

This is the first progress report on the project entitled “Non-Planar Antenna Arrays for GPS Receivers” between the Ohio State University and Applied EM INC. The objective of the project is to investigate the anti-jam performance of non-planar antenna arrays when GPS signals are the signals of interest. A computer program has been written to evaluate the performance of arbitrary antenna arrays. The computer program uses in-situ element patterns of the antenna array. In this report some sample results obtained using the computer code are presented. A GAS-1 CRPA mounted on an 8-foot ground plane is used to study the adaptive performance. It is shown that performance of space-only processing is identical to the performance of multi-tap STAP in the presence of wide band signals. This finding will have major impact on this project in that computation time will reduce significantly which will enable us to study many array configurations.