GE BWR 9x9 Geometry Considerations for Point Kinetics Project

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Fuel Pin Radial Dimensions and Setup As listed in the MIT Document provided by Connor [1, p. 9], the setup for the water channel and fuel pin radially is shown in Figure 1. Note that the simulation will only solve one water channel for the drift flux simulation, and one fuel pin for the diffusion simulation. It is likely that we will not be able to incorporate air gaps.

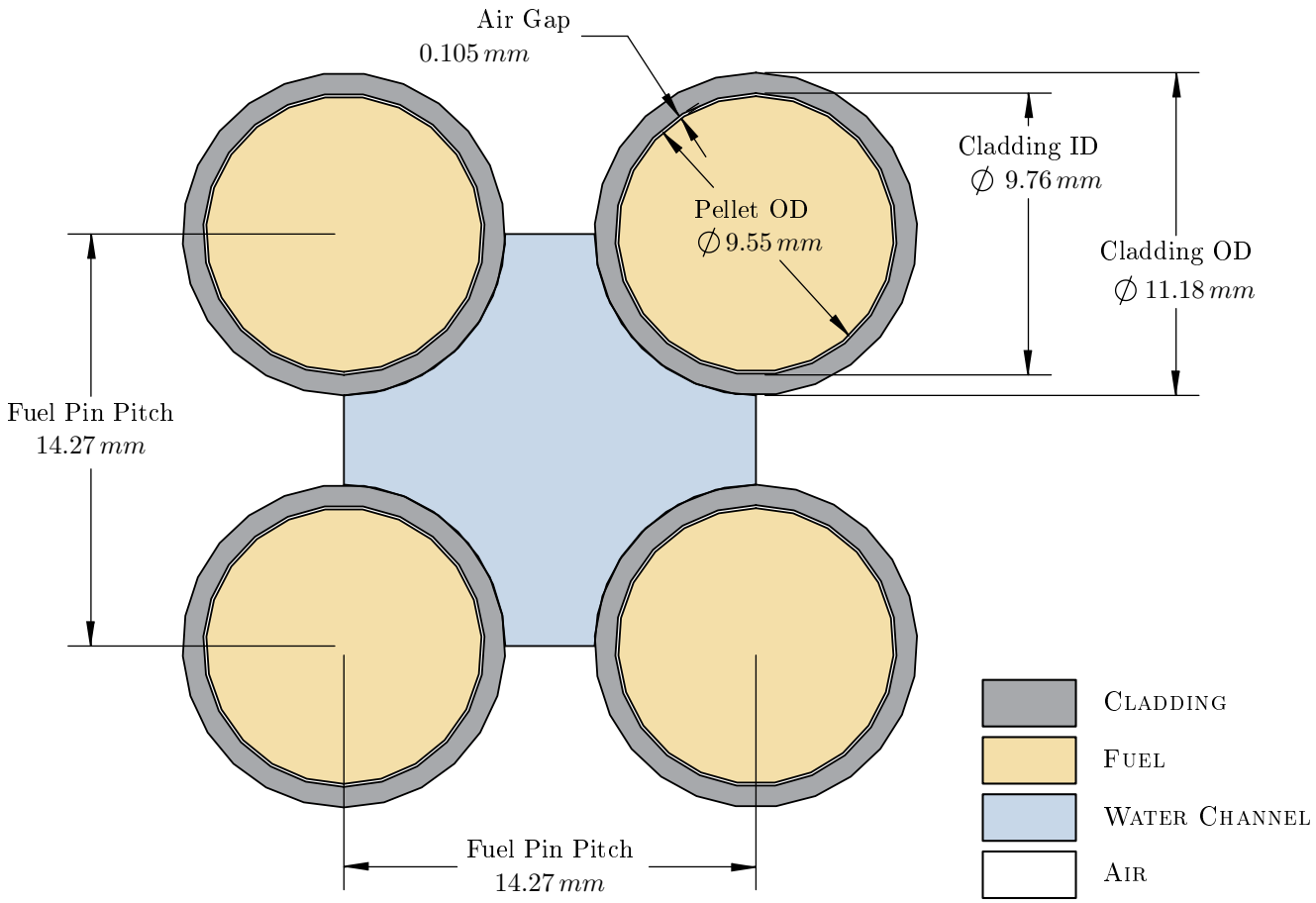

Figure 1: Radial Dimensions and Spacing of 4 Fuel Pins in GE 9x9 BWR Core

The axial setup for the fuel pins is shown in Figure 2. Note that the air gaps axially between fuel pellets will likely be impossible to simulate, so the heated percentage should be used for the drift flux, and for the diffusion code as well.

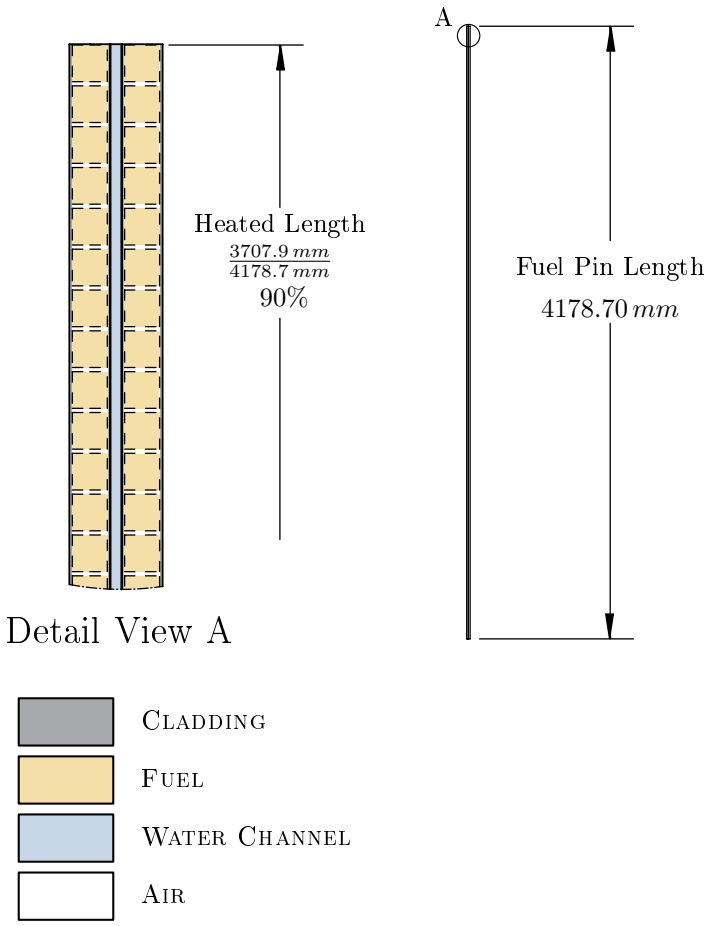

Figure 2: Axial Dimensions and Spacing of 4 Fuel Pins in GE 9x BWR Core

References

[1] J. Buongiorno. BWR Description, 2014.