

**Subject:** L070089-00: Request for advice/waivers on some Input Optics elements

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**Date:** 10/24/2007 12:12 AM

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LIGO-L070089-00

To the Vacuum Review Board (VRB):

The IO group have asked for waivers to not vacuum bake the following materials for ELI:

-DKDP: is hygroscopic crystal and according to [E960022-B](#), Appendix A.2.G, cannot be cleaned or baked. There will only be one of these optics per IFO, 1" diameter, 0.2" thick.

-Calcite: may be somewhat hygroscopic. There is no cleaning or baking advice in E960022-B. UFL/IO prefer not to bake. There will be two of these per IFO, 1" square, 0.2" thick.

- Half wave plates: each of these is made from two optically contacted pieces. UFL/IO are worried that the optical contact could pop apart during the bake and would like to get a waiver to forego a bake of these parts. There are two HWPs per IFO, 1" diameter, .05" thick. I presume that we would clean per the small optics cleaning procedure ([E990034-B](#))

Does the VRB have any comments or advice on the request to waive a bake (vacuum or air)? Are there any recommended cleaning procedures? Should we FTIR test the surfaces?

Dennis