```
[  DJStew,Podium,Report,Ross,Second_flr,Shooter,Sources, ...
    TMX,base,c,light_pole,north_barn,south_barn] = greg_constants();

[NLOCS,NSHOT] = size(Report);     calShot = 1;     checkShot=10;

locs = [Ross(checkShot,:); TMX(checkShot,:); DJStew(checkShot,:);
Podium(checkShot,:)];
times = Report(:,checkShot);

% compute TDOA errors assuming 1=Shooter and 10=south_barn

M = length(locs);
d = zeros(M,1);
cds = zeros(M,1);
for mm=1:M                % first the distances
    P1 = locs(mm,:);
    P2 = south_barn(checkShot,:);
    d(mm) = norm(P1-P2);
    P2 = Shooter(calShot,:);
    cds(mm) = norm(P1-P2);
end
errs = zeros(6,1);  Nerr = 0;
for ii=1:M-1                    % then the distance differences
    for jj=ii+1:M
        ddoa1 =  d(jj) - d(ii) ;
        ddoa0 =  cds(jj) - cds(ii);
        tdoa = times(jj) - times(ii);
        oneErr = (ddoa1 - ddoa0 - tdoa*c);
        Nerr = Nerr + 1;
        errs(Nerr) = oneErr;
    end
end

% estimate individual errors from differenced errors (underdetermined)

A = [-1 1 0 0; -1 0 1 0; -1 0 0 1; 0 -1 1 0; 0 -1 0 1; 0 0 -1 1];
soln = A\errs *(1/c);
disp([num2str(soln') ' seconds']);

Warning: Rank deficient, rank = 3, tol =  2.307555e-15.

0.15924     0.13745     0.16387           0 seconds
```