INTISARI

Sistem penentuan posisi menggunakan GNSS memiliki berbagai macam ketelitian. Salah satu aspek yang memengaruhi ketelitian adalah jumlah *receiver*. Solusi yang diharapkan dapat membantu meningkatkan ketelitian, pada aspek jumlah *receiver* adalah stasiun CORS. Penelitian ini bermaksud untuk melakukan perbandingan koordinat yang dihasilkan dari pengamatan satelit absolut statik menggunakan metode *post-processing online* dan *offline.*

Pengamatan dilakukan pada tanggal 4 Mei 2021 di titik JKHN N0005, berlokasi di UGM dengan metode absolut statik selama dua jam. Pengolahan data dilakukan dengan metode *post-processing* secara *offline* maupun *online*. *Post-processing offline* dilakukan dengan memanfaatkan pengunduhan data rinex dari stasiun CORS terdekat dan *post-processing online* dilakukan melalui *website*.

Berdasarkan hasil pengolahan, metode *post-processing offline* maupun *online* menghasilkan koordinat yang presisi. Selisih koordinat planimetris yang dihasilkan tidak terlalu jauh. Koordinat yang dihasilkan dari metode *post-processing offline* menggunakan moda jaring dan radial memiliki kesamaan pada sumbu *Easting* dan perbedaan sumbu *Northing* 3 mm. Tinggi terhadap ellipsoid pada kedua moda selisih 10,2 cm. Sedangkan koordinat yang dihasilkan dari metode *post-processing online* memiliki kesamaan pada sumbu *Northing* dengan pengolahan *offline* moda jaring dan perbedaan sumbu *Easting* 2 mm terhadap kedua moda *post-processing offline*. Tinggi terhadap ellipsoid memiliki selisih 15,4 cm terhadap pengolahan *offline* moda jaring dan 25,6 cm terhadap pengolahan *offline* moda radial. Bila ketiganya dibandingkan dengan metadata titik JKHN N0005 maka selisih rata-rata ketiga metode pada sumbu *Easting* 1,2 cm ; pada sumbu *Northing* 7 mm dan beda tinggi terhadap ellipsoid 9 cm.

Kata Kunci : *Post-processing online, Post-processing offline*, Koordinat, absolut statik

ABSTRACT

GNSS positioning method has many accuracies. One of the aspects that can influence the accuracy is the number of receivers. The solution that can be expected to increase the accuracy in the number of receivers is by using CORS. This study aims to compare the coordinates of absolute static observation between online and offline post-processing methods.

The observation was conducted on May 4th, 2021, on JKHN N0005 located at UGM by using the absolute static method for two hours. The data processing was done with both online and offline post-processing methods. The online post-processing method was done by downloading Rinex data from the nearest CORS, while the offline post-processing method was done by uploading Rinex data to the Ina-CORS website.

Based on the processing result, both online and offline post-processing methods generate precise coordinates and the results of planimetric coordinates from both methods are not too contrast. The Easting axis between the network and radial offline post-processing method share the same result, but in the Northing axis, there is a difference of 3 mm. Furthermore, the ellipsoid heights between both methods have 10.2 cm difference. On the other hand, the coordinates produced from the online post-processing method share a similar Northing axis with the offline post-processing network method and have a 2 mm Easting axis difference with the two offline post-processing methods. Moreover, the ellipsoid height has a 15.4 cm difference compared to the offline post-processing network method and 25.6 cm compared to the offline post-processing radial method. The comparison among the three of them to JKHN N0005 point metadata resulting in the differences of 1.2 cm in the Easting axis, 7 mm in the Northing axis, and 9 cm in the ellipsoid height.

Keywords : *Post-processing online, Post-processing offline, Coordinate, absolute static*