

# PEPII IR2 HER A-Side

January 2005 Survey Results

# Survey Summary

- Record the flange locations of the HER in the A side of Region 2 (also known as the “backward side” or the “left side”) for future downtime chamber upgrades.
- There are no useful fiducials on any of the flanges as no values have ever been assigned to the few existing tooling ball sockets.
- Use 4 TC2002 set-ups with different offset arms to cover the whole area. Base as-built results on the monument values from the last PEP-II global map from the 2000 Summer Downtime. Shoot the 3 magnets (Q4, Q5 and SQ1L) for reference. The MAD deck used is quoted “Run 1996/10/30”. Raw observation files are saved for AEG archiving in the following local directory:
  - N:\SetOut Files\Bfactory\2005 IR2A Flanges
- Tape the flange positions along beamline from SQ1L center as no reliable z-locations can be derived from the total station set-ups using extension arms. Field notes can be found in the following web link:
  - [http://www-group.slac.stanford.edu/met/Align/Job\\_List/Job\\_List.xls](http://www-group.slac.stanford.edu/met/Align/Job_List/Job_List.xls)

## PEPII IR2 A-Side HER Flange Center Positions in the Beam Following System

	Z (in)	X (in)	Y (in)	Diameter (in)
Flange01	13.8	-0.065	0.023	7.980
Flange02	35.5	-0.742	0.051	9.980
Flange03	149.1	-0.493	0.097	9.980
Flange04		-0.167	0.052	9.980
Flange05		-0.176	0.025	9.980
Flange06			0.010	9.980
Flange07				9.980
Flange08	396.3			9.980
Flange09	411.5	0.523	0.035	16.50
Flange10	459.1		-0.016	16.50
Flange11	554.7		0.067	<sup>1</sup> 7.516
Flange12	633.5		<sup>2</sup> 4.945	

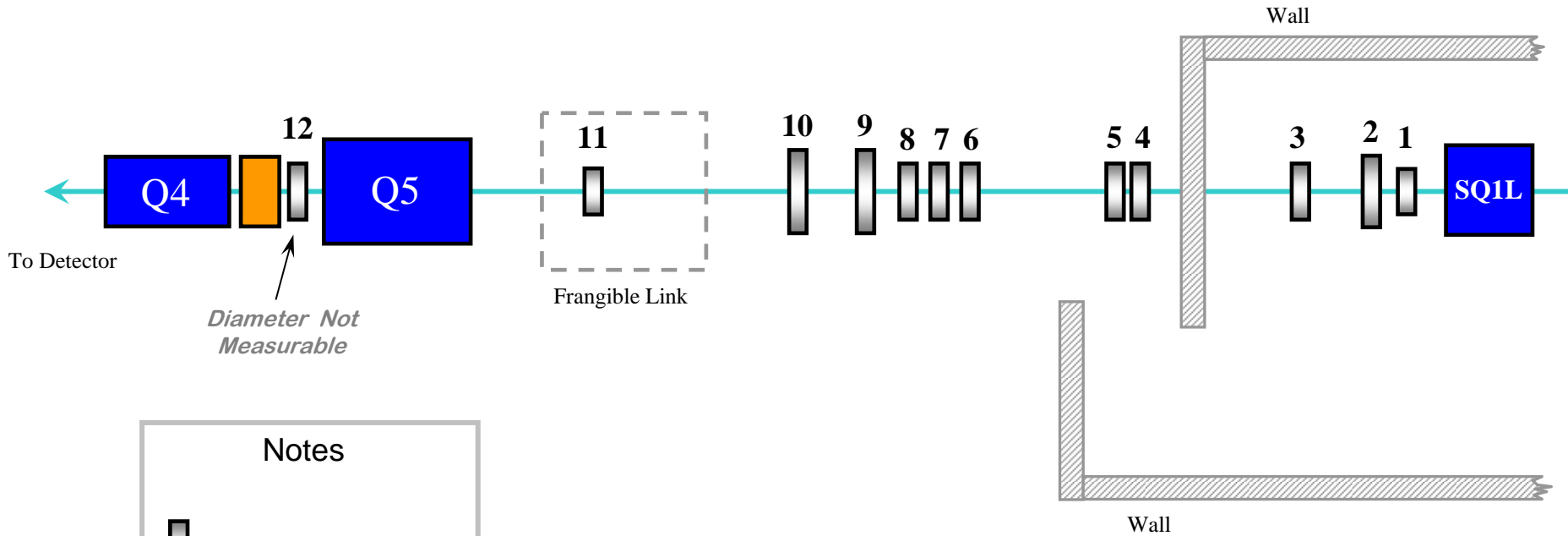
*Notes:*

- *Z's measured with a tape from the center of BH2ASQB-PR02-7037-SQ-SQ1L*
- *Empty cells mean values not measurable*

1. *Flange 11 is square. "Diameter" is the height of the flange*
2. *Flange 12 diameter could not be measured. Value to top of flange*

# PEPII HER Flange Numbering for Location Survey

2A Side

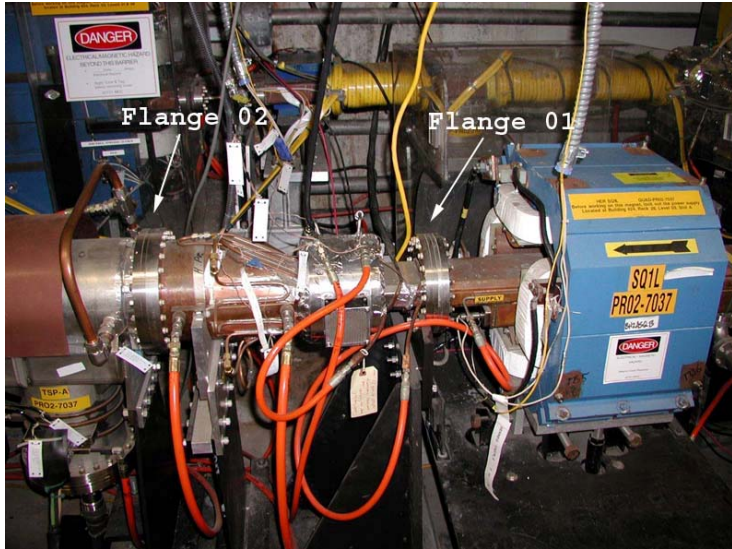


## Notes

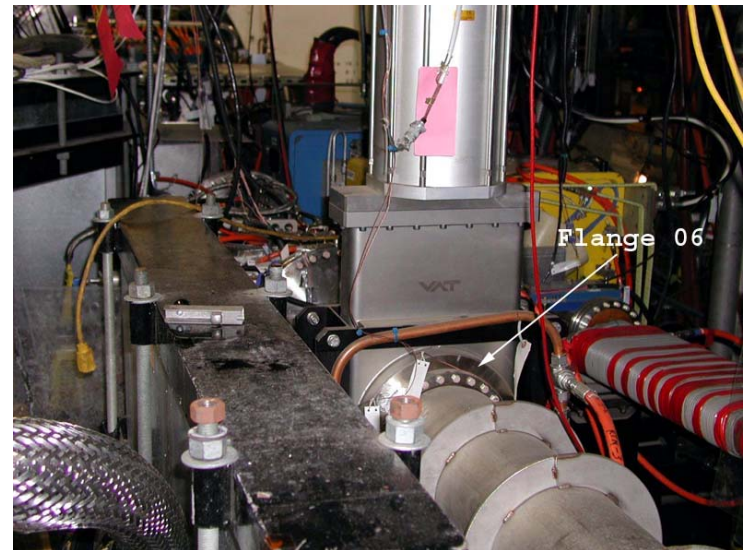
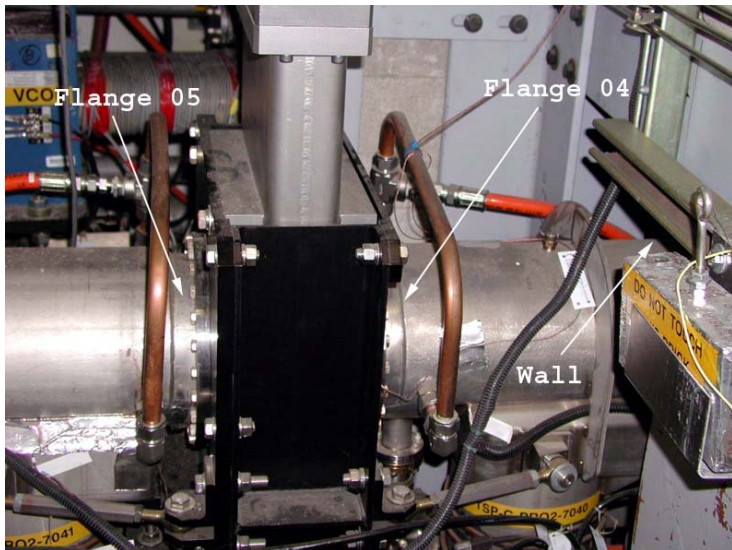


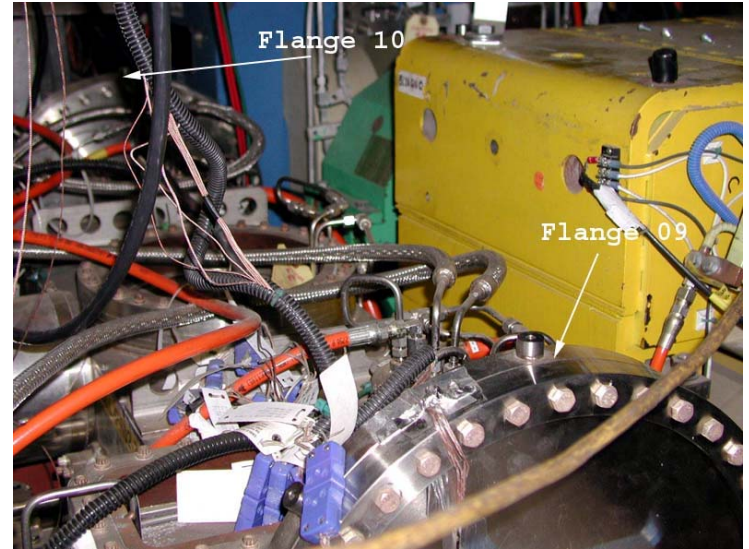
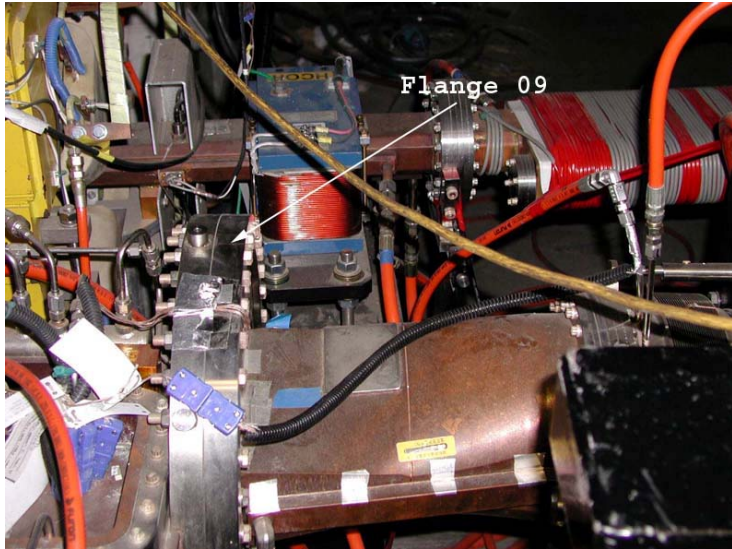
Connected Flange Pair

- Drawing is **Not To Scale**
- Survey completed 1/19/05

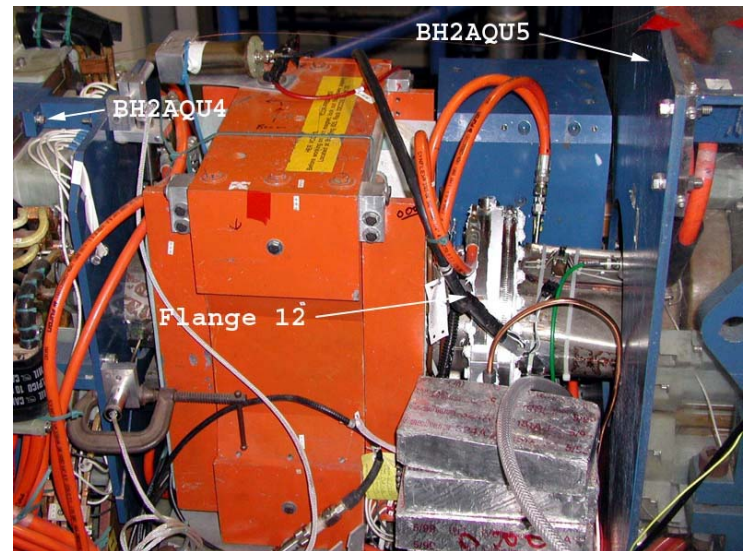
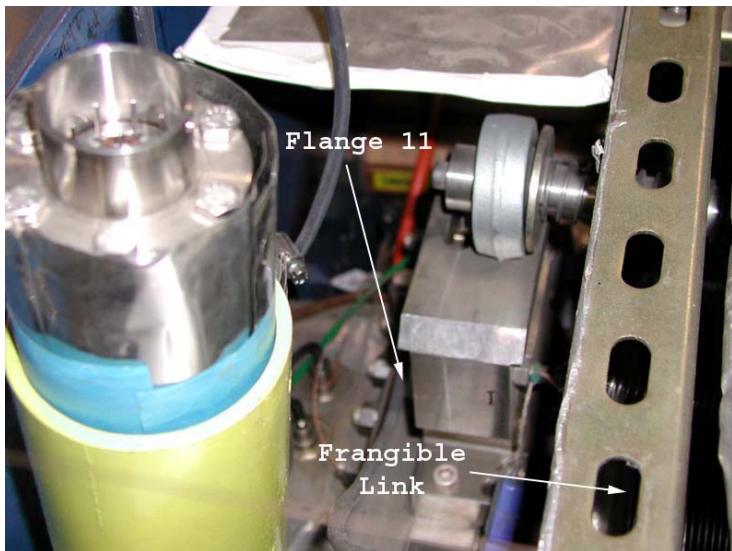


A Side





A Side



## PEPII IR2 A-Side HER Quadrupole As-Built Positions and Orientations in the Beam Following System

AEG Name	MAD Name	DZ (in)	DX (in)	DY (in)	Roll (deg)	Pitch (deg)	Yaw (deg)
BH2ASQB	SQ1L	0.106	0.019	0.118	0.0214	-0.1436	0.0187
BH2AQU5	QU5	0.096	0.015	0.032	-0.0055	0.0135	-0.0312
BH2AQU4	QU4	0.081	-0.015	0.011	0.0091	-0.0179	-0.0202

