



Contribution ID: 10

Type: POSTER

## Device Alignment with the Laser Tracker

The Taiwan Light Source (TPS) storage ring has a circumference of 518.4m. The devices are aligned along the storage ring with the relative accuracy of  $\pm 0.2\text{mm}$ . The Insertion Device (ID) needs higher relative accuracy of  $\pm 0.05\text{mm}$  to adjacent magnets in the local area. In order to evaluate the reliability performance of the Laser Tracker we test a series of the stability experiments. The first was to check the warm up behaviour. The second was to check the repeatability of the measuring data. The third was to check the horizontal angle measurement effect. All these tests were controlled in the stable temperature of  $< 0.1\text{ }^\circ\text{C}$ , like the real world application. This paper describes how the device is aligned to accuracy position by laser tracker in detail.

### Summary

**Author:** KUAN, Chien-Kuang (National Synchrotron Radiation Research Center)

**Co-authors:** Mr LIN, Chia-Jui (National Synchrotron Radiation Research Center); Mr TSAI, Chih-Wei (National Synchrotron Radiation Research Center); Mr HUANG, Din-Goa (National Synchrotron Radiation Research Center); Mr HSU, Keng-Hao (National Synchrotron Radiation Research Center); Mr TSENG, Tse-Chuan (National Synchrotron Radiation Research Center); Mr LAI, Wei-Yang (National Synchrotron Radiation Research Center)

**Presenter:** Mr TSENG, Tse-Chuan (National Synchrotron Radiation Research Center)