

## **Survey Standard Site use and development**

The Survey Standard Site (SSS) shall be developed to create a set of benchmarks with verified accuracy and known locations in an established coordinate system that can be utilized as a test site for equipment as well as crew development. A crew that utilizes the SSS will go to the field with confidence their skills and equipment are capable of collecting data acceptable to supporting CHaMP goals.

Use of the SSS should be carried out as part of the duties of a crew just as maintaining and calibrating gear. The crew should TEST the TS at a Survey Standard Site and then proceed to the field where they will KNOW the TS is function correctly.

If the crew encounters unexplained errors during a survey the SSS can be used to isolate the problem to determine if the equipment is at fault or if additional crew training is required. Total station problem identification can only be completed on a system of benchmarks with verified locations such as a Survey Standard site.

During revisit surveys if a crew encounters large errors relative to the previous survey a crew that has recently utilized the SSS will have the competency to suggest that the error is in the previous survey and not the current survey.

If the totals station has endured a traumatic event the total station should be calibrated and then tested at a SS site to verify the equipment is functioning correctly. A properly developed SSS is an excellent location for total station calibration.

The SSS is a good location to develop survey crew member skills as the results of survey data and field notes can be checked.

Whenever possible the SSS should be in a location easily accessible to multiple crews, such as near a bunkhouse or a CHaMP collaborators office.

## Criteria for site development:

Established with more than usual care by an experienced crew.

Established with calibrated and properly maintained equipment.

Established with the traverse function using face left and face right.

Established with tripods and traverse kits for backsight and foresight.

Instruments leveled, centered and height measured correctly.

Use Precise EDM setting and the correct prism constant.

Use the CHaMP survey field book to record information.

Benchmarks set and monumented in stable locations.

Resurveyed yearly after spring thaw.

Strong geometrical site layout.

Preferably can be established using multiple instruments and technologies.

A surveyed traverse consisting of at least three benchmarks.

### Survey Standard Site diagram

