[satPos, satVel, satAcc] = get\_sat\_pos\_vel\_acc(tow, ephFilt);

% e(satNr, 1) = (satPos(1) - initState(1)) / r;

% e(satNr, 2) = (satPos(2) - initState(2)) / r;

% e(satNr, 3) = (satPos(3) - initState(3)) / r;

e = satPos - initState(1:3);

rho = vecnorm(e')'; % norm of each row

e = e ./ rho; % [e1\_x/rho1, e1\_y/rho1, e1\_z/rho1; e2\_x/rho1, ...]

rhoDot = sum((satVel .\* e)')';

rhoDotDot = sum((satAcc .\* e)')';

eDot = (1.0 ./ rho) .\* (satVel - e .\* rhoDot);

H = [eDot, ones(length(acqSats), 1), -rhoDotDot];

D\_predicted = -sum((e .\* satVel)')' + initState(4);

D\_measured = doppler' .\* settings.c ./ 1575.42e6;

deltaD = D\_measured' - D\_predicted;

deltaX = H \ deltaD;

initState = initState + deltaX';