




SAAO Instrumentation Standard Operating Procedure

Title: IRSF Telescope Operational Checklist (Remote)

Document Number:

Personnel authorized to perform procedure: SAAO Technical Operations Staff

Date: 28 January 2020

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VERSION HISTORY

Document Number	Author	Version	Date	Change History

ACRONYMS AND ABBREVIATIONS

NRF	National Research Foundation
SAAO	South African Astronomical Observatory
SOP	Standard Operating Procedure

DEFINITIONS



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1. Purpose

The purpose of this document is to provide checklists specific to the operation of the IRSF telescope when operated remotely.

2. Constraints and Warnings

This should be performed by a standby electronic technician unless communicated otherwise. An email will be sent stating that the telescope will be operated remotely. These procedures should only be undertaken by trained personnel. Please note that at the end of this document, as well as at the entrance of the dome there is a QR code that needs to be scanned with a barcode scanner and the electronics check list must also be completed.

3. Technician Remote Observing checklist

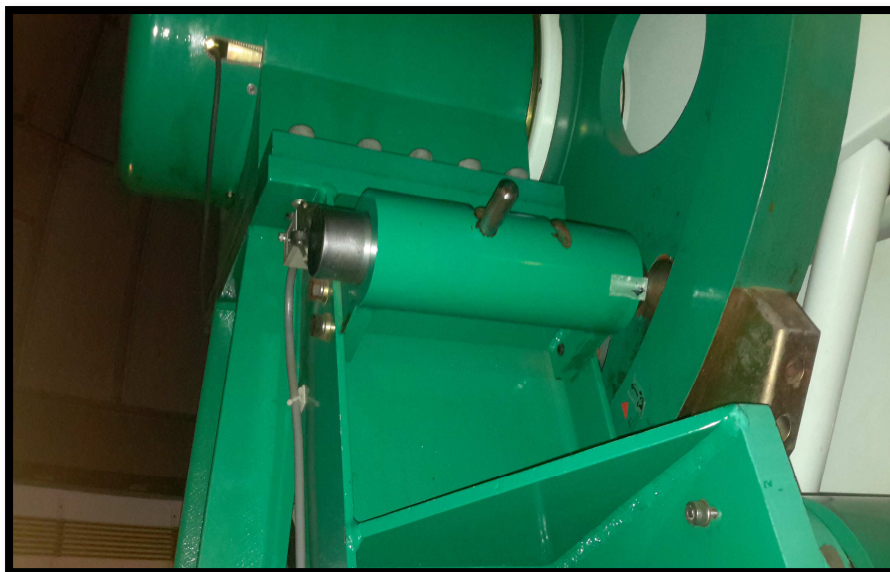
The following checks must be performed to ensure the telescope is safe for remote observing.

In the evenings (Preparing for remote observations):

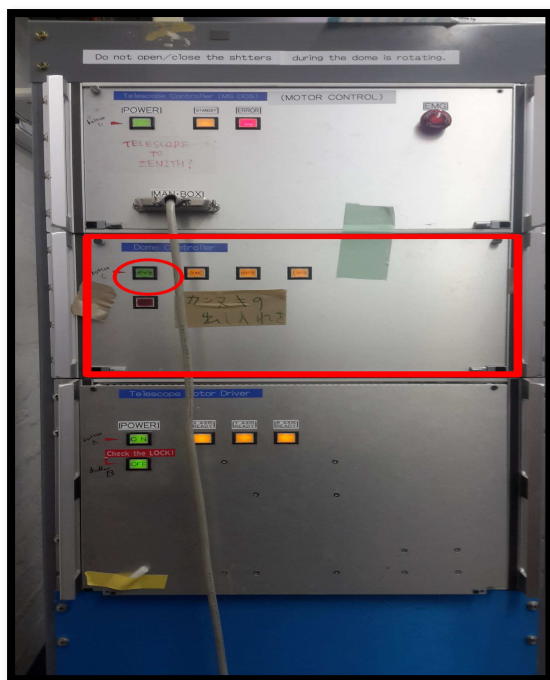
1. Ensure all ladders are stowed safely.
2. Switch Telescope Motor **ON**.



3. Disengage the altitude lock of the Telescope.



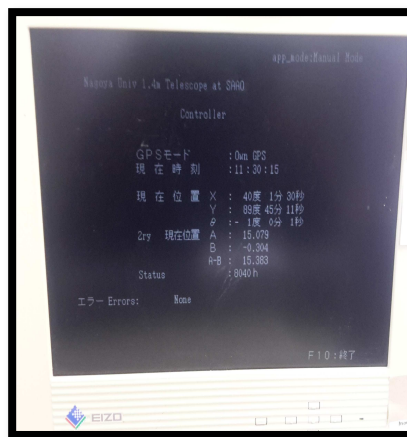
4. Switch Dome Controller **ON**.



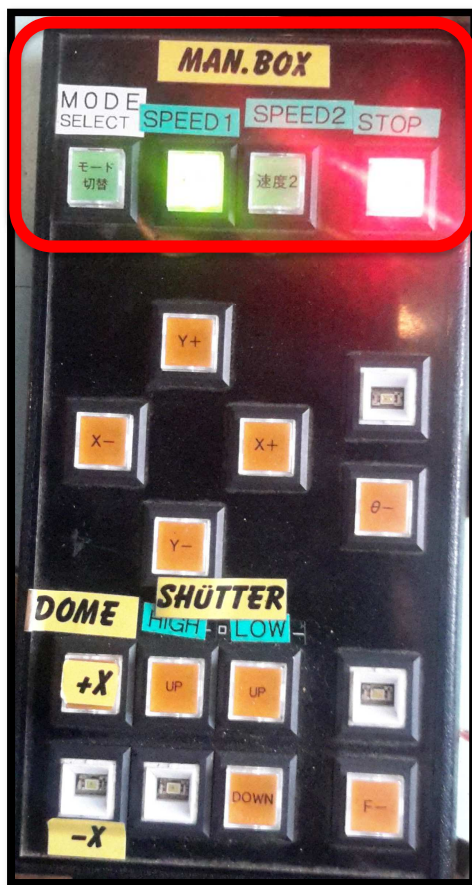
5. Start Telescope Controller Computer "MS-DOS".



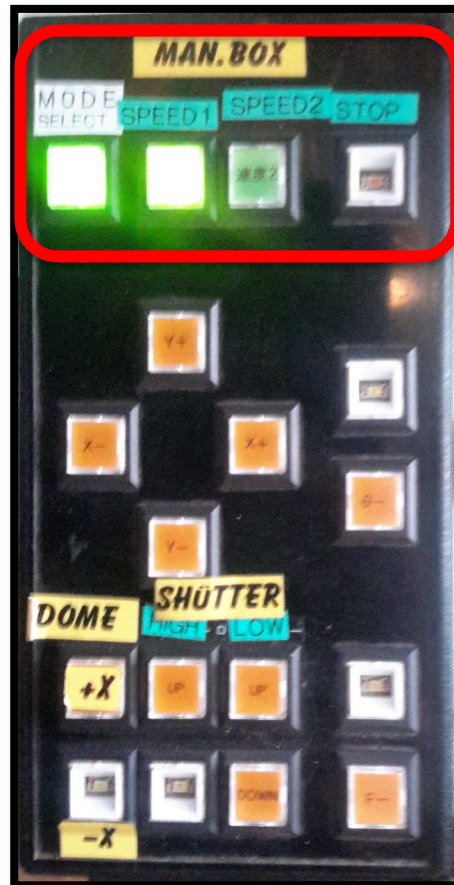
6. Change the monitor to "MS-DOS" B and check that **ERROR=NONE**



- Clear the error indicator on MS-DOS panel by pressing the mode button on the handset (Telescope side).



ERROR STATE

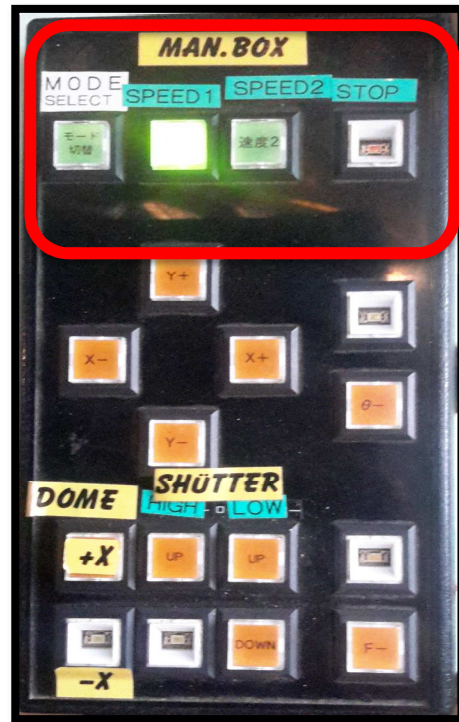


LOCAL MODE

- Press the mode button again to allow remote access. The 'Mode Select' led should be off.

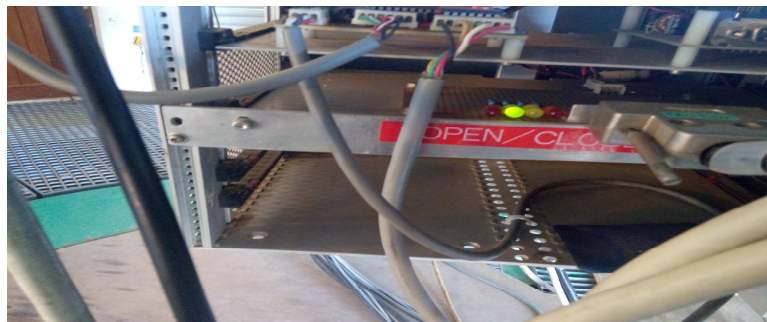


LOCAL MODE

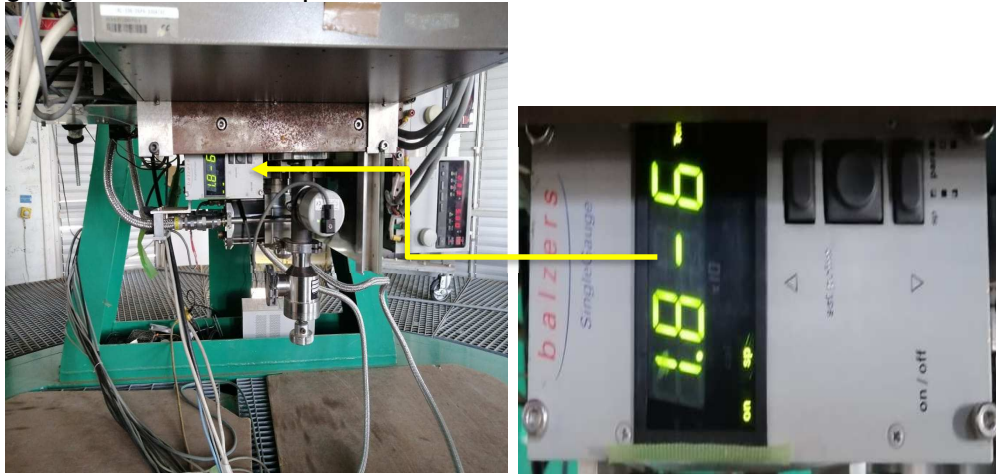


REMOTE MODE

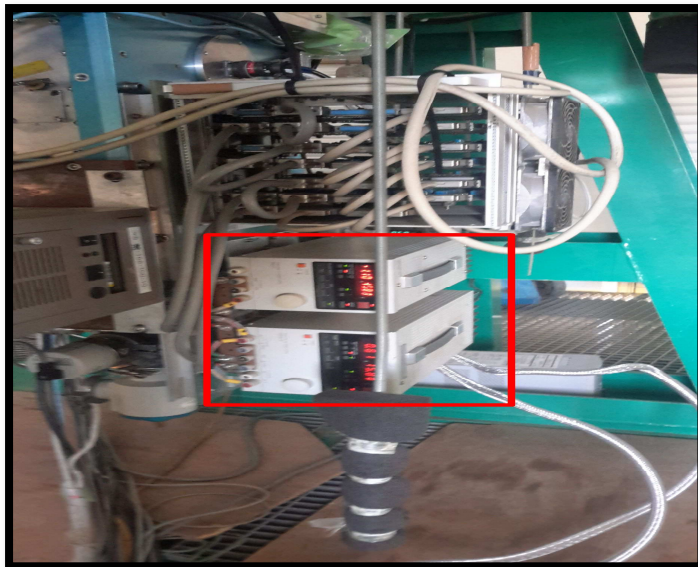
- Open the cold shutter of the Sirius instrument [turning counter clockwise 20 turns (1 turn means 180 deg) till the green led comes on].



10. Check that the vacuum reading is around -7 or -6 Torr on the vacuum gauge on the telescope.



11. Check instrument and the two detector power supplies on the instrument are **ON**



12. Ensure the Helium hoses are not tangled.
13. Ensure Dome lights are **OFF**.
14. Only open the louvers in the dome when instructed.

In the mornings (After remote observing):

1. **Shutdown Telescope Controller Computer "MS-DOS".**



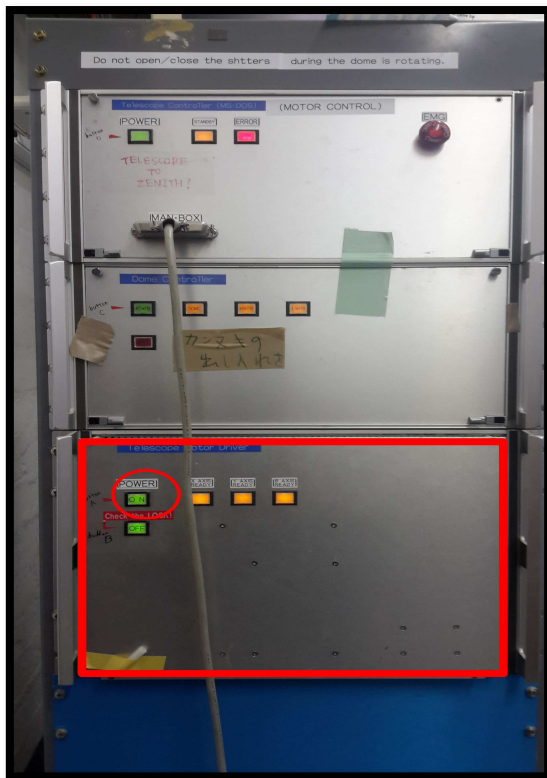
2. Switch Dome Controller **OFF**.



3. Engage the **altitude lock** of the Telescope.



4. Switch Telescope Motor **OFF**.



5. Close the cold shutter of the Sirius instrument [turning clockwise 20 turns (1 turn means 180 deg) till the yellow led comes on].



Please note that the yellow led is not working at the moment, so turn until the red led comes on and turn one(1) turn back. All Led's will be off.



6. Ensure that the helium hoses are not tangled.
7. Close the louvers in the dome if they are open.
8. Check that the dome is completely **CLOSED**.
9. Check Chiller temperature (13°C) and water level.



10. Check Helium compressor is running and at about ~20MPa.



*NB!!! At the end of these checks, please scan the QR-code below and complete the electronic check-list.
If you do not have a bar-code scanner on you smart phone, please use the following link:*

<https://forms.gle/AhEMcckCRdVmuxqu6>



The QR-code and link is also available at the entrance to the telescope (next to the entrance code pad) as per the below image:

