

```

% Matlab script stereonet.m
% To plot lines and planes in stereographic
% (equal-angle) projections
clf
% Read input data on planes
load planes.dat
% Data in column 1 are strikes, and data in column 2 are dips
% of planes, with angles given in degrees
strike = planes(:,1)*pi/180;
dip = planes(:,2)*pi/180;
num = length(strike);
% find cyclographic traces of planes and plot them
R = 1;
rake = 0:pi/180:pi;
for i=1:num;
    plunge = asin(sin(dip(i)).*sin(rake));
    trend = strike(i) + atan2(cos(dip(i)).*sin(rake), cos(rake));
    rho = R.*tan(pi/4 - (plunge/2));
    % polarb plots ccl from 3:00, so convert to cl from 12:00
    polarb(pi/2-trend,rho,'-')
    hold on
end

load lines1.dat
% Data in column 1 are trends, data in column 2 are plunges
% of lines, with angles given in degrees
trend1 = lines1(:,1);
plunge1 = lines1(:,2);
num = length(lines1(:,1));
R = 1;
trendr1 = trend1*pi/180;
plunger1 = plunge1(:,1)*pi/180;
rho1 = R.*tan(pi/4 - ((plunger1)/2));
for i=1:num;
    % polarb plots ccl from 3:00, so convert to cl from 12:00
    polarb(pi/2-trendr1(i),rho1(i),'o')
    hold on
end

load lines2.dat
% Data in column 1 are trends, data in column 2 are plunges
% of lines, with angles given in degrees
trend2 = lines2(:,1);
plunge2 = lines2(:,2);
num = length(lines2(:,1));
R = 1;
trendr2 = trend2*pi/180;
plunger2 = plunge2*pi/180;
rho2 = R.*tan(pi/4 - ((plunger2)/2));
for i=1:num;
    % polarb plots ccl from 3:00, so convert to cl from 12:00
    polarb(pi/2-trendr2(i),rho2(i),'*')
    hold on
end

```

The following file, called lines1.dat, provides an example of an input file for the stereonet plotting program

```
19      02
43      16
52      03
51      08
110     18
190     02
232 04
235     10
242     30
000     65
340     22
270     34
```

The file lines2.dat has the same format.

The following file, called planes.dat, provides an example of an input file for the stereonet plotting program

```
20      20
230     72.5048
```