LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY

RECORD OF DECISION/AGREEMENT (RODA)

Document	LIGO-M 080041 -Y
Date:	3 April 2008
Title:	RODA: Thickness of PR3 and SR3 and symmetric wedge of same
To the Attention of:	Aligo_sys, aligo_coc, aligo_sus, aligo_aos
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System(s) affected:	☐ Initial LIGO ☑ Advanced LIGO ☐ Other:
Nature/ Scope:	☑ Design Decision ☐ Requirements Decision ☐ Work Scope Decision ☐ Working Agreement between Groups ☐ Other
Subsystem(s) affected	☑ Relevant Subsystem(s)/Component(s): SUS, COC, AOS PR3, SR3
Primary Contacts	Group or Affiliation and Contact: COC, GariLynn Billingsley
Reference Documents:	

DECISION/AGREEMENT STATEMENT:

The thickness of PR3 and SR3 is changed from 100 mm to 101.4 mm. This is measured at the thickest part of the optic to the theoretical sharp extension of the bevel legs, as are all core optics. The tolerance remains at the typical ± 0.5 mm.

The wedge is symmetric, there are no right angles between the optical surfaces and the optic cylinder.

Background

SUS has an existing design that uses 100mm as the thickness at the center of the PR3/SR3 optic. Historically, we name the thickness at the thickest point of the optic. In order to make the optic mass consistent with the existing suspension design we will call the thickest part of the optic 101.4 mm

The wedge being carried by AOS is currently .6 degrees. For design purposes, SUS would like that to be a symmetric wedge, similar to all other core optics.