



LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY

ADVANCED LIGO RECORD OF DECISION/AGREEMENT (RODA)

Document	LIGO-M080041-v1
Date:	26 February 2010
Title:	RODA: Thickness of PR3 and SR3 and wedge information
To the Attention of:	aligo-sys, aligo_coc, aligo_sus, aligo_aos
cc:	
From/signatories:	Name/Title: Norna Robertson (SUS leader) Name/Title: Garilynn Billingsley (COC leader) Name/Title: Mike Smith (AOS leader) <i>See the LIGO Document Control Center (DCC) for electronic approvals</i>
System(s) affected:	<input type="checkbox"/> Initial LIGO <input type="checkbox"/> Enhanced LIGO <input checked="" type="checkbox"/> Advanced LIGO <input type="checkbox"/> Other:
Nature/Scope:	<input checked="" type="checkbox"/> Design Decision <input type="checkbox"/> Requirements Decision <input type="checkbox"/> Work Scope Decision <input type="checkbox"/> Working Agreement between Groups <input type="checkbox"/> Other
Subsystem(s) affected	<input checked="" type="checkbox"/> 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 asymmetric, with the HR surface perpendicular to the barrel.

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 0.6 degrees.

Version information

The first version of this document M080041-00 on the old DCC, dated 3 April 2008, has the wedge described as symmetric.

In this updated version, v1 on the new DCC, the wedge has been changed to asymmetric, and this is what is being delivered as per drawings, PR3 - D080662, F-PR3 - D080663 and SR3 - D080664.