

ABSTRACT

Data processing strategy is one of the factors that determine the high accuracy resulting from the survey with GNSS. The strategy of data processing done by modeling various phenomena when measuring. This modeling can generally done well by Scientific Software GNSS Data Processing. One of the scientific software package is GAMIT / GLOBK. GAMIT software implement least squares adjustment algorithms with weighted parameters method with tie points are considered not fix, so it can be given a certain constraint to control the magnitude of the correction is given in the coordinates of the tie points in the process of adjustment. Provision setting the adjustment constraint in the process of calculating the GAMIT Software done in sittbl file. by giving to the station coordinate constraint used in GNSS data processing, both observation stations and IGS stations.

This study was conducted to determine the optimal value of the coordinate constraint in generating the coordinate values and positioning accuracy BPN DIY CORS stations most good. The model consists of nine constraining models, from **prj1** to **prj9**. Because of the similarity value postfit nrms and fract on some models, from the ninth coordinate constraining models, taken five models that represent all the models **prj2**, **prj3**, **prj7**, **prj8**, and **prj9**. Model-2 **prj2** use standard sittbl. GAMIT by providing a uniform constraint value which is equal to 99.9 at the observation station. Model-3 **prj3**, IGS stations carry no fix to give a uniform constraint of 5.00 and 99.9 at the observation station. Model-7 **prj7**, IGS stations in accordance with the given constraints sittbl.refined from NASA's website and given constraint observation station at 99.9. Model-8 **prj8** together with Model-3 **prj3**, except that one of the IGS stations NTUS given the constraint of 90 Model-9 **prj9**, together with Model-3 **prj3**, the difference was not used IGS station named NTUS as tie points. GAMIT processing followed by processing with GLOBK to obtain coordinate values and positional accuracy DIY BPN CORS station. The data used are the observational data 6 DOY in 2013 of four stations BPN CORS DIY (BTL1, GK1_, KPG1, and SLM1) with 12 points tie IGS (COCO, CNMR, CUSV, DARW, DGAR, GUAM, IISC, KARR, NTUS, PBR2, PIMO, and XMIS)

The results of this study showed that constraining the coordinate value effect on positioning accuracy 4 DIY BPN CORS station observations, although a small effect that is the fraction of a millimeter. The model giving the coordinate values of different constraint applied yield value fract, postfit nrms, the coordinate value and accuracy of different positions as well. Sittbl.refined constraining based on NASA's website on-7 **prj7** models produce values that do not meet the standards Gamit. Among the five models were used for analysis, the model-9 **prj9** who do not use a tie point considered of poor quality and other tie point not too fixed observation stations provide high accuracy position with value postfit nrms, fract, and the coordinates of the smallest standard deviation. In addition, note also that the selection affects the quality of the tie point coordinate values and positioning accuracy of observation stations.