

Jefferson Lab Alignment Group

DATA TRANSMITTAL

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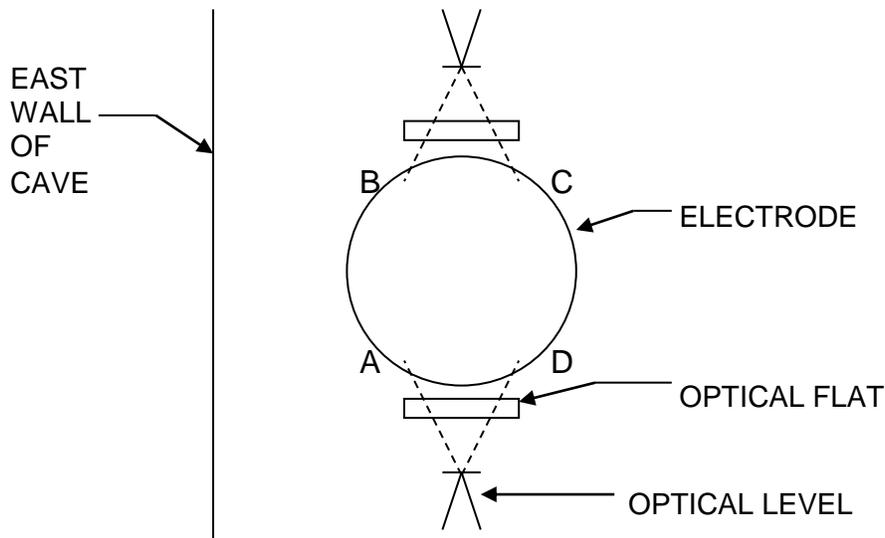
DETAILS:

Below are the results of the HV test system electrode alignment performed on 23 Dec 1999. The electrodes were set parallel by sighting the top and bottom edges at four locations using optical levels equipped with micrometers. The electrodes were viewed through optically flat glass mounted on the flanges (see below).

Under ideal conditions, the accuracy of the micrometer is .02mm. Although sighting through the optical flats can possibly cause refraction, the focal length and direction of sight did not change between the top and bottom micrometer readings. Any refraction is assumed to be constant between these measurements and would cancel out. Small errors in defining the top and bottom edges of the electrode may have occurred because of shadows created by lighting. Micrometer readings on the top electrode were repeated four times while adjustments were made on the bottom thus giving an indication of precision. These measurements repeated to within .05 mm.

Based on the repeatability, the shadowing effect, and the .02 mm accuracy of the micrometer, the accuracy of the measurements is estimated to be within 0.10 mm.

PLAN VIEW



FRONT VIEW

