

LIGO Laboratory / LIGO Scientific Collaboration

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Laboratory layout during ear bonding at LASTI

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Introduction

From Monday 27th – Friday 31st of August 2007 and Monday 10th December until Wednesday 12th December two stages of the delivery of the bonding of silica ears at LASTI were carried out, which consisted of bonding ears to the 1st and 2nd penultimate masses, and to the test mass, measuring the weights of the test mass, 1st and 2nd penultimate masses and the reaction mass, measuring the position of the ears and measuring the electrical resistance of the gold coating on the reaction mass as part of the ALIGO ETM/ITM noise prototype activity.

This document is a brief report on the layout of the laboratory during these exercises.

1 Reference documents

Back ground documents	
T070223-00-K	ALIGO NP-type: - Report on Ear Bonding at LASTI 27 th August – 31 st August
T-070298-00-D	ALIGO NP-type: - Preparations of Ear Bonding at LASTI on 10 th December – 14 th December 2007
T070305-00-D	ALIGO NP-type: - Report on Ear Bonding at LASTI 9 th – 14 th December August

2 Layout of the cleanroom

A floorplan of the cleanroom is shown in Figure 2.1. The room was filled with 2 tables, washing bath and ergo-arm, which means that the surface area available is the minimal required space for bonding the ears to the masses.

The table covered in aluminium foil was used to weigh the masses, measure the positions of the ears and to set the bonding template.

The other table had a black plastic surface that was used to put the mass on for bonding.

The bath sat on a movable trolley that was at the location indicated in Figure 2.1 during washing the mass, and that was moved to the right once the mass is lifted off the bath after washing. The mass is then put onto the table.

Ideally the room would be longer, such that the ergo-arm can be moved forward and backward more easily.

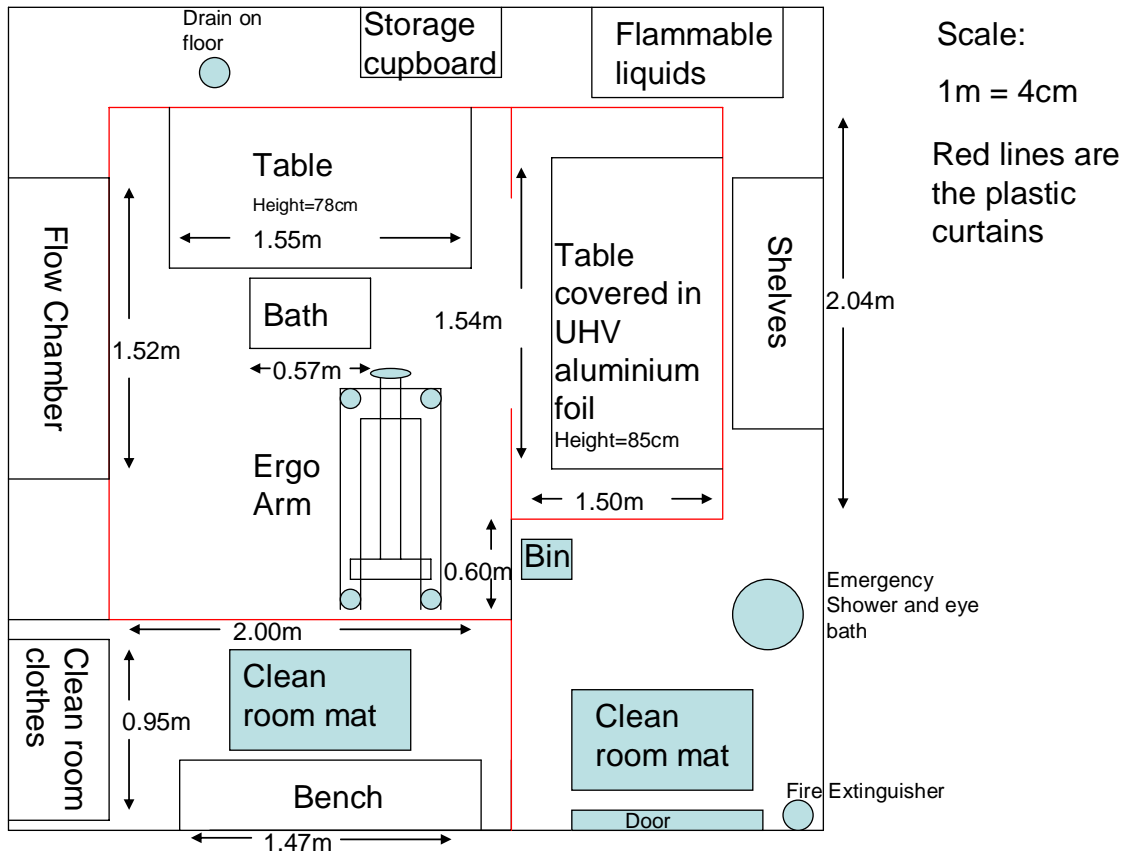


Figure 2.1 Floor plan of the bonding clean room



Figure 2.2 Lab from outside the cleanroom tent



Figure 2.3 Two tables inside cleanroom tent



Figure 2.4 Washing trolley in front of table 1



Figure 2.5 Flow chamber and table 1



Figure 2.6 Using the ergo-arm in the clean room