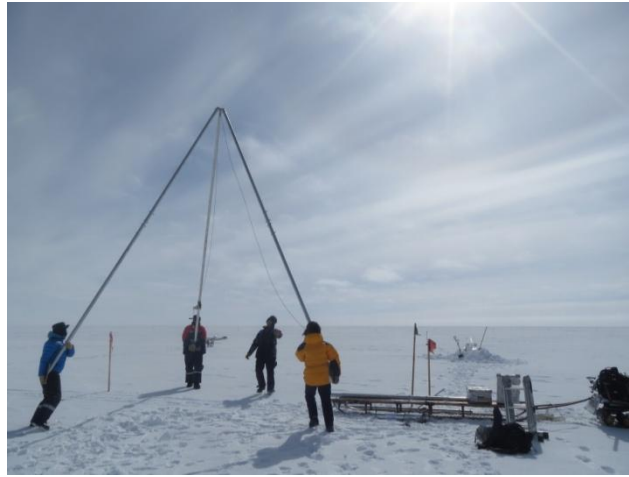


# NOAA/Steffen Solar Suite Raising

May 2016- Documented by H. James



Koni Steffen and his group will raise the two solar suites that are halfway between TAWO and the MSF when needed- usually every few years. They bring their own collapsible tripod setup with a crank to raise the instruments out of the snow before putting extensions on the stands. The following steps document how to safely raise and lower the instruments via installation of extension stands.

--Before assembling the tripod, dig out around the solar stands to the base where extensions will be installed. You will also need to mark the alignment of the instruments. This can be done by walking straight out ~10 meters from the stand, marking your spot with a flag, and marking the alignment about 3 meters back from the stand.



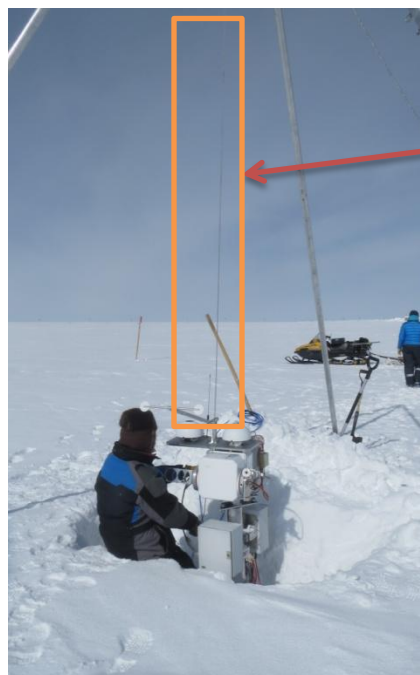
1. Assemble the tripod on the ground near the instruments. When ready to lift, have one person at each leg and a fourth person directing traffic. Slowly walk the legs in towards the center, bracing the large rectangular plates against your body securely. The person directing traffic will ensure that the top is centered directly over the instruments so there will be no pendulum effect when the raise happens.



2. Secure the tripod feet in place by inserting a metal rod through the hole in each footplate.



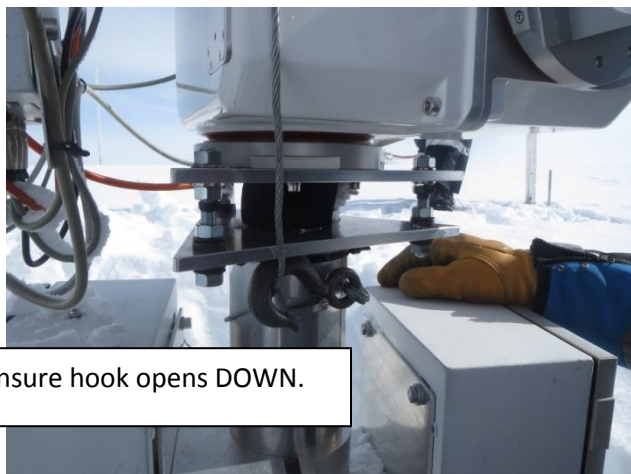
3. Crank the cable and hook down to the person handling the solar stand.



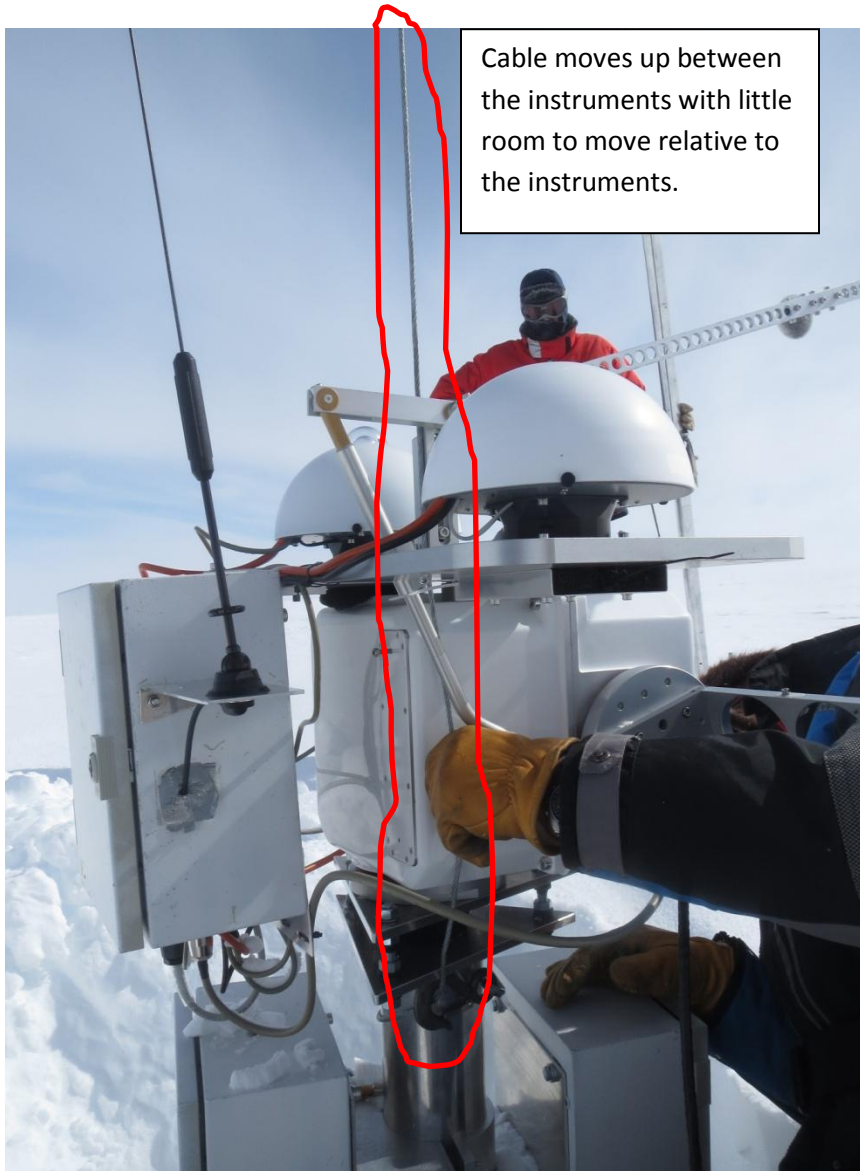
Ascension/descent  
cable and hook



4. Connect the hook around the central stand in a way that no cables or wires will be pinched, the domes will not be damaged, and the cable will be stable relative to the instruments- ie, it will not slip or jerk around once weight is put on it.



Ensure hook opens DOWN.

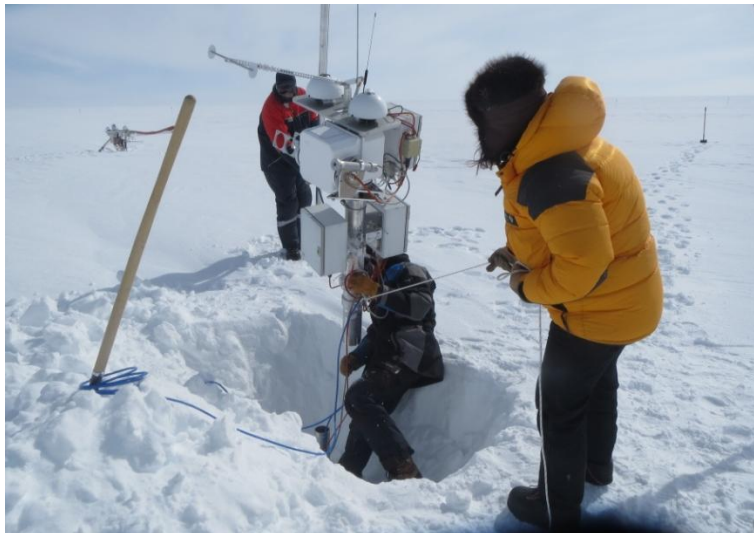


Cable moves up between the instruments with little room to move relative to the instruments.

5. Tie a tagline below the instruments to ensure a smooth, controlled raise and lower. Again, ensure that no cables or cords will be pinched with these knots. \*\*\* VERY IMPORTANT: See step 9 for the non-tracking stand\*\*\*



6. Slowly start the raise process by hand cranking.
- a. Once there is tension, the person in control of raising/lowering should not leave the crank.
  - b. One person should always be handling the tagline to ensure the instrument doesn't swing too much and the person in the pit is safe.

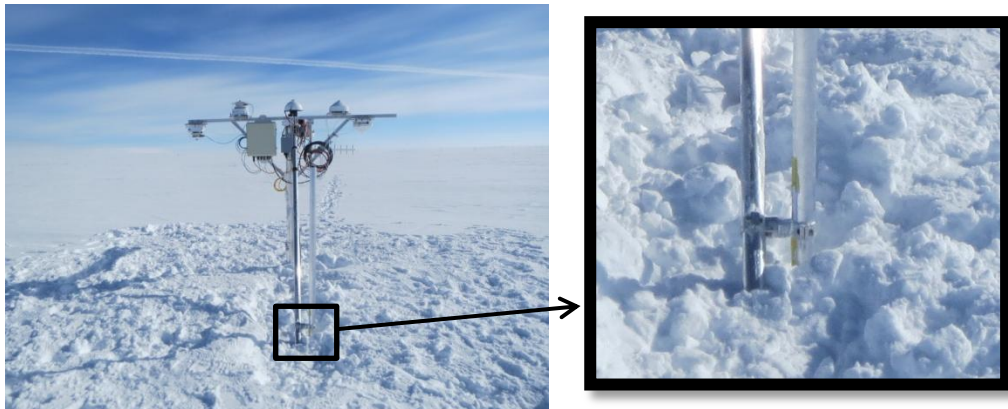


7. Install the extension stand



8. Align the solar stand back to its original position based of the marks you made in the beginning. Fill in the hole, **ensuring all cable ends are not buried!!**

9. On the non-tracking stand (with NOAA and Steffen instruments), the supporting leg will need to be raised as well. This requires digging down to where the diagonal leg meets the vertical leg. Simply loosen the clamp connecting the two and raise it while the main stand is being raised.



10. Look good? Go enjoy some good food and wine with Koni and co.

