



LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY

RECORD OF DECISION/AGREEMENT (RODA)

Document	LIGO-M 050418-01 -Y	
Date:	November 16, 2005	
Title:	RODA: Separation of chains in quad suspensions	
To the Attention of:	Janeen Romie, Justin Greenhalgh, Dennis Coyne, Norna Robertson, Caroline Cantley, Calum Torrie, Ian Wilmut, Tim Hayler, Russel Jones, Stuart Aston, Ken Strain.	
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From/signatories:	Name/Title:	Dennis Coyne/SUS & SYS Leader Signature: _____
	Name/Title:	Phil Willems/AOS Leader Signature: _____
	Name/Title:	Norna Robertson/SUS Cog. Sci. Signature: _____
	Name/Title:	Caroline Cantley/SUS/UK/UG PrjMgr Signature: _____
	Name/Title:	Justin Greenhalgh/SUS/UK/RAL PrgM Signature: _____
	Name/Title:	Signature: _____
	Name/Title:	Signature: _____
System(s) affected:	<input type="checkbox"/> Initial 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 checked="" type="checkbox"/> Working Agreement between Groups <input type="checkbox"/> Other _____	
Subsystem(s) affected	<input checked="" type="checkbox"/> Relevant Subsystem(s)/Component(s): Suspension (SUS) subsystem: all suspension assemblies. Auxiliary Optics (AOS) Subsystem. _____	
Primary Contacts	Group or Affiliation and Contact: Norna Robertson, Standford University	

Reference Documents:	1) Weekly SUS Meeting: Agenda and Summary Notes from 5 <sup>th</sup> July and 23 <sup>rd</sup> August, 2005. see: <a href="http://www.ligo.caltech.edu/~ctorrie/SUS_MEETING/SUS_MEETING.html">http://www.ligo.caltech.edu/~ctorrie/SUS_MEETING/SUS_MEETING.html</a> 2) LIGO-T050077-05-K Separation of chains in quad suspensions. 3) RODA M040283, this document details the baseline ETM and ITM sizes of the sapphire and fused Silica optics for advanced LIGO.
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**DECISION/AGREEMENT STATEMENT:**

Chain separation in the noise prototype ETM/ITM quadruple pendulum refers to the distance between the central axis of the main chain and the central axis of the reaction chain, in this respect the chain separation for the noise prototype will be 170mm.

The chain separation was agreed upon through discussions around the document T050077-05, separation of chains in quad suspensions, the note sets out the issues and background on the choice of chain separation, it also includes a diagram on what is meant by chain separation.