Geophysical Research Abstracts, Vol. 7, 05742, 2005
SRef-ID: 1607-7962/gra/EGU05-A-05742

Calibration experiments for C/A-P pseudorange biases

K. Choi and K. M. Larson

Department of Aerospace Engineering Sciences, University of Colorado, Boulder, Colorado, USA. [kyuhong.choi@colorado.edu, kristine.larson@colorado.edu]

It has long been known that there are GPS satellite-dependent biases between the L1 pseudorange observables, C/A and P1. Because these can adversely affect carrier phase ambiguity resolution, we are developing methods to measure them. We have conducted several experiments to measure pseudorange biases. By using a thermal isolation chamber, we also study the impact of temperature variations on receiver specific pseudorange biases. In order to evaluate receivers that only record C/A code, a zero-baseline experiment is conducted to remove receiver specific biases. In this way, we are able to evaluate the long-term stability of the transmitter biases, and compare results between different receivers. We evaluate the accuracy of the pseudorange bias estimates by assessing ambiguity resolution results with and without these corrections.