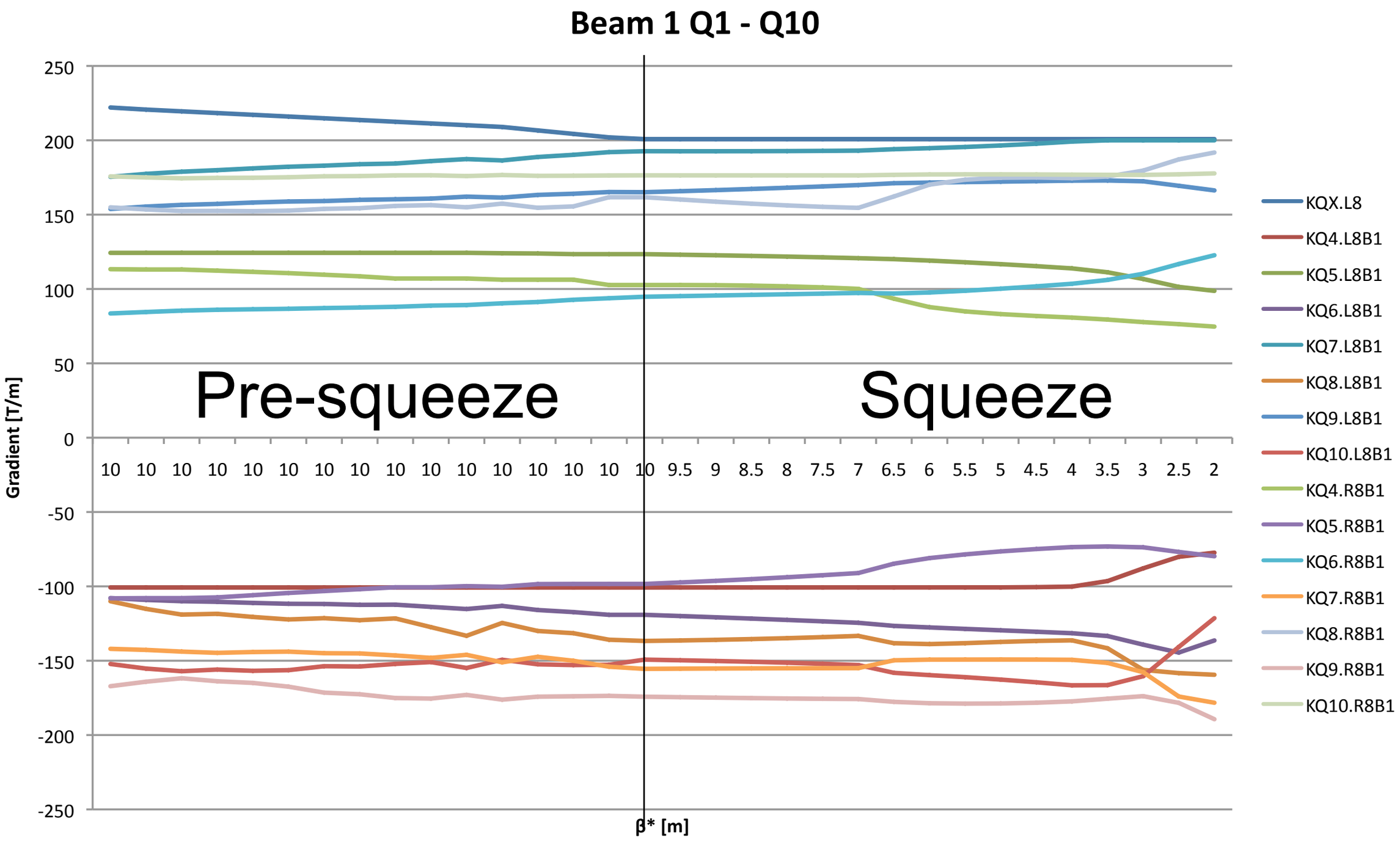
LCU meeting
23 / 10 / 2009

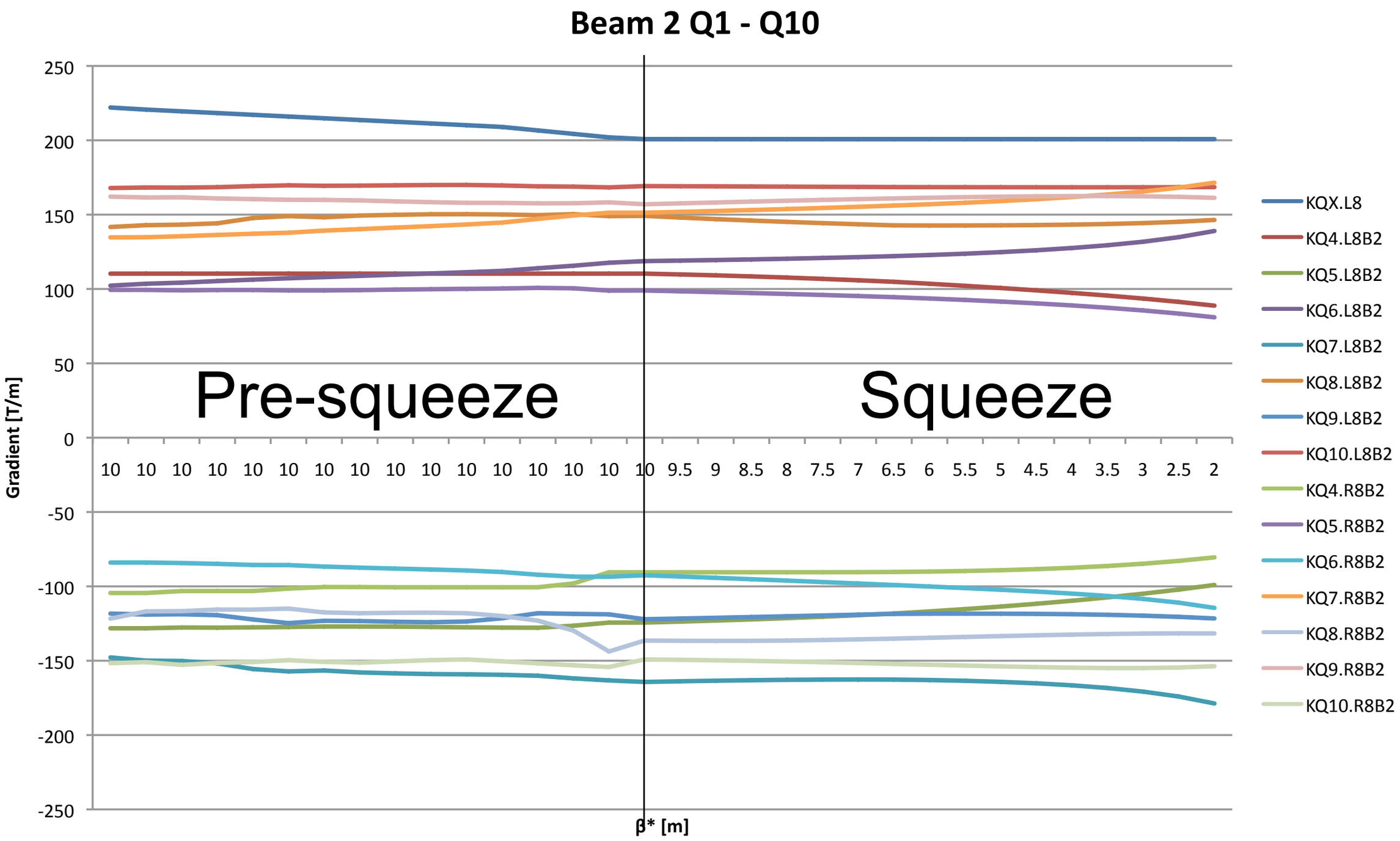
IR8 Squeeze: Nominal and 3.5 TeV

Emanuele Laface

Nominal Squeeze



Nominal Squeeze



Aperture parameters at 7 TeV

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β* from 10m to 2m

Aperture parameters at 7 TeV

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Required half separation: 100μrad (~5σ)

Aperture parameters at 7 TeV

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LHCb spectrometer angle: ±135μrad

Aperture parameters at 7 TeV

β* from 10m to 2m

Required half separation: 100μrad (~5σ)

LHCb spectrometer angle: ±135μrad

External crossing angle: 310μrad (why not 235?)

Aperture parameters at 7 TeV

β* from 10m to 2m

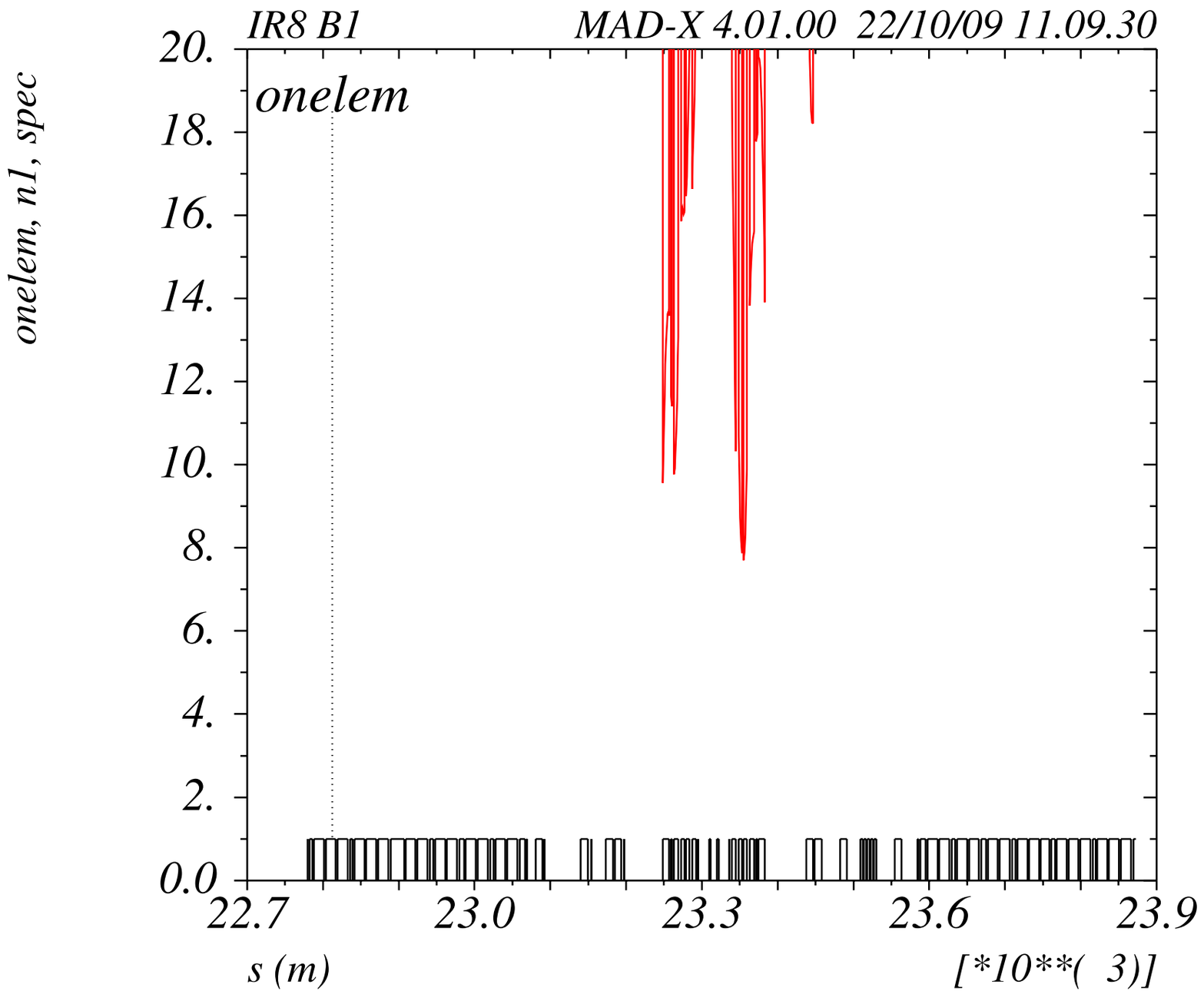
Required half separation: 100μrad (~5σ)

LHCb spectrometer angle: ±135μrad

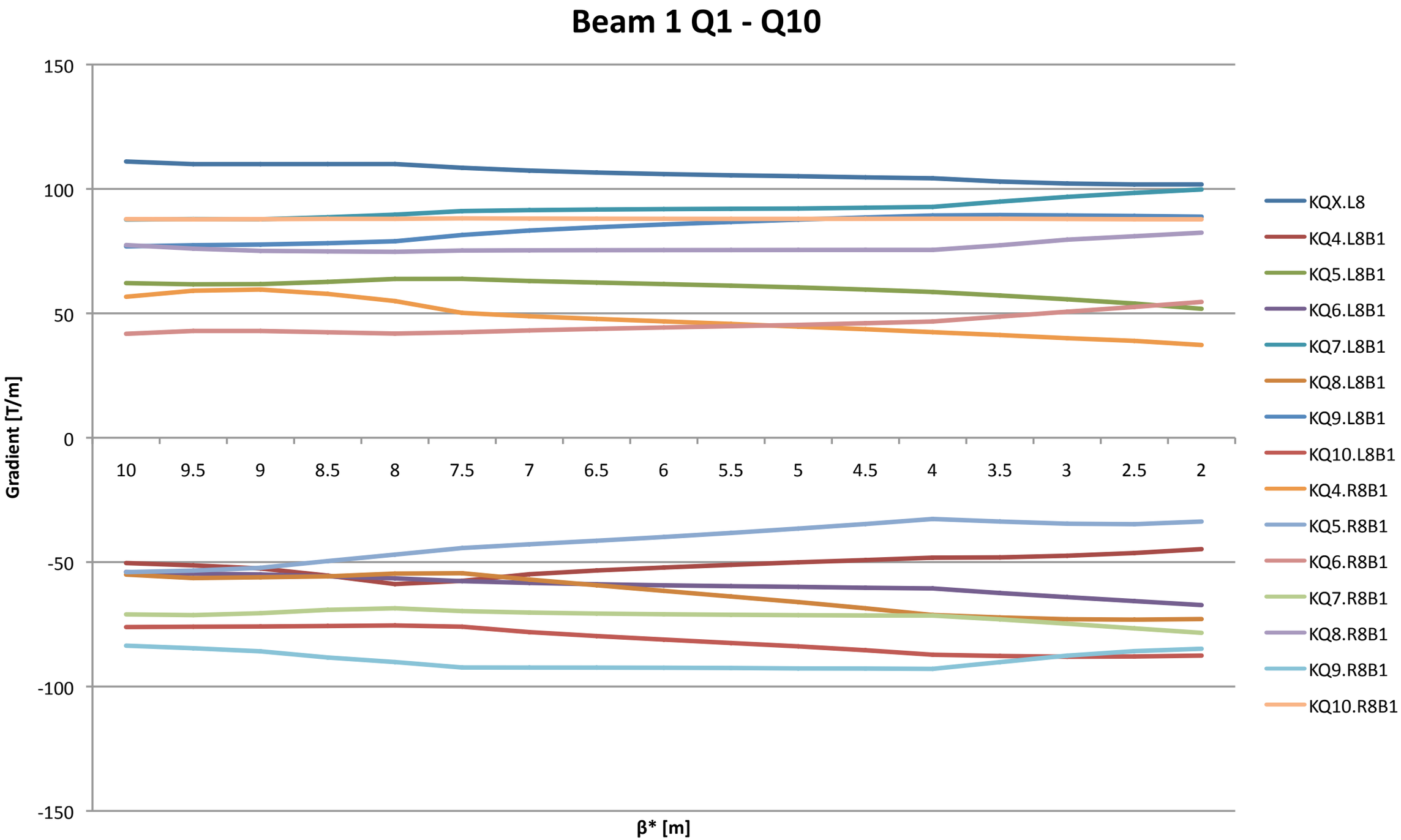
External crossing angle: 310μrad (why not 235?)

Final crossing angle from 445μrad to 175μrad

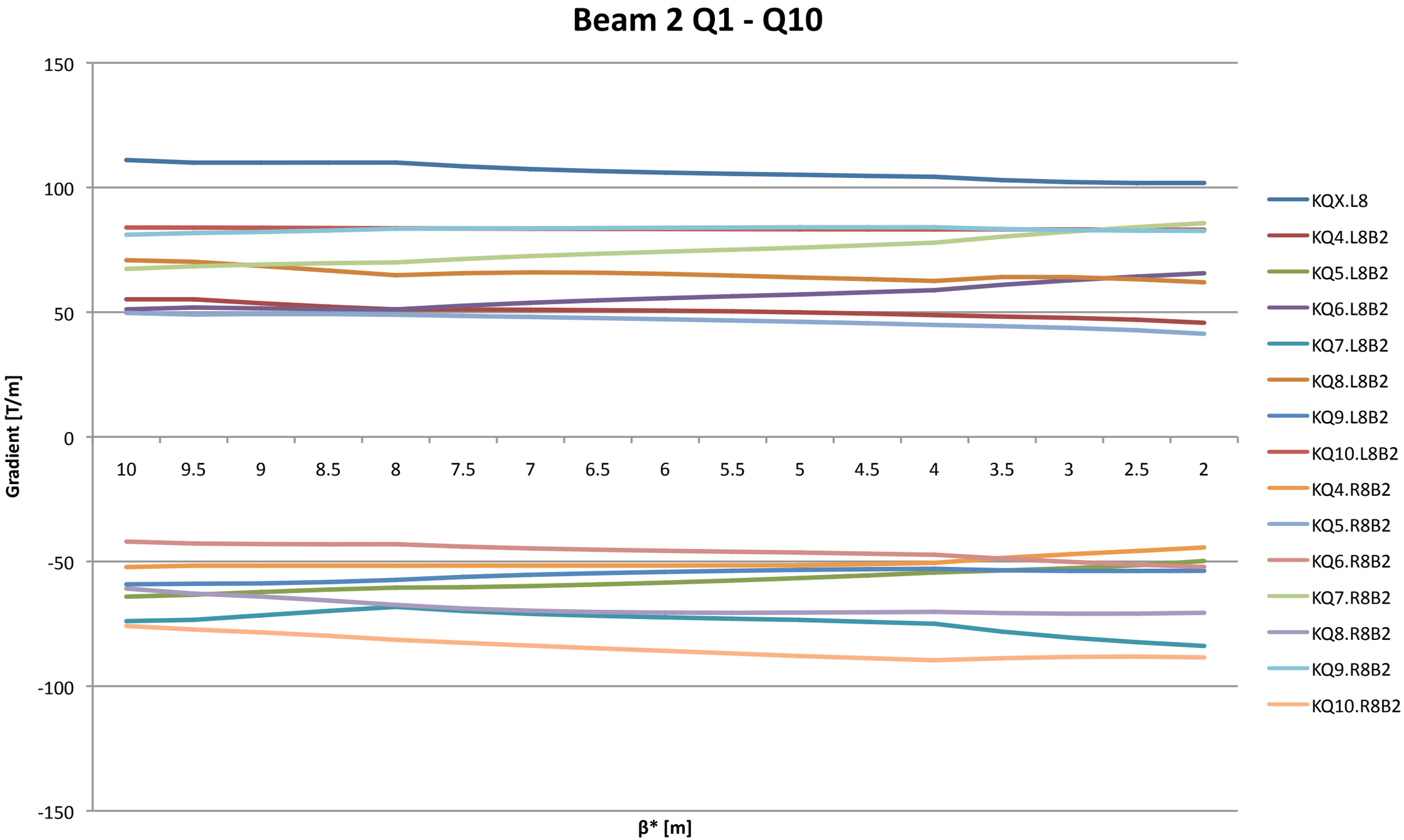
7 TeV β* = 2 m
spectrometer with “bad” polarity



3.5 TeV Squeeze



3.5 TeV Squeeze



Aperture parameters at 3.5 TeV

Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

Required half separation: 130μrad (~5σ)

Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

Required half separation: 130μrad (~5σ)

LHCb spectrometer angle: ±270μrad

Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

Required half separation: 130μrad (~5σ)

LHCb spectrometer angle: ±270μrad

External crossing angle: ?

Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

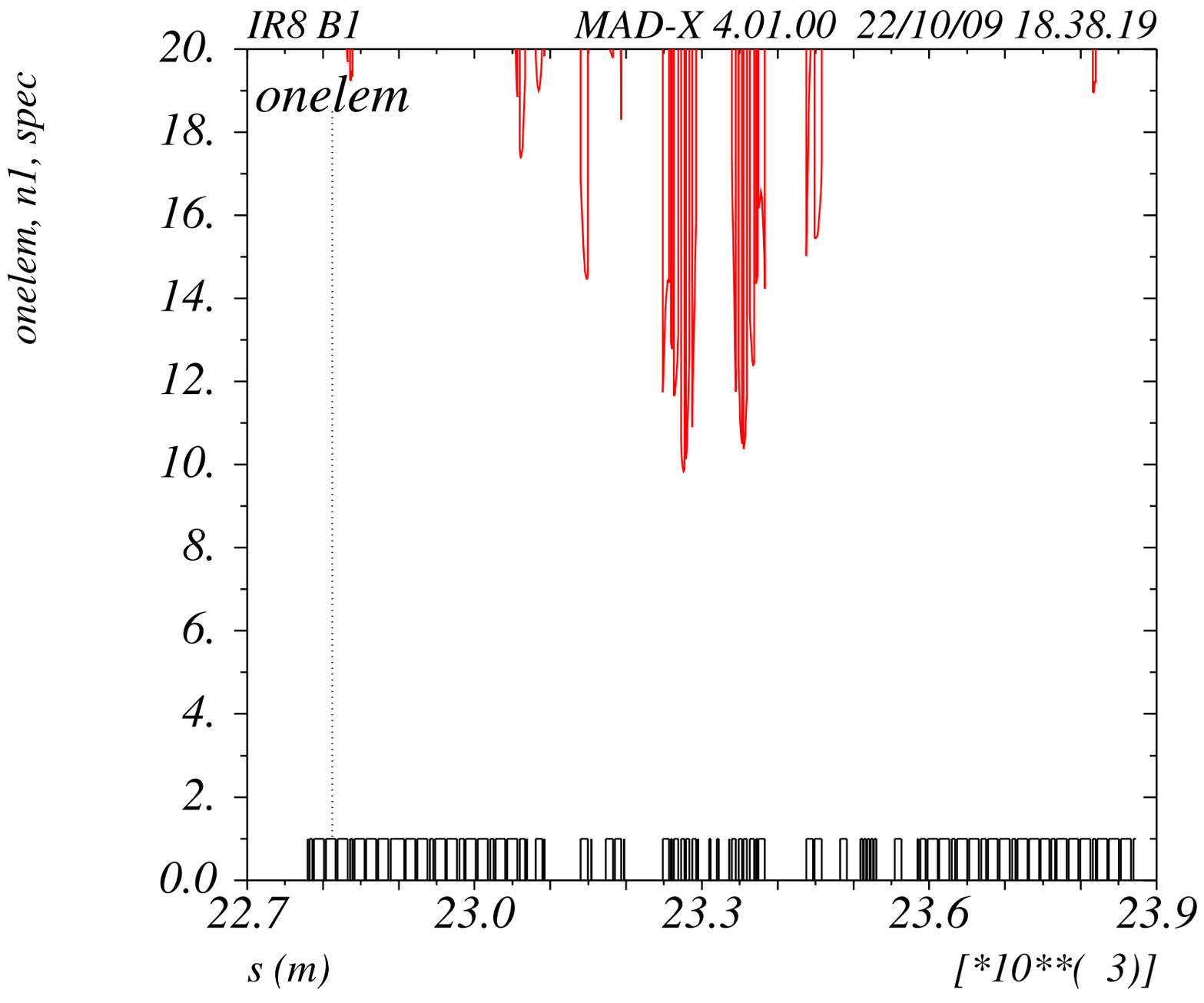
Required half separation: 130μrad (~5σ)

LHCb spectrometer angle: ±270μrad

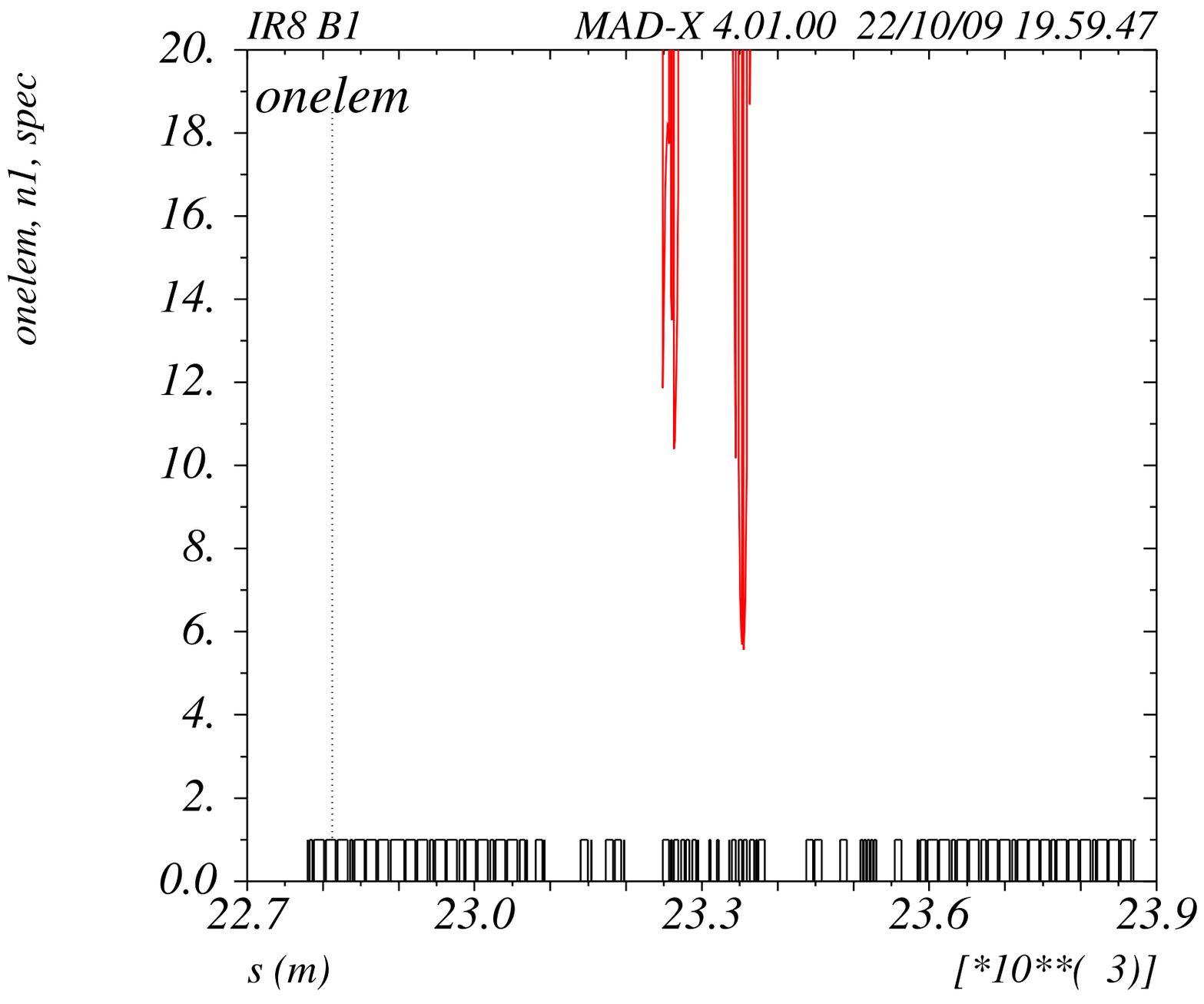
External crossing angle: ?

Total crossing angle from ? + 270μrad to ? - 270μrad

3.5 TeV, β* = 2 m
No spectrometer



3.5 TeV, β* = 10 m
Spectrometer with “bad” polarity



Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

Required half separation: 130μrad (~5σ)

LHCb spectrometer angle: ±270μrad

External crossing angle: ?

Final crossing angle from ? + 270μrad to ? - 270μrad

Aperture parameters at 3.5 TeV

β* from 10m to 2m (?)

Required half separation: 130μrad (~5σ)

LHCb spectrometer angle: ±270μrad

External crossing angle: 130μrad

Final crossing angle from ? + 270μrad to ~~? - 270μrad~~