

ringlorn: *adj.* the wish that the modern world felt as epic as the one depicted in old stories and folktales- a place of tragedy and transcendence, of oaths and omens and fates, where everyday life felt like a quest for glory, a mythic bond with an ancient past, or a battle for survival against a clear enemy, rather than an open-ended parlor game where all the rules are made up and the points don't matter.

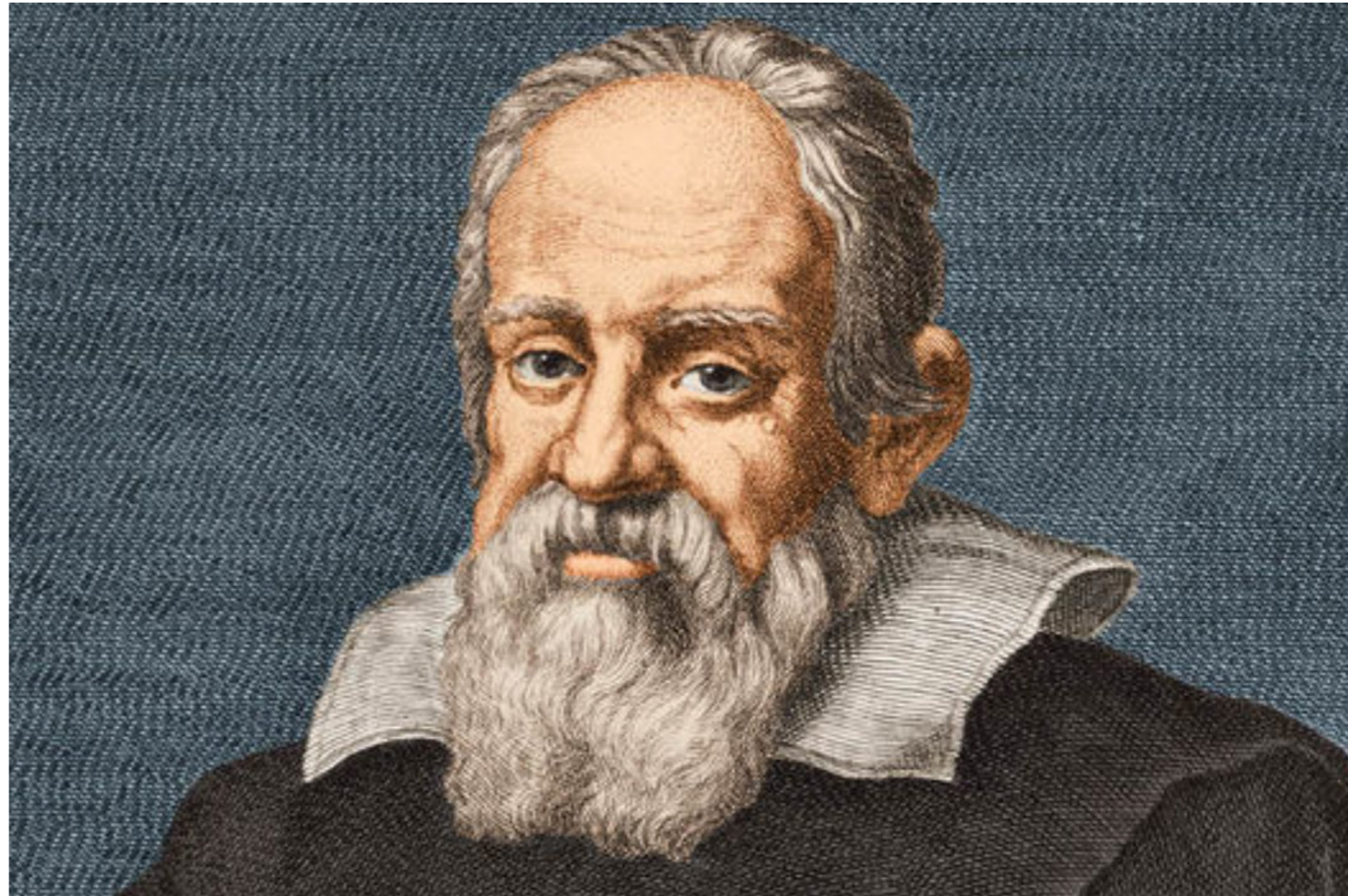
From ring, a key element in many sagas and myths + -lorn, sorely missing. Pronounced “*ring-lawrn*”

– John Koenig,
The Dictionary of Obscure Sorrows

Speed of light

Galileo 1564-1642

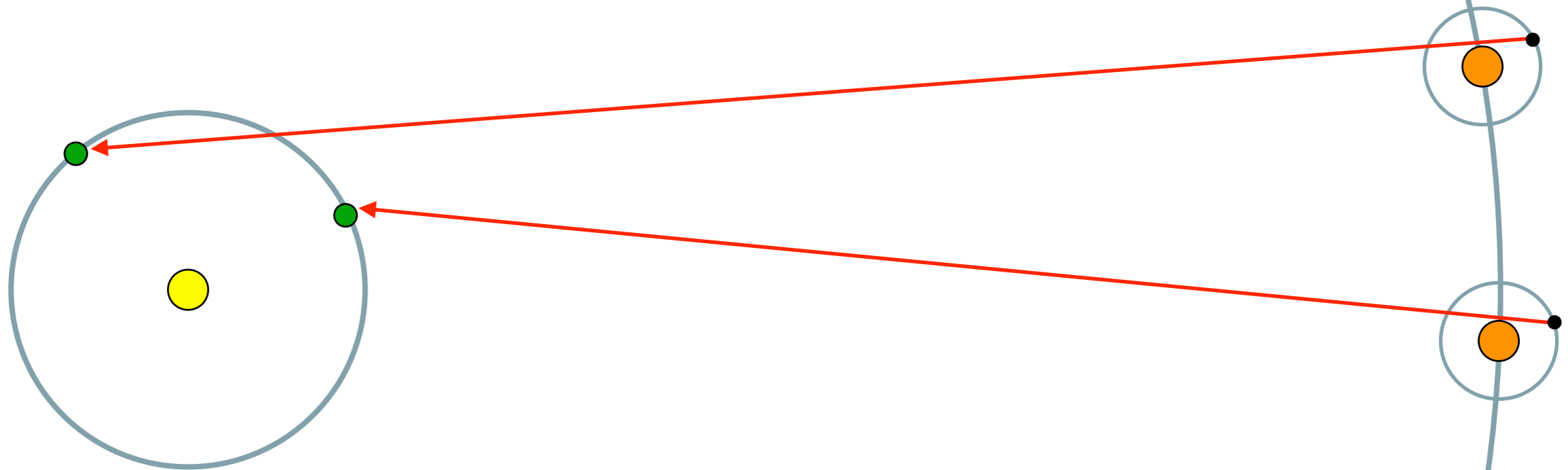
- Built early telescope, 1609



Galilean moons



Delay of occultation

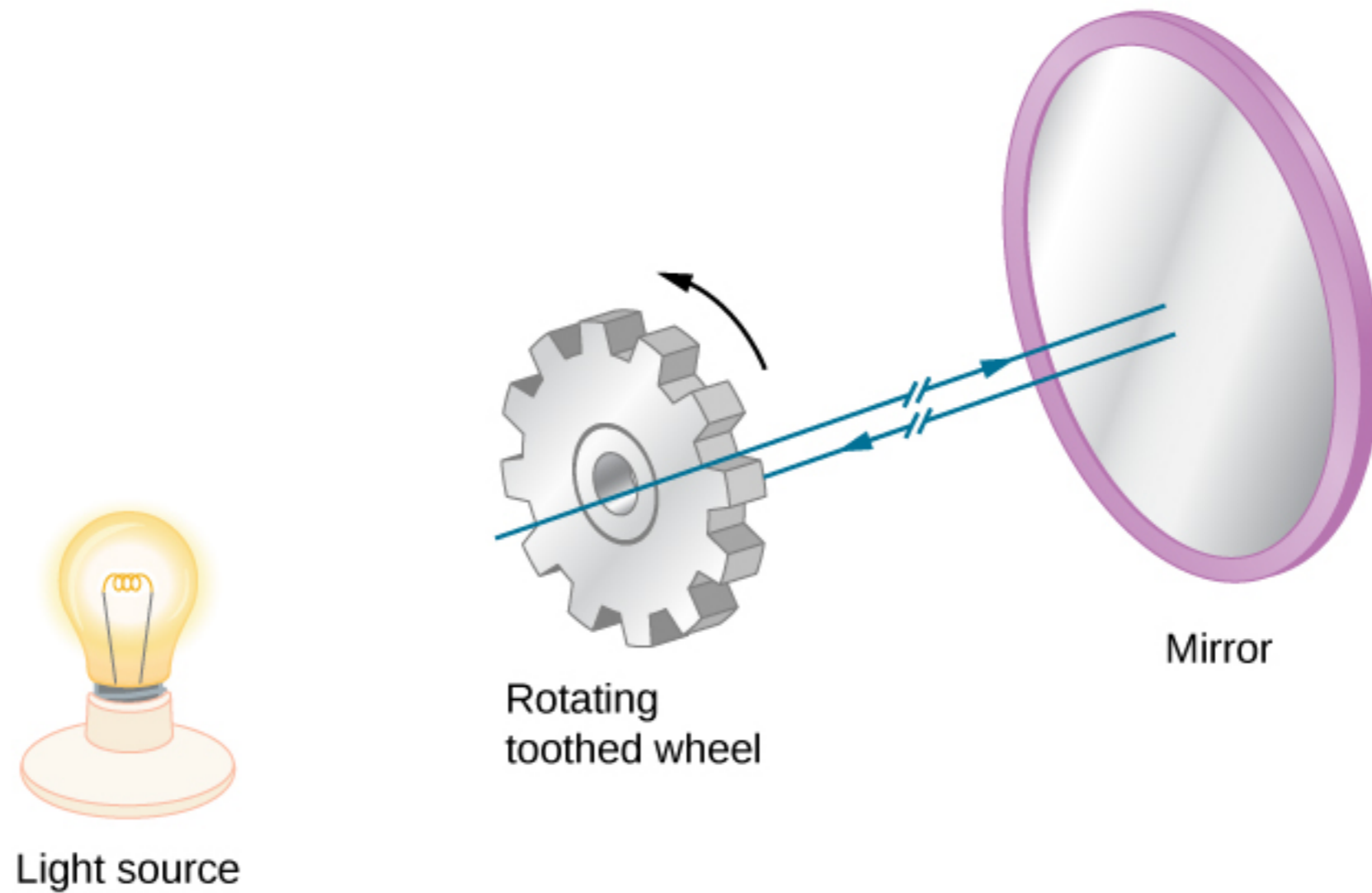


~11 extra minutes

Speed of light?

- Suggests that light has a finite speed

Early speed of light measurements

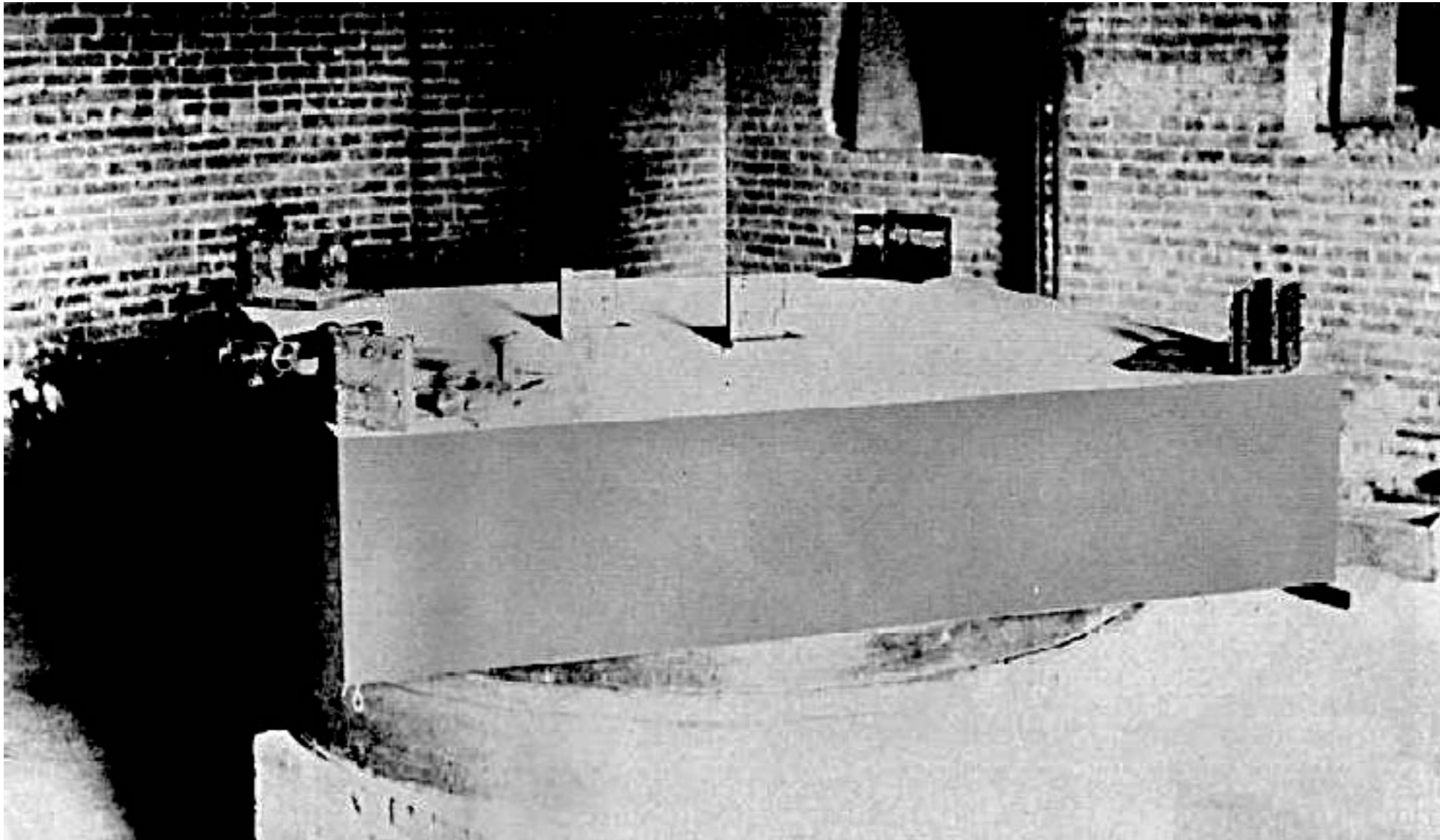


Victorian confusion

What is waving?



Speed of light, Michelson & Morley



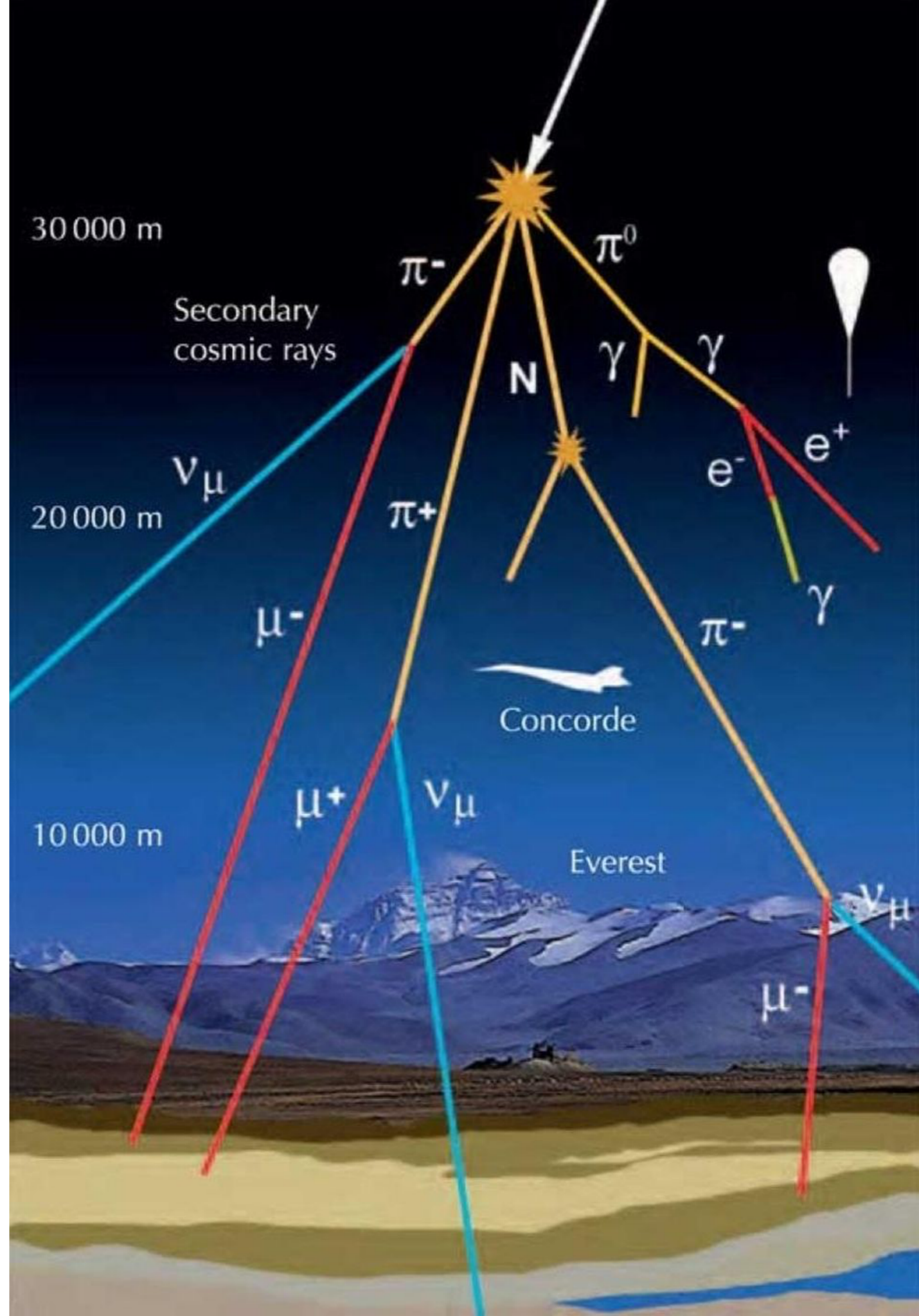
Relativity

Speed of light constant for ***all*** observers

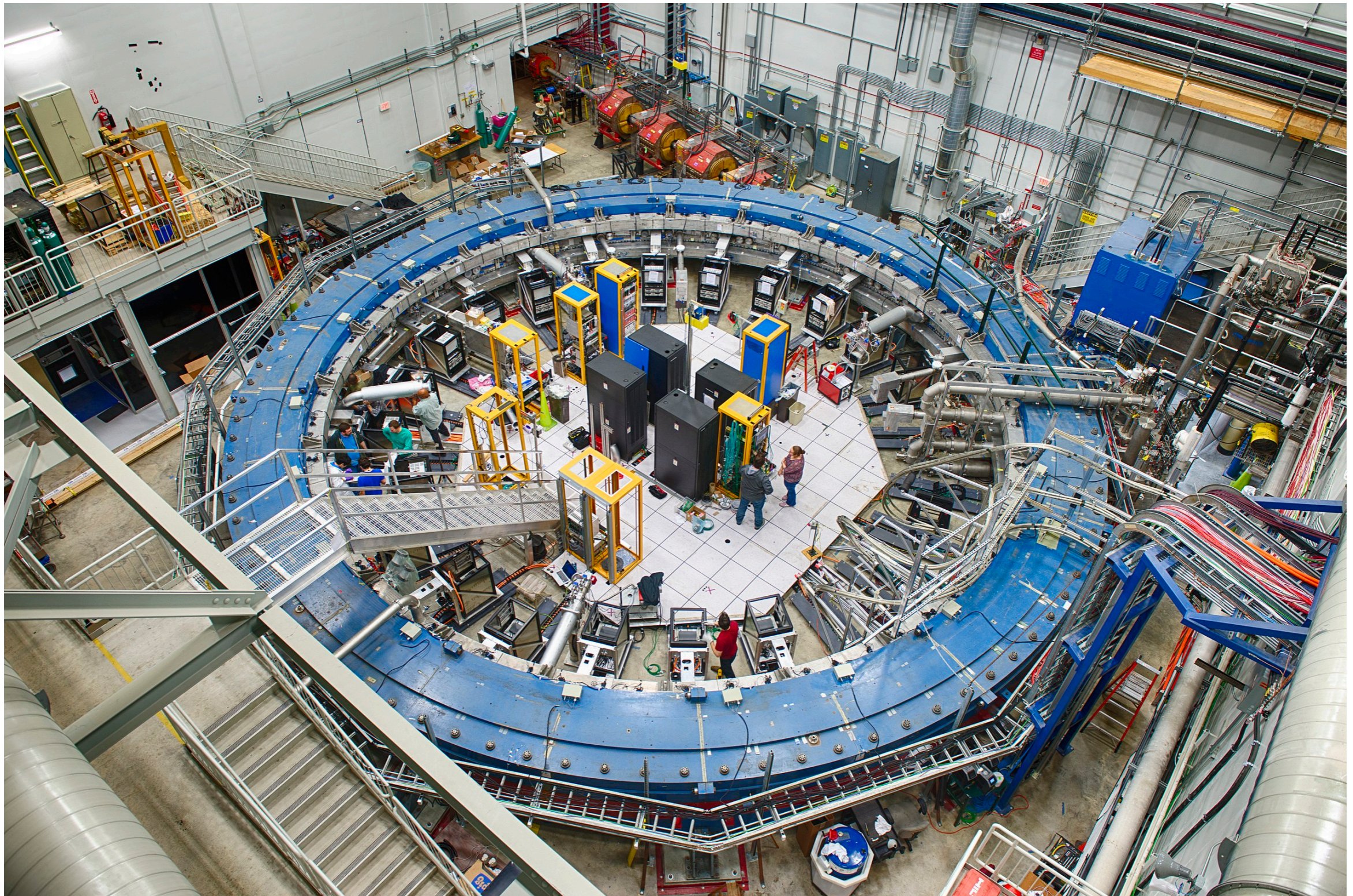
Non-additive speed

Non-uniform time

Atmospheric muons



Particle accelerators



Clocks



Conclusion

- Light travels through vacuum (like any particle)
- The speed of light is constant: ***all*** directions, ***all*** observers
- Time is not constant!