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## PSP Level Check Periodic Procedure

### I. Purpose:

This document describes the methods used to check the Eppley PSP level at the Tropical Western Pacific Site.

### II. Cautions and Hazards:

- Exercise caution: 12 VDC powers the PSP and PSP ventilators.
- The instrument must always be bolted down, except during transportation or level adjustment.
- When removing the sunshield, as required when checking PSP level, do not slip the screw driver off the shield screws; this will scratch the dome.
- The shield should fit tightly around the plastic housing to force the air over the domes rather than out the sides.
- The ventilator fan is on during this procedure; never stick your fingers under the radiometer.

### III. Requirements:

- Check PSP level daily during first month of setup, then weekly after that.
- The leveling devices must be checked to ensure that the PSP is level.
- Screw driver.
- Spare bolts (10-32).
- Spare screws for sunshield.
- Leveling screws on ventilator (1/4 20).
- Small tray or cup (for holding screws).

### IV. Procedure:

#### A. Steps:

1. Remove the 25 cm diameter shield. There are three screws to remove; use the small tray to hold the screws.
2. Before leveling the PSP, check inside the ventilator. Remove any debris or bugs from inside the ventilator. If ventilator motor need replacement, follow PSP Fan Motor Replacement Procedure **PRO(PSP)-005**.

**Note:** Keep fingers from underneath ventilator fan.

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3. Check leveling bubble on side of PSP sensor. If bubble is centered, there is no need to adjust the bolts; simply replace ventilator lid and proceed to step 10.
4. Loosen the three mounting screws 1 cm up from the ventilator base plate. These should only be loose enough so that the leveling screws can adjust the radiometer and attached ventilator. (See **Figure 1**, Eppley PSP with Ventilator).
5. Confirm that the data connector points to the south.
6. Adjust the three leveling feet; adjustment can be tricky; be patient.
7. Level the instrument by adjusting the leveling screws on the ventilator and centering the leveling bubble on the radiometer. (See **Figure 2**, Eppley PIR Overhead View).
8. Evenly tighten mounting bolts on ventilator after leveling. Do not tighten excessively; this causes PSP assembly to move out of alignment.
9. Re-install the 25 cm diameter shield.
10. Enter the date, start-time, end-time, and any comments in the Site Data Log.

#### **V. References:**

1. Conversations with Mike Rubes in Sandia (March, 1995).

#### **VI. Attachments:**

1. Figure 1. Eppley PSP with Ventilator.
2. Figure 2. Eppley PSP Overhead View.

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