DSG eCAL Supermodule Assembly Status Update

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Assembly preparation

Pre Assembly:
- Lead glass assembly measurement and sorting by length
- Light guide foil (4.25 x 5 inches) wrapping
- Spring gluing to flange one

Cutting foil to wrap the light guides
Measuring light guides before sorting by length
Supermodule assembly

Assembly:
• Frame inspection
• Installing nine lead glass assemblies into a three by three array
• Positioning flange one with the assembly jig to align screw holes
• Installation of the 12 screws in flange one

Assembling the lead glass array in frame
Flange one positioning in assembly jig
Installation of the flange one screws
Post assembly:

- Clamping the supermodule and tightening all screws
- Supermodule inspection
- Releasing spring plates from flange one
- Adding flange one handle and storage protection foil
- Move to storage
DSG assembly progress

- 20 supermodules assembled in 2022
  - 10 short modules
  - 10 long modules

eCAL frames are built to interlock to maximize acceptance
Assembled supermodule inventory

- 154 of 192 supermodules assembled
  - 82 short modules
  - 72 long modules

- 38 remaining modules to assemble
  - 14 short modules
  - 24 long modules

Side and end view of supermodule storage
# Supermodule assembly parts inventory

<table>
<thead>
<tr>
<th># Supermodules</th>
<th>Part</th>
<th>Need</th>
<th>On-hand</th>
<th>Balance</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>lead glass assembly</td>
<td>342</td>
<td>334</td>
<td>-8</td>
<td>Lead glass assemblies are being fabricated by ECAL group (balance date not provided)</td>
</tr>
<tr>
<td></td>
<td>spring</td>
<td>342</td>
<td>86</td>
<td>-256</td>
<td>600 springs ordered (2/2/2022); expected end of March</td>
</tr>
<tr>
<td></td>
<td>SM1 frame</td>
<td>14</td>
<td>17</td>
<td>3</td>
<td>Frame parts need to be procured and fabricated. (No procurement date)</td>
</tr>
<tr>
<td></td>
<td>SM2 frame</td>
<td>24</td>
<td>15</td>
<td>-9</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

• 154 of 192 supermodules have been assembled
• Inventory of supermodules and parts has been completed and verified (2/10/2022)
• Parts needed to complete the project
  – 600 springs ordered (expected end of March)
  – 8 lead glass assemblies are being wrapped
  – 9 long frames need to be fabricated
• Estimated project completion date June, 2022
Thank You