

## **Instructions for switching from science mode to commissioning mode (turning on the fans so that the PSL will stay clean when inhabited)**

**0) Find the “Unitronics” box**, the box that controls the PSL air systems, on the outside wall of the PSL enclosure right beside the table with the computer on it.

**1) Navigate to the “Facility Control” screen**, the screen with the map of the PSL enclosure. If the current screen does not show a map of the laser room and the anteroom, press the up arrow in the upper right hand corner until you see the map or until the arrow disappears (in which case you reached the top screen and will want to press “Facility Control” to get to the page with the map).

### **2) Turn on the fans in the Laser Room.**

- a. Press “Laser Room”,
- b. Press “Set speeds” in the lower left of the resulting screen.
- c. Press “Run”.
- d. Press “update all fans” which will appear only after pressing “Run”. This will bring up a map which will show you the start up of all of the fans.

### **3) Turn on the fans in the ante room.**

- a. Press the arrow in the upper right to get to the main map screen as in the first instruction.
- b. Press “Ante Room”
- c. Press “Set speeds” in the lower left of the resulting screen.
- d. Press “Run”
- e. Press “update all fans” which will appear after pressing “Run”. This will bring up a map which will show you the start up of all of the fans. You will hear these fans come on.

### **4) Turn on the 2 air conditioners.**

- a. Press the arrow in the upper right to get to the “Facility Control” screen as in “1” above.
- b. Press “A/C units”.
- c. Press the North AC button.
- d. Press “Stopped” to toggle the AC on. Wait until it says “Running”,
- e. Press the arrow at the upper right to go back up one page.
- f. Press the South AC button.
- g. Press “Stopped” to toggle the AC on. Wait until it says “Running”.

### **5) Turn the makeup air up to 100%.**

- a. Press the up arrow at the upper right to navigate back to the main map screen as in the first instruction.
- b. Press “Make-up Air”.
- c. Press “Set speeds” at the lower left of the resulting screen.
- d. Press the blue button with the fan percentage (e.g. 100%) under “Run:” (not the “Run” button).
- e. Enter “100” by pressing the number buttons if the number is not already 100. Hit the big return arrow on the right side of the keyboard when the number at the top reads 100.
- g. Press “update all fans” on the resulting screen.

### **6) Turn on the lights.**

- a. Toggle all 5 light switches on the little wall just to the left of the Unitronics control box. There are two sets of light switches, the upper set with 2 switches is the ante room, the lower set with 3 switches is the laser room. The lights should all be off so toggle all switches no matter what position they are in.

**7) Go inside and turn on the two air conditioners in the laser room.** There are two typical-looking thermostats on the walls of the room with the PSL table. On each of these controllers is an on/off switch with the circle bar symbol; press this switch twice, once to get out of standby and the second time to turn it back on. A screen should appear with the temperature settings. No adjustment is needed.

END. **Note: the air conditioning will be shut off from the outside, but don't forget to shut down video screens.**

## **Instructions for switching from commissioning mode to science mode (turning the fans off to reduce motion of the beam)**

**0) Shut down anything that was turned on** inside the PSL (except the air conditioning, which will be shut down from outside). In particular, make sure the video screens were shut down. Heat loads will change science mode operating temperature and beam alignment.

### **1) Shut down the ante room fans.**

- a. Navigate to the “Facility Control” screen – instructions in “1” of the turn-on procedure above.
- b. Press “Ante Room” on the “Facility control” screen, the screen with the map of both PSL rooms.
- c. Press “Set speeds” in the lower left of the detailed “Ante Room” screen.
- d. Press “Stop” on the resulting screen.
- e. Press “update all fans”.

### **2) Shut down the laser room fans.**

- a. Press “Laser Room” on the “Facility control” screen
- b. Press “Set speeds” in the lower left of the resulting screen with the detailed map.
- c. Press “Stop”
- d. Press “update all fans”.

### **3) Shut down the 2 air conditioners.**

- a. Press “A/C units” after navigating to the “Facility control” screen and
- b. Press the North AC button.
- c. Press “Running”, wait until it reads “Stopped”
- d. Press South AC button, after navigating up one screen using the up arrow in the upper right.
- e. Press “Running” wait until it reads “Stopped”.

### **4) Turn off the lights.**

- a. Toggle all 5 switches to the left of the “Unitronics” box. Check that the lights are out by looking at the webcam images of the rooms on the display screen on the +X, -Y side of the external wall of the PSL enclosure.

### **5) Turn the make-up air down to 20%.**

- a. Press “Make-up air”, after navigating back to the “Facility control” screen
- b. Press “Set speeds” in the lower left of the resulting screen.
- c. Press the blue fan percentage button (says, e.g., 20%) under “Run:” (not the “Run” button).
- d. Enter in “20” on the resulting screen so that the number at the top reads “20”.
- e. Press the big enter arrow.
- f. Press “Stop” We have to stop the fan for it to change from 100 to 20. This bug doesn’t apply when going the other way, from 20 to 100.
- g. Press “update all fans”.
- h. Press “Set speed” in the lower left
- i. Press “Run” on the resulting screen
- j. Press “update all fans”.

DONE!

## **Just switched to commissioning mode? Don't forget to turn on the air conditioners!**

**7) Go inside and turn on the two air conditioners in the laser room.** There are two typical-looking thermostats on the walls of the room with the PSL table. On each of these controllers is an on off switch with the circle bar symbol; press this switch twice, once to get out of standby and the second time to turn it back on. A screen should appear with the temperature settings. No adjustment is needed.

## **Just switched to commissioning mode? Don't forget to turn on the air conditioners!**

**7) Go inside and turn on the two air conditioners in the laser room.** There are two typical-looking thermostats on the walls of the room with the PSL table. On each of these controllers is an on off switch with the circle bar symbol; press this switch twice, once to get out of standby and the second time to turn it back on. A screen should appear with the temperature settings. No adjustment is needed.

## **Just switched to commissioning mode? Don't forget to turn on the air conditioners!**

**7) Go inside and turn on the two air conditioners in the laser room.** There are two typical-looking thermostats on the walls of the room with the PSL table. On each of these controllers is an on off switch with the circle bar symbol; press this switch twice, once to get out of standby and the second time to turn it back on. A screen should appear with the temperature settings. No adjustment is needed.