

Analysis of channeling for run 2262, crystal STF101

Run date: 2015-05-04

Particle type: Protons

Particle energy: 400 GeV

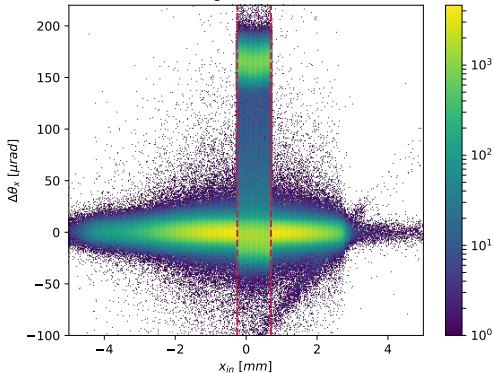
FRANCESCO FORCHER

February 13, 2018



Crystal STF101, run 2262 — Protons 400 GeV

Histogram: STF101



Cuts in x:

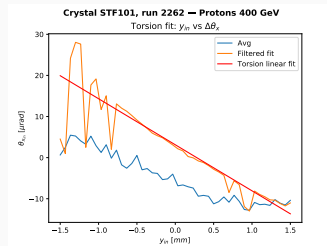
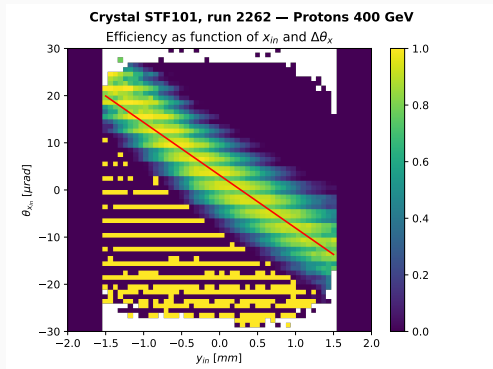
x1: -0.250 [mm]

x2: 0.700 [mm]

Cuts in y:

y1: -1.500 [mm]

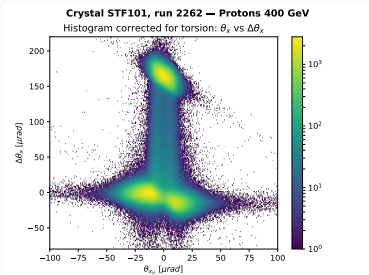
y2: 1.500 [mm]



Efficiency fit:

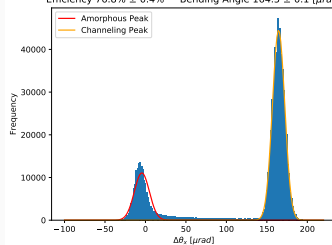
m : -11.2 [$\mu\text{rad}/\text{mm}$]

q : 3.1 [μrad]



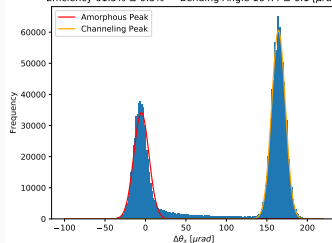
STF101 run 2262, Protons 400 GeV — Channeling, cut $\pm \theta_c/2 = \pm 4.85$

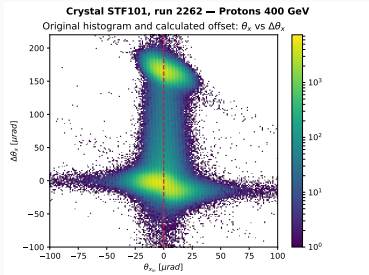
Efficiency $76.8\% \pm 0.4\%$ — Bending Angle 164.5 ± 0.1 [μrad]



STF101 run 2262, Protons 400 GeV — Channeling, cut $\pm \theta_c = \pm 9.71$

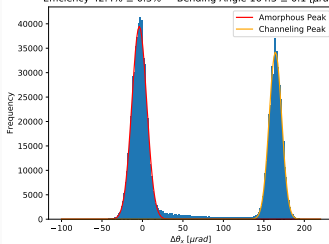
Efficiency $61.5\% \pm 0.3\%$ — Bending Angle 164.4 ± 0.1 [μrad]





STF101 run 2262, Protons 400 GeV — Chan., cut $\pm \theta_c/2 = 0.0 \pm 4.85$

Efficiency $42.4\% \pm 0.3\%$ — Bending Angle 164.3 ± 0.1 [μrad]



STF101 run 2262, Protons 400 GeV — Chan., cut $\pm \theta_c = 0.0 \pm 9.71$

Efficiency $39.0\% \pm 0.3\%$ — Bending Angle 164.6 ± 0.1 [μrad]

