

# Lightning Shutdown, Short Version: Updated 2/15/19

## Changes coming out of Downtime 2018

1. We have an “always on” UPS now, which feeds a power strip above BokAux. The Aux computer, the WIFI, BokPOP, and the phones are all plugged into this power strip which means these are now always left on. You can use BokAux now to keep an eye on the weather by pulling up the weather sites bookmarked on the computer in Firefox.
2. BokCCD2 is now the main Azcam computer for both the B&C and 90Prime instruments. We are going to have a spare Azcam Login machine (BokCCD4) in the future. The username and password to get in are the same as before.
3. There is no longer an UPS under the counter feeding console power. There is a new UPS in the black computer rack labeled “Console UPS” To shut this down you press the on/off button and select “Off Immediately” with the OK button. This takes a while to shut off. When you turn it back on using the power button, you must use the arrow keys and OK button to choose “On Immediately” or it will not turn on.
4. The weather computer is now password protected, and the password is posted on the monitor. You turn on the weather computer by pressing the top edge of the left hand corner (it's beveled at a 45 degree angle), of the PC mounted on the wall next to the monitor.

## CASS (B&C, WIFIS, SCC) Lightning Shutdown

Complete a “Normal Shutdown” if you have not done so already.

- Telescope (for the B&C)
  1. Shutdown gray power supply to camera east side of IIS and unplug
  2. Unplug shutter east side of IIS
  3. Shutdown guider computer (blue box north side of IIS) and unplug
  4. Shutdown chiller (northwest side of IIS) and unplug
  5. Unplug silver Opto22 (box west side of the IIS)
  6. Turn off lamp controller and unplug (west side of IIS)
  7. Turn off IIS readout and unplug
  8. Turn off IIS motor controller and unplug
  9. Turn off and unplug 'bokccd5' CCD computer
- Telescope (for other CASS users [WIFIS, SPOL, SCC, PISCES])
  1. Make sure everything is turned off and unplugged from orange outlets on the bottom of the telescope
  2. Make sure IIS readout and motor controller are turned off and unplugged.
- Control Room
  1. Turn off upper dome power
  2. Turn off dome motor power
  3. At the Operators Console:
    - Shutdown TCS computer
    - Shutdown guider computer
    - Turn IIS switch to OFF

- Turn Dome switch to MANUAL
- Turn off console
- Push in emergency stop button on console
- Unplug dome mic if in use next to AED
- 4. Observers Workstation
  - Shutdown AzCam program, shutdown Azcam computers (BOKCCD2 & BOKCCD4 if in use) from start menu, and shutdown AzCam Xterm
  - Shutdown programs on Bart, shutdown Bart from Start Menu, and Bart Xterm
  - Shutdown weather computer
- 5. Electronics Computer Rack Area
  - Using the KVM switch make sure all computers in the rack are off (**except BOKPOP**):
    - #2 Bokccd2 Azcam Login (Should already be off)
    - #5 Priscilla (if in use)
    - #6 Bart (should already be off)
    - **#7 BokPOP (Please leave BOKPOP turned ON)**
  - Turn off flat field lamp controller if in use
  - Turn off printer
  - Turn off (3) UPS units in bottom of the rack
  - Note: The CONSOLE UPS powers the Operators Console, make sure everything in it is turned off first. You will need to hit the power button, then use the arrow and OK buttons to choose "Off Immediately" or it will not shut down.
- Warm Room Cable Closet
  1. Unplug three plugs with red tape on your right as you enter the door down low
  2. Unplug 1 twist lock plug with red tape west wall
  3. Unplug Brandywine NTP Server's Ethernet cable, BNC cable and power cable on west wall
- Second Floor Pier Room
  1. Shutoff UPS in rack and unplug
- Second Floor Office
  1. Unplug power strip from wall
  2. Disconnect phone line from fax machine
  3. There is a computer tower that sits to the left of the desk. If on, turn off by pushing the power button.

## 90Prime Lightning Shutdown

Complete a "Normal Shutdown" if you have not done so already

- Instrument
  1. Unload filter from filter wheel
  2. Turn off "90 Prime CCD" and "90 Prime System" rotary switches on black computer rack
- Control Room
  1. Turn off upper dome power
  2. Turn off dome motor power
  3. At the Operators Console:
    - Shutdown TCS computer

- Shutdown guider computer
- Turn IIS switch to OFF
- Turn Dome switch to MANUAL
- Turn off console
- Push in emergency stop button on console
- Unplug dome mic if in use next to AED
- 4. Observers Workstation
  - Shutdown AzCam program, shutdown Azcam computer (BOKCCD2) from start menu, and shutdown AzCam Xterm
  - Shutdown programs on Bart, shutdown Bart from Start Menu, and Bart Xterm
  - Shutdown weather computer
- 5. Electronics Computer Rack Area
  - Using the KVM switch make sure all computers in the rack are off **except BokPOP**
    - #2 Bokccd2 Azcam Login
    - #4 Bokccd4 Spare Azcam Login
    - #5 Priscilla (if in use)
    - #6 Bart (should already be off)
    - #7 BokPOP (**should stay ON**)
  - Turn off flat field lamp controller if in use
  - Turn off printer
  - Turn off (3) UPS units in bottom of the rack
  - \* Note: The CONSOLE UPS powers the Operators Console, make sure everything in it is turned off first. You will need to hit the power button, then use the arrow and OK buttons to choose "Off Immediately" or it will not shut down.
- Warm Room Cable Closet
  1. Unplug three plugs with red tape on your right as you enter the door down low
  2. Unplug 1 twist lock plug with red tape west wall
  3. Plug in Brandywine NTP Server's Ethernet cable, BNC cable, and power cable on west wall
- Second Floor Pier Room
  1. Shutoff UPS in rack and unplug
- Second Floor Office
  1. Unplug power strip from wall
  2. Disconnect phone line from fax machine
  3. There is a computer tower that sits to the left of the desk. If on, turn off by pushing the power button.

## Cold Start up- Coming out of Lightning Shutdown

- Second Floor Office
  1. Plug in power strip
  2. Connect phone line to fax machine
  3. Turn on the computer tower to the left of the desk by pressing the power button.
- Second Floor Pier Room
  1. Plug in UPS and turn on
- Warm Room Cable Closet
  1. Plug in three plugs with red tape on your right as you enter the door down low

2. Plug in 1 twist lock plug with red tape west wall
  3. Plug in Brandywine NTP Server's Ethernet cable, BNC cable and power cable on west wall
- Electronics Computer Rack Area
    1. Turn on (3) UPS units in bottom of the rack. On the new Console UPS: You will need to hit the power button, then use the arrow and OK buttons to choose "On Immediately" or it will not turn on.
1. Turn on Bokpop (it should already be ON)
  2. Turn on Bart
  3. Turn on BokAux (should already be on)
  4. Turn on printer
  5. **90Prime users**
    - Turn on BokCCD2
    - Turn on two rotary switches labeled "90Prime CCD" and "90Prime System"
  6. **B&C users**
    - Turn on BokCCD2
- Observers Work Station
    1. Turn on Azcam Xterm, log into BokCCD2 if using B&C or 90Prime. Start the Azcam program.
    2. Start Bart Xterm, login either as Primefocus Observer if you're using 90Prime, or Bok Observer with any other instrument using appropriate passwords. Start programs on Bart.
    3. Start weather computer by pressing button on top of the upper left edge. Enter the password posted on the monitor.
  - At the Operators Console:
    1. Make sure the CONSOLE UPS is plugged in and turned ON (should be done already if the above steps were followed)
    2. Pull out emergency stop button on console
    3. Turn on TCS computer
    4. Start About Time program from Start Menu
      - Hit set time, get the time as close to 0ms as possible
      - Click on Hide, **not exit**
    5. Start TCS program
    6. Start guider computer if you're using it
    7. Turn IIS switch to ON if you're using it
    8. Turn dome switch to AUTO
    9. Turn on console
    10. Turn on Upper Dome Power and Dome Motor Power
  - For B&C users (bottom of the telescope)
    1. Plug in gray power supply to camera east side of IIS and turn on
    2. Plug in shutter east side of IIS
    3. Plug in guider computer (blue box north side of IIS) and turn on
    4. Plug in chiller (northwest side of IIS) and turn on
    5. Plug in silver Opto22 (box west side of the IIS)
    6. Plug in lamp controller and turn on (west side of IIS)
    7. Plug in IIS readout and turn on
    8. Plug in IIS motor controller and turn on
    9. Plug in and turn ON "bokccd5" CCD control computer

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