ray_white_21_inch_telescope

Telescope Control System GUI for the Ray E White Telescope.

The Graphical User Interface (GUI) for the Ray E. White Telescope is located on the desktop of the computer in the dome. The Telescope Control computer should be running before you start the GUI program or the program will hang. To open the program simply double click on the icon labeled TCS GUI 03-24-2008. If everything is working correctly you should get a window that looks like this:
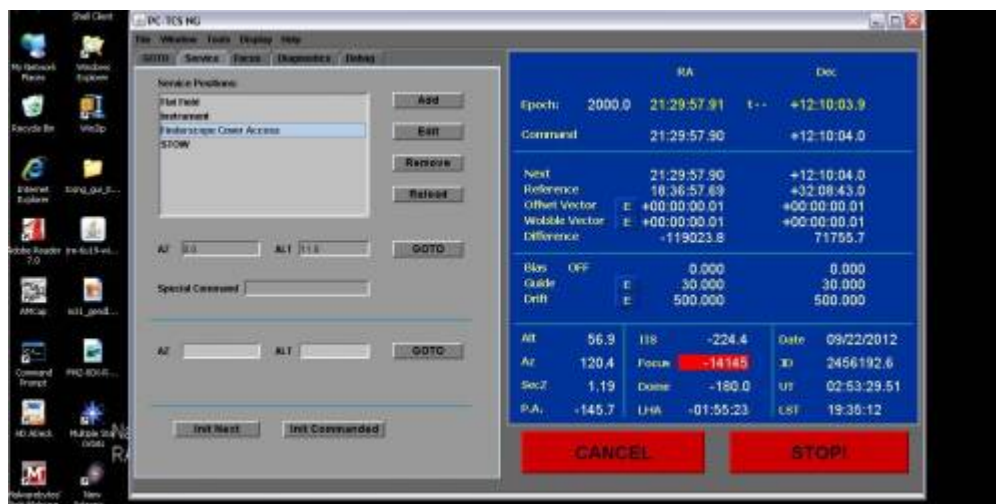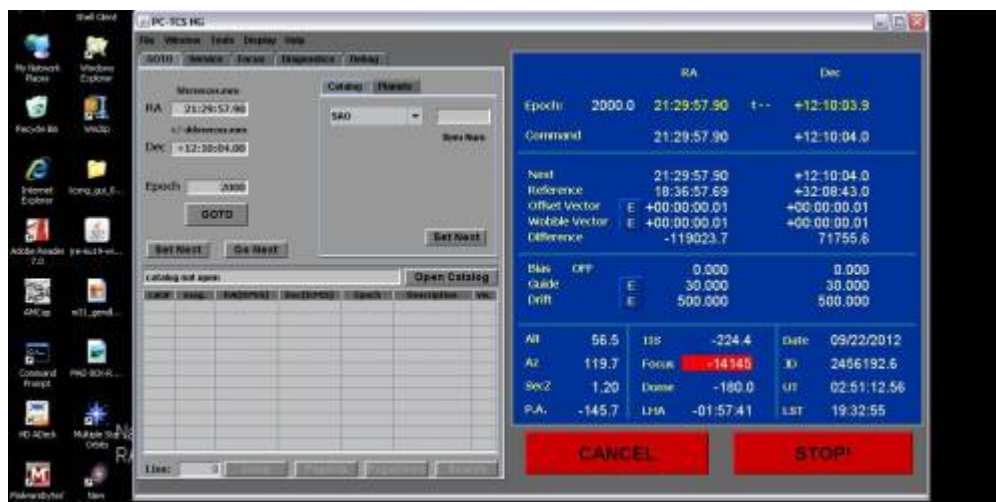

STOPPING THE TELESCOPE

To stop the telescope click on the red STOP in the TCS GUI. In an emergency the Emergency Stop button can also be pushed on the observatory control panel on the south wall.

General Use

Generally, you will be using the GOTO tab to slew to an object. The GOTO tab looks like this:

There are a few ways to slew to and track an object in the night sky.

Manually Enter the RA and Dec Coordinates

To enter RA and Dec coordinates manually, make sure you are in the GOTO tab. Enter the coordinates of your object in the RA and DEC input boxes and click the Set Next button. The object's coordinates are now in the buffer. Click the Go Next button to slew to these coordinates.

Select an Object From a Source Catalog

To slew to an object in a catalog you must be in the GOTO window. Click on the Open Catalog button in the center of the window. Double click on the catalog you would like from the list of catalogues that appear. The objects in the catalog will be listed in the catalog box in the bottom half of the window. All objects below the horizon are highlighted in red. Click on an object to select it. Click the Set Next button under GOTO. Click the Go Next button to slew the telescope to the object.

Initializing the Telescope on a Bright Star

Small errors in the mechanical and electrical systems in the telescope can accumulate to cause trouble with telescope pointing. That's why the telescope should be initialized every night in order to verify the telescope position. Be warned, initializing the telescope improperly can cause lots of headaches.

Here are the basic steps to follow when initializing: Slew to a bright star using the GOTO window. Make sure you use the "Set Next" and then Go "Next" buttons in order to put the coordinates into the "Next" buffer. You can see what this buffer is by looking on the right hand side of the GUI screen and looking at the "Next" column. Use the using_dome_remote_paddle:paddle controls to put that object in the center of the field. Return to the GUI application and check to make sure the "Next" column is close to the current telescope position. After this check, click on the Service tab. In the service tab click the "Init Next" Button at the bottom of the screen this will set the current telescope position to the "Next" coordinates.

List of Popular Stars for observing

Proper Name	FK5	SAO	Greek Letter	Constellation	Type	
Albireo	732			Cygnus	Visual	
Alcor 497				Ursa Major	Spectroscopic	
Algol 111				Perseus	Eclipsing	
Almach 73			gamma	Andromeda	Visual	
Alpheratz	1			Andromeda	Spectroscopic	
Arcturus	526		Alpha	Bootes	3rd brightest star in sky	
Bellatrix	201			Orion	No	
Betelgeuse	224			Orion	Spectroscopic	
Capella	193			Auriga	Spectroscopic	
Castor 287				Gemini	Visual	
Gamma Leporis	217			Lepus	yellow and red	
Dubhe 417				Ursa Major	Visual	

Proper Name	FK5	SAO	Greek Letter	Constellation	Type	
Iota Cancri		80416	Iota	Cancer	Visual***	
Mintaka	206			Orion	Eclipsing	
Mirach 42			Beta	Andromeda		
Mizar 497				Ursa Major	Visual	
Polaris	907			Ursa Minor	Inferred	
Pollux 295				Gemini	No	
Procyon	291			Canis Minor	Visual (but don't bother)	
Rigel 194				Orion	Visual (very nice, almost looks like a quad)	
R Leporis		150058		Lepus	"Drop of blood" red star	
Sigma Orionis		132406	Sigma	Orion	Gravitational nonuple system, can see 7 easily - awesome!!	
Saif 209				Orion	No	
Spica 498						
Sirius 257				Canis Major	Visual (but don't bother)	
Tsih 32			Gamma	Cassiopeia		
Vega 699				Lyra	Freaking bright star	
ghost of jupiter	NGC 3242				planetary nebula	
37 NGC 2169						open cluster
epsilon lyrae	67310			Lyra	double double system	

Questions or Suggestions

If you have any questions or suggestions for changing the GUI email Scott Swindell sswindell@as.arizona.edu. Here is a list of suggestions we have already received.