

E040017-01-D

Revision 00: Initial release for Glasgow SUS summit (RAJ, Aug 03) - (Formerly ALUKGLA0024aAUG03)
Revision 01: Minor correction following comment from CIT, DCC number reserved (RAJ, Feb 04)

Mass Catcher Design for the Mode Cleaner Controls Prototype

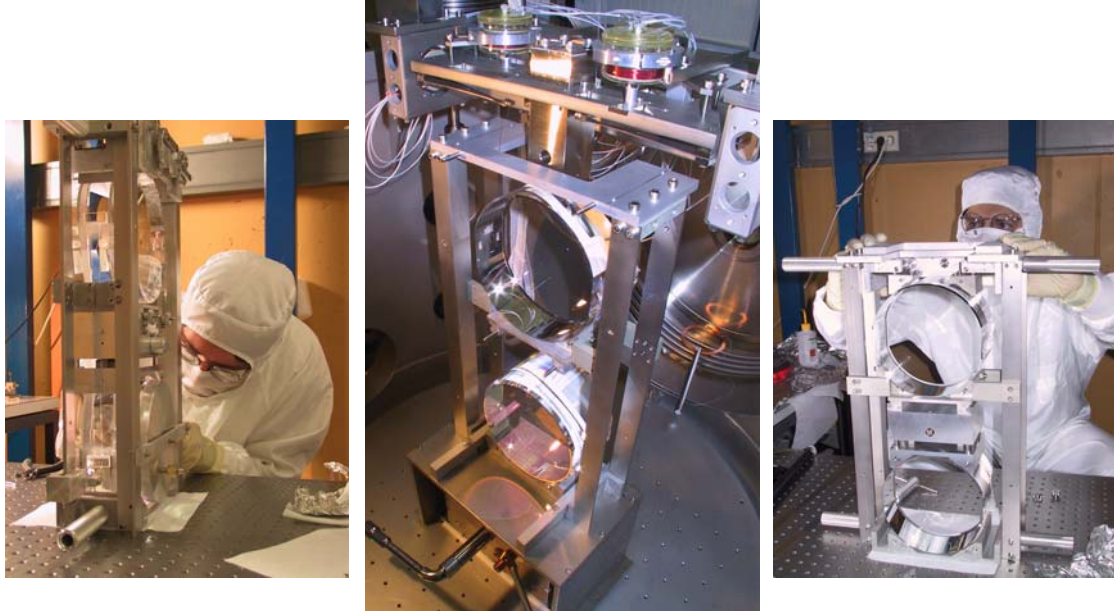


Figure (i): The GEO Catcher Design

DESIGN BRIEF

Following a detailed analysis of the Catcher Design used for the Monolithic Suspension in GEO 600 (figure (i) above), develop a catcher for use in the LIGO Mode Cleaner Controls Prototype.

The Catcher must perform the following functions:

- Define the positions of the silica masses in order to assist and compliment the process welding fibres
- Clamp and protect the masses during installation
- Provide the facility to catch masses in the event of a major failure in the suspension chain
- Restrict exaggerated motion caused by extreme excitation of the suspension chain

Characteristics such as structural rigidity and modularity that were a feature of the GEO design should be embraced and developed in the refined design for LIGO.