

Anti-jam (AJ) performance of some planar as well as some non-planar adaptive antenna arrays in GPS frequency bands (L1 and L2) is discussed. All antenna arrays investigated in this work have similar projected area (looking from top). To make sure that mutual coupling between the antenna elements is accounted for in the performance evaluation, in situ volumetric patterns of the array elements are used in this study. It is shown that convex non-planar antenna arrays perform significantly better than the planar as well as concave non-planar antenna arrays. In fact concave non-planar antenna arrays do not perform as well as planar antenna arrays. This is true for antenna electronics (AE) based on simple power minimization as well as for AE based on beam forming/null steering. Also, since non-planar antenna arrays have more surface area, one can add more elements to these arrays for further performance improvement.