Starting TCSng

1. Xephem
     - Click "RT" button under looping if Xephem is not updating the time.
     - Click "View" and Select "Sky View".
2. In the "Sky View" window click on the "telescope" tab and select "INDI Panel"
3. In the "INDI Panel" window that opens connect to the following module:
     1. Expand "TCS-NG-INDI"
         - Telemetry → Connection → On
4. Click "Enable" (red light next to "TCS-NG-INDI" turns green)

Stopping the Telescope

Using "cancel in XEphem":

1. In the "Indi Panel" window
     1. TCS Module
         - Telemetry → Actions → Cancel

Using "SafeTelescope" Buttons:

1. Enable/Disable and Cancel

Moving the Telescope

- YOU MUST LOOK AND MAKE SURE IT IS CLEAR TO MOVE THE SCOPE (ladders out of the way,etc).
- Telescope must be enabled.

Ways to move:

1. With the Sky View window
     1. Right click on the desired object.
     2. Click Telescope GOTO
         - The Coordinates should populate in the NEXT section of TCS telemetry
     3. Under "Actions" Click "Go Next"
         - Watch the telescope move and make sure to move the dome!
2. Equatorial Coordinates
     1. In Indi control Panel:
         1. Under TCS-NG-INDI
             1. GOTO Functions
             2. Enter Desired RA, Dec and Epoch
             3. Click "set" or hit the enter key
             4. Then under "Actions" "hit Go Next"
         - Watch the telescope move and make sure to move the dome!
         - When moving with the Sky View Window or Entering Equatorial coordinates, the

telescope will start tracking automatically.
  - Remember the telescope moves much faster than the dome, and you need to watch to make sure telescope does not hit the staircases or platform attached to the dome.
3. Alt/Az coordinates:
    1. In Indi Control Panel:
        1. Under TCS-NG-INDI
            1. GOTO Functions
            2. Alt Az Goto
            3. Enter the desired Altitude and Azimuth.
            4. Click "Set" or hit the enter key.
    - Watch the telescope move and make sure you move the dome
    - Note: the telescope will start moving after you clicking Set or hitting enter. There is no Go Next Button for Alt/Az postions.

Observing

Initializing:

1. Send the scope to a bright star close to the zenith.
2. Using the paddle, center the star in the finder scope.
3. Center the star in the eyepiece using the finderscopes and paddle.
4. In the "Actions" menu under TCS-NG-INDI Click "Init Next".
    - Don't Click "Init Commanded" unless you are a very experienced user!

Focus:

- Focus is achieved by looking through an eyepiece and adjusting it using the paddle.

Limits:

- For this telescope there is no autodome function. Because of the design of the dome and telescope you need to keep a good eye on where the scope is in relation to the dome. There are many situations where the scope can run into the dome.
- Currently there is no indication (flashing etc) on the TCS screen that you have hit a limit or that you have run into the dome.

Catalogs:

1. Selecting a catalog
    1. In Xephem Main Window
        - Data
        - Files
        - The Files window will pop up you can add catalogs in the "Files" menu and remove them with the "Delete" button.

2. Catalogs in list form
    1. In Xephem Main Window
        - Data Menu
        - Index
        - The Index window will pop up. You can select an object by name.
        - If you click Telescope GoTo the "Next" coordinates will be populated in the Indi Panel.
        - You can then click Go Next to move to that object.
        - To use the search function, you must type in the name of the object exactly or it will return no results.

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