



Exercise 6: Low Energy Neutrons

7th FLUKA Course
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- Create a folder called ex6, download the solution of ex5 (only ex5.inp) from the website, rename it to ex6.inp and open it in *flair*
 - Change the materials of the regions *TARGS1* and *TARGS2* to lead. Change the material of region *TARGS3* to water.
 - Add an estimator to score the fluence of neutrons **in** water (region TARGS3):
 - ◆ Use logarithmic energy binning down to the group of lowest energy
 - ◆ Write the output unformatted to unit 56
 - Run 5 times 5000 primaries and plot the results as a lethargy spectrum (x-axis: GeoMean, y-axis: $Y^* <X_{geo}>$, both axis logarithmically)
 - Save the plot
 - Identify the peak in thermal part of spectrum
 - Note: automatic matching of group structure
 - Redo the exercise for water at 87K
- applying LOW-MAT to water components*
- Compare the new plot to the previous one