The thermal NO mass fraction along the central axis of the furnace are compared in fig. 11.2. The thermal NO measurement results are identical for OpenFOAM and ANSYS Fluent far from the inlet. Close to the inlet where the flow dynamics is active the agreement is good considering the fact that NO present in the furnace is in trace amounts when compared to the global species concentration. The discrepancies in the results can be attributed to the differences in the input flow profile as seen in fig. 11.1 for the axial component of the velocity field.

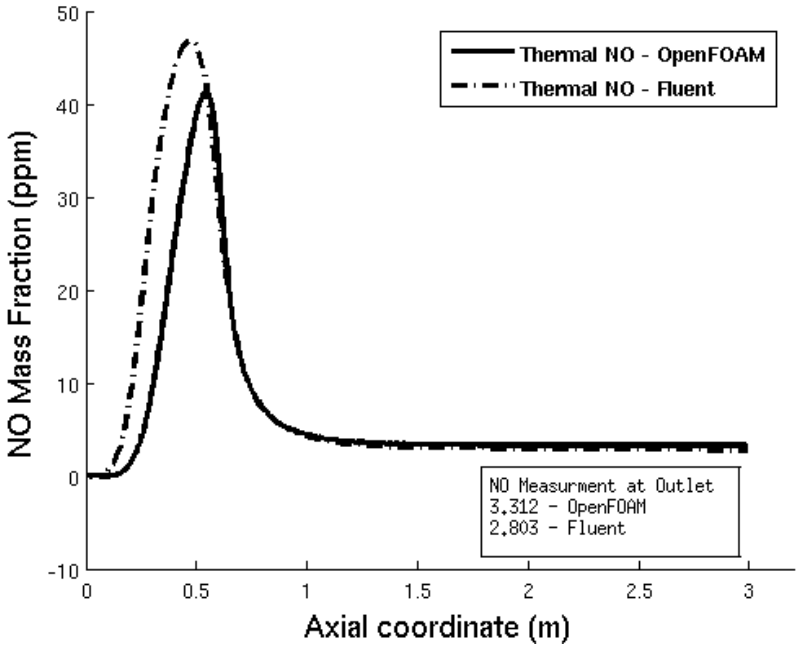

Figure 11.2: Thermal NO mass fraction (in ppm) along the central axis of the furnace.