

version 9.2.96

Acceptance shape :
Beam shape :
Calculation mode :
Particle:

Rectangle (X' & Y')
Rectangle (X' & Y')
Distribution
Beam

& Ellipse (X' & Y')
& Ellipse (X' & Y')
& Monte Carlo
& Fragment

Beam

A: 40, Element: Ar, q+: 18, Z: 18, Stable, Table of Nuclides, Ok, Cancel

Beam energy

Energy: 84.2755 MeV/u
 TKE: 3367.85 MeV
 Brho: 3 Tm
 P: 16.189 GeV/c
 U: 1.87e+5 KV

Beam intensity

18 enA
 1 pnA
 6.25e+9 pps
 0.003371 KW

Emittance

	Beam CARD (sigma, semi-axis, half-width...)	1D - shape (Distribution method)	2D mode	2D - shape (Monte Carlo method)	Correlated with
1. X mm	0	Ellipse uniform (proj.)	<input type="checkbox"/>		
2. T mrad	20	Rectangle uniform	<input checked="" type="checkbox"/>	Rectangle uniform	P
3. Y mm	0	Ellipse uniform (proj.)	<input type="checkbox"/>		
4. P mrad	20	Rectangle uniform	<input checked="" type="checkbox"/>	Rectangle uniform	T
5. L mm	0	Gaussian	<input type="checkbox"/>		
6. D %	0	Gaussian	<input type="checkbox"/>		

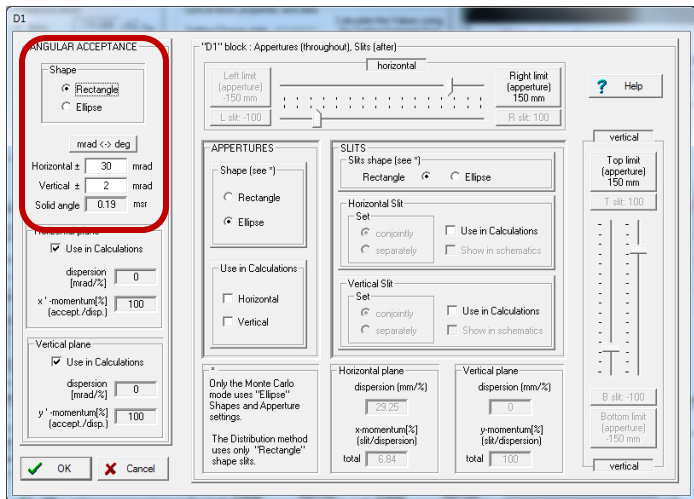
mm cm

beam respect to spectrometer

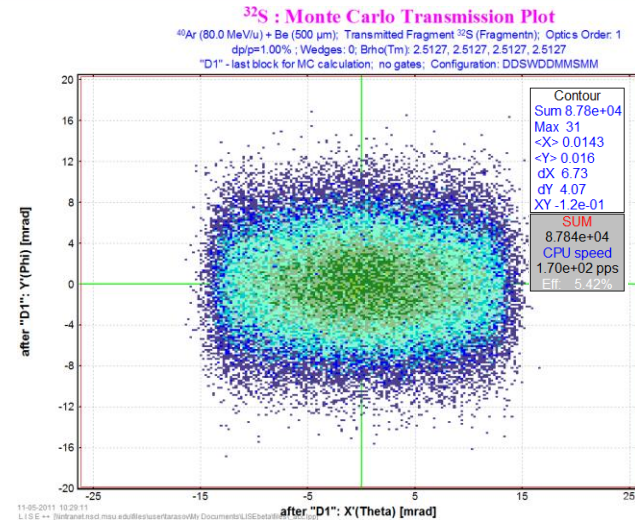
dX: 0 mm
 dT: 0 mrad
 dY: 0 mm
 dP: 0 mrad
 dT: 0 degrees
 dP: 0 degrees

Energy Loss in the target box [KW]: 4.03e-11

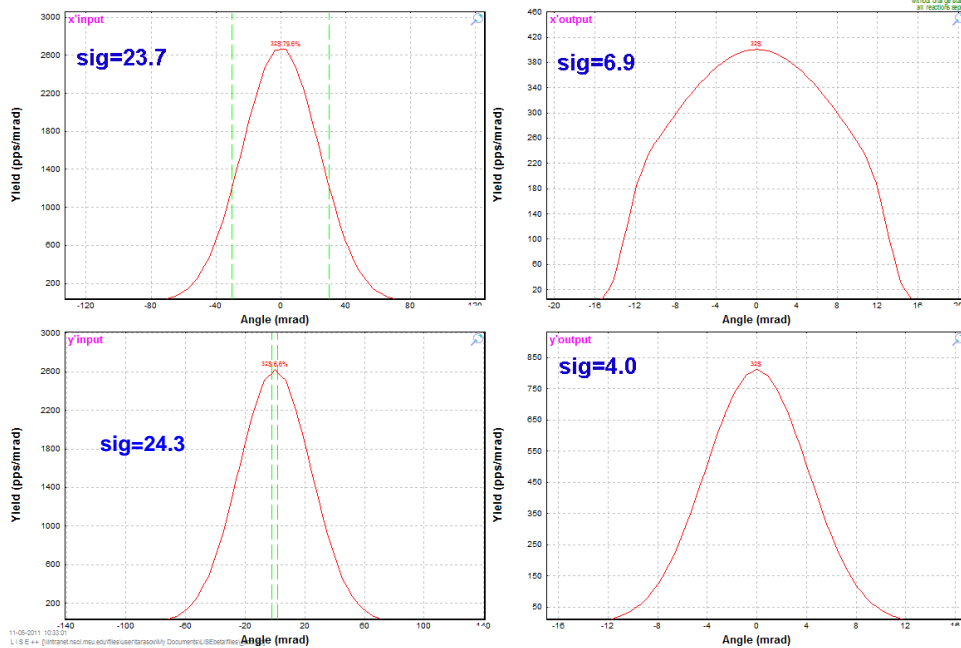
RF frequency: 20 MHz



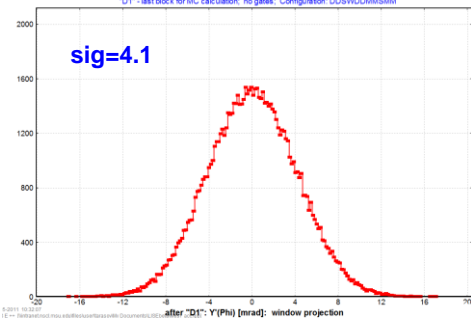
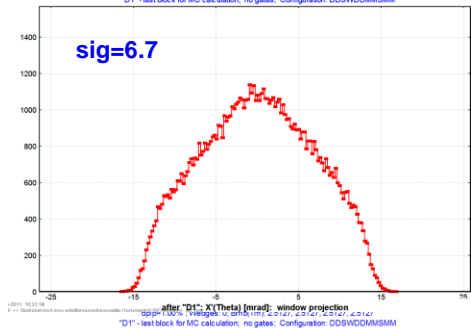
Angular Transmission
Distribution = 5.2%
MonteCarlo = 5.4%



D1-Angle
⁴⁰Ar (80.0 MeV/u) + Be (500 μm), Settings on ³²S; Config: DDSWDDMSMM
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127, 2.5127



³²S : Monte Carlo Transmission Plot
 after "D1": X(Theta) [mrad]; window projection --> ⁴⁰Ar (80.0 MeV/u) + Be (500 μm), Transmitted Fragment ³²S (Fragments), Optics C
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127, 2.5127
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMSMM



ANGULAR ACCEPTANCE

Shape
 Rectangle
 Ellipse

mrad ↔ deg

Horizontal ± 30 mrad
 Vertical ± 2 mrad
 Solid angle 0.19 msr

"D1" block : Apertures (throughout) Slits (after)

Left limit (aperture) -150 mm
 Right limit (aperture) 150 mm
 L slit -100 R slit 100

horizontal vertical

APERTURES
 Shape (see ?)
 Rectangle
 Ellipse

Slits shape (see ?)
 Rectangle Ellipse

Horizontal slit
 Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

Vertical slit
 Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

Horizontal plane dispersion (mm/%) 29.25
 x-momentum [%] (slit/dispersion) total 5.84

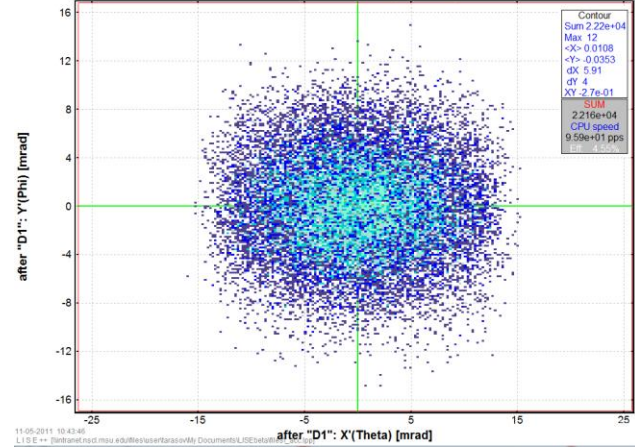
Vertical plane dispersion (mm/%) 0
 y-momentum [%] (slit/dispersion) total 100

Only the Monte Carlo mode uses "Ellipse" Shapes and Aperture settings.
 The Distribution method uses only "Rectangle" shape slits.

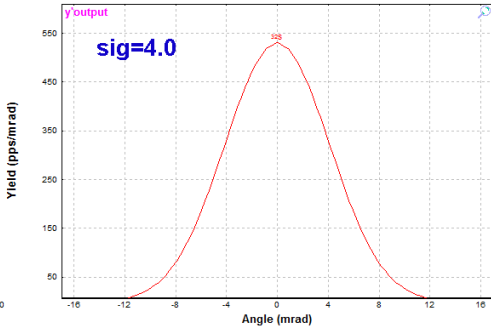
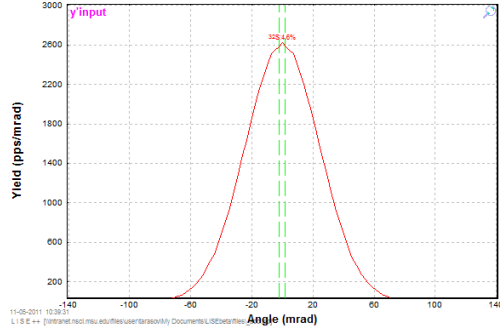
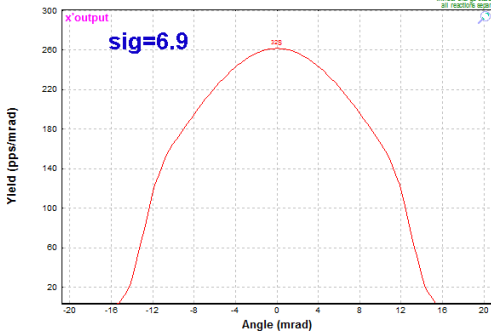
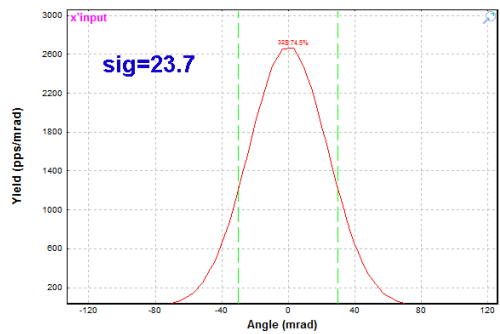
OK Cancel

Angular Transmission
 Distribution = 3.5%
 MonteCarlo = 4.5%

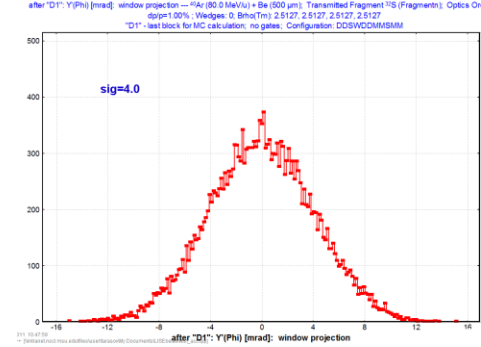
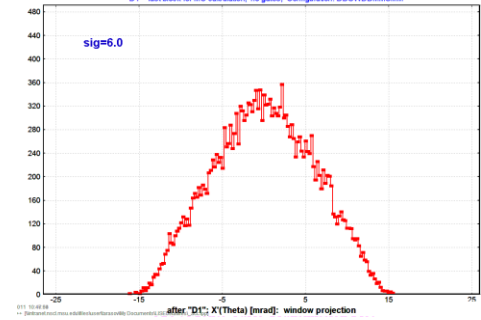
³²S : Monte Carlo Transmission Plot
⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Transmitted Fragment ³²S (Fragment); Optics Order: 1
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMMSSMM



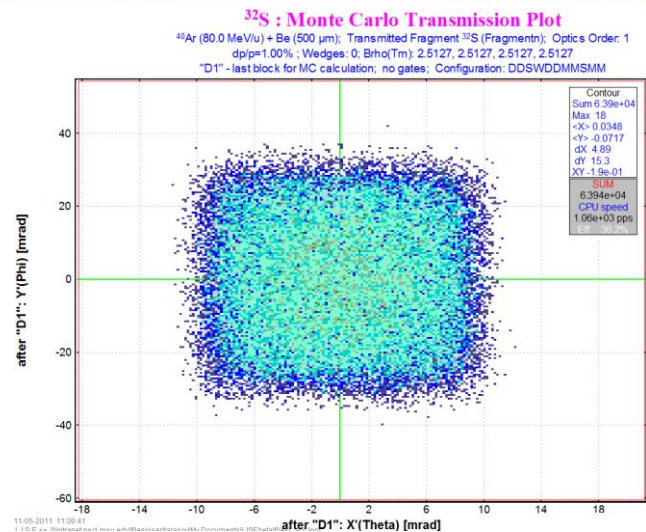
D1-Angle
⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Settings on ³²S; Config: DDSWDDMMSSMM
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127



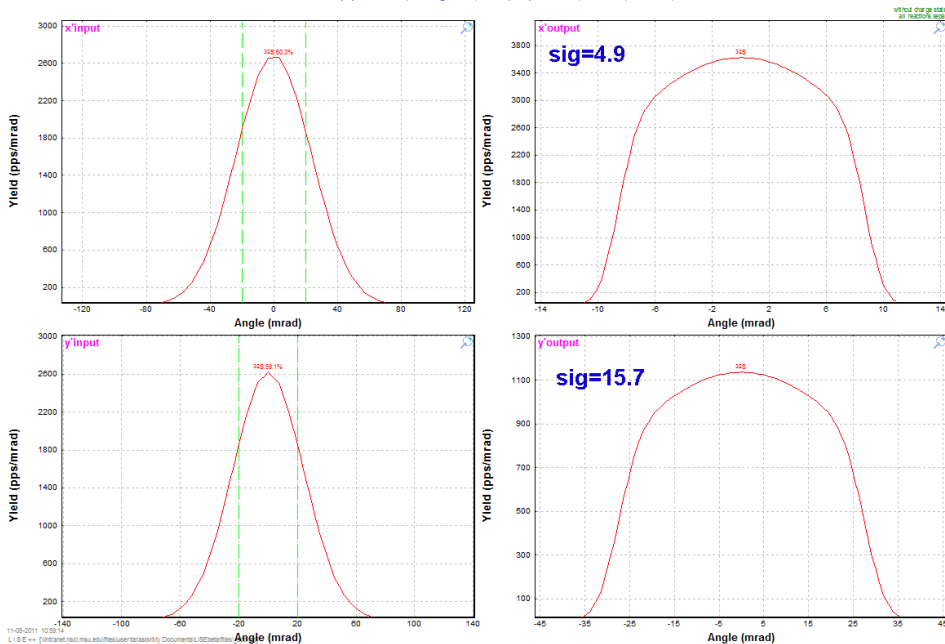
³²S : Monte Carlo Transmission Plot
 after "D1": X(Theta) [mrad]; window projection -- ⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Transmitted Fragment ³²S (Fragment); Optics C
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMMSSMM



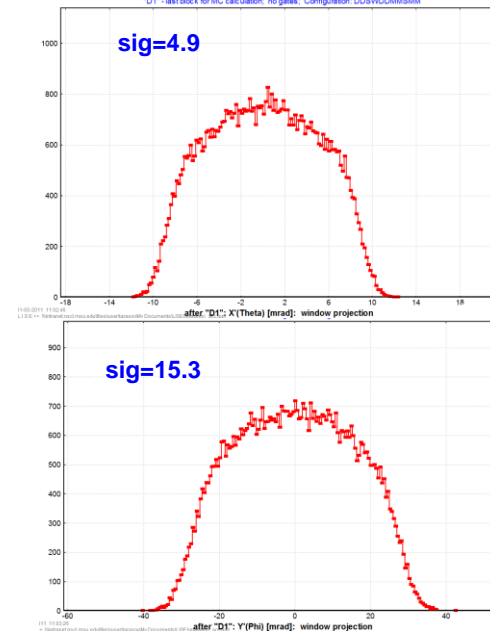
Angular Transmission
 Distribution = 35.6%
 MonteCarlo = 36.2%



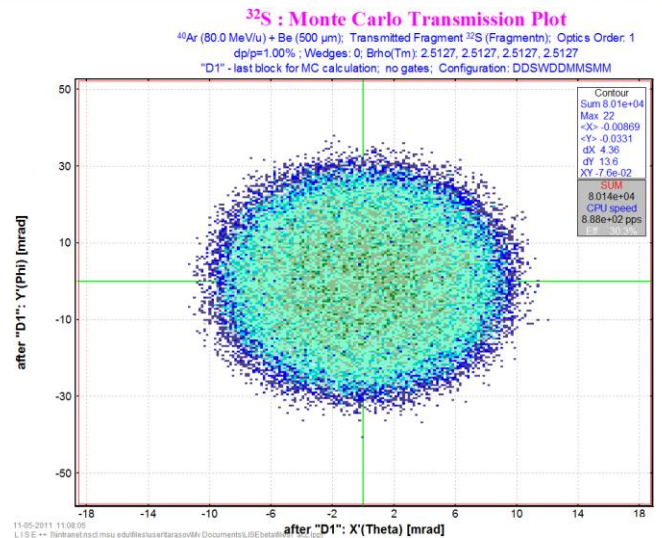
D1-Angle
⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Settings on ³²S; Config: DDSWDDMMSSM
 dp/p=1.00%; Wedges: 0; Bho(Tm): 2.5127, 2.5127, 2.5127, 2.5127



³²S : Monte Carlo Transmission Plot
 after "D1": X(Theta) [mrad] window projection — ⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Transmitted Fragment ³²S (Fragment); Optics C
 dp/p=1.00%; Wedges: 0; Bho(Tm): 2.5127, 2.5127, 2.5127, 2.5127
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMMSSM

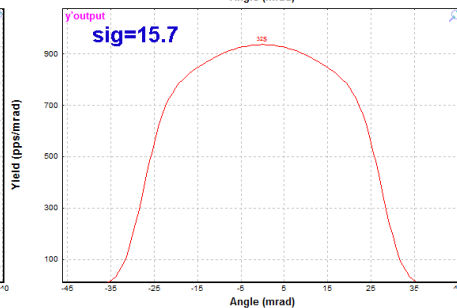
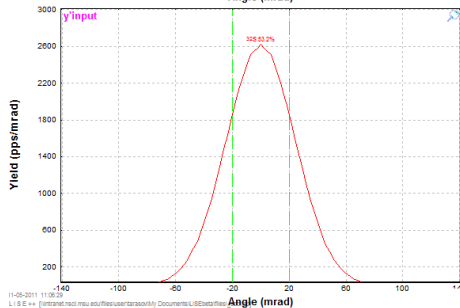
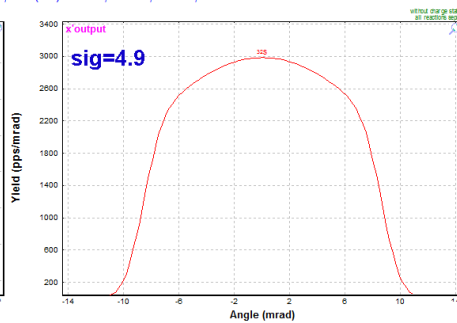
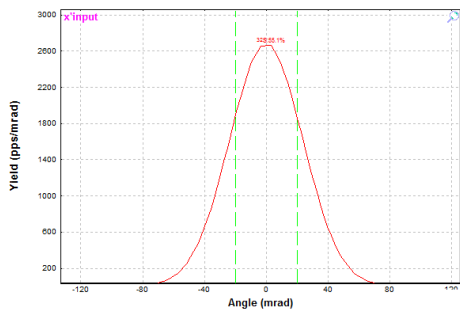


Angular Transmission
Distribution = 29.3%
MonteCarlo= 30.3%

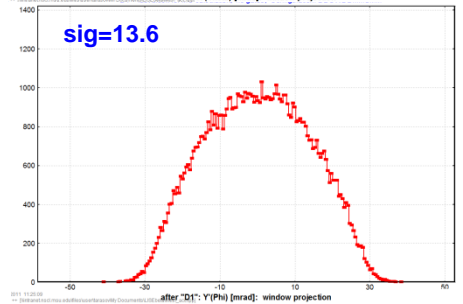
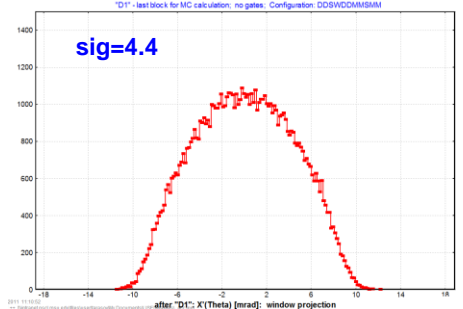


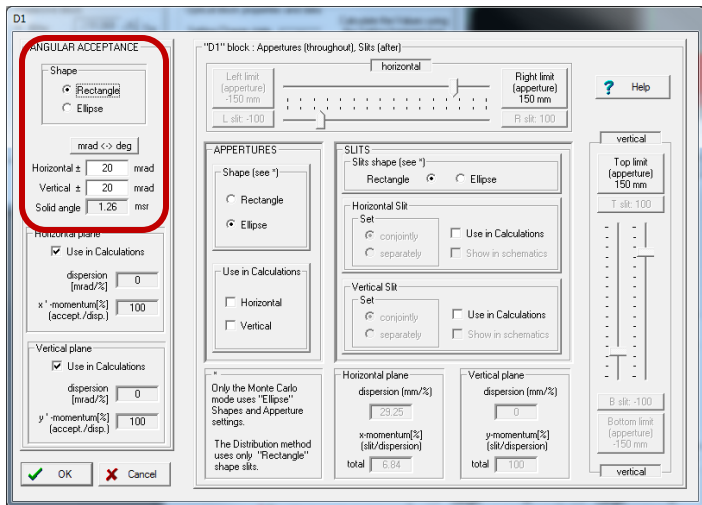
D1-Angle

⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Settings on ³²S; Config: DDSWDDMSMM
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127, 2.5127

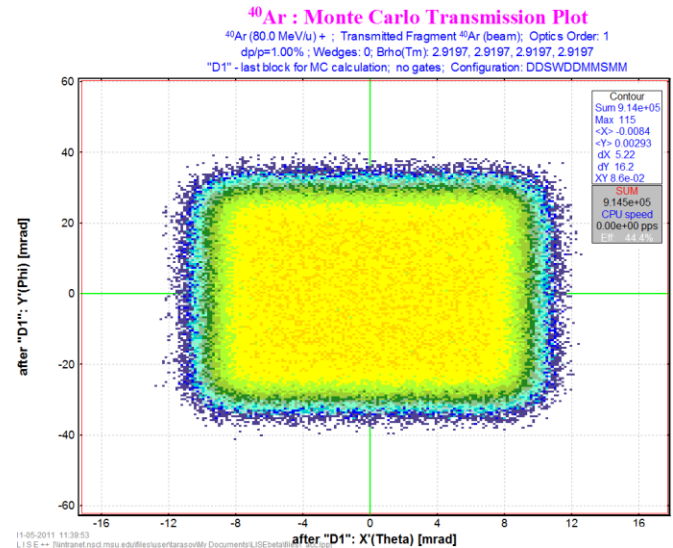


³²S : Monte Carlo Transmission Plot
 after "D1": X(Theta) [mrad] window projection — ⁴⁰Ar (80.0 MeV/u) + Be (500 μm); Transmitted Fragment ³²S (Fragments); Optics C
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.5127, 2.5127, 2.5127, 2.5127
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMSMM



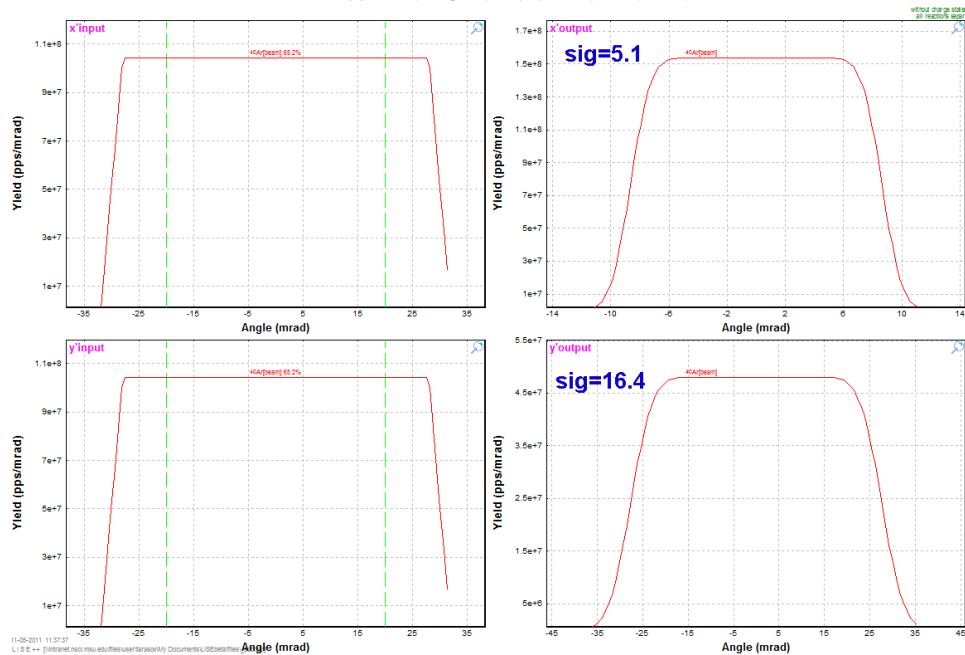


Angular Transmission Distribution = 42.5%
 MonteCarlo = 44.4%



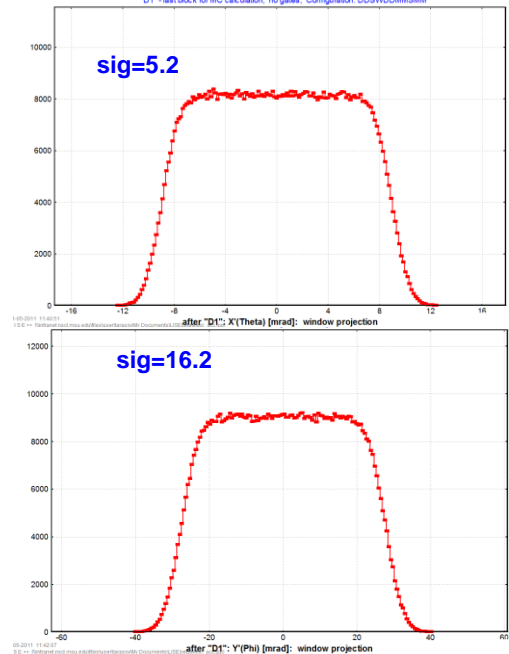
D1-Angle

⁴⁰Ar (80.0 MeV/u); Settings on ⁴⁰Ar; Config: DDSWDDMMSSM
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.9197, 2.9197, 2.9197, 2.9197



⁴⁰Ar: Monte Carlo Transmission Plot

⁴⁰Ar (80.0 MeV/u) + ; Transmitted Fragment ⁴⁰Ar (beam); Optics Order: 1
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.9197, 2.9197, 2.9197, 2.9197
 D1 - last block for MC calculation; no gates; Configuration: DDSWDDMMSSM



D1

ANGULAR ACCEPTANCE

Shape
 Rectangle
 Ellipse

mrad <> deg

Horizontal ± 20 mrad
 Vertical ± 20 mrad
 Solid angle 1.26 msr

Horizontal plane
 Use in Calculations
 dispersion [mrad/%] 0
 x'-momentum[%] (accept./disp.) 100

Vertical plane
 Use in Calculations
 dispersion [mrad/%] 0
 y'-momentum[%] (accept./disp.) 100

Horizontal plane dispersion (mm/%)
 29.25
 x-momentum[%] (slit/dispersion) total 6.84

Vertical plane dispersion (mm/%)
 0
 y-momentum[%] (slit/dispersion) total 100

Left limit (aperture) -150 mm
 Right limit (aperture) 150 mm
 L slit -100 R slit 100

horizontal

vertical

Top limit (aperture) 150 mm
 T slit 100

Bottom limit (aperture) -150 mm
 B slit -100

vertical

APERTURES
 Shape (see *)
 Rectangle
 Ellipse

Use in Calculations
 Horizontal
 Vertical

SLITS
 Slits shape (see *)
 Rectangle
 Ellipse

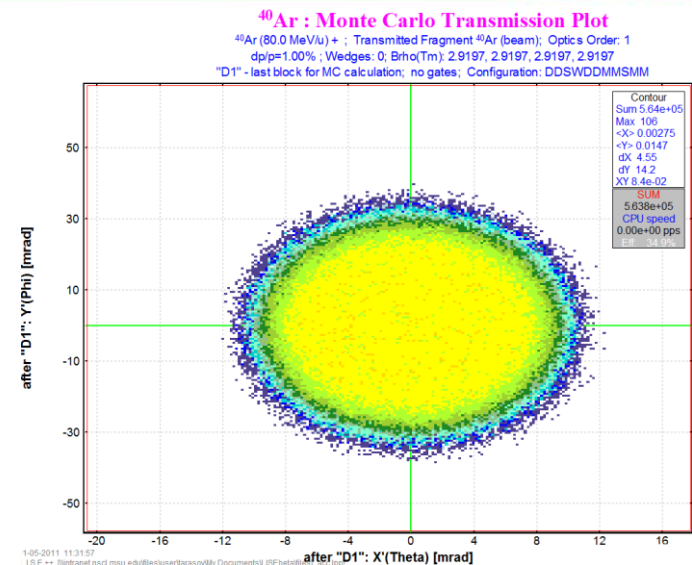
Horizontal Slit Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

Vertical Slit Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

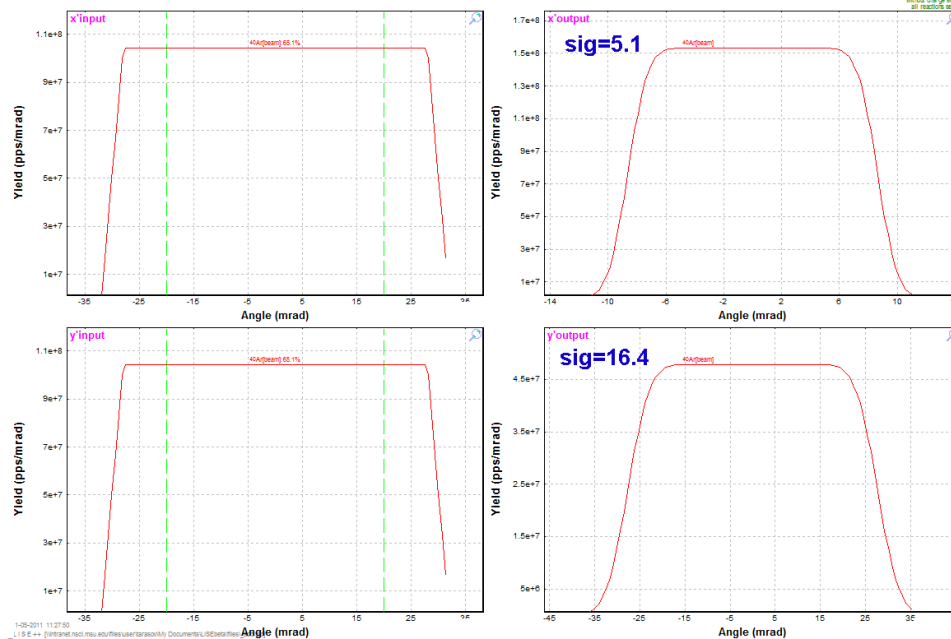
Only the Monte Carlo mode uses "Ellipse" Shapes and Aperture settings.
 The Distribution method uses only "Rectangle" shape slits.

OK Cancel

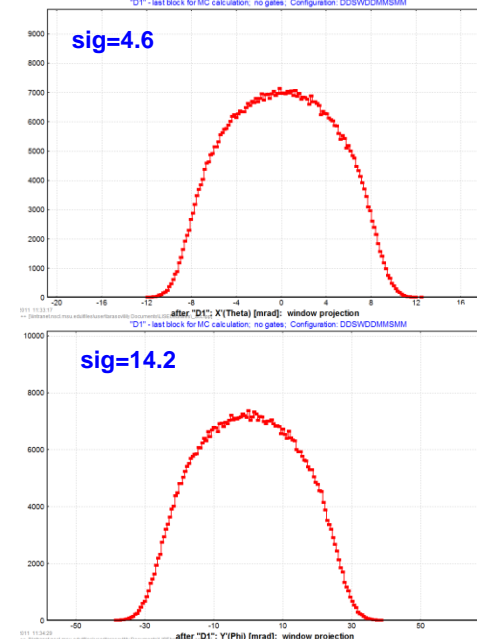
Angular Transmission
 Distribution = 42.3%
 MonteCarlo = 34.9%

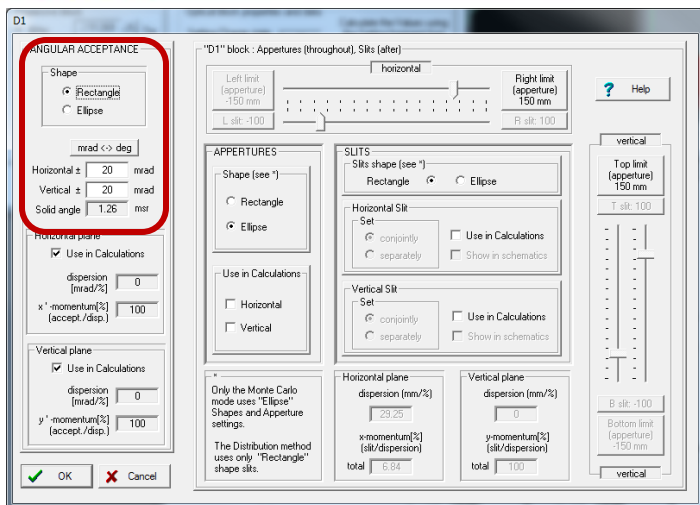


D1-Angle
⁴⁰Ar (80.0 MeV/u), Settings on ⁴⁰Ar, Config: DDSWDDMSMM
 dp/p=1.00%, Wedges: 0, Bho(Tm): 2.9197, 2.9197, 2.9197, 2.9197



⁴⁰Ar : Monte Carlo Transmission Plot
 after "D1": X'(Theta) [mrad] window projection -- ⁴⁰Ar (80.0 MeV/u) + ; Transmitted Fragment ⁴⁰Ar (beam); Optics Order: 1
 dp/p=1.00%; Wedges: 0; Bho(Tm): 2.9197, 2.9197, 2.9197, 2.9197
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMSMM

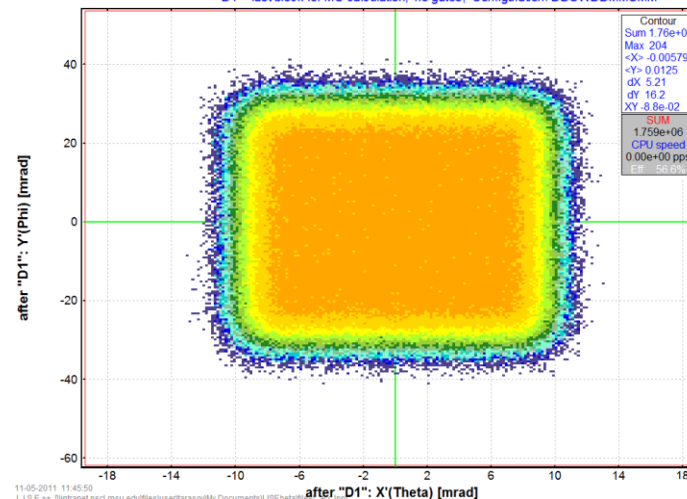




Angular Transmission Distribution = 59.5%
MonteCarlo = 58.6%

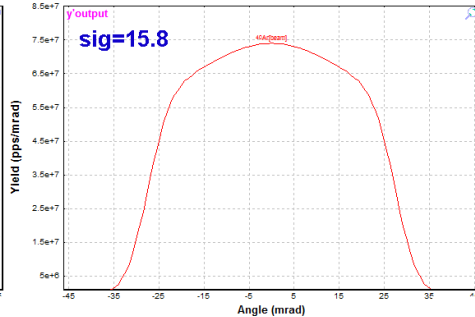
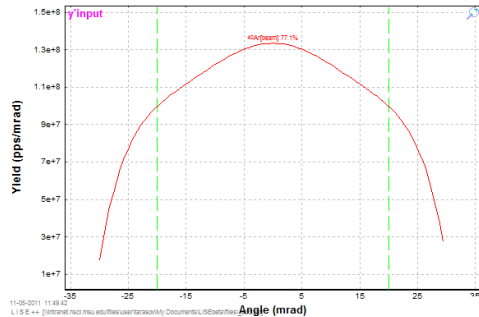
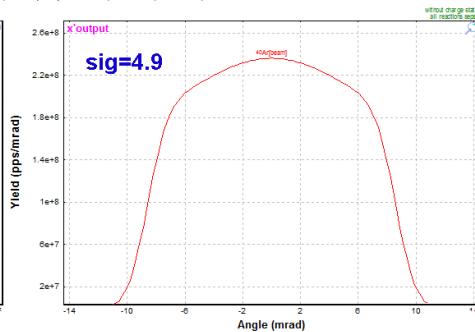
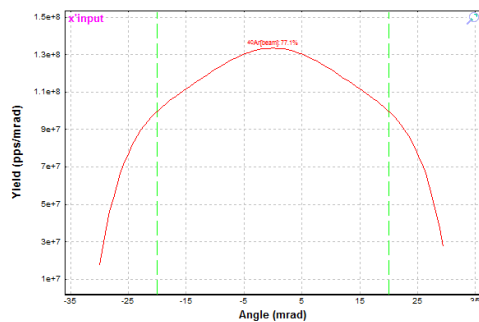
⁴⁰Ar : Monte Carlo Transmission Plot

⁴⁰Ar (80.0 MeV/u) + : Transmitted Fragment ⁴⁰Ar (beam); Optics Order: 1
dp/p=1.00%; Wedges: 0; Bho(Tm): 2.9197, 2.9197, 2.9197, 2.9197
"D1" - last block for MC calculation; no gates; Configuration: DDSWDDMMSSM



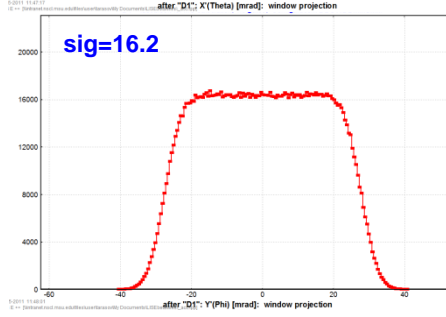
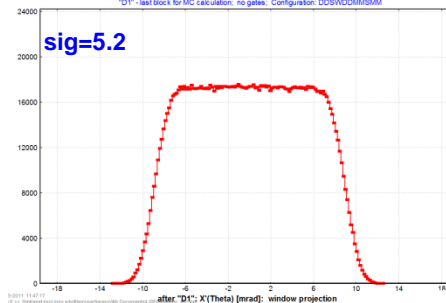
D1-Angle

⁴⁰Ar (80.0 MeV/u); Settings on ⁴⁰Ar; Config: DDSWDDMMSSM
dp/p=1.00%; Wedges: 0; Bho(Tm): 2.9197, 2.9197, 2.9197, 2.9197



⁴⁰Ar : Monte Carlo Transmission Plot

after "D1": X'(Theta) [mrad]; window projection --> X'(80.0 MeV/u) + : Transmitted Fragment ⁴⁰Ar (beam); Optics Order: 1
dp/p=1.00%; Wedges: 0; Bho(Tm): 2.9197, 2.9197, 2.9197, 2.9197
"D1" - last block for MC calculation; no gates; Configuration: DDSWDDMMSSM



D1

ANGULAR ACCEPTANCE

Shape
 Rectangle
 Ellipse

mrad <> deg

Horizontal ± 20 mrad
 Vertical ± 20 mrad
 Solid angle 1.26 msr

Horizontal plane
 Use in Calculations
 dispersion [mrad/%] 0
 x'-momentum[%] (accept./disp.) 100

Vertical plane
 Use in Calculations
 dispersion [mrad/%] 0
 y'-momentum[%] (accept./disp.) 100

OK Cancel

"D1" block : Apertures (throughout), Slits (alter)

horizontal

Left limit (aperture) -150 mm
 Right limit (aperture) 150 mm
 L slit -100 R slit 100

vertical

Top limit (aperture) 150 mm
 T slit 100

B slit -100
 Bottom limit (aperture) -150 mm

vertical

APERTURES

Shape (see *)
 Rectangle
 Ellipse

Use in Calculations
 Horizontal
 Vertical

Only the Monte Carlo mode uses "Ellipse" Shapes and Aperture settings.
 The Distribution method uses only "Rectangle" shape slits.

SLITS

Slits shape (see *)
 Rectangle
 Ellipse

Horizontal Slit Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

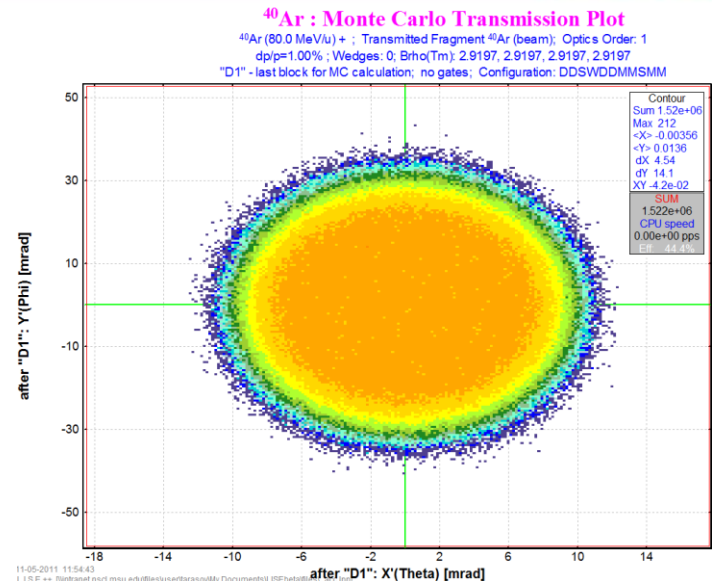
Vertical Slit Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

Horizontal plane
 dispersion (mm/%) 29.25
 x-momentum[%] (slit/dispersion) total 6.84

Vertical plane
 dispersion (mm/%) 0
 y-momentum[%] (slit/dispersion) total 100

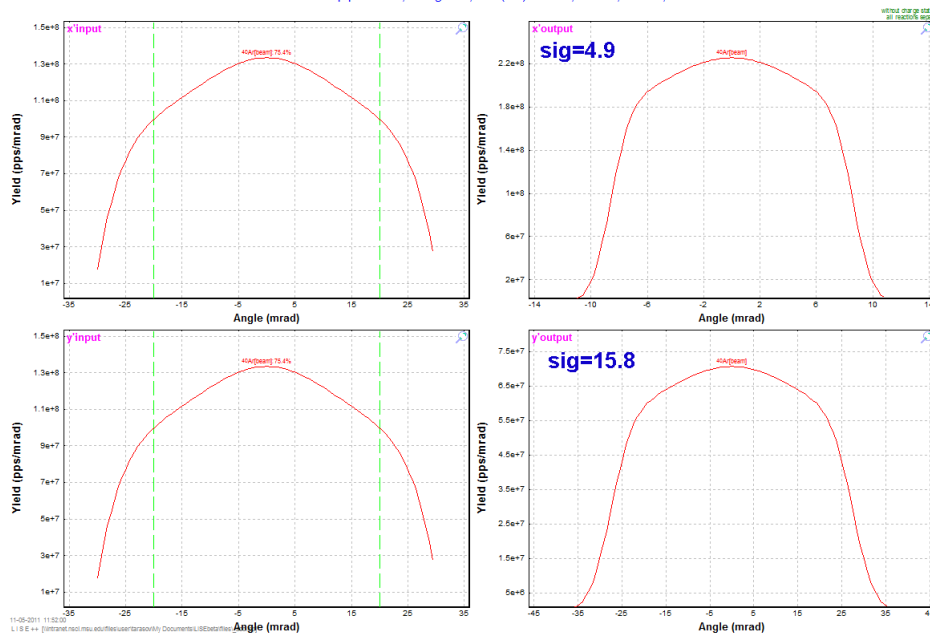
Help

Angular Transmission
 Distribution = 56.8%
 MonteCarlo = 44.4%



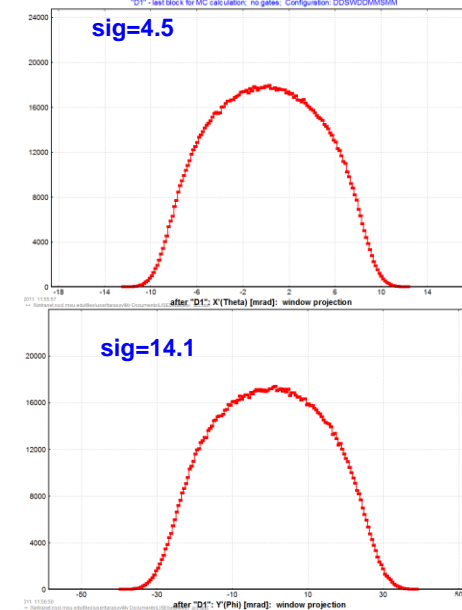
D1-Angle

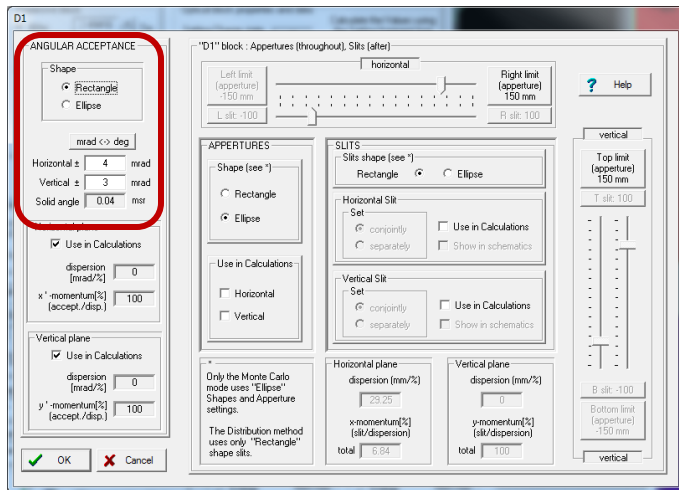
⁴⁰Ar (80.0 MeV/u); Settings on ⁴⁰Ar; Config: DDSWDDMMMSMM
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.9197, 2.9197, 2.9197, 2.9197



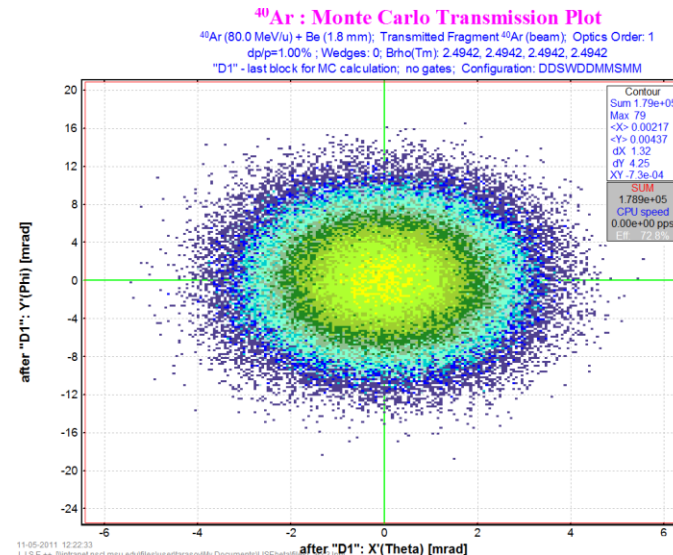
⁴⁰Ar : Monte Carlo Transmission Plot

after "D1": X'(Theta) [mrad]; window projection -- ⁴⁰Ar (80.0 MeV/u) + ; Transmitted Fragment ⁴⁰Ar (beam); Optics Order: 1
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.9197, 2.9197, 2.9197, 2.9197
 "D1" - last block for MC calculation; no gates; Configuration: DDSWDDMMMSMM



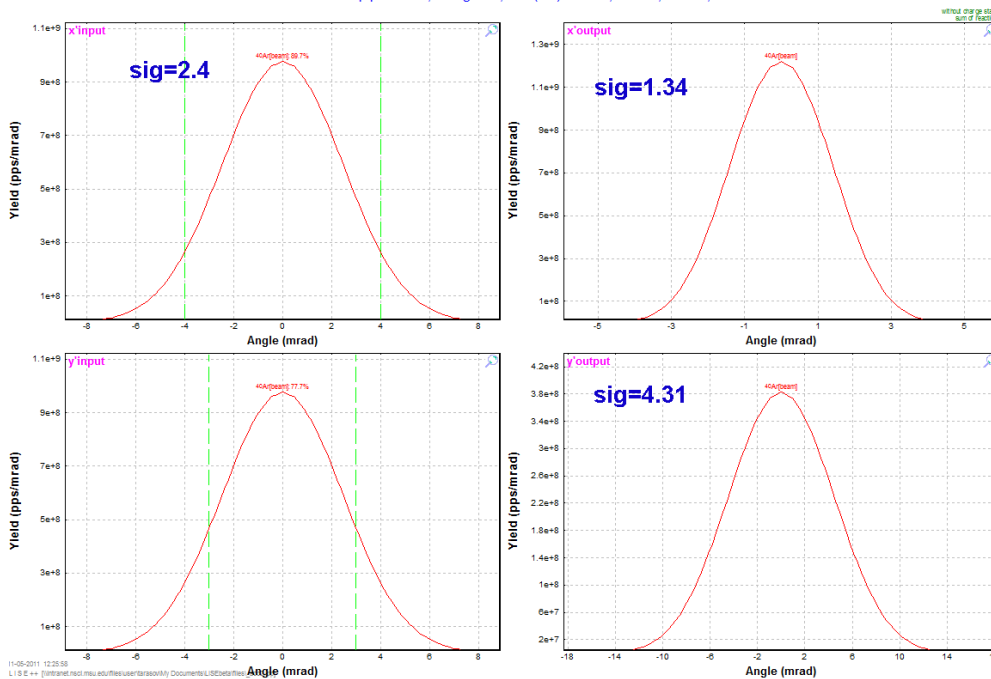


Angular Transmission
Distribution = 69.7%
MonteCarlo = 72.8%

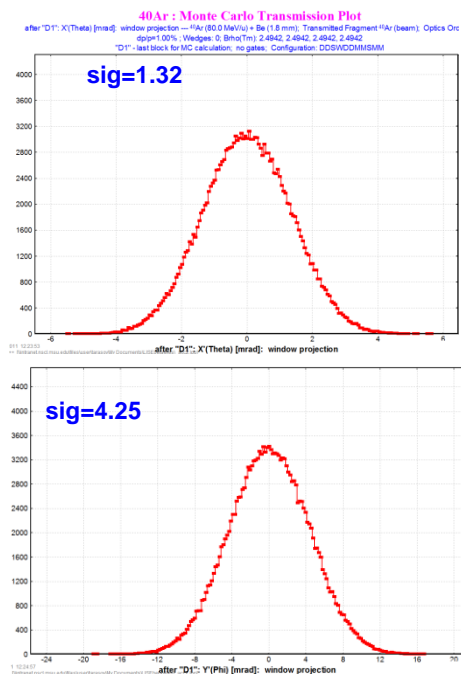


D1-Angle

⁴⁰Ar (80.0 MeV/u) + Be (1.8 mm); Settings on ⁴⁰Ar; Config: DDSWDDMMSSM
 dp/p=1.00%; Wedges: 0; Brho(Tm): 2.4942, 2.4942, 2.4942, 2.4942



Init sigma = 2.3



D1

"D1" block : Apertures (throughout), Slits (after)

ANGULAR ACCEPTANCE

Shape
 Rectangle
 Ellipse

mrad <> deg

Horizontal ± 4 mrad
 Vertical ± 3 mrad
 Solid angle 0.04 msr

Horizontal plane
 Use in Calculations
 dispersion [mrad/%] 0
 x'-momentum[%] (accept./disp.) 100

Vertical plane
 Use in Calculations
 dispersion [mrad/%] 0
 y'-momentum[%] (accept./disp.) 100

APERTURES
 Shape (see "S")
 Rectangle
 Ellipse

Use in Calculations
 Horizontal
 Vertical

SLITS
 Slits shape (see "S")
 Rectangle
 Ellipse

Horizontal Slit
 Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

Vertical Slit
 Set
 conjointly
 separately
 Use in Calculations
 Show in schematics

Horizontal plane
 dispersion (mm/%) 29.25
 x-momentum[%] (slit/dispersion) total 6.84

Vertical plane
 dispersion (mm/%) 0
 y-momentum[%] (slit/dispersion) total 100

Left limit (aperture) 150 mm
 Right limit (aperture) 150 mm
 L slit -100 R slit 100

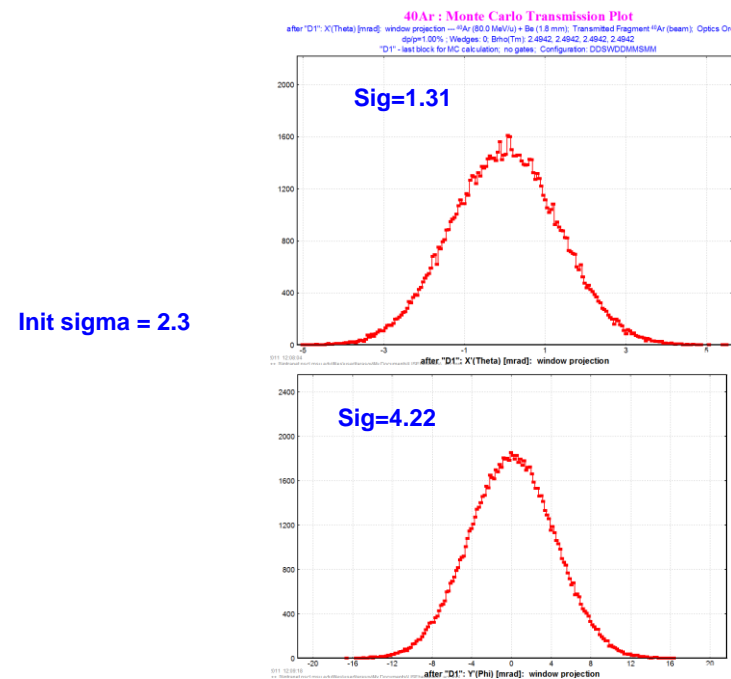
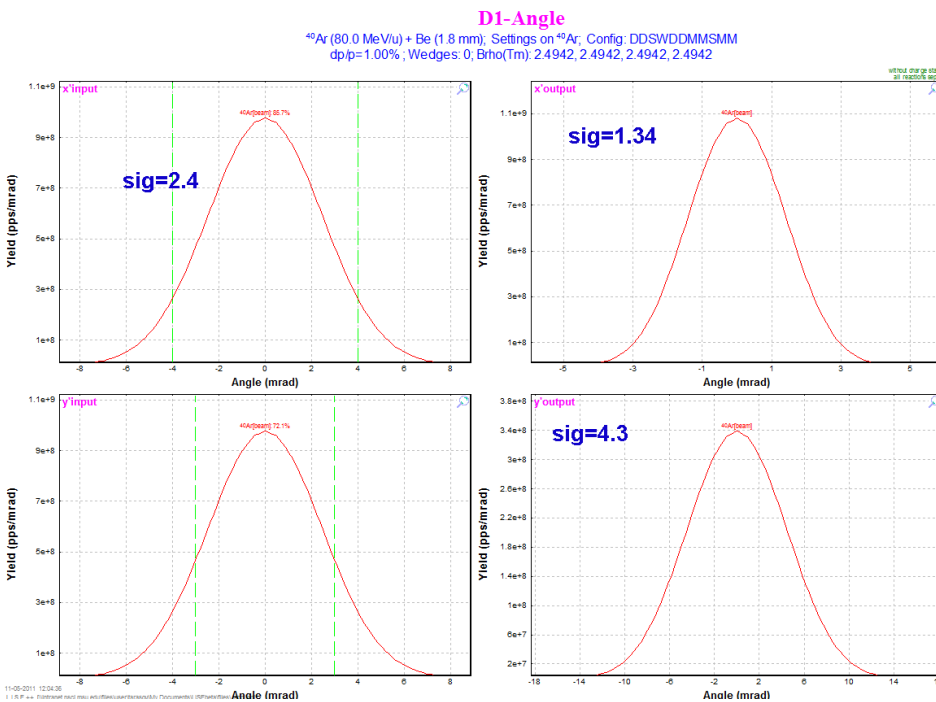
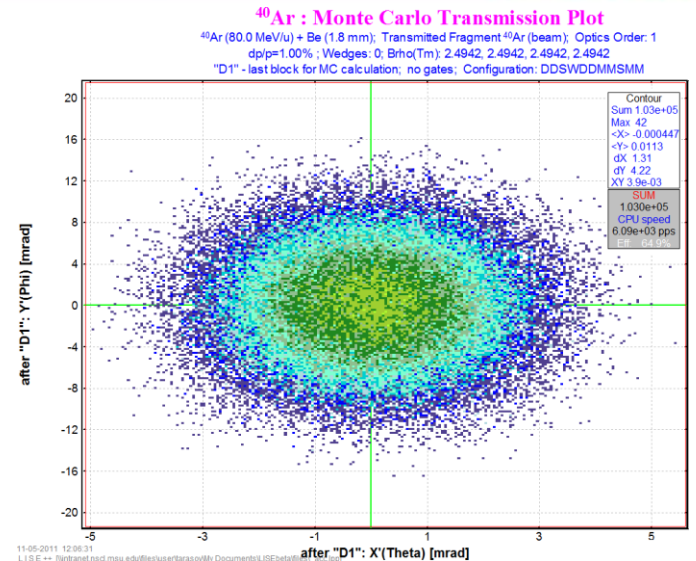
Top limit (aperture) 150 mm
 Bottom limit (aperture) -150 mm
 T slit 100 B slit -100

vertical

Only the Monte Carlo mode uses "Ellipse" Shapes and Aperture settings.
 The Distribution method uses only "Rectangle" shape slits.

OK Cancel

Angular Transmission
 Distribution = 61.8%
 MonteCarlo = 64.9%



Init sigma = 2.3