
BCAL LIGHTGUIDE FABRICATION STATUS

Will Brooks and Iñaki Vega, 10 January 2012



Outline

- * the bad news
- * the excuses
- * the good news, and schedule

The bad news

- * we are nearly 1 month behind on delivering the 80 first article lightguides (was to be 2 months after contract established)

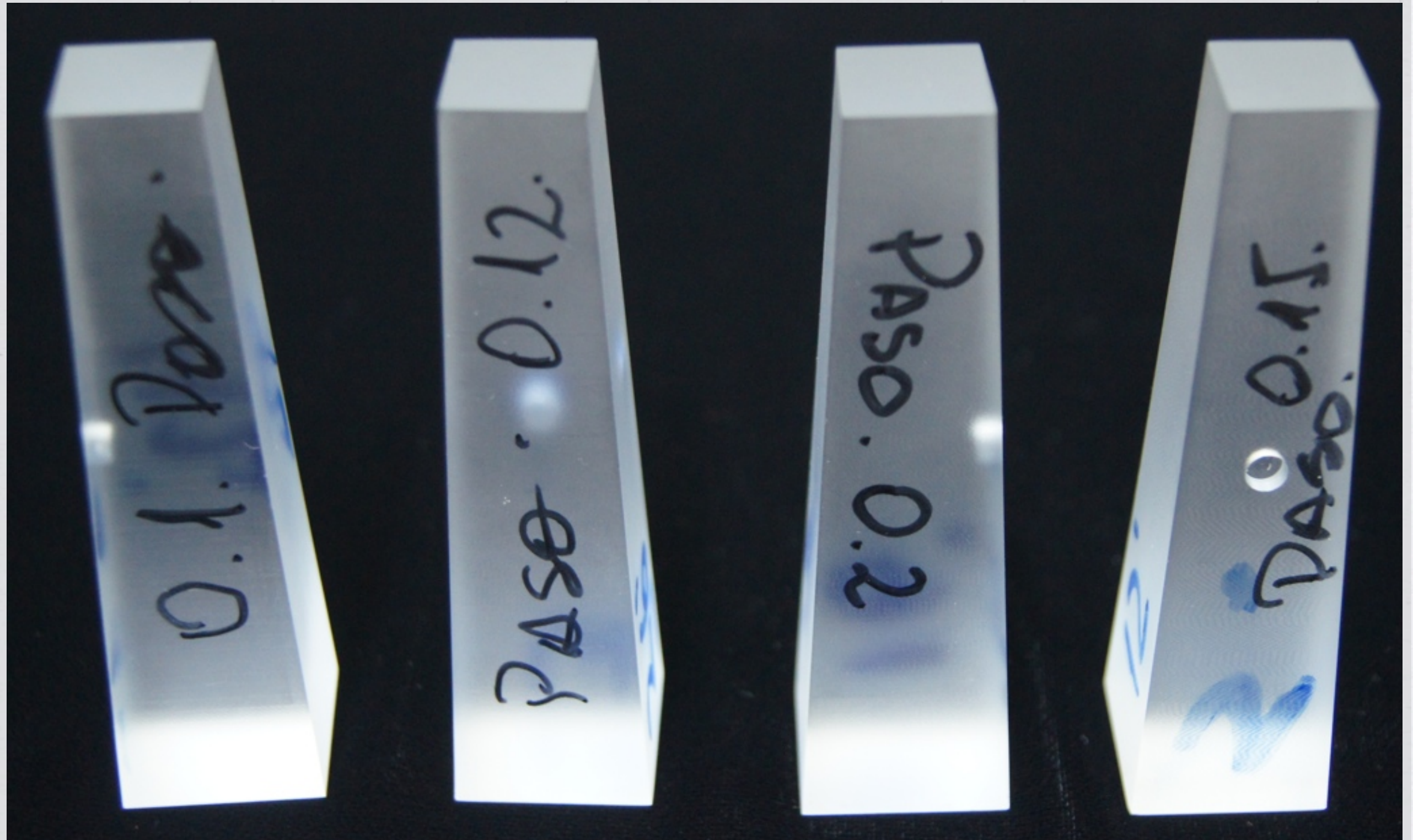
The excuses

- * our production mill was delivered about 6 months late
- * we had great difficulty locating UVT, <1% haze plastic, that could be obtained on the relevant timescale
- * our two small prototyping mills do not consistently deliver mechanical tolerances that meet the JLab dimensional specification
- * quasi-excuse:
 - * still have a non-planar face in JLab drawings (due to roundoff error?). Workaround in hand, approved by JLab.

The good news

- * Today the commissioning session for our production mill begins, through the end of the week.
- * We have found two companies and two USM CNC shops that can supplement our production rate, and have received samples from all four locations.
- * Our polishing team has found significant, scalable speed increases and are producing excellent quality surfaces.
- * We are now optimizing the surface quality (machining speed vs. polishing speed).
- * We believe we will have 80 lightguides machined in 2 weeks, fully polished in 3 weeks.
- * We are exploring options for a partial shipment, earlier

Samples with 4 different cutting pass granularities





Surfaces from
finest pass



Surfaces from finest pass



Surfaces from coarsest pass