The Astronomer's Proposal Tool for the Roman Space Telescope

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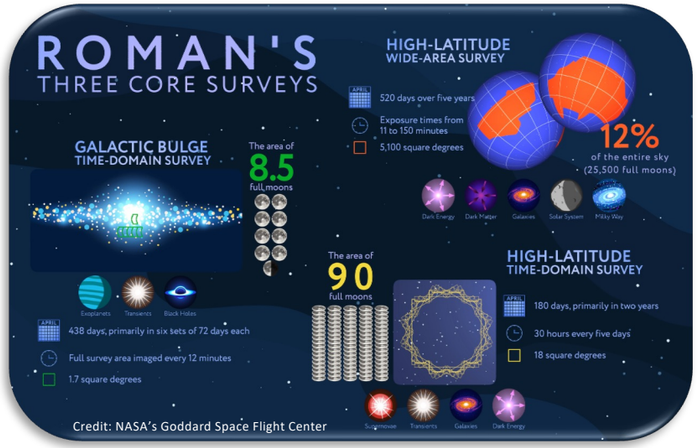
Planning for Large Surveys

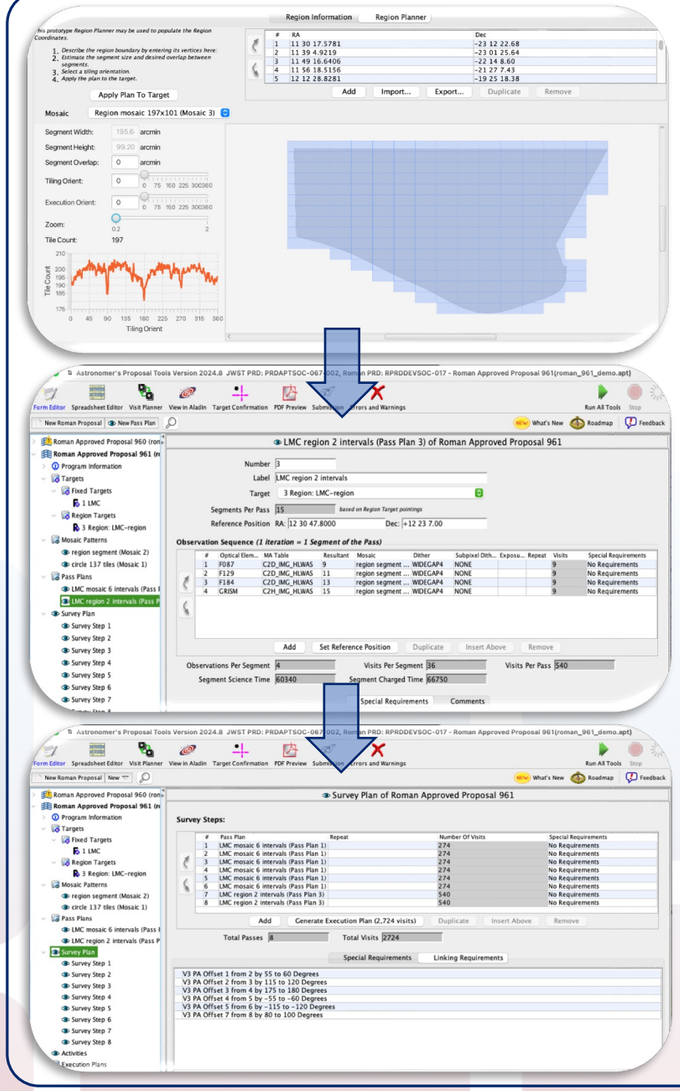


The Astronomer's Proposal Tool (APT) will be familiar to scientists who have previously submitted proposals for Hubble and JWST. APT now also supports proposals for the Wide Field Instrument on the Nancy Grace Roman Space Telescope.

The Roman APT includes a new hierarchical structure tailored for designing large surveys – taking advantage of Roman's rapid slewing capabilities and a field of view 200 times larger than Hubble's infrared camera. It also provides tools for designing mosaics and large region targets, along with on-sky visualization in Aladin.

The Roman APT was developed to support the implementation of both the Core Community Surveys (see above) and General Astrophysics Surveys (GAS). General Investigators interested in submitting GAS programs will be invited through calls for proposals, including a peer-review process, to broaden the Roman science program.

Roman APT Hierarchy for Survey Design



Targets & Region Planner

While fixed targets are available, region targets can be defined with user-input vertices and segment size, which the planner then uses to fill the region at the selected orient. It is an effective way of planning surveys over large and/or irregular regions. Users can also visualize their regions using Aladin.

Pass Plans

On the Pass Plan form, each row specifies how the observations are to be taken, i.e. exposure times, dithers, mosaics, etc. These observation sequence form segments, which are the building blocks of a survey.

Survey Plan

A Survey Step references one Pass Plan, and provides additional parameters such as the number of repeat passes and some special requirement that can link different passes (either in time or in orientation).

Learn More & Get Support

Roman APT User Guide

Updates are published many times a year and provide users with the most accurate information available, including installation instructions.

Demonstration Programs

These programs are available from the APT File menu and are designed to help new users create their first Roman survey. We expect to add many more programs in the near future to demonstrate a range of scenarios.

Helpdesk

Please contact us if you have any additional questions.

Take Part in the Mission

- ❑ **Tune In**: sign up for news, listen to webinars, and read documentation.
- ❑ **Interact**: attend conferences, use simulated data and tools, and prepare to submit proposals.
- ❑ **Actively Contribute**: engage with formal committees, join the WFI working groups, and participate in workshops.