

Measured gain and phase data from some GAS-1 CRPA units is used to study the antenna variations in induced carrier phase and code phase biases as a function of the look angle as well as from one antenna unit to the next. It is shown that the antenna induced biases vary with the look angle. Thus, one needs to correct/compensate for these biases to obtain an accurate PVT solution. Also, the antenna induced biases vary from one antenna unit to the next. This is especially true for antenna units from different batches. Thus, one can not use a common look-up table to correct/compensate antenna induced biases for all antenna units. On the other hand, if all the antenna units belong to the same batch, a common look-up table may work. The antenna induced biases are smaller when the antenna is operating in a beam forming mode as compared to the antenna operating in a flow through mode. Finally, the antenna gain and phase data from one ground plane can not be used to correct/compensate for the antenna induced biases when the antenna is mounted on a different ground plane. In this study, space-only processing based AE is used. The conclusions, however, should be true for multiple-tap STAP based AE. Also the incident signal scenario contains no interfering signals.