

National Association of Rocketry
in partnership with the
Academy of Model Aeronautics
present



The FAI World Championships for Space Models
For Juniors and Seniors

2 July 2023 (Opening Ceremony) through 7 July 2023 (Closing Ceremony)

Austin, Texas (metropolitan area)

United States of America

Bulletin 4, 22 June 2023



Event Website

nar.org/championships

Event Leadership

Event Director:	James Duffy (USA)
Contest Director:	Dr. Michael Nowak (USA)
Data Processing:	Denis Khmil (UKR)
Housing Director:	David Bellhorn (USA)
Secretary:	Jonathan Rains (USA)
Comptroller:	Mark Bundick (USA)
S2/P Director:	Jonathan Rains (USA)
S7 Director:	Dr. Chris Kidwell (USA)
S8 Director:	Kevin Johnson (USA)
NAR President:	Dr. John Hochheimer

FAI Jury

Jury President	Antonis Papadopoulos (GRE)
Jury Member	Dr. John Langford (USA)
Jury Member	Dr. Zoran Pelagic (SVK)
Reserve	Narve Jensen (NOR)
Honorary Reserve Jury Member	Michael Ryabokon (UKR)
Honorary Jury Member	Edward Pearson (USA)

S5 and S7 Scale Judges

Chief Judge	Zivan Josipovic (SRB)
Judge	Marcin Bielecki (POL)
Judge	Matej Hagara (SVK)
Judge	Dr. Bob Kreutz (USA)
Judge	Dan Popa (ROM)
Chief Measurement Judge	Pat McCarthy (USA)
Measurement Judge	Bob Ferrante (USA)
Measurement Judge	John Brohm (CAN)

Range Safety Officers

Range Safety Officers	Ewa Dudziak Przybytek (POL), Denis Pridanikov (UKR)
Reserve RSO	Janka Kajanova (SVK)
Assistant RSOs	John Hochheimer (USA), Tony Reynolds (USA)
S8 Landing Safety Officer (LSO)	David O'Bryan (USA)

Engine Testing

Team Chiefs	Matt Steele (USA), Chris Flanigan (USA)
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Electronic Altitude Measurement Officers

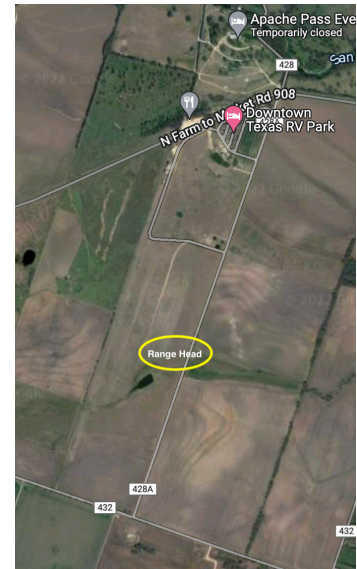
Chief	Dan Wolf (USA)
Assistant	Bernard Cawley (USA)
Assistant	Will Marchant (USA)

Organizers and Location

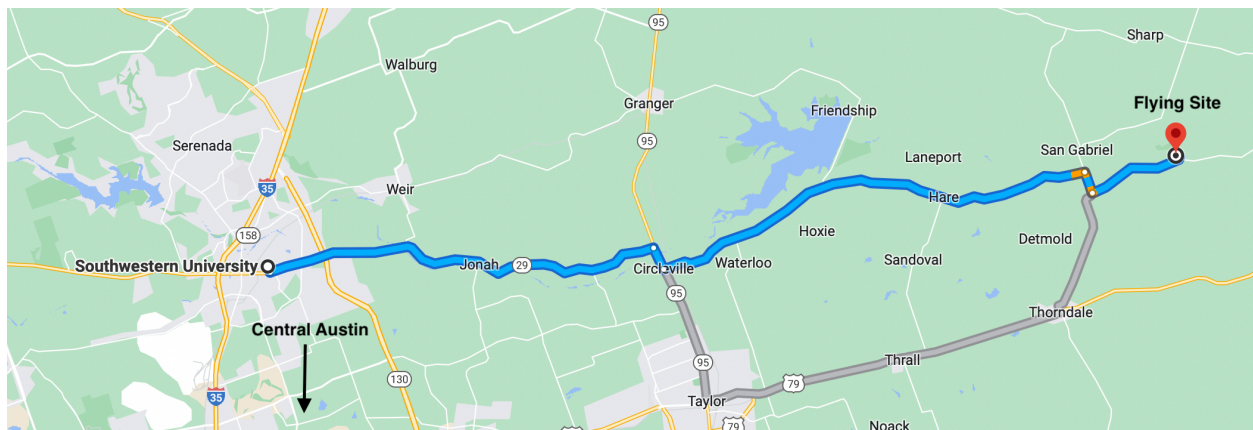
The Championships will be organized by the National Association of Rocketry in partnership with the Academy of Model Aeronautics.

The competition field for the World Championships will be located at the Apache Pass Event Center Airport, west-northwest of Rockdale, TX. The range and recovery area will cover approximately 500 acres (200 hectares). GPS coordinates for the field are 30°40'49.8"N 97°08'33.4"W (30.680505, -97.142596).

The primary housing location for competitors and team supporters will be in student housing located on the campus of Southwestern University in Georgetown, Texas, approximately 34 miles (55km) from the flying site. Cafeteria-style breakfast and dinner choices will be available for participants who choose this housing option. Participants who prefer more traditional hotel arrangements will have the opportunity to choose from many options offering a wide range of amenities and prices.



Overview of flying site



The housing and competition sites are separated by 35 miles/56km of lightly traveled roads.

Competition Classes

Seniors: S1B (two stage), S3A, S4A, S5C, S6A, S7, S8P, S9A, S2/P
Juniors: S1A (single stage), S3A, S4A, S5B, S6A, S7, S8D, S9A, S2/P

Senior and Junior S2/P will be contested as Open International Cup events.

Rules and Safety Code

The Championships will be administered according to the FAI Sporting Code, Section 4 CIAM General Rules (2023 Edition) and Section 4 Volume S, Space Models (2023 Edition). The FAI General Section and FAI Code of Ethics will also apply.

All flight operations at this event will be conducted according to the FAI Space Model Safety Code (FAI Sporting Code, Section 4, Aeromodelling, Volume S, Space Models, Annex 5) and the National Association of Rocketry Model Rocket Safety Code.

Anti-Doping Statement

If a competitor has to take, by a medical condition, any of the substances listed on the WADA Prohibited List then he must have a Therapeutic Use Exemption from the FAI. www.wada-ama.org
Statement from the FAI anti-doping regulations: "If you regularly take medication prescribed by your doctor and this medication is on the WADA prohibited list, you need to get a form called a TUE (therapeutic use exemption) filled out by your doctor. International level athletes must send the form to the FAI Secretariat, national level athletes send it to their National Air Sport Control."

FAI Sporting License

Each competitor and Team Manager must possess an FAI Sporting License valid for the year of the Championship. This license must be registered in the FAI licenses database. The holder of an FAI Sporting License may be required to produce an official document bearing their photograph and signature as proof of identity.

Protests

Any protests must be presented in writing to the Contest Director and must be accompanied by the deposit of a fee of €50 (or equivalent USD amount). The deposit shall be returned only if the protest is upheld.

Official Language

English

Measurement of Flight Altitudes

Adrel Altimeters will be used to measure altitudes in classes S1A, S1B, S5C, S5B, and S2/P. The organizer shall provide electronic altimeters for all entrants in these classes. Every team shall submit a €100 (or equivalent USD amount) deposit for each altimeter that will be issued. This deposit must be paid prior to the competitor's first flight in each event, and will be returned following the event when each altimeter and battery is returned. If an altimeter or battery is not returned or is damaged the deposit will be retained by the organizer. If an altimeter or battery is lost during the competition, a new deposit must be paid to allow the competitor to continue participating in the competition.

Motors

All motors used in this Championship must be legal and certified for use, transport, and sale in the United States. To simplify the challenges traditionally associated with motor transport to space modeling events, the organizers will provide all motors to be used by competitors at this World Championships, as allowed by Rule 3.10.3 of the Space Models Sporting Code. By removing the burden of motor transport from the participating teams, this will be an exciting, efficient, equitable, and safe event. Only motors provided by the organizers may be used at this Championships.

Motors will be tested well in advance of the event, with testing data provided to all participating teams in accordance with Rule 3.10.1 of the Space Models Sporting Code. Additional information concerning the motors to be used at this Championship may be found in the Motor Information Appendix accompanying this Bulletin.

Motors for S1, S3, S4, S5, S6, and S9 will be available on the flying field at no cost to competitors for both practice and competition. An order form for motors to be used in S7, S8, and S2/P is distributed with this Bulletin. Please submit payment for any needed S2/P, S7, and S8 motors with your registration payment.

Dethermalizers

Due to the high risk of fire, dethermalizers that use burning or smoldering media (such as fuse dethermalizers) may not be used. Electronic timer-based and radio actuated dethermalizers are permissible. *Please contact the Contest Director if you have any questions concerning the appropriateness of your dethermalizer for this contest!*

Special UAS Information Concerning Regulations for S8D and S8P Flyers

The United States has very specific requirements for individuals flying UAS aircraft (Unmanned Aircraft Systems), such as radio control aircraft. Non-US citizens are required to follow the same model aircraft regulations that US citizens are required to follow, including following AMA safety guidelines, registering at [FAA's Drone Zone](#), and taking [The Recreational UAS Safety Test \(TRUST\)](#). A portal has been established through the World Championship website (nar.org/championships) to assist competitors and team managers in complying with these regulations prior to arriving in the US.

A waiver to Section 44809 §(a)(6) of the Federal Aviation Regulations allowing S8 flights up to 1,200' AGL has been secured with the assistance of the Academy of Model Aeronautics.

Launch Rails

A limited number of 6'/1.8m rail launchers will be available for use by teams for the S2/P event on a shared basis. Rail guides (rail buttons) will be available on the field for participating contestants.

Composition of a National Team

Each National Aero Club or National Federation that is a member of the FAI and CIAM may enter a team consisting of the following:

- * Senior Team Manager
- * Senior Team Manager Assistant
- * Senior Competitors
 - * In each class a maximum of three competitors, or a maximum of four competitors if at least one competitor is female.
- * Junior Team Manager
- * Junior Team Manager Assistant
- * Junior Competitors
 - * In each class a maximum of three competitors, or a maximum of four competitors if at least one competitor is female.
- * The reigning Senior and Junior World Champions
- * Official helpers and supporters
- * Each National Team may bring one timekeeper who will be provided housing and board free of charge

Classification and Awards - Individual

FAI Medals and Diplomas and National Association of Rocketry medals will be awarded to individual Senior and Junior competitors placing first, second, and third in each event.

All Senior Females will compete for the overall Senior individual classification in each class. Additionally, there is a Senior Female classification in each class with FAI Medals and Diplomas.

All Junior Females will compete for the overall Junior individual classification in each class. Additionally, there is a Junior Female classification in each class with FAI Medals and Diplomas.

With the approval of their National Aero Club the reigning World Champion from 2021 in each class is eligible to participate regardless of whether or not they qualify for their national team. If they are not a member of their national team, their score will not be considered in the team results.

The 2021 World Champions are as follows (those listed in *italics* are ineligible per the decision of the FAI Executive Board issued on February 28, 2022):

Class	Seniors	Country	Juniors	Country
S3	KARALKEVIČIUS Povilas	LTU	FLOREK Sebastian	POL
S4	FLANIGAN Christopher	USA	<i>VORNAVSKOY Aleksandr</i>	<i>FASR</i>
S5	<i>EZHOV Alexey</i>	<i>FASR</i>	DUBROVNYI Mykhailo	UKR
S6	MAŁMYGA Leszek	POL	<i>PYAKHOV Matvey</i>	<i>FASR</i>
S7	GREŠ Marian	SVK	WOJDYŁO Emilia	POL
S8	BOLFA Simon	SVK	KOSZELSKI Wojciech	POL
S9	PETRENKO Andriy	UKR	<i>TARASOV Vadim</i>	<i>FASR</i>

Classification and Awards - Teams

A single FAI Medal will be awarded to the team manager of the teams placed first, second, and third in each class. FAI Diplomas and National Association of Rocketry medals will be awarded to each member (including the fourth competitor and team manager) of the teams placed first, second, and third in each class.

Other Awards

The following CIAM Championship Trophies were awarded at the FAI World Championships for Space Models in Romania in 2021.

Category	Trophy Name	Condition	Box	Awarded	Remarks
S4B Individual	Carl Neubronner Challenge Trophy	Good	Yes	Christopher FLANIGAN (USA)	
S4B Team	Minister of Education of the People's Polish Republic Challenge Trophy	Good		FASR	
S7 Team	General Committee for Physical Culture and Sport of the Polish People's Republic Challenge Trophy	Unknown		POL	Reported Lost
S8E Team	President of the Aero Club of the Polish People's Republic Challenge Trophy	Good	Yes	POL	
Space Multiple Contest Team	Pelagic Brothers Trophy	Excellent	Yes	FASR	

Category	Trophy Name	Condition	Box	Awarded	Remarks
S7 Senior Team	Hermann Oberth Romania Challenge Trophy - Bartoc Cultural Foundation, Romania			POL	

The organizer will inform all holders of trophies that they must be submitted to the organizer no later than the start of the competition.

Schedule

Saturday, July 1	Arrival Day
1100-1600	Arrival of participants, registration, accommodation - Robertson Center
1800-1900	Dinner - Bishops Lounge
1830-2000	Manager's Meeting, Olin 126 (Jury, Scale Judges, RSOs/ARSOs, Team Managers)
2000-2200	S5/S7 Entry Submission (by schedule below), Olin 126
2000-2015	China (CHN)
2015-2030	Romania (ROU)
2030-2045	United States (USA)
2045-2100	Poland (POL)
2100-2115	Ukraine (UKR)
2115-2130	Canada (CAN), Croatia (CRO), Great Britain (GBR), Latvia (LAT), Slovakia (SVK), Serbia (SRB), Spain (ESP)
Sunday, July 2	Practice Day, Opening Ceremony
0600-0715	Breakfast - Bishops Lounge
0715-0800	Transport to Contest Site - pickup behind McCombs Campus Center
0815-1400	Official practice
0900- 1000	Timekeeper Training on competition field
1200-1230	Lunch at Contest Site
1100-1400	Model Registration at Contest Site
1400-1445	Transport to Housing
1700-1800	Opening Ceremony - Robertson Center
1815-1930	Dinner - Bishops Lounge
1930-2030	Model Registration outside Scale Judging Room, Olin 126
Monday, July 3	Competition Day 1
0600-0715	Breakfast - Bishops Lounge
0715-0800	Transport to Contest Site - pickup behind McCombs Campus Center
0800-1600	Model Registration at Contest Site
0830-0930	Round 1 Contest Flights, S4 Senior, S3 Junior

0930-1030	Round 2 Contest Flights, S4 Senior, S3 Junior
1030-1130	Round 3 Contest Flights, S4 Senior, S3 Junior
1130-1210	Lunch at Contest Site
1140-1210	Estes Demo Launch
1210-1310	Round 1 Contest Flights, S9 Senior, S6 Junior
1310-1410	Round 2 Contest Flights, S9 Senior, S6 Junior
1410-1455	Round 3 Contest Flights, S9 Senior, S6 Junior
1510-1530	Flyoff Round 1, S4 Senior, S3 Junior
1540-1550	Flyoff Round 2, S4 Senior, S3 Junior
1555-1615	Flyoff Round 1, S9 Senior, S6 Junior
1620-1630	Flyoff Round 2, S9 Senior, S6 Junior
1700-1745	Transport to Housing
1800-1845	Dinner - Bishops Lounge
2000-2100	Model Registration outside Scale Judging Room, Olin 126
Tuesday, July 4	Competition Day 2
0600-0715	Breakfast - Bishops Lounge
0715-0800	Transport to Contest Site - pickup behind McCombs Campus Center
0800-1600	Model Registration at Contest Site (registration for S8 and S1 will be available)
0830-0930	Round 1 Contest Flights, S3 Senior, S4 Junior
0930-1030	Round 2 Contest Flights, S3 Senior, S4 Junior
1030-1130	Round 3 Contest Flights, S3 Senior, S4 Junior
1130-1215	Lunch at Contest Site
1215-1315	Round 1 Contest Flights, S6 Senior, S9 Junior
1315-1415	Round 2 Contest Flights, S6 Senior, S9 Junior
1415-1500	Round 3 Contest Flights, S6 Senior, S9 Junior
1515-1535	Flyoff Round 1 S3 Senior, S4 Junior
1545-1555	Flyoff Round 2 S3 Senior, S4 Junior
1600-1620	Flyoff Round 1 S6 Senior, S9 Junior
1630-1640	Flyoff Round 1 S6 Senior, S9 Junior
1700-1745	Transport to 4th of July baseball game and fireworks (optional)
1800-1845	Dinner (for those not attending baseball game) - Bishops Lounge
1800-2100	US Independence Day Celebration, Sugarland Space Cowboys vs. Round Rock Express, Dell Diamond, Round Rock
2100-2130	Transport from Dell Diamond to University

Wednesday, July 5	Competition Day 3		
0600-0715	Breakfast - Bishops Lounge		
0715-0800	Transport to Contest Site - pickup behind McCombs Campus Center		
0745-1600	Model Registration at Contest Site		
Junior Track			
0815-0915	Round 1 Contest Flights, S1A Junior		
0915-1015	Round 2 Contest Flights, S1A Junior		
1015-1115	Round 3 Contest Flights, S1A Junior		
1115-1215	Lunch at Contest Site		
1215-1315	Round 1 Contest Flights, S8D Junior		
1315-1415	Round 2 Contest Flights, S8D Junior		
1415-1515	Round 3 Contest Flights, S8D Junior		
1525-1540	Flyoff Round 1 S8D Junior		
1550-1605	Flyoff Round 2 S8D Junior		
Senior Track			
0815-0915	Round 1 Contest Flights S8P Senior		
0915-1015	Round 2 Contest Flights S8P Senior		
1015-1115	Round 3 Contest Flights S8P Senior		
1115-1215	Round 4 Contest Flights S8P Senior		
1215-1245	Lunch		
1245-1345	Round 1 Contest Flights, S1B Senior		
1345-1445	Round 2 Contest Flights, S1B Senior		
1445-1545	Round 3 Contest Flights, S1B Senior		
1555-1610	S8P Final Round 1		
1615-1630	S8P Final Round 2		
1700-1745	Transport to Housing		
1800-1845	Dinner - Bishops Lounge		
1900-2130	Awards Ceremony: S3 Senior, S4 Junior, S6 Senior, S9 Junior, S4 Senior, S3 Junior, S9 Senior, S6 Junior - Alma Thomas Theater		
2130-2200	Pick up S5/S7 entries, Olin 126 (following awards ceremony)		
Thursday, July 6	Competition Day 4: Public and Media Day		
0600-0715	Breakfast - Bishops Lounge		
0715-0800	Transport to Contest Site - pickup behind McCombs Campus Center		
0815-0945	Round 1 Contest Flights, S7 Junior	0815-0945	Round 1 Contest Flights S5C Senior

0945-1115	Round 2 Contest Flights, S7 Junior	0945-1045	Round 2 Contest Flights S5C Senior
		1045-1145	Round 3 Contest Flights S5C Senior
1130-1230	Lunch at Contest Site		
1200-1230	High Power and Sport Demonstration Launches		
1245-1415	Round 1 Contest Flights, S7 Senior	1230-1345	Round 1 Contest Flights, S5B Junior
1415-1545	Round 2 Contest Flights, S7 Senior	1345-1445	Round 2 Contest Flights, S5B Junior
		1445-1545	Round 3 Contest Flights, S5B Junior
1615-1700	Transport to Housing		
1800-1845	Dinner - Bishops Lounge		
1900-2000	Awards Ceremony: S1A Junior, S8E/P Senior, S8D Junior, S1B Senior - Alma Thomas Theater		
2000-2030	Model Registration (location TBD)		
2000-2130	Scale Show & Tell (location TBD)		
Friday, July 7	Competition Day 5, Reserve/Banquet Day		
0600-0715	Breakfast - Bishops Lounge		
0715-0800	Transport to Contest Site - pickup behind McCombs Campus Center		
0800-1115	Model Registration and Egg Issue on field		
0815-0915	Round 1 Contest Flights, S2/P Junior and Senior		
0915-1015	Round 2 Contest Flights, S2/P Junior and Senior		
1015-1115	Round 3 Contest Flights, S2/P Junior and Senior		
1115-1200	Lunch at Contest Site		
1200-1245	Transport to Housing		
1300-1430	Spacemodeling Subcommittee Meeting (location TBD)		
1645-1700	Transport to Closing Ceremony, Reunion Ranch		
1730-1845	Awards Ceremony: S7 Senior, S7 Junior, S5C Senior, S5B Junior, S2/P Senior, S2/P Junior, Reunion Ranch		
1845-1900	Closing Ceremony, Reunion Ranch		
1900-2130	Banquet - Reunion Ranch		
2130-2200	Transport to Housing		
Saturday, July 8	Departure Day		
0600-0800	Breakfast - Bishops Lounge		
Before 1100	Departure		

Entry Fees

€400 per Senior Competitor, Team Manager, and Assistant Team Manager
€300 per Junior Competitor
€10 per supporter or helper

Deadlines

The Final Entry Form (FEF) should be submitted via the eNavigator online tool and all fees (including entry, lodging, food, dining, motor, and banquet fees) should be submitted to the following bank account no later than 20 June, 2023. Any fees paid at registration must be paid in US currency.

Motor orders for S2/P, S7, and S8 should ideally have been submitted. If motors for these events are needed, please submit your order immediately,

Payments

Payments should be submitted electronically to the following account:

Bank Name: J.P. Morgan Chase Bank
Address: 106 N. Washington Street, Alexandria VA 22314
SWIFT Code: CHASUS33
For the Account of: National Association of Rocketry
2275 Geode Street, Marion, IA 52302-7625
Account Number: 909655802

Payments submitted after 1 May 2023 will be subject to a surcharge.
* 1 June 2023 through 20 June 2023: 20% surcharge

Any bank commissions or transmission fees shall be the responsibility of the sender. Registrations and payments cannot be accepted after June 20.

Housing and Meals

The primary housing location for competitors, team supporters, and staff will be in comfortable student housing located on the campus of Southwestern University in Georgetown, Texas. Rooms are paired in suites, with shared bathrooms. A limited number of rooms will be available for families that wish to be housed together. Cafeteria-style breakfast and dinner choices will be available for participants who choose this housing option.

Double occupancy room with shared bath, breakfast/dinner, per day(per person)	€69
Single occupancy room with shared bath, breakfast/dinner, per day (per person)	€90

Box lunches will be available on the field for €10.50/day, prepaid during the registration process.

Alcohol is not permitted anywhere on campus or on the contest site. If you would like a drink, Southwestern University is located within walking distance of a very vibrant restaurant, bar, and shopping district in downtown Georgetown.

Dorms will not be available for move-in until July 1. If participants arrive prior to July 1 please consider booking one of the hotels listed below directly until dorm move-in opens.

Participants who prefer more traditional hotel arrangements will have the opportunity to choose from many options offering a wide range of amenities and prices. The following hotels are recommended.

Premium

Sheraton Austin Georgetown Hotel and Conference Center
1101 Woodlawn St, Georgetown, TX 78628, phone (737)444-2700, marriott.com

Mid-range

Hampton Inns and Suites Georgetown/Austin North
160 River Oaks Cove, Georgetown, TX 78626, phone (512)688-5300, hilton.com

Fairfield Inns and Suites Austin Georgetown
900 West University Ave., Georgetown, TX 78626, phone (512) 969-3500, marriott.com

Comfort Suites Georgetown
11 Waters Edge Circle, Georgetown, TX 78626, phone 863-7544, choicehotels.com

Budget

Motel 6 Georgetown
1005 Leander Rd., Georgetown, TX 78628, phone (512)863-7504, motel6.com

Should you choose to stay in one of these hotels please contact the property directly.

Banquet

A Texas-style closing ceremony and barbecue banquet will be held Friday, July 7 at Reunion Ranch, 850 CR 255, Georgetown, TX 78633. Banquet fees will be €60 per Senior, €40 per Junior.

Insurance

Each participant in the Championships will be required to provide their own personal health insurance coverage. Please consult your individual insurance provider to determine the validity of your policy while in the United States.

Visa and Immigration Information and Support

Please read this section carefully. Any participant coming from outside the United States will need to complete ONE of these two important steps before traveling:

1) **You must hold a visa to travel to the United States,**

OR

2) **Hold a passport from a country that participates in the Visa Waiver Program and complete the Electronic System for Travel Authorization**

Please consult the US State Department website to determine if you will need a visa in order to travel to the United States: <https://www.state.gov/visas/>

Many visitors will be eligible for the Visa Waiver Program. A list of these countries may be found here: <https://travel.state.gov/content/travel/en/us-visas/tourism-visit/visa-waiver-program.html>

All travelers using the Visa Waiver Program (VWP) will also need to complete an Electronic System for Travel Authorization application (ESTA). This is a simple online application, and should be completed no less than 72 hours before your departure for the US. More information may be found at: <https://esta.cbp.dhs.gov/esta>

Invitation letters for participants requiring a visa will be available. Those needing a visa letter should request one by contacting their team manager, who may request these through the organizers.

Registration of National Teams

This process is to be used for both the World Championships and the S2/P Open International event! Registration for National Teams is now open, and will be completed by Team Managers and their National Aero Clubs using the eNavigator contest management platform. To register, Team Managers should visit the eNavigator website at: <https://2023-wchsm.enavigator.org/applications>

Begin by creating an account using the “Sign Up” link at the bottom middle of the page. Once signed in as an authorized user of the eNavigator tool, Team Managers should begin the registration process. When all participants have been entered the eNavigator tool will present a “Submit” button. The tool will even generate a payment amount for each team using the “Payment and Options” button.

It is vitally important that *ONLY* Team Managers should enter data into the eNavigator tool. If individual competitors have questions about the registration process they should consult with their Team Manager. This PDF will provide Team Managers an overview of the registration process: <https://www.nar.org/wp-content/uploads/2023/03/eNavigator-Tutorial.pdf>

Upon arrival at registration each Team Manager should present FAI Licenses for team participants, an updated entry form (if any changes have been made from the preliminary entry form), a national flag (3' x 5'/1m x 1.5m), and their national anthem on a USB thumb drive.

On-site Registration Procedure

Team Registration will open at 11 AM on Saturday, July 1, in the Robertson Center on the Southwestern University campus.

- 1) Managers will begin the process by registering their team, verifying payment of all fees, and receiving team credentials. Participants will each be issued a “swag bag” with an event T-shirt.
- 2) All dorm residents must be present for housing registration. Southwestern University staff will complete registration and place a wristband on each dorm resident. This wristband will act as a meal ticket for all breakfast and dinner dining on campus at the University. Each dorm resident will be asked to sign a waiver during the registration process (available on the ‘Bulletins’ tab of the event website).
- 3) Keys will be issued to dorm residents by SU staff. Please note the charges that will be assessed for any lost key. Most dorms will use key cards, while certain dorms will have physical keys. Lost key cards will be \$20, while lost physical keys will be \$100. *Don't lose your key!*
- 4) Each dorm resident will be issued a bedding package that contains sheets, blanket, pillow, towel, soap, and shampoo. These become the property of the dorm resident, and we encourage you to take them with you at the end of the Championships.

Late Arrivals

Those teams staying in the Southwestern University residence halls arriving outside of the designated registration window should contact James Duffy ((512) 423-1855) or Jonathan Rains ((301) 529-3449) upon arrival at the University.

Check-Out

All key cards and physical keys must be returned to Southwestern University staff upon departure. A table will be set up in Bishops Lounge on the morning of July 8 for return of keys. Those departing before that time should contact James Duffy or Jonathan Rains to arrange a check-out time.

Air Transportation

Austin-Bergstrom International Airport (IATA code: AUS, ICAO code: KAUS) offers direct flights from all major cities in the United States and also offers convenient direct international service from Toronto, London, Frankfurt, and Amsterdam. Alternatively, participants may choose to fly to Dallas/Fort Worth International Airport (IATA: DFW, 185 miles/300 km away, 3 hours driving time) or Houston George Bush Intercontinental Airport (IATA: IAH, 180 miles/290 km away, 3.5 hours driving time). Driving time from the Austin airport to the housing site at Southwestern University is approximately 45 minutes.

Ground Transportation

Texas is *big*. Teams should take great care to consider their transportation needs carefully, as public transport options are not available for the distances participants will need to cover each day. Depending on the size of their group, teams are encouraged to rent cars, vans, or buses. For those unable to secure rental vehicles, the organizers have arranged for buses to transport a *limited* number of competitors from the dorms at Southwestern to the flying field at Apache Pass each day. Only 60 participants each day will be able to use this option!

We strongly encourage larger teams to arrange their own local transportation. Smaller teams should consider renting cars or vans, while larger teams may wish to secure coach-style bus transport. Please contact these firms directly, as the organizers are not able to assist with securing rented or contracted car, bus, or van services.

Rental car companies operating out of the Austin airport include:

Advantage	advantage.com
Alamo	alamo.com
Avis	avis.com
Budget	budget.com
Dollar	dollar.com
Enterprise	enterprise.com
Fox	foxrentacar.com
Hertz	hertz.com
National	nationalcar.com
Payless	paylesscar.com
Thrifty	thrifty.com

Van rentals may be an attractive option for small-to-medium sized teams. These companies specialize in larger passenger vans:

Bandago Van Rental bandago.com

Longhorn Rentals longhornrentals.com
Ground Shuttle groundshuttle.com

Larger teams may wish to consider coach rentals. These services will also provide a driver:

Clark Travel clarktravel.net
ETI Limos etilimo.com
Corporate Services csidmc.com

For transportation to and from Austin Bergstrom International Airport for those not renting vehicles, we recommend that teams contact *SuperShuttle*, and book their airport transfers on their website. The airport code for Austin is AUS, and the address for Southwestern University is 1001 E. University Ave., Georgetown, TX 78626.

www.supershuttle.com

Weather

Temperatures in central Texas during early July are hot, but manageable. Expect highs each day to be around 93°F (34C), with lows overnight at 76°F (24C). Rain is rare during July, and the winds during the summer are typically from the south-southeast. It is recommended that participants wear light colored clothing and hats to help manage the heat, and to use sunscreen. Proper hydration is critical, so plenty of water and ice will be on hand to help participants stay cool.

COVID19 Safety Information

All subsequent Bulletins will include any necessary information and protocols that the organizers and the participants will have to follow in order to participate based on the national regulations and the FAI recommendations. National regulations will prevail at all times over FAI recommendations. From time to time please consult the COVID19 information provided on the FAI website. The event website will also be updated with relevant health information as appropriate.

Organizer Contact Information

Event Director
James Duffy, email jduffy@mac.com

Mailing Address:
National Association of Rocketry - 2023 FAI World Championships
450 Abrams Rd.
Georgetown, TX 78633

nar.org/championships

Registered Competitors

No	Surname, Name	Country	S/J	S1	S3	S4	S5	S6	S7	S8	S9	S2/P
1	COOK, Peter	CAN	S			X		X			X	
2	TATARYN, Taras	CAN	S		X							X
3	GNASS, Fritz	CAN	S	X	X	X					X	X
4	DENNETT, Michael	CAN	S	X		X				X		
5	FACIU, Liviu	CAN	S	X			X	X	X			
6	PRATO, Saverio	CAN	S		X			X			X	X
7	LYU, Yuxi	CHN	S								X	
8	LI, Shiqi	CHN	S		X						X	
9	JIANG, Xin	CHN	S		X							
10	PANG, Jingpei	CHN	S					X				
11	ZHANG, Bolun	CHN	J/S					X	X	X/ X		
12	DONG, Jiaqi	CHN	J		X						X	
13	FENG, Shengyang	CHN	J		X							
14	LI, Haoran	CHN	J			X						
15	WANG, Sizhi	CHN	J								X	
16	XU, Meiyuan	CHN	J			X		X				
17	YANG, Xiaoyu	CHN	J			X						
18	GAO, Zhengyi	CHN	J	X								
19	SHENG, Yichen	CHN	J		X					X		
20	JIAO, Kaiyuan	CHN	J								X	
21	HAN, Bowen	CHN	J					X				
22	SUN, Haigang	CHN	S							X		
23	ZHANG, Zhaonian	CHN	S							X		
24	FAN, Mengmeng	CHN	S				X	X	X			
25	HUANG, Yang	CHN	S	X		X			X			
26	HUANG, Zhendi	CHN	S	X		X	X					
27	SUN, Hongxiang	CHN	S	X		X	X					
28	HU, Hangjing	CHN	J/S			X	X	X	X	X		

No	Surname, Name	Country	S/J	S1	S3	S4	S5	S6	S7	S8	S9	S2/P
29	LI, Xiang	CHN	J/S				X/X		X			
30	ZHANG, Zhiyong	CHN	S		X						X	
31	ZHI, Zhengyi	CHN	S	X								
32	CHENG, Jinyu	CHN	J					X				
33	REN, Pinyi	CHN	J					X				
34	WANG, Bohan	CHN	J	X								
35	ZHANG, Houlin	CHN	J	X								
36	WANG, Zichen	CHN	J			X	X					
37	XU, Yinghao	CHN	J						X			
38	FENG, Bo	CHN	S		X						X	
39	IVANCIC, Jozo	CRO	S	X	X		X	X			X	X
40	CVITIC, Tomislav	CRO	S	X	X	X	X	X	X		X	
41	DEDEIC, Ines	CRO	S	X	X			X				
42	ROURA FONT, Jordi	ESP	S			X		X				
43	MISSE SUNOL, Neus	ESP	S					X			X	
44	MUNOZ RIERA, Joan	ESP	S		X	X						
45	ESQUIROL MESTRE, Miquel	ESP	J		X	X		X			X	X
46	DE MARIANO PASTOR, Joana	ESP	J		X	X		X			X	X
47	GIMENO AHIS, Enrique	ESP	S		X	X				X		
48	BUENACHE VEGA, Alejandro	ESP	S					X			X	X
49	FUENTES CARRILLO, Carlos	ESP	S					X			X	X
50	HERNANDEZ ALVAREZ, Javier	ESP	J		X	X		X			X	X
51	HERNANDEZ GONZALEZ, David	ESP	S		X						X	X
52	CALVO PADROS, Rosa	ESP	S		X	X						
53	ROURA MISSE, Esther	ESP	S						X			X
54	LAANEJÕE, Andres	EST	S		X	X		X			X	
55	TURSK, Merili	EST	S		X	X		X			X	
56	LAANEJÕE, Sten Andri	EST	S		X	X		X			X	
57	LEWIS, Ian	GBR	S	X								X

No	Surname, Name	Country	S/J	S1	S3	S4	S5	S6	S7	S8	S9	S2/P
58	SEABROOK, Trevor	GBR	S		X	X	X	X			X	X
59	ZACH, Slawomir	GBR	S	X	X	X	X	X	X			X
60	JASZKIM, Eryk	GBR	S	X	X	X	X	X		X	X	
61	ROBINSON-CALVER, Sharon	GBR	S		X	X	X	X			X	
62	CALVER, Andrew	GBR	S								X	
63	BINER, Wilfred	GBR	J	X	X	X		X			X	X
64	MELVILLE, Edward	GBR	J	X	X	X		X			X	X
65	JACKSON, Charlie	GBR	J		X			X			X	X
66	WEIßGERBER, Franz	GER	S							X		
67	MAZZARACCHIO, Antonio	ITA	S	X	X			X			X	
68	TERAO, Takuma	JPN	S			X		X			X	
69	LUPIKS, Raivo	LAT	S		X	X		X			X	
70	RAUDINS, Oskars	LAT	S		X	X		X		X	X	
71	BRAKOVSKIS, Maris Juris	LAT	S							X		
72	LIMORA, Karina	LAT	S		X					X	X	
73	TUCS, Mikus	LAT	J		X	X		X		X	X	
74	HARITONOVŠ, Arturs	LAT	J		X	X		X	X	X	X	
75	PUMPURE, Austra	LAT	S			X		X	X			
76	ALISMAILS, Eliass Marko	LAT	J		X	X		X		X	X	
77	PUMPURS, Lauris	LAT	S		X	X		X		X	X	
78	TOKARCZYK, Bartłomiej	POL	S		X	X	X		X			X
79	TOKARCZYK, Mateusz	POL	J		X	X	X	X	X		X	X
80	KREMPA, Kacper	POL	S	X			X		X	X	X	X
81	ŁASOCHA, Slawomir	POL	S	X	X	X		X		X	X	X
82	FILAS, Michał	POL	S	X			X	X	X	X		X
83	PRZYBYTEK, Krzysztof	POL	S		X	X		X		X	X	X
84	ŻYŁA, Jakub	POL	J	X	X	X	X	X	X	X	X	X
86	SERCAIANU, Florica	ROU	S	X	X	X	X	X			X	
88	STĂNEAN, Mihai Gabriel	ROU	S							X		
89	GUZU, Florin Alexandru	ROU	S		X	X	X	X				
90	ENE, Gabriel Ciprian	ROU	S	X					X			

No	Surname, Name	Country	S/J	S1	S3	S4	S5	S6	S7	S8	S9	S2/P
91	VLAD, Adelin	ROU	S		X				X			
92	CONSTANTINESCU, Gabriel	ROU	S			X	X		X		X	
93	CONSTANTINESCU, Gica	ROU	S	X		X		X	X		X	
94	MIHAILESCU, Andra Ileana	ROU	J	X	X	X	X	X	X		X	
95	IVANOVSKI, Nikola	ROU	J	X	X	X	X	X	X		X	
96	VRABIE, Rareș	ROU	J	X	X	X	X	X	X		X	
97	COSTACHE, Andreea Elena	ROU	J	X	X	X	X	X	X		X	
98	SERCAIANU, Lucian	ROU	S	X	X		X	X			X	
99	PETROVIĆ, Mihailo	SRB	S	X	X	X	X	X	X		X	
100	MIHELČIČ, Anže	SLO	S	X	X	X		X			X	
101	STOLL, Hans	SUI	S		X	X		X		X	X	
102	STOLL, Franziska	SUI	S		X	X		X			X	
103	KOŤUHA, Ján	SVK	S				X		X			
104	ŽITŇAN, Michal	SVK	S	X	X	X	X	X			X	
105	ŽITŇAN, Michal jr.	SVK	S	X	X	X		X			X	
106	ČIŽNÁROVÁ, Ema	SVK	S	X	X	X	X	X	X		X	
107	ČIŽNÁR, Roman	SVK	S	X	X	X	X	X			X	
108	TRUSH, Serhiy	UKR	S	X	X	X	X	X	X		X	X
109	PETRUKH, Anton	UKR	S	X		X	X		X			X
110	RADCHENKO, Oleksandr	UKR	S	X	X	X	X	X	X	X	X	X
111	KHMIL, Olha	UKR	S	X	X	X	X	X	X		X	X
112	PRYMUSHKO, Andrii	UKR	J	X		X	X		X			X
113	KYRIIENKO, Ivan	UKR	J		X		X		X		X	X
114	DUBROVNYI, Mykhailo	UKR	J				X	X	X			X
115	MOZOK, Denys	UKR	J		X	X		X		X		
116	STRUZMAN, Rodion	UKR	J	X		X		X			X	
117	FISUN, Sofia	UKR	J			X		X			X	
118	LUHYNA, Artem	UKR	J	X	X						X	
119	LYTVYENENKO, Viktor	UKR	S		X			X			X	
120	AVRAMOV, Stoil	USA	S							X		
121	BERK, Matthew	USA	S							X		

No	Surname, Name	Country	S/J	S1	S3	S4	S5	S6	S7	S8	S9	S2/P
122	CARSON, Donald	USA	S			X						
123	DUFFY, Campbell	USA	S		X				X			
124	FILLER, James	USA	S				X					
125	FLANIGAN, Christopher	USA	S						X			X
126	FOSTER, Steve	USA	S			X						
127	KREUTZ, Robert	USA	S	X								
128	GUZEK, Sean	USA	S						X			
129	KRISTAL, Emma	USA	S	X	X							
130	KUCZEK, Kevin	USA	S			X		X				
131	MARSH, John	USA	S				X	X				
132	MUZEK, Brian	USA	S							X		
133	O'BRYAN, David	USA	S		X							
134	PUND, Tracy	USA	S							X		
135	SCHAFER, Rod	USA	S								X	
136	SCHMAKER, Lila	USA	S			X						
137	STEELE, Matt	USA	S				X		X			
138	STEWART, Cassidy	USA	S				X					
139	STOKKER, Alan	USA	S	X								X
140	VAN MILLIGAN, Ashley	USA	S					X			X	
141	VINYARD, Keith	USA	S		X			X				
142	VINYARD, Sally	USA	S								X	
143	WILLARD, Terrill	USA	S								X	
144	ZUCHERO, David	USA	S									X
145	ZUREK, Rebecca	USA	S									X
146	KRISTAL, Steve	USA	S	X								
147	ANDERSON-HANEY, Ethan	USA	J			X						
148	ANDERSON-HANEY, Zuri	USA	J						X			
149	BALA, Rohan	USA	J		X							
150	BARR, Kody	USA	J								X	
151	BARR, Rylan	USA	J	X								X
152	GBOLAGUN, Ike	USA	J						X			

No	Surname, Name	Country	S/J	S1	S3	S4	S5	S6	S7	S8	S9	S2/P
153	GILLEY, Will	USA	J				X	X				
154	HARRIS, Camille	USA	J			X		X				
155	HOUTS, Lauren	USA	J	X								X
156	LI, Jake	USA	J			X				X		
157	LIU, Andrew	USA	J								X	
158	LIU, Rita	USA	J						X			
159	MATSUMOTO, Yui	USA	J				X					
160	MOSBY, Randall	USA	J					X	X			
161	NAGARKATTI, Aaryan	USA	J	X								X
162	O'BRIEN, Simon	USA	J				X					
163	OLVER, Isaac	USA	J					X				
164	PUND, Madalynn	USA	J							X		
165	QU, Lingxiao	USA	J								X	
166	SINGH, Aniket	USA	J			X						
167	STENBERG, Ryan	USA	J							X		
168	STOKKER, Maddie	USA	J		X		X					
169	WANG, Patrick	USA	J	X								X
170	WU, Hannah	USA	J		X						X	
171	WU, Lily	USA	J		X							
172	ZHANG, Kenneth	USA	J							X		

Senior Teams

ID	Country	S1B	S3A	S4A	S5C	S6A	S7	S8P	S2/P	S9A	Lane
CAN	Canada	3	3	3	1	3	1	1	3	3	1
CHN	China	4	4	4	4	4	3	3		4	2
CRO	Croatia	3	3	1	2	3	1		1	2	3
ESP	Spain		4	4		4	1	1	4	4	4
EST	Estonia		3	3		3				3	5
GBR	Great Britain	3	4	4	4	4	1	1	3	4	6
GER	Germany							1			7
ITA	Italy	1	1			1				1	8
JPN	Japan			1		1				1	8
LAT	Latvia		4	4		4	1	4		4	9
POL	Poland	3	3	3	3	3	3	4	5	3	10
ROU	Romania	4	4	4	4	4	4	1		4	11
SRB	Serbia	1	1	1	1	1	1			1	12
SLO	Slovenia	1	1	1		1				1	12
SUI	Switzerland		2	2		2		1		2	7
SVK	Slovakia	4	4	4	4	4	2			4	13
UKR	Ukraine	4	4	4	4	4	4	1	4	4	14
USA	USA	4	4	4	4	4	4	4	4	4	15
	TOTAL	35	49	47	31	50	26	22	24	49	

Junior Teams

ID	Country	S1A	S3A	S4A	S5B	S6A	S7	S8D	S9A	S2/P	Lane
CAN	Canada										
CHN	China	3	3	4	3	4	3	3	3		1
CRO	Croatia										
ESP	Spain		3	3		3			3	3	2
EST	Estonia										
GBR	Great Britain	2	3	2		3			3	3	3
GER	Germany										
ITA	Italy										
JPN	Japan										
LAT	Latvia		3	3		3	1	3	3		4
POL	Poland	1	2	2	2	2	2	1	2	2	5
ROU	Romania	4	4	4	4	4	4		4		6
SRB	Serbia										
SLO	Slovenia										
SUI	Switzerland										
SVK	Slovakia										
UKR	Ukraine	3	3	4	3	4	3	1	4	3	7
USA	USA	4	4	4	4	4	4	4	4	4	8
	TOTAL	17	25	26	16	27	17	12	26	15	

Senior Lane Assignments

- 1 Canada
- 2 China
- 3 Croatia
- 4 Spain
- 5 Estonia
- 6 Great Britain
- 7 German Switzerland
- 8 Italy Japan
- 9 Latvia
- 10 Poland
- 11 Romania
- 12 Serbia Slovenia
- 13 Slovakia
- 14 Ukraine
- 15 USA

Junior Lane Assignments

- 1 China
- 2 Spain
- 3 Great Britain
- 4 Latvia
- 5 Poland
- 6 Romania
- 7 Ukraine
- 8 USA

Directions to Launch Site from Southwestern University

The Championships launch site may be located on Google Maps as “AARG Apache Pass Launch Site.” The range is located at the following GPS coordinates: 30°40’49.8”N 97°08’33.4”W (30.680505, -97.142596)

