Phoenix Removal from 2.1-m on 5 December 2012

Following are some suggestions for the upcoming removal of Phoenix from the 2.1-m on 5 December, prior to its shipment to the 4-m the following day. These are just suggestions, but there are a couple of underlying motivations for them:

Phoenix will be shipped to the 4-m. This will require the Interface Unit to be removed and stored on its shipping box (currently stored on the dome level on the NE). The stay bars must be used to secure Phoenix in its cart prior to shipment (and they cannot be installed with the Interface Unit in place).

When the cold heads warm up, the gas inside will expand. There are supposed to be pressure relief valves on the cold heads, but I would like to suggest that after Phoenix is moved downstairs that the gas heater (the white cylinder) be attached to the manifold. This will give some extra volume for the gas to expand into. The tee connections going to the differential pressure switch do not need to be reattached. The gas heater hose should be removed before shipping on the 6th.

1. If the observer has not already done this, make sure that the detector has been deactivated (check the yellow Phoenix window on second-2 for a message that the array has been deactivated). You can then close WildFire using the "Kill Wildfire" button on the Phoenix GUI in the upper left corner. This will gracefully exit from the program.

2. Turn off He compressors, leaving the motor controller box on. Eventually, the pressure in the supply and return lines will equalize at around 200 psi and the heads will turn off by themselves. This will leave the heads at a constant 200 psi pressure.

3. Turn off the motor controller box, disconnect AC lines, fibers, vent hose, etc.

4. Disconnect the He lines, slide the cart in (with the W side removed), raise and support the floor, raise the jack, and remove Phoenix from the telescope. It is easiest to leave the Interface Unit attached and remove both of them. Follow your checklist for doing this.

5. Move the floor over to the E, install the cart side, remove the 11 nuts holding the Interface Unit to the top of Phoenix, and lift the Interface Unit off with the crane. One can run the web straps in a choker hitch within the open gussets between the top and bottom plates of the Interface Unit, since it weighs only ~ 200 lb. Lift the Interface Unit with the crane and jockey it over its transport box. Use the holddown clamps to secure the Interface to the top plate of its box. Install the top cover. Store the "toilet seat" gasket in the Interface Unit box, as well as the other stuff from the instrument.

6. The fiber optics can remain attached to the Analog Electronics box, but they should be coiled and secured to the instrument with a Velcro tie.

7. Install the Phoenix window cover, crane the cart down to the basement. There is no need to put it in the back room, since it will be heading to the 4-m the following day.

8. Use the 4-foot length of He tubing to reconnect the gas heater to the supply connector on the He manifold. This will give some more volume for the head gas to expand into. The tee connections can remain unconnected and safely stowed. NOTE: Remove this short line the following day when Phoenix is being transported; it should be fairly warm by then.

9. Install the two stay bars on top of the Phoenix cart prior to shipping.

10. Lower the Interface Unit box to the basement as well, after making sure that all of the cabinet doors are locked with the key (the key can be kept in one of the locks).