We thank the reviewers…

Comments to the author (if any):

Reviewer #1: Authors present the interesting investigation about the formation energy of point defects in U-Mo alloy. They studied in detail the impact of the various conditions (temperature, composition, pressure) on the energy. The article definitely deserves to be published. I have only the couple comments.

1. What did the version of the ADP potential the authors use? Authors wrote they used the potential developed in 2015, but in some recent articles they used the new version of this potential developed in 2018. Please, check it.

Indeed, the 2018 version of the potential has been utilized, and the citation has been updated to reflect this fact.

2. I should notice that concentration of point defects at non-zero pressure depends on formation enthalpy (H\_f) where the formation energy (E\_f) is only part of it: H\_f = E\_f + P\*V\_f. To estimate the impact of pressure on the defect concentration, the authors should calculate the formation volume V\_f for both types of the point defects. For instance, Smirnova et al. calculated this formation volume for pure g-uranium with same potential (2015 version) and discussed the available experimental data about impact of pressure on self-diffusion. [Smirnova, Kuksin and Starikov, JNM 458 (2015)]

To do…

Reviewer #2: The manuscript "Analyzing the effect of pressure on the properties of point defects in γU-Mo through atomistic simulations" presents an interesting and carefully executed study of the pressure dependence of defect formation energies in U-Mo alloys envisioned to be used as fuel in research reactors. The data is generated by atomic scale simulations based on an empirical potential for interatomic forces. The analysis of the results is accurate. The topic should be of interest to the readers of MRS advances. I only have a few minor comments that I recommend the authors address before the paper is accepted for publication. Those are listed below.

1. Defect diffusion in stress fields are often modeled at the atomic scale by the dipole tensor formalism. I recommend adding some background on this approach and how the present study relates to that theory.

To do…

2. Page 4, line 54: "high" should be "higher".

Corrected.

3. Page 5, line 16: "for" should be "to".

Corrected.

4. Page 5, line 38: consider deleting "of interest".

Deleted.

5. Page 5: "Under reasonable applied bulk pressures below the yield point (<100 MPa), negligible deviations in the defect formations are observed." Previous sentences seem to define an effect, but here it says that the effect is negligable. Either explain the difference or quantify what negligible means.

To do…

6. There is no conclusion section, is that intentional?

The conclusion section was mislabeled discussion, which has been rectified.