

---

# Galileon

Telescope Automation

## Problem Statement

Participants need to start with designing a dobsonian/equatorial/alt-azimuth mount of a telescope and attach a pseudo telescope to it. Even the mounts can be minimal. They need not be in complete shape but the two axes of the mounts must be functional. Attach a pipe like structure to it to be used as a pseudo telescope.

Now, the main task is to automate this mount. Participants will be given some particular R.A. (Right Ascension) and Declination of objects/name of objects (Whichever is comfortable) in the celestial sphere. The values can then be put in the code/ input directly by some means and the telescope must get aligned to the object by itself. We want the telescope to be functional in Kamand. The geographic details of Kamand are as follows:  $31.7754^\circ$  N,  $76.9861^\circ$  E and the Altitude: 1000 m above mean sea level

## Timeline:

- The team has to submit their code as the event commences.
- Each team has to present and show the working with appropriate execution of the code within 10 minutes.
- Time limit has to be adhered to the extension upto 5 minutes.

## Judging Criteria

- Cost of making the automated telescope. Cost efficiency stands most significant ,thus carries a big percentage of marks
- Response Time of the telescope.
- Accuracy of the alignment
- Percentage Completion (In case the telescope is not fully functional) . This would come into play if the accuracy of the model is very bad or the model is not completed till the date of competition.
- Presentation and its time boundness
- Durability and User Friendliness

## Rules and Regulations

- A team size should not exceed over 5 members.
- Plagiarism in any form is strictly prohibited and will lead to disqualification.
- Organizers reserve the right to modify rules at any point of time, with intimation to registered participants
- Any team's presentation exceeding 15 minutes will face a penalty of some points.

## FAQ's

Q1: Do we have to devise a mechanism to input R.A. and Dec in our solution? Does it contain any weightage? Ans. No, the values of R.A. and Dec is to be hard coded in the code as well as can be input from some external device. It doesn't have any weightage in the final judgment

### Event Coordinators

- Garvit Mathur (+91) 8114415628
- Akshita Jain (+91) 8209368122
- Shreyas Bapat (+91) 9736210570

In case of any doubt/concern regarding the event, either call the co-ordinators or write a mail to [stac@students.iitmandi.ac.in](mailto:stac@students.iitmandi.ac.in) or drop a message on this facebook page. We would try to reply ASAP

**Prizes:** Worth 40K

**Registration:** Rs.300