



Quick Guide for ThiMeT: Thickness Measurement Tools for SRIM v1.0

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[www. ThiMeT.org](http://www.ThiMeT.org)

ThiMeT is a code for thickness calculation using SRIM (www.srim.org) stopping power values. ThiMeT code also can be used for the determination of the required thickness for energy degraders which are needed for nuclear reactions. ThiMeT calculation is very easy and quick compared to the TRIM code calculation. ThiMeT code also contains TTEC Module for calculation of the mean transmission energy from the TRIM output file "transmit.txt".

Cite:

1. C. Yalçın, "Thickness measurement using alpha spectroscopy and SRIM", Journal of Physics: Conference Series, 2014.
2. The Thickness Measurement Tools for SRIM (ThiMeT), www.thimet.org

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Installation of ThiMeT

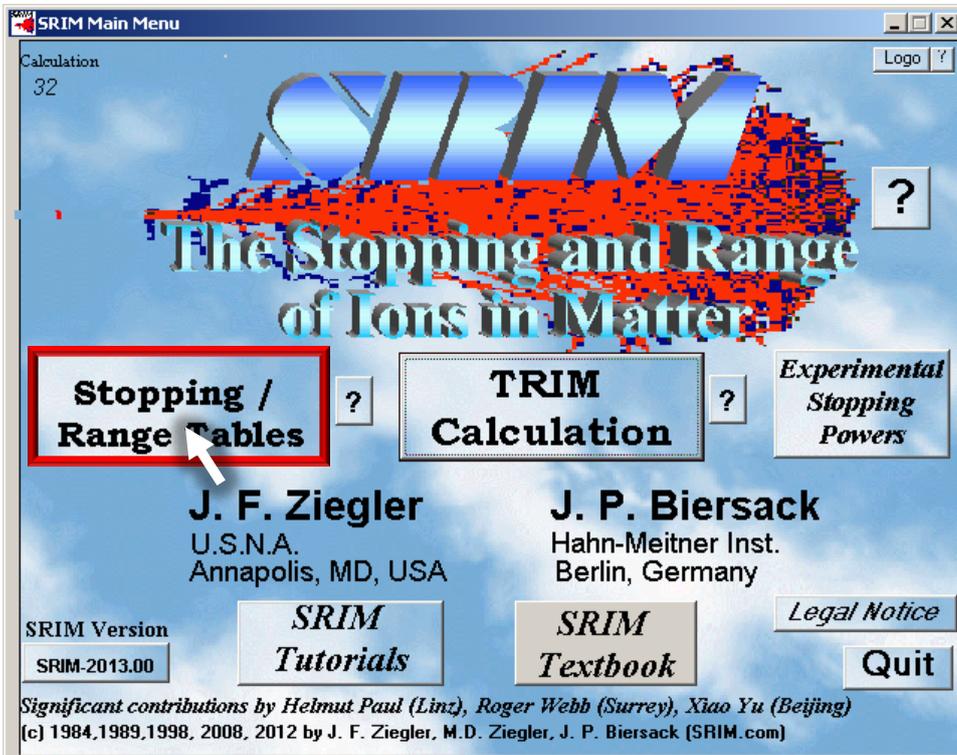
Because of the ThiMeT code uses SRIM code, first you should install it. SRIM code can be download from www.srim.org.

After the installation of the SRIM, download the ThiMeT code (www.thimet.org) for appropriate platform which you use. Extract the zip file and copy the ThiMeT code folder wherever you want. This folder includes "Docs", "OUT_ThiMeT" and "OUT_TTEC" sub-folders and also "ThiMeT.exe", "TTEC.exe" and "SRIM_Path.txt" files. Open the "SRIM_Path.txt" file and change your own path of the SRIM code and save it. Now you ready to use ThiMeT code.

Running ThiMeT Code

Because of the ThiMeT code uses SRIM parameters, first you should adjust SRIM code for calculation. Follow these steps;

1. Run the SRIM code and chose the “Stopping / Range Tables”,



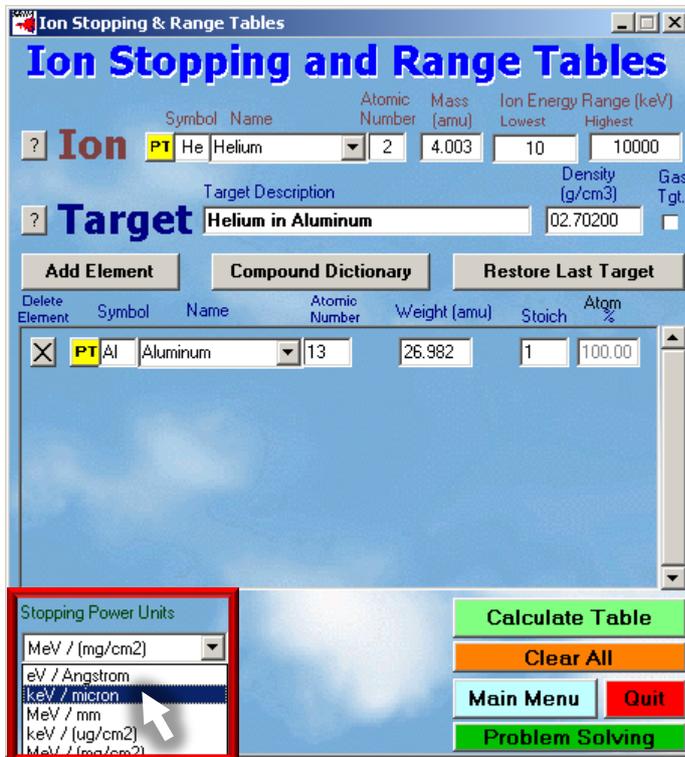
2. Chose projectile from “ion” section,



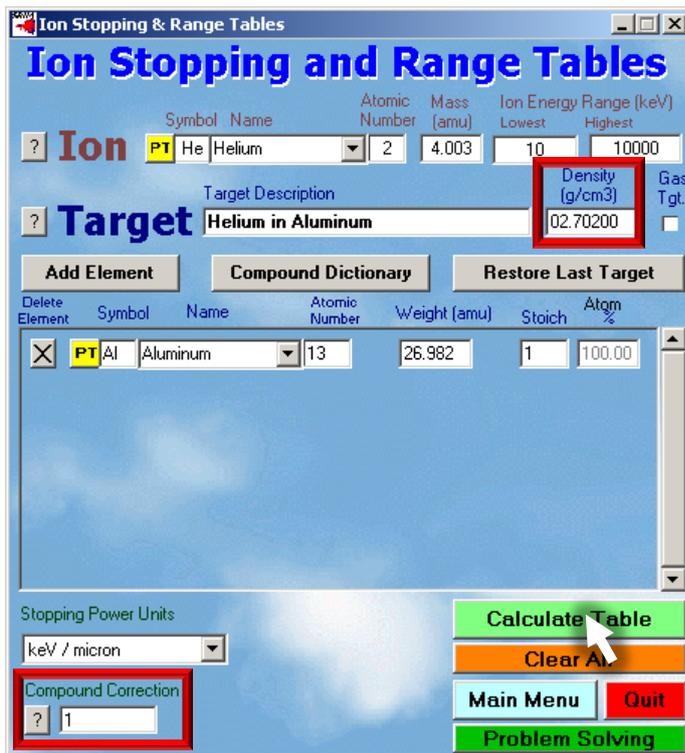
3. Add the material which is correspond your target or degrader from “Add element” or “Compound Dictionary”,



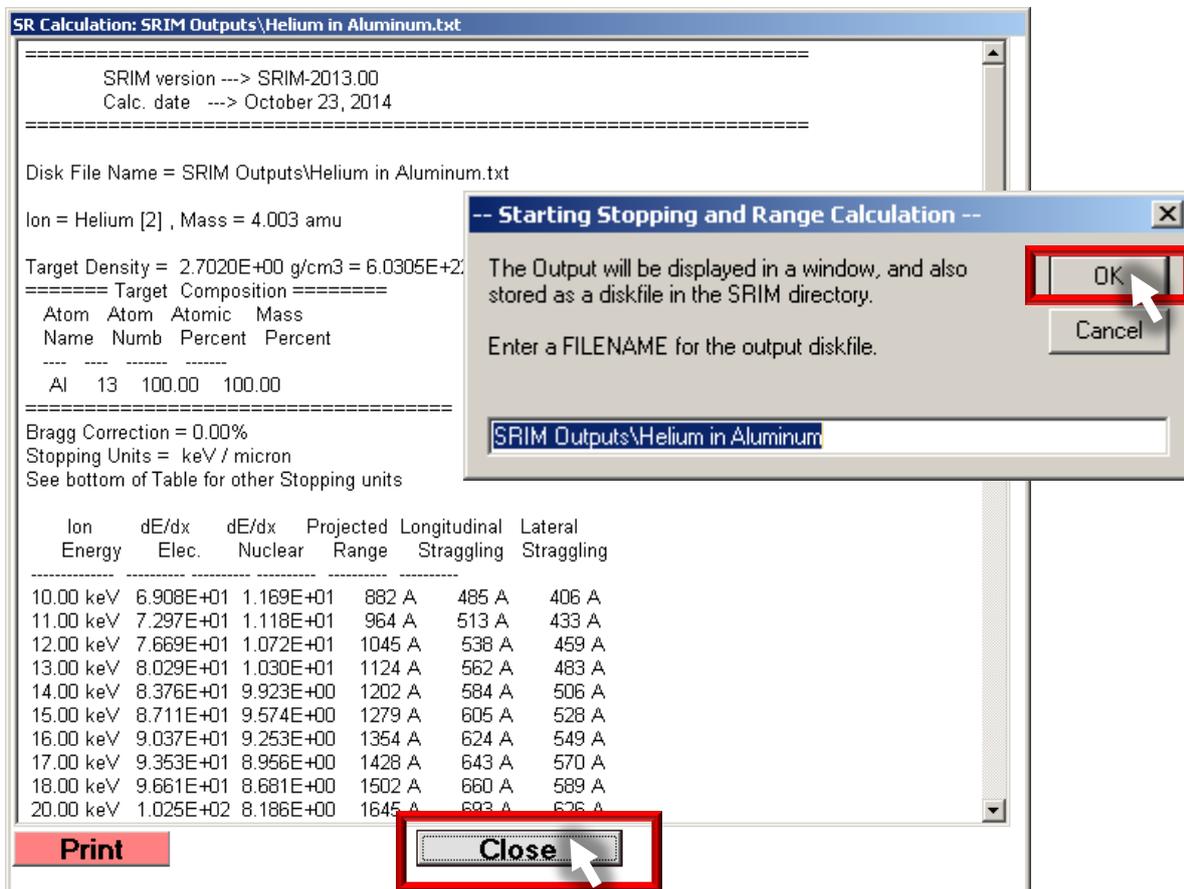
4. Change the “Stopping Power Unit” to keV / micron.



- If “Density” and “Compound Correction” are correct, and there is no need to change them, then click to “Calculate Table” ,



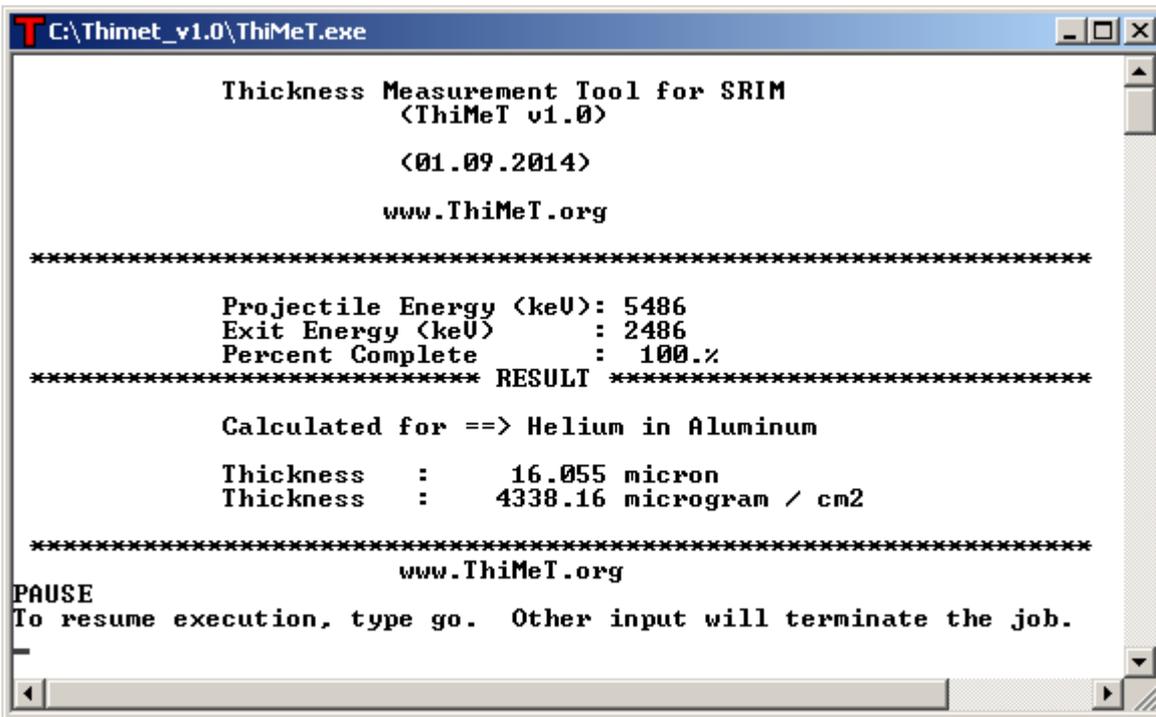
- Click to “OK”, then click to “Close” to close calculated results,



- Close the SRIM.

Now you are ready to use ThiMeT. For the same material and ion you don't need to do same steps given above but if you want to calculate for new material or for new projectile, you should follow again steps 1 to 7.

In order to run ThiMeT code just double clicks to "**ThiMeT.exe**" file or in command mode type "**ThiMeT.exe**". Code will ask you just two parameter, "**Projectile energy**" and "**Exit energy**" from the material. Please give energies as **integer** and in "**keV**" unit. Code will calculate thickness in a few seconds, according to energy difference between incident ions and exit ions may be it takes longer. Thickness results are in two units; **µm** (micron) and **µg/cm²** or **mm** and **mg/cm²** according to its value.



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T C:\Thimet_v1.0\ThiMeT.exe

Thickness Measurement Tool for SRIM
  (ThiMeT v1.0)

  (01.09.2014)

  www.ThiMeT.org

*****

Projectile Energy (keV): 5486
Exit Energy (keV)      : 2486
Percent Complete      : 100.%
***** RESULT *****

Calculated for ==> Helium in Aluminum

Thickness   :    16.055 micron
Thickness   :   4338.16 microgram / cm2

*****

                          www.ThiMeT.org

PAUSE
To resume execution, type go.  Other input will terminate the job.
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Contact

For the suggestions, comments and questions please send an email to info@thimet.org or support@thimet.org.