## **TCS Crash Recovery Procedure**

If TCS crashes when the scope is not at stow or if TCS is shutdown when the scope is not at stow, **pointing will be lost**. To recover, follow the steps below:

- 1. Restart the TCS program if it is not up and running.
- 2. Determine if the telescope is at zenith or not. If it is, precede to step 3. If not, there are three ways to get the telescope close to zenith.
  - 1. Use the Hard stow (Hardware Stow) feature in TCS.
  - 2. Use the setting circles on the side of RA and DEC drives if they are available.
  - 3. Use the hand paddle to get the telescope as close to zenith as possible by using the bubble level on the NW side of the scope (only at 90") or a carpenter's level by checking in the North/South and East/West directions.
- 3. Once the base of the telescope is as level as possible on the TCS computer
  - 1. Source  $\rightarrow$  Keyboard  $\rightarrow$  <Enter>
  - 2. Position  $\rightarrow$  Next  $\rightarrow$  <Enter>
    - 1. Epoch = 2000 < Enter>
    - 2. Add 2 minutes to the current LST time in TCS. Enter this time in RA of Next Position. <Enter>
    - Enter the DEC of Next Position using the correct DEC position at stow (+31:50:00.0 at 90"). <Enter>
    - 4. Skip past RA Proper Motion and DEC Proper Motion with <Enter>
  - 3. When back at the main screen, Declare  $\rightarrow$  Init Next  $\rightarrow$  <Enter>
    - 1. A screen will appear which reads:

Coordinate System Initialization

Warning - This function will make the current position equal to the NEXT position coordinates.

Make sure the correct object is centered in the

field.

Hit Y to confirm, ->ESC to abort<-

1. Watch the LST reading in TCS. When the LST and the RA position displayed in the Next line on TCS are equal (the value you entered in step 6), hit Y to confirm initialization on next position.

This should get the scope and TCS synched close enough to find a star in the finder scope and go through the normal initialization process.

## Notes

- Latitude of the observer is equal to the declination of objects at zenith.
- LST is equal to the RA of objects on the meridian.

Last update: 2019/06/18 Public:kitt\_peak:bok\_90:troubleshooting:tcs\_crash\_recovery\_procedure https://lavinia.as.arizona.edu/~tscopewiki/doku.php?id=public:kitt\_peak:bok\_90:troubleshooting:tcs\_crash\_recovery\_procedure&rev=1560887002 12:43

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Last update: 2019/06/18 12:43