Mueller Files README file

There will be one such file for each scan.
These file types contain, in order from top to bottom:

the number of azimuth sweeps
a list of the elevation angles used in the scan (degrees)
the estimate of the peak range (m) for each elevation angle
the nearfield-corrected Mueller matrices for each elevation angle
the nearfield-corrected NRCS (in dB for VV, VH, HV then HH polarizations)

If, for example, there are 13 azimuth sweeps, there will be 13 elevation angles, 13 estimates of peak range, 13 Mueller matrices, and 13 values of NRCS for each polarization (4x13 = 52 values total). All VV NRCS will be displayed first, followed by all VH, then all HV, and finally all HH.

See the following page for a color-coded example.

number of lines or azimuth sweeps

3

line elevation angles

25.0002 28.0002 31.0002

estimate of peak range (m)

3.85225 3.85225 3.99492

nearfield-corrected Mueller matrices for each elevation angle

0.618482 0.162243 -0.0398118 0.0247328
0.162243 0.557332 0.0189464 0.0392349
-0.0398118 0.0189464 0.517959 -0.168507
-0.0247328 -0.0392349 0.168507 0.456809

0.767977 0.0245722 -0.0432475 0.00891826
0.0245722 0.740048 0.00100478 -0.0205660
-0.0432475 0.00100478 0.717108 -0.118338
-0.00891826 0.0205660 0.118338 0.689179

0.691737 -0.0601757 0.0318131 0.000466804
-0.0601757 0.625693 0.000317766 -0.0297414
0.0318131 0.000317766 0.611931 -0.0601419
-0.000466804 0.0297414 0.0601419 0.545887

nearfield-corrected NRCS in dB: all VV, all VH, all HV, all HH

-1.24852 -1.08694 -2.22907
-15.1463 -18.5498 -14.8120
-14.3696 -17.8571 -14.0962
-3.70934 -1.37010 -1.43337