



2023 US Space Modeling Team Bulletin #1 – October 2021 Team Selection

The 23rd Federation Aeronautique Internationale (FAI) World Championships for Space Models will be held July 1-8, 2023 in Austin, Texas. This will be the first such championships hosted by the US since 1992. We expect teams from at least 20 other nations will participate.

The National Association of Rocketry (NAR) is responsible for organizing the U.S. Senior and Junior Teams that will compete in the 2023 World Championships. This bulletin outlines the procedures that will be used to competitively select the Junior and Senior teams.

The NAR FAI Activities Committee for this contest cycle is John Langford, Trip Barber, Chris Flanigan, Mike Nowak, and Matt Steele. This group will serve as the contest jury and oversee the selection process.

Basic Ground Rules

- A competitive flyoff for US Team selection will be held July 16-17, 2022 in conjunction with the 2022 North Coast Cup FAI contest and the NAR Annual Meet (NARAM-63) in Springfield, Missouri.
- The team selection flyoff will be flown under the 2022 edition of the FAI Sporting Code. The FAI code may be found at <https://www.fai.org/page/ciam-code>. The 2022 edition will be released in late December 2021. In cases where FAI and NAR rules conflict, the NAR Model Rocket Safety Code shall have highest precedence, followed by the FAI Sporting Code, except as modified herein or in subsequent bulletins.
 - Extensive details, advice, and designs for the FAI events can be found on the NAR website at <http://www.nar.org/contest-flying/fai-spacemodeling/>
- Contest director for the flyoffs will be Matt Steele (MattMSteele@gmail.com).
- Anyone participating in the flyoffs must also register as either a contestant or a sport flyer at NARAM-63 and must be a current member of the NAR.
 - Competitors who will have reached the age of 19 by December 31, 2023 will compete for the Senior Team. Those younger will compete for the Junior Team.
- Flyoffs for the S2P, S3A, S4A, S6A, S8E/P, and S9A events will be conducted in conjunction with the flying of these same events in the North Coast Cup, an FAI sanctioned World Cup and Open International contest. Flyoff participants have the option to also compete in that contest, if they have a current FAI license.

- Competitors in either age division who wish to participate in the flyoffs in S2P, S3A, S4A, S6A, and S9A must earn eligibility for participation by demonstrating their proficiency in flying through conducting and reporting the results of flights in these events at an NAR launch between January 1, 2022 and June 30, 2022. The procedures for conducting and reporting these flights will be identical to the NAR NRC process, and a separate national “scoreboard” of flight results for these events will be maintained on the NAR website and available by January 1. NAR membership is required to participate in this process. Additional paths to selection may be developed and announced for Junior Team competitors if this becomes necessary in order to field a robust Junior team.
 - Competitors may conduct and report flights as often as they wish in attempts to better their posted score.
 - Flights will be conducted in accordance with FAI rules, with the following exceptions for S3A, S4A, S6A, and S9A: three models are permitted; all flights will be flown with 1/2A motors; and no additional flights are required in the event of three “maxes”.
 - For S2P, any altimeter approved for NAR competition may be used in qualifying flights, but only the FAI-approved Adrel altimeters may be used in the fly-offs.
 - A minimum of the top 10 competitors in each event, in each of the two age divisions, based on scores conducted by June 30, 2022 and posted by July 5, will be permitted to enter the final in-person team selection flyoff for that event.
- The US team for each event in each age division will be named as follows: All qualifiers in each event will be ranked based on flyoff performance. Team slots will be offered to qualifiers in order of rank, until a three-member team has been named (or four members if one of the members is female) or until all flyers with a score equal to 50% or better of the top score have been offered a slot. Further assignments will be at the discretion of the NAR FAI Activities Committee. Flyers with scores below 50% of the top score are not guaranteed an assignment.
- Pending availability of qualified applicants, no person will be named to the team for more than two events. Those who are ranked in the top three of more than two events based on flyoff scores must pick which two events they will compete in once the final flyoff standings are announced.
- Registration for the flyoffs will be handled through the NARAM-63 website (www.naram.org) once it opens. There will be a \$20 fee for participation in the flyoffs to cover the cost of the rocket motors provided to participants. There will be a separate entry fee for those who wish to compete in the North Coast Cup in connection with the flyoffs.
- As a condition of application to become part of the US Team, all applicants agree to be responsible for the following costs and obligations if selected:
 - Maintaining membership in the NAR through July 2023.
 - Holding an FAI license issued through the National Aeronautic Association and holding a membership in the Academy of Model Aeronautics, both by no later than February 2023, and both of which must be valid through July 2023.

- Placing a non-refundable deposit of within 30 days of selection and the balance of the non-refundable team fees, as shown below:

Category	Deposit (August 2022)	Balance (February 2023)	Total (w/o travel)
Seniors	\$300	\$TBD	\$TBD
Juniors	\$300	-0-	\$300
Supporters	-0-	\$TBD	\$TBD

These fees will cover contest entry fees and room and board at the contest, once these have been established. The costs for entry fees and room and board for Junior team members that are above \$300 will be covered by a subsidy provided by the NAR. Team uniforms are funded by grants from the NAR and Estes Industries for competitors and managers, and will be available for purchase by supporters. Travel to and from the contest site is not included and is the responsibility of the team member.

- Regularly practice by building and flying models for their event(s) in the interim between selection and the championship. Team members may be asked to provide their team manager regular assessments of their progress.
- Attending either a US World Cup or a separate US Team practice session (if one is held) after team selection and prior to the WSMC.

Events

Events for the flyoffs are those currently announced for the World Championships. Those marked with an asterisk will also be part of the North Coast Cup. All events in the 2.5 N-sec power class will be flown with **1/2A motors**:

1. S2P – (Precision Fragile Payload) - Senior and Junior
2. S3A* (Parachute Duration Models - 0 to 2.5 NS) - Senior and Junior
3. S4A* (Boost Glider Duration Models 0 to 2.5 NS) - Senior and Junior
4. S5B (Scale Altitude Model 2.51-5.0 NS) – Junior
5. S5C (Scale Altitude Model 5.01 to 10.0 NS) - Senior
6. S6A* (Streamer Duration Models - 0 to 2.5 NS) - Senior and Junior
7. S7 (Scale) - Senior and Junior
8. S8D (Rocket Glider Duration - 10.01 to 20.00 NS) - Junior
9. S8E/P* (Rocket Glider Duration and Precision Landing Models) - Senior
10. S9A* (Gyrocopter Duration Models - 0 to 2.5 NS) - Senior and Junior

Motors

Only motors with a current contest approval from the NAR may be used in the flyoffs. Those competing in the North Coast Cup may not use reloadable motors as these are not permitted under FAI rules.

Motor Selection.

Only the following motors will be allowed for the 2022 North Coast Cup/US Team Flyoffs:

S2P: Estes D12; Aerotech Single Use E20, E30, F20W, F23FJ, F27R, F42T, F52C, F67W (supplied by competitor)

S3A: Estes 1/2A3-2T, Estes 1/2A3-4T (supplied by meet organizer)

S4A: Estes 1/2A3-2T, Estes 1/2A3-4T (supplied by meet organizer)

S5B: Estes B6-0 B6-4, B6-6, Quest B4-4, B4-6, B6W-4, B6W-6 (supplied by competitor)

S5C: Estes B6-0, B6-4, B6-6, C5-3, C6-3, C6-5, C6-7; Aerotech C12-4, C12-6, C12-8 (supplied by competitor)

S6A: Estes 1/2A3-2T, Estes 1/2A3-4T (supplied by meet organizer)

S7: Any Estes or Aerotech NAR contest certified motor with 80 or less n-sec total impulse and 30 grams or less propellant weight (supplied by competitor)

S8D: Aerotech Reloadable D2.3-P (reload kits supplied by meet organizer)

S8E/P: Aerotech Reloadable E6-RC (reload kits supplied by meet organizer)

S9A: Estes 1/2A3-2T, Estes 1/2A3-4T (supplied by meet organizer)

Special Provisions

- All models shall be inspected for conformance with FAI rules prior to the start of the round. Check-in on the evening before flight is strongly preferred.
- A third model may be used in the third round in S3A, S4A, S6A and S9A. Any flight using the third model will not be an official flight in the North Coast Cup competition but will count towards team selection.
- Altitude events (S2/P, and S5) must use an Adrel ALT-BMP altimeter. You may provide your own, or there will be altimeters available for free rental with a deposit refundable on return.
- For Scale (S7), models will be judged for craftsmanship, but a boilerplate may be flown. S5 Scale Altitude must fly the model that is judged – no substitutions.

- Consistent with FAI rules, piston launchers may not be used in S2P or S5, and “floating head” piston launchers where the following FAI rule requirements are not met may not be used in any event.
 - During the launch of the model, the moving section of the gas-dynamic device must not detach from the end of the fixed section of the gas-dynamic device. No part of the launch device may lose contact with the ground.
- Depending on the availability of timers, we may elect to fly duration events with one timer per model.

For More Information

Please contact John Langford at jslangford@me.com or Trip Barber at ahbarber@alum.mit.edu for questions on team selection; and Matt Steele at MattMSteele@gmail.com for questions on flyoff management or the North Coast Cup.