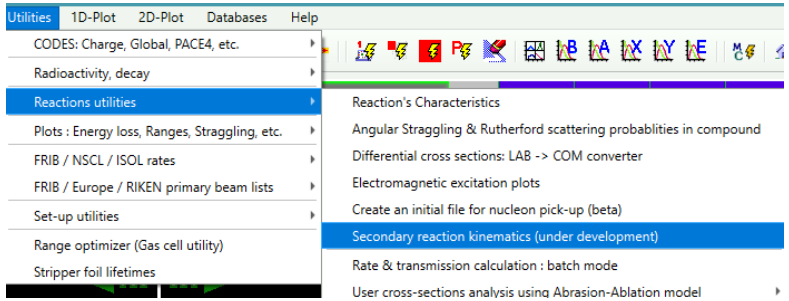
Secondary Reactions, Silent mode

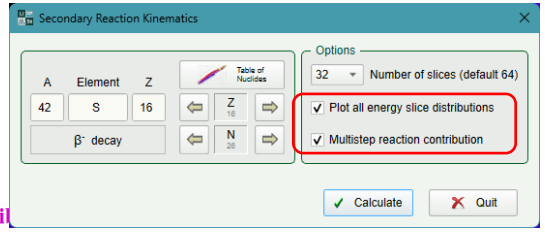
v.17.5
05/05/24

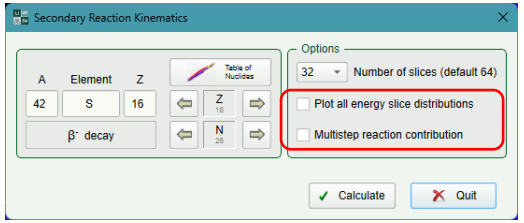
- Kinematics of secondary reaction products
- Transmission calculation option: List of Isotopes
- Calculation results : Rates table
- Silent mode
- Rates calculation from command string
- Fragmentation CS plots: plots selection to draw
- All modifications v.17.3.2-17.5.1

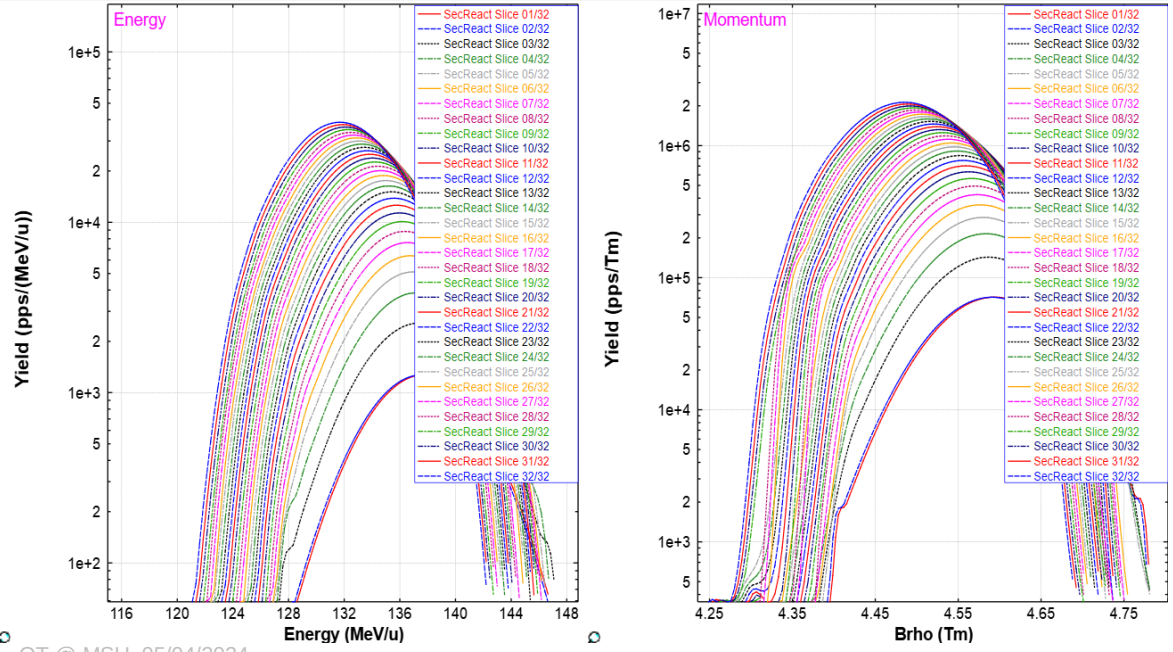
Kinematics of secondary reaction products

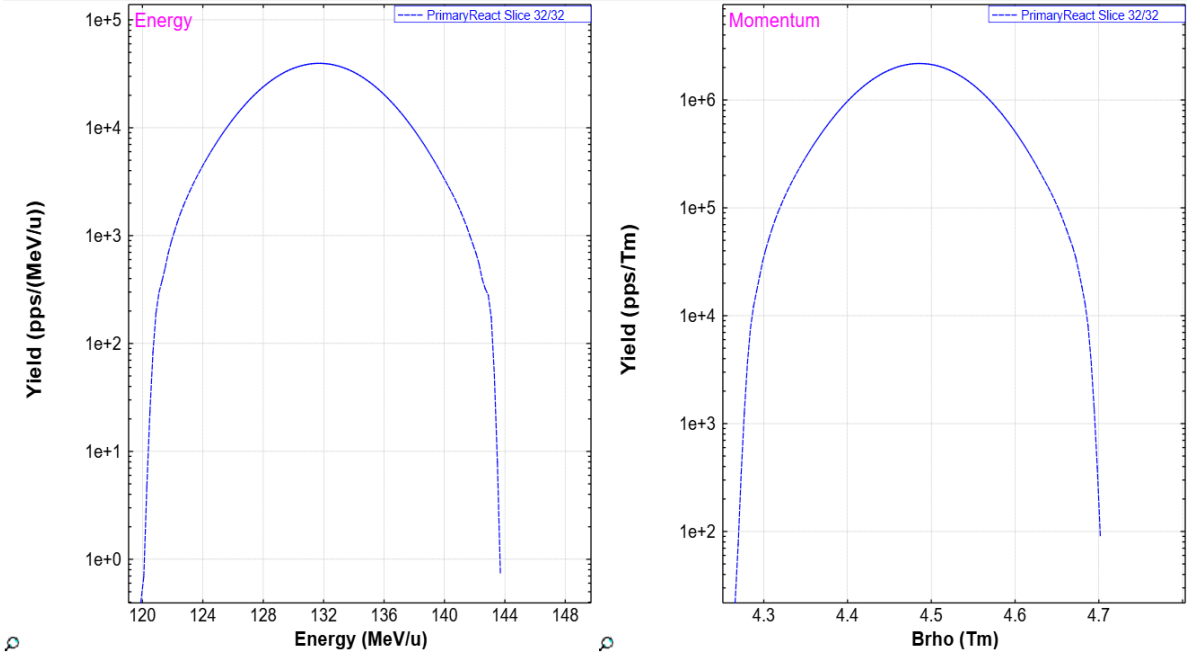


Sorry! The current dialog is still under development, in order to avoid confusion with calculation results, please,

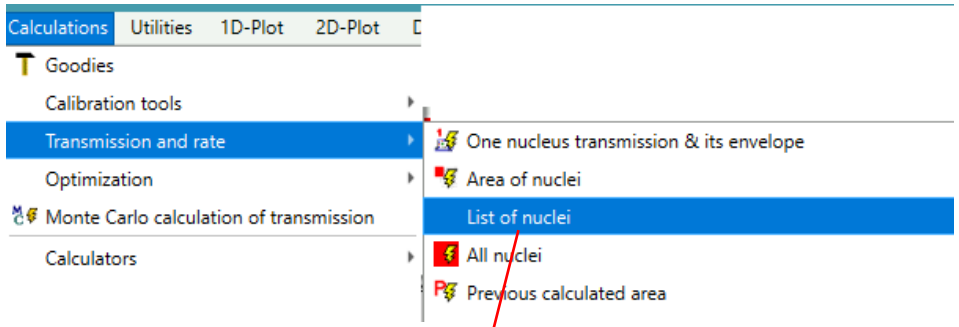




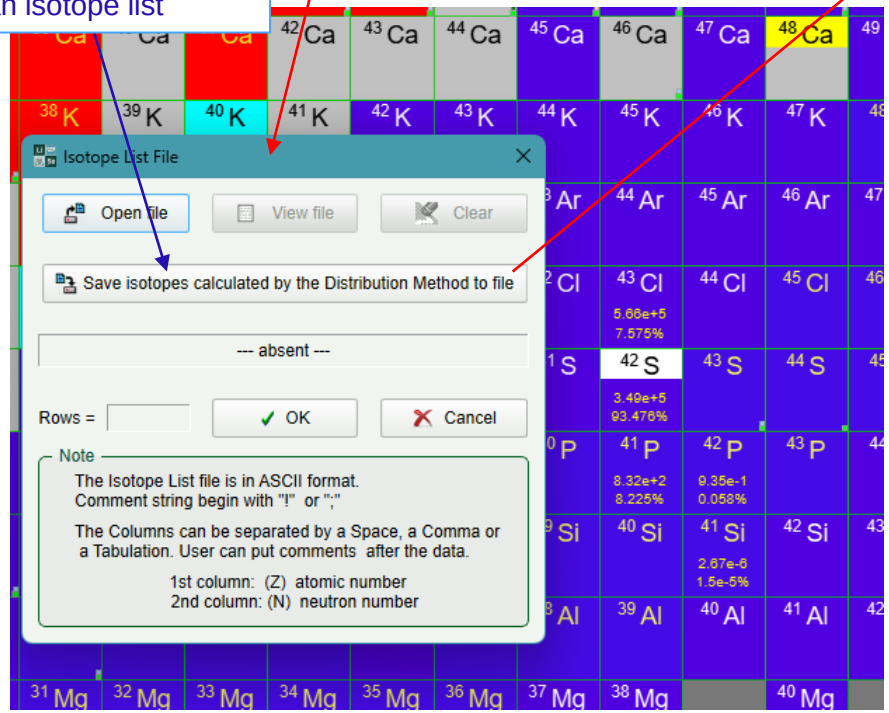


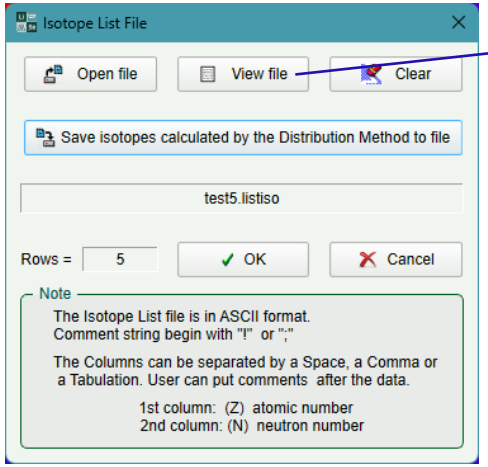


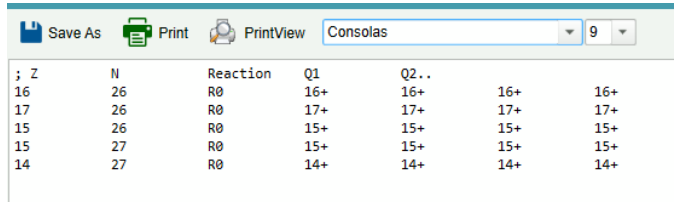
Transmission calculation option: List of Isotopes



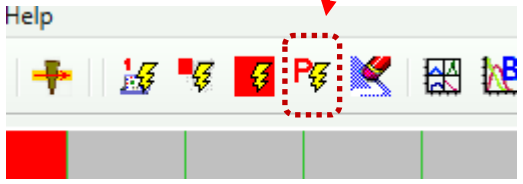
Use this button to add already calculated isotopes to an isotope list



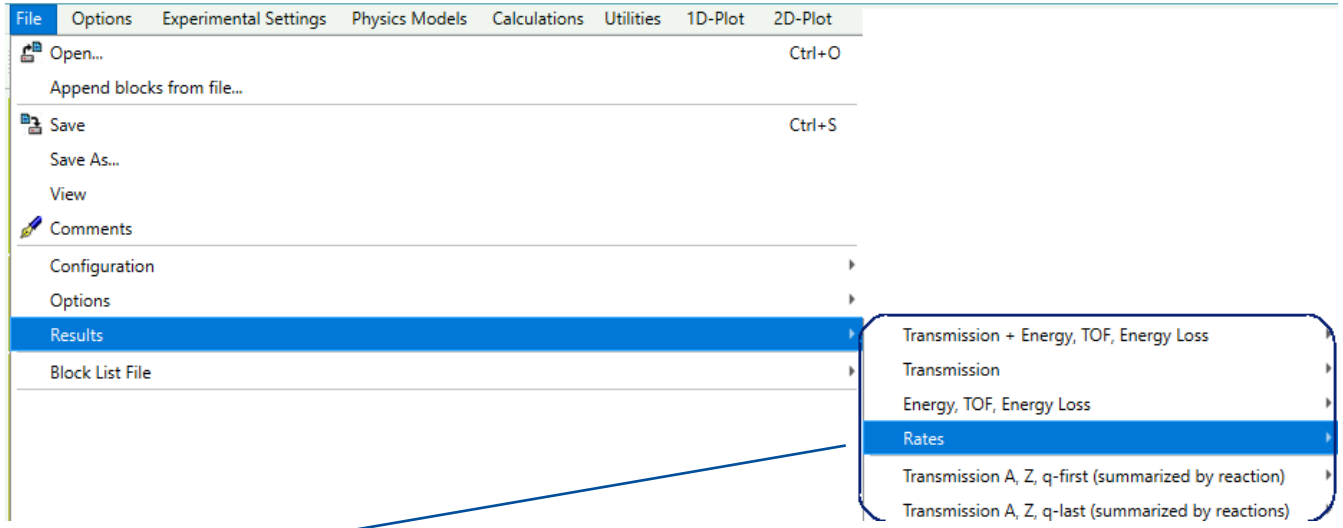




Use the “previous calculated area” to repeat Transmission calculation with the List of Isotopes



Calculation results : Rates table



Save As | Print | PrintView | Consolas | 9

A	43	42	42	41	41
Z	17	16	15	15	14
N	26	26	27	26	27
Q1	17	16	15	15	14
Q2	17	16	15	15	14
Q3	17	16	15	15	14
Q4	17	16	15	15	14
React	0	0	0	0	0
Rate(pps) after:					
Stripper	7.33e+06	3.66e+05	1.57e+03	9.94e+03	17.5
D1	7.21e+06	3.58e+05	1.52e+03	9.59e+03	16.8
I1_slits	2.7e+06	3.57e+05	11.8	2.92e+03	3.65e-05
D2	2.7e+06	3.57e+05	11.8	2.92e+03	3.65e-05
I2_slits	5.67e+05	3.49e+05	0.937	835	2.68e-06
I2_wedge	5.67e+05	3.49e+05	0.937	835	2.68e-06
D3	5.66e+05	3.49e+05	0.935	833	2.67e-06
D4	5.66e+05	3.49e+05	0.935	833	2.67e-06
FP_PPAC0	5.66e+05	3.49e+05	0.935	833	2.67e-06
FP_PPAC1	5.66e+05	3.49e+05	0.935	833	2.67e-06
FP_slits	5.66e+05	3.49e+05	0.935	833	2.67e-06
FP_PIN	5.63e+05	3.47e+05	0.93	828	2.66e-06
FP_SCI	0	0	0	0	0

Silent mode, Rate results

- -s : silent mode. LISE will be closed after calculation
- If no “-listiso” key, then FOI rates will be calculated
- -s & -listiso cannot be used without LISE file name
- Rate result file = LISE_filename + “.res5”

Command line arguments: c:/temp/test/82Se_54K.lpp -listiso=c:/temp/test/test3.listiso -s

c:\temp\test*.*

Name	Ext	Size
[..]		<DIR>
82Se_54K	lpp	76,870
test3	listiso	337
82Se_54K	res5	1,495

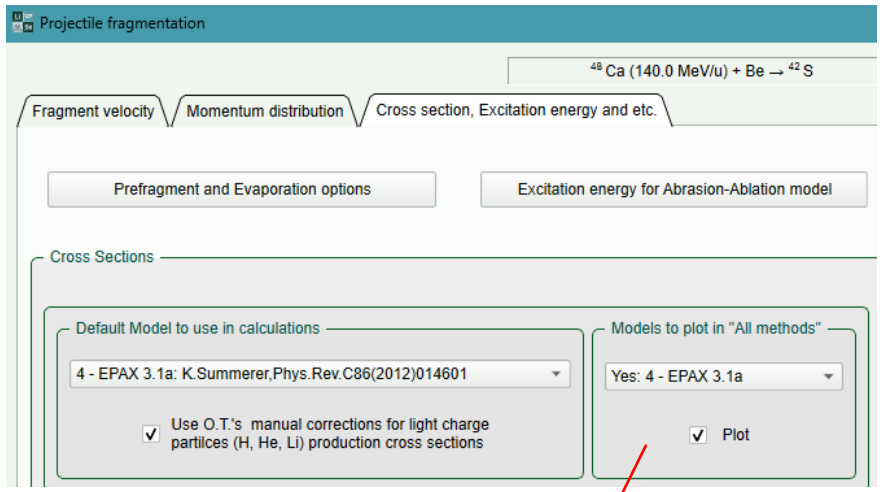
Lister - [c:\temp\test\test3.listiso]

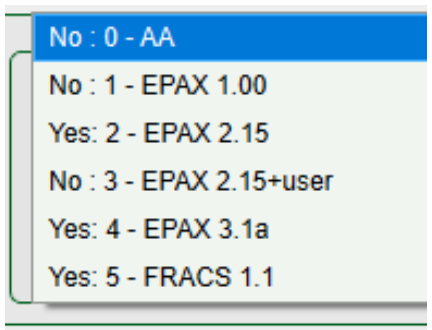
File Edit Options Encoding Help

; Z	N	Reaction	Q1	Q2..	
18	30	R0	18+	18+	18+
16	30	R0	16+	16+	16+
16	32	R0	16+	16+	16+
18	32	R0	18+	18+	18+
18	34	R0	18+	18+	18+
19	35	R0	19+	19+	19+
20	36	R0	20+	20+	20+
21	35	R0	21+	21+	21+
21	37	R0	21+	21+	21+
20	34	R0	20+	20+	20+
19	33	R0	19+	19+	19+
17	33	R0	17+	17+	17+

A	58	56	56	54	54	52	52	50	48	50	48	46
Z	21	21	20	20	19	19	18	18	18	17	16	16
N	37	35	36	34	35	33	34	32	30	33	32	30
Q1	21	21	20	20	19	19	18	18	18	17	16	16
Q2	21	21	20	20	19	19	18	18	18	17	16	16
Q3	21	21	20	20	19	19	18	18	18	17	16	16
Q4	21	21	20	20	19	19	18	18	18	17	16	16
React	0	0	0	0	0	0	0	0	0	0	0	0
Rate(pps) after:												
Target	0.108	14	0.0189	3.19	0.00314	0.696	0.000499	0.145	24.4	7.56E-05	1.09E-05	0.00559
Stripper	0.108	14	0.0189	3.19	0.00314	0.696	0.000499	0.145	24.4	7.56E-05	1.09E-05	0.00559
D1	0.105	13.5	0.0182	3.04	0.00297	0.65	0.000463	0.133	21.7	6.84E-05	9.74E-06	0.00487
I1_slits	0.0663	0.333	0.0157	0.438	0.00278	0.258	0.000374	0.0908	1.3	3.37E-05	1.79E-06	0.004
D2	0.0663	0.333	0.0157	0.438	0.00278	0.258	0.000374	0.0908	1.3	3.37E-05	1.79E-06	0.004
I2_slits	0.0376	0.0384	0.0125	0.116	0.00241	0.123	0.000284	0.0624	0.332	2.00E-05	7.86E-07	0.00311
I2_wedge	0.0376	0.0384	0.0125	0.116	0.00241	0.123	0.000284	0.0624	0.332	2.00E-05	7.86E-07	0.00311
D3	0.0375	0.0383	0.0124	0.115	0.0024	0.122	0.000283	0.0622	0.33	1.99E-05	7.83E-07	0.0031
D4	0.0375	0.0383	0.0124	0.115	0.0024	0.122	0.000283	0.0622	0.33	1.99E-05	7.83E-07	0.0031
FP_PPAC0	0.0375	0.0383	0.0124	0.115	0.0024	0.122	0.000283	0.0622	0.33	1.99E-05	7.83E-07	0.0031
FP_PPAC1	0.0375	0.0383	0.0124	0.115	0.0024	0.122	0.000283	0.0622	0.33	1.99E-05	7.83E-07	0.0031
FP_slits	0.0375	0.0383	0.0124	0.115	0.0024	0.122	0.000283	0.0622	0.33	1.99E-05	7.83E-07	0.0031
FP_PIN	0.0373	0.0381	0.0124	0.114	0.00239	0.122	0.000281	0.0618	0.328	1.98E-05	7.78E-07	0.00308
FP_SCI	0	0	0	0	0	0	0	0	0	0	0	0

Fragmentation CS plots: plots selection to draw





Default

?

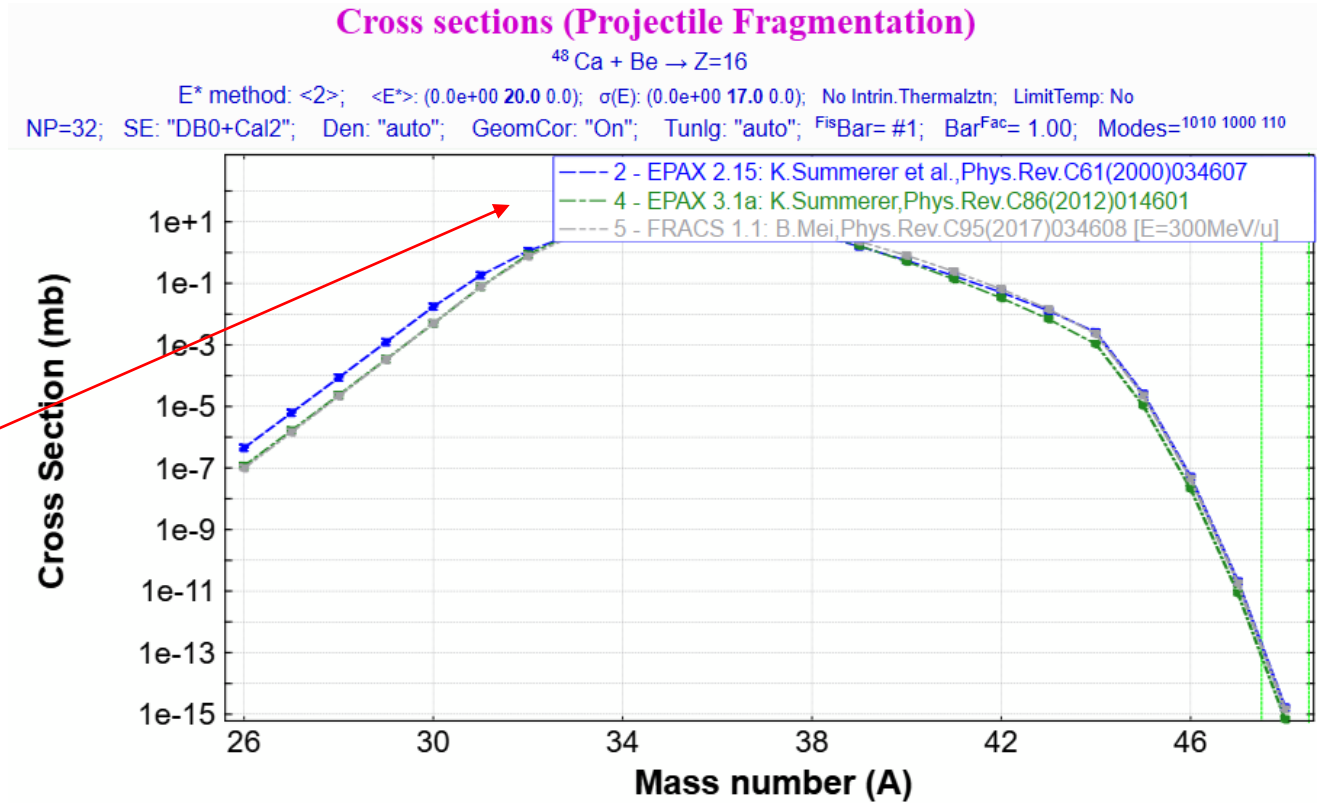
No

Yes

No

Yes

Yes



All modifications v.17.3.2-17.5.1

17.3.2 03/25/24 Secondary reaction kinematics: development started

17.3.3 03/25/24 Z & N values in CN-dialogs

17.3.4 03/26/24 Migration to Qt v.6.6.2

17.3.5 **03/27/24 L_Trans_Wedge : corrections in the shift position case**

17.3.6 03/27/24 discovery iso-file for updated based on https:frib.msu.edu/public/nuclides

17.3.7 03/27/24 discovery project link from LISE

17.3.8 03/27/24 discovery links are modified for chen's folders

17.3.9 03/27/24 using share_ptr for Celement in o_class_physics.h

17.3.10 03/27/24 revision of Beam scattering in target

17.4.0 03/27/24 middle version was changed

17.4.1 04/12/24 Copy/Past distributions in Graph : no disable issue, warning if empty

17.4.2 04/12/24 compiled with qt v.6.7

17.4.3 04/17/24 no plots after target, only after stripper

17.4.4 04/20/24 Fragmentation CS plot all methods : selection to plot

17.4.5 04/20/24 Fragmentation CS plot --- correction for error plotting

17.4.6 04/20/24 Secondary reactions : sum of lost

17.4.7 04/21/24 Secondary reactions dialog update

17.4.8 04/29/24 update of secondary reaction kinematics

17.4.9 04/30/24 DrawThisDist flag for plot statistics

17.4.10 04/30/24 Secondary Reactions Kinematics dialog update for plot Al and Numder of Slices

17.4.11 04/30/24 energy loss with trans_after_lose in Secondary Reactions Kinematics

17.4.12 05/01/24 password energy for the Secondary Reactions Kinematics dialog

17.4.13 05/02/24
SpecialSilentMode (GSI request) "-s"
run FOI transmission, save results

17.4.14 05/02/24
Tong's patch manually has been merged

17.4.15 05/03/24
Working on Special Silent Mode

17.4.16 05/03/24
Transmission: List of Isotopes (shell)

17.4.17 05/03/24
Revision of trans prev area

17.4.18 05/03/24
Transmission: List of Isotopes (completed)

17.4.19 05/03/24
Menu->Results->Rates

17.4.20 05/03/24
Menu->Results->*** no more "print"

17.4.21 05/03/24
Results "Rate" completed

17.4.22 05/04/24
new argument -listiso

17.5.0 05/05/24
middle version changed

17.5.1 05/05/24
correction in secondary reactions kinematics for the primary reaction mode