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## Potential Example to Add to SPARTA

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**Marisa Petrusky** <Marisa.Petrusky@colorado.edu>

Mon, Nov 28, 2022 at 3:03 PM

Reply-To: Marisa.Petrusky@colorado.edu

To: "sparta-users@lists.sourceforge.net" &lt;sparta-users@lists.sourceforge.net&gt;

Cc: "Gallis, Michail A" &lt;magalli@sandia.gov&gt;, "Moore, Stan" &lt;stamoor@sandia.gov&gt;, Jenny Horing &lt;jeho9313@colorado.edu&gt;

Thank you for the feedback! Here is our current working example for a shock tube. The chosen gas was Argon to avoid any internal energy modes, and the domain is small enough to where the problem only takes a couple minutes to run. We made use of the *region* command to create two density zones. Let us know if we are missing anything to make a complete example!

For visualization purposes, we created two copies of the Argon species so a movie would show the high density gas (red) expanding into the low density gas (green). However, a cleaner way to do this might be to color particles based on mixture species or region initialization. Is there a way of doing that?

Additionally, the particles seem to appear on top of the simulation domain outline, which is something I do not see in the other Pictures/Documentation for the other examples. Is there a command that can force the box to appear over the particles? If there are any other ideas on how to make the image better, please let us know as well.

Thank you for your help!

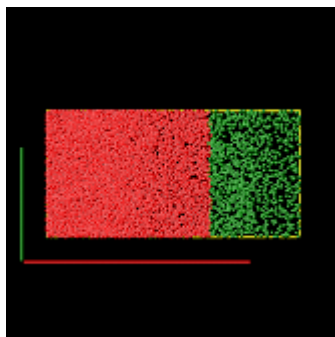
Sincerely,

Marisa

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### 2 attachments



**example\_shock.PNG**  
425K

 **shocktube.zip**  
8K