

# Results

March 24, 2012

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## 1 Description of run a

No MCNPX cross section intervention. Base case.

## 2 Description of run b

Using MCNPX cross sections everywhere, , but no constant scaling of water xs's.

### 3 The only Flux plot(s)

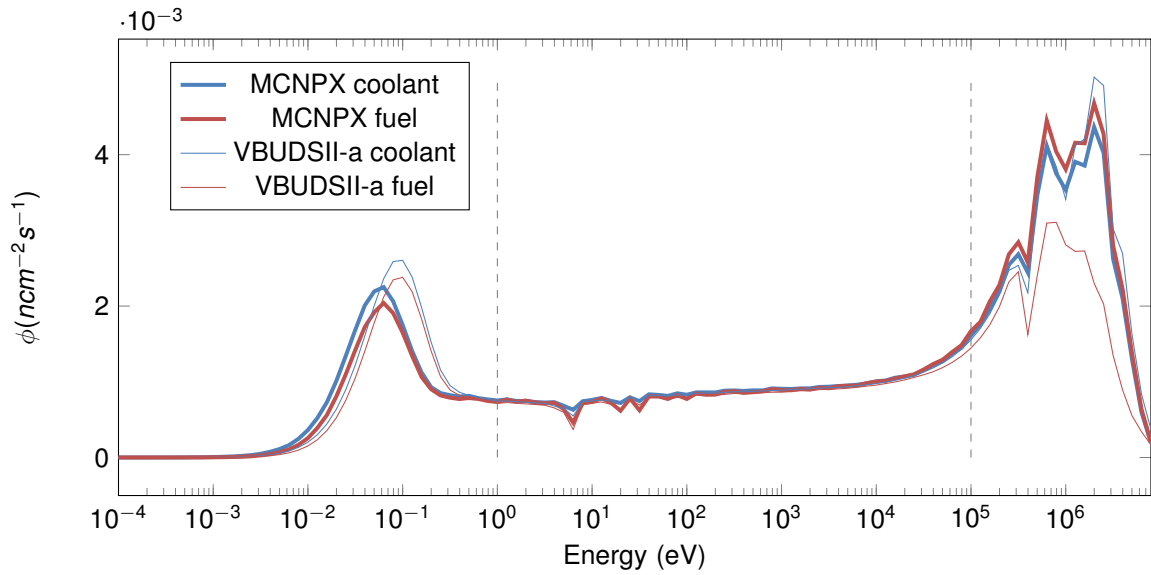


Figure 1: Energy dependent flux in both cells of the reactor, generated by MCNPX and VBUDSII run a.

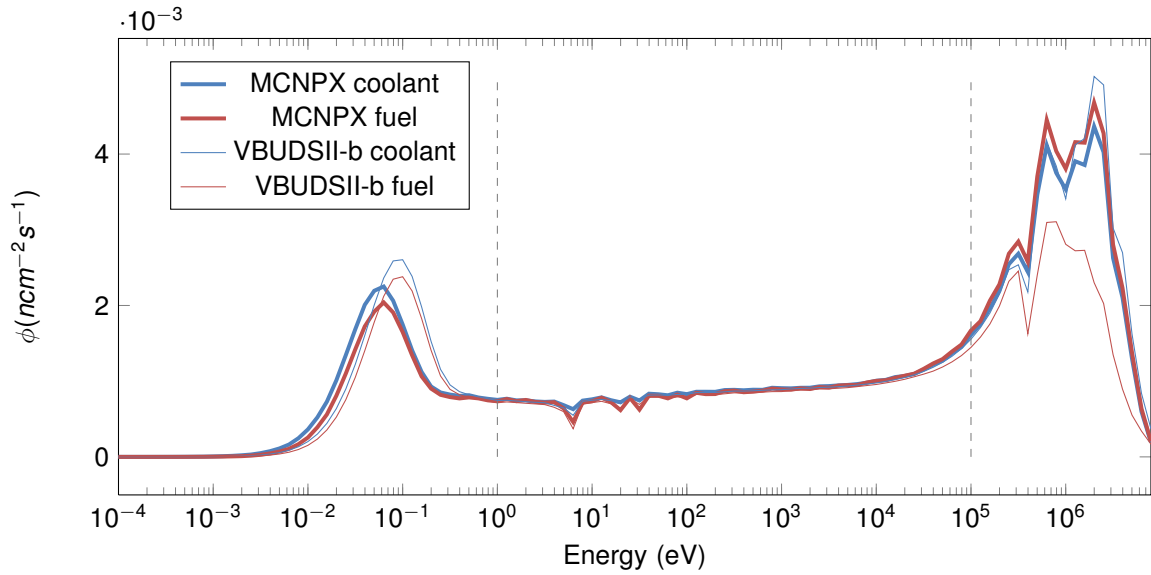


Figure 2: Energy dependent flux in both cells of the reactor, generated by MCNPX and VBUDSII run b.

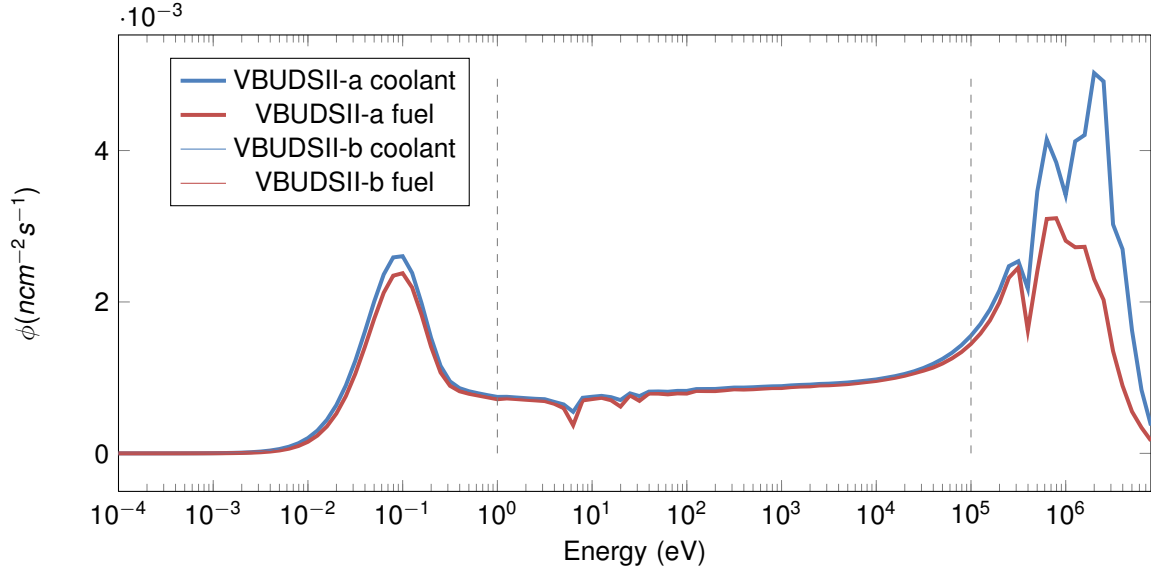


Figure 3: Energy dependent flux in both cells of the reactor, generated by VBUDSII run a and VBUDSII run b.

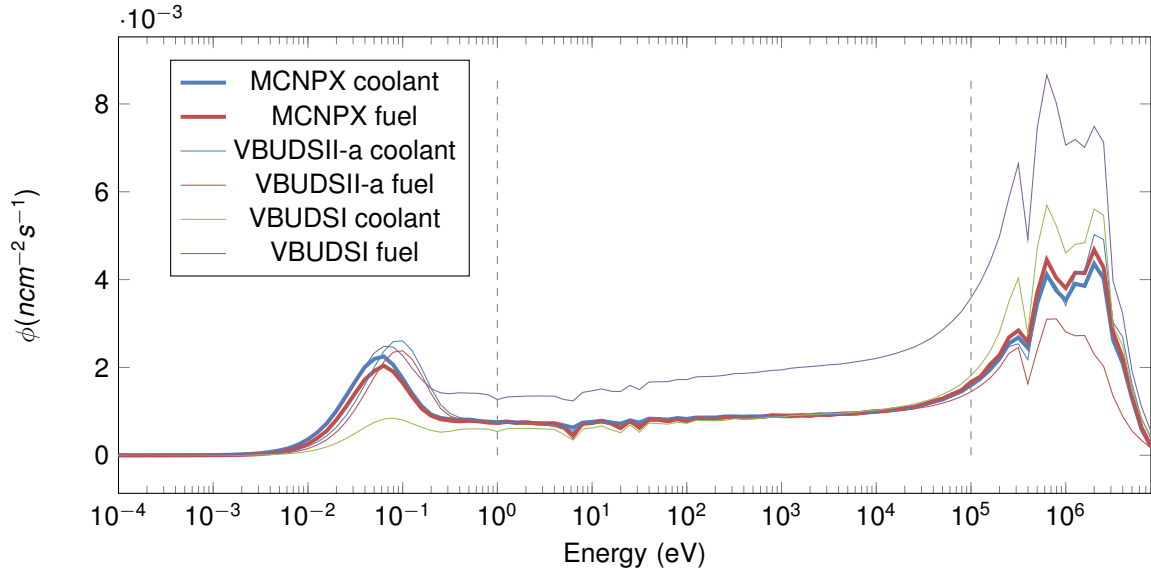


Figure 4: Energy dependent flux in both cells of the reactor, generated by MCNPX, VBUDSII and VBUDSI.

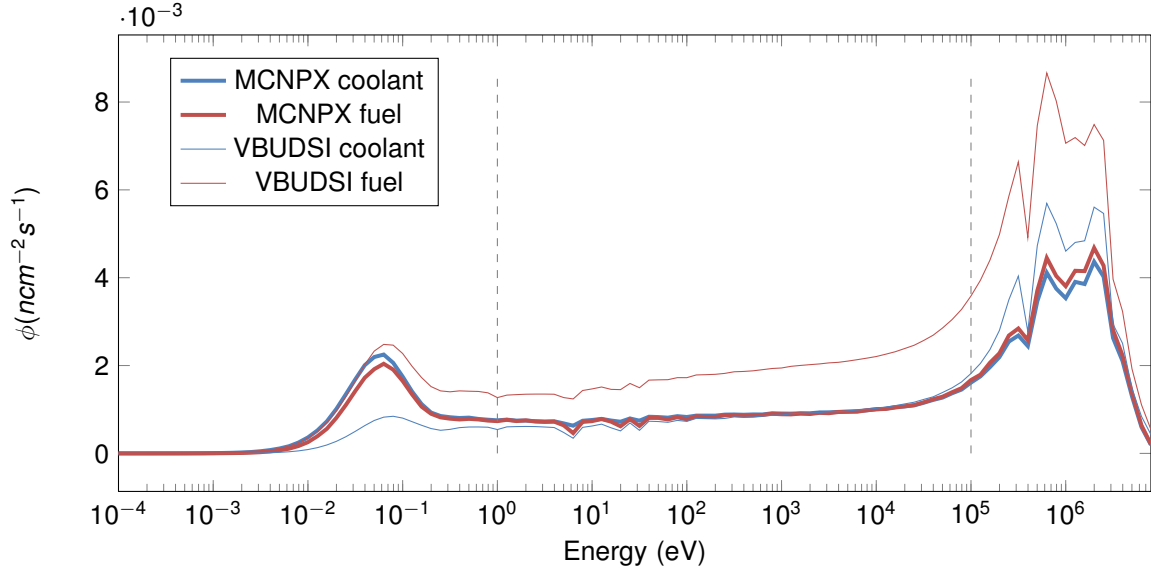


Figure 5: Energy dependent flux in both cells of the reactor, generated by MCNPX and VBUDSI.

## 4 Cross sections in cell H2O

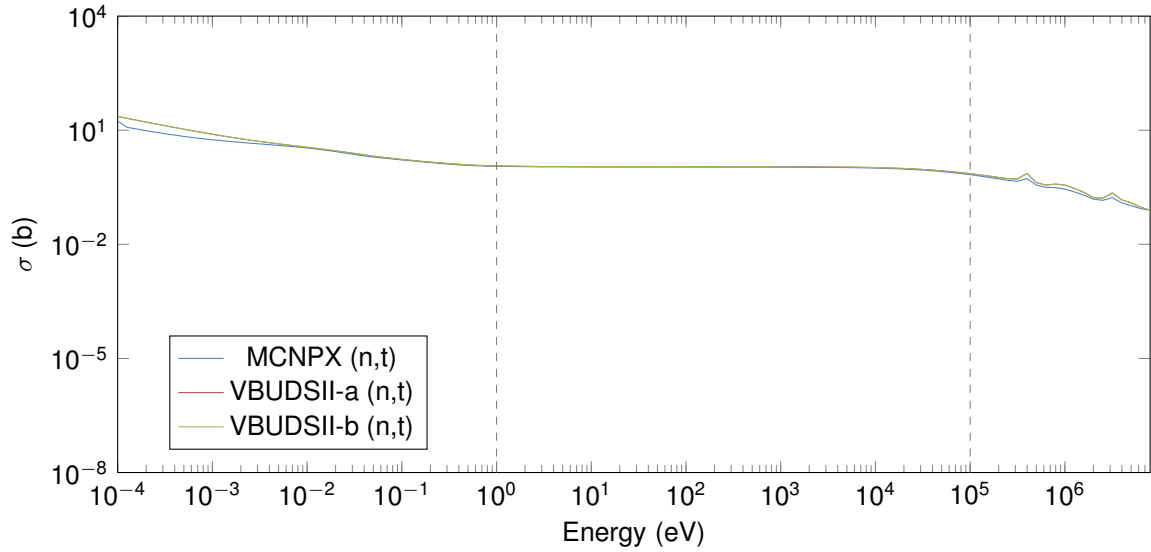


Figure 6: Energy-dependent total cross section for the H2O cell, generated by MCNPX and VBUDSII run a and run b.

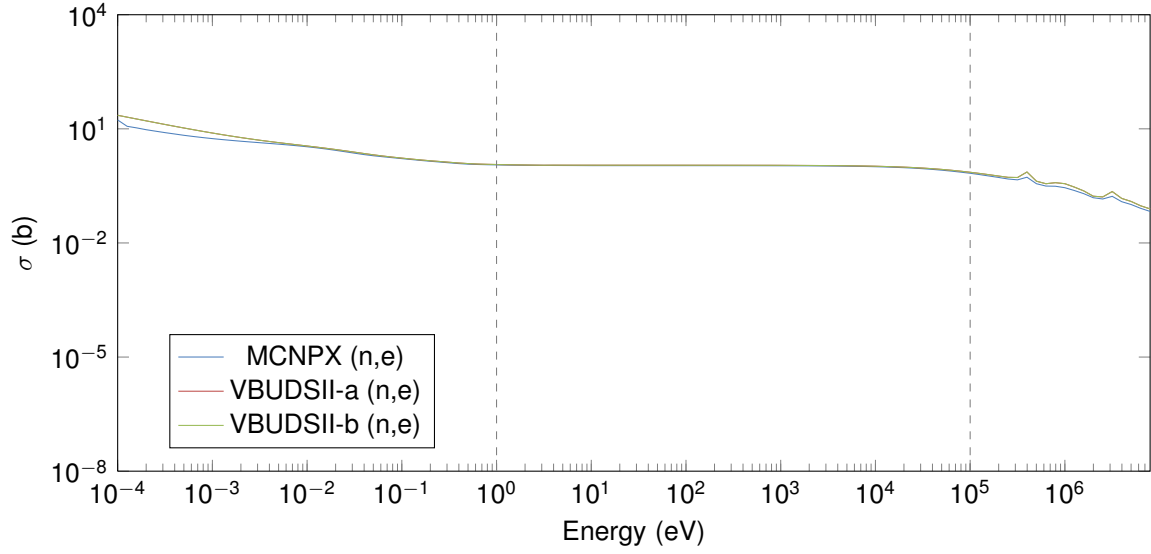


Figure 7: Energy-dependent scatter cross section for the H2O cell, generated by MCNPX and VBUDSII run a and run b.

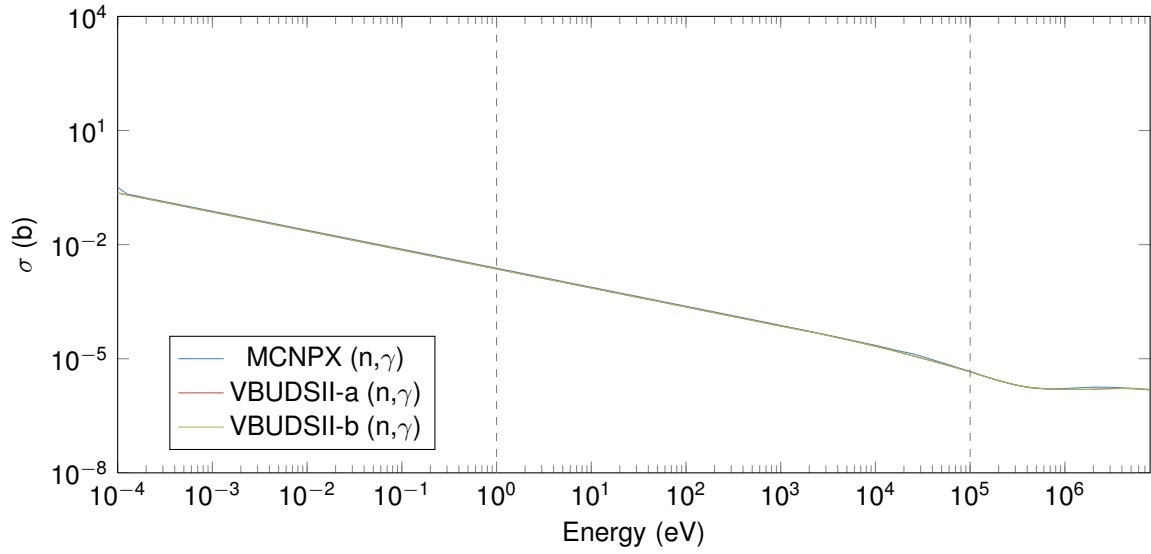


Figure 8: Energy-dependent capture cross section for the H2O cell, generated by MCNPX and VBUDSII run a and run b.

## 5 Cross sections in cell UO2

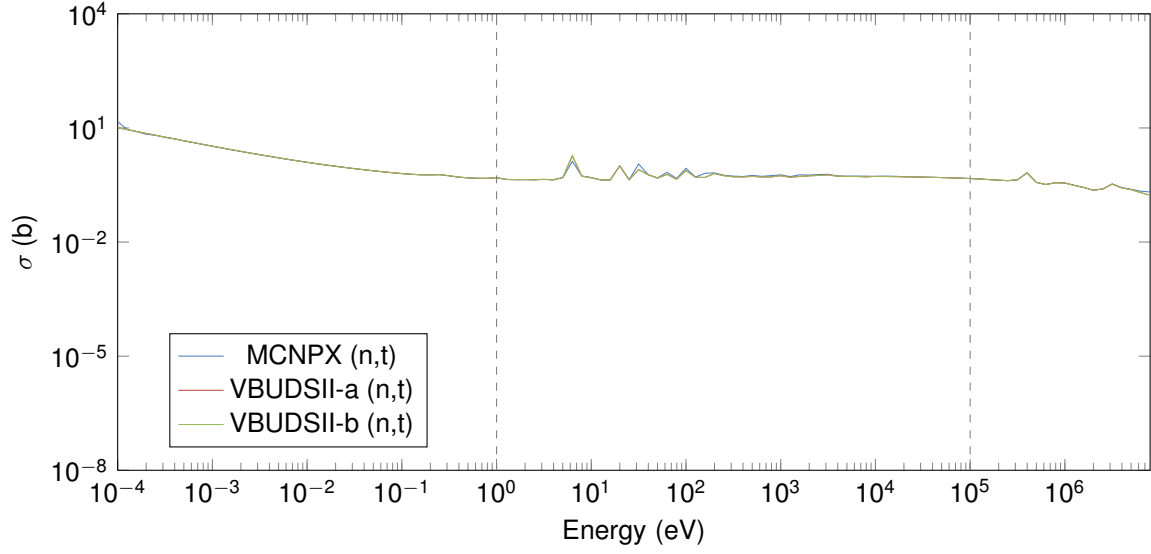


Figure 9: Energy-dependent total cross section for the UO2 cell, generated by MCNPX and VBUDSII run a and run b.

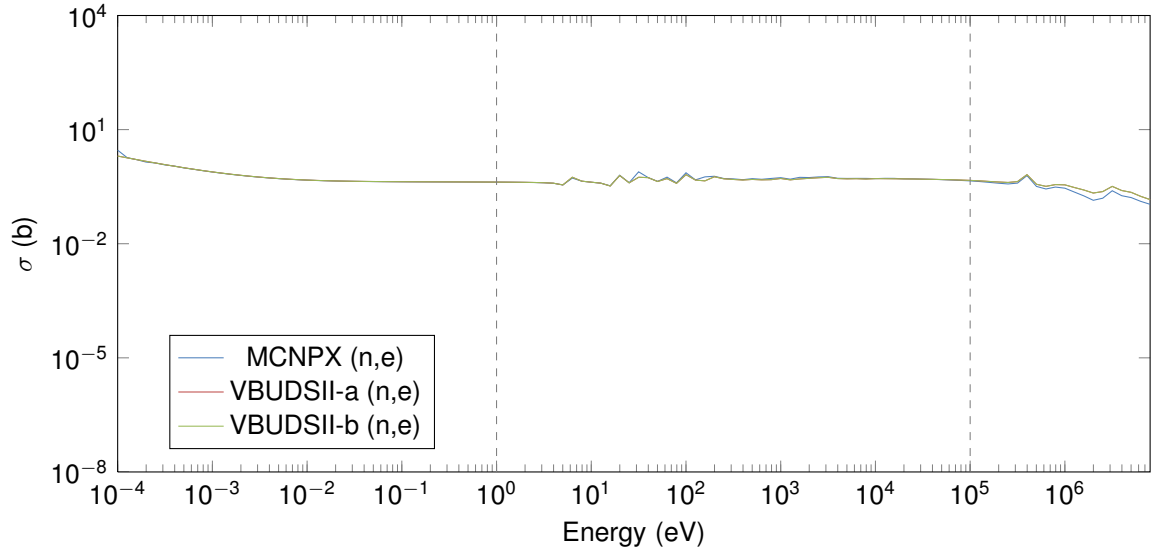


Figure 10: Energy-dependent scatter cross section for the UO2 cell, generated by MCNPX and VBUDSII run a and run b.

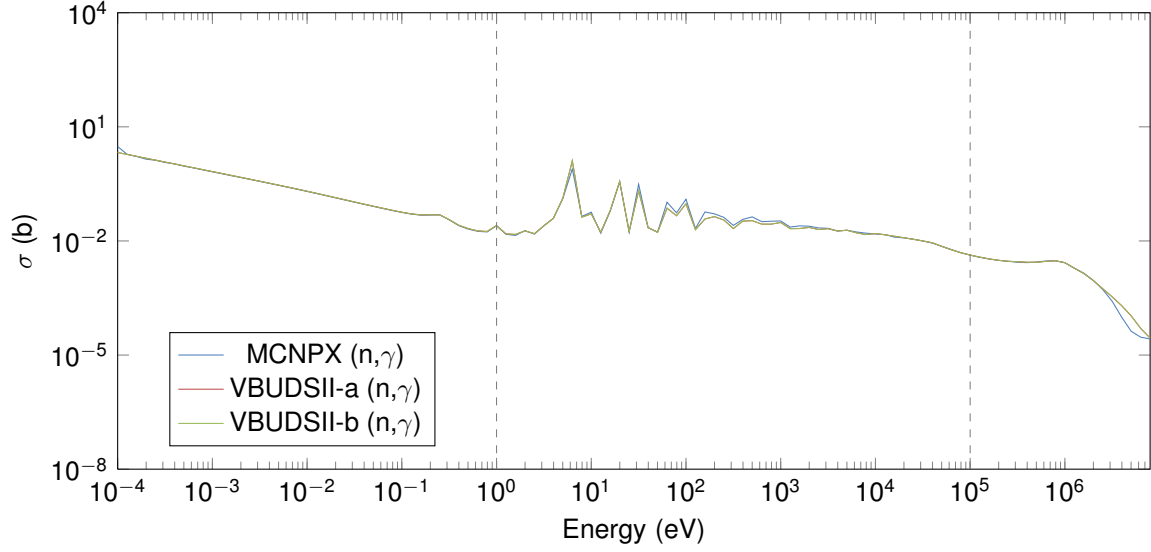


Figure 11: Energy-dependent capture cross section for the UO2 cell, generated by MCNPX and VBUDSII run a and run b.

### 5.1 Cross sections in cell UO2, for ZAID 92235

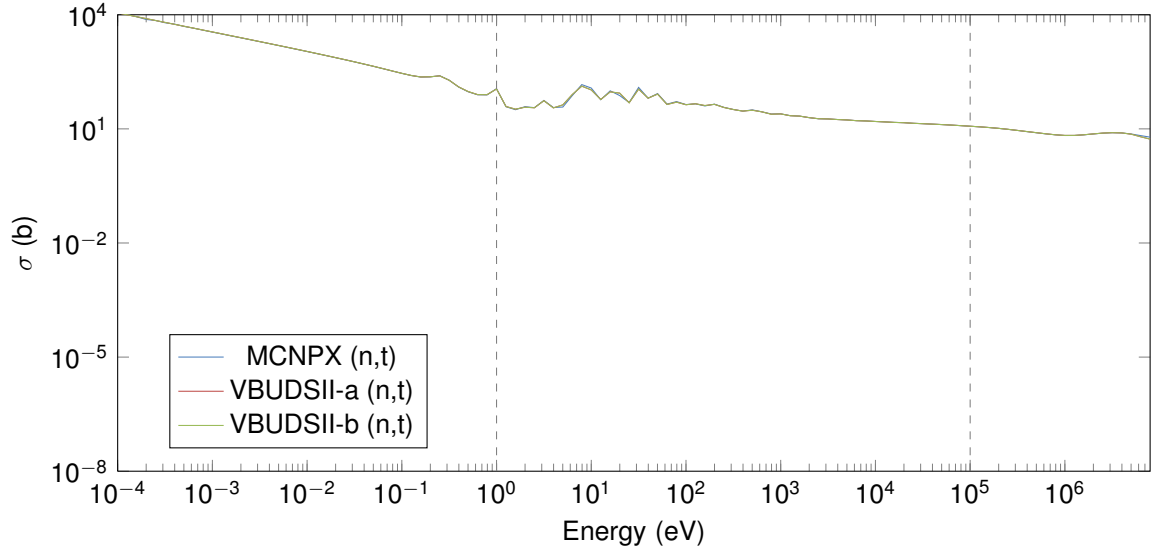


Figure 12: Energy-dependent total cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

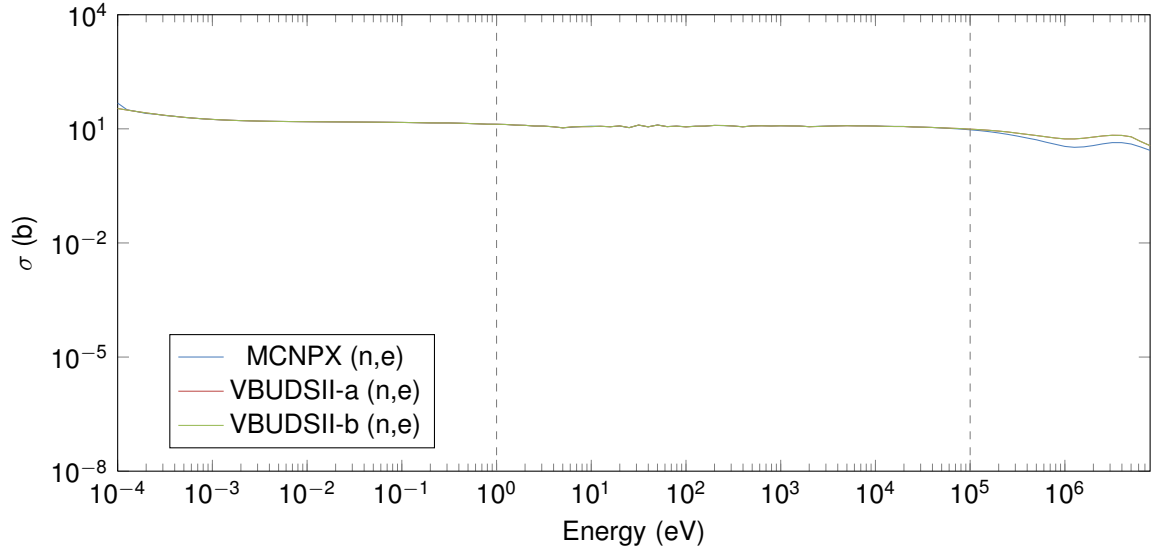


Figure 13: Energy-dependent scatter cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

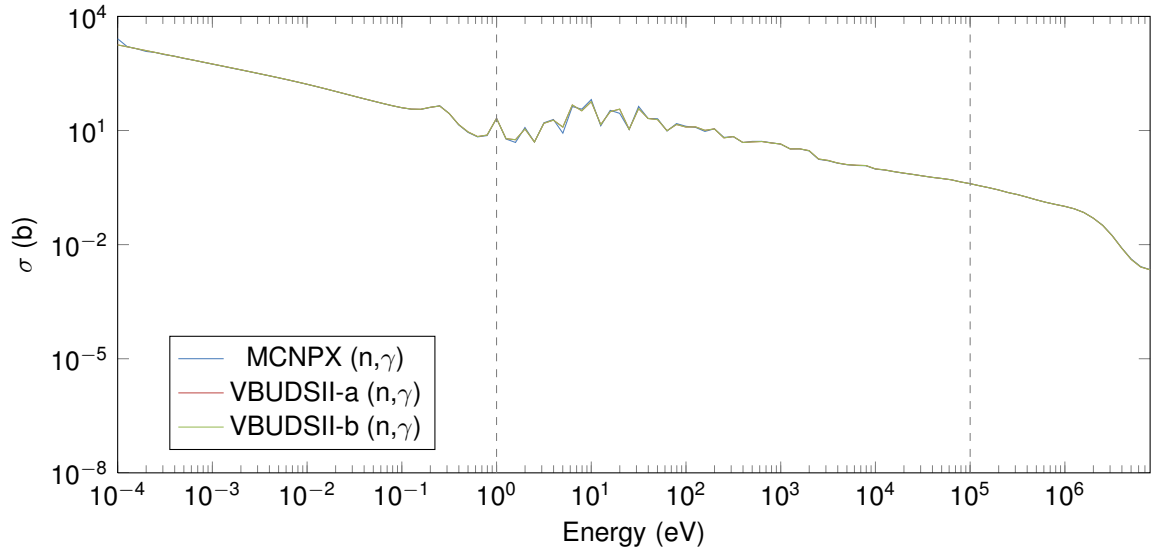


Figure 14: Energy-dependent capture cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.



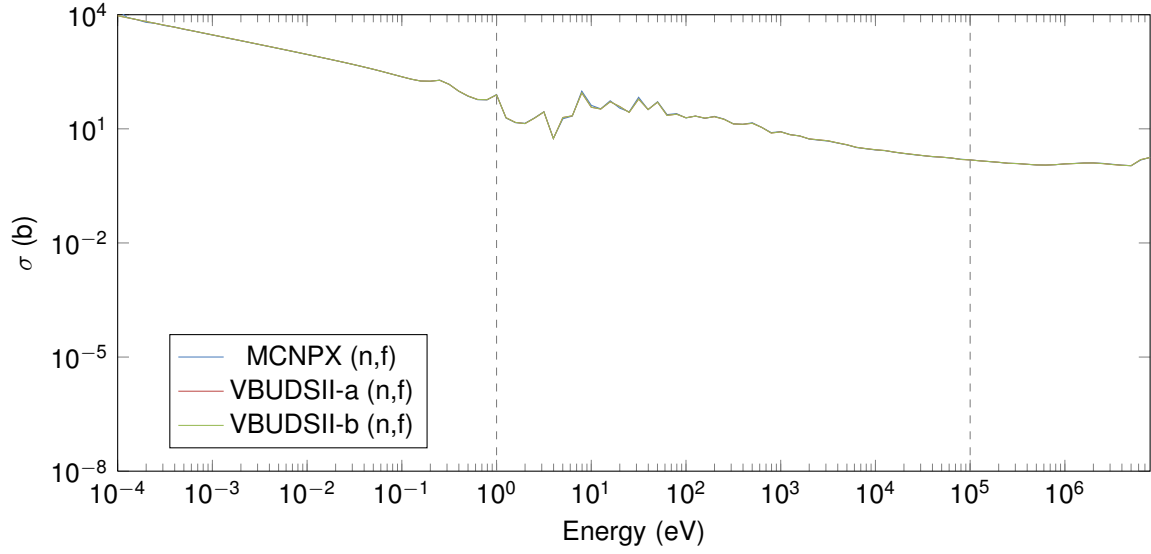


Figure 15: Energy-dependent fission cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

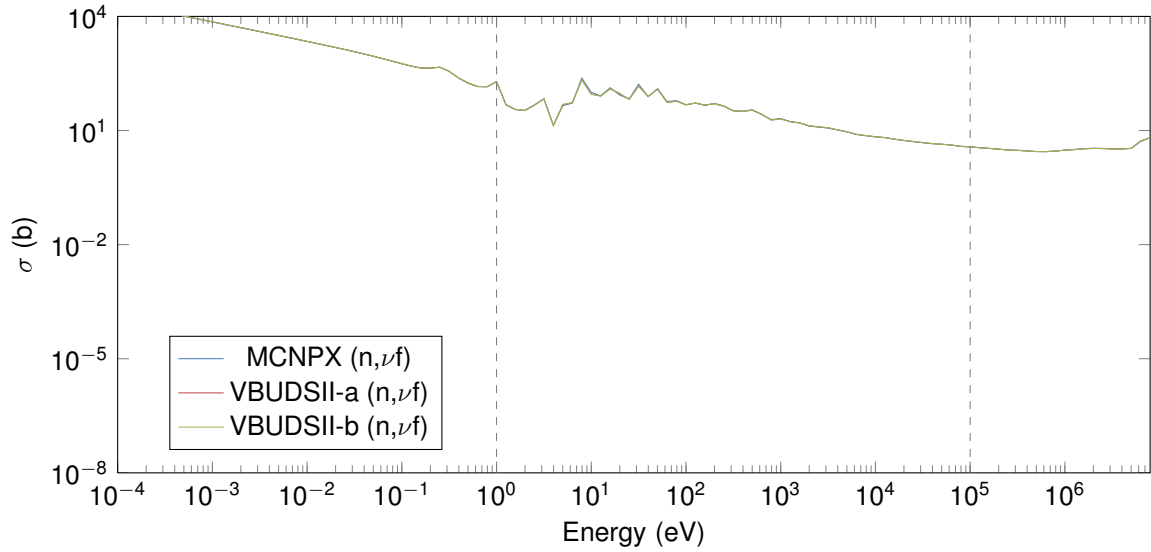


Figure 16: Energy-dependent nufission cross section in the UO2 cell for ZAID 92235, generated by both MCNPX and VBUDSII.

## 5.2 Cross sections in cell UO2, for ZAID 92238

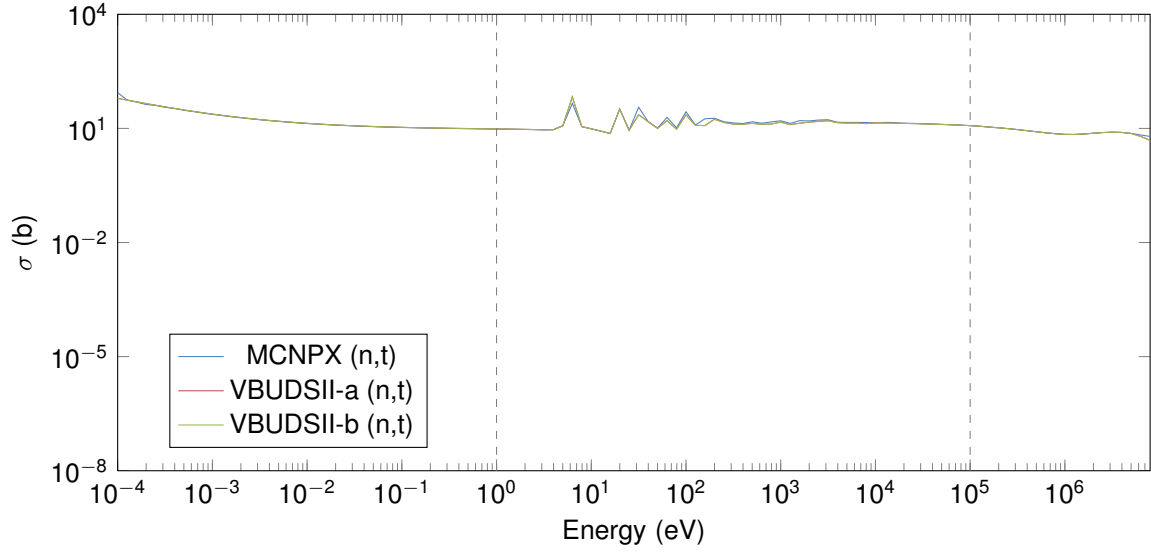


Figure 17: Energy-dependent total cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

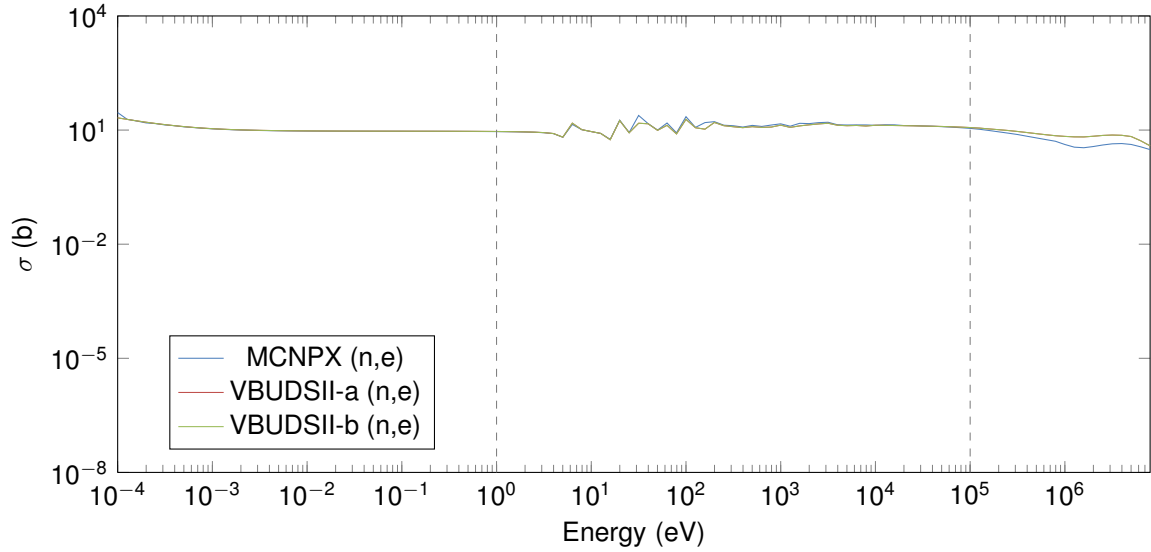


Figure 18: Energy-dependent scatter cross section in the UO2 cell for ZAID 92238, generated by both MCNPX and VBUDSII.

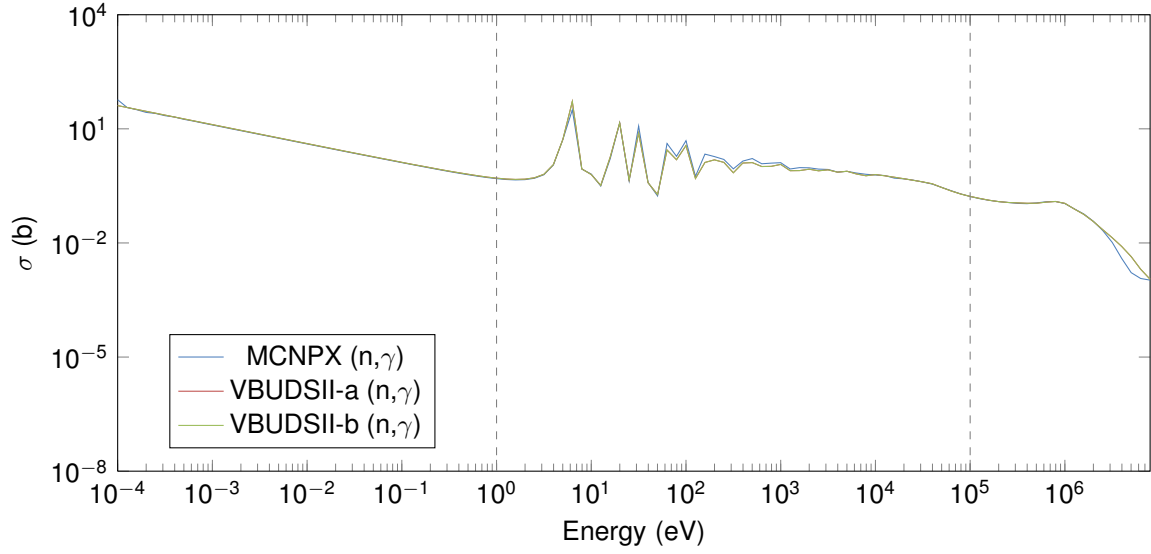


Figure 19: Energy-dependent capture cross section in the UO2 cell for ZAIID 92238, generated by both MCNPX and VBUDSII.

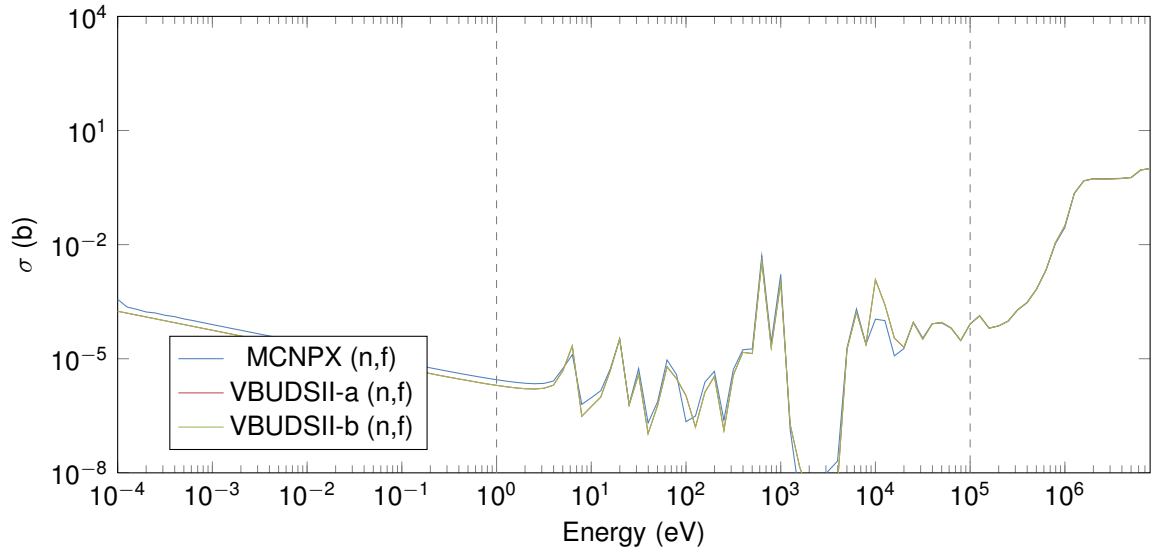


Figure 20: Energy-dependent fission cross section in the UO2 cell for ZAIID 92238, generated by both MCNPX and VBUDSII.

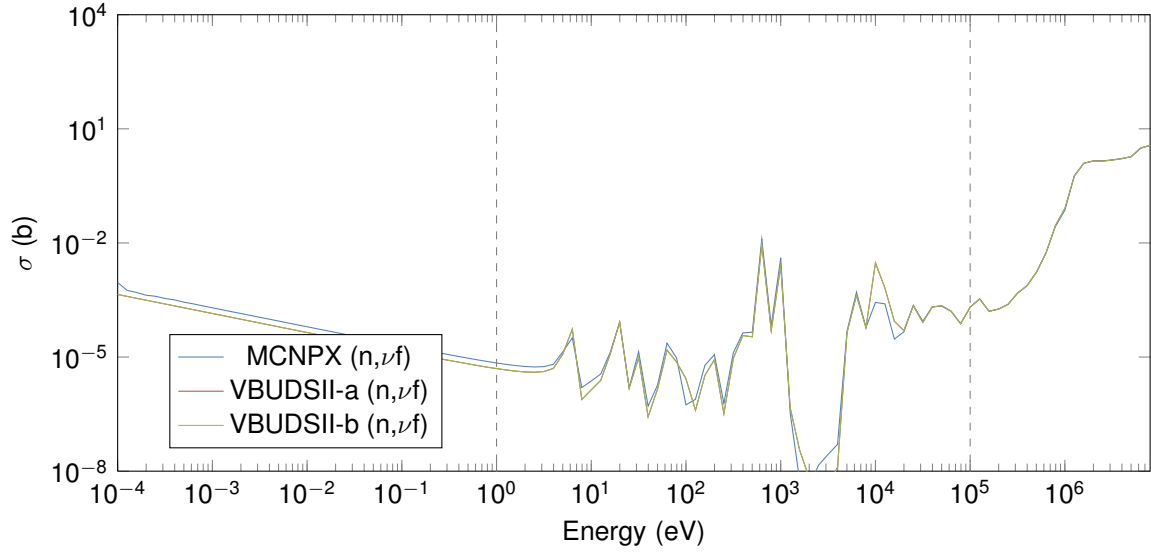


Figure 21: Energy-dependent nu fission cross section in the UO2 cell for ZAIID 92238, generated by both MCNPX and VBUDSII.

### 5.3 Cross sections in cell UO2, for ZAIID 8016

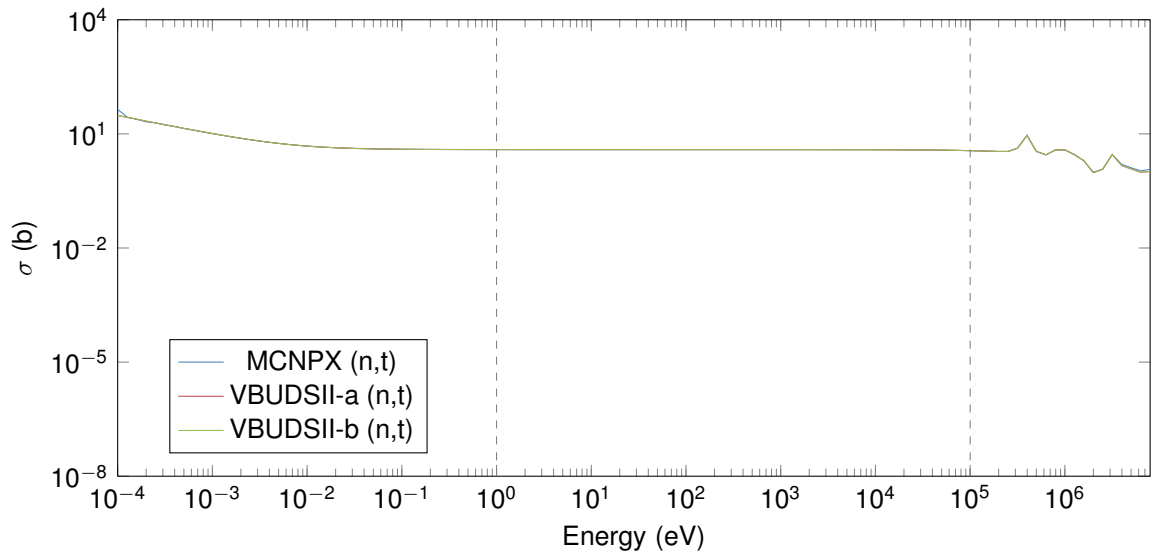


Figure 22: Energy-dependent total cross section in the UO2 cell for ZAIID 8016, generated by both MCNPX and VBUDSII.

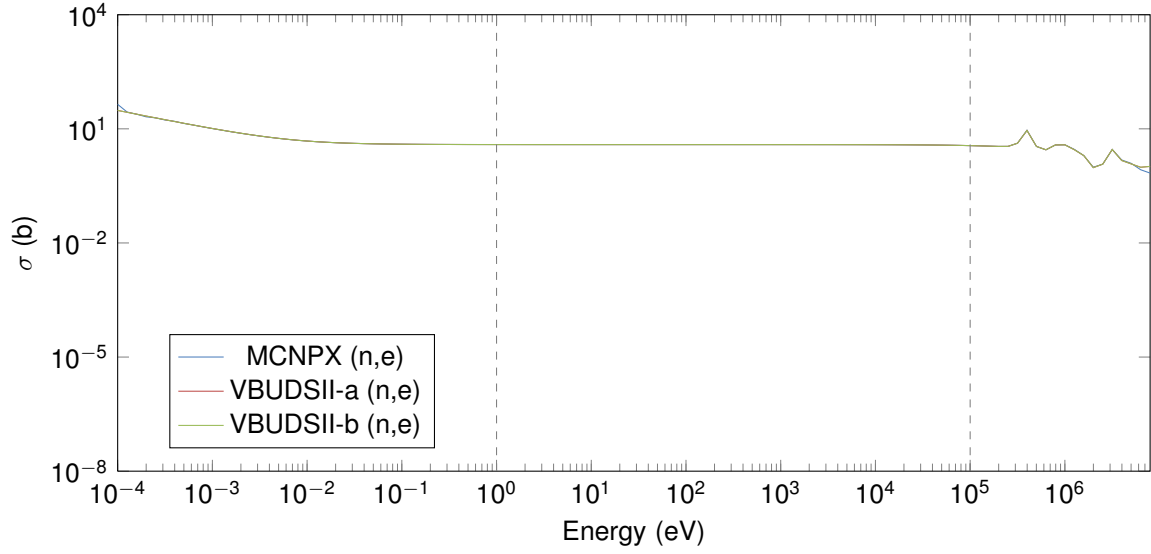


Figure 23: Energy-dependent scatter cross section in the UO2 cell for ZAID 8016, generated by both MCNPX and VBUDSII.

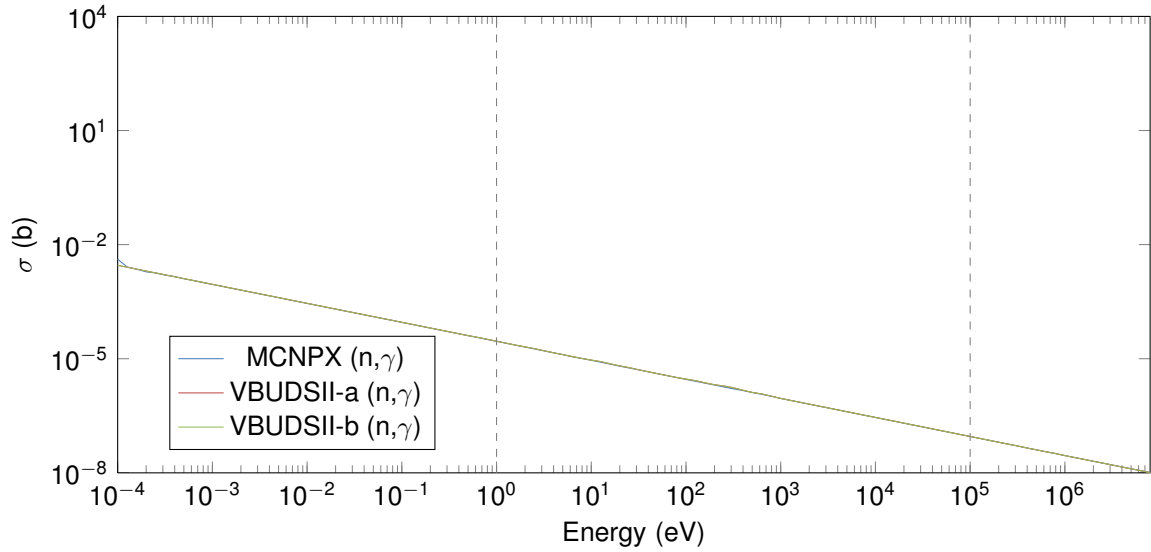


Figure 24: Energy-dependent capture cross section in the UO2 cell for ZAID 8016, generated by both MCNPX and VBUDSII.