

ARCS PROCEDURE: Author: C. Cornwall	PSP DESICCANT CHANGE PROCEDURE	PRO(PSP)-002.002 June 22, 1998 Page 1 of 2
--	-----------------------------------	--

PSP Desiccant Change Procedure

I. Purpose:

This document describes the methods used to replace desiccant in the PSP radiometer when the desiccant is ineffective.

II. Cautions and Hazards:

- Exercise caution; ventilators are powered by 12 VDC.
- It is easy to drop screws on the ground; be careful and use a drop cloth under the stand.
- As soon as the desiccant chamber is open, quickly complete the entire procedure; the unsealed chamber allows moisture to enter the radiometer.

III. Requirements:

- Small funnel.
- Adjustable pliers (locking type) or Robo grips.
- Small tray or cup to hold screws.
- Putty-for cable.
- Desiccant.
- Spare o-rings.
- Clean tarp or drop cloth.

IV. Procedure:

A. Steps:

1. Check desiccant window to see if desiccant needs changing. If not, end replacement process. (**Note:** The desiccant appears blue when dry and clear and pinkish when saturated).
2. Spread a clean tarp or large cloth under the PSP radiometer stand.
3. If necessary, prepare new, dry desiccant according to step #1: dry the desiccant in an oven at 135°C for three hours.
4. Remove the 25 cm diameter shield. There are three screws to remove. Use the small tray to hold the screws. This applies to the SKYRAD PSP only; not the GNDRAD PSP.
5. Turn the desiccant cap (located on the PSP) counter-clockwise and remove the cap and 4 cm long tube. Use the locking pliers or Robo grips to loosen desiccant cap. (**Note:** The desiccant cap is fragile, do not excessively tighten

ARCS PROCEDURE: Author: C. Cornwall	PSP DESICCANT CHANGE PROCEDURE	PRO(PSP)-002.002 June 22, 1998 Page 2 of 2
--	-----------------------------------	--

the cap, squeeze it too tightly with the locking pliers, or grind loose dessicant into the grooves in dessicant chamber.)

6. Pull the 4-cm-long desiccant tube off of the desiccant cap.
7. Remove the pink (saturated) desiccant from inside the tube and place it in a storage container. With the small funnel, add the new, dry desiccant (blue color) to the desiccant tube. (**Note:** Save the used desiccant in a jar/plastic bag for later reuse.)
8. Check the o-ring on the desiccant cap. Does the o-ring look worn? Replace if necessary; apply sealing grease to o-ring if necessary.
9. Attach desiccant tube to desiccant cap.
10. With a small flat head screw driver, remove any loose pieces of desiccant from dessicant chamber of instrument.
11. Re-attach the dessicant container to the radiometer. Desiccant cap should turn several times before becoming tight. If it only turns a partial turn, it may be cross-threaded.
12. If desiccant requires changing within a couple of days, recheck the seal of desiccant cap on the PSP/PIR. It's possible that the cap was not sealed correctly or that the o-ring on the cap needs replacing.
13. On the checklist, record that change was completed.
14. Enter the date, start-time and end-time of procedure and any comments of the desiccant change in the Site Daily Log.

V. References:

None.

VI. Attachments:

None.