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### The surveying and data processing of the primary control net of CSNS

China is building a world-class spallation neutron source, called CSNS. It's located in Guangdong province, which is in the south of China, and the civil construction is under progress. This paper introduced the surveying scheme of the primary network of CSNS, including the control points distribution and the instruments using, then the LGO software was used for the processing of the GPS observations, the choosing of the ellipse and the central meridian for UTM projection were discussed. The distances between the control points were also measured by Total Station, it's demonstrated that the baselines of GPS adjustment were agree well with the Total Station, and the accuracy of the control points could meet the requirement.

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