

# 90-inch Lightning Shutdown

Updated 07/06/11

See pictures for location - cords to be unplugged are wrapped with red tape for identification.

**NOTE:** If open for some reason, the **SuperLotis telescope** will need its roof shut due to lightning. If no telescope operator is present, Mountain Operations personnel should be called.

## On Telescope

1. If B&C Spectrograph is in use shut **OFF AND UNPLUG** the following (*SEE RED TAPE*) :

Figure 1 –

- a. “BCSpec” Power Supply - Turn **OFF** rocker switch on south side of grey box located on the east side of the IIS (instrument interface system, the rotator)
- b. Shutter Controller (no on/off switch, just unplug)

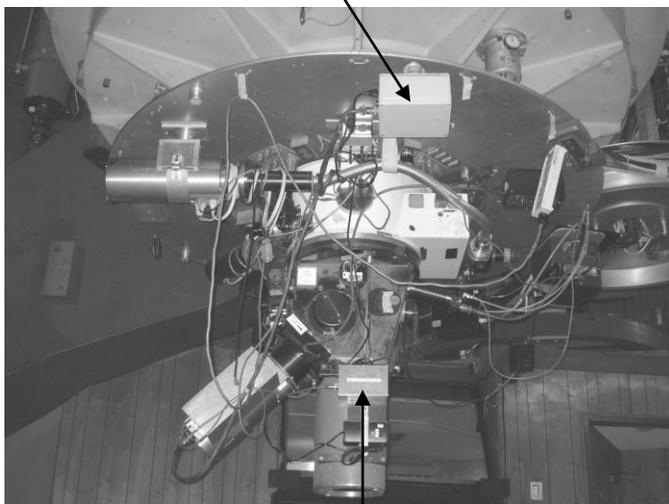
Figure 2 –

- c. Autoguider Controller - blue unit (has black computer piggybacked onto it)
- d. Autoguider Chiller (look for small diameter plastic tubing)
- e. Optoserver (square silver aluminum box, west side, no on/off switch, just unplug)
- f. Lamp Power Supply

Figure 1

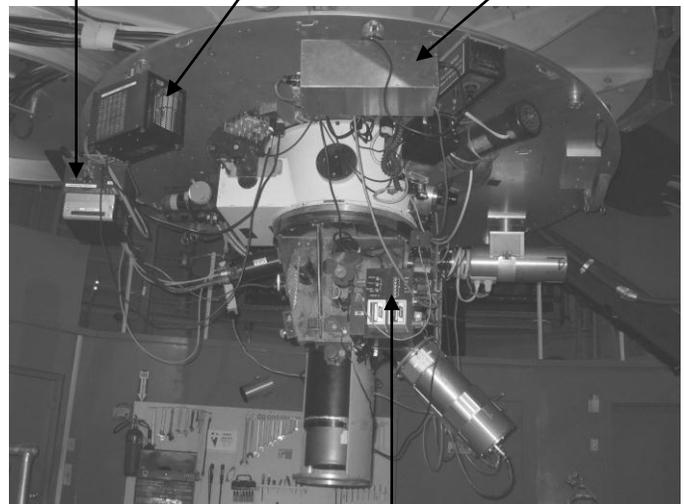
Figure 2

a. BCSpec Power Supply



b. Shutter Controller

c. Autoguider    d. Autoguider Chiller    e. Optoserver

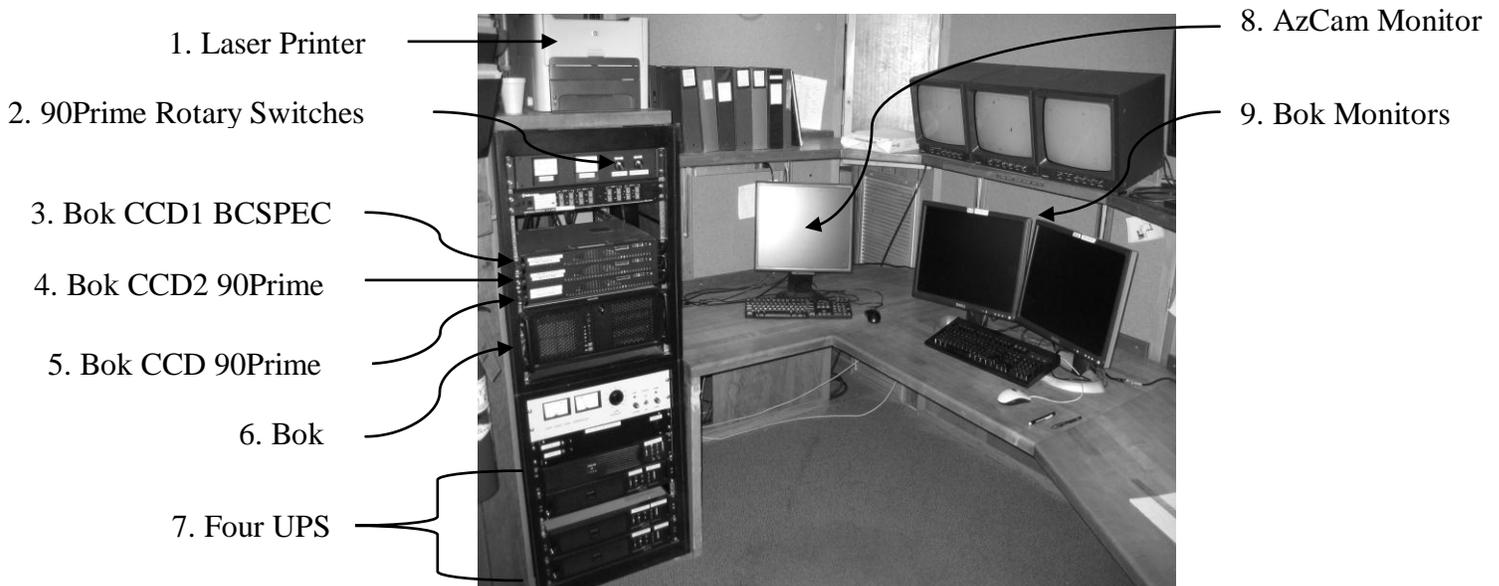


f. Lamp Power Supply

### Control Room: Observers Workstation Area

1. Turn **OFF** laser printer using switch towards side and rear (Figure 3).
2. Turn **OFF** power to the two rotary switches for 90 Prime in the front of the black rack near where observers sit. They control the two AC power circuits to the 90 Prime. They are labeled “90 PRIME CCD” and “90 PRIME SYSTEM” (Figure 3).
3. Determine if the “Bok CCD1 BCSPEC” computer is on. It is located in the front of the black rack near where observers sit (Figure 3). Look at the power indicator light on the front of the computer (Figure 4; the fifth light from the left, light bulb symbol). If it is lit, the computer is on. Select “BCSpec” on the screen splitter. Using Windows, **SHUTDOWN** the computer. The powerlight should go out.
4. Determine if the “Bok CCD2 90Prime” computer is on. It is located in the front of the black rack near where observers sit (Figure 3). Look at the power indicator light on the front of the computer (Figure 4; the fifth light from the left, light bulb symbol). If it is lit, the computer is on. Select “90Prime” on the screen splitter. Using Windows, **SHUTDOWN** the computer. The power light should go out.
5. Determine if the “Bok CCD 90Prime” computer is on. It is located in the front of the black rack near where observers sit (Figure 3). Look at the power indicator light on the front of the computer (Figure 4; the fifth light from the left, light bulb symbol). If it is lit, the computer is on. Push in the “power” button once and release (do not hold down; see figure four) to **SHUTDOWN** the computer. The power light should go out.
6. **LOGOUT** of and then **SHUTDOWN** the “Bok” PC computer. It is located in the front of the black rack near where observers sit and is the computer that uses 2 screens (Figure 3).

Figure 3: Observers Workstation Area



7. **SHUTDOWN** four UPS units in black rack near where observers sit (Figure 3). Press button with the circle in the center (Figure 5).
  - a. Instrument
  - b. System
  - c. Network
  - d. Observer
8. Turn **OFF** the single AzCam computer monitor.
9. Turn **OFF** both “Bok” monitors.

Figure 4:  
BokCCD Indicator Lights

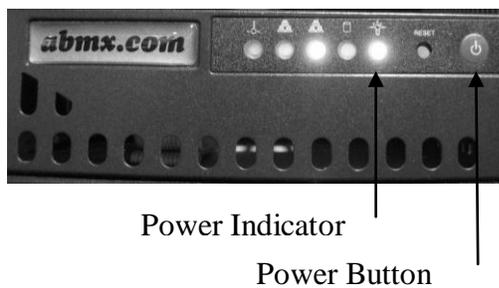
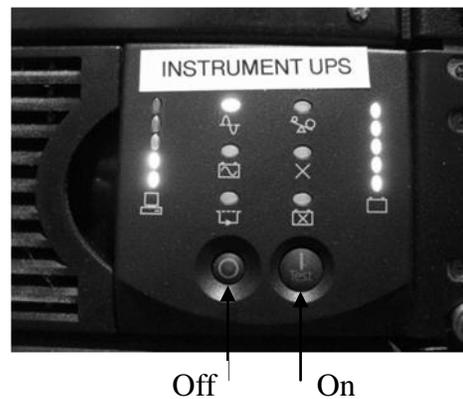


Figure 5:  
UPS Power Buttons



### **Control Room: Operators Workstation**

10. Make sure dome is stowed. Turn **OFF** “UPPER DOME POWER” and “DOME MOTOR POWER” using buttons next to electric panel in control room (Figure 6).
11. Make sure mirror covers are closed.
12. Send telescope to Zenith (90 Az/180 El) and declare stow if not done already.
13. Verify that Main/Aux Compressors, RA Oilpad and Telescope Power are **OFF** on Operators console (Figure 7a).
14. Turn **OFF** Operator’s console: “Console Power” switch to **OFF** (Figure 7a)
15. **EXIT** TCS program then **SHUTDOWN** TCS computer. It turns off automatically. Turn **OFF** monitor (Figure 7b).
16. **SHUTDOWN** Autoguider Computer . In Windows initiate shutdown (Figure 7b). When prompted “it is now safe to shut off computer” go to back of blue rack, open door and flip switch to **OFF** position on back of computer. Turn **OFF** monitor.
17. Push **IN** Emergency Stop on console (Figure 7a).
18. **SHUTDOWN** Operators UPS in blue observers rack below countertop. Press button with the circle in the center (Figure 7b).

19. UNPLUG Operators UPS from wall behind the blue console (Figure 8). *SEE RED TAPE*

Figure 6

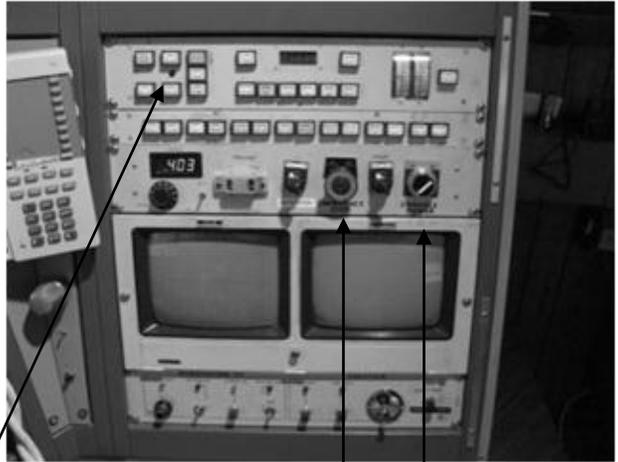


Upper Dome Power  
Dome Motor Power

Microphone

Main/Aux Compressors, RA Oilpad, Telescope

Figure 7a



Emergency Stop

Console Power

Figure 7b

Autoguider Computer

TCS Computer

Operators UPS



Figure 8



Operators UPS

20. **SHUTDOWN** “BokAux” general use computer. Turn **OFF** monitor (Figure 9).
21. **SHUTDOWN** WeatherHawk computer. Turn **OFF** monitor (Figure 9).
22. **UNPLUG** microphone/dome listening system below First Aid/Defibrillator area near console (Figure 6) *SEE RED TAPE.*

Figure 9

WeatherHawk  
Computer



BokAux  
Computer

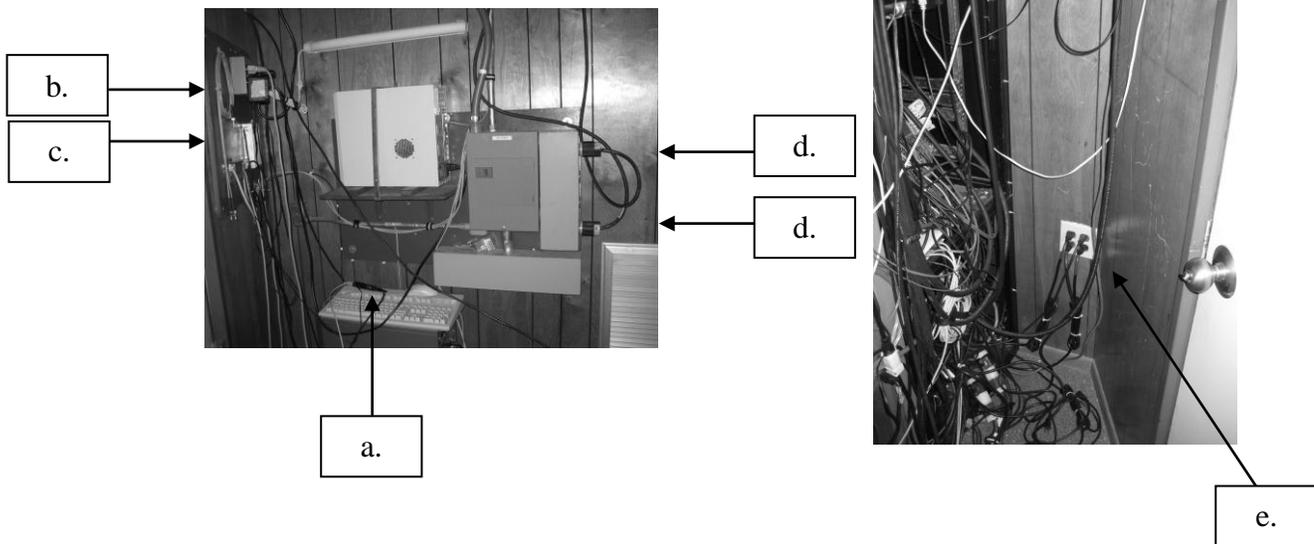
## Behind Observers Workstation

The following are located behind the observer's workstation. Access to this area is through the side door (labeled Warm Room Cable Closet) located between the Bok Walk and south warm room door.

1. **UNPLUG** the following *SEE RED TAPE* :
  - a. Serial cable isolator to WeatherHawk (Figure 10)
  - b. WeatherHawk power supply (Figure 10, black square shaped 'brick')
  - c. Antenna to GPS (Figure 10)
  - d. Two twist lock plugs west wall chest height (Figure 10)
  - e. Four plugs on wall, just inside door lower right hand corner (Figure 11)

Figure 10

Figure 11



## Second Floor

1. **SHUTDOWN** computer in lunchroom. Turn **OFF** monitor (Figure 12).
2. Turn **OFF** UPS in the 2<sup>nd</sup> floor pier room (Figure 13, door adjacent to instrument room and across from the bathroom, labeled Second Floor Pier Room).
3. Unplug UPS (Figure 14). *SEE RED TAPE*

**NOTE: You need to turn on BokPOP in the Warm Room Cable Closet when starting back up from a lightning shutdown!!! I will label this - Joe**

Figure 12



Figure 13



UPS

Figure 14



Unplug