

## Experiment e10001 (Charity) - List of tasks and required resources from NSCL.

This list doesn't include tasks that HiRA group and WashU group can handle by themselves and don't require resources from NSCL personnel or machine shop.

	Description	Person in charge	Start	End	Resources/Comments
1	Cleaning the s2 vault	Dirk Weisshaar, Paul Zeller	Dec 11	Dec 11	- Scheduled for morning - Use of crane
2	Bringing the HiRA electronic racks to s2 vault	HiRA group	Dec 11	Dec 11	- will be done between tasks #1 and #3 - use of small crane in s2 vault
3	Bringing the chamber to the s2 vault	Paul Zeller	Dec 11	Dec 11	- Scheduled for afternoon - have to use crane
4	Recalibrate the optical telescope on the beam axis using the laser tracker.	Dave Sanderson *	Dec 12	Dec 14	Required to align the chamber
5	Alignment of the chamber using the entrance and exit flanges and alignment of the beamline	Dave Sanderson *	Dec 12	Dec 14	- Craig Snow is going to provide the dimensions of the chamber location -Once the chamber is in place, it will need to be anchored to the floor using flush concrete anchors for one corner and tapped holes in the flooring for the other three -Then, Dave can do the final alignment
6	Test the beam dump vacuum system	Dave Sanderson *	Dec 14	Dec 28	The vacuum system near the beam dump is buried under a bunch of water jugs. They may need to be opened up to make sure it works.
7	Measurements of the new exit beamline	Craig Snow *	Dec 18	Dec 28	The exit beamline needs to be shortened once we have the chamber aligned and can measure the new gap. Part ready by Jan 10 (NSCL shop)
8	Connecting the pumps, IG, PG	Dave Sanderson, Robin Walker (if needed) *	Dec 14	Dec 28	1) (WashU shop)
9	Testing the vacuum system and controlling it from epics				
10	Connecting the "CAESAR" part of the beam line	HiRA group	Jan 10	Jan 11	Parts available by Jan 10 (NSCL shop)

<b>11</b>	Connecting the rough pump to the “CAESAR” part of the beam line and testing it (including EPICs)	Dave Sanderson, Robin Walker (if needed) *	Jan 10	Jan 16	After tasks #8 & 9 is completed
<b>12</b>	Mounting the drive and the beam blocker	HiRA group	Jan 11	Jan 18	Parts available by Jan 10 (NSCL shop)
<b>13</b>	Setting up CAESAR	Dirk Weisshaar	Jan 10	Jan 24	CAESAR stand available by Jan 10 (NSCL shop)
<b>14</b>	Mounting the HiRA stand	HiRA group	Dec 21	Dec 22	2) (NSCL shop)
<b>15</b>	Use CMM arm to align the HiRA	Dave Sanderson*	Jan 15	Jan 20	Can be done after the HiRA telescopes are mounted

\* HiRA group can provide assistance

- 1) Parts of the mechanical isolation of the turbo pump won't be available before Jan 10 (WashU shop). Thus, we would like to connect the turbo pump in the same way as it was in the previous experiments with s2 chamber so we can do the vacuum test before January. WE CAN'T START ANY WORK INSIDE THE CHAMBER BEFORE THE VACUUM TEST IS PERFORMED.
- 2) The HiRA stand exists and was used in the previous experiment. However, four new holes have to be drilled as the position of the HiRA detectors with respect to the s2 chamber has changed. This part should arrive from the MSU storage in week Dec 10-14. They will be sent to machine shop once they are in the lab.