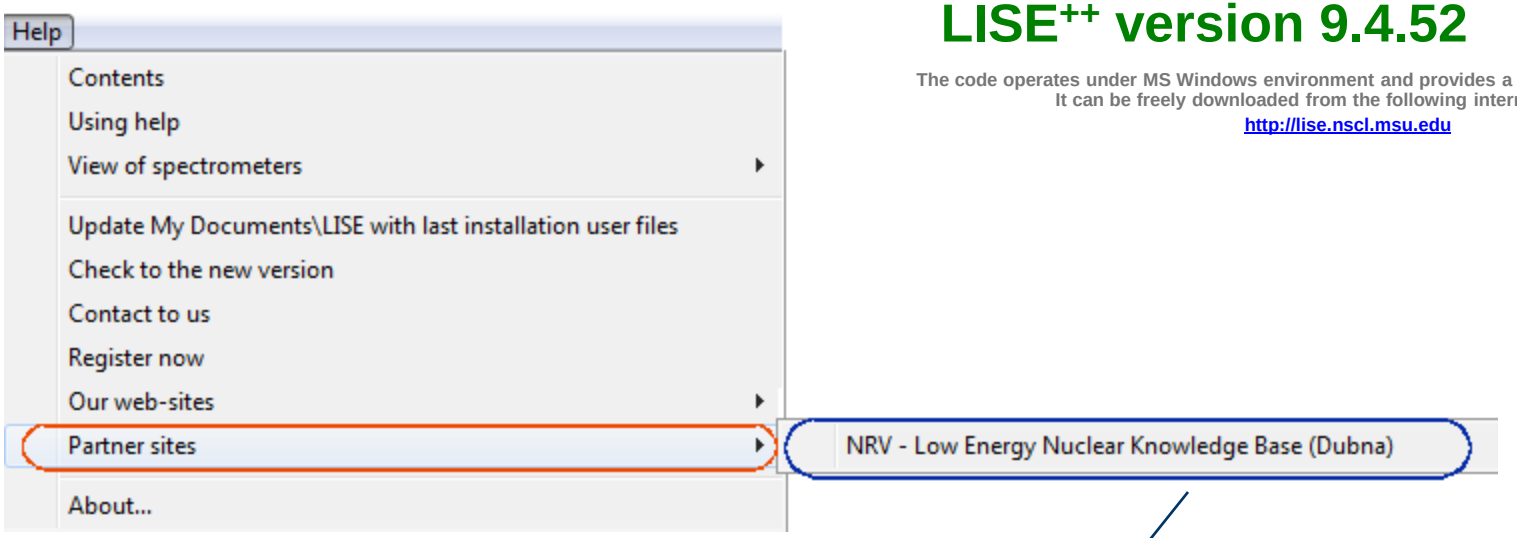
NRV : LISE^{++} `s partner site

LISE^{++} version 9.4.52

From 28.10.2012

The code operates under MS Windows environment and provides a highly user-friendly interface.
It can be freely downloaded from the following internet addresses:
http://lise.nscl.msu.edu



nrv.jinr.ru/nrv/

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Nuclear Reactions Video
Low Energy Nuclear Knowledge Base

Nuclear Properties	Nuclear Models	Nuclear Decays	Nuclear Reactions	
Nuclear Map	Shell Model	Alpha - decay	Elastic scattering Classical Semiclassical Optical Model	Experimental Data $d\sigma/d\Omega$
Check your Browser Settings	Liquid Drop Model	Beta - decay	Inelastic Scattering Coulomb excitation Direct process (DWBA) Channel coupling Deep inelastic collision	
Warning! NRV extensively uses Java. Your browser must support Java Virtual Machine	Two-Center Shell Model	Fission	Transfer reactions: Direct process (DWBA) Semicalssical approach (GRAZING code) 3-body classical model Two-nucleon transfer Massive transfer	

NRV : LISE^{++} `s partner site

lise.nscl.msu.edu/lise.html

it's diffused freely

LISE++

- Home
- Introduction
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- Last Changes
- Perspectives
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- MOTER
- PACE 4
- Spectrometers
- Related topics
- Personal pages
- Registration
- Email

v. 9.4.52

partner site

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Low Energy Nuclear Knowledge Base

SIMULATION OF FRAGMENT SEPARATORS

Range of application

The program LISE++ has been developed to calculate the transmission and yields of fragments produced and collected in a spectrometer. This code allows to simulate an experiment, beginning from the parameters of the reaction mechanism and finishing with the registration of products selected by a spectrometer. The program allows to quickly optimize the parameters of the spectrometer before or during the experiment. It also makes it possible to estimate and work in conditions of maximum output of studied reaction products and their unambiguous identification. Wedge and Wien filter selections are also included in the program.

LISE++ is the new generation of the LISE code, which allows the creation of a spectrometer through the use of different "blocks". The number of blocks used to create a spectrometer in LISE++ is limited by operating memory of your PC and your imagination.

built-in Energy loss, Time-of-Flight, Position, Angular, Charge, Cross-Section distribution plots and dE-E, dE-TOF, Z-A/Q and dE-X two-dimensional plots allow to visualize the results of the program calculations. An application of transport integral lies in the basis of fast calculations of the program for the estimation of temporary evolution of distributions of phase space.

The LISE code may be applied at medium-energy and high-energy facilities (fragment- and recoil-separators with electrostatic and/or magnetic selections). A number of these facilities, like A1900 and S800 at NSCL, LISE3, SISSI/LISE3 and SPEG at GANIL, FRS and SuperFRS at GSI, RIPS and BigRIPS at RIKEN, based on the separation of projectile-like and fission fragments, fusion residues are included or might be easily added to the existing optical configuration files.

The Projectile Fragmentation, Fusion-Evaporation, Fusion-Fission, Coulomb Fission, and Abrasion-Fission assumed in this program as the production reaction mechanism allows to simulate experiments at beam energies above the Coulomb barrier.

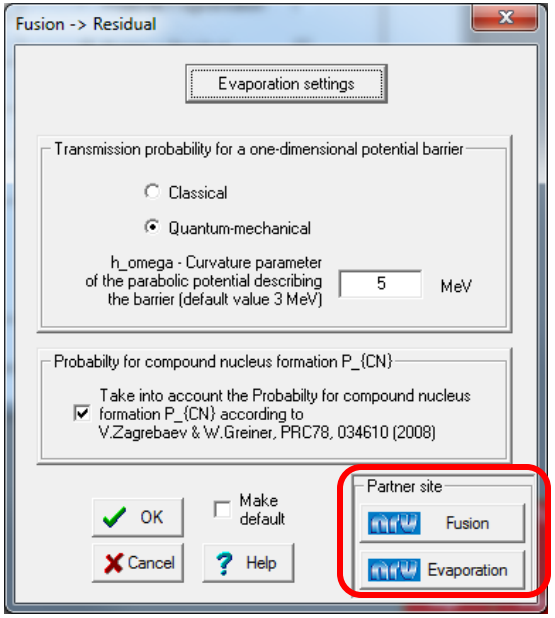
Built-in powerful tools:

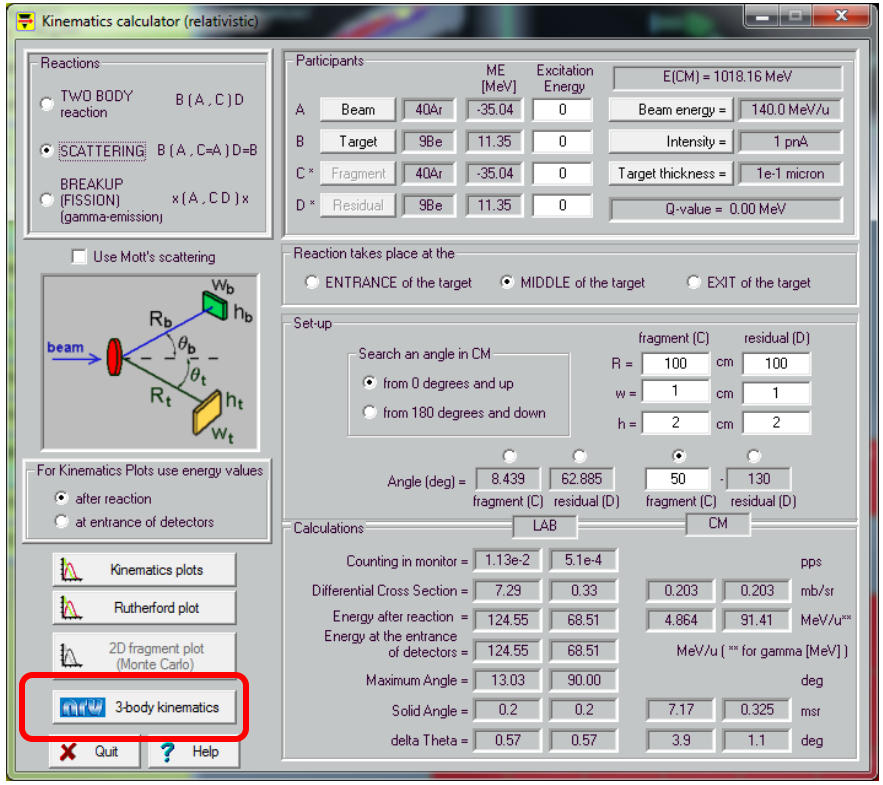
- «Physical Calculator»,
- «Relativistic Kinematics Calculator»,
- «Evaporation Calculator»,
- «Spectroscopic calculator" (of J.Kantele»),
- «Matrix calculator",
- «PACE4» (fusion-evaporation code),
- «Global» (charge-state distribution code),
- «Charge» (charge-state distribution code),
- Nuclide and Isomeric state Databases utilities,
- Units converter,
- ISOL catcher,
- Twinsol (solenoid) utility,
- Transport calculations,
- Brho analyzer,
- Stripper foil lifetime utility (new),
- Monte Carlo simulation of fragment transmission (new),
- Monte Carlo simulation of fission fragment kinematics,
- «BI» - the automatized search of two-dimensional peaks in spectra and definition of their characteristics

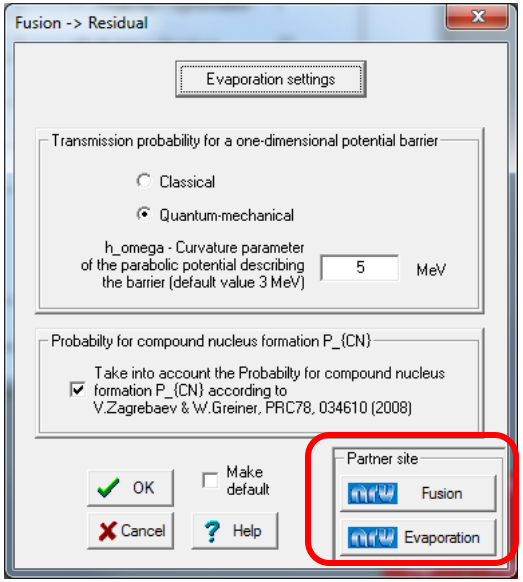
permit to work well below this energy limit, and this makes the program very attractive for all users dealing with physics of heavy ions from 10 keV up to some GeV per nucleon.

LISE++ presentation on EBSS2011 - PDF (1.6 MB)
LISE++ first steps - PDF (EBSS2011-tutorial)
LISE++ status (2008) - PDF (1,8 MB)
LISE++ presentation (2007) - PowerPoint (4,3 MB)
LISE++ presentation (2004) - PowerPoint (4 MB)
LISE++ Coulomb fission - PowerPoint (3 MB)
LISE++ Abrasion-Fission - PowerPoint (3 MB)

Links in LISE++







+ Future link from the Two-body reactions dialog