

ARM Radiometer Ventilator Improvements ENG-00991

Where we are, where we are going and how long is it going to take us.

What have we done?

- Engineering Change opened in 2013. It is now 2017 and we still have significant work to do ☹️ (actually been working on this since 2010)
- All sites upgraded to the new 12VDC fans.
- AMF2 upgraded to 5 inch hole with screen during StormVex.
- AMF1 has 50mm holes
 - But has blockage
 - No screen. Need to know if we need screens or not.



- AMF1 stand alone Ventilator is configured

- Is this ok?
- If so, how important is sealing the ventilator to mount or plate?

Need to know this for future Design for SGP systems.



Where the heck are we going?

- SGP not done since they only have two radiometers on SIRS tracker. This means that the two radiometers are mounted above the supports for the mount plate. Not easy to cut 5 in. hole with support brace in the way.
- Chuck brought up issue with only one PIR on SGP SIRS system.
- Resolution: Killing two birds with one stone.
 - Mike proposed to Jim Mather, adding in additional PIR to all SIRS locations. Now that TWP PIR's are back, we have a surplus. Jim agreed!
 - Means buying new longer plate for all SIRS systems, new cross-arms, new shading balls, cables, ventilators, washers, etc.
 - Also means modifying SGP stand alone radiometer to increase air flow. Plus EF9, 11, 13 & 15 on old mounts, not saw horses. These sites will all have to be upgraded to the newer model saw horse. EF21 is different than all others. Will need to review that location also and come up with solution.

- I will insure to obtain installation kits for all sites (SGP SIRs, NSAC1, AMF1, AMF2, AMF3, ENA). Kit will be shipped to sites for installation.
- Need guidance on filters, yay or nay? Do we stick with fan filters or design something to be on the mount plate? We must have decision soon.
- Sites will need guidance on stand-alone Radiometer.
- Need to open EWO in ENG00991 to add in additional radiometer to ingest.
 - This will lead to an end-to-end reprocessing of the SIRS data.
 - IRT removal off the SKYRAD/GNDRAD system will allow for end-to-end reprocessing of those. Perhaps tie together? SKYRAD/GNDRAD end-to-end reprocessing will be a long, drawn out process.

Questions:

- Have or will PM Procedures been updated to check flow and check on the ventilator fans for blockage?
- Do we need to seal the bottom of the ventilator to mount plates? It would be easier to level if we did not. Will prevent installation of gasket on bottom of ventilator.
- Filter question, on fan or plate? Need to know!
- When can NREL have a new SIRS program written?
- Any questions for me?