**Why Muons?**

By replacing the electron with a muon, we can bring nuclei closer together and facilitate fusion!

Muons and electrons only differ by mass. Muons are around 200 times heavier.

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**Previous Experimental Data**

**Muonic vs. Thermonuclear Fusion**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller atomic radius</td>
<td>Need muons</td>
</tr>
<tr>
<td>Can be achieved at room temperature or lower</td>
<td>Short average muon lifetime (2.2μs)</td>
</tr>
<tr>
<td>No need for plasma</td>
<td>Loss of muons due to sticking factor</td>
</tr>
</tbody>
</table>

1. (a) Normalized cycling rates vs. temperature for gaseous D/T mixture at 33% Tritium Concentration (Cₜ) and different densities.

1. (b) Normalized cycling rates vs. density for gaseous D/T mixture at Cₜ ≈ 33% and different temperatures.

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**References & Acknowledgements:**

3. A. Knaian, Diamond Anvil Measurement of Muon Catalyzed Fusion Kinetics, Open CHRSIP User Meeting BVR 55, January 2024, Villigen, Switzerland

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