

Space RACE: NASA Centennial Challenge

RFI Response Template

Instructions:

Responses should be submitted in Adobe PDF or Microsoft Word format and are limited to five (5) pages in length. Responses should include: name, address, email address, and phone number of the respondent, business, or organization, with point of contact for business or organization.

RFI response documents should be saved with a filename of the form:

SpaceRACE_RFResponse_Name_Organization_Date.doc

OR

SpaceRACE_RFResponse_Name_Organization_Date.pdf

Respondents are NOT required to use the template for their RFI response and may include more (or less) than suggested by the space provided. Respondents are also NOT required to address every question in the template. However, detailed responses will be greatly appreciated by the challenge developers to ensure all concerns are addressed in the final challenge rules.

Contact Details

Name:

Organization:

Address:

Phone Number:

Email Address:

Point of Contact for Business or Organization:

Conceptual Design of the Competition

General interest in competing

Are you interested in this challenge? Would you participate in this challenge? Would you form a team to participate? Do you have suggestions to make the challenge/competitions more exciting?

Areas for technology development

Does this challenge incentivize technology development, or does it simply put a new spin on current, or nearly current, technology? Are there ways the competition could be changed to encourage more technology development?

Competition awards

Do the award levels sufficiently incentivize participation? Is there an alternative distribution that better incentivizes participation? Would you compete in this competition for the proposed awards?

Competition Structure (phases, milestones, qualifying events)

Do you like the phases? Are the milestones achievable? Is the competition format (head-to-head) suitable for this challenge? How should partial credit and scoring be designed, so in the event no one is successful, prizes can be awarded?

Technical Design of the Competition

Competition rules and guidelines

Are the rules too strict? Not strict enough? Do the rules contain any non-necessary information or make competition impossible? Should additional rules be added to ensure competition is fair?

Starting configuration of competitors and OS Bot

Do the parking orbit configurations make sense? Do the starting configurations give an advantage to one competitor over the other that has not been addressed? Do you have alternative ideas for more fair or more exciting starting configurations?

Competitor regulation package

Does the proposed regulation package seem reasonable to you (speed, acceleration, power)? Do you have a preferred interface to this package? Do you have suggestions for how the above quantities should be measured and regulated? Are there any other aspects of the competitors' vehicles that should be monitored?

OS Design

Does the proposed cylindrical design make sense to you? Will it be possible to grasp a cylindrical OS that is rotating asymmetrically? Do the proposed fiducials make sense? If not, what pattern/features would you propose? Do you foresee any issues with the magnetic mount? If so, how should it be changed?

Track Design

Does a flat, circular track make sense, or are there other configurations that might be better? Would the competition gain a lot from being held on an inclined track? Is the projected spotlight a sufficient signal to hold the parking orbit? If not, how should this signal be changed?

Earth Return Vehicle design

What shape and orientation should the provided ERV take? Is it reasonable to expect competitors to be able to control orientation of the OS while inserting it into their ERV?