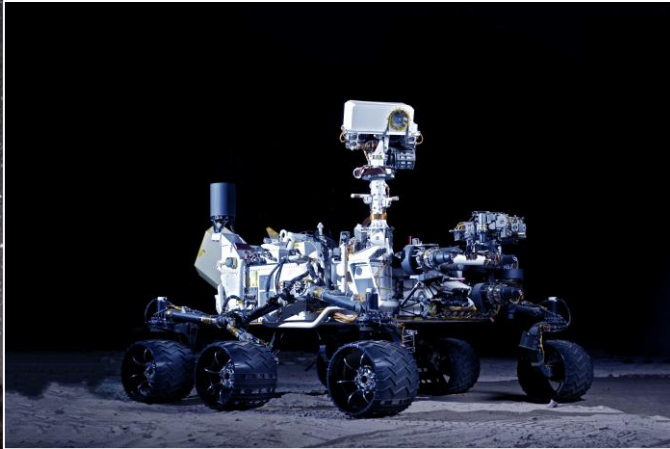


# TAMRON

## Innovative Optical Technologies for Space Missions

Since its establishment in 1950, TAMRON has consistently emphasized creativity and originality in its activities as a manufacturer of precision optical equipment.



Space Imaging Systems



Laser Communication Technologies

### Core Technologies



Opto-Science R&D



Actuator



Coating & Filter



Lens Processing



Optical Design & Engineering R&D



Resin Forming & Molding

### Partners



Thales Alenia Space



Lens OTAs for Copernicus Programme of the European Union co-funded with ESA



NICT  
National Institute of Communication Technology



JAXA  
Japan Aerospace Exploration Agency

### Space Environment Ready



We have thermal cycling, vacuum bake-out and top-grade optical performance check facilities in-house. We collaborate with external partners for vibration, shock and radiation tests in Japan.



# Space Imaging Systems



TRL 9

## Key Features

High Precision

Space Heritage

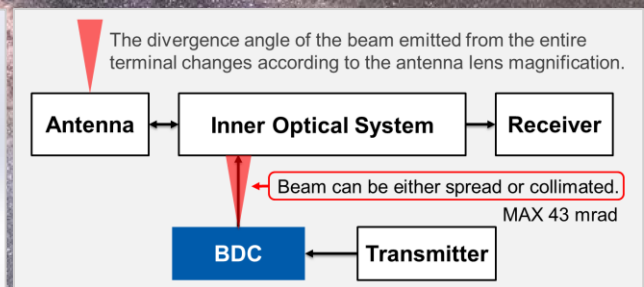
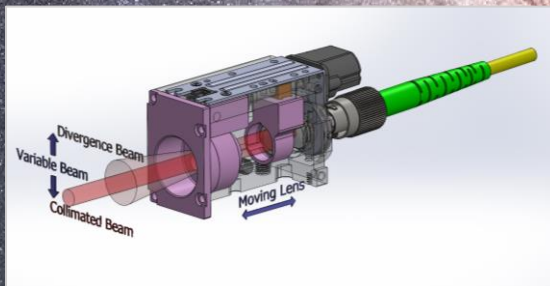
Low SWaP

- ✓ Compact Space Environment Qualified Lens
- ✓ Versatile Lens to Shorten Development Time
- ✓ Designed for Use in a Wide Range of Application

## Laser Communication Technologies

### 1. Beam Divergence Control (BDC) system

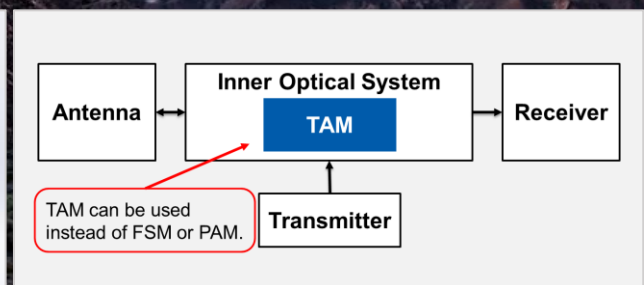
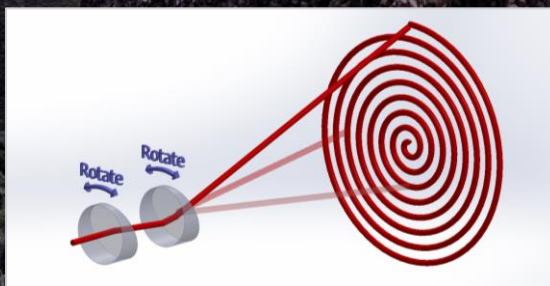
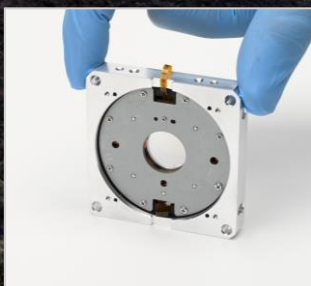
TRL 7



- ✓ The beam divergence can be adjusted by using a moving lens according to the actual operating conditions, such as link distance, pointing error, and vibration environment.
- ✓ Based on the principle prototype developed according to the NICT's commissioned specifications, we have achieved miniaturization and space compatibility.

### 2. Transmissive Applied-optical Mechanism (TAM)

Under Development



- ✓ The optical axis of the beam can be adjusted quickly and accurately by rotating multiple prisms with high-precision actuators and control systems.
- ✓ Depending on the number of prism sets, TAM can be used for different kinds of applications from beam steering to beam fine pointing.

## Contact

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