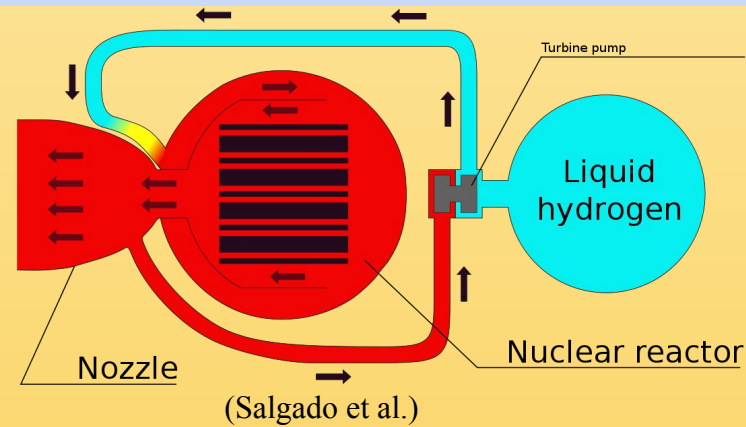


Intro: It is not possible to dive into every new advancement in space travel and how they relate to time travel. So I decided to narrow it down to propulsion systems (space travel) and time dilation (time travel).

Importance: Unfortunately, the correlation between propulsion systems and time dilation remains unanswered in the research of others even though it is quite essential to the latter. There is a gap to be filled and hopefully, this paper will allow for a better understanding of the two and allow for a stronger connection to be made.



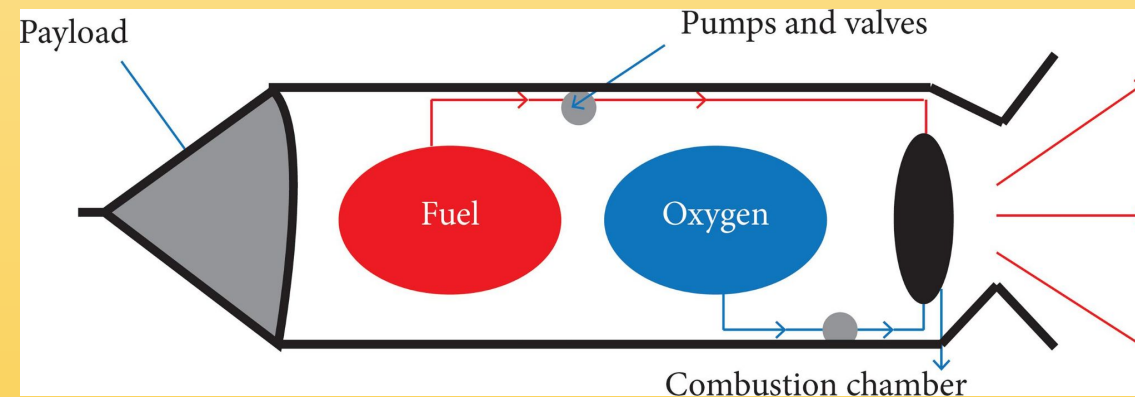
Method: Searched for articles and research papers about propulsion systems then compared them to each other and then to time dilation.

Interstellar

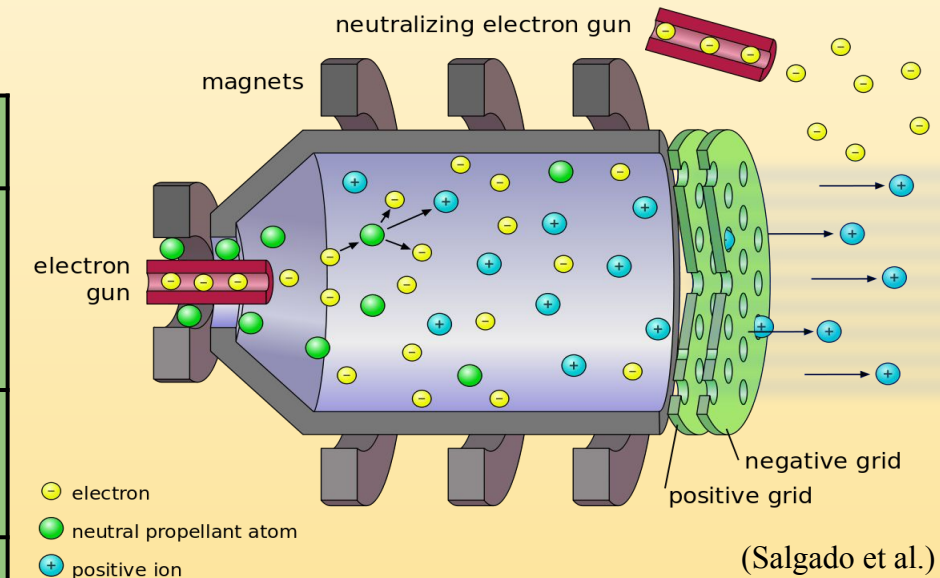
"Will advancements in Space Travel bring us a step closer to Time Travel?"

	Chemical	Nuclear	Ion
Energy Source	Fuel grain, oxygen	Fission heats up hydrogen	Release of positive ions (cation)
Strengths	Reliable	Short distances	Long distances
Flaws	Heavy	Dangerous	Minimal Force
ISP	500	1000	3000
Speed of light %	0.0016%	0.0033%	0.01%

(Salgado et al. ; nextbigfuture)



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Conclusion: Some propulsion systems have been analyzed and it is certain that advancements in space travel are bringing civilization a step closer to time travel. Maybe not through the use of chemical propulsion but hopefully through ion or nuclear propulsion or even one of the hundreds of other proposed systems.

Reference:
nextbigfuture. "Going 1 Million Miles per Hour with Advanced Propulsion." *Universe Today*, 15 Nov. 2018, www.universetoday.com/140518/going-1-million-miles-per-hour-with-advanced-propulsion/. Accessed 27 Apr. 2021.
Salgado, Maria Cristina Vilela, et al. "Space Propulsion: A Survey Study about Current and Future Technologies." *Journal of Aerospace Technology and Management*, vol. 10, no. ISSN 2175-9146, 26 Feb. 2018, www.scielo.br/scielo.php?script=sci_arttext&pid=S2175-91462018000100201,10.5028/jatm.v10.829. Accessed 25 June 2019.