# Reviewer #1

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| **Comment** | **Changes/Rebuttal** |
| The manuscript is well written and nice to read.One small comment is that the abstract mentions an STP condition. What is an STP condition? Please expand abbreviation. | Thanks for the comment.STP refers to Standard Temperature and Pressure. It is the conditions in the atmosphere at sea level. These are 0 °C of temperature and 1 atm of pressure.Expansion for the abbreviation is now added in the abstract. |

# Reviewer #2

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| **Comment** | **Changes/Rebuttal** |
| Before this paper is accepted, the authors should address the heat transfer correlations used in the model. References should be provided for the Dittus-Boelter and Seban-Shimazaki correlations. Additionally, a justification for using the Seban-Shimazaki correlation within the sodium legs should be provided. Due to the oscillating nature of the sodium in the legs, I expect the flow regime to be alternating between turbulent and laminar. Because the Seban-Shimazaki correlation is intended for turbulent pipe flow, I feel it will overestimate the heat transfer coefficient, ultimately leading towards a non-conservative prediction for total heat removed by the system. | Thanks for the comments.References are now added for the Dittus-Boelter and Seban-Shimazaki correlations.As you have pointed out, due to the oscillating nature of the sodium in the legs, the flow regime alternates between laminar and turbulent. The heat transfer coefficient is calculated in the code based on the flow regime. In the laminar regime, a constant Nusselt number of 4.364 is used. The Seban-Shimazaki correlation is used in the turbulent regime. The values are linearly interpolated in the transition regime. Hence, the heat removal rate predicted by the system will be realistic.The explanation is added in the text now. |