

CORS ZWDAugmented PPP for Bridge Deflection Monitoring

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SUMMARY

PPP is an optimal method for bridge deflection monitoring, particular in the scenario that Double Difference (DD) method is not available due to the reference station failure. More than 20 minutes has to be taken when PPP is used for the bridge monitoring. Instead of estimated the tropospheric delays with position in general PPP method, we take the tropospheric delays derived for the local CORS as a tropospheric correction on the observations. GNSS data gathered on the Severn bridge, UK is used for assessing the tropospheric correction PPP performance. The studies imply that CORS tropospheric correction augmented PPP can effectively shorten the convergence period. Additionally, the PPP precision is also improved by using the local CORS derived troposphere correction.

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