

# GMAT



## For Users

The GMAT project provides many resources for end-users, both on this wiki and externally:

- [Download GMAT](#)
- [Official Homepage](#)
- [Documentation](#)
- [Contacts](#) (mailing lists, forums, etc.)
- [JIRA](#) (bug reports and feature requests)

## For Contributors

Want to help us develop GMAT? These resources will help you understand how the project is structured and how you can effectively contribute.

- [GMAT Development](#)
- [How Can I Help?](#) (project ideas)
- [JIRA](#) (bug reports and feature requests)
- [Project Dashboard](#)

## Welcome to GMAT

The General Mission Analysis Tool (GMAT) is an open-source space mission analysis and design tool being developed by a team made up of NASA, private industry, and a range of academic, public, and private contributors. GMAT is intended both for real-world engineering design studies and as a tool for education and public engagement in the spirit of the NASA Charter.

This wiki contains many resources for GMAT users and developers. It is intended for collaboration! If you see anything wrong with any of the pages on this wiki, or wish to add GMAT-related information on your own, please feel free to contribute. Please see the official [TikiWiki documentation](#) for details.

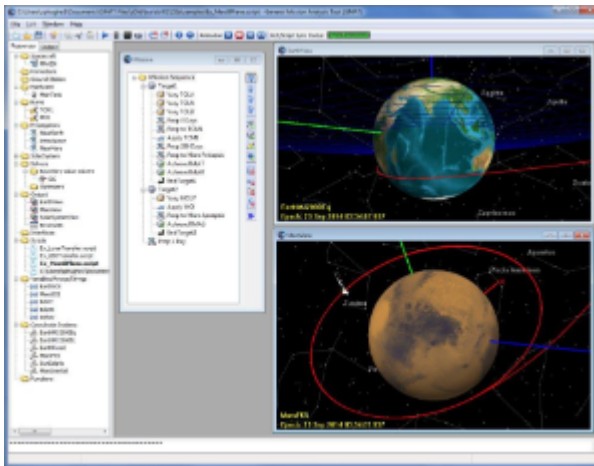
## GMAT and Space Mission Design

GMAT is designed to model, optimize, and estimate spacecraft trajectories in flight regimes ranging from low Earth orbit to lunar applications, interplanetary trajectories, and other deep space missions. Analysts model spacemissions in GMAT by first creating resources such as spacecraft, propagators, estimators, and optimizers. A figure of the resource tree for a lunar transfer application is shown in Fig. (1). Resources can be

configured to meet the needs of specific applications and missions. GMAT contains an extensive set of available Resources that can be broken

down into physical model Resources and analysis model Resources. Physical Resources include spacecraft, thruster, tank,

transmitter\*, transponder\*, antenna\*, receiver\*, ground station, formation, impulsive burn, finite burn, planet, comet, asteroid, moon, barycenter, libration point, measurement model\*, and measurement simulator\*. Analysis model Resources include differential corrector, propagator, optimizer, estimator\*, 3-D graphic, x-y plot, report file, ephemeris file, user-defined variable, array, and string, coordinate system, custom subroutine, MATLAB function, and data



## News

### Blog Posts

- [Test Post](#) created by Joel Parker Sep 13, 2012 GMAT
- [GMAT OnDemand](#) created by Administrator Sep 09, 2012 GMAT

**Note:** This is a prototype implementation of the Atlassian OnDemand instance for the GMAT Project..