

matrix of partial derivatives for CP1 on image 1 using part

delta_pix = 25
delta_lat = 0.0000024
delta_q = 0.000025
delta_h = 10

8.802e-08	8.1639e-09	1	0	-3.818e-08	0.0026846	-0.064184	0.097412
-2.5385e-10	-1.2267e-07	0	1	8.8049e-08	0.085557	0.014656	-0.19521

also using units of km rather than meters for h is helpful
changes cond(N) from 7e14 to 7e08
can accomplish by scaling columns of B, and delta