

100000 α particles flown 180 times

 $\boldsymbol{\alpha}$ initial position distribution:

 $N_x(0.00, 3.90) \times N_y(-0.00, 3.97) \times N_z(101.35, 7.47)$ [mm]

 $\boldsymbol{\alpha}$ average direction:

(0.00, 0.00, 0.00) (normalized)

0.098 \pm 0.001 % of them reached the Si detector.

Based on calculated solid angle = 0.105931 %