

Results

April 6, 2012

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1 Description of run a

No MCNPX cross section intervention. Base case.

2 Description of run b

Using water xs scaling factor from MCNPX cross sections, but no other intervention from MCNPX

3 Flux plot(s)

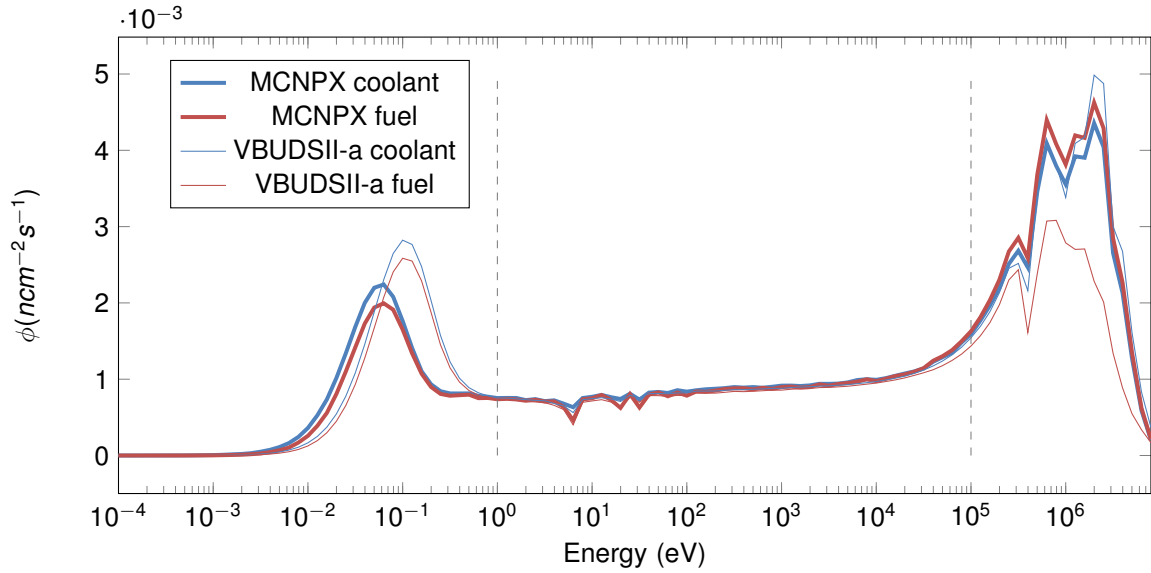


Figure 1: Energy dependent flux in both cells of the reactor, generated by MCNPX and VBUDSII run a.

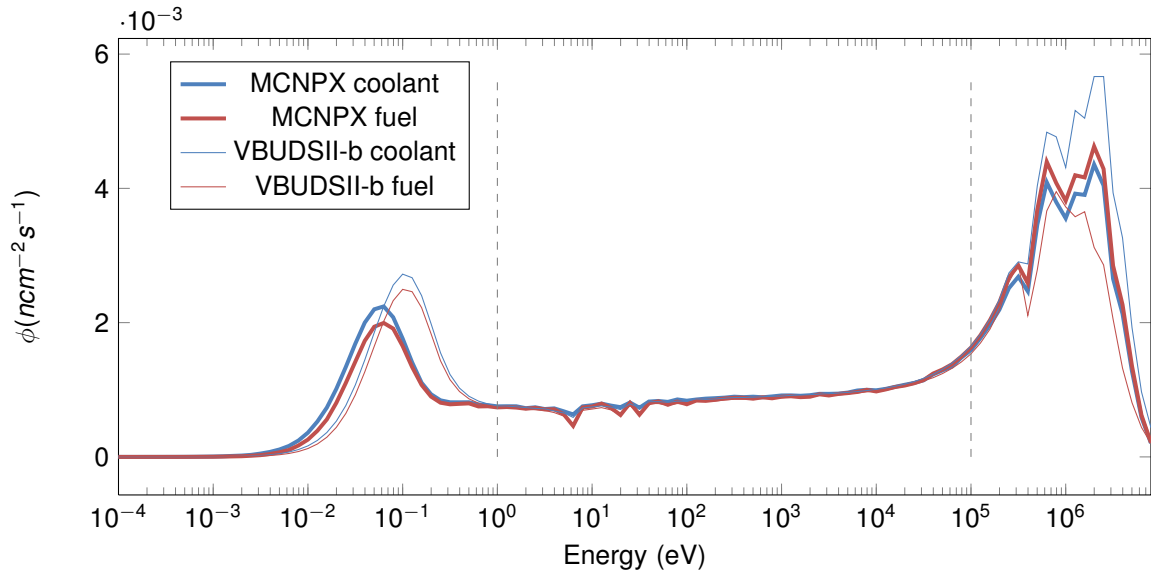


Figure 2: Energy dependent flux in both cells of the reactor, generated by MCNPX and VBUDSII run b.

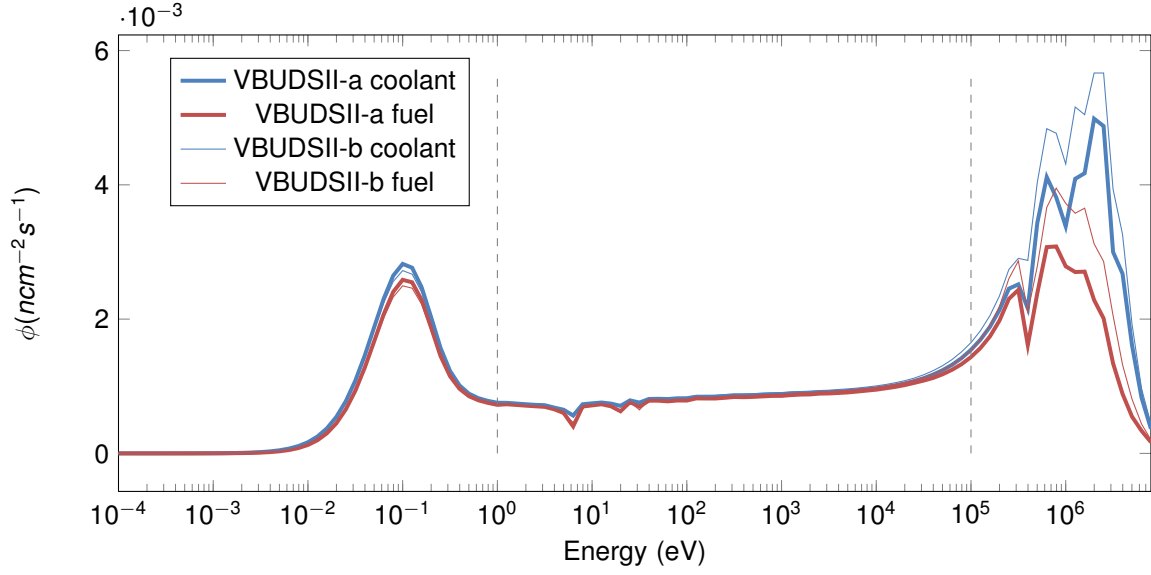


Figure 3: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a and VBUDSII run b.

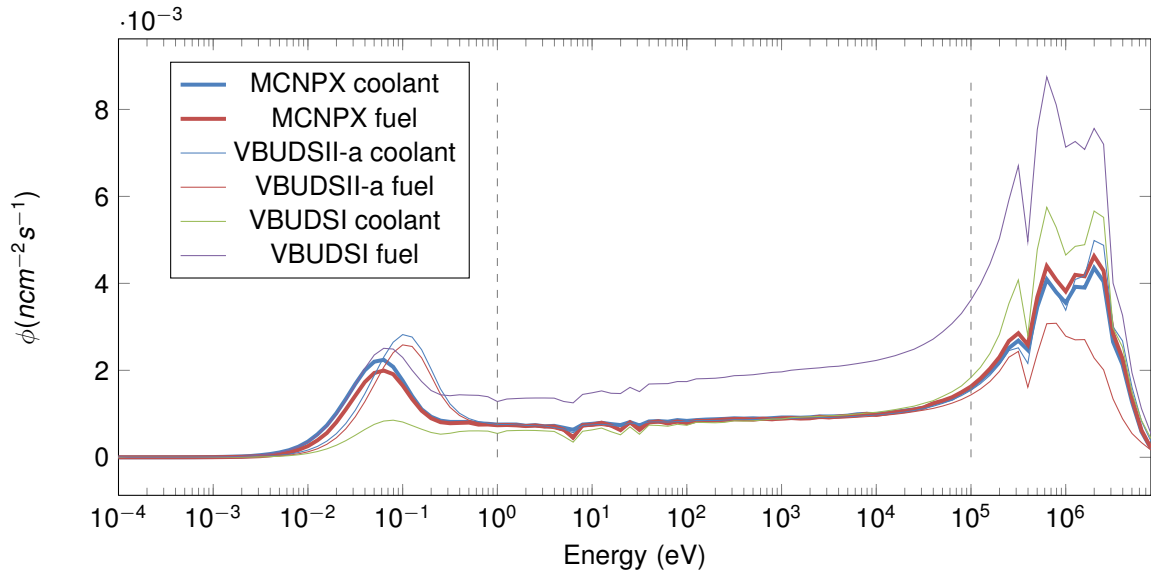


Figure 4: Energy dependent flux in both cells of the reactor, generated by MCNPX, VBUDSII and VBUDSI.

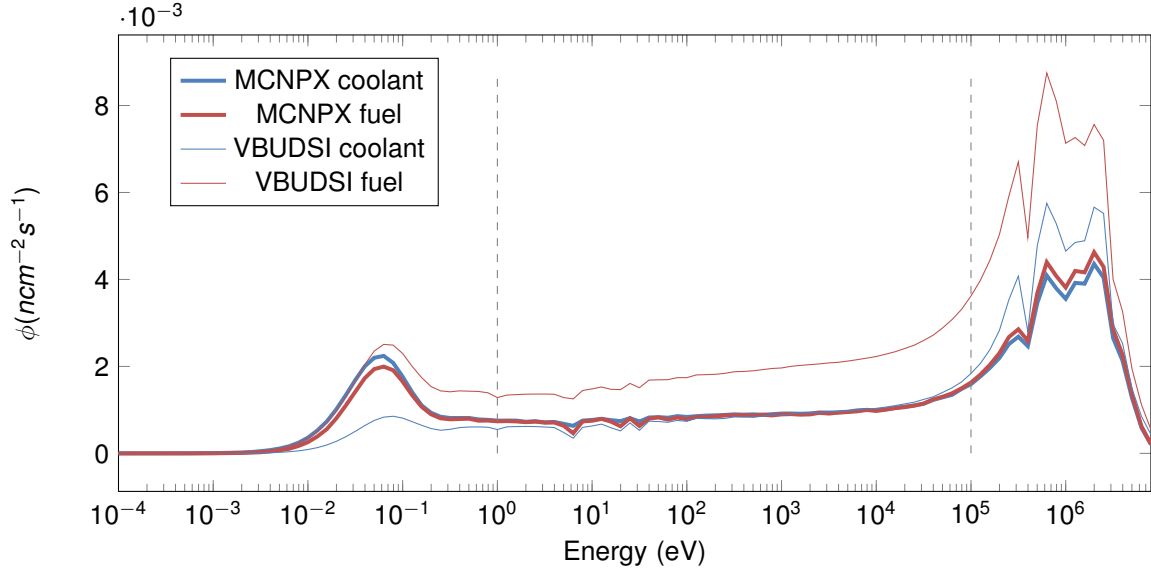


Figure 5: Energy dependent flux in both cells of the reactor, generated by MCNPX and VBUDSI.

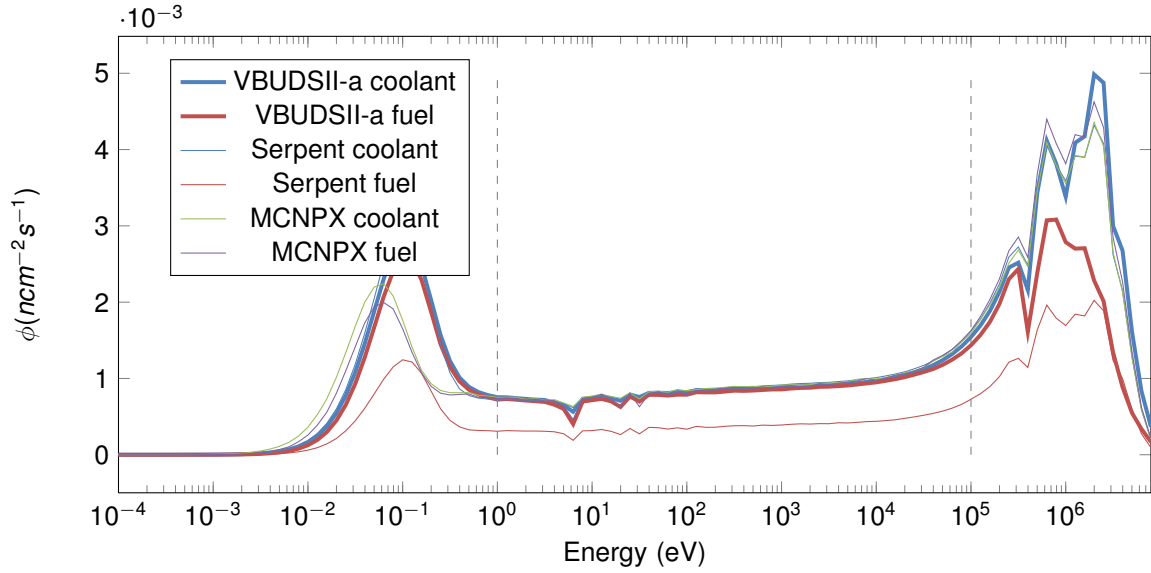


Figure 6: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a, Serpent, and MCNPX.

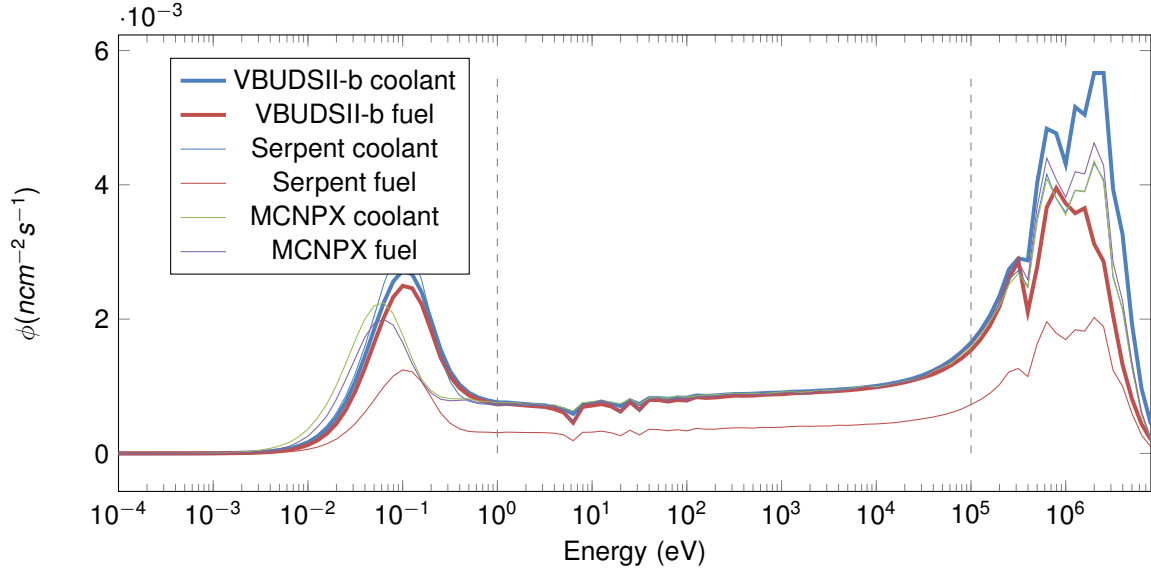


Figure 7: Energy dependent flux in both cells of the reactor, generated by VBUDSII run b, Serpent, and MCNPX.

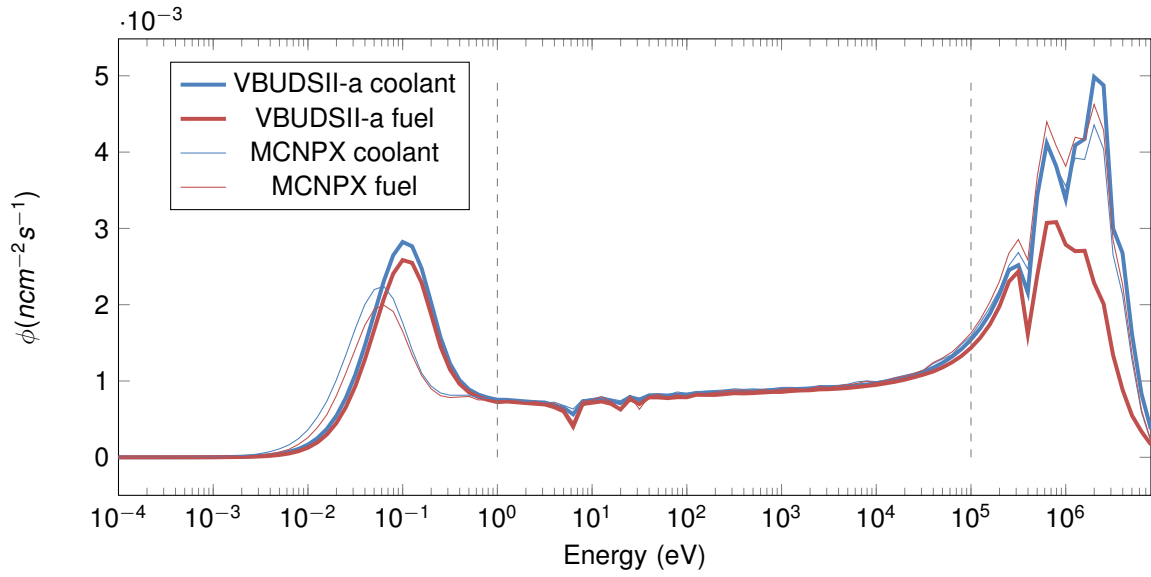


Figure 8: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a and MCNPX.

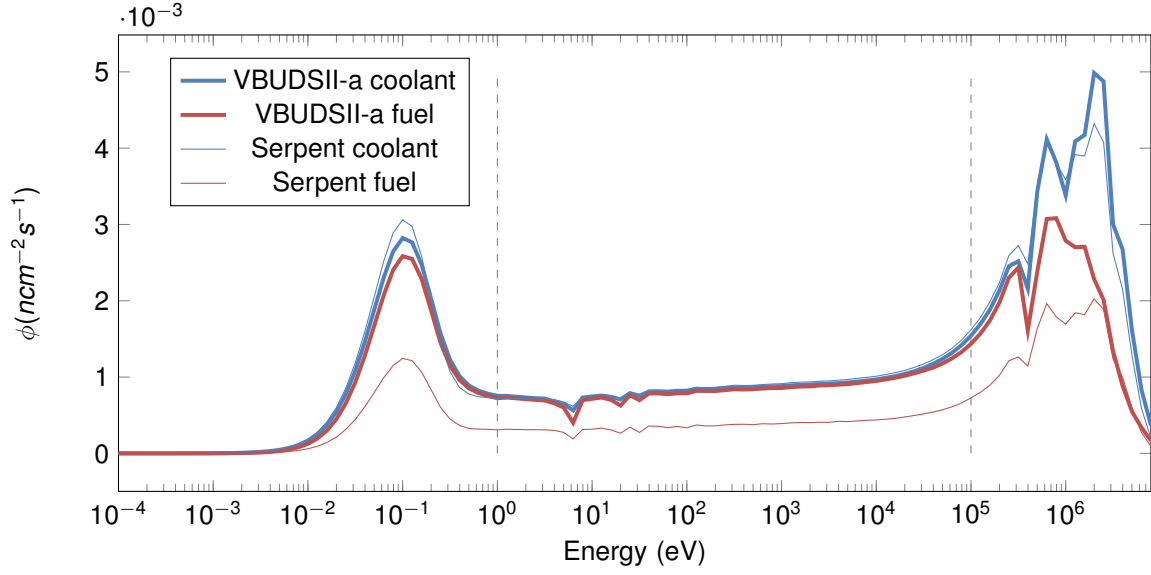


Figure 9: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a and Serpent.

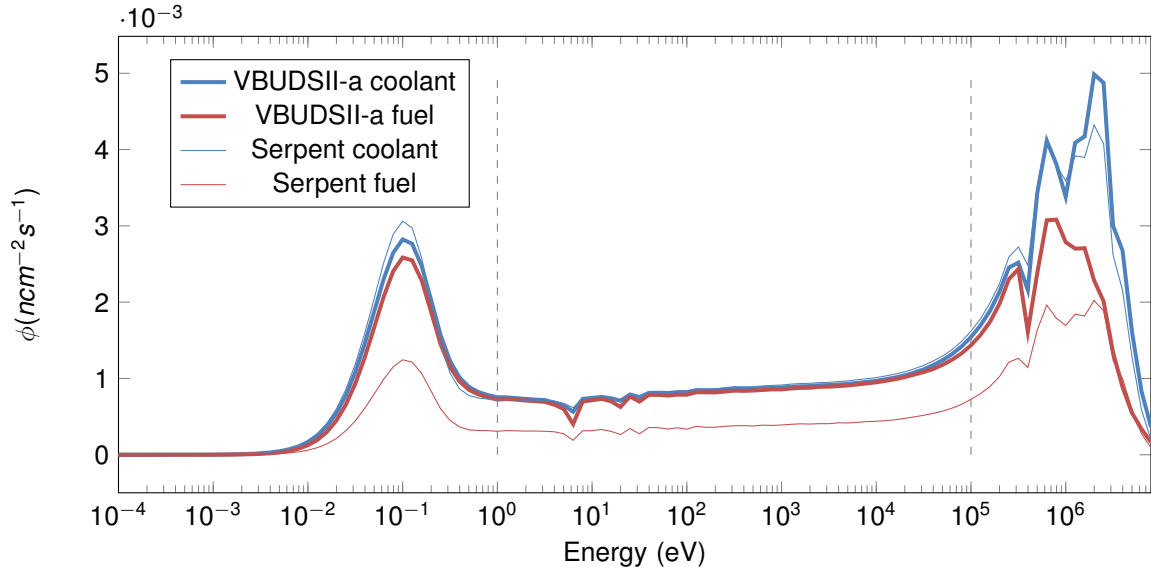


Figure 10: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a and Serpent.

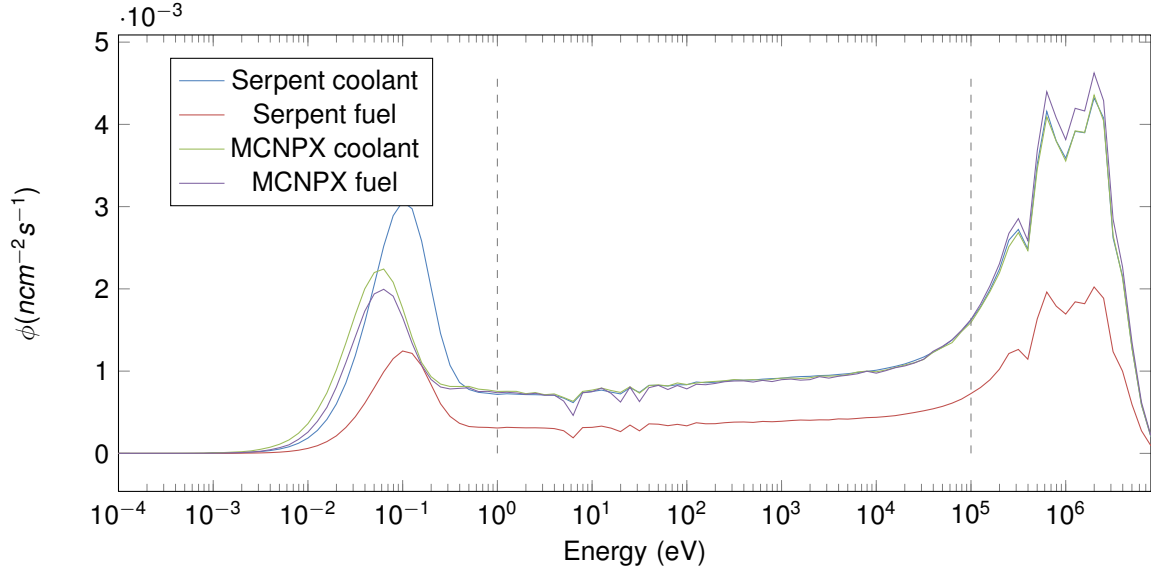


Figure 11: Energy dependent flux in both cells of the reactor, generated by Serpent and MCNPX.

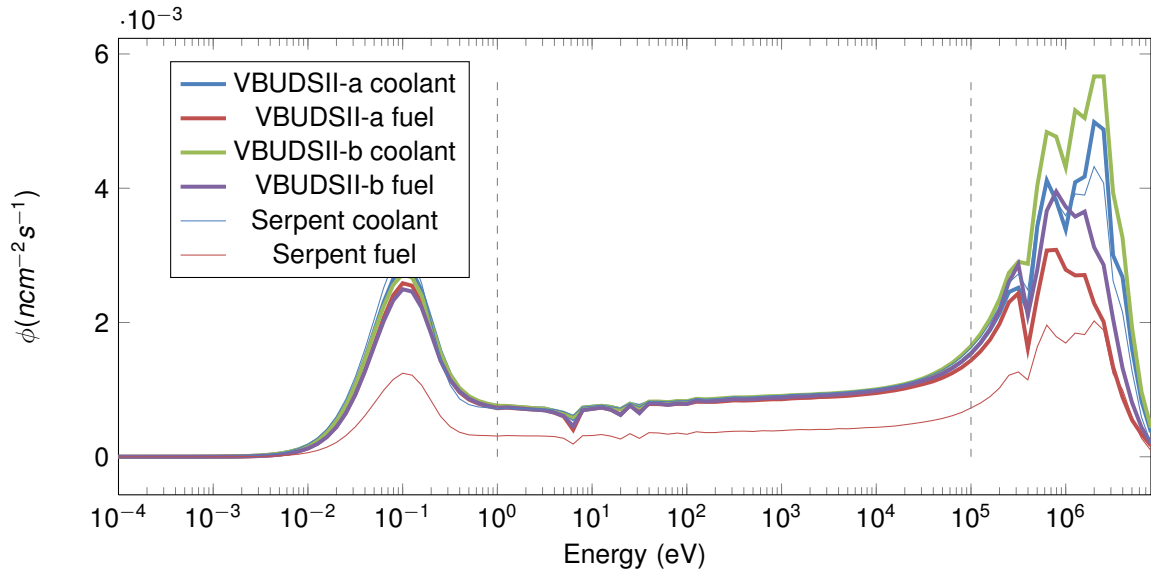


Figure 12: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a, VBUDSII run b, and Serpent.

4 Cross sections in cell H2O

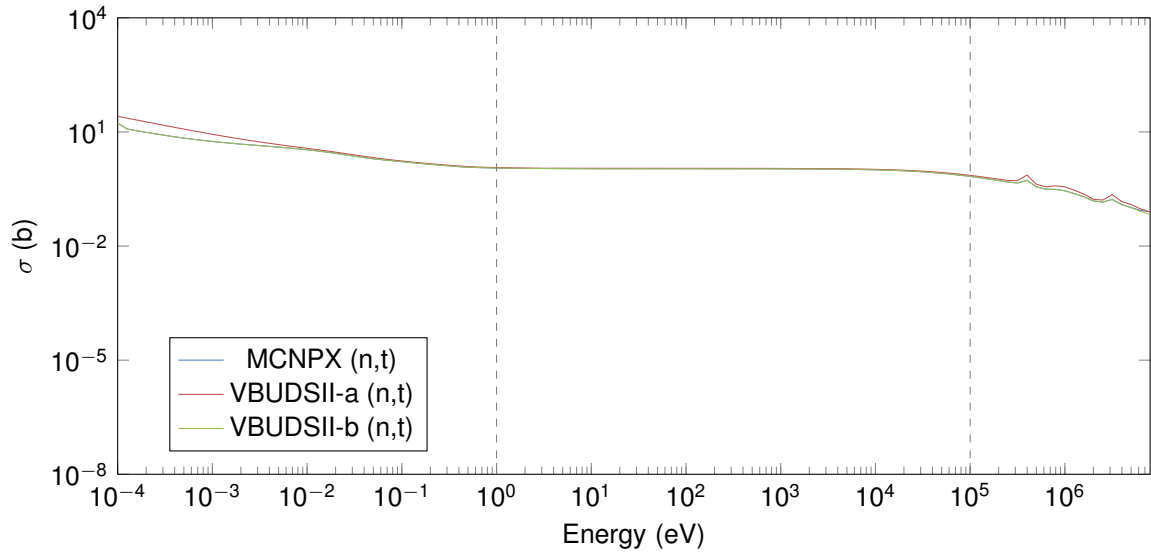


Figure 13: Energy-dependent total cross section for the H2O cell, generated by MCNPX and VBUDSII run a and run b.

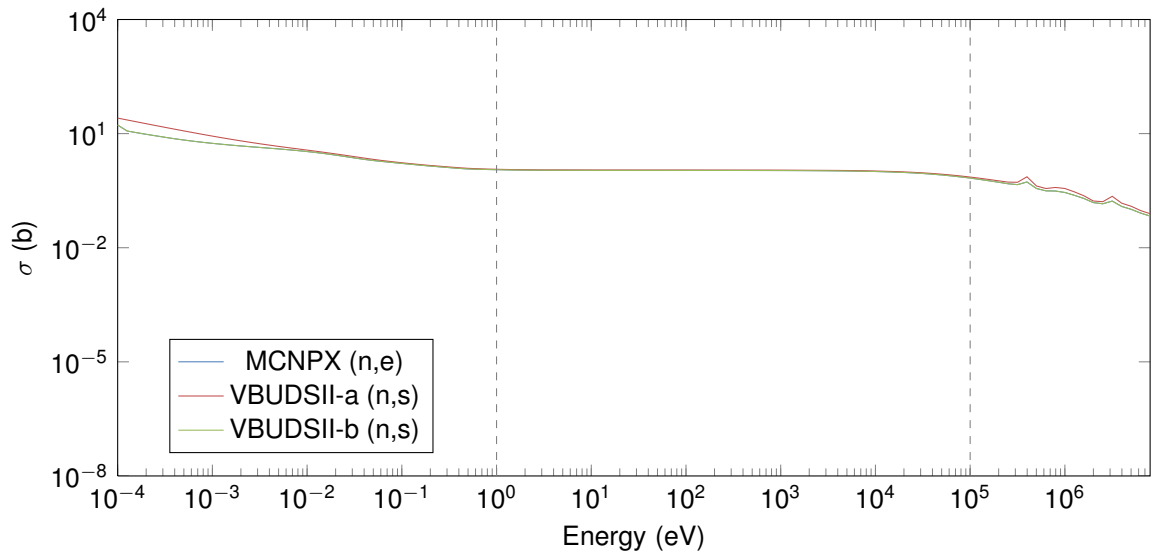


Figure 14: Energy-dependent scatter cross section for the H2O cell, generated by MCNPX and VBUDSII run a and run b.

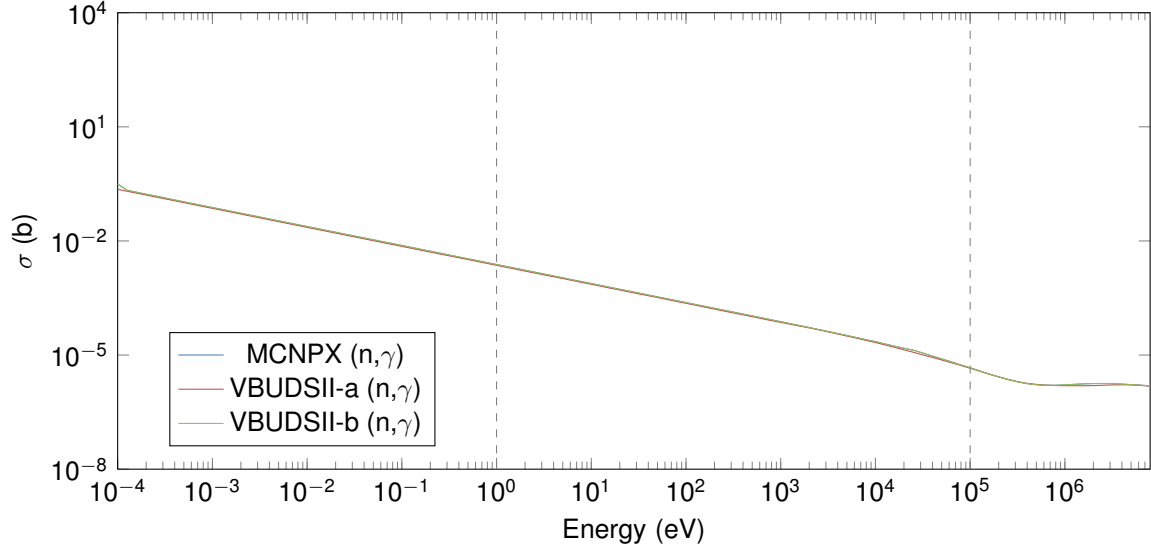


Figure 15: Energy-dependent capture cross section for the H2O cell, generated by MCNPX and VBUDSII run a and run b.

5 Cross sections in cell UO2

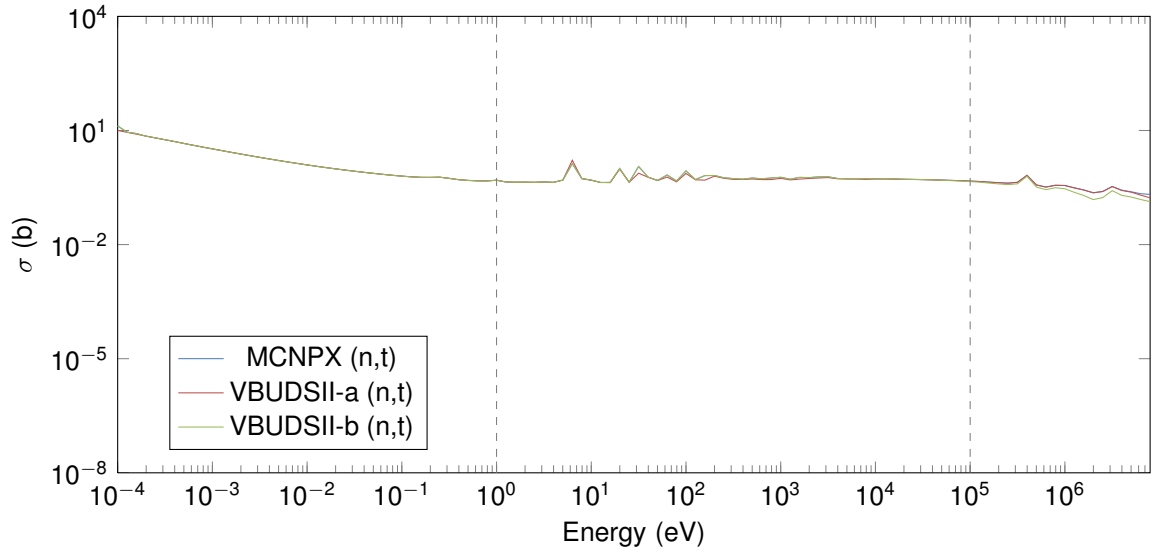


Figure 16: Energy-dependent total cross section for the UO2 cell, generated by MCNPX and VBUDSII run a and run b.

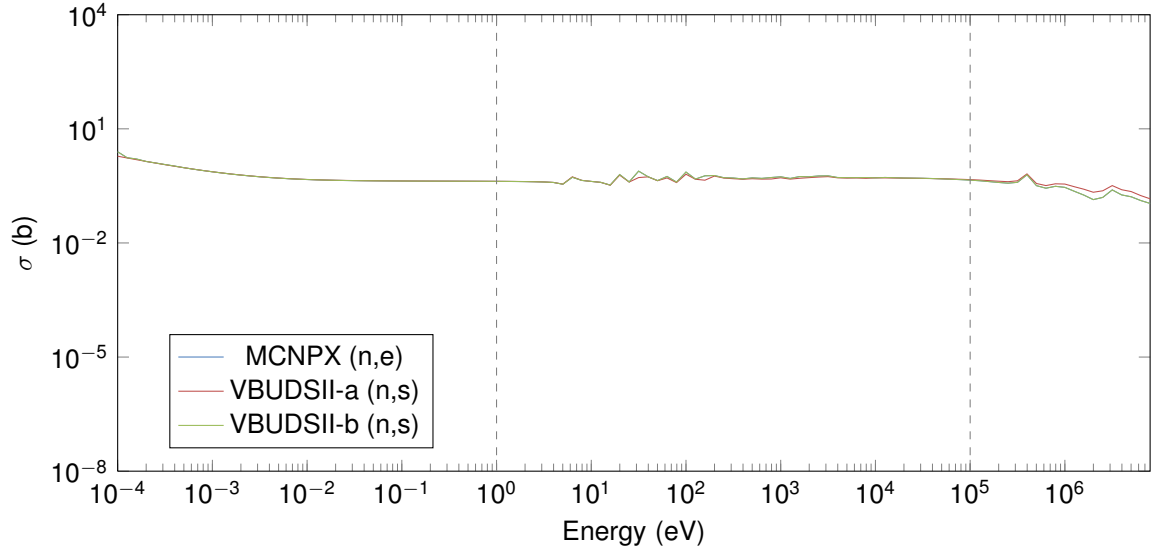


Figure 17: Energy-dependent scatter cross section for the UO2 cell, generated by MCNPX and VBUDSII run a and run b.

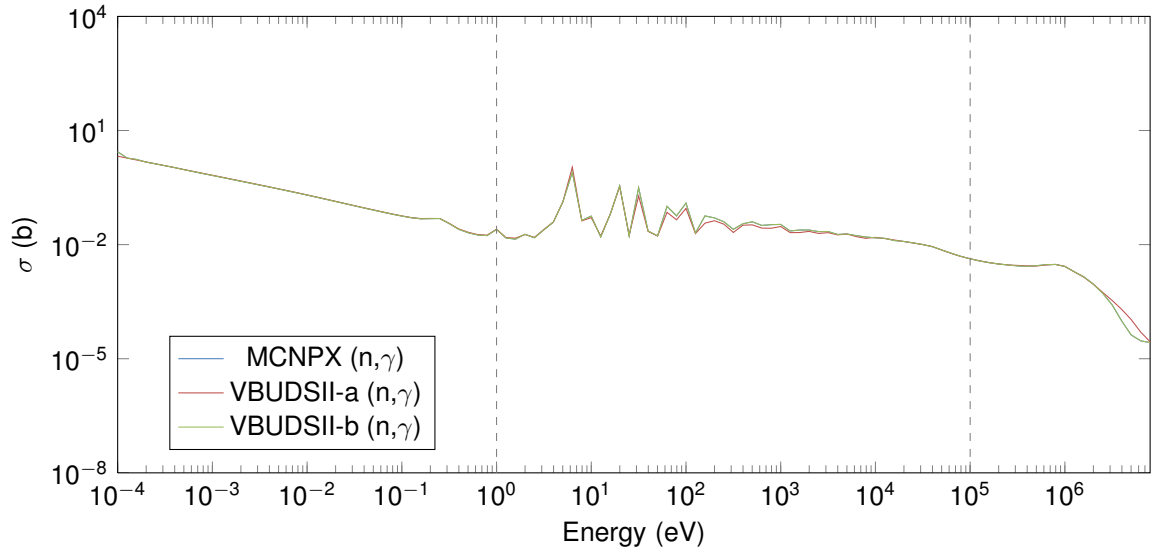


Figure 18: Energy-dependent capture cross section for the UO2 cell, generated by MCNPX and VBUDSII run a and run b.

5.1 Cross sections in cell UO2, for ZAID 92235

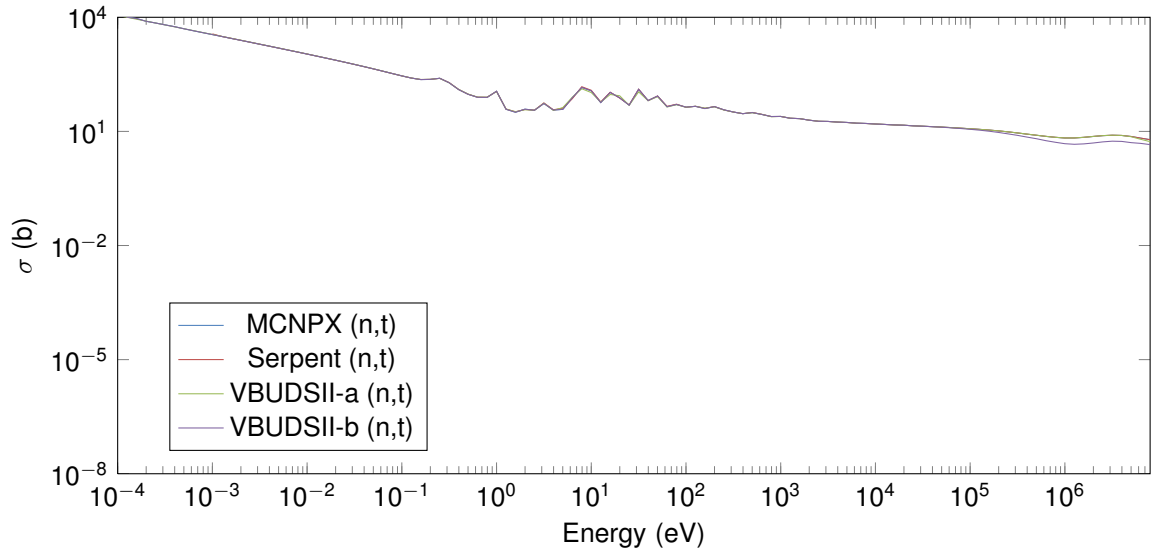


Figure 19: Energy-dependent total cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

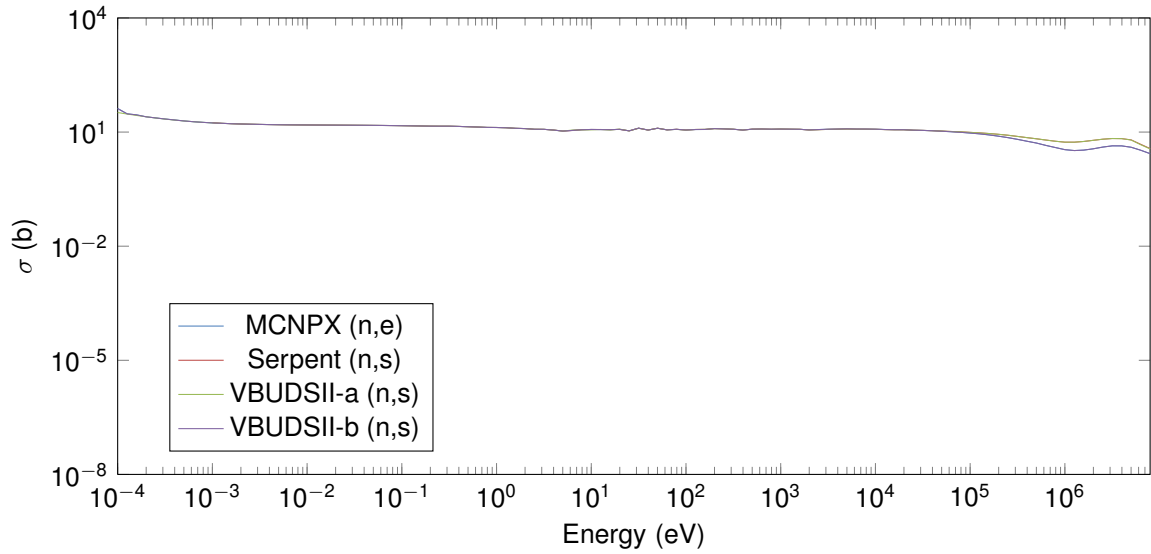


Figure 20: Energy-dependent scatter cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

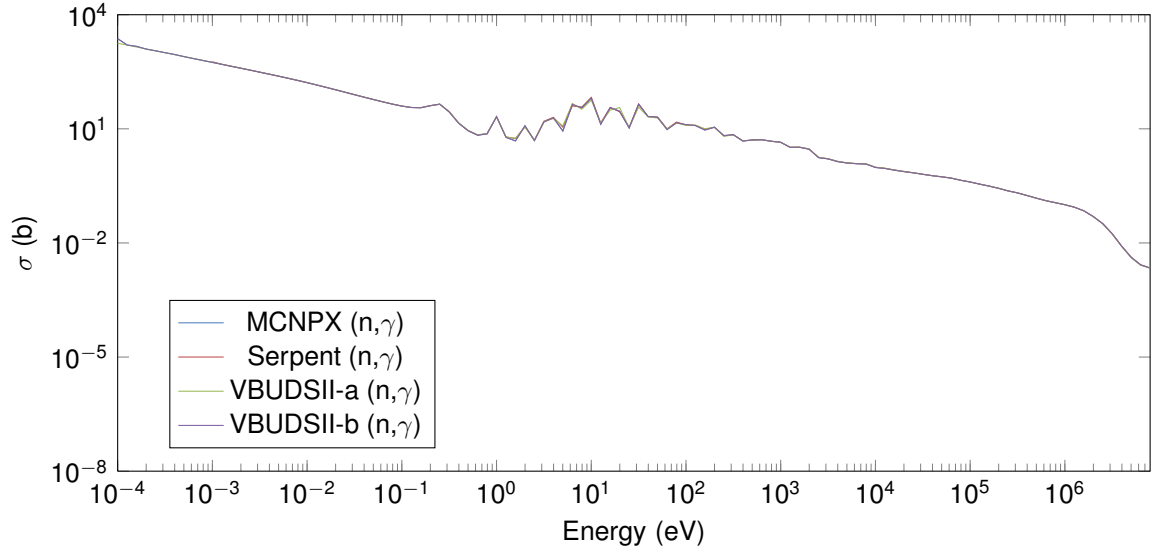


Figure 21: Energy-dependent capture cross section in the UO2 cell for ZAIID 92235, generated by both MCNPX and VBUDSII.

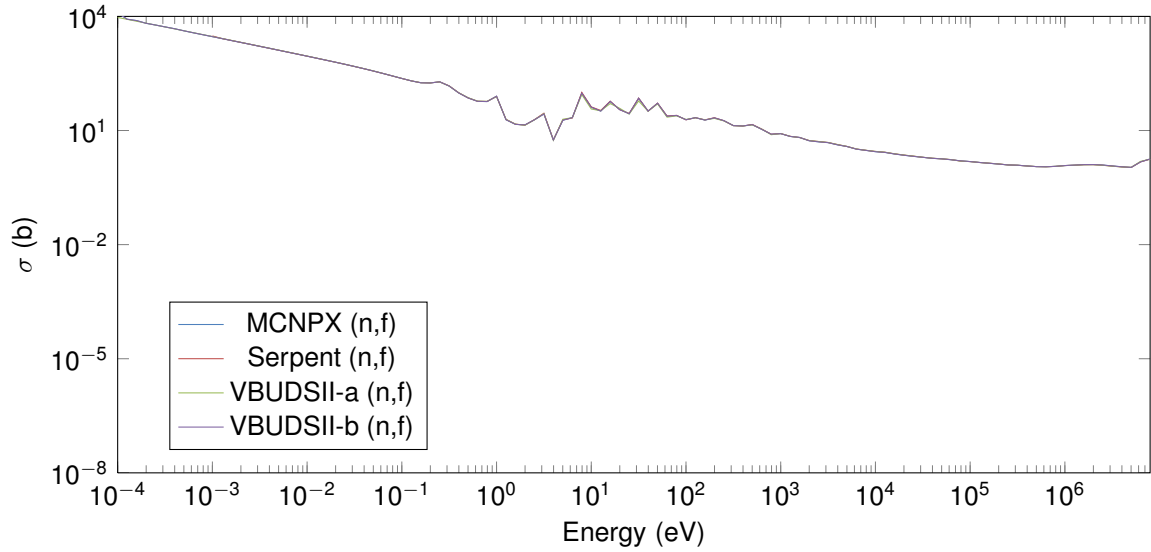


Figure 22: Energy-dependent fission cross section in the UO2 cell for ZAIID 92235, generated by both MCNPX and VBUDSII.

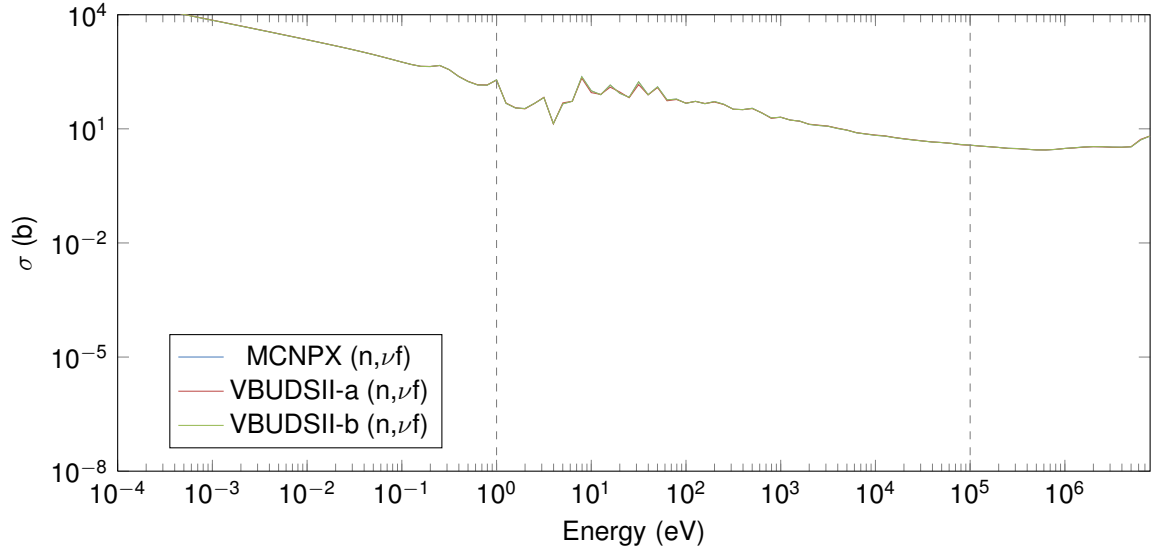


Figure 23: Energy-dependent nuission cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

5.2 Cross sections in cell UO2, for ZAID 92238

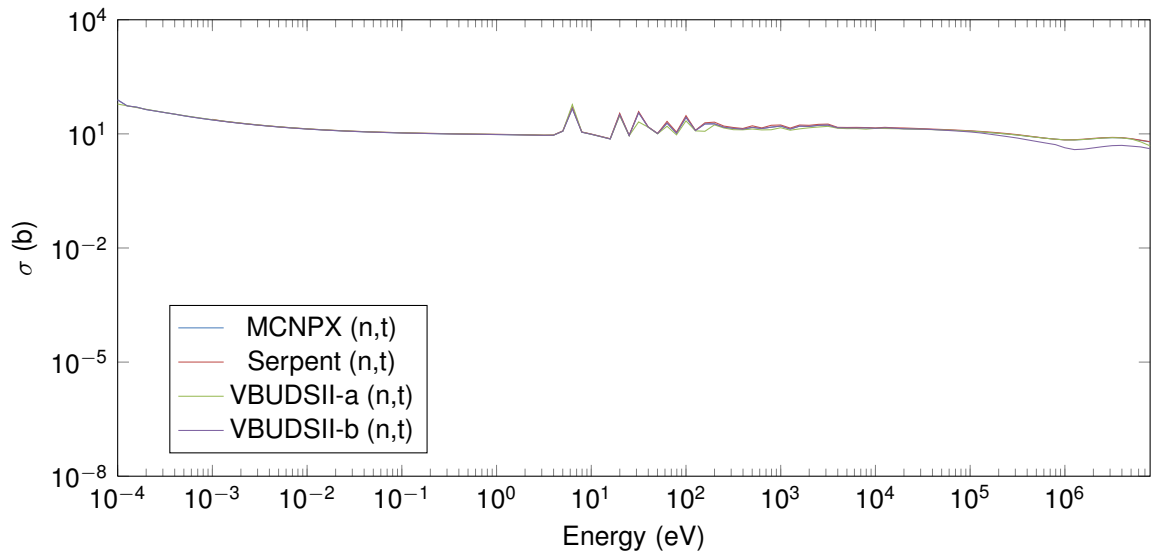


Figure 24: Energy-dependent total cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

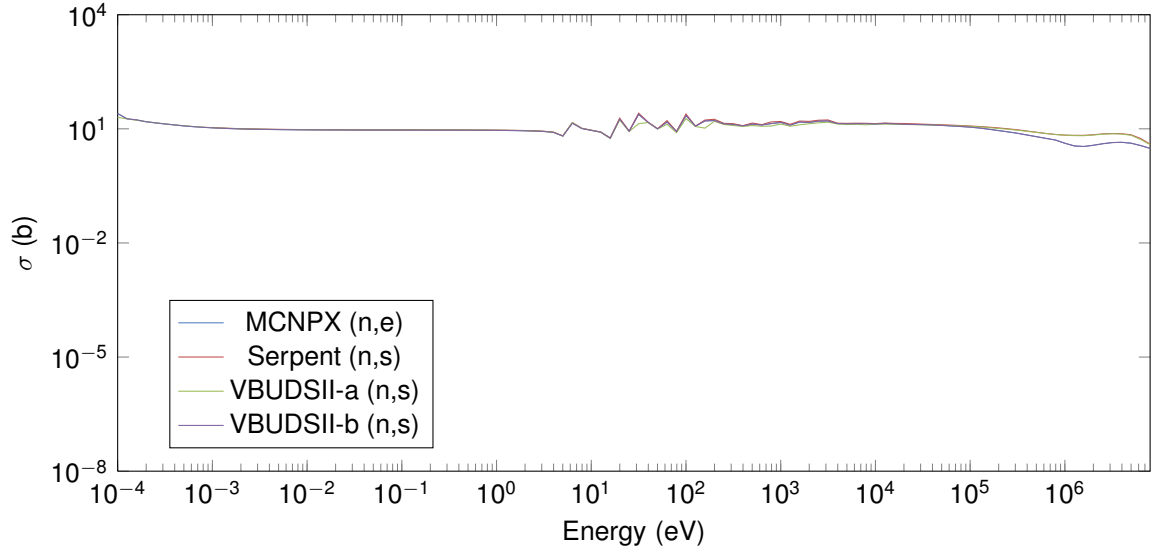


Figure 25: Energy-dependent scatter cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

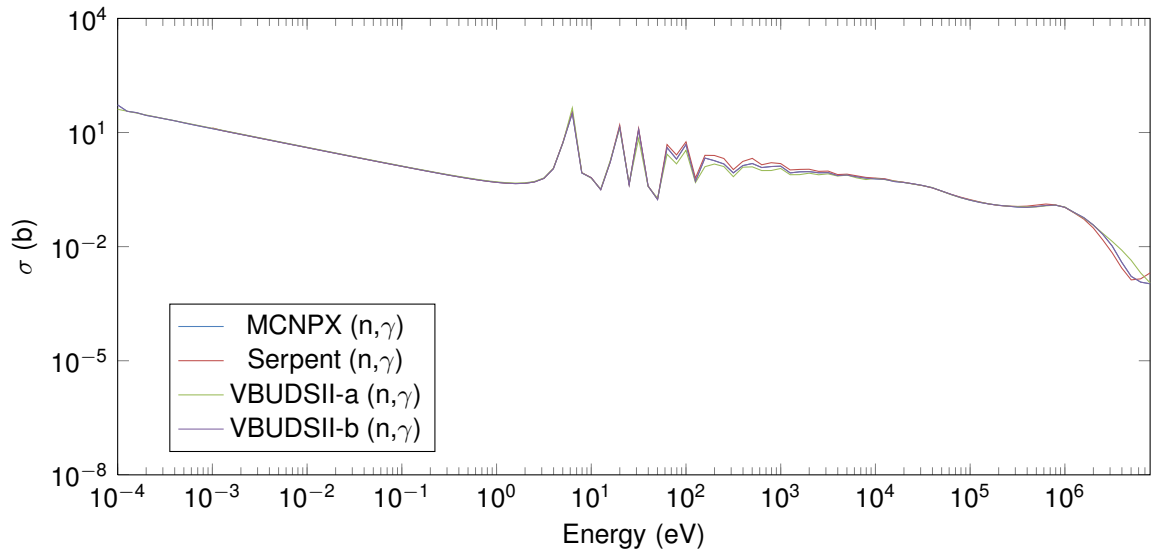


Figure 26: Energy-dependent capture cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

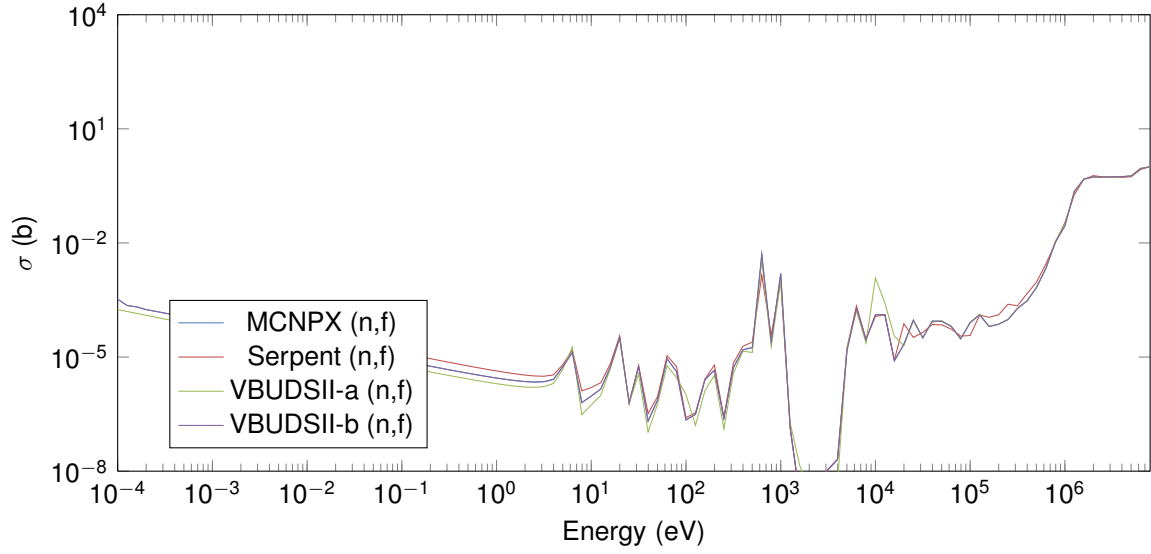


Figure 27: Energy-dependent fission cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

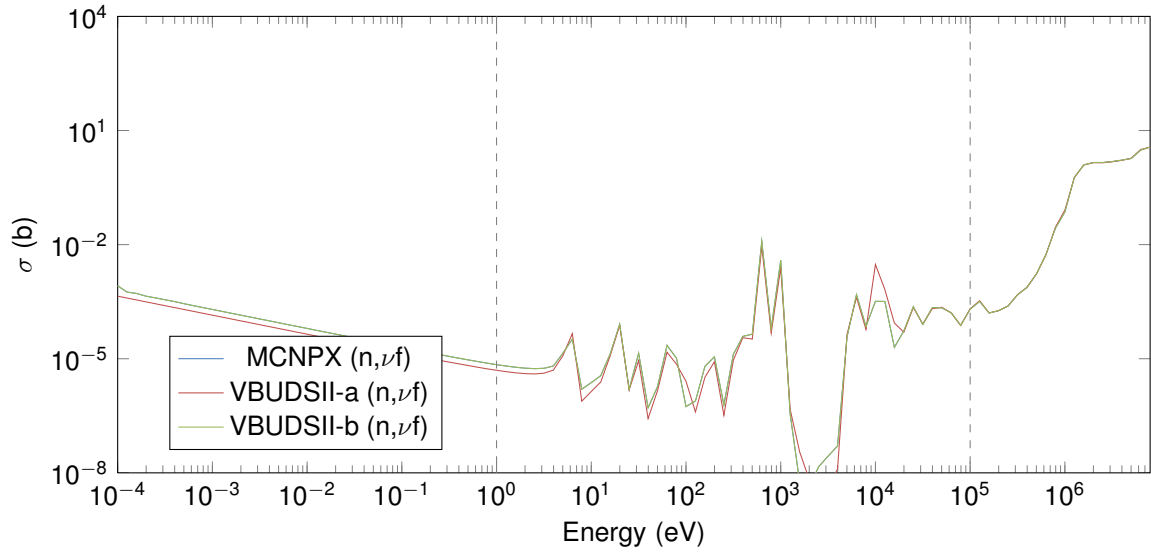


Figure 28: Energy-dependent nufission cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

5.3 Cross sections in cell UO2, for ZAID 8016

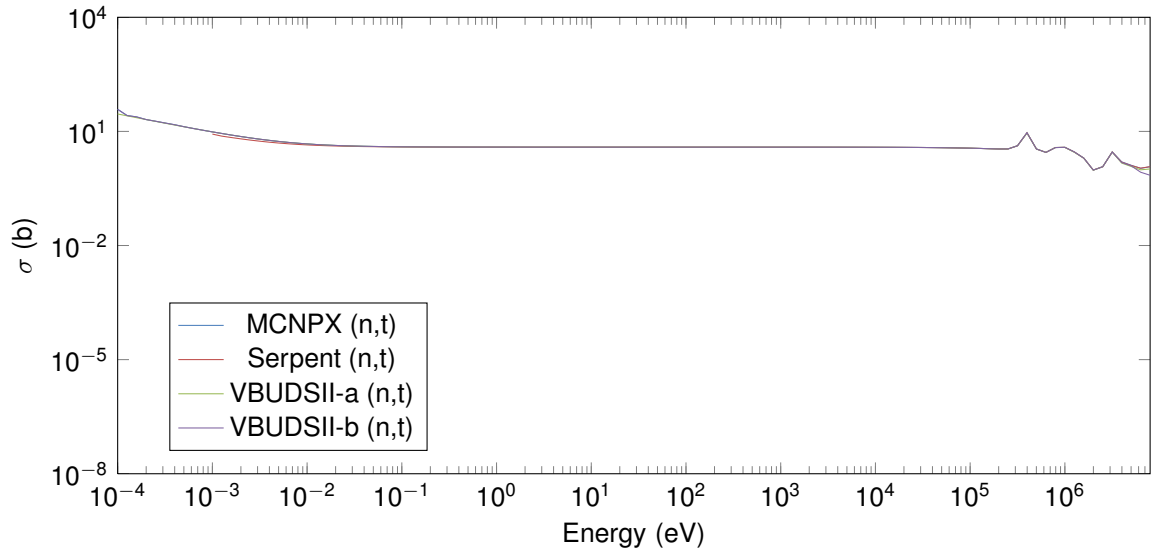


Figure 29: Energy-dependent total cross section in the UO2 cell for ZAID 8016, generated by both MCNPX and VBUDSII.

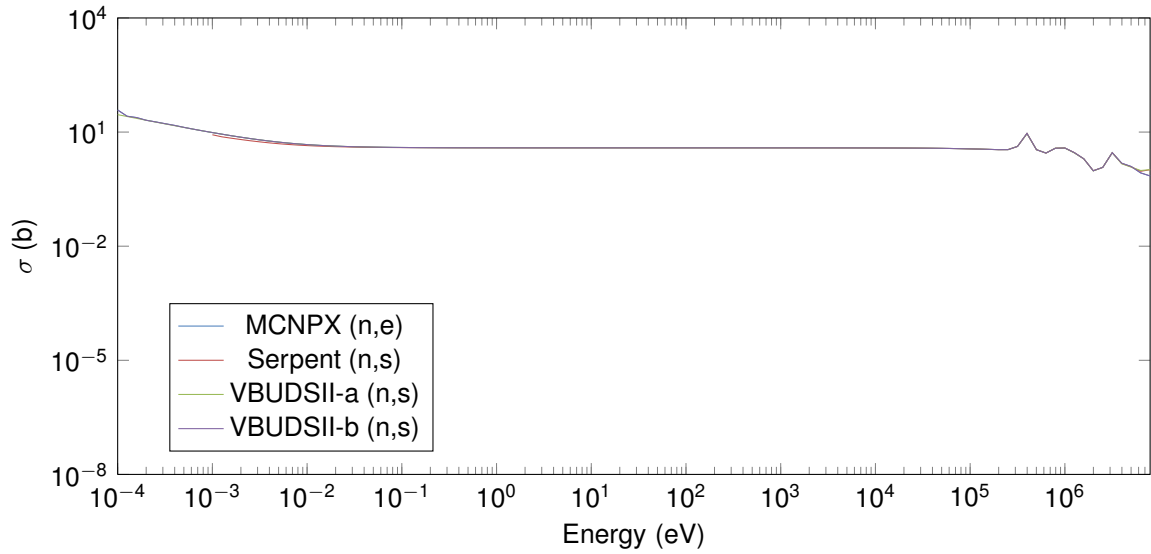


Figure 30: Energy-dependent scatter cross section in the UO2 cell for ZAID 8016, generated by both MCNPX and VBUDSII.

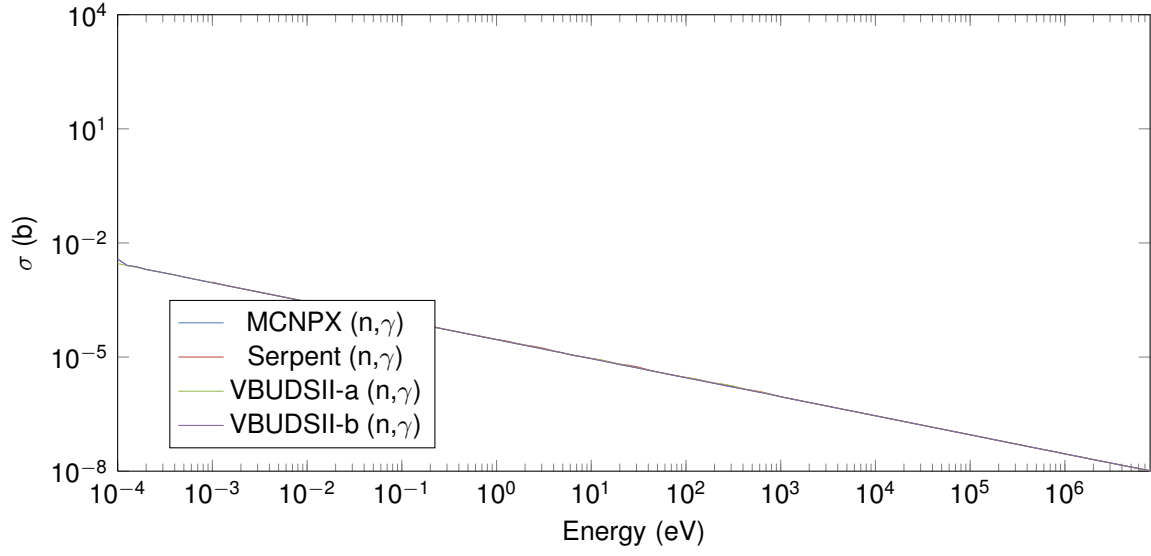


Figure 31: Energy-dependent capture cross section in the UO2 cell for ZAID 8016, generated by both MCNPX and VBUDSII.