

v.16.11.16  
02/08/23

It's hard to select a block of interest because of big amount of blocks in total. Mainly they are drift blocks are not used for plot selection

Example of 5 “regular” drift blocks in row

<input checked="" type="checkbox"/> LS1a1	standard : 10.2 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> shield	standard : 40 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-30 H +30    -30 V +30			
<input checked="" type="checkbox"/> LS1a3	standard : 3.15 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> GV	standard : 9.3 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> LS1a5	standard : 26.07 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>

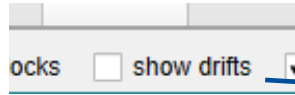
Target	PSW_VD1	CIQT4A	Q_D1639	Lm
Stripper	PSW_SLV	Lpp	L1647	DB5_Slits
dummy	L1184	CIQT4B	Q_D1646	
LS1a1	slits_PS_WED	Lpp	Lh	
shield	Wedge001	CIQT4C	DB3_Slits	
LS1a3	L1192	Lf	Wedge002	
GV	to_flange	to FP	Li	
LS1a5	CIQT1A	PS_slits	Q_D1674	
WIQ1	gap	dummy	L1684	
L1018	CIQT1B	La	Q_D1682	
FRNT-SHLD	gap	Q_D1476	L1694	
WIQ2	CIQT1C	L1477	Q_D1691	
L1030	to_flange	Q_D1484	Lj	
WIQ3	L1225	L1486	FSDA_3	
L1040	FSD2_SCD3	Q_D1492	Lk	
Ltv1	L1274	Lb	Q_D1733	
TV-SHLD	to_flange	DH_D1513	L1743	
Ltv2	CIQT2A	Lc	Q_D1740	
L1051	gap	Q_D1538	L1752	
FSD1_SCD1	CIQT2B	L1544	Q_D1748	
toBDaxis	gap	Q_D1545	Lj	
to IMG1	CIQT2C	L1554	DB4_Slits	
slit_IMG1	to_flange	Q_D1553	Wedge003	
toBDexit	Lmid1	Ld	Lk	
toL1088	Lmid2	DB2_Slits	Q_D1767	
FSS2_space	to_flange	Wedge001	L1777	
L1096	CIQT3A	Le	Q_D1775	
FSD1_SCD2	gap	Q_D1573	L1787	
L1133	CIQT3B	L1580	Q_D1783	
WIQ4	gap	Q_D1580	Li	
L1142	CIQT3C	L1589	DH_D1807	
WIQ5	to_flange	Q_D1588	Lm	
L1153	L1385	Lf	Q_D1827	
FSQ6_space	FSD2_SCD4	DH_D1608	L1843	
L1164	L1421	Lg	Q_D1835	
WIQ7	L1421	Q_D1629	L1852	
toVD1	Lf	L1638	Q_D1843	

Preferences dialog box with various settings sections:

- Starting files and working directories:** Starting configuration (A1900\_2019.lcn), Starting options file (FRIB\_2023.lopt), Working directory (Saved to this PC), LISE\*\* working directory (User My Documents).
- Options dialogs:** Font size, Scheme options, Window satellites locations, Target optimization options, Plot options.
- Calculation settings:** Calculation threshold (1.0e-10 pps), Dimension of distribution (NP) (64), Calculate spectrometer settings (mean), Apply "Edge" effect (Yes), Charge States (Yes), Cross Section (File).
- Transmission information in the Table of Nuclides:** Display 1 (Total: All reactions (pps)), Display 2 (TI transmission no SR (%)).
- Utility options:** Navigation map, Spectrometer scheme, Allow drift blocks hiding (checkbox), Balls animation, Show laboratory logs, Sound.
- Expert options:** Show Fitting constraint blocks, Use angular straggling contribution, Primary beam scattering, Show Abrasion-Ablation.
- Debug options:** Show transmission calculation time, Charge State Optimization Debugging Mode, Distribution Debugging Mode, Hold inclination angles.

new option

Check box to permit "show drifts" check box in the statusbar



Compare with the menu list in the first slide

It's applied for:

- left block panel
- Top plot menu and toolbar
- MC dialog block selection

Target	Q_D1553
Stripper	DB2_Slits
dummy	Wedge001
WIQ1	Q_D1573
WIQ2	Q_D1580
WIQ3	Q_D1588
TV-SHLD	DH_D1608
FSD1_SCD1	Q_D1629
slit_IMG1	Q_D1639
FSD1_SCD2	Q_D1646
WIQ4	DB3_Slits
WIQ5	Wedge002
WIQ7	Q_D1674
slits_PS_WED	Q_D1682
Wedge001	Q_D1691
CIQT1A	FSDA_3
CIQT1B	Q_D1733
CIQT1C	Q_D1740
FSD2_SCD3	Q_D1748
CIQT2A	DB4_Slits
CIQT2B	Wedge003
CIQT2C	Q_D1767
CIQT3A	Q_D1775
CIQT3B	Q_D1783
CIQT3C	DH_D1807
FSD2_SCD4	Q_D1827
CIQT4A	Q_D1835
CIQT4B	Q_D1843
CIQT4C	DB5_Slits
PS_slits	
dummy	
Q_D1476	
Q_D1484	
Q_D1492	
DH_D1513	
Q_D1538	
Q_D1545	

Monte Carlo calculation of fragment transmission

What isotope transmission to calculate?

- One ION of interest. Chose manually here
- One FRAGMENT of interest. All produced charge states are kept
- Group of isotopes already calculated by the Distribution method (Ncalc = 0)
- List of isotopes from file to produce inside target
- Input ions rays from file emitted from target

2-D  2-D & 3-D  ?

A	Element	Z
100	Tc	43

$\beta^-$  decay

Charge states: 43+ dummy Set

Reaction mechanism: Projectile Fragmentation

MC transmission options

"Distribution" calculation

MC calculation to file

Monte Carlo

```
// 16.11.2 01/15/23 // crash in Radiation Calculator issue in GetHalfLifeForRadiationDecay -> min ValueErr
// 16.11.4 01/18/23 // correction in SElement : use for min separation energy only enable channels

// 16.11.5 01/19/23 //Fixed: bug in atima for energy loss higher than 110 -- crush // precalculated_lindhard, precalculated_lindhard_X
// 16.11.6 01/19/23 //Fixed: bug in atima for energy loss higher than 110 -- crush //void global_eqdist(int zp,double ein,int zt,double *f){
// 16.11.7 01/19/23 // new class TSecTarDebugDlg to plot statistics during calculations // modification in TSecondaryTargetDlg
modification in s_ST_option to add showDebug value

// 16.11.8 01/19/23 // class TSecTarDebugDlg connection to CalcArea and CalcAll // ST_option->showDebug to start
// 16.11.9 01/19/23 // dialog SecTarDebugDlg shifted with new command in class
// 16.11.10 01/19/23 // modification due to reaction in materials in void Ccalc::CalcPowerDeposition(double CS_NAG)
// 16.11.11 01/19/23 // modification due to energy loss in void Ccalc::CalcPowerDeposition(double CS_NAG)
// 16.11.12 01/21/23 // modification due to reaction loss in materials in void Ccalc::CalcPowerDeposition(double CS_NAG) // Power
Deposition can be used now for fragments produced in materials

// 16.11.13 01/21/23 // implementation of ARIS calibration files, // an extended files with block names and calibrations
// 16.11.14 01/22/23 // Change default settings for Quad bounds, FPinM. // COSY-disactivated message in Optics fit dialog
// 16.11.15 02/08/23 // new options ShowDrift and PermitShowDrift // for left setup panel, menu, MC_dialog
// 16.11.16 02/08/23 // Gauge at creation of blocks, if block number > 50
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