

Investigation of the Kinematic PPP-AR Positioning Performance with Online CSRS-PPP Service

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SUMMARY

The Global Navigation Satellite System (GNSS) has been widely used for many years as it provides precise positioning. In general, relative or absolute positioning methods are used for GNSS. The precise point positioning (PPP), which is an absolute positioning technique has become more practical with online data processing services. The main drawback of PPP technique is that it needs a long convergence time to achieve millimeter level accuracy. With the recently popular PPP with ambiguity resolution (PPP-AR), the positioning accuracy can be improved. However, the ambiguity resolution in PPP can only be possible with additional hardware biases which are previously computed from a network. Among the online GNSS data processing services, CSRS-PPP (The Canadian Spatial Reference System-PPP) provides reliable and robust solutions. At the end of 2020, CSRS-PPP updated its software, and it has begun to give ambiguity-fixed solutions. In this study, the kinematic positioning performance of CSRS-PPP was examined. Thus, the improvements of the CSRS-PPP-AR solutions were analyzed comparing to the previous version (CSRS-PPP-FLOAT).

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