**Reviewer 1: The paper is well written in general and deals with a Hi2Low modeling approach. Some remarks:**

1. *Properly introduce abbreviations NEM, CTF, CTFFuel (and check other abbreviations) when they first appear.*

Added.

1. *Provide correct references for the various Cheng and Todreas correlations mentioned.*

Added.

1. *Chapter 4: "...region is shown in FIG. 6 shows..." is not a correct sentence. Please correct.*

Sentence corrected.

1. *The SUMMARY is more a discussion rather than a summary. Consider to split this chapter in a DISCUSSION and a SUMMARY chapter.*

A new discussion section is made, and the summary is now a brief overview.

1. *Please insert figures in the text near where they are mentioned. Enlarge figures 6 and 7. Values are not readable.*

The figures are moved to corresponding locations. Figure 6 is enlarged, Figure 7 was removed unrelated to this comment.

**Reviewer 2: Thanks for this paper! Please find a few comments/remarks/requests for clarification below :**

1. *§2 : Would it be possible to organize this section into a few subsections like 1. Neutronics, 2. Fuel Performance and 3. Thermal-hydraulics? Currently, everything is a bit mixed together…*

The section is reorganized to have a paragraph on each of the three component fields.

1. *§2 par 2 : Has CTFFuel also been extended to address FR oxide fuel? (for instance MOX with 15-20% PuO2)*

Yes, it has. A note has been added that the extension for FRs includes the option for either oxide or metallic fuels, beyond the further investigations into specific details of U-Zr sodium bonding infiltration effects.

Yes, CTFFuel is also

1. *§3 par 1 : Was the edge subchannel mixing effect (which is not diffusive but convective, as you noted) also implemented by modifying the existing turbulent mixing/void drift code?*

Yes, it was. The phrasing in the paper reflects this as well.

1. *p3 last line: could you add one or two references here to the TAMU experiments?*

Added.

1. *p6 §5 par 3: extending the code to sodium two-phase flows would also require the implementation of new physical models compared to those applicable to LWRs!*

Reworded to clarify that the implementation of sodium vapor properties would only be a first step in fast reactor two-phase flow with CTF.