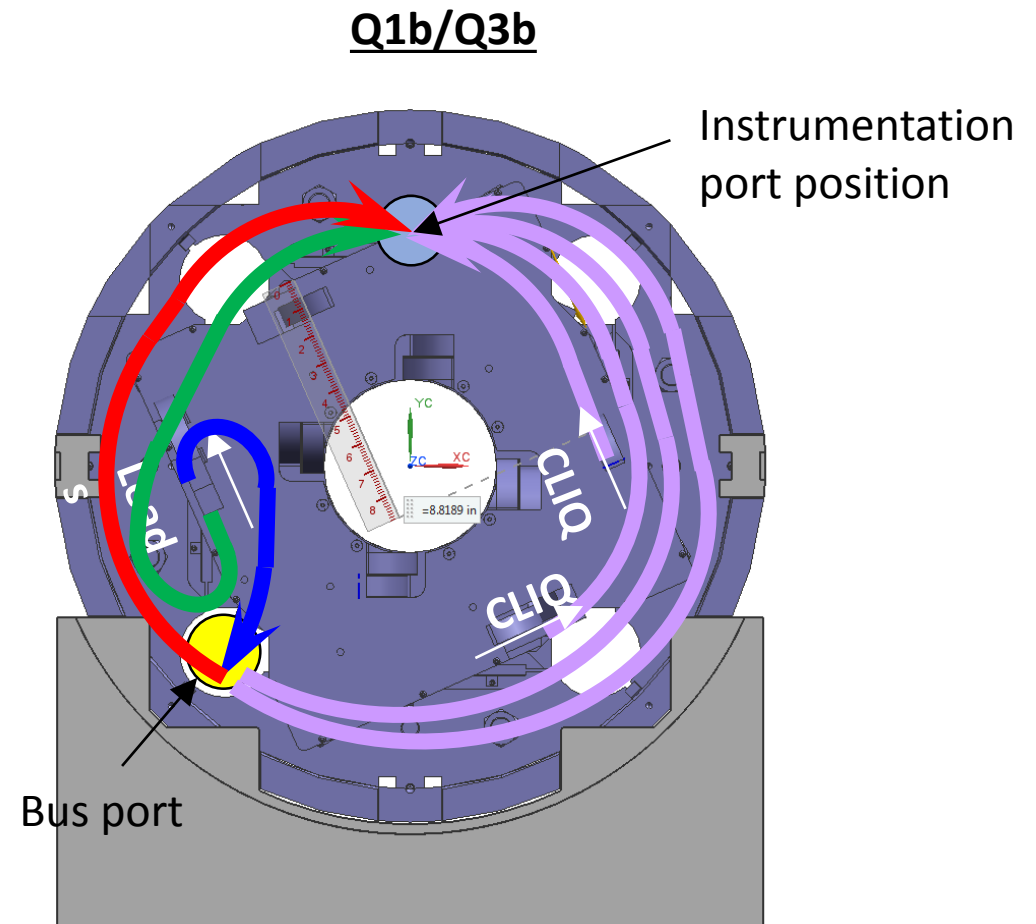
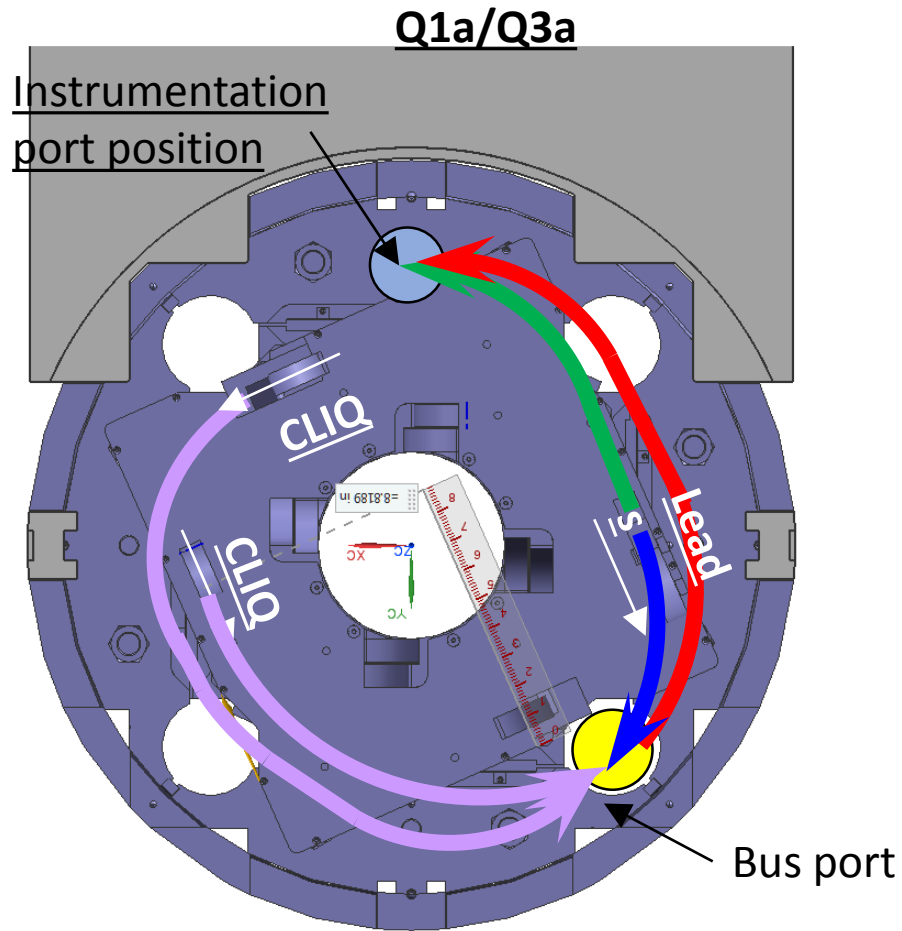


# LMQXF Bus and Expansion Loop Status

R. Bossert Nov. 1, 2017

Conceptual design of expansion loops and bus configuration was completed and is shown below.

Since the bus port is not placed symmetrically with respect to the cold mass, there will be two different bus loop configurations on the face of the cold mass.





**Assembly of a mockup, which will include both bus loop configurations and a through-bus, is beginning.**

- Space has been allocated in Industrial Building 3, and a dedicated technician has been assigned.
- Models have been obtained (from Mike Solis) of all the magnet end and splice connection box assemblies.
- Cable for power leads has been obtained.
- Drawings of connection box and end plate assemblies for mockup have been completed.

**Still need to:**

- Receive mockup parts.
- Obtain end dome model and add this to the mockup.
- Order through-bus port for mockup.
- Design through bus after confirmation of CLIQ lead configuration.
- Obtain CLIQ leads for mockup.
- Build mockup.
- Form power leads and CLIQ leads
- Insert through bus port on mockup and short model.
- Assess results

## LMQXF Splice and Bus Mockup Schedule

	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	25-Dec	1-Jan	8-Jan	15-Jan	22-Jan	29-Jan
<b>Preparatory Work</b>																		
Arrange for work area for mockup	█																	
Clean and prepare work area	█	█																
Obtain material for power leads*	█																	
Obtain material for CLIQ leads						█												
<b>Mockup Construction</b>																		
Establish layout of mockup	█	█																
Design parts to use for end plates and pizza boxes		█	█		█	█	█	█	█									
Procure materials for end plate and pizza boxes						█	█	█	█	█								
Fabricate mockup parts (probably done by techs)						█	█	█	█	█								
Design other mockup parts (through-bus housing, dome, etc.)					█	█												
Procure materials for other mockup parts						█	█											
Fabricate other mockup parts							█	█	█	█								
Assemble mockup without leads or through bus.									█	█	█	█	█	█	█	█	█	█
<b>Through-Bus Construction and insertion</b>																		
Understand exact size of Power leads and CLIQ leads					█	█												
Design preliminary through-bus						█	█	█										
Order preliminary through-bus parts							█											
Procure preliminary through-bus parts								█	█	█								
Assemble preliminary through-bus (techs)									█	█	█	█	█	█	█	█	█	█
<b>Implementation of Mockup</b>																		
Understand amounts of thermal contraction needed for all loops							█	█										
Attach power leads and CLIQ leads into mockup										█	█	█	█	█	█	█	█	█
Insert and attach through-bus												█	█	█	█	█	█	█
Add any other parts (voltage taps, heaters, etc.)															█	█	█	█
Assess and re-do if necessary																	█	█