Jefferson Lab Alignment Group

Data Transmittal

TO: T. Whitlatch		**DATE:** 09/04/2020
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DETAILS: Step2B\HallD\TRD_GEM\200902A

Below are the results of the recent GEM_TRD detector survey. For this run the detector's ideal pitch angle (rX) is +9.0 degrees. The GEM and Pad detector positions are defined by the average location of the (4) all-threads projected to their respective planes. Measurements were taken on the downstream face to define the GEM detector, for all other detectors the plane measured is the upstream face. Coordinates are reported in the CEBAF mechanical system (meters). Angles are reported in degrees. Since the centerlines of the GEM_TRD and Wire detectors are not defined, the Z positions should be considered approximate. Distances are provided along the normal of the GEM detector.

	CEBAF Mechanical (meters)				Rotations (degrees)		
Detectors	**Z**	**X**	**Y**		**rZ(Roll)**	**rX(Pitch)**	**rY(Yaw)**
GEM	403.74505	80.59316	103.88771		0.1982	99.6529	0.6860
GEM_TRD	403.71798					99.7462	0.5168
WIRE	403.49062					100.0173	0.4341
PAD	402.72265	80.58290	104.06068		-0.9911	99.6940	0.3034

Distance from GEM along Normal (meters)	
GEM TRD	0.0296
Wire	0.2588
Pad	1.03697