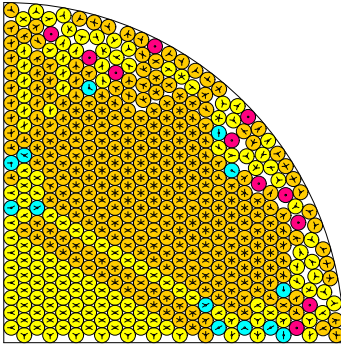


N = 445

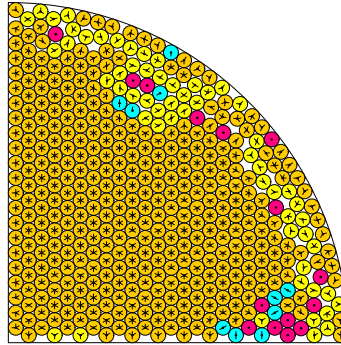
445 circles in a circular quadrant



radius = 0.022009317503 density = 0.862249901370
 ratio = 45.435302560015 contacts = 976

N = 446

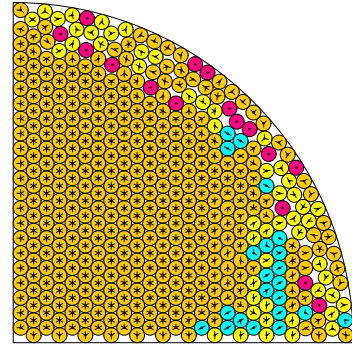
446 circles in a circular quadrant



radius = 0.021986755547 density = 0.862416707745
 ratio = 45.481925683205 contacts = 1087

N = 447

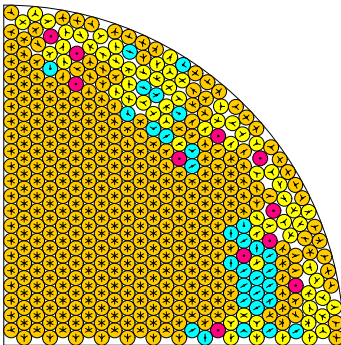
447 circles in a circular quadrant



radius = 0.021958265992 density = 0.862111816325
 ratio = 45.540936628062 contacts = 1090

N = 448

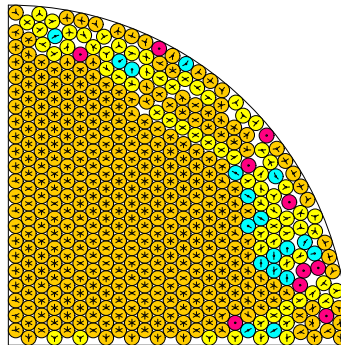
448 circles in a circular quadrant



radius = 0.021936780037 density = 0.862350394581
 ratio = 45.585541647418 contacts = 1073

N = 449

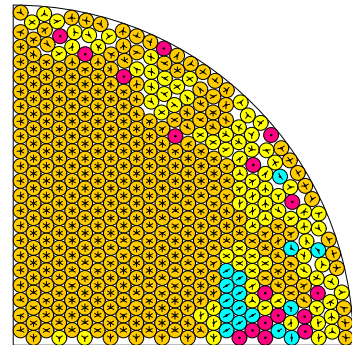
449 circles in a circular quadrant



radius = 0.021906556524 density = 0.8621895404886
 ratio = 45.648834035020 contacts = 1042

N = 450

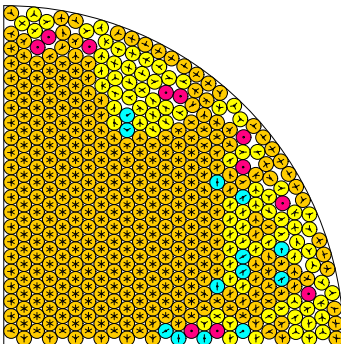
450 circles in a circular quadrant



radius = 0.021878170511 density = 0.861577820810
 ratio = 45.707660954185 contacts = 1054

N = 451

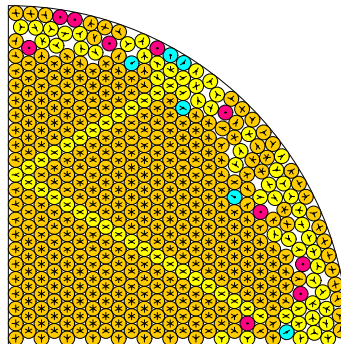
451 circles in a circular quadrant



radius = 0.021851998603 density = 0.861427756679
 ratio = 45.762404853030 contacts = 1096

N = 452

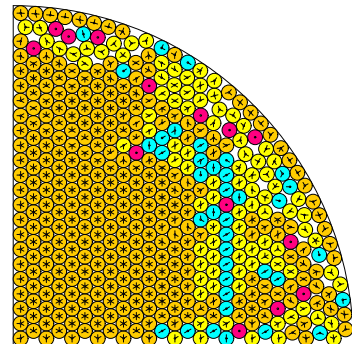
452 circles in a circular quadrant



radius = 0.021844050429 density = 0.862709870779
 ratio = 45.779056460209 contacts = 1072

N = 453

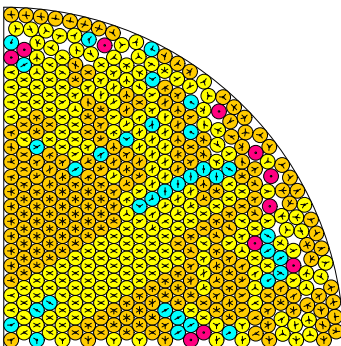
453 circles in a circular quadrant



radius = 0.021822188561 density = 0.862888739393
 ratio = 45.824917937324 contacts = 1009

N = 454

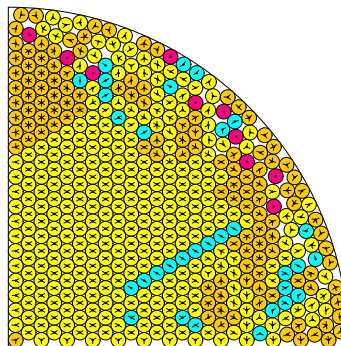
454 circles in a circular quadrant



radius = 0.021789785086 density = 0.862227237083
 ratio = 45.893063932110 contacts = 887

N = 455

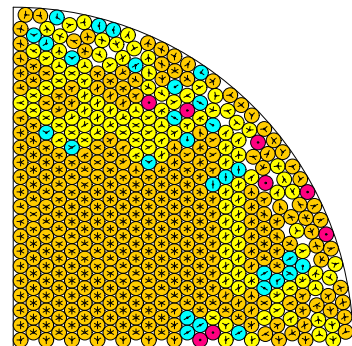
455 circles in a circular quadrant



radius = 0.021784715024 density = 0.863724331764
 ratio = 45.903744846537 contacts = 874

N = 456

456 circles in a circular quadrant



radius = 0.021762345307 density = 0.863845803989
 ratio = 45.950929732794 contacts = 1024