

## EME Antenna Workday Report 2018

At the end of the January contest, when we made 14 2m EME Q's using Johnny's 2m station in my shack, the elevation rotor froze up on us. Just quit and stuck at about 20 degrees elevation. Azimuth still worked OK. We couldn't move the rotator manually like we usually can so something major is wrong, jammed gears or something.

Anyway, since Johnny wanted to be ready to try to work the upcoming Bouvet Island DXpedition on 2m EME, we needed to get it fixed. The elevation rotor has the cross-boom through the rotor itself so it's not an easy job to work with that having 21' boom cross-pol yagi antennas on each end of the 12' cross-boom. When Johnny and I put it up, we determined that it was definitely a 3 man job! I thought of a way to take the rotor out and replace it without having to completely dis-assemble the entire set up. But I also thought that it was at least a 4 man job to do this properly and not cause us any more physical labor than necessary. We decided on Tuesday January 30, even though it was a pretty cool day with a mild breeze but we were also running out of time. Rick KK4LPP and Sherman W4ATL offered to come help Johnny K4SQC and I do the job. With my back problems, I volunteered to be the ground go-fer!

I have a bunch of masonry type scaffolding and we set up two sections high on each side of the tower trailer, lowered the antennas as low as the mast will go and with Rick supplying some extra scaffold walk boards and I made some 2x4 upper rest and safety rails. We don't think we can tilt the weight of these antennas over like we do with the contest antennas on trailers. We were able to remove the right side antenna with it's fiberglass boom extension, support post and feedline support rail from the solid aluminum cross-boom that runs through the rotator and rest it all on the safety rails. Then we managed to slide the rest of all the left side antenna system with the cross-boom out of the rotor body onto the scaffolding on the other side. Now the rotor was easily replaced and we just reversed our dis-assembly and got it all back together. Probably took as much time setting up and taking down the scaffolding as it did to do the antenna work, but it was safe and more efficient than complete dis-assembly. We did the whole job in 2 1/2 hours but it did take our 4 man crew to do it this way. Probably would have taken 8 hours or more for two folks to get it done and I wouldn't have been of much help with my current back problems.

I have taken some pictures of what we were doing and Kos has posted them somewhere for viewing since they can't be attached going through this email reflector. Check them out at:

<http://randyrick.us/W4QQ/BobL/Jan18AntWork1.JPG>

<http://randyrick.us/W4QQ/BobL/Jan18AntWork2.JPG>

<http://randyrick.us/W4QQ/BobL/Jan18AntWork3.JPG>

Special thanks to Rick and Sherman for coming up and helping us out on this venture. Johnny bought us all lunch! Later in the evening, we got the 2m station back on the air, antennas tracking again and copied sigs off the moon, so success! Didn't try to make a Q as Johnny and I were pretty tired by then.

