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SAO 60" primary bevel

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To: Emilio Falco <falco@cfa.harvard.edu>, Gary Rosenbaum <garyr@as.arizona.edu>, "rlutz@as.arizona.edu" <rlutz@as.arizona.edu>

Hi Emilio,

Randy Lutz is planning to come to Sunnyside on Aug 9th to work on the beveled edges of the SAO 60" primary mirror.

One question that you mentioned is that you could start using 4 straps to lift the mirror instead of 3. An extra strap would reduce the load on each strap which would seem to be helpful but with better beveled edges I don't know if it would be necessary. Maybe Randy could comment.

Since Randy will grind a better bevel in discrete areas instead of all around the entire edge Emilio should use a black Sharpie permanent marker on the edge/back of the mirror where you want the grinding to take place so these areas are clearly marked on the glass.

Randy is going to grind the backside inner and outer edges. He asked if he is also grinding at the top faceplate outer edge (optical surface). When grinding next to the optical surface there may be a risk of affecting the optical surface figure in that localized area. However, since the 60" mirror blank is full thickness (~10" thick I think) there may be a minimal risk of this happening but you and Randy should probably discuss the top faceplate issue before any work is done so everybody is in agreement.

Emilio and I discussed the possibility of making a new cross type spreader bar the same diameter as the mirror so the lifting straps could go straight up the side of the mirror and not have to angle in to the hook of the crane. This would eliminate all stress at the top outer faceplate of the mirror. I mentioned the idea to my supervisor, Bob Peterson and he agrees it would be a good idea but since we would only be using it on the SAO 60" mirror he was not too interested in paying to have one made. A new spreader bar can't be used on the mountain but it can be used here at Sunnyside. Emilio if you think a new spreader bar for use at Sunnyside would be a good idea you may need to see if someone at base camp could make one. If we decide to grind a better bevel at the top outer faceplate of the mirror then maybe a new spreader bar might not be necessary.