

# Telescope Report

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# Contents

- Observation cancellations due to telescope troubles.
- Status of telescope refurbishment.
- Telescope performance.

# Observation cancellation due to the telescope maintenance or trouble in 2024.

- 2023/9/15-2024/2/15 (M1 trouble)
- 2024/2/16-2/18, 2/23, 2/29-3/2 (PA/MA)
- 2024/2/21-2/22, 2/24-2/28 (TUE maintenance)
- 2024/3/6 (ADC stacked)
- 2024/4/1 (SMCU trouble)
- 2024/5/20 (Main shutter trouble)
- 2024/7/6 (Earthquake)
- 2024/8/26 (SMCU trouble)
- 2024/11/5 (EI drive trouble)
- 2024/12/6-12/8 (M1 actuator trouble)

# Status of telescope refurbishment.

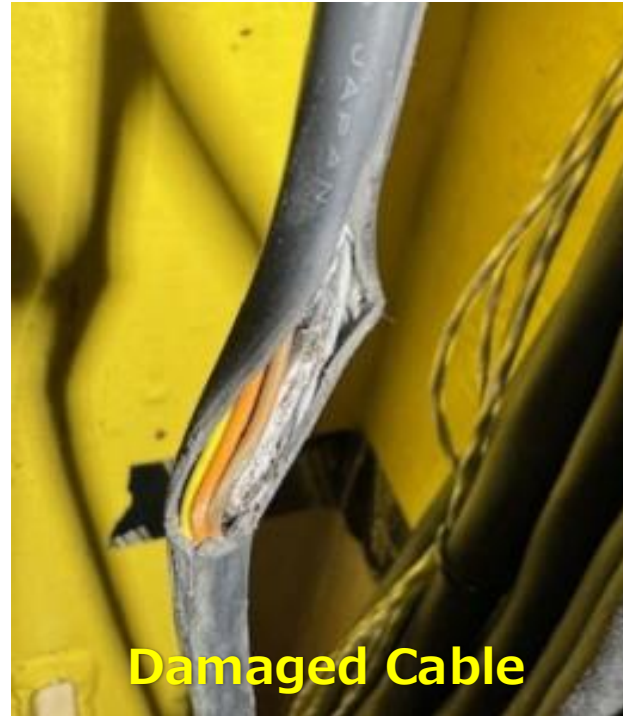
- Completed items
  - Main shutter mechanical repair. Top screen. UPSs. Power distribution panels. M1 coating carts. Dome air conditioner. Chillers. Top unit exchanger mechanical system.
- Continuing items
  - Az/El encoder system. Az/El drive system. Dome rotation mechanical system. M1 coating chamber. M1 cleaning facility. Dome sealing. Dome motion control system. Hydrostatic bearing. Main shutter control system upgrade.
- Planned items
  - Telescope tracking systems. Mirror recoating. Top unit spider connectors. Telescope control drivers. Telescope control computers.
- Revisions will be made to those that require to be refurbished.

# Telescope refurbishment

Main shutter upgrade

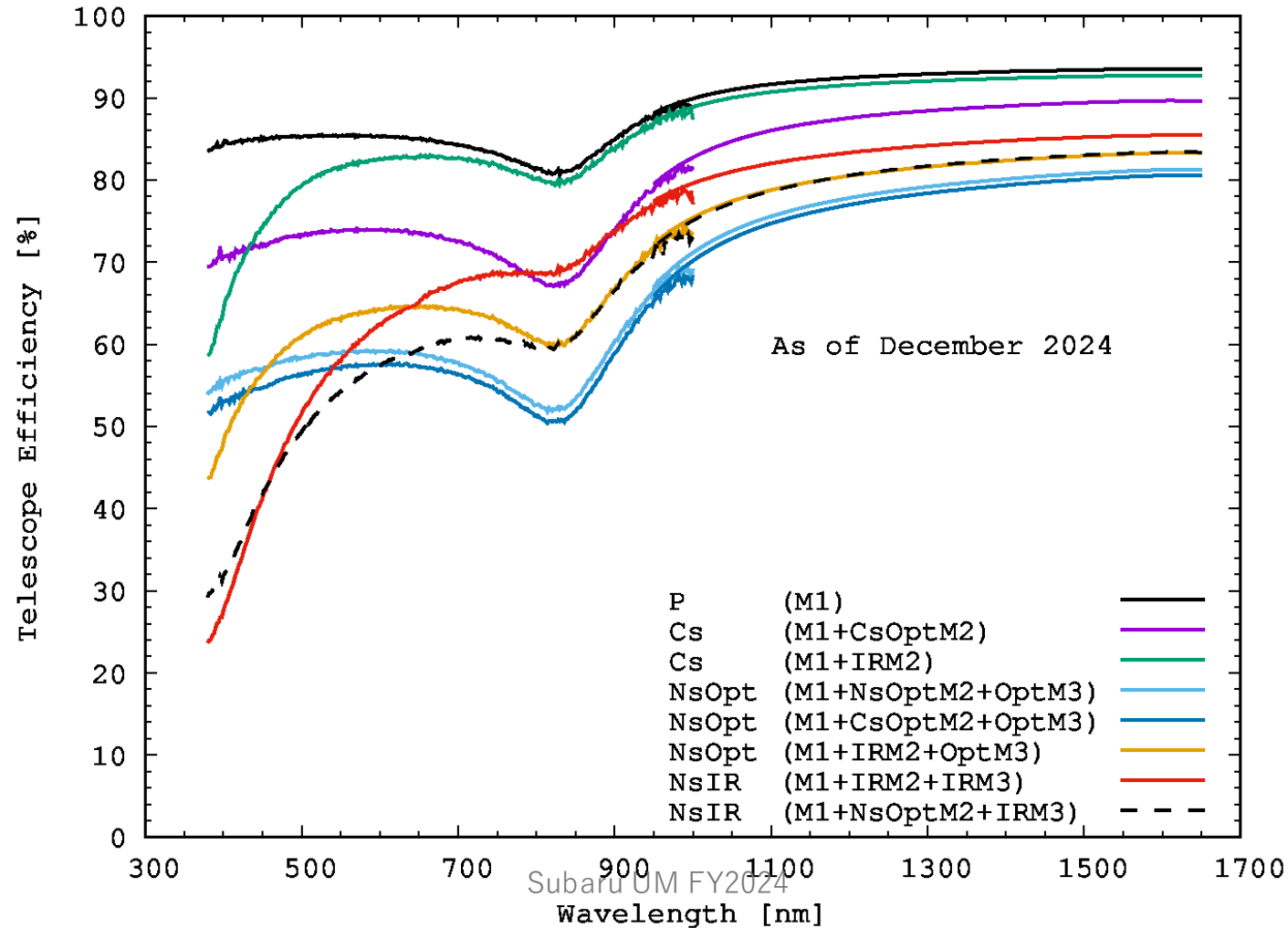


Overhaul of top unit exchanger



# Telescope Reflectivity.

<https://subarutelescope.org/Observing/Telescope/Parameters/Reflectivity/>



# Worst pointing and unstable tracking.

- Pointing error has become larger.
  - Targets could not acquire for SCExAO and IRD.
  - Under investigation.
  - PA will be schedule in March.
- Unstable tracking has been reported when the tracking speed is small.
  - Crossing the meridian. (Tracking speed of EL is small.)
  - Specific sky at the north. (Tracking speed of Az is small.)
  - Under investigation during the daytime.
- If you have any requests or concerns about the telescope performance, please give us a feedback after the observation through an open-use report.

# Summary

- Observation was cancelled due to the M1 trouble until the middle of February.
- After M1 trouble recovery, the schedule of PA/MA and the TUE maintenance was optimized.
- Telescope refurbishment is continuing.
- Some items related to the the dome and the facility have been completed.
- Revisions will be made for the refurbishment future plan.
- Telescope reflectivity has been monitored regularly.
- Worst pointing and unstable tracking is under investigation.
- Any comments or concerns regarding the telescope's performance are welcome.