# Az/El-dependent AMCS Phase Residuals (memo, 2001)

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The attached memo from Kwan-Dong Park (Harvard-Smithsonian) discusses the effect of changing the baseline vector between the parabolic dish antenna and the choke ring antenna, and the effects on the phase residuals.

## Az/El-dependent AMCS Phase Residuals

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### 1 Introduction

While analyzing AMCS-mode data, I found that the AMCS-mode residuals are affected by the baseline vector between the two antenna phase centers. For the schematic diagram of phase centers, please refer to Pedro's report, "Geometry of the AMCS antenna system". The vector ~b of the phase reference point of the parabolic antenna with respect to the phase center of the Trimble antenna was computed to be (-20.820 8.394 -1.866) meters in the ENV reference frame. However, when this vector was slightly adjusted, the characteristics (e.g. RMS and geometric shape of the residuals) of AMCS- mode residuals changed signifcantly (refer to Figure 1). Thus, I became to believe that some of the strange features of AMCS-mode residuals (which were discussed in the previous meeting) maybe due to errors in the baseline vector.

[See attached .pdf for more.]

Online URL: https://kb.unavco.org/article/az-el-dependent-amcs-phase-residuals-memo-2001-245.html