

**CENTER FOR PHOTOGRAMMETRIC TRAINING
FERRIS STATE UNIVERSITY**

SURE 340 - Photogrammetry

Spring 2008/09

Extra Credit

A photograph was taken with a focal length of 152.010 mm. The following photo measurements were taken on the photograph:

Point No.	x (mm)	y (mm)
1	-8.948	100.967
2	77.174	90.653
3	-111.412	-15.993

The corresponding ground coordinates were found to be:

Point No.	X (m)	Y (m)	Z (m)
1	42,205.75	115,540.77	259.16
2	41,765.48	116,487.83	263.81
3	44,041.60	115,234.46	270.29

The initial estimates of the exposure station were determined to be $X_L = 43,000$ m, $Y_L = 116,100$ m, and $Z_L = 2,100$ m. Using the Church Method, determine the adjusted coordinates of the exposure station (X_L , Y_L , Z_L). Use a criterion of 0.5 m to terminate the iterative process.