

//-----  
 // 14.6.8 05/29/20

// \* d\_Calculator\_fusionResidue : DONE!  
 // \* d\_Mechanism\_fusion : DONE! (except output file)

// -- substitution QWindow for Qwidget for parent parameter  
 // everywhere in the code  
 // -- revision "o\_clas\_physics" according to version v.13  
 // -- revision "o\_MC\_fission" according to version v.13  
 // -- revision "o\_Cinematique" according to version v.13  
 // -- revision "o\_Reaction" according to version v.13  
 // -- revision "o\_brho\_beta" according to version v.13%

// 14.6.9 05/30/20

// \* d\_ReactionCharacter : DONE! --> results 100% correspond to Borland

// \* d\_Participant : DONE! --> results 100% correspond to Borland

// \* d\_RCE : DONE! --> results 100% correspond to Borland

// \* d\_Mechanism\_fusion -- output file in html format: DONE!

// CNO\_base & CNO\_baseT dialogs should be remade

// in order to exclude their UIs (write forms manually) and join them

48Ca

parameter	value	dimension	definition	reference	formula
Q	-44.22	MeV	mass excess	Audi	
R	4.11	fm	equivalent sharp radius	Wilcke	$1.28 A^{1/3} - 0.76 + 0.8 / A^{1/3}$
R <sub>1</sub>	4.14	fm	equivalent sharp radius	Hodgson	$(1.13 + 0.0002 A) A^{1/3}$
C	3.87	fm	matter half-density rad.	Wilcke	$R (1 - (1/R)^2)$
C1	3.9	fm	matter half-density rad.	Hodgson	$R^1 (1 - (1/R^1)^2)$
R <sub>charge</sub>	4.59	fm	charge radius	Hodgson	$1.28 A^{1/3} + 2.009 / A^{1/3} - 1.513 / A$
R <sub>s</sub>	3.81	fm	half-density radius	Bass	$1.12 A^{1/3} - 0.94 / A^{-1/3}$

Quit Database

Reaction Characteristics

48Ca + 9Be -> 57Cr\*

parameter	value	dimension	definition	reference	formula
Q	19.65	MeV	mass excess	Audi	$Q_p + Q_t - Q_c$
R <sub>p</sub> + R <sub>t</sub>	6.4	fm	Sum of eq. sharp radii	Wilcke	$R_p + R_t$
C <sub>p</sub> + C <sub>t</sub>	5.72	fm	Sum of m. half-den. radii	Wilcke	$C_p + C_t$
Rint	9.31	fm	interaction radius	Wilcke	$C_t + C_p + 4.49 - (C_t + C_p) / 6.35$
R0	1.63	fm	R0	Wilcke	$R_{int} / (A_p^{1/3} + A_t^{1/3})$
Rint2	8.92	fm	interaction radius	Hodgson	$C_{t1} + C_{p1} + 3.2$
RintB	8.89	fm	interaction radius	Bass	$R_{at} + R_{ap} + 3.2$
Rbar	8.52	fm	fusion barrier for s-wav.	Wilcke	$R_{int} - 0.3117 (Z_p Z_t)^{0.2112}$
Rc	8.27	fm	Coulomb radius	LNP	$0.5 + 1.36 (A_p^{1/3} + A_t^{1/3})$
VC	12.36	MeV	Coulomb pot. at r=Rint	Wilcke	$1.438 Z_p Z_t / R_{int}$
VC_Rbar	13.51	MeV	Coulomb pot. at r=Rbar	Wilcke	$1.438 Z_p Z_t / R_{bar}$
VC_Rc	13.91	MeV	Coulomb pot. at r=Rc	LNP	$1.438 Z_p Z_t / R_c$
Bint	11.68	MeV	Interaction barrier	Bass	$1.438 Z_p Z_t / R_{intB} - R_{at} R_{at} / (R_{at} + R_{at})$
Xf	0.16	MeV	Saddle point (fissility parameter)	-	$Z^2 / A / 50.13 * (1 - 7.826(N-Z)^2 / A^2)$
TKE fission 1	38.3	MeV	fission TKE for simm. fission	Viola66	$0.1071 Z^2 / A^{1/3} + 22.3$
TKE fission 2	25.1	MeV	fission TKE for simm. fission	Viola85	$0.1189 Z^2 / A^{1/3} + 7.3$
TKE fission 3	17.2	MeV	fission TKE for simm. fission	Willkins	$Z_1 Z_2 e^2 / D$

Show characteristics for particle energy 6 MeV/A Exit

Reaction Characteristics from Energy

48Ca + 9Be -> 57Cr\*

parameter	value	dimension	definition	reference	formula
E <sub>lab</sub>	287.6	MeV	Energy		
E <sub>lab</sub> / A	6	MeV / A	Energy per nucleon		$E_{lab} / A_p$
E <sub>cm</sub>	45.5	MeV	Energy in CMS		$E_{lab} * A_t / (A_t + A_p)$
E <sub>cm</sub> + Q	unknown	MeV	Excitation Energy		$E_{cm} + Q$
ETA	5.14		Coulomb parameter	Wilcke	$Z_p Z_t e^2 / h / v$
k	4.06	1/fm	asym. wave number	Wilckie	$\sqrt{2 \mu \text{amu } E_{cm} / h / h}$
a	1.27	fm	parameter	Hodgson	$Z_p Z_t e^2 / 2 / E_{cm}$
QP_CM	18.1	deg	quaterpoint angle in CMS	Wilcke	$2 \text{asin}(ETA / (k * R_{int} - ETA))$
Theta_gr	18.1	deg	grazing angle in CMS	Wilcke	$2 \text{atan}(ETA / L_{max})$
L <sub>CG</sub>	19.7	h/2/pi	crit. gangle for collisions	Hodgson	$k (R_t + R_p) \sqrt{1 - 2a / (R_t + R_p)} - 0.2$
L <sub>max</sub>	32.3	h/2/pi	graz. ang. mom. by QP_CM	Wilcke	$ETA \cot(QP\_CM / 2)$
CS <sub>max</sub>	2043.8	mb	CS derived from Lmax	Wilcke	$n / k^2 (L_{max} + 0.5)^2$
CS <sub>LCG</sub>	777.7	mb	based on LCG	Hodgson	$n / k^2 (L_{CG} + 0.5)^2$
CS <sub>total</sub>	1859.9	mb	total reaction CS	Kox	$n / r_0^2 (... + b * ... - c + D^2) (...)$
Dgr	9.31	fm	dist. of appr. in graz. angle	Hodgson	$a (1 + \text{cosec}(QP\_CM / 2))$
AngleDifr	19.46	deg	1st diffraction minimum	Valentin	$2 \text{asin}(n * L_{wave} / 2 / R_t)$
FBarrier	11.71	MeV	fusion barrier height	Bass	
FRadius	5.7	fm	fusion radius	Bass	
CS <sub>fusion</sub>	1318.4	mb	fusion cross section	Bass	
CS <sub>total</sub>	1845.5	mb	total reaction CS	Bass	

Exit

// 14.6.9 05/30/20

// \* d\_ReactionCharacter : DONE! --> results 100% correspond to Borland

// \* d\_Participant : DONE! --> results 100% correspond to Borland

// \* d\_RCE : DONE! --> results 100% correspond to Borland

// \* d\_Mechanism\_fusion -- output file in html format: DONE!

// CNO\_base & CNO\_baseT dialogs should be remade

// in order to exclude their UIs (write forms manually) and join them

file:///C:/LISEcute/\_install/results/1.html

Fusion Details

$^{48}\text{Ca}(6.0\text{ MeV/u}) + ^9\text{Be} \rightarrow ^{57}\text{Cr}^+ (E_x = 65.2\text{ MeV})$

$E_{\text{LAB}} = 287.65\text{ MeV}$ ,  $E_{\text{CM}} = 45.52\text{ MeV}$

Fusion -> Residues

Settings

Nuclear Potential	Wood-Saxon	<b>Momentum (h)</b>	
WS parameters	105.0, 1.12, 0.75	L (B <sub>fit</sub> =0)	47
P <sub>CN</sub> (probability of compound formation)	Yes (take into account Quasi-Fission)	L critical	42 (E <sub>crit</sub> =80.2115 MeV)
P <sub>CN</sub> at L=0	1.00e+00	L direct (Geom.AA)	24.1
Fission barrier vanishing	Yes (take into account Fast Fission)	L direct @ CpCt	31 used in calculations
Transmission probability for a 1-dimensional barrier	Quantum-Mechanical	L <sub>max</sub> (grazing)	32.3 used in calculations
Curvature parameter of the parabolic potential	5.00	L <sub>max</sub> (LISE @ R <sub>int</sub> )	32.8
Fusion L-diffuseness	1.00		

*this file in browser*

Cross sections (mb)

-- Partial (LISE<sup>++</sup>)

Interaction	2.114e+03	<b>Distances (fm)</b>	
Compound	1.328e+03	R <sub>interaction</sub> (Wilcke)	9.31
Quasi-Fission	4.580e+02	Cp+Ct (half density radii)	5.72
Direct+QE	3.285e+02	LISE Barrier position(@L=0)	9.98 B(L=0)=10.647 MeV
		Dgr (distance of approach)	9.31
		a (Ruth or ETA/k) [fm]	1.27
		k (wave number) [1/fm]	4.06

-- Compound 1<sup>st</sup> step de-excitation channels (LISE<sup>++</sup>)

Fusion-Residue	2.150e+01	<b>Grazing Angle (deg)</b>	
Fusion-Fission	1.306e+03	Center-of-mass system	18.10
Fusion-Breakup	0.000e+00	Laboratory system	2.83

-- Cross section used in calculations (beginning of target)

Complete Fusion	1.318e+03	<b>Compound excitation energy (MeV)</b>	
Use this factor for rates	1.01	@ L=0	65.17

-- Bass cross section calculations

Fusion cross section	1.318e+03	mb	@ L(B <sub>fit</sub> =0)=47	-43.05
Fusion barrier	11.71	MeV	@ Lcritical=42	-21.47
Fusion radius	5.70	fm	@ Ldirect =31	17.58
Barrier position	9.10	fm	@ Lmaximum =32.8	11.92

Fusion Details
Save Print

Fusion Details

$^{48}\text{Ca}(6.0\text{ MeV/u}) + ^9\text{Be} \rightarrow ^{57}\text{Cr}^+ (E_x = 65.2\text{ MeV})$

$E_{\text{LAB}} = 287.65\text{ MeV}$ ,  $E_{\text{CM}} = 45.52\text{ MeV}$

Fusion -> Residues

---

Settings

Nuclear Potential	Wood-Saxon
WS parameters	105.0, 1.12, 0.75
P <sub>CN</sub> (probability of compound formation)	Yes (take into account Quasi-Fission)
P <sub>CN</sub> at L=0	1.00e+00
Fission barrier vanishing	Yes (take into account Fast Fission)
Transmission probability for a 1-dimensional barrier	Quantum-Mechanical
Curvature parameter of the parabolic potential	5.00
Fusion L-diffuseness	1.00

---

Momentum (&hbar;)

L (B <sub>fit</sub> =0)	47	
L critical	42	(E <sub>crit</sub> =80.2115 MeV)

---

L direct (Geom.AA)	24.1	
L direct @ CpCt	31	used in calculations

---

L <sub>max</sub> (grazing)	32.3	used in calculations
L <sub>max</sub> (LISE @ R <sub>int</sub> )	32.8	

---

Cross sections (mb)

-- Partial (LISE<sup>++</sup>)

Interaction	2.114e+03
Compound	1.328e+03
Quasi-Fission	4.580e+02
Direct+QE	3.285e+02

---

-- Compound 1<sup>st</sup> step de-excitation channels (LISE<sup>++</sup>)

Fusion-Residue	2.150e+01	<i>difference with Borland. it will be investigated tomorrow</i>
Fusion-Fission	1.306e+03	
Fusion-Breakup	0.000e+00	

---

-- Cross section used in calculations (beginning of target)

Complete Fusion	1.318e+03
Use this factor for rates	1.01

*HTML-format*

*difference with Borland. it will be investigated tomorrow*

//-----  
 // 14.6.10 05/31/20  
 // \* d\_Mechanism\_coulombFission : DONE!  
 // \* d\_Mechanism\_abrasionFission : redesign 100%, connection 10%  
 // \* d\_Calculator\_phys : DONE! --> results 100% correspond to Borland

**Physical Calculator** *Qt*

Element: 52 V, Z: 23, q: 22

Beta-decay

Energy: 643.489 MeV/u, Brho: 10 Tm, Erho: 2420.69 MJ/C, P: 65954.3 MeV/c, p\_trmspt: 2.997925 GeV/c

Energy: 642.6563 AMeV, TKE: 33418.1 MeV, Velocity: 24.1739 cm/ns, Beta: 0.8063555, Gamma: 1.690814

Ion mass: 51.9327 amu

After / Into material: Si 504 micron

Energy Remain: 641.012 MeV/u, Energy Loss: 128.63 MeV, Energy Stragglng (σ): 0.06346 MeV/u, Angular Stragglng (σ): 0.31623 mrad (plane), Lateral Spread (σ): 0.01579 microns, Brho (for q=Z): 9.5421 Tm

Equilibrium values for material "Si": Charge State <q>: 23, dq (σ): 0, Thickness (mg/cm²): 8.8055

Range and Energy Loss in: Material: Si, Range: 20539.7, dRange (σ): 29.055 mg/cm², Energy Remaining: 0 MeV/u, Material thickness for energy rest: 20540 mg/cm², 88487 μm

Calculation method of: Energy Losses: 2, Energy stragglng: 1, Charge States: 3, Angular stragglng: 1

Block	Z	Thickness	Remain MeV/u	Remain MeV	E-Loss MeV	<q>
FP_PIN	Si (504 micron)		641.01	33289	128.63	23.00
FP_Stack0	Si (500 micron)		638.55	33162	127.74	23.00
FP_Stack1	Si (1000 micron)		633.62	32906	255.96	23.00
FP_Stack2	Si (1000 micron)		628.68	32649	256.67	23.00
FP_Stack3	Si (1000 micron)		623.73	32392	257.37	23.00
FP_Stack4	Si (1000 micron)		618.76	32134	258.05	23.00
FP_SCI	C9H10 (100 mm)		318.31	16531	15603	23.00

**Physical calculator** *Borland*

Element: 52 V, Z: 23, q: 22

Beta-decay, Ion mass = 51.9327 amu

Energy: 643.489 MeV/u, Brho: 10 Tm, Erho: 2420.69 MJ/C, P: 65954.3 MeV/c, p\_trmspt: 2.997925 GeV/c

Energy: 642.6562 AMeV, TKE: 33418.1 MeV, Velocity: 24.1739 cm/ns, Beta: 0.8063554, Gamma: 1.690814

Equilibrium values for material "Si": Charge State <Q>: 23, dQ (sigma): 0, Thickness: 8.8055 mg/cm2

Range and Energy Loss to: Si, Range: 20539.7, dRange (sigma): 29.055 mg/cm2, Energy Remain: 0.000 MeV/u, Material thickness for energy rest: 20540 mg/cm2, 88487 micron

Calculation method of: Energy Losses: 2, Energy stragglng: 1, Charge States: 3, Angular stragglng: 1

Block	Z \ Thickness	MeV/u	MeV	MeV	<Q>
FP_PIN	Si 504 micron	641.01	33289	128.63	23.00
FP_Stack0	Si 500 micron	638.55	33162	127.74	23.00
FP_Stack1	Si 1000 micron	633.62	32906	255.96	23.00
FP_Stack2	Si 1000 micron	628.68	32649	256.67	23.00
FP_Stack3	Si 1000 micron	623.73	32392	257.37	23.00
FP_Stack4	Si 1000 micron	618.76	32134	258.05	23.00
FP_SCI	C9H10 100 mm	318.31	16531	15603	23.00

**Coulomb Fission**

EM fission deexcitation function

only average deexcitation energy (fast)

3 points of deexcitation function (qualitatively)

manually E\* = 20 MeV, CS = 1000 mb

Fission properties, Evaporation settings

Make default

OK, Cancel, Help

Plots: EM excitation plots (fixed proj.energy), EM cross section versus proj.energy, Fission CS plots (summary), Fission CS plots (partial), Fission fragment E\*-function

Fission cross section normalization

1 mb (non-dependent from Ex.Energy)

Fission deexcitation channel based on the E.-M. excitation value

**Abrasion-Fission**

Reaction

Excitation energy region: LOW, MIDDLE, HIGH

Choose a primary reaction

Perform transmission calculations for this energy region

Choose FISSILE nucleus: 237U, 230Th, 226Ra

Excitation energy (MeV): 25, 100, 250

Cross section (mb): 300, 1000, 800

Restore previous settings, Cross sections sum (mb): 159.

Load Fission, Evaporation, Excit.Energy Region settings from file

Fission properties, Evaporation settings, Prefragment excit.energy

Calculate Fissile nuclei velocity based on the Projectile Fragmentation model (DJM)

Utility: Initial fissile nucleus analysis for selected fragment

OK, Cancel, Help, Make default

LISE++ Abrasion-Ablation calculations to estimate excitation energy regions

1. Calculate. 2. Use "All" hints in code. 3. Plot

Calculate \* Text13

Plot use "ALL" hints in code

Hints: LOW, MIDDLE, HIGH, EM fission

LISE++ hint for the fissile nucleus from excitation energy: 236U, 230Th, 221Fr, 238U

Excitation energy (MeV): 15.9, 100, 200, 16

Cross section (mb): 500, 1500, 700, 1500

L+M+H, L+M+H+EM, use in code\*\*, use in code, use in code

Region Boundaries

Fission barrier: < LOW < 30.0, 30 < MIDDLE < 100, 100 < HIGH

Boundary energies for mean values of prefragment excitation energy distributions to split low, middle and high energy regions. Recommendation: 2.3\*dEx, where dEx is excitation energy per abraded nucleus. Default values are equal to 40 & 180 MeV

coef for Zb = 0.75, 0.1 < coef <= 1; recommendation: 0.75, Zstop= 90

coef for Nb = 0.75, 0.1 < coef <= 1; recommendation: 0.80, Nstop= 120

determine low Z (element number) where Abrasion-Ablation stops. Zstop = coef \* Zbeam

\* - takes about 0.5 - 1 minute \*\* - Low-excitation Abrasion-Fission and EM fission results will be used together

// 14.6.11 06/01/20

// \* d\_Mechanism\_abrasionFission : redesign 100%, connection 50%

// \* d\_Mechanism\_abrasionFissionRestore : redesign 100%, connection 50%

// \* d\_Number\_Isotopes : DONE!

**Excitation functions plot (fission)**

Setting fragment: 52V

Show

- only final results
- plus intermediate results without odd-even corrections and neutrons evaporation

Number of Isotopes

- all isotopes of given element
- user's number: 1

OK Cancel

**Abrasion-Fission restore previous settings**

previous settings were for: 48Ca (140.0 MeV/u) + Be

Energy region definitions

- Excitation energy region: LOW MIDDLE HIGH
- Choose a primary reaction:
- Perform transmission calculations for this energy region:
- Choose FISSILE nucleus: 47Ca 42Ar 36S
- Excitation energy (MeV): 25 100 250
- Cross section (mb): 300 1000 800
- Cross sections sum (mb): 2100

Accept Cancel

**Abrasion-Fission**

48Ca (6.0 MeV/u) + Be

Energy region definitions

- Excitation energy region: LOW MIDDLE HIGH
- Choose a primary reaction:
- Perform transmission calculations for this energy region:
- Choose FISSILE nucleus: 47Ca 42Ar 36S
- Excitation energy (MeV): 25 100 250
- Cross section (mb): 300
- Cross sections sum (mb): 300

Restore previous settings

Load Fission, Evaporation, Excit. Energy Region settings from file

Fission properties: Calculate Fissile nuclei velocity based on the Projectile Fragmentation model (DJM)

Evaporation settings

Prefragment excit. energy

Utility: Initial fissile nucleus analysis for selected fragment

OK Cancel Help Make default

**LISE++ Abrasion-Ablation calculations to estimate excitation energy regions**

1. Calculate. 2. Use "All" hints in code. 3. Plot

Calculate \* Plot use "ALL" hints in code

Hints

	LOW	MIDDLE	HIGH	EM fission
LISE** hint for the fissile nucleus from excitation energy				
Excitation energy (MeV)				
Cross section (mb)				

use in code\*\* use in code use in code

Region Boundaries

Fission barrier < LOW < 40

40 < MIDDLE < 180

180 < HIGH

Boundary energies for mean values of prefragment excitation energy distributions to split low, middle and high energy regions. Recommendation: 2.3\*dEx, where dEx is excitation energy per abraded nucleon. Default values are equal to 40 & 180 MeV

coef for Zb = 0.8 0.1 < coef <= 1; recommendation: 0.75 121

coef for Nb = 0 0.1 < coef <= 1; recommendation: 0.80 0

determine low Z (element number) where Abrasion-Ablation stops. Zstop = coef \* Zbeam

\* - takes about 0.5 - 1 minute \*\* - Low-excitation Abrasion-Fission and EM fission results will be used together



// 14.6.12 06/02/20

// \* d\_Mechanism\_abrasionFission : redesign 100%, connection 80%

// \* d\_Mechanism\_abrasionFissionRestore : DONE!

// \* dialog names and locations revision

// \* creation of excel dialog summary file => tt/dialog\_status\_v\*.xlsx

// will be use for

// - the incoming LISE porting presentation,

// - understanding of current situation (so without plots 55% dialogs done),

// - and further planning

The screenshot shows the 'Abrasion-Fission' dialog box. The 'Energy region definitions' section includes options for 'Excitation energy region' (LOW, MIDDLE, HIGH), 'Choose a primary reaction', and 'Perform transmission calculations for this energy region'. It also displays 'Choose FISSILE nucleus' (237U, 233Th, 222Rn), 'Excitation energy (MeV)' (29.1, 108.1, 295.6), and 'Cross section (mb)' (665.9, 611.3). A 'Cross sections sum (mb)' of 1277.1 is shown. The 'Hints' section provides 'LISE++ hint for the fission nucleus from excitation energy' and 'Excitation energy (MeV)' values for different regions. The 'Region Boundaries' section shows 'Fission barrier' values and coefficients for Zb and Nb.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Directory	Subdirectory	Dialog	re-Design, %	Link, %	DONE	Plots total	Plots done	Bench-mark	Comments	date	size			
110	d_MC		d_rays_generator								03/31/20	75930			
111	d_Mechanism		d_AbrasionFission_initFN								03/31/20	36351			
112	d_Mechanism		d_Fragmentation_convolution	100	100	1	2	0			05/21/20	57124			
113	d_Mechanism		d_Fragmentation_convolutionPlot								03/31/20	12176			
114	d_Mechanism		d_Fragmentation_friedman	100	100	1	0	0			05/20/20	17986			
115	d_Mechanism		d_Fusion_info	100	100	1	0	0			05/28/20	32573			
116	d_Mechanism		d_Fusion_plotCS								03/31/20	29393			
117	d_Mechanism		d_Mechanism	100	100	1	0	0			05/21/20	94738			
118	d_Mechanism		d_Mechanism_abrasionFission	100	80		2	0			05/31/20	71642			
119	d_Mechanism		d_Mechanism_abrasionFissionResto	100	100	1	0	0			06/01/20	21567			
120	d_Mechanism		d_Mechanism_coulombFission	100	100	1	5	0			05/31/20	16704			
121	d_Mechanism		d_Mechanism_fissionProperties	100	100	1	3	0			05/25/20	37200			
122	d_Mechanism		d_Mechanism_fragmentation	100	100	1	2	0			05/20/20	111114			
123	d_Mechanism		d_Mechanism_fusion	100	100	1	6	0			05/30/20	49569			
124	d_Mechanism		d_Suppression_chargeStates	100	100	1	0	0			05/16/20	10727			
125	d_Mechanism		d_Suppression_fissionCS	100	100	1	0	0			05/25/20	7687			
126	d_Options		d_Comments								04/06/20	2919			
127	d_Options		d_CS_files	100	60		1	0			05/04/20	28046			
128	d_Options		d_NewVersion								03/31/20	8505			
129	d_Options		d_Options	100	100	1	1	0			04/24/20	49272			

The screenshot shows the 'Abrasion-Fission restore previous settings' dialog box. It displays 'previous settings were for'  $^{238}\text{U}$  (600 MeV/u) + Be. The 'Energy region definitions' section includes 'Excitation energy region' (LOW, MIDDLE, HIGH), 'Choose a primary reaction', and 'Perform transmission calculations for this energy region'. It also displays 'Choose FISSILE nucleus' (237U, 233Th, 222Rn), 'Excitation energy (MeV)' (29.1, 108.1, 295.6), and 'Cross section (mb)' (665.9, 611.3, 813.1). A 'Cross sections sum (mb)' of 1277.121 is shown. The dialog has 'Accept' and 'Cancel' buttons.

// 14.7.1 06/03/20

// \* d\_Mechanism\_abrasionFission : DONE! →

// Revision of early commented lines "Qt-temp"

// Cascade calculations now are agreed between Borland and Qt

// It was last reaction mechanism dialog.

// The Middle version number has been increased

summary from excel dialog status file

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Directory	Subdirectory	Dialog	re-Design, %	Link, %	DONE	Plots total	Plots done	Bench-mark	Comments	date	size	size done			
209	d_Utilities	Reaction	d_RCE	100	100	1	0				05/30/20	47274	47274			
210	d_Utilities	Reaction	d_ReactionCharacter	100	100	1	0				05/30/20	49303	49303			
211	d_Utilities	Solenoid	d_Solenoid								03/31/20	17507	0			
212	d_Utilities	Solenoid	d_Twinsol								03/31/20	65380	0			
213	w_Bi		d_Bi								03/31/20	20524	0			
214	w_Converter		converter	100	100	1					03/31/20	64297	64297			
215	w_IsoTable		NuclideInfo	90	70	0.7					03/31/20	12906	9034.2			
216	w_Main		MainWindow	90	70	0.7					05/19/20	89905	62933.5			
217	w_Stuff		d_about								04/01/20	18415	0			
218	w_Stuff		d_FRIB_isotopes								03/31/20	3078	0			
219	w_Stuff		d_Password								03/31/20	2234	0			
220	w_Stuff		d_Transmission_statistics	100	100	1	0				05/28/20	60991	60991			
221	w_Stuff		d_Value_input	100	100	1					04/15/20	3401	3401			
222	w_Stuff		w_Gauge	100	100	1					03/31/20	5122	5122			
223																
224		total		221	sum	108	48.9%					5.16E+06	3.21E+06	62.2%		
225		procent			completely done	96	43.4%									
226																



# LISE++ porting schedule (v.6 from 06/03)

