pfRICH Purdue Update

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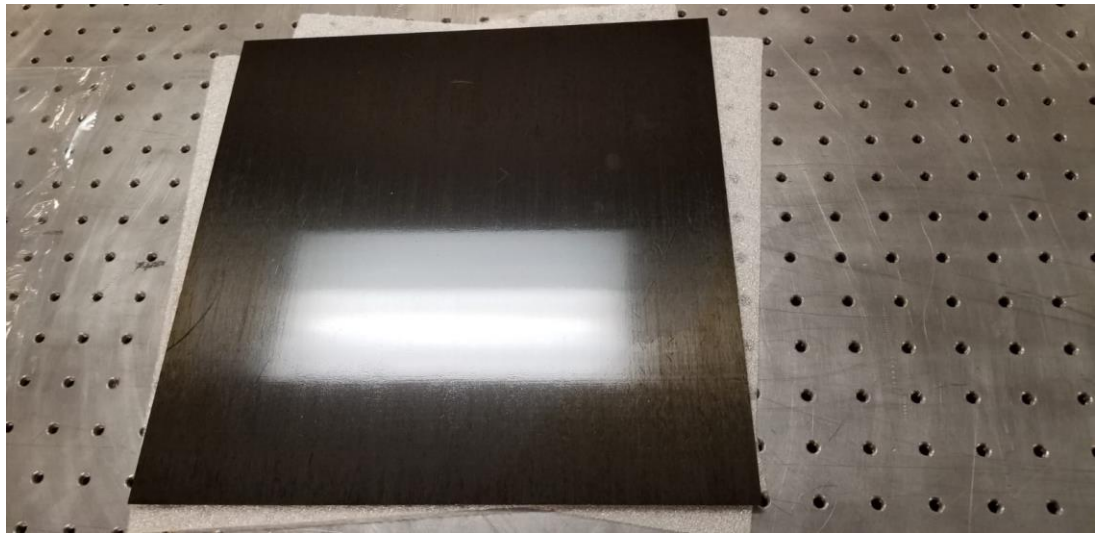
21 December 2023

Flat sheet with better surface finish



- The lab that has the optical profilometer to measure the surface roughness is closed for the winter break – measurements will happen early January and will send these to Stony Brooks immediately after the measurements in January

- Representative cylindrical samples to follow soon after for mirror coating

- To see from these pictures “the dominant texture along the fiber direction” is not present anymore.

pfRICH – Mirror substrate update – better surface finish – closer to sample from Argonne

pfRICH gasket sealing simulation updates

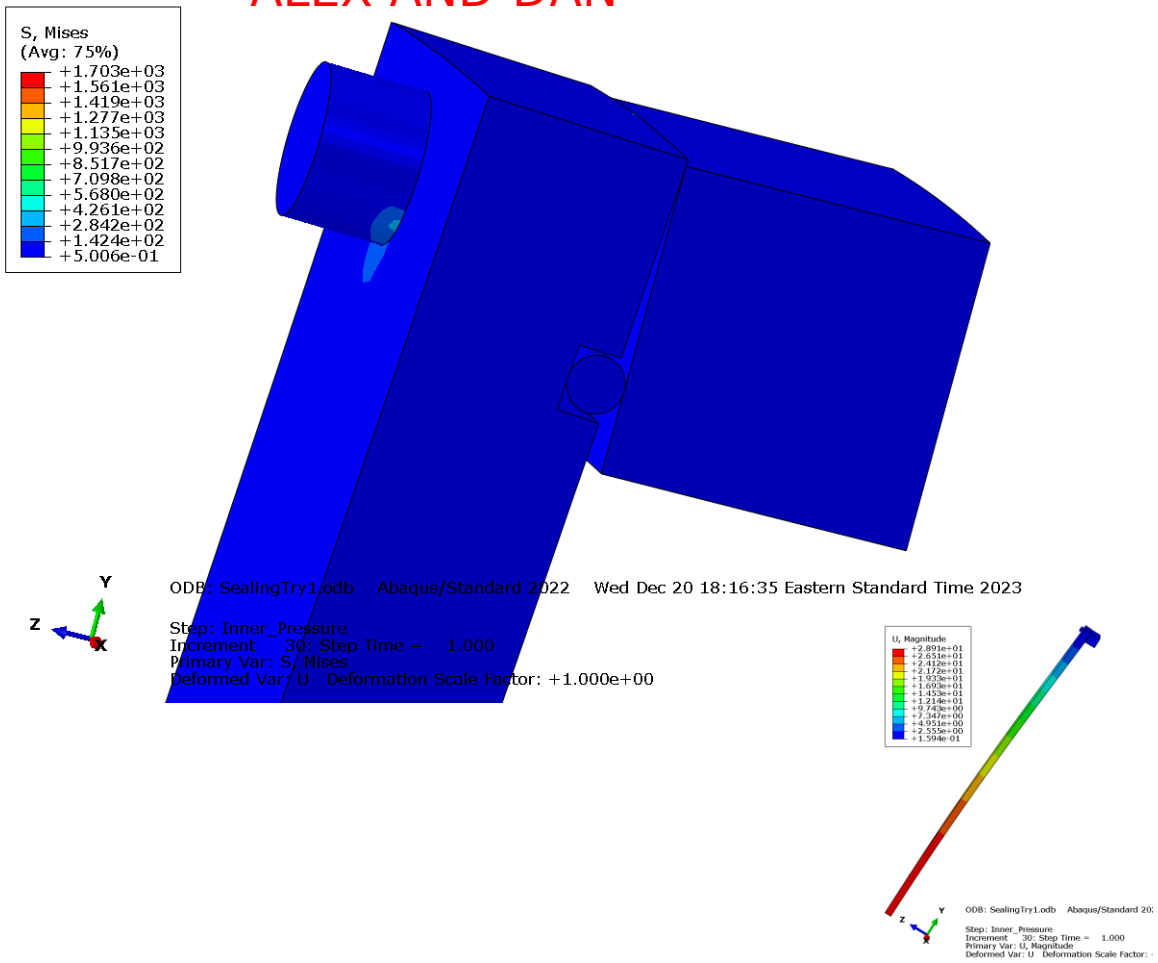
- TAKEAWAY – we have a working simulation

- Changes needed – Boundary conditions – where the “fixed” points are to prevent rigid body motion

- The material properties used for gasket need to be revised and checked in detail –
  - First results tell me that the material properties used are pretty “stiff” for gasket material

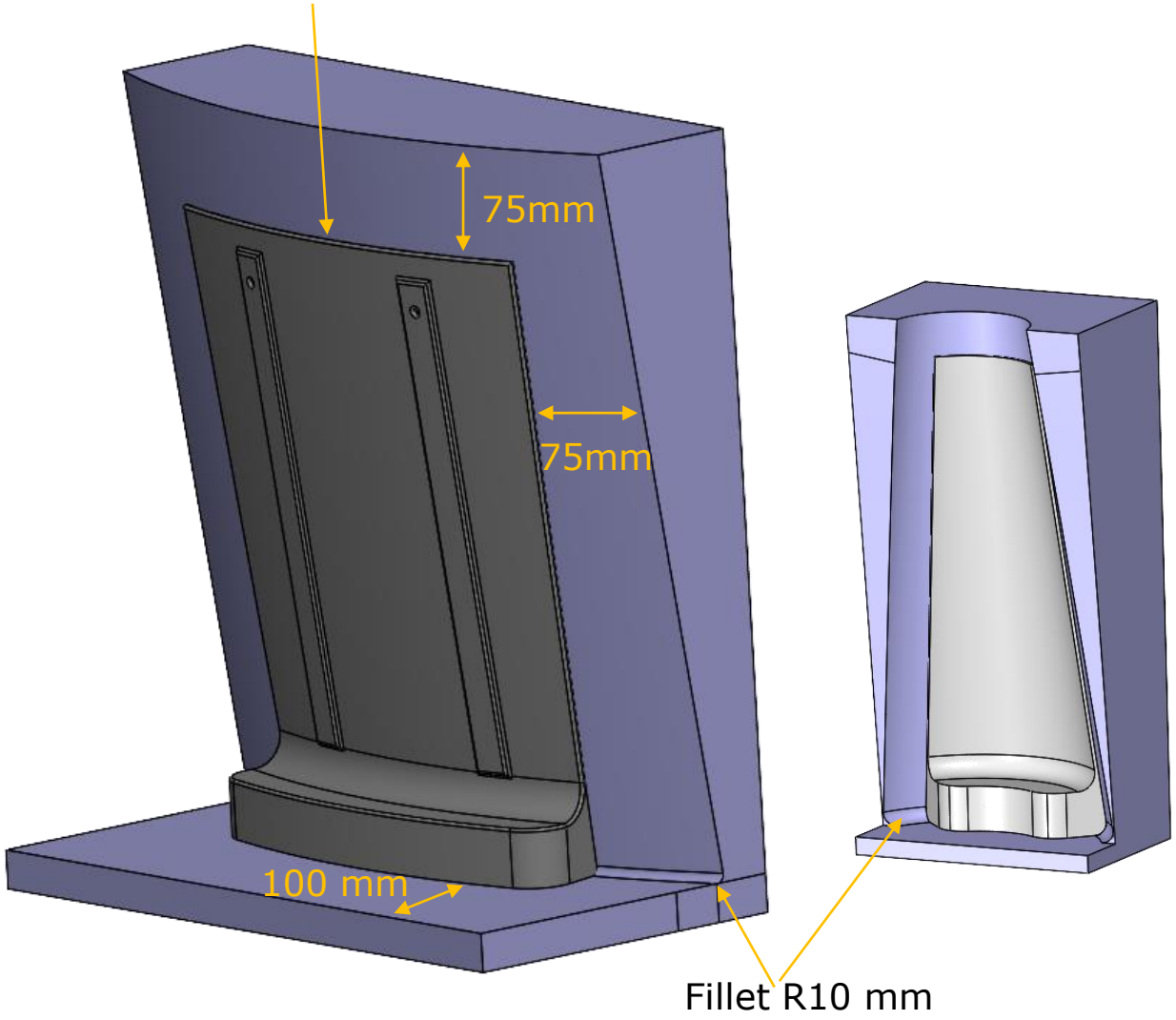
- Meeting with Alex and Dan right after this meeting and iterations to follow

PRELIMINARY RESULTS – ITERATIONS GOING ON WITH ALEX AND DAN



Extrusion Deposition Additive Manufacturing for Tool

R623 mm (need to evaluate if CFRP is mirror substrate or we need another layer of lexan or similar) Dimension will change to accommodate the layer accordingly



- EDAM will be used to make this tool out of PESU + 25% CF wt. polymer printing
- Same concept will be implemented for inner mirror tool – same fillet radius of 10 mm

Flange can be thinner and location of through holes is achievable for any spatial location – keep 1 inch away from side edges and try to center on the flange.

Simulation Flow Chart