

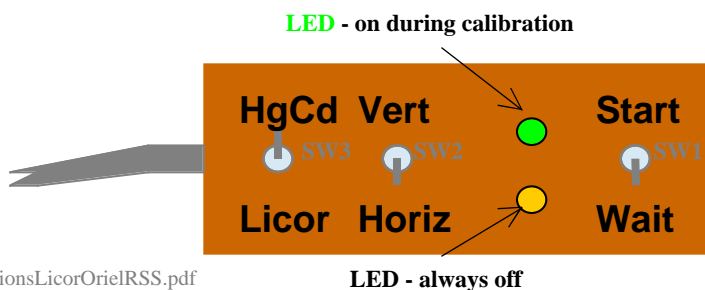
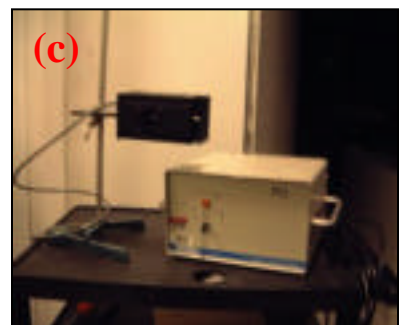
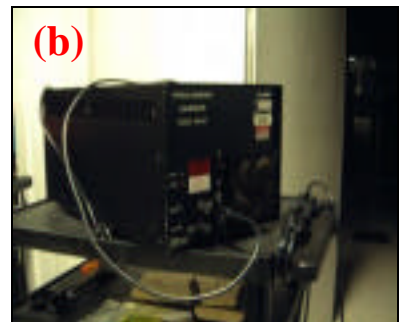
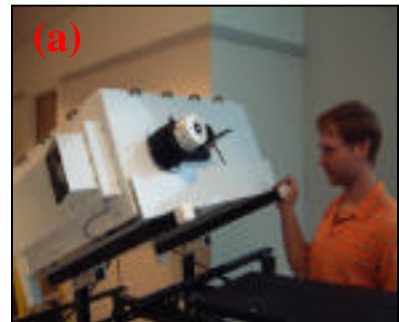
# Instructions for Using Li-Cor and Oriel Spectral Calibrator with RSS

(a) The **frame of RSS** allows us to calibrate RSS also in a horizontal position. Power supplies of calibrators (Oriel Spectral Lamp) or Li-Cor calibrators can be placed on the **calibrator shelf** during calibrations.

(b) **Li-Cor** irradiance calibrator (110VAC 35lb). This calibrator is used only when RSS is in a horizontal position.

(c) **Oriel** spectral lamp calibrator's power supply (110VAC, 35lb) and **Hg-Cd** lamp. The spectral calibration can be performed when RSS is either in a vertical or a horizontal position.

(d) "Fake calibrator" **control cable**: this control cable has the same function as the Portable Calibrator's control cable, i.e., it stops shadowbanding cycle thus telling RSS that calibration is about to begin and it sends a binary code to RSS to identify a type of calibration. With the toggle switches SW2 and SW3 four possibilities can be selected, though (Licor, Vert) pair is not realizable (see (b)).



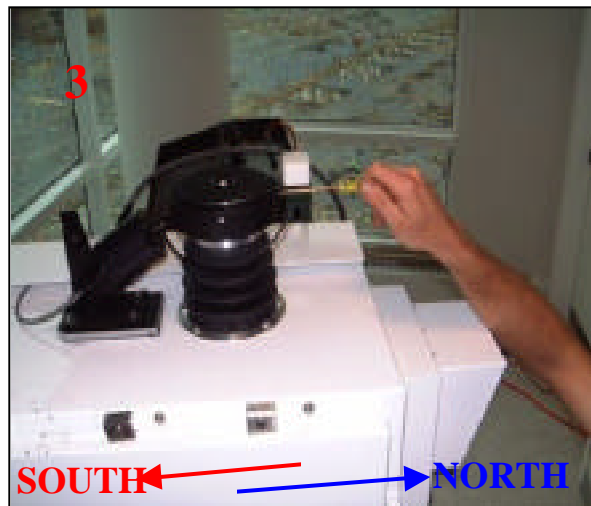
# 1. Prepare RSS for calibration

**Important:** set the switch SW1 to "WAIT" position on the box of the "fake calibrator" control cable.

(1.1) Plug the the "fake calibrator" **control cable** to RSS. This stops the shadowbanding cycle.

(1.2) Verify that the shadowbanding cycle was stopped. Move the **shadowband** to "home" position (East or West side of the snorkel).

(1.3) If you intend to perform calibration with Li-Cor, place the **calibrator adapter** on the RSS's snorkel. One set screw should face North and the other set screw should face East. Use 3/32 Allen wrench.



## 2. Calibration with Li-Cor

**Set Switches: SW1=Licor, SW2=Horizon**

(2.1) Lower RSS to horizontal position.

(2.2) Place Li-Cor on the shelf. Verify that Li-Cor has a correct adapter that matches RSS's adapter. The axes of the snorkel and Li-Cor should coincide in both vertical and horizontal planes. If necessary adjust the level of the Li-Cor with respect to the shelf.

(2.3) The Li-Cor and RSS adapters should be in contact. Turn the power on of the Li-Cor and wait 5 minutes after the Li-Cor's green LED lights up. Turn the switch SW1 to "START" position on the box of the "fake calibrator" **control cable**.

**Note:** The greenish LED next to the switch SW1 will light up indicating that RSS is going through the calibration cycle. When the LED turns off, the calibration is finished.

**Remember! Do not unplug the control cable yet.** It can be unplugged only as the last step of calibration when snorkel was cleared and RSS was returned to the vertical position.



### 3. Horizontal calibration with Oriel HgCd lamp

Set Switches: SW1=HgCd, SW2=Vert

(3.1) Lower RSS to horizontal position.

(3.2) Place the spectral (Hg-Cd) lamp and its power supply on the shelf. Plug the lamp cable to the power supply.

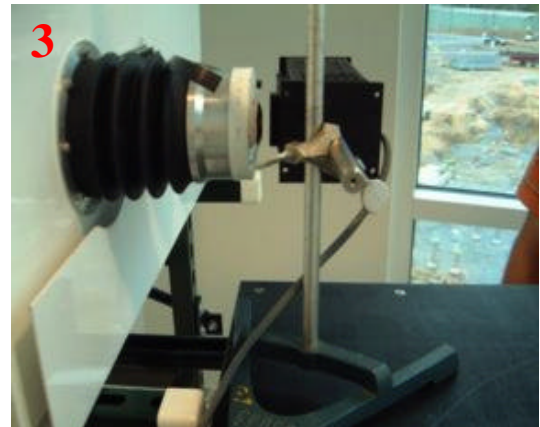
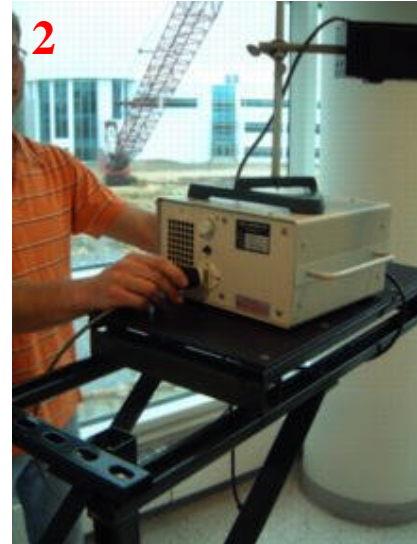
(3.3) Place the lamp 1"-2" away from the RSS's diffuser.

(3.4) Cover the lamp and snorkel with a black cloth.

Turn the power on of the Oriel power supply and wait 5 minutes. Turn the switch SW1 to "START" position on the box of the "fake calibrator" **control cable**.

**Note:** The greenish LED next to the switch SW1 will light up indicating that RSS is going through the calibration cycle. When the LED turns off, the calibration is finished.

**Remember! Do not unplug the control cable yet.** It can be unplugged only as the last step of calibration when snorkel was cleared and RSS was returned to the vertical position.





## 4. Vertical calibration with Oriel HgCd lamp

**Set Switches: SW1=HgCd, SW2=Vert**

(4.1) Place the spectral (Hg-Cd) lamp and its power supply on the shelf. Plug the lamp cable to the power supply.

(4.2) Place the lamp 1"-2" away from the RSS's diffuser.

(4.3) Cover the lamp and snorkel with a black cloth.

Turn the power on of the Oriel power supply and wait 5 minutes. Turn the switch SW1 to "START" position on the box of the "fake calibrator" **control cable**.

**Note:** The greenish LED next to the switch SW1 will light up indicating that RSS is going through the calibration cycle. When the LED turns off, the calibration is finished.

**Remember! Do not unplug the control cable yet.** It can be unplugged only as the last step of calibration when snorkel was cleared.

