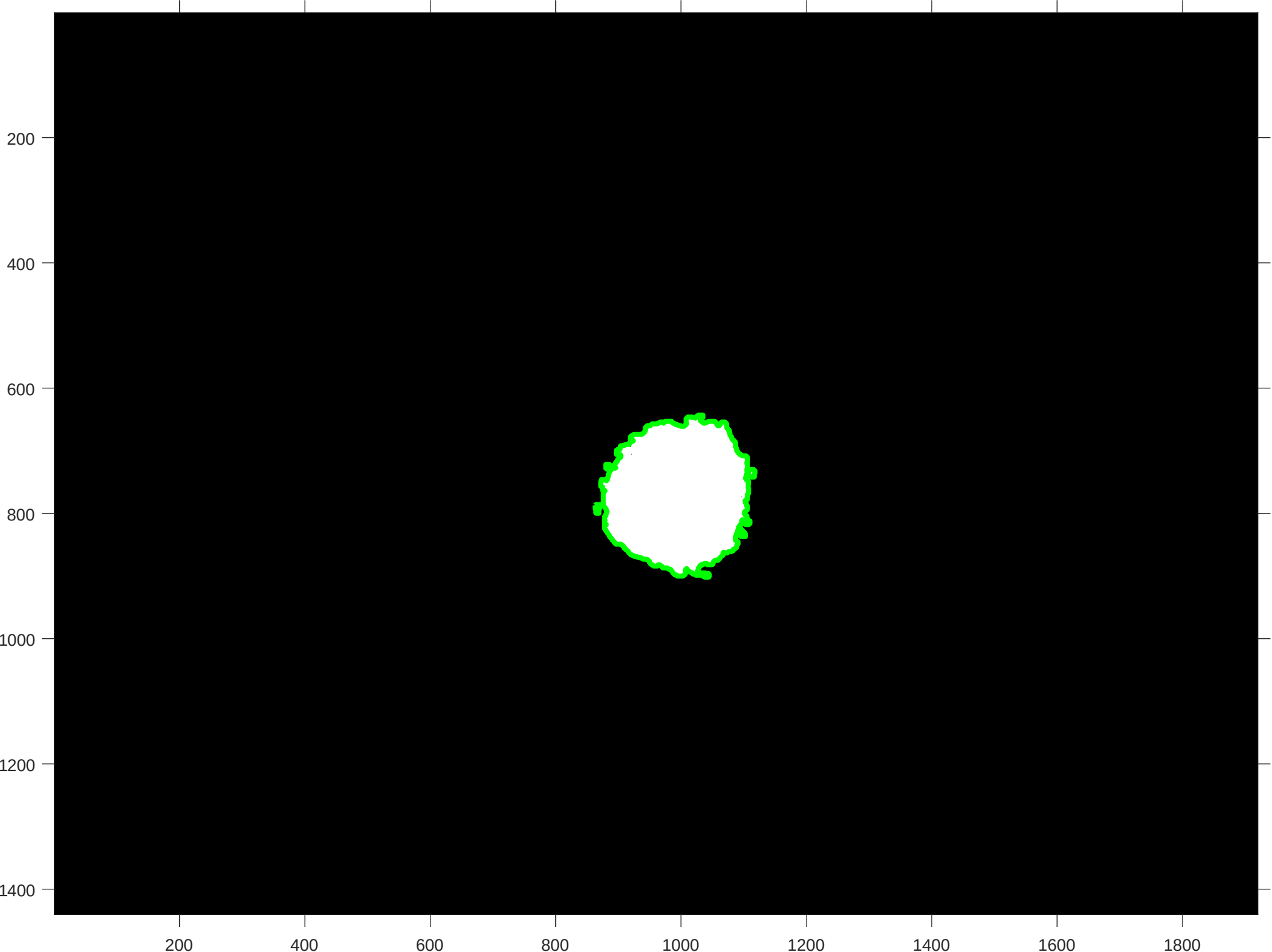
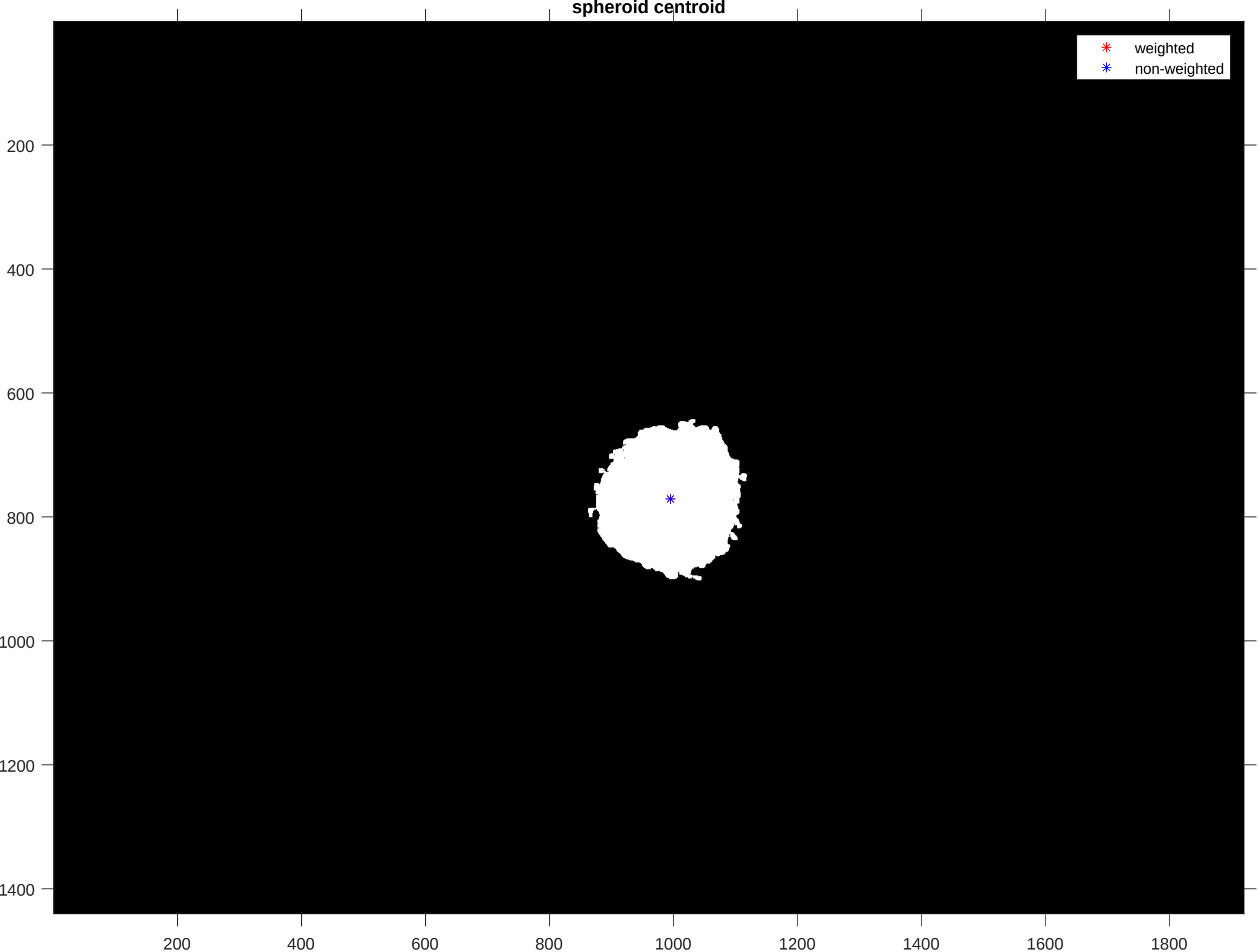
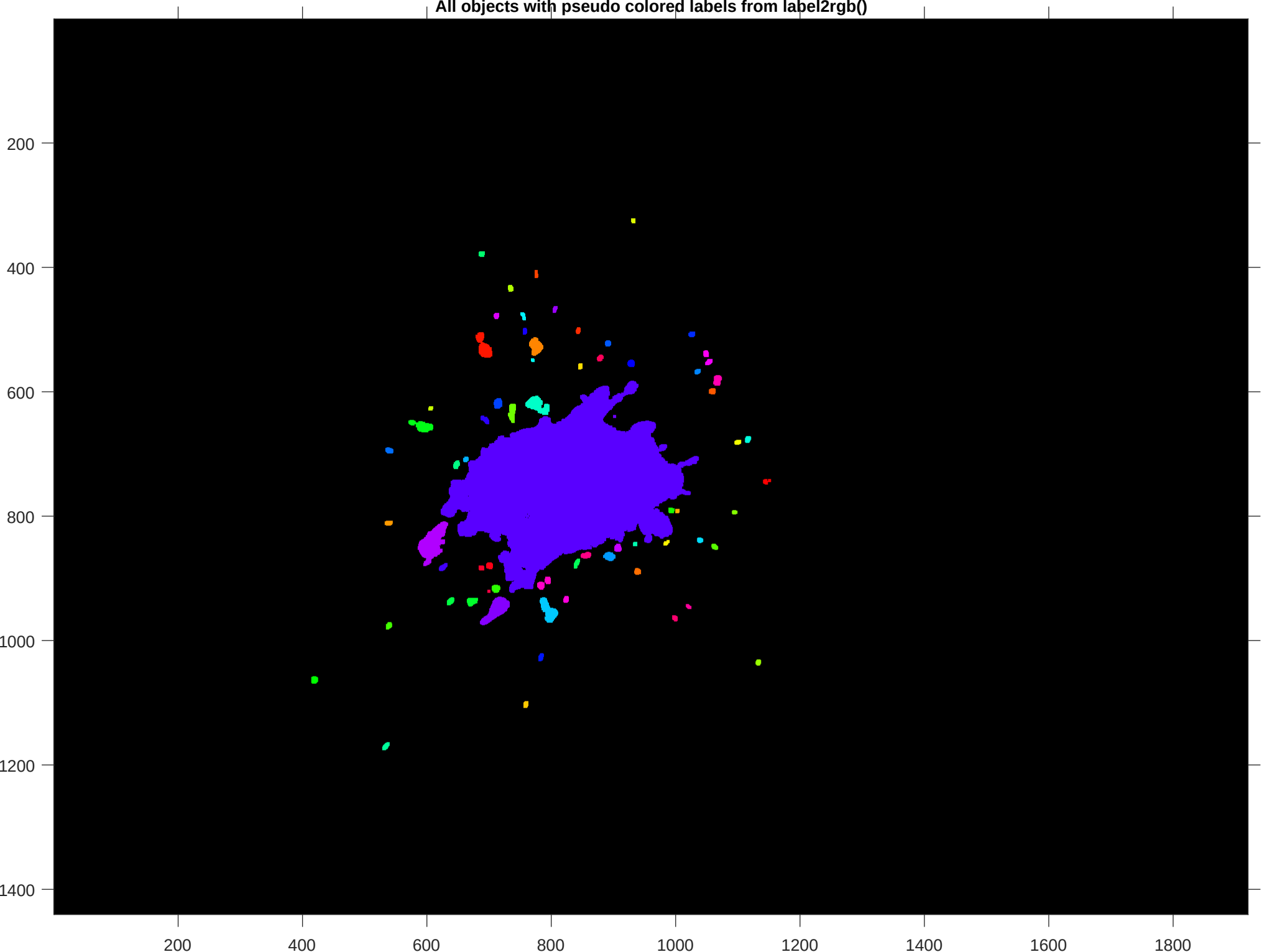
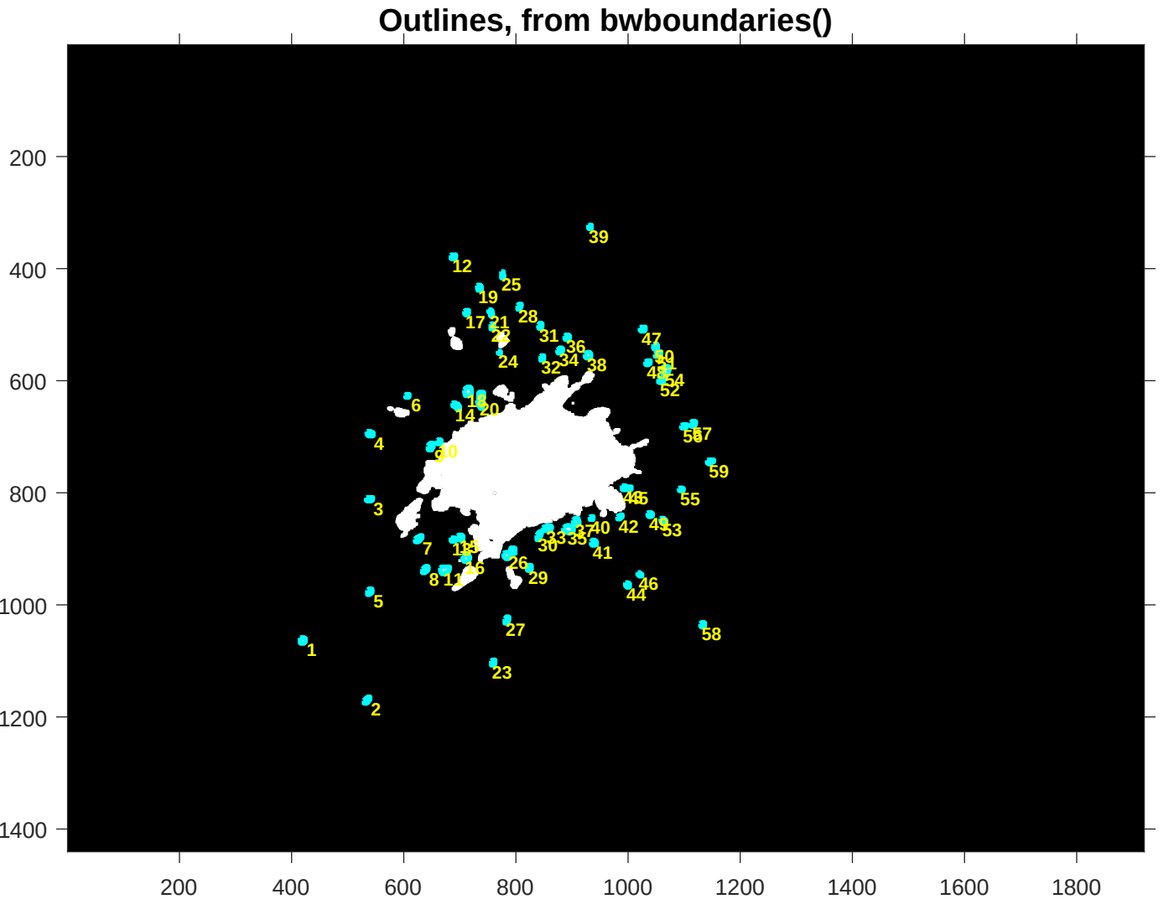
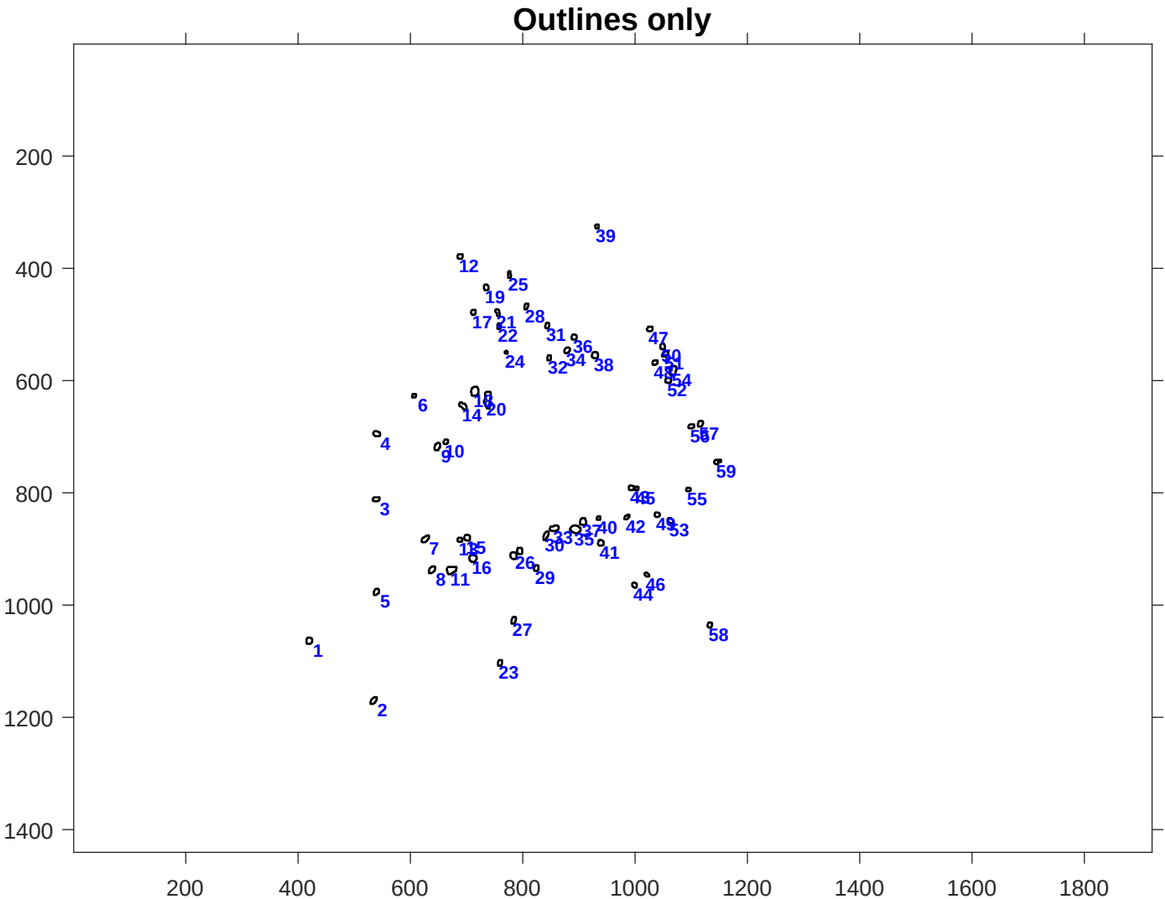

200
400
600
800
1000
1200
1400
200
400
600
800
1000
1200
1400
1600
1800

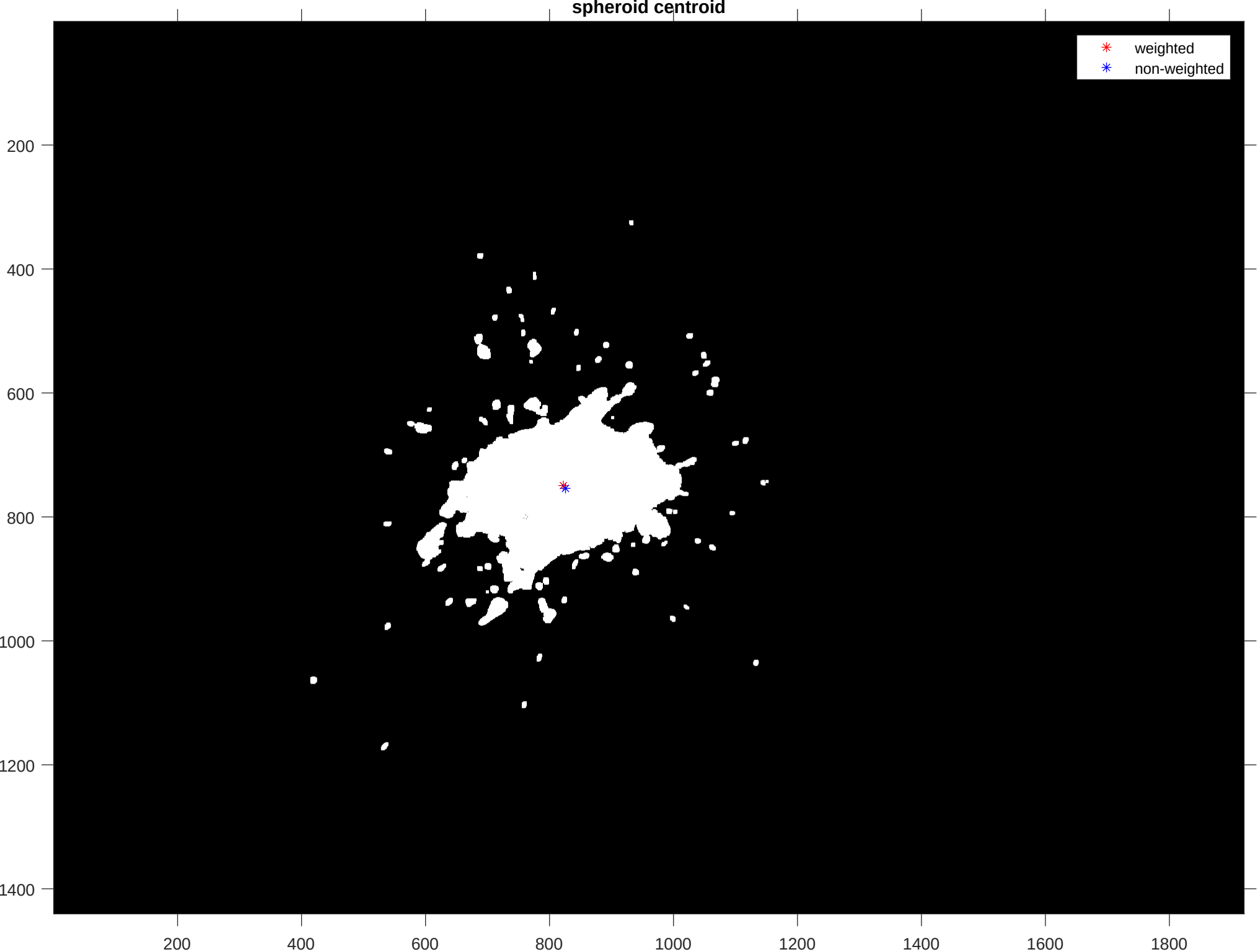

spheroid centroid
weighted
non-weighted
200
400
600
800
1000
1200
1400
200
400
600
800
1000
1200
1400
1600
1800

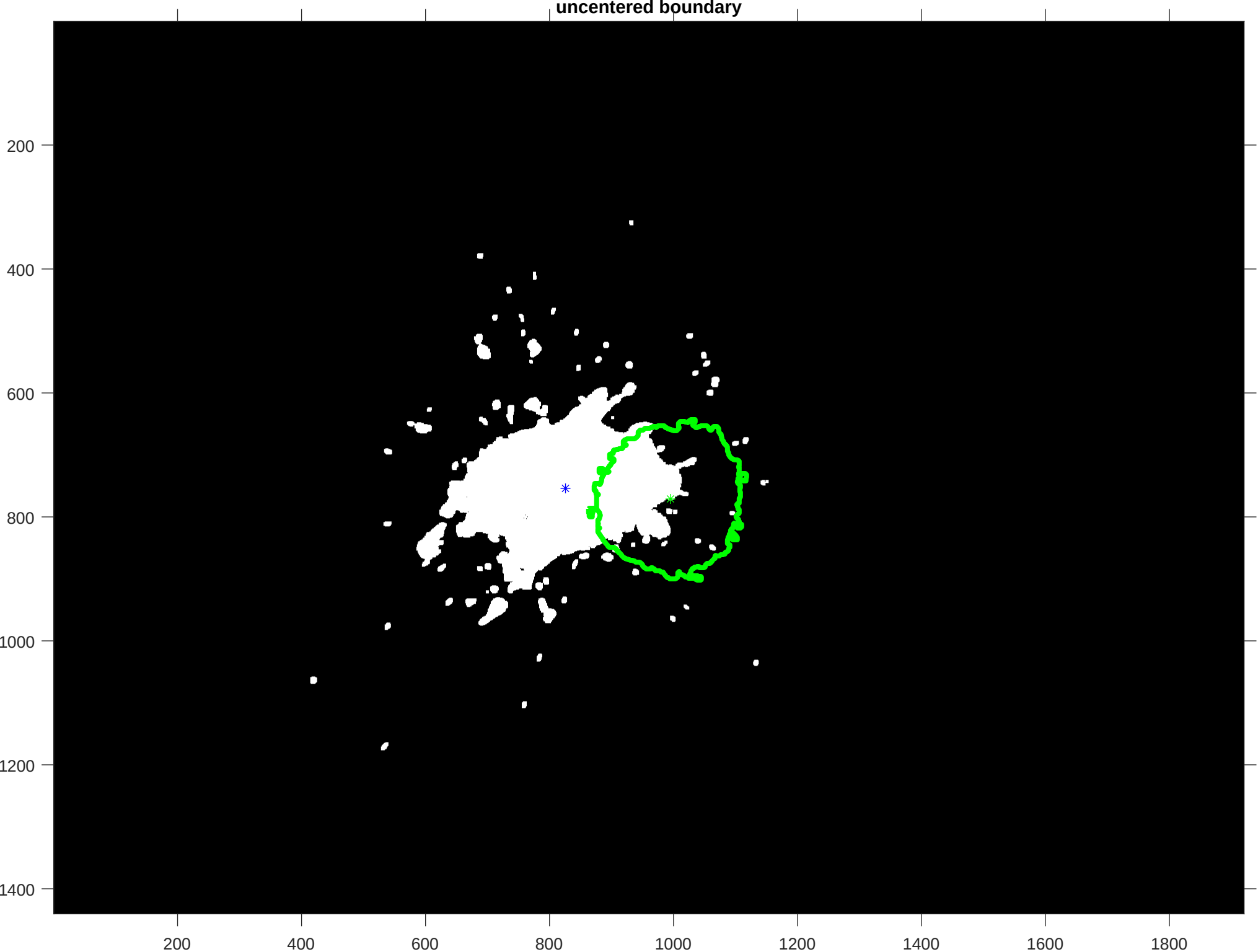

All objects with pseudo colored labels from label2rgb()
200
400
600
800
1000
1200
1400
200
400
600
800
1000
1200
1400
1600
1800

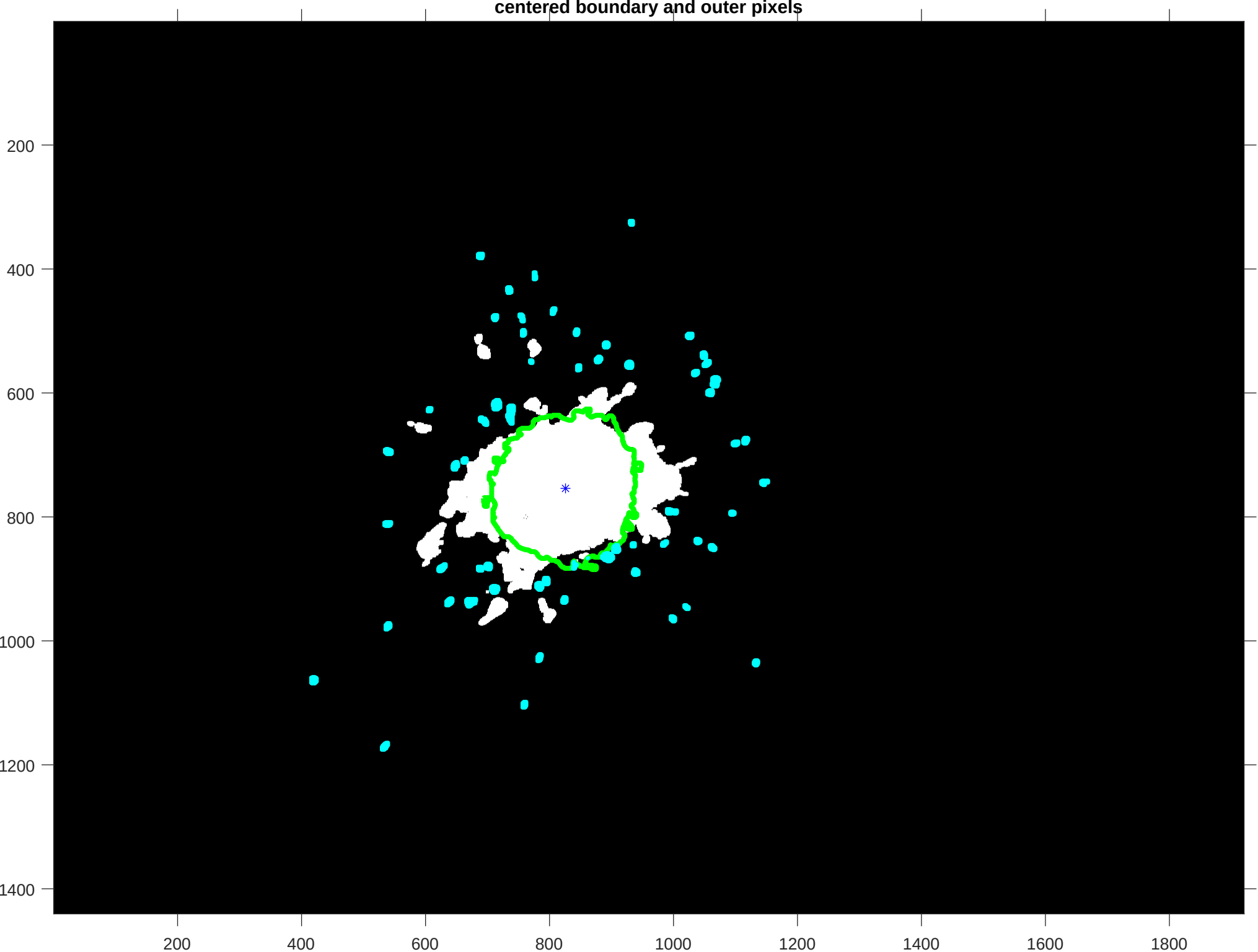
Outlines of only blobs 30-300 px^2.
Blobs are numbered from top to bottom, then from left to right.

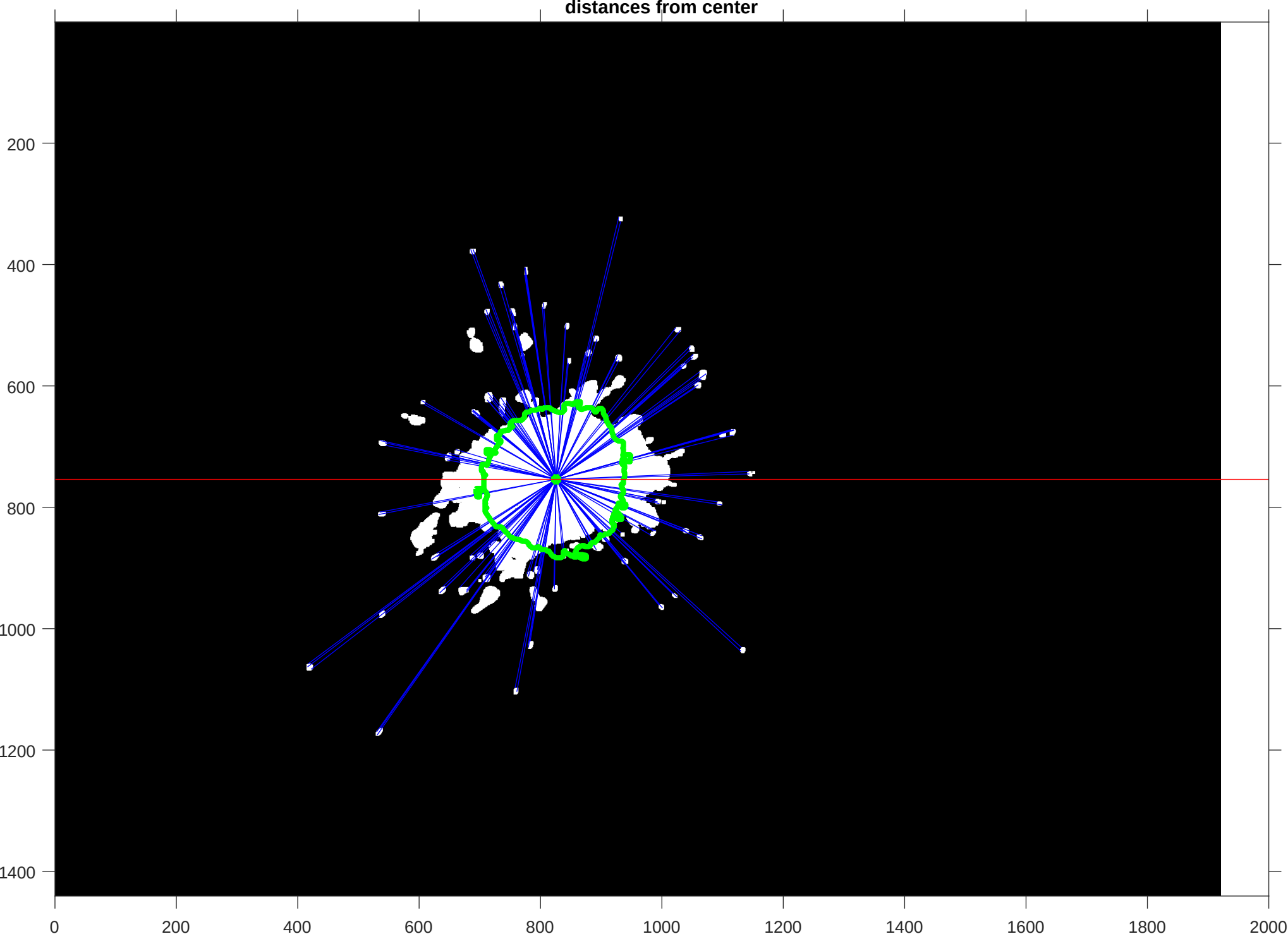


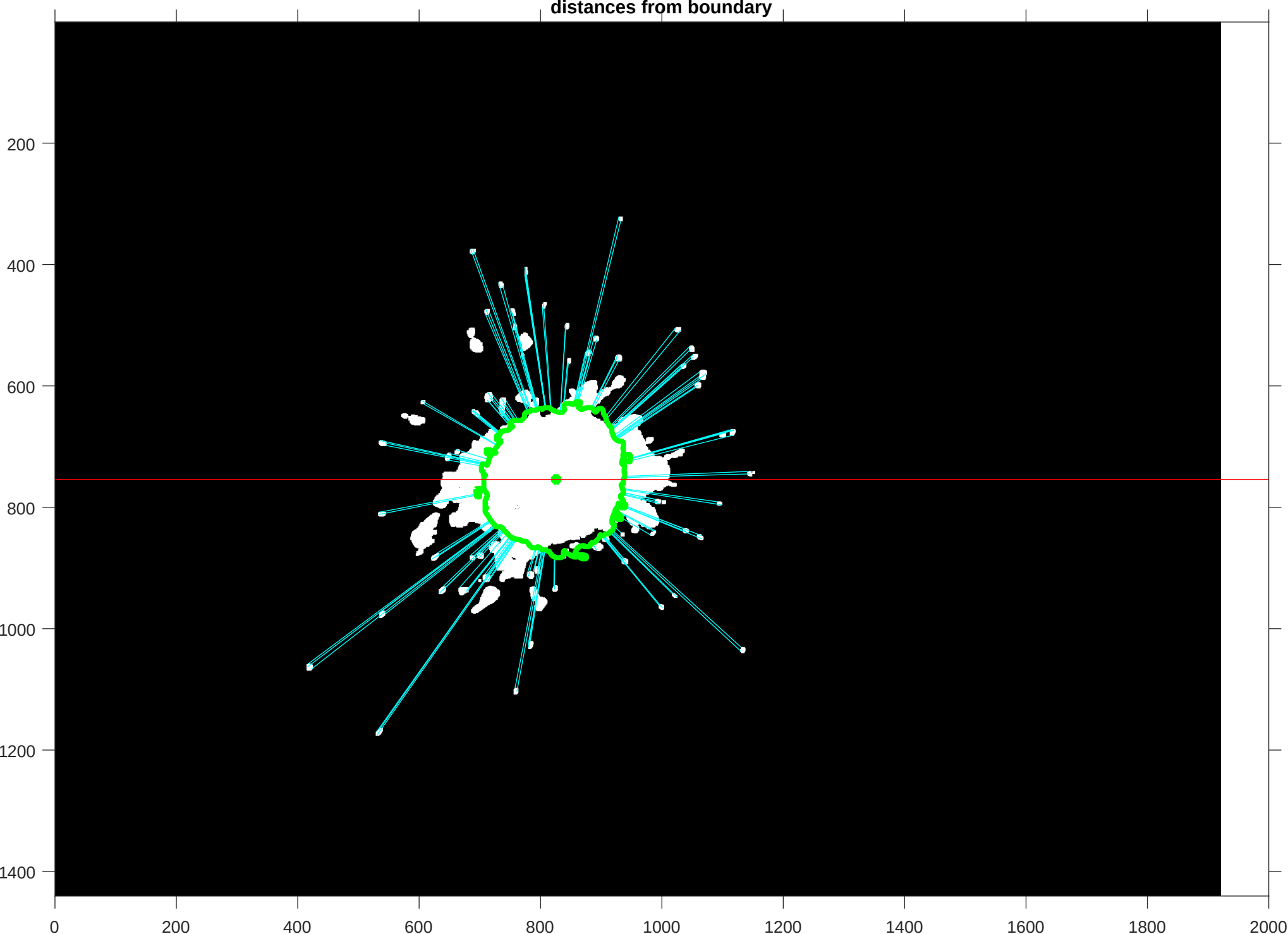


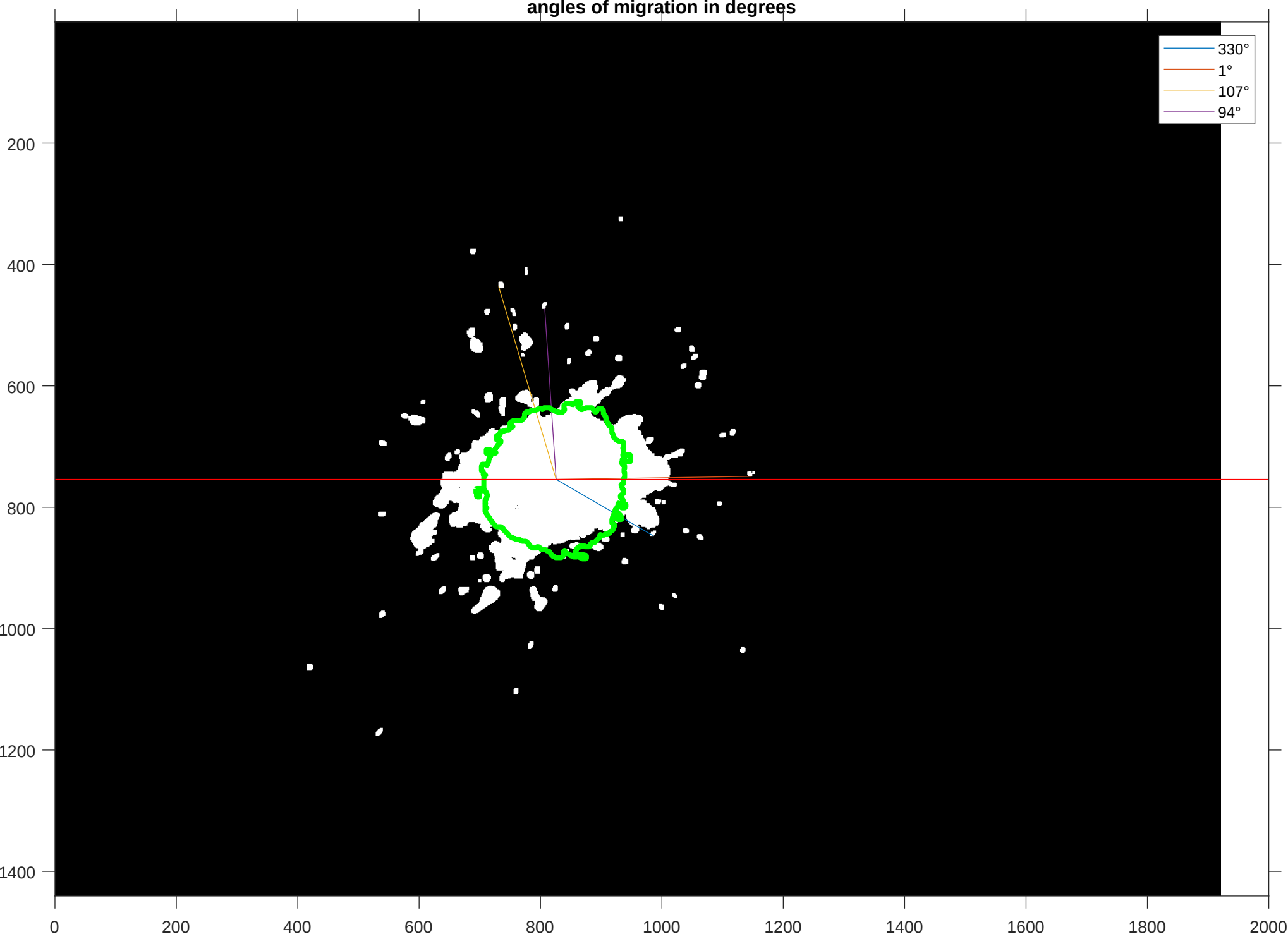

spheroid centroid
weighted
non-weighted
200
400
600
800
1000
1200
1400
200
400
600
800
1000
1200
1400
1600
1800

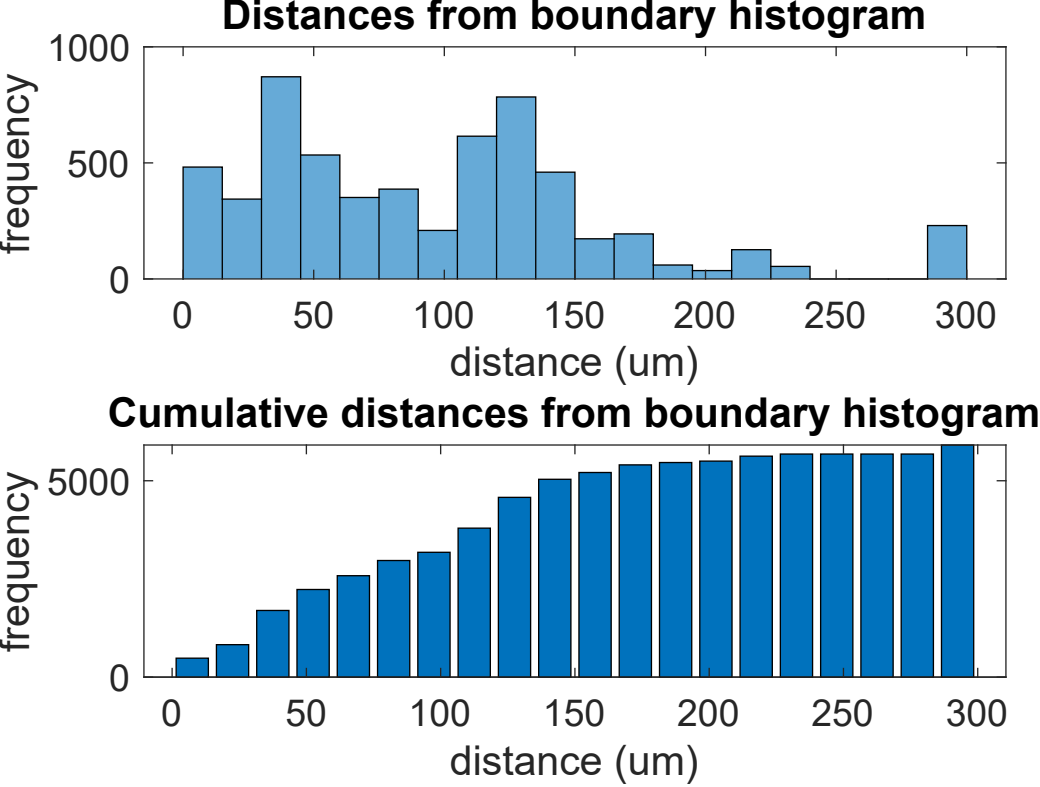

uncentered boundary
200
400
600
800
1000
1200
1400
200
400
600
800
1000
1200
1400
1600
1800

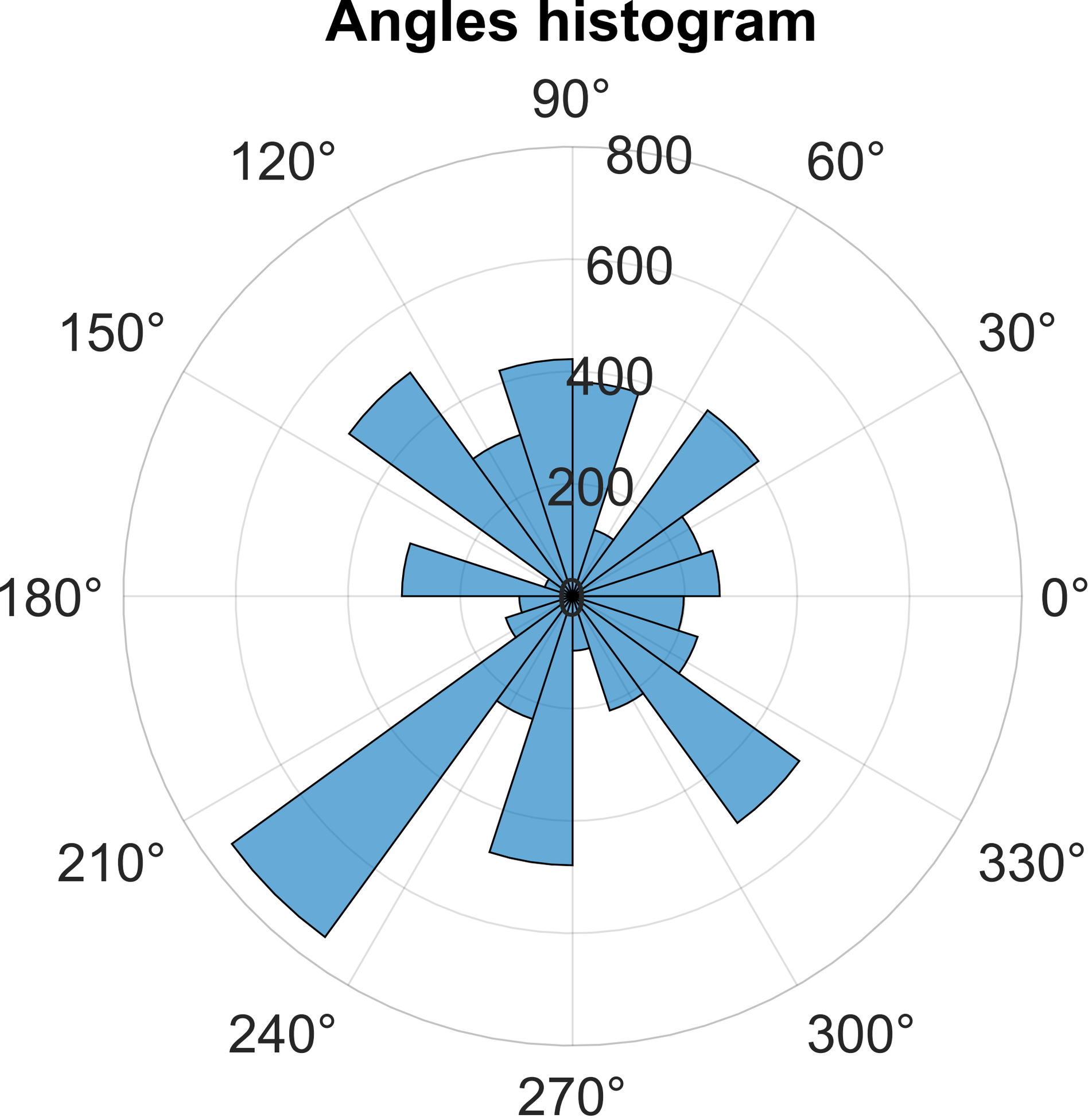

centered boundary and outer pixels
200
400
600
800
1000
1200
1400
200
400
600
800
1000
1200
1400
1600
1800

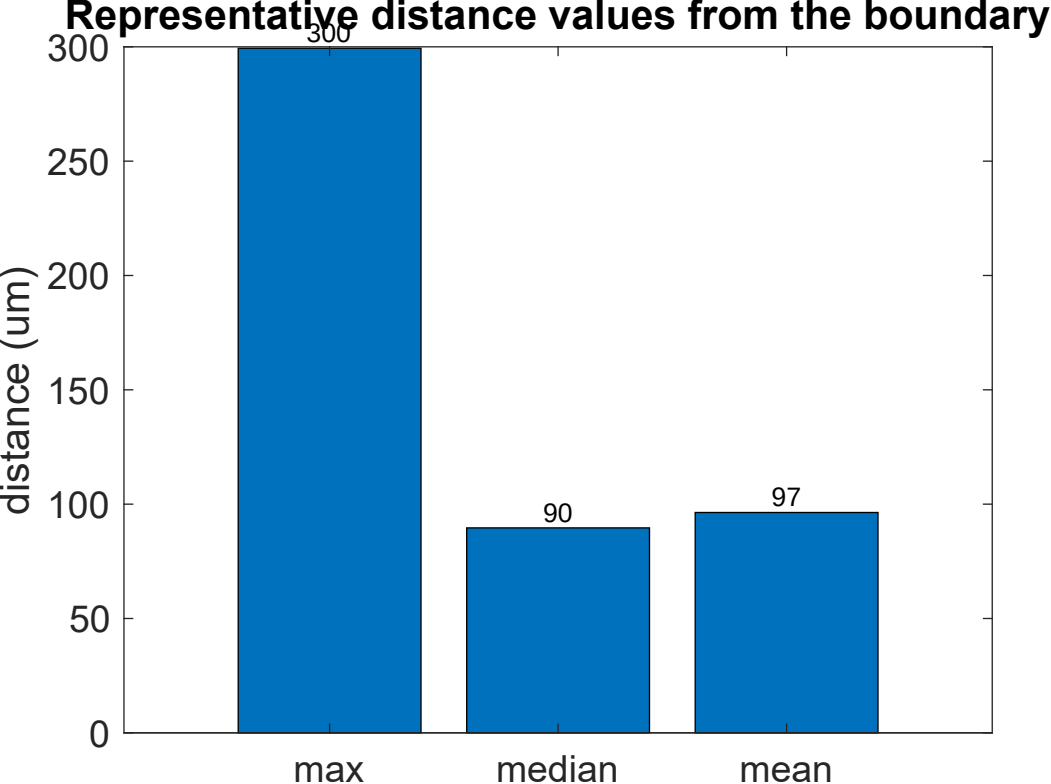

distances from center
200
400
600
800
1000
1200
1400
0
200
400
600
800
1000
1200
1400
1600
1800
2000


distances from boundary
200
400
600
800
1000
1200
1400
0
200
400
600
800
1000
1200
1400
1600
1800
2000

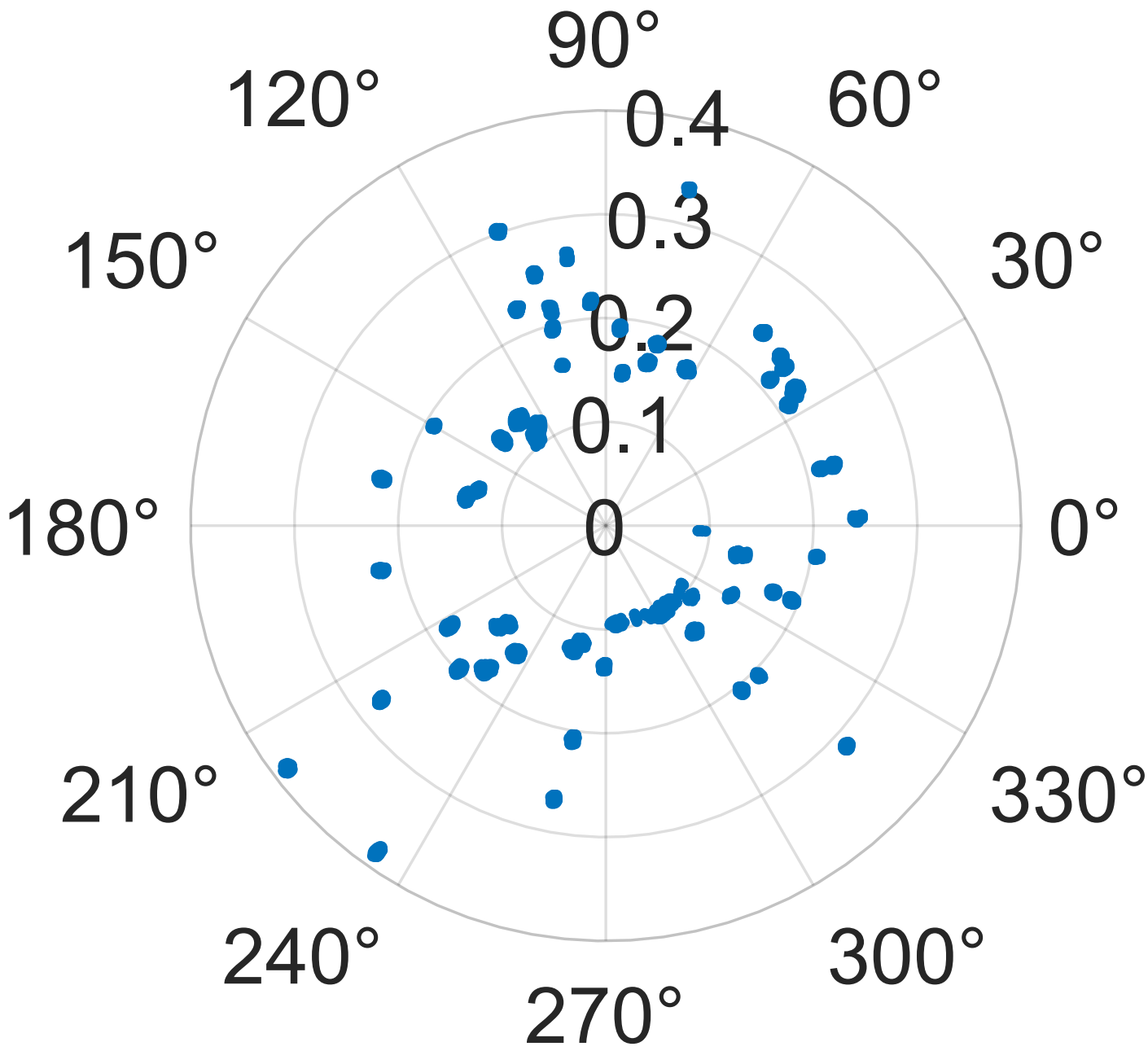

angles of migration in degrees
330°
1°
107°
94°
200
400
600
800
1000
1200
1400
0
200
400
600
800
1000
1200
1400
1600
1800
2000


Distances from boundary histogram
1000
500
0
frequency
0
50
100
150
200
250
300
distance (um)
Cumulative distances from boundary histogram
5000
0
frequency
0
50
100
150
200
250
300
distance (um)

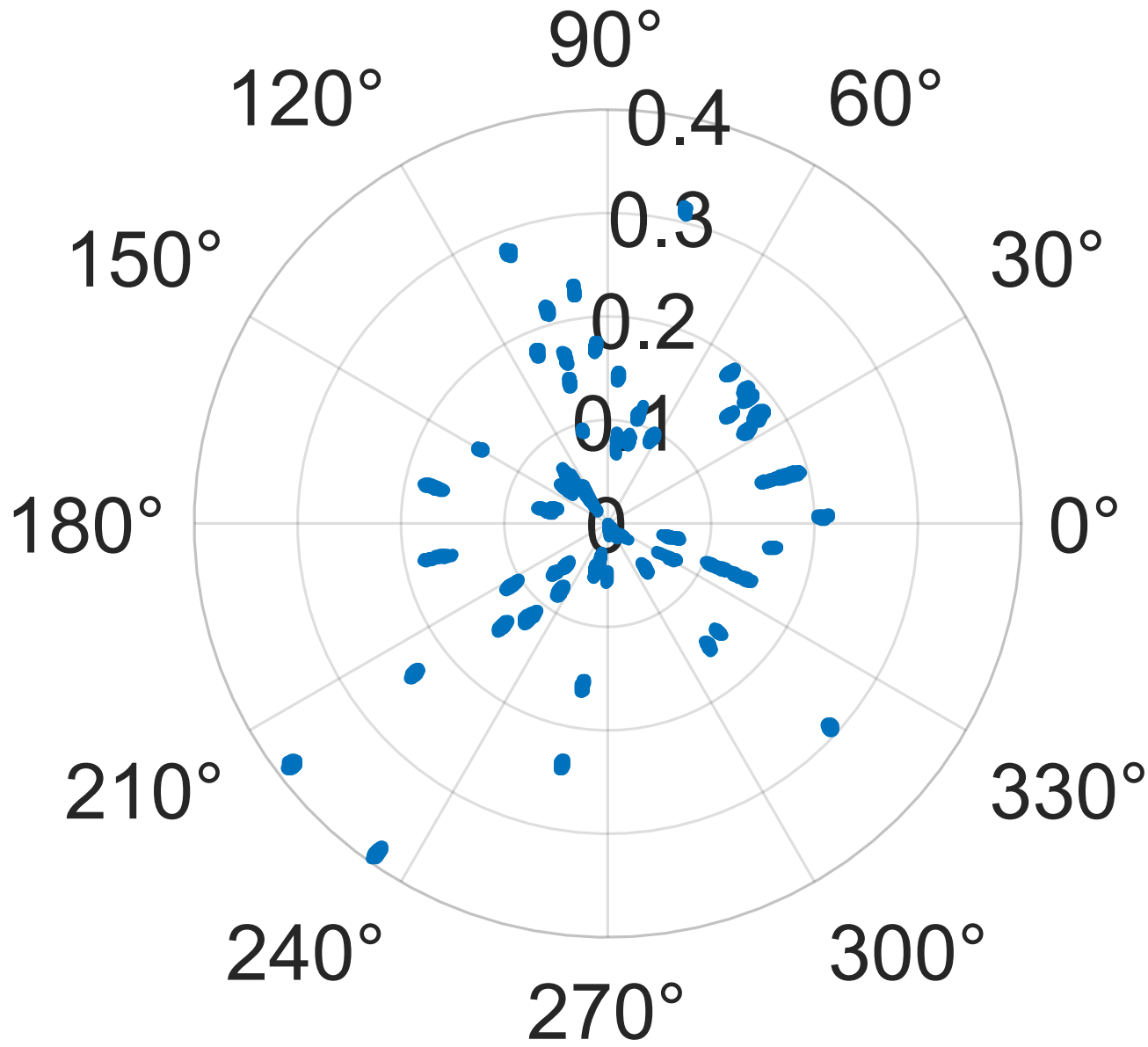

Angles histogram
90°
120°
60°
800
600
150°
30°
400
200
180°
0°
210°
330°
240°
300°
270°

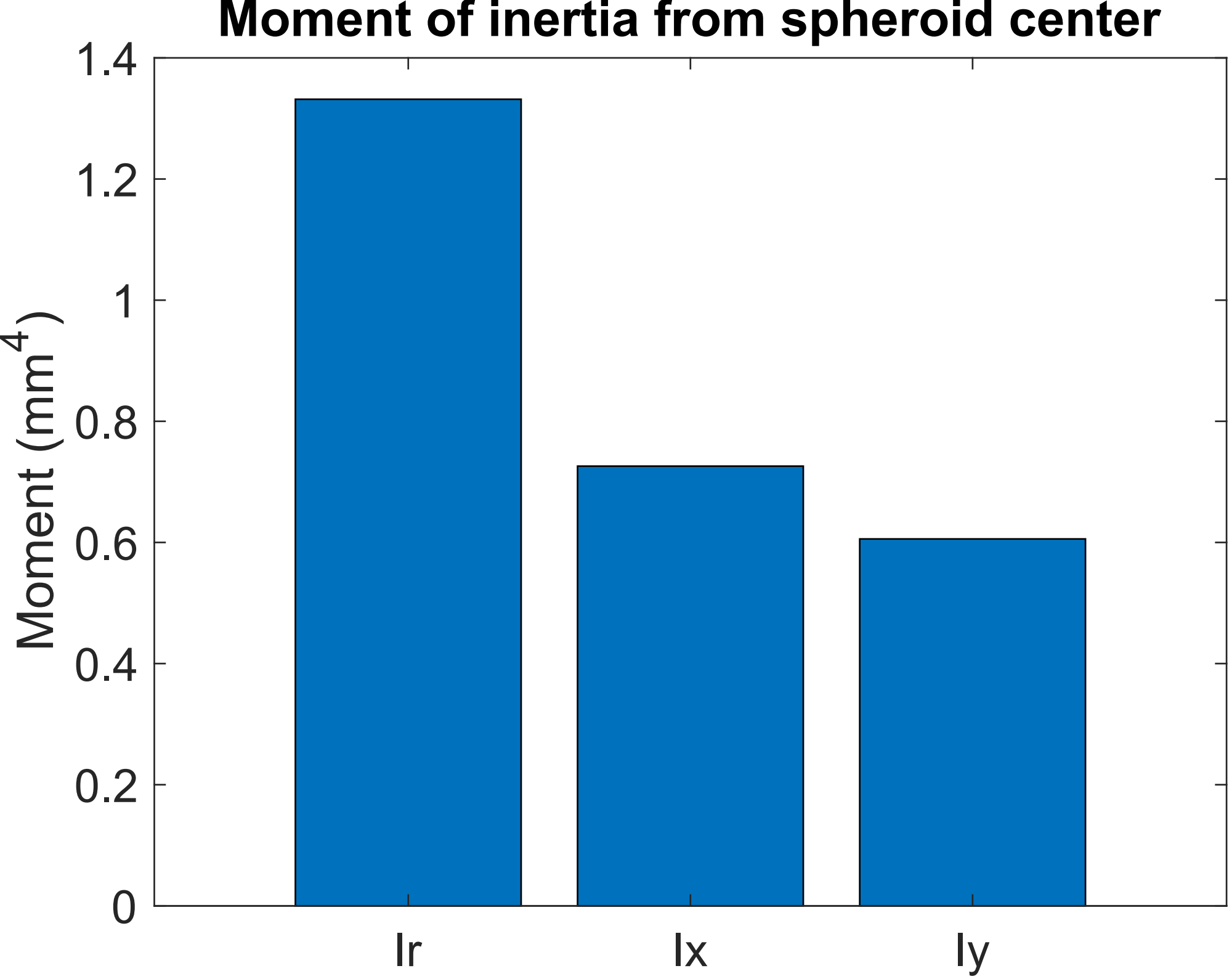

Representative distance values from the boundary
distance (um)
300
250
200
150
100
50
0
300
90
97
max
median
mean

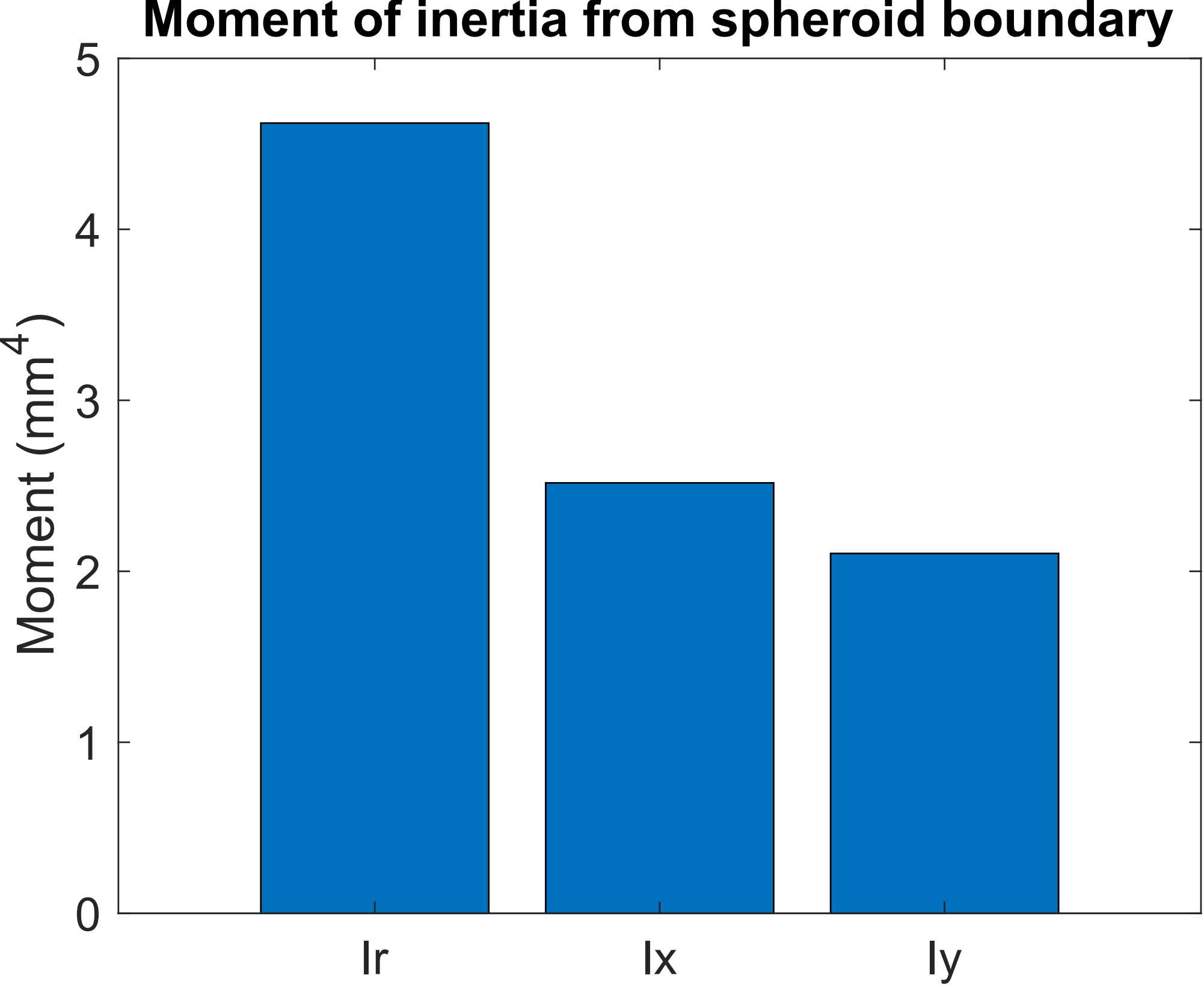
Distances from spheroid center (mm) vs migration angle



Distances from spheroid boundary (mm) vs migration angle




Moment of inertia from spheroid center
Moment (mm^4)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Ir
Ix
Iy


Moment of inertia from spheroid boundary
Moment (mm^4)
0
1
2
3
4
5
Ir
Ix
Iy