LIGO Laboratory / LIGO Scientific Collaboration

LIGO-T080158-02-K

Advanced LIGO UK

14th July 2008

SPI interface to structure sleeve discussion

Amanda J Brummitt and Calum Torrie

Distribution of this document:
Inform aligo_sus

This is an internal working note
of the Advanced LIGO Project, prepared by members of the UK team.

Institute for Gravitational Research
University of Glasgow
University Avenue, Glasgow G12 8QQ,
Scotland UK

Department of Physics
University of Birmingham

+44 (0) 121 414 6447

+44 (0) 131 440 5880
Engineering Department
CCLRC Rutherford Appleton Laboratory
Chilton, Didcot, Oxon OX12 0NA
Phone +44 (0) 1235 44 5297
Fax +44 (0) 1235 445843

Particle Physics and Astronomy Research Council (PPARC)

http://www.ligo.caltech.edu/

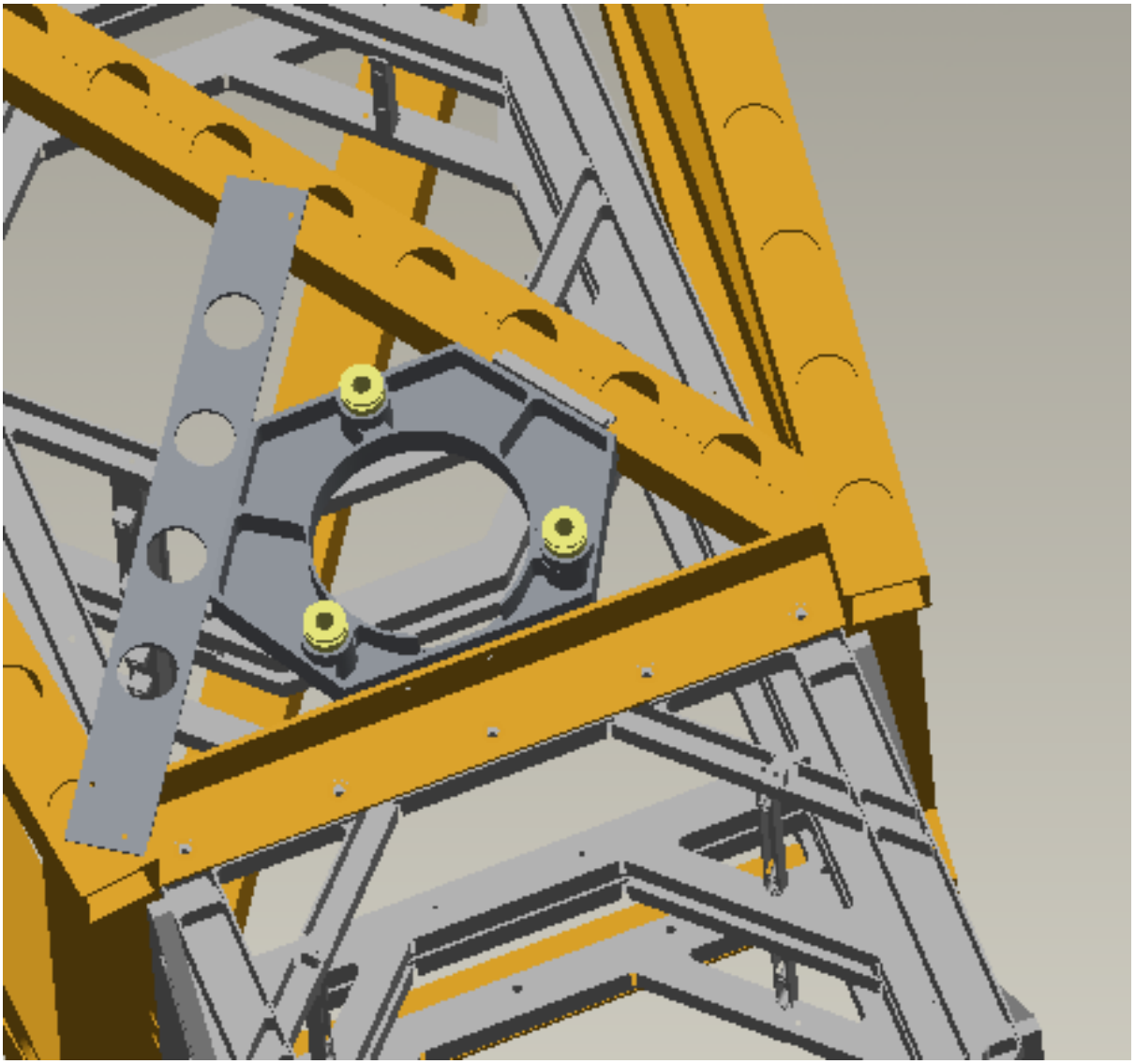
http://www.eng-external.rl.ac.uk/advligo/papers_public/ALUK_Homepage.htm.

1 Introduction

The purpose of this document is to serve as a record of the discussion on defining the interface between the SPI and the sleeve.

2 General description of the interface

The SPI needs to interface with the sleeve. The proposal is to add holes in the sleeve to allow this to be the case. The hoes in the sleeve will interface both with the SPI directly and with brackets around the SPI. The brackets are there to allow for the variations that will come in the sleeve because the sleeve is a welded structure. These variations will mainly be in the angle of the cross beam. The holes that are directly in the SPI need to be tapped with the holes in the brackets or the sleeve depending on location being clearance holes. The bottom set of holes on the SPI will be the clearance holes in the sleeve. There will also be a bar to take the other side of the triangle required. This will be in front of the sleeve and interface directly with the sleeve. The bar will have clearance holes and the sleeve tapped holes. The bracket on the side of the bar to the SPI will need to go on the optic side.



3 Approval

After several meetings with Amanda and gathering of information on the SPI from Dennis I presented the 00 revision of this document to Dennis. Based on this discussion with Dennis I would like to approve the addition of the suggested holes from section 2.

Calum Torrie

4 SPI Design

At present section 2 only includes concepts of how to interface the SPT with the structure sleeve. The existing SPI concept of the non-suspended components is in the Caltech PDMWorks vault.

5 Drawing reference

Drawing D070552 is updated to reflex these changes. The drawings issued by the manufacturer are also updated to this.