

AMATEUR ROCKETEERING

Team ID: 207

Team Members:

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Description:

Amateur rocketeering is a hobby involving experimenting with fuels and making own rocket motors, launching a wide variety of types and sizes of rockets. Amateur rocketeers have been responsible for significant research into hybrid rocketeering motors, and have built and flown a variety of solid, liquid, and hybrid propellant motors. There's a MIT Rocket Team - an independent student group focused on rocket-related projects.

Motivation:

The basic motivation behind the project is we are going to do “**The Rocket Science**”. Also learning the basics of rocket propulsion along with using them practically. The project will include a bit of chemical learning also as the Solid-Fuel motor will also be self-made. We want to know the basic tech and make it cum more feasible for others to attempt the same.

Vision:

As nothing of this sort has been done in ITSP, we plan on making this project a success and later work on this improving the Altitudes and designs consequently in our coming years at IIT Bombay. We will try to make this bigger and have a rocket team in IIT as well.

Implementation:

The whole rocket will consist of:

- **Rocket Body**
- **Solid-fuel Motor**
- **Parachute Deployment Mechanism**
- **Miscellaneous (launch platform, electric switch)**

At the end of the ITSP we plan to achieve an altitude of 1000 m (measured using altimeter) and then successfully recovery of the rocket by parachute deployment. Also the altimeter testing will be done after a successful test in order to ensure vertical flight. This will also help to ensure reusability of the Rocket.

Approx. Cost: INR 10,000

Timeline:

First Week: Discussion with mentors . Reading more about the topic. Decide Plan of action.

Second and Third Week: More Reading. Acquiring the material.

Fourth Week: Getting into action. Start making the rocket body and parachute mechanism.

Fifth Week: Complete earlier assignments. Start making solid motor and others.

Sixth Week: Testing and Debugging.