X Band Radar Data for Six Points of a Rotating Octahedron

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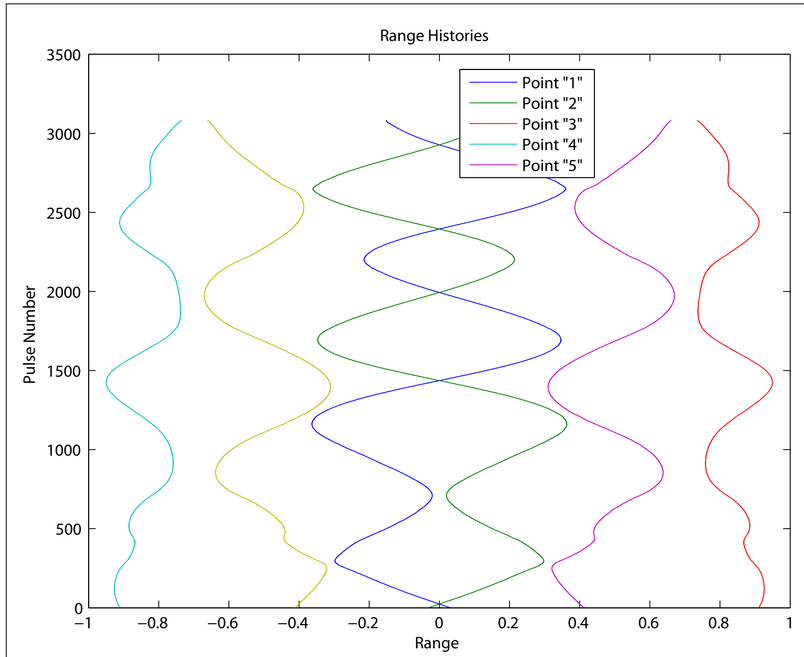
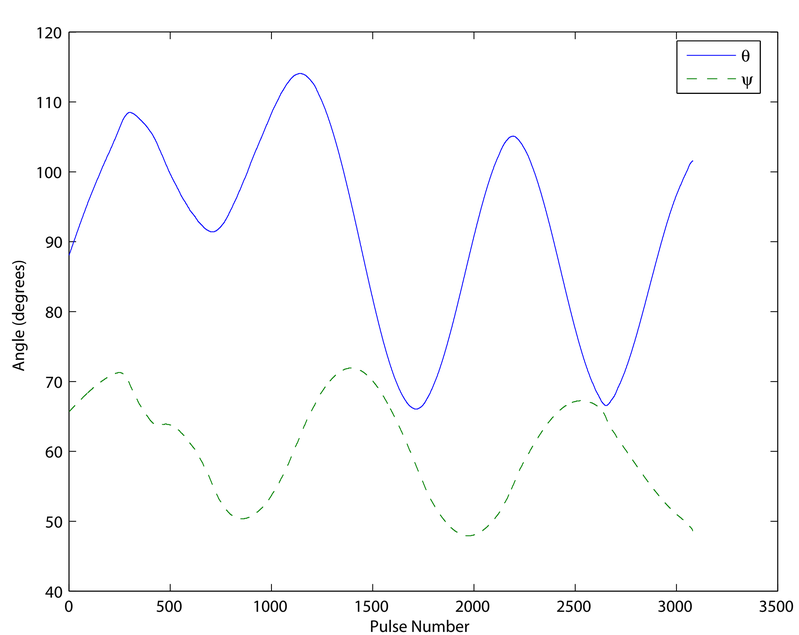
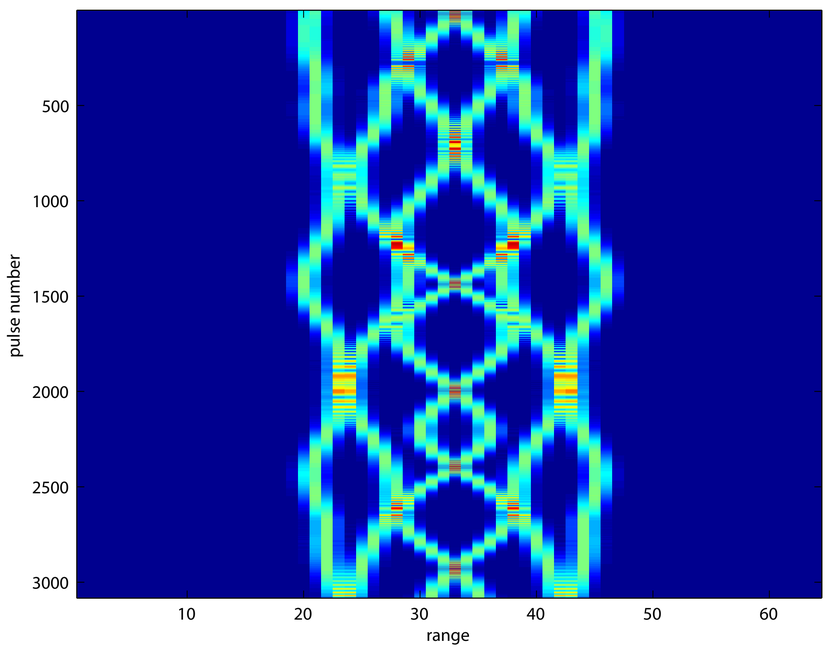
This algorithm generates radar profiles for X Band radar data for six points of a rotating octahedron







Assumptions

Single Scattering Model .... Radar pulse scatters only once off of each object
Multiple Scatters..... Many objects (10 in this case)
Born Approximation ..... Distance between radar and target is very large, so we assume planar wavefronts rather than spherical ones.

Input Parameters for the Algorithm

Center Frequency ..... 10 GHz
Bandwidth ..... 2 GHz
Frequency Steps..... 64 steps