N = 181

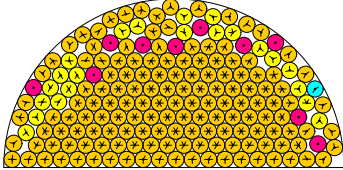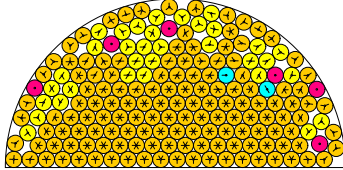**181 circles in a semicircle**

radius = 0.048142630866   density = 0.839012072242
ratio = 20.771610981824   contacts = 416
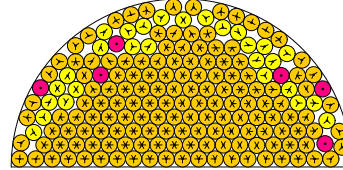
N = 182

182 circles in a semicircle

radius = 0.048041101917   density = 0.840092880312
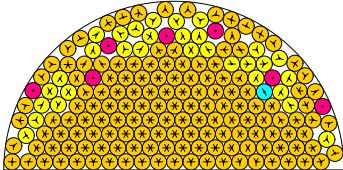ratio = 20.815509222311   contacts = 423

N = 183

183 circles in a semicircle

radius = 0.047895781454   density = 0.839606152472
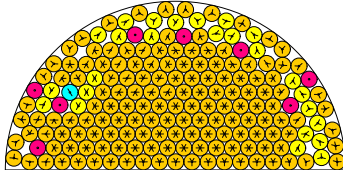ratio = 20.878665503439   contacts = 422

N = 184

184 circles in a semicircle

radius = 0.047809800091   density = 0.841165930373
ratio = 20.916213790978   contacts = 429
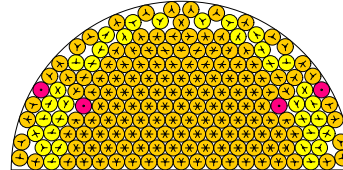
N = 185

185 circles in a semicircle

radius = 0.047711997361   density = 0.842280836101
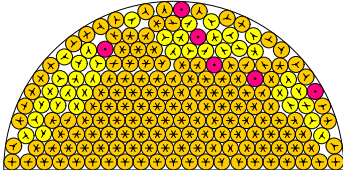ratio = 20.959089019822   contacts = 432

N = 186

186 circles in a semicircle

radius = 0.047629163892   density = 0.843895858145
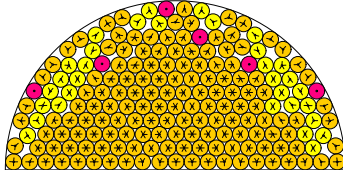ratio = 20.995539671057   contacts = 444

N = 187

187 circles in a semicircle

radius = 0.047459686749   density = 0.842405777988
ratio = 21.070514124890   contacts = 431
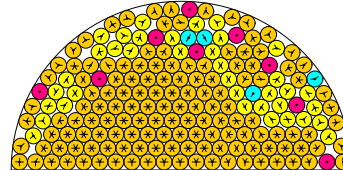
N = 188

188 circles in a semicircle

radius = 0.047372985602   density = 0.843819111566
ratio = 21.109076983472   contacts = 429
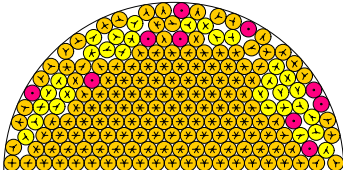
N = 189

189 circles in a semicircle

radius = 0.047233667870   density = 0.843539591336
ratio = 21.168650100425   contacts = 422
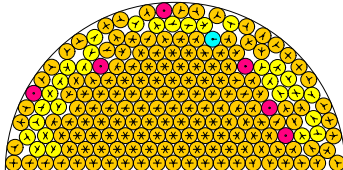
N = 190

190 circles in a semicircle

radius = 0.047133350670   density = 0.844190043241
ratio = 21.216399551215   contacts = 434
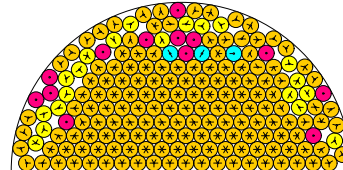
N = 191

191 circles in a semicircle

radius = 0.046976238840   density = 0.842984999945
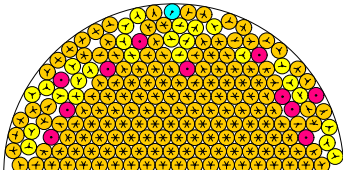ratio = 21.287357708733   contacts = 437

N = 192

192 circles in a semicircle

radius = 0.046818965318   density = 0.841733957154
ratio = 21.358865861593   contacts = 435
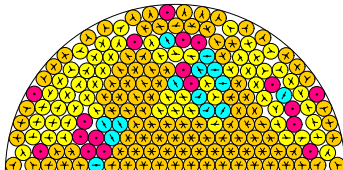
N = 193

193 circles in a semicircle

radius = 0.046677137770   density = 0.840999503506
ratio = 21.423764347349   contacts = 438
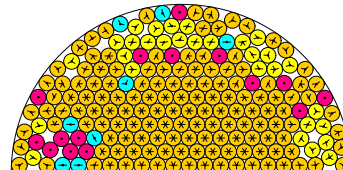
N = 194

194 circles in a semicircle

radius = 0.046566760008   density = 0.841363697416
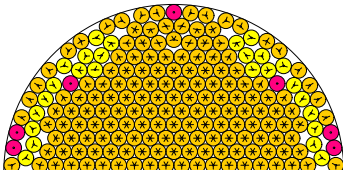ratio = 21.474545358577   contacts = 360

N = 195

195 circles in a semicircle

radius = 0.046459961362   density = 0.841815052200
ratio = 21.524048404358   contacts = 420
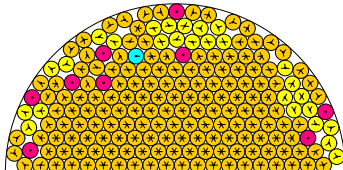
N = 196

196 circles in a semicircle

radius = 0.046361388872   density = 0.842556324234
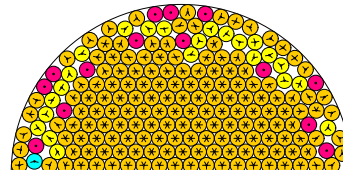ratio = 21.569673047527   contacts = 482

N = 197

197 circles in a semicircle

radius = 0.046234828663   density = 0.842237796320
ratio = 21.628716465736   contacts = 450

N = 198

198 circles in a semicircle

radius = 0.046108443314   density = 0.841891463755
ratio = 21.688001765559   contacts = 462