Kinematic Processing Analysis of Carrier Phase based Precise Point Positioning

Xiaobing SHEN and Dr. Yang GAO, Canada

Key words: Precise point positioning (PPP), ionosphere-free, precise GPS data, kinematics processing.

ABSTRACT

This paper presents processing results of applying a new precise point positioning method at a kinematic mode. Analysis is conducted with repect to the positioning accuracy and convergence performance. The results have indicated an average positioning accuracy of 12 cm RMS vertically and less than 10 cm horizontally. An average of 2 hours is usually needed for the float position solution to converge to an accuracy of a few centimetres which points out the importance for the development of ambiguity resolution method for PPP processing.

CONTACT

Mr. Xiaobing Shen and Dr. Yang Gao Department of Geomatics Engineering The University of Calgary 2500 University Drive NW Calgary, Alberta CANADA T2N 1N4 Tel. + 1 403 220 8150 Fax + 1 403 284 1980 E-mail: shenx@ucalgary.ca, gao@geomatics.ucalgary.ca