

This is an abstract template for the 7th Mission Idea Contest.

Limit to 5 pages, single spacing, 11 pt font, in English. A4 with 2cm margins on all sides. Number all pages. (Please delete the parts written in different color)

Title:

Primary Point of Contact (POC) & email:

Co-authors:

Organization:

Please check the brackets and delete if there is no need of checking.

- () We apply for Student Prize.
() Please keep our idea confidential if we are not selected as finalist/semi-finalist.

Mission Objectives (where and why?)

Describe the target planet and/or asteroid to be observed and why you want to go there (scientific objectives). Please include scientific reason why the proposed mission has large impact for gaining new knowledge or solving social problems.

Concept of Operations including orbital design

Describe the mission scenario (from launch to realization of the final objectives, etc.) and describe the orbital design to realize the mission. Use diagrams, figures and/or tables if required. Formation flight of multiple explorers are also allowed if the mass restriction (relationship between total mass and V-infinity) is not violated.

Key Performance Parameters

List and explain the required key technologies with several important performance parameters (accuracy, bit rate of data transmission, etc.) which are essential to realize your mission. If the technologies are not realized yet, you should indicate how to realize it and its possibility of R&D success. For example, required technologies include high precision orbit change, deep-space communication, observation sensors, power in deep space, and/or autonomy.

Space Segment Description

Describe the conceptual design for your satellite system or systems. List key specifications (e.g. mass, volume, peak and average power, link budget, attitude control accuracy, delta-V for mid-course maneuver, etc.). Diagrams or simple CAD drawings are encouraged.

Additional considerations

If you have some originality of analyzing and/or designing this mission, please describe it It may be considered as “a bonus point.”

References

List any technical references for your idea