

Galileo orbit determination using zero-difference ambiguity fixing in a Multi-GNSS processing: first results

Georgia Katsigianni (1), Sylvain Loyer (2), Felix Perosanz (1), Flavien Mercier (1), Radoslaw Zajdel (3), and Krzysztof Sośnica (3)

(1) CNES, TOULOUSE, France (georgia.katsigianni@cnes.fr), (2) CLS, Ramonville, France, (3) IGG , Wroclaw University of Environmental and Life Sciences, Poland

Ambiguity fixing to integer numbers of the phase measurements has been proven to ameliorate the accuracy of GNSS data processing. Until now there are two strategies to achieve ambiguity resolution; by forming double differences and by using undifferenced phase measurements. In this article, the potentiality of using the latter method for fixing the phase ambiguities for the Galileo system combined with GPS measurements in a multi-GNSS solution is proved. The integer property of the Galileo phase clocks is demonstrated. GPS and Galileo phase fixed orbit and "integer" clock products are compared to the float solutions. Both orbit overlaps and SLR validation methods showed that there is an improvement mainly in the normal and the along track direction.