shown a positive result when used in space modelling contests Cat 1 (European Championship 2015 & 2019, World Championship 2016) and different stages of the World Cup which pertain to Cat 2. We need one system that will include all these requirements and will be used by everyone.

Subcommittee votes: 17	YES: 2	NO: 11	ABS.: 4

Part Seven – Parachute/Streamer Duration Competition (Classes S3 and S6)

am) 7.1 General — Slovak Republic

Modify the paragraph by deleting text as shown below:

The Parachute or Streamer Duration Competition is divided into classes according to the total impulse of the engine used. During the flight no part of the model ~~other than parachute protectors or wadding~~ may be detached or jettisoned.

Reason: Safety update, and not detaching any part of the model makes the class more challenging.

Subcommittee votes: 17	YES: 10	NO: 7	ABS.: 0

an) 7.4 Sub-Classes — Croatia

Delete the table and replace it as shown below. The last three rows remain unchanged:

For Parachute and Streamer Duration Competitions the classes and their respective maximum flight tines are:

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	MAXIMUM PARACHUTE (sec)	FLIGHT TIME STREAMER (sec)
~~S3A/S6A~~	~~0,00 - 2,50~~	~~100~~	~~300~~	~~180~~
~~S3B/S6B~~	~~2,51 - 5,00~~	~~100~~	~~420~~	~~240~~
~~S3C/S6C~~	~~5,01 - 10,00~~	~~200~~	~~540~~	~~300~~
~~S3D/S6D~~	~~10,01 - 20,00~~	~~500~~	~~660~~	~~360~~

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	**MINIMUM WEIGHT**	MAXIMUM PARACHUTE (sec)	FLIGHT TIME STREAMER (sec)
S3A/2A - S61/2A	**0,00 - 1,25**	**100**		**240**	**120**
S3A/S6A	**1,26 - 2,50**	100		300	180
S3B/S6B	2,51 - 5,00	100		420	240
S3C/S6C	5,01 - 10,00	200		540	300
S3D/S6D	10,01 - 20,00	500		660	360

Reason: Using smaller A/2 engines instead A, can reduce the maximum flight duration and this make smaller grounds to complete. In Croatia, the A/2 motors with good results have been used at the state championship for many years. *See also Items j (2.4.4), t (4.2), az (8.4)*

Subcommittee votes: 17	YES: 3	NO: 13	ABS.: 1

ao) 7.4 Sub-Classes **Switzerland**

Delete the table (shown above in Item am)) and replace it as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	~~MAXIMUM WEIGHT (g)~~	MAXIMUM PARACHUTE (sec)	MAXIMUM STREAMER (sec.)
S3A/2/S6A/2	**0,00 – 1,25**		**300**	**180**
S3A/S6A	**1.26** - 2,50	~~100~~	300	180
~~S3B/S6B~~	~~2,51 - 5,00~~	~~100~~	~~420~~	~~240~~
~~S3C/S6C~~	~~5,01 - 10,00~~	~~200~~	~~540~~	~~300~~
~~S3D/S6D~~	~~10,01 - 20,00~~	~~500~~	~~660~~	~~360~~

Consequential Change: Provisional Rules: Class S6A/P – Streamer target Duration Time

7.5.2. **Construction requirement and specification**

Models for this class are identical with those in ~~Class S6A~~ **S6A/2** – Streamer duration competition.

Reason: New Class. *See also Items i (2.44), av (8.4), bt (12.5)*

Subcommittee votes: 17	YES: 2	NO: 14	ABS.: 1

ap) 7.4 Sub-Classes **Ukraine**

Delete the table (shown above in Item am)) and replace it as shown below:

CLASS	TOTAL IMPULSE **(Ns)**	MAXIMUM WEIGHT (g)	MAXIMUM PARACHUTE (sec)	MAXIMUM STREAMER (sec.)
S3A/2 - S6A/2	**0,00 – 1,25**	**100**	**300**	**180**
S3A/S6A	**1.26** - 2,50	100	300	180
S3B/S6B	2,51 - 5,00	100	420	240
~~S3C/S6C~~	~~5,01 - 10,00~~	~~200~~	~~540~~	~~300~~
~~S3D/S6D~~	~~10,01 - 20,00~~	~~500~~	~~660~~	~~360~~

Reason: The introduction of new classes of models of rockets in adults and juniors will give a powerful impetus to the development of new technologies, will make rocket sports for the spectators and sponsors more attractive. It will allow the organizers of European and World Championships to be more flexible in the choice of rocket model classes, depending on the size of the flying field. Reducing the overall momentum for racing in radio-controlled models will be interesting because more athleticism and skill. *See also Items k (2.44), s (4.1), aw (8.4), bv (12.5)*

Subcommittee votes: 17	YES: 3	NO: 13	ABS.: 1

aq) 7.4 Sub-Classes **Italy**

Delete the table (shown above in Item am)) and replace it as shown below:

CLASS	TOTAL IMPULSE (~~Newton-seconds~~**Ns**)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME PARACHUTE (~~sec~~)	STREAMER (~~sec~~)
S3A/2 - S6A/2	**0.00 - 1.25**	**100**	**300**	**180**
S3A3/4 - S3A3/4	**1.26 - 1.88**	**100**	**300**	**180**
S3A~~/~~ - S6A	~~0,00~~**1.89** - 2~~,~~.50	100	300	180
S3B~~/~~ - S6B	2~~,~~.51 - 5~~,~~.00	100	420	240
S3C~~/~~ - S6C	5~~,~~.01 - 10~~,~~.00	200	540	300
S3D~~/~~ - S6D	10~~,~~.01 - 20~~,~~.00	500	660	360

Reason: The present proposal intends to meet the need to facilitate the recovery of the S1, S3, S4, S6 and S9 models normally used in competition by reducing the available total impulse of the engine.

This allows for a more rational, efficient and cheaper approach instead of increasing the size of the models.

Two new classes of engines that can be used in competition are introduced: A/2 and A3/4, endowed respectively with 50% and 75% of the total impulse of the class A, the least powerful to date. *See also Items n (2.44), ba (8.4), bu (12.5)*

Subcommittee votes: 17	YES: 4	NO: 12	ABS.: 1

ar) 7.4 Sub-Classes **Russia**

Add a column to the table as shown below:

CLASS	**MINIMUM LENGTH OF STREAMER (mm)**	**MINIMUM WIDTH OF STREAMER (mm)**
S3A/S6A	**3000**	**150**
S3B/S6B	**4000**	**170**
S3C/S6C	**5000**	**190**
S3D/S6D	**6000**	**210**

Reason: Using a larger tape will increase the starting weight of the model, which in turn will reduce the flight altitude of the model and improve its visibility.

Subcommittee votes: 17	YES: 1	NO: 15	ABS.: 1

Provisional Rules – Class S6A/P – Streamer Target Duration Competition

as) 7.5. Class S6A/P – Streamer target time duration competition **Switzerland**

Change the title:

~~Class S6A/P – Streamer target time duration competition~~

Class S6-G – Streamer group duration competition

Reason: Clarification.

Subcommittee votes: 17	YES: 6	NO: 7	ABS.: 4

at) 7.5. Class S6A/P – Streamer target time duration competition **Switzerland**

Change this class from Provisional to Official.

Move full text 7.5 to 7.5.4 from Page 56 to 7.5 to 7.5.4 in Part Seven Page 27

Subcommittee votes: 17	YES: 6	NO: 7	ABS.: 4

au) 7.5.1 Purpose of competition **Switzerland**

Modify the following section: 4.8.1 by deleting some text as shown below:

The purpose of this competition is to achieve, ~~as exact as possible~~, the target time of 240 sec and to launch the model within the five (5) minutes working time for the relevant group. The model shall be timed from the instant of first motion on the launcher until the instant it touches the ground.

Reason: Clarification.

Subcommittee votes: 17	YES: 12	NO: 2	ABS.: 3

Part Eight – Boost Glider Duration Competition (Class S4)

av) 8.4 Sub-Classes **Switzerland**

Delete the table and replace it as shown below:

~~CLASS~~	~~TOTAL IMPULSE (Newton-seconds)~~	~~MAXIMUM WEIGHT (g)~~	~~MAXIMUM FLIGHT TIME (sec.)~~
~~S4A~~	~~0,00 - 2,50~~	~~60~~	~~180~~
~~S4B~~	~~2,51 - 5,00~~	~~90~~	~~240~~
~~S4C~~	~~5,01 -10,00~~	~~120~~	~~300~~
~~S4D~~	~~10,01 -20,00~~	~~240~~	~~360~~
~~S4E~~	~~20,01 -40,00~~	~~300~~	~~360~~
~~S4F~~	~~40,01 -80,00~~	~~500~~	~~360~~

CLASS	TOTAL IMPULSE (Newton-seconds)	~~MAXIMUM WEIGHT (g)~~	**MINIMUM WING SPAN (mm)**	MAXIMUM FLIGHT TIME (sec.)
S4A/2	**0,00 – 1,25**		**600**	**180**
S4A	1,26 - 2,50	~~60~~	**700**	180
~~S4B~~	~~2,51 - 5,00~~	~~90~~		~~240~~
~~S4C~~	~~5,01 - 10,00~~	~~120~~		~~300~~
~~S4D~~	~~10,01 - 20,00~~	~~240~~		~~360~~
~~S4E~~	~~20,01 - 40,00~~	~~300~~		~~360~~
~~S4F~~	~~40,01 - 80,00~~	~~500~~		~~360~~

Reason: Add Class, delete old Classes. *See also Items i (2.44), ao (7.4), bt (12.5)*

Subcommittee votes: 17	YES: 3	NO: 14	ABS.: 0

aw) 8.4 Sub-Classes **Ukraine**

Delete the table (shown above in Item au)) and replace it as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (sec.)
S4A/2	**0,00 – 1,25**	**60**	**180**
S4A	1,26 - 2,50	60	180
S4B	2,51 - 5,00	90	240
~~S4C~~	~~5,01 - 10,00~~	~~120~~	~~300~~
~~S4D~~	~~10,01 - 20,00~~	~~240~~	~~360~~
~~S4E~~	~~20,01 - 40,00~~	~~300~~	~~360~~
~~S4F~~	~~40,01 - 80,00~~	~~500~~	~~360~~

Reason: As for Item ap). *See also Items k (2.4.4), s (4.1), ap (7.4), bv (12.5)*

Subcommittee votes: 17	YES: 1	NO: 16	ABS.: 0

ax) 8.4 Sub-Classes **Russia**

Modify the table (shown above in Item au)) with the deletions and additions as shown below:

8.4. SUB-CLASSES

CLASS	TOTAL IMPULSE (Newton-seconds)	**MINIMUM WING SPAN (mm)**	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (sec.)
S4A	0,00 - 2,50	**1000**	~~60~~ **90**	180
S4B	2,51 - 5,00	**1100**	~~90~~ **120**	240
S4C	5,01 - 10,00	**1200**	~~120~~ **150**	300
S4D	10,01 - 20,00	**1300**	~~240~~ **180**	360
S4E	20,01 - 40,00	**1400**	~~300~~ **210**	360
S4F	40,01 - 80,00	**1500**	~~500~~ **240**	360

In a class of models S4 wing chord size should be at least 7% of the wingspan, and at least 50% of the total length of the wing.

Subcommittee votes: 17	YES: 1	NO: 16	ABS.: 0

ay) 8.4 Sub-Classes **Bulgaria**

Modify the table with an additional column as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	**MINIMUM WING SPAN (mm)**	MAXIMUM FLIGHT TIME (sec.)
S4A	0,00 - 2,50	60	**700**	180
S4B	2,51 - 5,00	90	**800**	240
S4C	5,01 - 10,00	120	**900**	300
S4D	10,01 - 20,00	240	**1000**	360
S4E	20,01 - 40,00	300	**1200**	360
S4F	40,01 - 80,00	500	**1200**	360

Reason: The models will become more attractive and visible to the viewers. The safety of the competitors will be improved. The timekeeper factor - "I see / I don't see" will decrease and disappear. The models will not be much larger in length and this will facilitate their transportation and hence the additional cost. In the height classes, the models will be visible due to the smaller height and will not lose altimeters which also reduces the cost to the competitor.

Subcommittee votes: 17	YES: 2	NO: 15	ABS.: 0

az) 8.4 Sub-Classes **Croatia**

Modify the table as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (sec.)
S4A/2	**0,00 – 1,25**	**60**	**120**
S4A	**1,26** - 2,50	60	180
S4B	2,51 - 5,00	90	240
S4C	5,01 - 10,00	120	300
S4D	10,01 - 20,00	240	360
S4E	20,01 - 40,00	300	360
S4F	40,01 - 80,00	500	360

8.5 If the S4 models can throw off the engine mouth, they will be able to climb more steadily.

Reason: Using the lower engine in class S4, can reduce the maximum flight duration, this satisfying the smaller terrains and introducing more starts, one day. *See also Items j (2.4.4), t (4.2), an (7.4)*

Subcommittee votes: 17	YES: 2	NO: 15	ABS.: 0

ba) 8.4 Sub-Classes **Italy**

Modify the table as shown below:

8.4. SUB-CLASSES
For Boost/Glider Duration Competitions the classes and their respective maximum flight times are:

CLASS	TOTAL IMPULSE (~~Newton-seconds~~**Ns**)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME ~~(sec.)~~ **(s)**
S4A/2	**0.00 - 1.25**	**60**	**180**
S4A3/4	**1.26 - 1.88**	**60**	**180**
S4A	~~0,00~~**1.89** - 2~~,~~.50	60	180
S4B	2~~,~~.51 - 5~~,~~.00	90	240
…			

Reason: Two new classes of engines that can be used in competition are introduced: A/2 and A3/4, endowed respectively with 50% and 75% of the total impulse of the class A, the least powerful to date. *See also Items n (2.44), aq (7.4), bu (12.5)*

Subcommittee votes: 17	YES: 4	NO: 13	ABS.: 0

Part Nine – Scale Competition (Class S7)

bb) 9.1 Definition **Slovak Republic**

Add a note to this section:

9.1. DEFINITION

Scale competition is a single event and is limited to flying space models that re true scale models of existing or historical guided missiles, rocket vehicles, or space vehicles. **Note: To indicate the subject full-size rocket being scale modelled, the word "prototype" may be used. To indicate the scale model itself, the word “entry” may be used.**

Reason: Added definition for “prototype” and “entry” in the definitions section.

Subcommittee votes: 17	YES: 15	NO: 1	ABS.: 1

bc) 9.6 Stabilising Fins **Slovak Republic**

Add a sentence to this section as shown below:

9.6. STABILISING FINS

Scale models of rockets, missiles or space vehicles that are not fin-stabilised may be fitted with transparent plastic fins so as to make the model stable in flight while detracting the least from the scale qualities of the model. **The clear stabilising fins may be detached from the entry for static judging, but must be presented with the entry (best near it).**

Consequential Amendment to 9.8:

9.8. CONDITIONS OF MODEL FOR JUDGING

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. Nothing may be added to or taken off the model between the scale judging and the flight except space model motors, **detachable plastic fins** and recovery device packing.

Reason: Clear plastic fins have to be used to stabilize the model. For esthetical reasons, competitors don't use proper stabilising surfaces, which causes in some cases unstable flights. Allowing detachable fins, the judges can better judge the model, and the model's stability is improved.

Subcommittee votes: 17	YES: 10	NO: 6	ABS.: 1

bd) 9.7. Plastic Model Kit Parts **Slovakia**

Add the following text to Par.9.7. as shown below.

Parts from plastic model kits **and 3D printed parts** may be used on scale space models provided that this use is pointed out in the data presented with the model at the time of judging for scale qualities.

Reason: 3D printed parts are becoming more often used on scale models. As they are parts not directly manufactured by the competitor, they underly the same level and treatment as parts from kit parts.

Subcommittee votes: 17	YES: 9	NO: 6	ABS.: 2

be) 9.11. Scale Judging **Slovakia**

Modify the following section: 9.11.1 with the deletions and additional text shown below:

9.11.1. A competitor who presents the following proper technical data may be awarded with points defined in the paragraphs below only for items documented in these technical data:

- authentic, authorised drawing(s) of the prototype with ~~at least ten~~

~~dimensions and three~~ cross sections, i.e. data which define colour ~~of cross sections~~ and markings on it;

- workshop drawing of scale model that shows prototype and model dimensions;
- ~~at least one colour~~ photograph**s** of the whole prototype with clearly visible details of colour and markings;
- ~~at least three~~ photographs of details and assemblies;
- **Flight profile - taken from official sources: official publications, magazines, books, specifications of the design bureau or developer of space rocket systems.**
- file containing all necessary technical data including data regarding the locations of the centre of gravity, centre of pressure, gross weight, burnout weight and/or calculated or measures flight performance of the model necessary for safety reasons.

Reason: Clarification of what data are needed to be presented by the competitor.

Subcommittee votes: 17	YES: 11	NO: 2	ABS.: 4

bf) 9.11. Scale Judging **Russia**

Modify the following section: 9.11.1 with the additional text shown below:

9.11.1. A competitor who presents the following proper technical data may be awarded with points defined in the paragraphs below only for items documented in these technical data:

- authentic, authorised drawing(s) …;
- workshop drawing of scale model that shows prototype and model dimensions; **place stage separation model;**
- at least one colour photograph …;
- at least three photographs of details and assemblies;
- file containing all necessary technical data …;
- **the cyclogram flight of the prototype**.

Reason: Place stage separation, you must specify to estimate the sub-heading "Degrees" of Flight Characteristics.
The prototype flight cyclogram is necessary to confirm the claimed special effects and flight stages.

Subcommittee votes: 17	YES: 2	NO: 11	ABS.: 4

bg) 9.11. Scale Judging **Slovak Republic**

Modify the following section: 9.11.4 by deleting the last sentence as shown below:

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 40 points for “originality” shall be awarded to a prototype that is the only one in the competition and a bonus of 20 points 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 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.).~~

Reason: The definition of a scale model prototype is stated in Annex 2 d.5 so the second definition is not needed. *See also the following proposal*.

Subcommittee votes: 17	YES: 8	NO: 8	ABS.: 1

bh) 9.11. Scale Judging **Ukraine**

Delete the section: 9.11.4. (not reproduced here – see Item bd) – and replace it with the paragraph shown below:

Degree of difficulty: **maximum 150 points. Judge the degree of difficulty associated with model building up to 150 points. Factors to consider include the symmetry of the model; number of external components; sophistication of paint; the degree of detail; and the degree of difficulty in adapting the model to flight conditions.**

Reason: The main purpose of introducing 40 points for "originality" was the hope of the emergence of new scale models that would receive points for "fresh breath" in this class. Unfortunately, this did not happen. Therefore, it is suggested that you redistribute these points in the "Difficulty" section, leaving a total score of 150. This will remove the tension and speculation around this topic.

Subcommittee votes: 17	YES: 4	NO: 12	ABS.: 1

bi) 9.11. Scale Judging **Ukraine**

Modify the following section: 9.11.5 as shown below:

9.11.5. **Flight, characteristics**: ~~300~~ **350** points maximum. To be judged on launch, stability of flight, staging (if any) and recovery. A competitor has to designate which operations his models are to perform in flight (eg separation of stages; radio controlled trajectory; ejection of payload, etc).

When submitting a space model for bench evaluation, the participant must also submit a flight cyclogram to evaluate the flight characteristics, confirming all flight stages of the selected prototype and its specific consequences: separation of stages in time (tandem or block division of stages), separation of transition surfaces, hulls, satellites, inclusion or exclusion of upper stage engines, or optical clouds, etc. In assessing the flight of a space model, judges should calculate points based on how close that flight is to the flight of a real rocket based on the provided flight cyclogram.

If the model has been disqualified in both official flights, the competitor will not be eligible for final classification.

Reason: Increasing a flight rating from 300 points to 350 reduces the "dominant pressure" between scale and flight ratings. This requirement, regarding the provision of the official flight scheme and the system of separation of the prototype stages, will make it possible to familiarize the crew of judges of scale with the flight scheme of the model rocket before the start of the start and remove the annoying errors in terms of time limit at the launch pad.

Subcommittee votes: 17	YES: 7	NO: 5	ABS.: 5

Part Eleven – Rocket Glider Duration Competition (Class S8)

bj) 11.2 Purpose **Switzerland**

Modify the following section: 11.2 Purpose - as shown below:

The purpose of this competition is to achieve the longest flight duration time in combination with a landing of any part of the model within a given **one or more** landing area**(s)** of ~~20 by 20~~ **15 by 15** metres.

Reason: At the World or Continental Championships the pilots have to walk a long distance to the landing field. The pilot level has improved so that the landing field can be reduced.

Subcommittee votes: 17	YES: 11	NO: 4	ABS.: 2

bk) 11.6 Sub-Classes **Switzerland**

Delete the table and replace it as shown below:

~~CLASS~~	~~TOTAL IMPULSE (Newton-seconds)~~	~~MAXIMUM WEIGHT (g)~~	~~MINIMUM WING SPAN (mm)~~	~~MAXIMUM FLIGHT TIME (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~~

CLASS	**TOTAL IMPULSE (Ns)**	**MAXIMUM WEIGHT (g)**	**MINIMUM WING SPAN (mm)**	**MAXIMUM FLIGHT TIME (sec)**
S8B	**2,51 - 5,00**	**90**	**650**	**240**
S8D	**10,01 - 20,00**	**250**	**1100**	**360**
S8D-P	**10,01 - 20,00**	**250**	**1250**	**360**
S8E	**20,01 - 40,00**	**250**	**1450**	**360**

Reason: The specifications for class S8-P are defined under 11.7.2. Adaptation of the model specifications to the coming aviation regulations so that they can be flown without major restrictions.

Also see Item bk) which follows.

Subcommittee votes: 17	YES: 3	NO: 11	ABS.: 3

bl) 11.7 Class S8E/P Radio Controlled Rocket Glider Time Duration And Precision Landing Competition **Switzerland & Ukraine**

Change the name of the Class:

Class ~~S8E/P~~ **S8-P** Radio Controlled Rocket Glider Time Duration and Precision Landing Competition.

Consequential Amendment to 4.10.2 b):

b) for ~~S8E/P~~ **S8-P** a landing line with landing circles in accordance with Volume S paragraph 11.7.5 and relevant subparagraphs.

Reason: The specifications for the engine class S8-P are defined under 11.7.2. *See Item bj) below.*

Subcommittee votes: 17	YES: 8	NO: 6	ABS.: 3

bm) 11.7.2 Specifications **Switzerland**

Modify the following section: 11.7.2 Specifications - as shown below:

~~The competition has only one subclass determined for models which comply with subclass S8E. Total impulse of engine(s) 20,01 to 40,00 is allowed.~~

The competition has only one subclass determined for models which comply with subclass S8D-P.

Reason: The reduction in performance makes competition more interesting as flight times are more difficult to achieve. Adaptation of the model specifications to the coming aviation regulations so that they can be flown without major restrictions.

Subcommittee votes: 17	YES: 3	NO: 11	ABS.: 3

bn) 11.6 Sub-Classes **Ukraine**

Delete the table shown in Item bh) and replace it with the table shown below.

In addition the amendment of 11.1.3. is consequential to Switzerland, Ukraine and Russia proposals:

11.1.3. Radius of the nose must be a minimum of 5 mm in all orientations for S8D,

S8E, S8E/P S8**D**/P and S8F.

CLASS	TOTAL IMPULSE (Ns)	MAXIMUM WEIGHT (g)	MINIMUM WING SPAN (mm)	MAXIMUM FLIGHT TIME (s)
S8D	**10,01 - 20,00**	**250**	**1100**	**360**
S8D for P	**10,01 - 20,00**	**250**	**1250**	**360**
S8E for P	**20,01 - 40,00**	**250**	**1450**	**360**

Reason: See previous proposals.

Subcommittee votes: 17	YES: 5	NO: 9	ABS.: 3

bo) 11.6 Sub-Classes **Russia**

Delete the table shown in Item bh) and replace it with the table shown below.

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	MINIMUM WING SPAN (mm)	MAXIMUM FLIGHT TIME (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	240	960	360
S8E & S8E/P	**10,01 - 20,00**	**250**	1100	360
~~S8F~~	~~40,01 - 80,00~~	~~500~~	~~1500~~	~~360~~

Motors for the competition category 1 (Championships and World and European Championships) must be provided by the organizers in an amount sufficient to participate in the contest and training flights.

Subcommittee votes: 17	YES: 2	NO: 12	ABS.: 3

bp) 11.6 Sub-Classes **Bulgaria**

Modify the table as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	MINIMUM WING SPAN (mm)	MAXIMUM FLIGHT TIME (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	240	**1300**	360
S8E & S8E/P	**10,01 - 20,00**	**250**	**1450**	360
S8F	40,01 - 80,00	500	**1450**	360

Reason: The models will become more attractive and visible to the viewers. The safety of the competitors will be improved. The timekeeper factor - "I see / I don't see" will decrease and disappear. The models will not be much larger in length and

this will facilitate their transportation and hence the additional cost. In the height classes, the models will be visible due to the smaller height and will not lose altimeters which also reduces the cost to the competitor.

Subcommittee votes: 17	YES: 1	NO: 13	ABS.: 3

bq) 11.7.2 Specifications **Ukraine**

Modify the following section: 11.7.2 Specifications - as shown below:

~~The competition has only one subclass determined for models which comply with subclass S8E. Total impulse of engine(s) 20,01 to 40,00 is allowed.~~

~~The radio shall be able to operate at 2.4 GHz. Where the radio does not meet this requirement, the working bandwidth (Maximum 50 kHz) shall be specified by the competitor.~~

There are two subclasses defined for the S8-P class. Allowed total impulse of the motor(s) for S8D / P from 10.01 to 20.00 Ns, for S8E / P from 20.01 to 40.00 Ns.

Specifications for flight time models in Class S8-P shall be as specified in paragraph 11.6.

Landing accuracy points are accrued in accordance with 11.7.3, 11.7.5.

The radio should operate at 2.4 GHz. If the radio does not meet this requirement, the competitor must determine the working bandwidth (maximum 50 kHz).

Reason: The introduction of new classes of models of rockets in adults and juniors will give a powerful impetus to the development of new technologies, will make rocket sports for the spectators and sponsors more attractive. It will allow the organizers of European and World Championships to be more flexible in the choice of rocket model classes, depending on the size of the flying field. Reducing the overall momentum for racing in radio-controlled models will be interesting because more athleticism and skill.

Subcommittee votes: 17	YES: 5	NO: 9	ABS.: 3

br) 11.7.3 Landing Area **Ukraine**

Modify the following section b) in 11.7.3. 'Landing Area' with the additions as shown below:

b) A landing area consisting of the appropriate number of 10 metre landing circles, **for the final, 3 metre circles,** laid out square to the wind direction and with the marked landing tapes pinned down at the centre of each circle. The contest director is responsible for determining the direction and layout of the circles. Any changes of indicated landing area are forbidden during the round. The landing area must be located at a place on the field where there is no danger of collision with any person during the landing of the models.

c) The location of the timekeeping judges and pilots during landing near their landing circles is the responsibility of a specially appointed landing officer.

Reason: See previous reason.

Subcommittee votes: 17	YES: 10	NO: 6	ABS.: 1

bs) 11.7.4. Timing and Classification **Switzerland**

Modify the following sections: 11.7.4.9 and 11.7.4.10 - as shown below. Renumber the final sub-paragraph 11.7.4.11 to 11.7.4.10:

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

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

~~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 the initial rounds must change the frequency of his/her radio.~~

Reason: This solves the problem with the World Cup point calculation (large difference in points between the finalists and the other participants). 11.7.4.9. must be changed together with 11.7.4.10.

Subcommittee votes: 17	YES: 12	NO: 2	ABS.: 3

bt) 11.7.5.4. Organisation of Starts **Switzerland**

Modify the following section: 11.7.5.4. with the addition of two sentences:

In normal situations the circles will overlap each other but the centres should never be closer than 10 metres apart as in the diagram above. A competitor (pilot) and one helper may stay at the landing area either inside or outside the landing circles.

The timekeepers must stand outside the landing circles behind the pilots.

The LSO (landing safety officer) supervises the pilots, helpers and timekeepers and the measuring team of the landing points to prevent obstructions to landing models.

Reason: Safety! The pilots, helpers and timekeepers run like chickens through the landing circles after their flight and have already caused collisions and severe obstructions of the models landing later.

Subcommittee votes: 17	YES: 16	NO: 0	ABS.: 1

bu) 11.7.5.3. Organisation of Starts **Ukraine**

Modify the following section as shown below:

11.7.5.3. Each group of competitors has ~~12~~ **10** minutes of working time to perform an official fight. In the case of the working time being exceeded (a delay in landing), the competitor will be disqualified for the round.

Reason: See previous reason for this section of proposals from Ukraine.

Subcommittee votes: 17	YES: 5	NO: 8	ABS.: 4

Part Twelve – Gyrocopter Duration Competition (Class S9)

bv) 12.5 Sub-Classes **Switzerland**

Modify the tables as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	~~MAXIMUM WEIGHT (g)~~	MAXIMUM FLIGHT TIME (sec.)
S9A/2	**0,00 – 1,25**		**180**
S9A	1,26 - 2,50	~~60~~	180
~~S9B~~	~~2,51 - 5,00~~	~~90~~	~~240~~
~~S9C~~	~~5,01 - 10,00~~	~~150~~	~~300~~
~~S9D~~	~~10,01 - 20,00~~	~~200~~	~~360~~

12.6.5 Time Duration Triathlon Tournament (Provisional) Sub-Classes

CLASS	TOTAL IMPULSE (Newton-seconds)	~~MAXIMUM WEIGHT (g)~~	MAXIMUM FLIGHT TIME (sec.)
S12A/2/P	**0,00 – 1,25**		**180**
S12A/P	1,26 - 2,50	~~60~~	180
~~S12B/P~~	~~2,51 - 5,00~~	~~90~~	~~240~~
~~S12C/P~~	~~5,01 - 10,00~~	~~150~~	~~300~~
~~S12D/P~~	~~10,01 - 20,00~~	~~200~~	~~360~~

Reason: Add Class, delete old Class. *See also Items i (2.4.4), ao (7.4), av (8.4)*

Subcommittee votes: 17	YES: 1	NO: 15	ABS.: 1

bw) 12.5 Sub-Classes **Italy**

Modify the tables as shown below:

CLASS	TOTAL IMPULSE (~~Newton-seconds~~**Ns**)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (~~sec.~~**s**)
S9A/2	**0.00 - 1.25**	**60**	**180**
S9A3/4	**1.26 - 1.88**	**60**	**180**
S9A	~~0,00~~**1.89** - 2~~,~~.50	60	180

S9B	2~~,~~.51 - 5~~,~~.00	90	240

…

13.6. Sub-Classes

CLASS	TOTAL IMPULSE (~~Newton-seconds~~**Ns**)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (~~sec.~~) **(s)**
S10A/2	**0.00 - 1.25**	**60**	**180**
S10A3/4	**1.26 - 1.88**	**60**	**180**
S10A	~~0,00~~**1.89** - 2~~,~~.50	60	180
S10B	2~~,~~.51 - 5~~,~~.00	90	240

…

12.6.5. Sub-Classes

CLASS	TOTAL IMPULSE (~~Newton-seconds~~**Ns**)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (~~sec.~~**s**)
S12A/2	**0.00 - 1.25**	**60**	**180**
S12A3/4	**1.26 - 1.88**	**60**	**180**
S12A	~~0,00~~**1.89** - 2~~,~~.50	60	180
S12B/P	2~~,~~.51 - 5~~,~~.00	90	240

…

Reason: Two new classes of engines that can be used in competition are introduced: A/2 and A3/4, endowed respectively with 50% and 75% of the total impulse of the class A, the least powerful to date. *See also Items n (2.44 , aq (7.4), ba (8.4)*

Subcommittee votes: 17	YES: 5	NO: 11	ABS.: 1

bx) 12.5 Sub-Classes **Ukraine**

Modify the tables as shown below:

CLASS	TOTAL IMPULSE (Newton-seconds)	~~MAXIMUM WEIGHT (g)~~	MAXIMUM FLIGHT TIME (sec.)
S9A/2	**0,00 – 1,25**	**60**	**180**
S9A	**1,26** - 2,50	~~60~~	180
S9B	2,51 - 5,00	90	240
~~S9C~~	~~5,01 - 10,00~~	~~150~~	~~300~~
~~S9D~~	~~10,01 - 20,00~~	~~200~~	~~360~~

12.6.5 Time Duration Triathlon Tournament (Provisional) Sub-Classes

CLASS	TOTAL IMPULSE (Newton-seconds)	MAXIMUM WEIGHT (g)	MAXIMUM FLIGHT TIME (sec.)
S12A/2	**0,00 – 1,25**	**60**	**180**
S12A	**1,26** - 2,50	60	180
S12B/P	2,51 - 5,00	90	240

~~S12C/P~~	~~5,01 - 10,00~~	~~150~~	~~300~~
~~S12D/P~~	~~10,01 - 20,00~~	~~200~~	~~360~~

Reason: See previous reason for the similar proposals. *See also Items k (2.4.4), s (4.1), ap (7.4), aw (8.4)*

Subcommittee votes: 17	YES: 3	NO: 13	ABS.: 1

by) 12.5 Sub-Classes **Russia**

Add a column to the table as shown below:

CLASS	**MINIMUM LENGTH OF BLADE (mm)**
S9A	**700**
S9B	**800**
S9C	**900**
S9D	**1000**

Reason: The use of rocket planes with a large wing size will reduce the flight altitude of the model and improve visibility for timekeepers, and facilitate the search for models.

Subcommittee votes: 17	YES: 1	NO: 15	ABS.: 1

Annex 1 – Scale Space Models Judge's Guide

bz) Scale Judging Tables **Slovak Republic**

*Amend the Scale judging tables. Also, if rule change applied, change the number of points in Paragraphs 9.11.2-9.11.5 accordingly to the numbers in the tables in Annex 1. See **Annex 7l – Space Annex 1 – Scale Judging Tables – Item bz**.*

Note: Version 2 was supplied for Plenary 2021.

Reason: The intention of this proposal is to make the current rules easier for both – competitors and judges. As praxis has shown a bigger focus has to be brought to the realism and stability of the flight as it currently plays a more minor role than it should. Beside this, the smaller difference between static/flight motivates people to build a wider range of prototypes.

Subcommittee votes: 17	YES: 8	NO: 5	ABS.: 4

ca) Scale Judging Tables **Ukraine**

*Modify the Scale judging tables. See **Annex 7m - Space Annex 1 – Scale Judging Tables – Item ca.***

Reason: These changes are proposed for improvement in the Scale Model category. They should empower competitors to realize the potential embedded in each space model. Scale judges will make it easier to calculate points when assessing scale accuracy and flight demonstration.

Subcommittee votes: 17	YES: 1	NO: 12	ABS.: 4

cb) Scale Judging Tables **Russia**

Modify 9.11.4. 'Degree of Difficulty' and the Scale judging tables.
*See **Annex 7n Space Annex 1 – Scale Judging Tables – Item cb.***

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~~ **150** points. Factors to be considered include …

Reason: - Improving the objectivity of assessment: comparison of the number of similar elements.
- Configuration. 20 points not enough for the differentiated assessment between complex models with side blocks and a simple model "cylinder with cone".
- External components and Detailing. A fairer assessment of the participant's work. Production of external components and parts takes a significant part of the total time to manufacture the model.
- Originality. Practice has shown that there are no more new models. In addition, it is necessary to exclude the random element of evaluation in the exact technical sport.
- Improving the objectivity of the assessment: assessing the elements of the flight in accordance with the complexity of the demonstration.
- Divide the "Special effects" category into 3 subcategories with varying difficulty demonstrating special effects.
- List the most common special effects and evaluate them according to the complexity of the demonstration. Demonstration of smoke before the flight is much easier than the demonstration of the separation of the side blocks (busters).
- Fair encouragement for participants demonstrating difficult special effects.

Subcommittee votes: 17	YES: 1	NO: 12	ABS.: 4

Annex 2 – Scale Space Models Judges' and Organisers' Guide

cc) 2. Judges Tasks **Ukraine**

Modify the following sections as shown below, with the deletion in c. and the addition of a final sentence, named f.:

Special Judge Duties:
c. ~~Radio control events require that all transmitters (including 2.4 GHz) be impounded and kept under control of a steward and be issued to the competitor at flight time then returned.~~ The steward or the judge will also monitor radio frequencies to detect interference and communicate this information to the pilot.

Engine Test Officials:

f. The calibration control of electronic equipment undergoing static rocket test shall meet the requirements of 3.12.1; 3.12.2; 3.12.3; 3.13.4

Reason: Clarifications and changes are agreed in Annex 2 to the GENERAL REGULATIONS and SPECIAL RULES OF SPATIAL COMPETITIONS, Championships and entries.

Subcommittee votes: 17	YES: 13	NO: 3	ABS.: 1

cd) 4. Specific Events **Ukraine**

*Modify d.1., d.4., and d.5. in **Scale Events** as shown below:*

d.1. Flight Characteristics-Staging: Stages must separate step by step. If the 3rd stage separate simultaneously with the 2nd stage the flight will be considered two stage only. ~~With Saturn 1B and Soyuz if the competitor performs a powered flight of command module, this shall be evaluated as "modeller's third stage" , according to paragraph 2.3.1.~~

d.4. ~~Flight Characteristics-Recovery: For single stage, one parachute up to 10 points will be awarded. If a single stage rocket separates up to 20 points will be awarded. With multistage models deployment of a parachute will be awarded up to 10 points and a deployment of streamer 5 points. Maximum recovery points in any case may not exceed 40.~~

d.4. Flight Recovery Characteristics: Damage points are not calculated in accordance with paragraph 1.1. Part One - GENERAL DEFINITIONS: All parts of the space model, separated during flight, must be returned through the rescue system. To prove if the scale models to be launched are the same models which were submitted for static judging, judges will designate each model with an appropriate marking during the static judging.

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.~~

Reason: Clarifications and changes are agreed in Annex 2 to the GENERAL REGULATIONS and SPECIAL RULES OF SPATIAL COMPETITIONS, Championships and entries.

Subcommittee votes: 17	YES: 4	NO: 6	ABS.: 7

ce) 4. Specific Events **Slovak Republic**

Modify d.5. in Scale Events as shown below:

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~~ **launch vehicles** up to date, thus: Ariane 1, 2, 3, 4 and 5. These

five ~~variants~~ **launch vehicles** are defined as **different** scale model rocket prototypes.

Reason: More understandable definition for a scale model rocket prototype.

Subcommittee votes: 17	YES: 13	NO: 0	ABS.: 4

cf) 4. Specific Events **Switzerland**

Delete the final sentence in 4.a. Rocket Glider and Boost Glider:

~~In classes S4, S8 and S10, a flight is declared official if the model maintains a stable aerodynamic glide for at least 60 seconds, or it lands by stable flight.~~

Reason: Conflicting with 4.6.5.

Subcommittee votes: 17	YES: 15	NO: 0	ABS.: 2

cg) 5. Organisers' Tasks **Switzerland**

Add a paragraph (d.) to this section as shown below:

d. Landing Safety Officer (LSO) - Organiser of an international S8 contest will appoint a person to act as Landing Safety Officer (LSO). LSO can be from the organising NAC. When the there are junior and senior classifications at the same place and at the same time organiser shall appoint two LSO, one for senior and the other for junior classification.

Reason: Safety! The pilots, helpers and timekeepers run like chickens through the landing circles after their flight and have already caused collisions and severe obstructions of the models landing later.

Technical Secretary Note: In Item ak) it was proposed to add a new paragraph 5.d. Contest Documentation Software. If both that proposal and this one are successful, the above proposal will be 5.d., and the Contest Documentation Software will become 5.e.

Subcommittee votes: 17	YES: 16	NO: 0	ABS.: 1

Annex 3 – Space Models World Cup

ch) 1. Classes **Switzerland**

Modify this section with the deletion and addition as shown below:

~~The following separate classes are recognised for World Cup Competition: S4A, S6A, S7, S8E/P and S9A.~~

The following separate classes are recognised for World Cup Competition: S4, S6, S7, S8-P and S9.

The subclasses to be performed are defined in CIAM General Rules C.15.2.2

Reason: Clarification

Subcommittee votes: 17	YES: 12	NO: 3	ABS.: 2

Annex 5 – FAI Space Model Safety Code

ci) Proposed new Annex 5 – FAI Space Model Safety Code **Space Subcommittee**

*For the text of the proposed new Annex 5, see **Annex 7o**:*

Note: This is a replacement for the submission from USA for the 2020 Plenary Meeting. This replacement version of the proposed new Annex 5 is based on meetings and discussions of an international working group on safety organised by Zoran Pelagic.

Reason: This is a proposed new Annex to the Space Model Code, to provide a complete Safety Code that has all of the safety-related requirements from all parts of the Code brought together and summarized in one place for easy reference.

Subcommittee votes: 17	YES: 11	NO: 4	ABS.: 2

cj) Proposed new Annex 5 – FAI Space Model Safety Code **Croatia**

*For the text of the proposed new Annex 5, see **Annex 7p – Launch Boxes and FAI Space Model Safety Code**:*

Reason: This is a proposed new Annex to the Space Model Code, together with landing site dimensions which were proposed for a previous rule change.

Subcommittee votes: 17	YES: 1	NO: 14	ABS.: 2

Annex 6 – Common Motor Source

ck) Proposed new Annex 6 – Common Motor Source **USA**

For the text of the proposed new Annex 6, see ***Annex 7q – Space Annex 6 – Common Motor Source***

Reason: Providing a "common motor source" for space model contests could improve transportation logistics, expedite motor testing, and provide improved competition by providing a common source of motors for all competitors for specified events at a contest. A common motor source can improve competition.

Consequential Amendments in CIAM General Rules

Technical Secretary Note: Changes to B.2.2 Classification of Space Models which lists the space model classes and sub-classes, and C.10.2 Number of Models Eligible for Entry (Class S – Space Models) will be made as a consequence of successful proposals.

Proposals relating to CGR rule C.15.2.2 Current World Championships for Class S (Space Models) have been located below for Plenary's consideration.

Subcommittee votes: 17	YES: 6	NO: 9	ABS.: 2

cl) CGR 15.2.2 Current World Championships for Class S (Space Models) **Italy**

Amend this section as shown below, and add a sentence at the end:

C.15.2.2 Class S (Space Models)
The Space Models World Championships are held in **even years**. The following classes (or subclasses) are recognised for the Space Models World Championships:

a) Senior

S1B~~B~~**A,** S3A**/2,** S4A**/2 or S4A3/4,** S5C**,** S6A**/2 or S6A3/4,** S7**,** S8E/P**,** S9A**/2 or S9A3/4.**

b) Junior
S1A**,** S3A**/2,** S4A**/2 or S4A3/4,** S5B**,** S6A**/2 or S6A3/4,** S7**,** S8D**,** S9A**/2 or S9A3/4.**

The choice between S4A/2 or S4A3/4, and S6A/2 or S6A3/4, and S9A/2 or S9A3/4 classes, both for seniors and juniors, is in charge of the organizer who, based on appropriate evaluations on the chosen competition field and other logistical considerations, will communicate in Bulletin No. 1 of the event.

Reason: Two new classes of engines that can be used in competition are introduced: A/2 and A3/4, endowed respectively with 50% and 75% of the total impulse of the class A, the least powerful to date.

Subcommittee votes: 17	YES: 3	NO: 14	ABS.: 0

cm) CGR 15.2.2 Current World Championships for Class S **Switzerland**

Amend this section as shown below:

The Space Models World Championships are held in **even years**. The following classes (or subclasses) are recognised for the Space Models World Championships:

a) Senior

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

S1A / S3A/2 or S12A/2/P / S4A/2 / S5C / S6A/2 or S6-G / S7 / S8-P / S9A/2

~~*Note: Subclass S8E/P complies with sub-class S8E; the purpose of the contest in S8E/P is to achieve as exactly as possible the given time of 360 seconds and to precisely land the model in a specified landing circle of 10 metres radius.*~~

b) Junior

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

S1A Single Stage / S3A/2 or S12A/2/P / S4A/2 / S5B Single Stage / S6A/2 or S6-G / S7 / S8D / S9A/2

Reason: Simplification.

Subcommittee votes: 17	YES: 2	NO: 15	ABS.: 0

cn) CGR 15.2.2 Current World Championships for Class S **Slovak Republic**

Amend this section as shown below:

The Space Models World Championships are held in **even years**. ~~The following classes (or subclasses) are recognised for the Space Models World Championships:~~

~~a) Senior~~

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

~~*Note: Subclass S8E/P complies with sub-class S8E; the purpose of the contest in S8E/P is to achieve as exactly as possible the given time of 360 seconds and to precisely land the model in a specified landing circle of 10 metres radius.*~~

The following event categories are recognised as World Championships for Space Models:

a) Altitude Models – S1, or S2/P
b) Parachute duration models – S3 or S12P
c) Boost glider Boost Glider duration models – S4 or Rocket Gliders S8B for senior competition
d) Scale Altitude Models – S5
e) Streamer Duration Models – S6 or S6/P
f) Scale – S7
g) Rocket Glider Duration And Precision Landing Models – S8
h) Gyrocopter Duration Models – S9
The events and total impulse classes shall be selected by the contest organiser. One event is required for each category. Different events and total impulse classes may be selected for Senior and Junior classes.

~~b) Junior~~

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

Reason: The proposal is a simplification on the rules, and also gives the organizer the possibility to choose the events, which makes the competitions more interesting and versatile.

Subcommittee votes: 17	YES: 8	NO: 9	ABS.: 0

co) CGR 15.2.2 Current World Championships for Class S **Ukraine**

Amend this section as shown below:

The Space Models World Championships are held in **even** years. The following classes (or subclasses) are recognised for the Space Models World Championships:

a) Senior

S1B or **S2/P,** S3A **or S12P,** S4A**/2** or S4A**,** S5C**,** S6A **or S6A/P,** S7**,** S8**-P for D or E,** S9A**.**

~~*Note: Subclass S8E/P complies with sub-class S8E; the purpose of the contest in S8E/P is to achieve as exactly as possible the given time of 360 seconds and to precisely land the model in a specified landing circle of 10 metres radius. Note: Subclass S8E/P complies with sub-class S8E; the purpose of the contest in S8E/P is to achieve as exactly as possible the given time of 360 seconds and to precisely land the model in a specified landing circle of 10 metres radius.*~~

Note: The S8D / P and S8E / P subclasses are of the S8-P class, and the aim of the S8-P is to reach the set time of 360 seconds as accurately as possible and to accurately land the model within a specified landing circle within 10 metres; in the final - within 3 metres.

a) Junior

S1A or **S2/P,** S3A**/2 or S12P,** S4A**/2,** S5B**,** S6A**/2 or S6A/P,** S7**,** S8D**,** S9A**/2.**

The choice between classes S1B or S2 / P, S4A / 2 or S4A, S6A or S6A / P, S8D / P or S8E / P and S3A or S12P, both for seniors and juniors, is made by the organizer of the Continental or World Championships, who should indicate classes in event Bulletin # 1.

Reason: The introduction of new classes of models of rockets in adults and juniors will give a powerful impetus to the development of new technologies, will make rocket sports for the spectators and sponsors more attractive. It will allow the organizers of European and World Championships to be more flexible in the choice of rocket model classes, depending on the size of the flying field.

Subcommittee votes: 17	YES: 1	NO: 16	ABS.: 0

14.4 Volume CIAM Records

a) 4.5.3 Homologation Requirements (Space Models) **Serbia**

Amend the section of 4.5.3.1 as shown below:

4.5.3.1. The competition flight card of the submitted record attempt shall be marked, "Record Attempt." ~~Tracking station angular~~ **Record attempt result** data must be entered in ink.

In addition see the following proposal b)

Subcommittee votes: 17	YES: 14	NO: 0	ABS.: 3

b) Forms: Application for record confirmation – Space Models **Serbia**

In this suite of forms, available from the 'Documents' section of the CIAM website, delete pages 4 & 5 (Table V Sheet 1 & 2) and replace with a single page form. Refer to ***Agenda Annex 7a****:* ***Space Altitude Record Attempt Form****.*

Reason: Electronic altimeters have been used for altitude measurements in space models altitude classes S1, S2 and S5 for last ten years. Triangulation Method is not being used anymore because of slow procedure and limited accuracy of calculated altitudes in comparison with electronic measurements. Therefore it is necessary to change this form in relation with present situation.

Subcommittee votes: 17	YES: 14	NO: 0	ABS.: 3

c) Forms: Record Dossier Check Form – Space Models **Serbia**

In this suite of forms, available from the 'Documents' section of the CIAM website, amend the above form. Refer to ***Agenda Annex 7h****:* ***Record Dossier Check List****.*

Reason: CIAM Sporting Code 4 was reorganized several years ago. So all paragraphs on aeromodelling and spacemodelling records were moved from Volume ABC Section C and Volume Space Models Chapter 14 to a new Volume CIAM Records. However, reference paragraphs in the Record Dossier Check Form - Space Models were not renumbered and that is necessary to do now to allow interconnection between this form and homologation requirements and homologation data defined in Volume Records, which should be submitted to CIAM for confirmation of records.

Subcommittee votes: 17	YES: 14	NO: 0	ABS.: 3