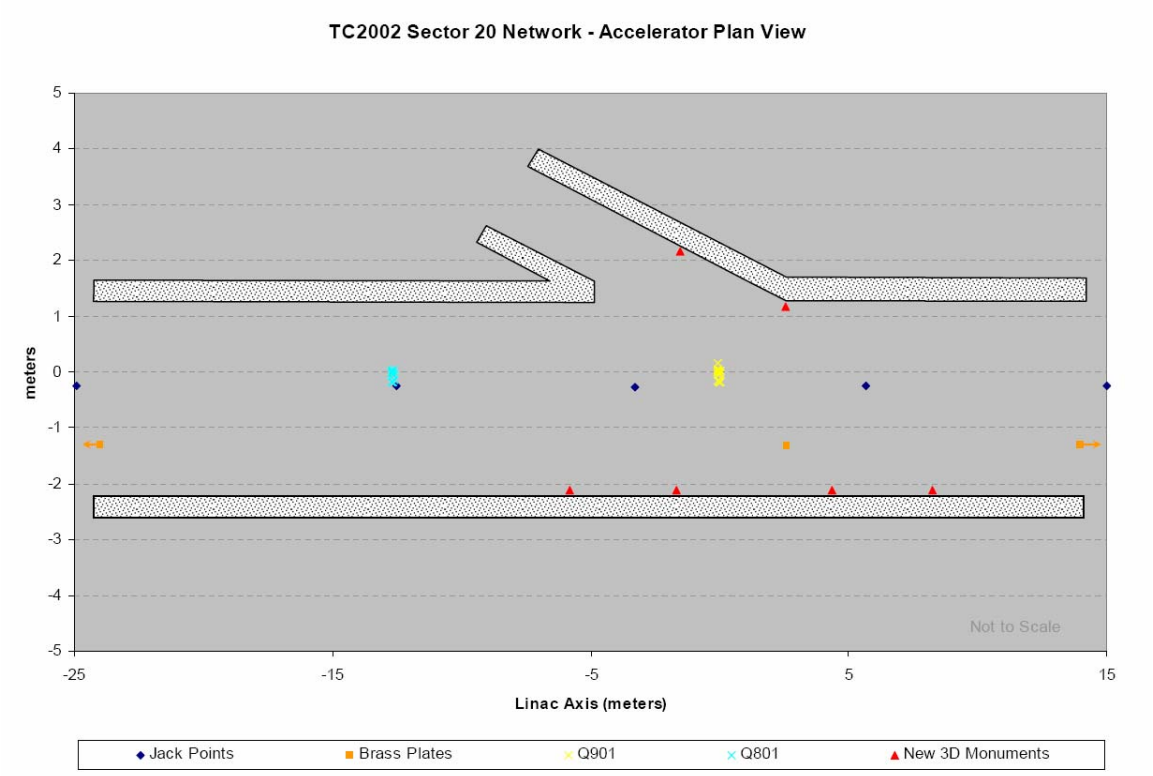
LINAC Sector 20 LCLS Injector

1) Web Links

1.1) Introduction to 2004 Summer/Fall Downtime
http://www-group.slac.stanford.edu/met/Align/Down2004/Descriptions/DesAct5.html
with the following drawing:



1.2) Page 3 of
http://www-group.slac.stanford.edu/met/Align/Down2004/Week_Summary/Down2004_week1.pdf

1.3) Page 8 of
http://www-group.slac.stanford.edu/met/Align/Down2004/Week_Summary/Down2004_week2.pdf

1.4) Page 3 of
http://www-group.slac.stanford.edu/met/Align/Down2004/Week_Summary/Down2004_week4.pdf

2) Miscellaneous correspondence

2.1)
As part of the Sector 20 survey on August 3rd, 4th and 5th measurements were made on the Quad LI20 701, Quad LI20 801, Quad LI20 901, Quad LI21 201 and the Sector 21 Brass Plate. Hopefully these measurements will help resolve the origin question. All the Ideal values are from AD-238-000-20 and AD-238-000-21.

Assuming Quad LI20 901 is at 2029.406 m then:

Quad LI20 701 was measured at 2004.383 m, drawing shows 2004.386 m. (+2 mm)
Quad LI20 801 was measured at 2016.733 m, drawing shows 2016.730 m. (+3 mm)
Quad LI21 201 was measured at 2044.259 m, drawing shows 2044.257 m. (-3 mm)
Sector 21 Brass Plate was measured at 2032.008 m, drawing shows 2032.0000 m. (+8 mm)

The distance from Quad LI20 901 to the LCLS injector intersection point is 134.964 inches per the drawings. The pitch of the LCLS line is 0.00403 radians.

2.2)
Here are the measurements you ask for (they are all from the center of Quad LI20 901 and measured with respect to the linac.):

Upstream face of the fast vac. valve is Z = +218.149 inches with X = -0.105 inches and Y = -0.014 inches.
Center of the 2 inch flange upstream of fast vac valve is Z = +216.525 inches.
Upstream face of the downstream 20-9 light pipe flange is Z = +215.895 inches with a width of 1.53 inches.
Upstream face of the upstream 21-1 light pipe flange is Z = +219.980 inches with a width of 3.05 inches.