

## DSG Hall A LAPPD Meeting Minutes

**Date:** May 7, 2024

**Time:** 11:00 PM – 12:00 PM

*Attendees:* Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, Simona Malace, and Marc McMullen

### 1. Gantry installation

*Pablo Campero and Marc McMullen*

1. Marc and Pablo installed gantry system inside the dark box
2. Pablo, Marc, and Simona, set up gantry motor controllers on a metal shelf next to the dark box
3. Pablo presented talk on the installation process and future tasks

### 2. Gantry system controls

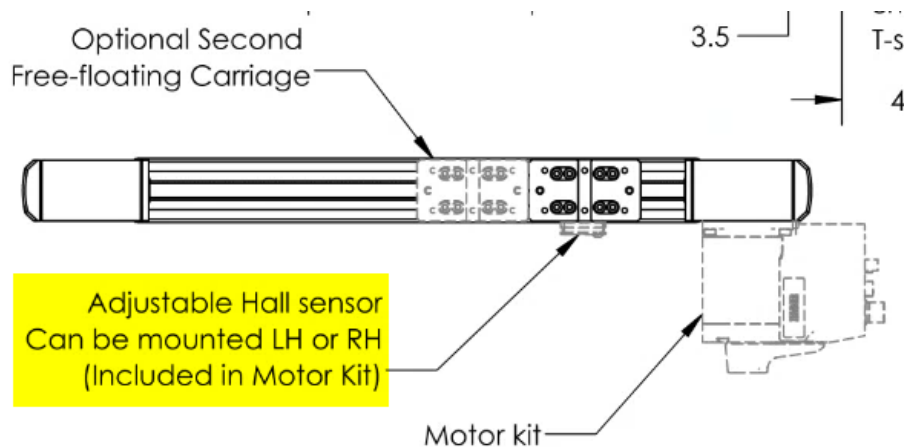
*Pablo Campero and Simona Malace*

1. Pablo installed Zaber Launcher version 1.10.2 on Simona's laptop
2. Pablo and Simona configured drivers to connect laptop with the controller via USB
3. Pablo resolved error displayed in Zaber Launcher for motor drivers due to moving the carrier manually during installation

### 3. Relocation of gantry's home sensor

*Pablo Campero*

1. Pablo needs to move the hall sensor forward to redefine the zero location as recommended by Zaber technical support
  - If needed, there is an available longer home sensor cable HS02L150



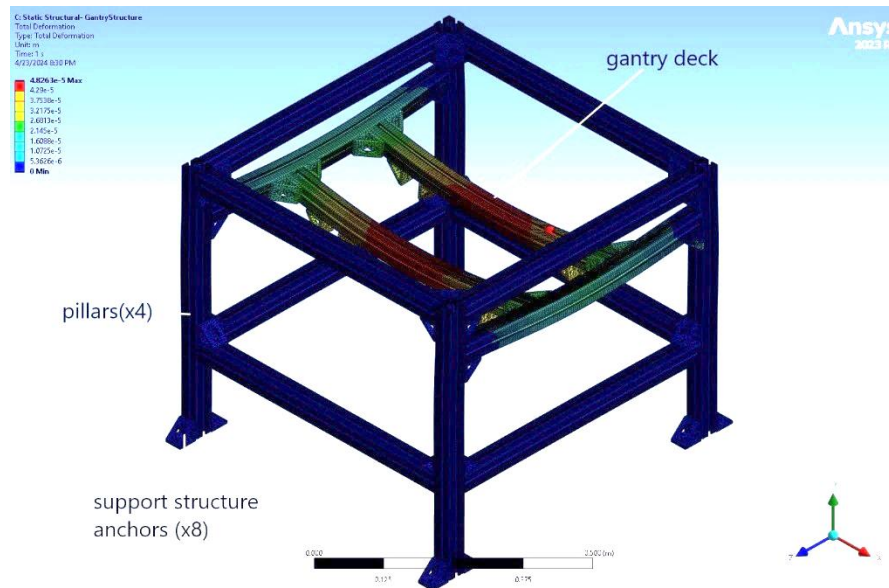
2. Because these stages and motors are modular, another option would be to reconfigure the gantry so the motors and home side are on the other end of travel, preventing the stage from moving forward past the travel limit that is currently on the home side

30.1

#### 4. Static structural analysis of the gantry's structure

*Pablo Campero*

1. Pablo completed Ansys calculations of maximum deformation, moment, and force reactions for entire gantry support
  - Simulation results showed the maximum deformation as 48.3  $\mu\text{m}$ , the total moment reaction 2.29 Nm, and the total force reaction 160 N, as expected



LAPPD gantry's support structure model with maximum deformation simulation results

#### 5. Plans to complete gantry system installation

*Pablo Campero, Marc McMullen, and Simona Malace*

1. This week, Simona will be taking data with current setup and gantry system static (no movement) at one pixel of the LAPPD
2. Relocation of hall sensor, installation of clamps, placing gantry at final location with anchors, and recalibration can be done next week
3. Simona informed group that the LAPPD-38 will be replaced by a newer model, which has the same dimensions
  - Gantry system will have to be moved out of the dark box to allow LAPPD replacement