

Review of: "Dynamic structure factors and equation of state of fluid iron under Earth's core condition"

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Potential competing interests: No potential competing interests to declare.

Comment for Qeios YZ6RIT is listed as follows,

1. In subsection **2.2 Equations of states**, please change the "pressure-volume-temperature (P-V-T data)" into the "pressure-volume-temperature (P-V-T) data".
2. In subsection **2.3 Calculation details**, please denote the "MD" in the firstly used.
3. In eq. (1), please denote the parameter " \bar{g} " in the firstly used.
4. After eq. (3), please check the parameter "S" in the "The ion-ion dynamic structure factor $S(q, \omega)$..." is not in the same form with the parameter " S_{ij} " in left hand side of eq. (3). Please use the only one denotation.
5. After eq. (4), please denote the parameter " V " in the expression " $\eta_i = N/V$ " at the firstly used, also check the parameter " T " it is duplicated but in different meaning with that in eq. (2).
6. Please denote the parameter " r " for eq. (5).
7. Please check the parameter " N " denoted doubly, for eq. (1) using the " N is the total number of particles" and for eq. (5) using the " N is the number of atoms". Please use the only one denotation.
8. After eq. (5), please check " V is the cell volume", is " V " in the same meaning with that expression " $\eta_i = N/V$ "? Please use the only one denotation.
9. Please check the parameter " V_p is the..." after eq. (3).
10. In Figure 4(b) name, please check the parameter " V_p " in the "adiabatic sound velocity V_p " with that parameter " V_p is the..." after eq. (3). Please use the only one denotation.