

Vatican Advanced Technology Telescope

The VATT telescope has an Alt/Az mount and uses a 1.8-m f/1.0 honeycombed construction, borosilicate primary mirror developed by the University of Arizona Mirror Lab. Its secondary mirror is a 0.38-m f/0.9 Zerodur manufactured by the Space Optics Research Laboratory ¹⁾.



Both observing time and responsibility for VATT are shared with the University of Arizona on a 75% The Vatican Observatory Research Group VORG, 25% basis. Limited resources prevent VATT from being a visitor observatory, but collaborations are welcomed by VORG, especially when suitable instrumentation is provided for shared use at VATT. ²⁾

Altitude : 3191 meters = 10,469 ft
Latitude : 32° 42' 04.69" N
Longitude : 109° 53' 31.25" W
Optical System : aplanatic Gregorian, f/9
Focal Length : 16.48 m
Primary Mirror : f/1.0, Diameter 1.83 meters = 72 inches
Secondary Mirror : f/0.9, Diameter 0.38 meters = 14.96 inches
Back Focal Distance : 50.80 mm (effective)
Vignetting-Free Field : 72 mm diameter (15 arcmin)
Image Scale : 12.52 arcsec/mm
Image quality : 0.1 arcsec throughout 6.8 arcmin diameter flat FOV
Mount : altitude-azimuth with derotator

[Read-Me before applying for VATT time](#)

[List of Approved Observers](#)

[Current Schedule](#)

[Past Schedules](#)

[Useful Astronomy Links](#)

[Weather & Environmental Conditions & Hazards](#)

[Dome, Security & Finderscope Cameras](#)

[MGIO Radio Call Codes](#)

Safety

- [Wind-gust limit](#)

What's New at VATT

- [What is New at VATT](#)
- [Miscellaneous Tips](#)

The Telescope & Instruments

- [Brief Chronology of VATT Development](#)
 - Blanco et al. SPIE 1990
 - West et al. SPIE 1997
- [A paper on Mt Graham atmosphere](#)
- [Optical Diagram](#)
- [Specifications](#)
- [Instrumentation and Computers](#)
- [Filters](#)

Base Camp & Swift Trail

- [Base Camp and Swift Trail](#) prior to your arrival

Don User Manual

Don by ProjectSoft: psd-01-um r03

Still a work in progress. Feedback welcome!

Start up and shutdown

- [VATT Operations README](#)
- [VATT Don Warm Startup Checklist](#)
- [VATT Don Warm Shutdown Checklist](#)
- [VATT Don Lightning Shutdown Checklist](#)

Particular tasks

- [Thermalizing M1](#)
- [Liquid Nitrogen for ITL cameras](#)
- [Operating PEPSI](#)
- [Focusing & Collimating](#)

Telescope Operation

- [Remotely operated valve on LN2 dewar](#)
- [Collimate and Focus \(New Hexapod\)](#)
 - [Instructions for use of the VATT 4K Camera](#)
 - [CCD Imager Log Sheet](#)
- [VATTspec](#)

General Instructions

- VATTspec

Instructions on Guiding

- [Dome Flats](#) (Gabor style)
- [LED Dome Flats](#) (Boyle style)
- [PHD2 Guiding \(Abbreviated\)](#)
- [Cosmograil/H0LiCOW](#)
- Guider: [Temporary fix](#)
- Don by ProjectSoft: psd-01-um r02a
- Vertiv 10kVA GXT5 UPS manual

Peripheral Systems

- [Mirror Cell Thermal Reader](#)
- [Secondary Mirror](#)
- [Logging System](#)
- [Dome, security & finderscope cameras](#)

Data Retrieval

- [How do I retrieve my data from VATT servers](#)

Maintenance and Engineering

- [Fiber Panel Test](#)
- [PHD2 Guiding](#)
- [Oil chillers](#)

Superannuated Contents

- [Collimate VATT \(Old\)](#)
- [VATT Warm Startup Checklist \(2011\)](#)
- [VATT Warm Shutdown Checklist \(2011\)](#)
- [Calibrate](#)
 - [VATT Instructions \(2005\)](#)
- [VATT Streamlined Warm Startup Checklist](#)
- [Remote Observation Checklist](#)
 - [Warm Startup Checklist for VATT operation during PEPSI runs](#)
- [\(Re\)Booting VATTtel](#)
- [Starting NESLAB](#)
- [Recovering from a stall](#)
- [Recovering from a power glitch](#)
- [VATT Ash Shutdown/Startup Checklist](#)
- [VATT Lightning Shutdown Checklist](#)
- [VATT Lightning Startup Checklist](#)
- [VATT Warm Startup Checklist](#)

- [VATT Warm Shutdown Checklist](#)

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<http://vaticanobservatory.org/VATT/>

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Last update: **2025/06/03 21:02**

