

## **Discussion on "RIA Project Spoke Cavity Fabrication" by Ken Shepard & Joel Fuerst**

Shepard was asked, why they only do a light BCP before testing the spoke cavities. He answered that the cavity is electropolished before the final welding of the end dishes. This gives a very smooth surface which is preserved with a light BCP. Heavy BCP would reintroduce surface roughness. He believes that for the desired field levels ( $> 30$  MV/m surface field) this might be an issue to overcome high field Q-degradation.

On the fabrication of the spoke-cavity connection Shepard explained that the flared connection is not extruded, but welded on. They felt that this would give them better geometric tolerances. They did this similar to the LANL approach for previous cavities and might reconsider, depending on discussion with LANL and Zanon. For comparable performance the LANL approach might be preferable, as it eliminates weld-steps.

On the second part of the presentation Fuerst confirmed that the cavity body is rolled from one piece and does only have one weld, this is different from LANL, that used several pieces and thus needed 3 welds.

Finally the post-treatment of welds was discussed. Shepard explained that they stopped doing any post-treatment, like machining or grinding, which is still done at other places. They feel that touching the smooth weld beads would be disruptive. They do not believe that they saw any performance penalty using this approach.