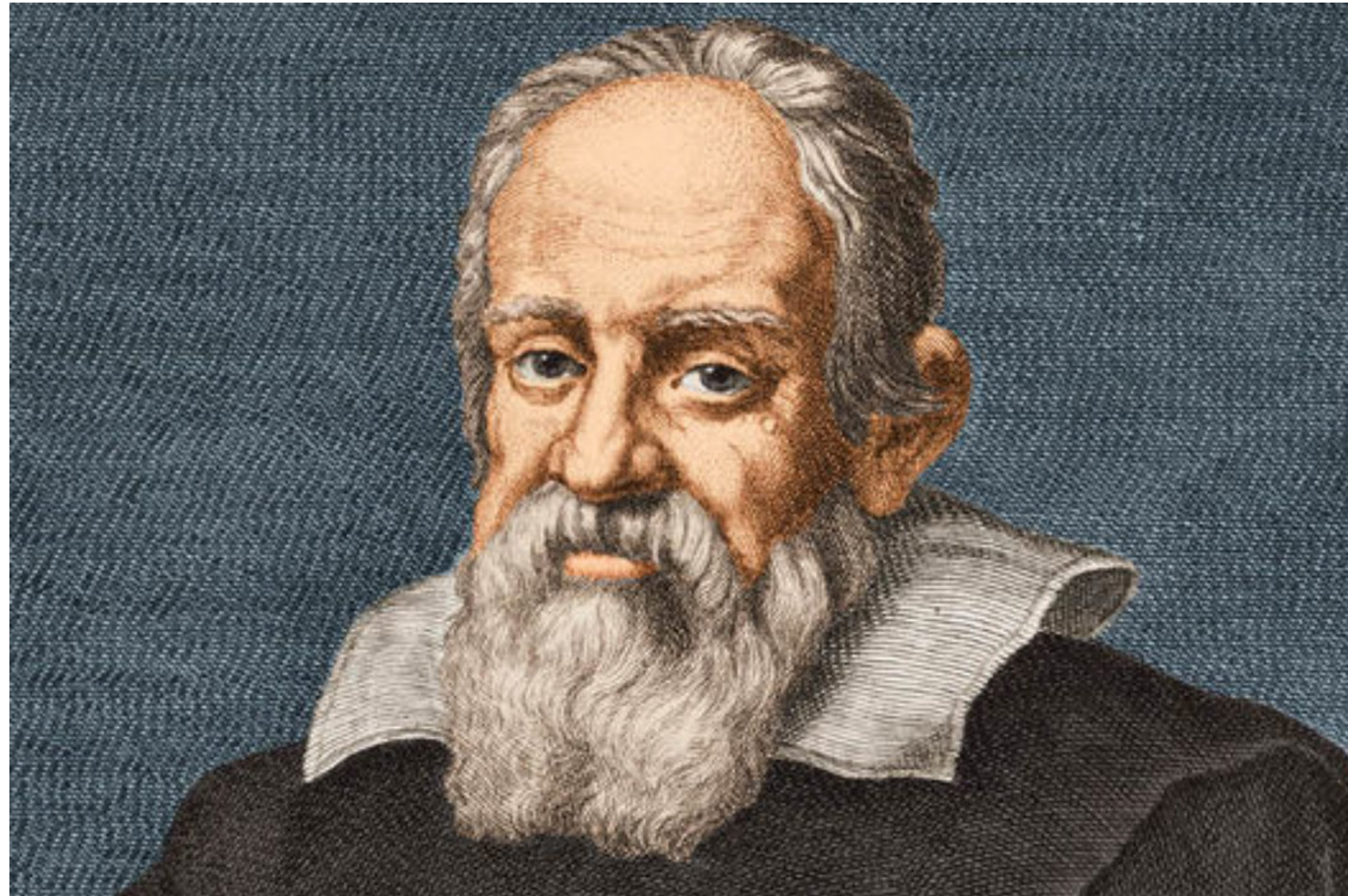


Speed of light

Galileo 1564-1642

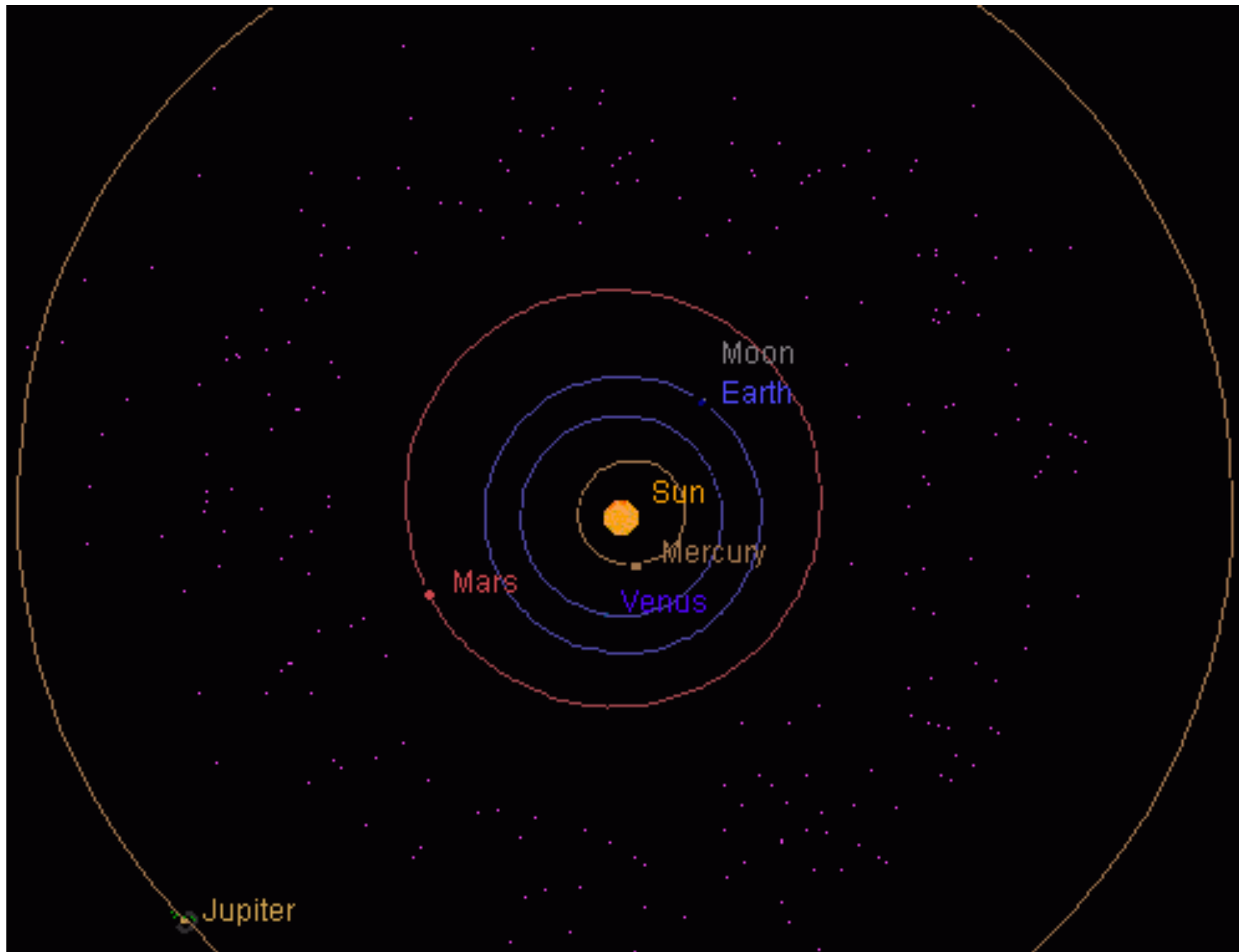
- Built early telescope, 1609



Galilean moons



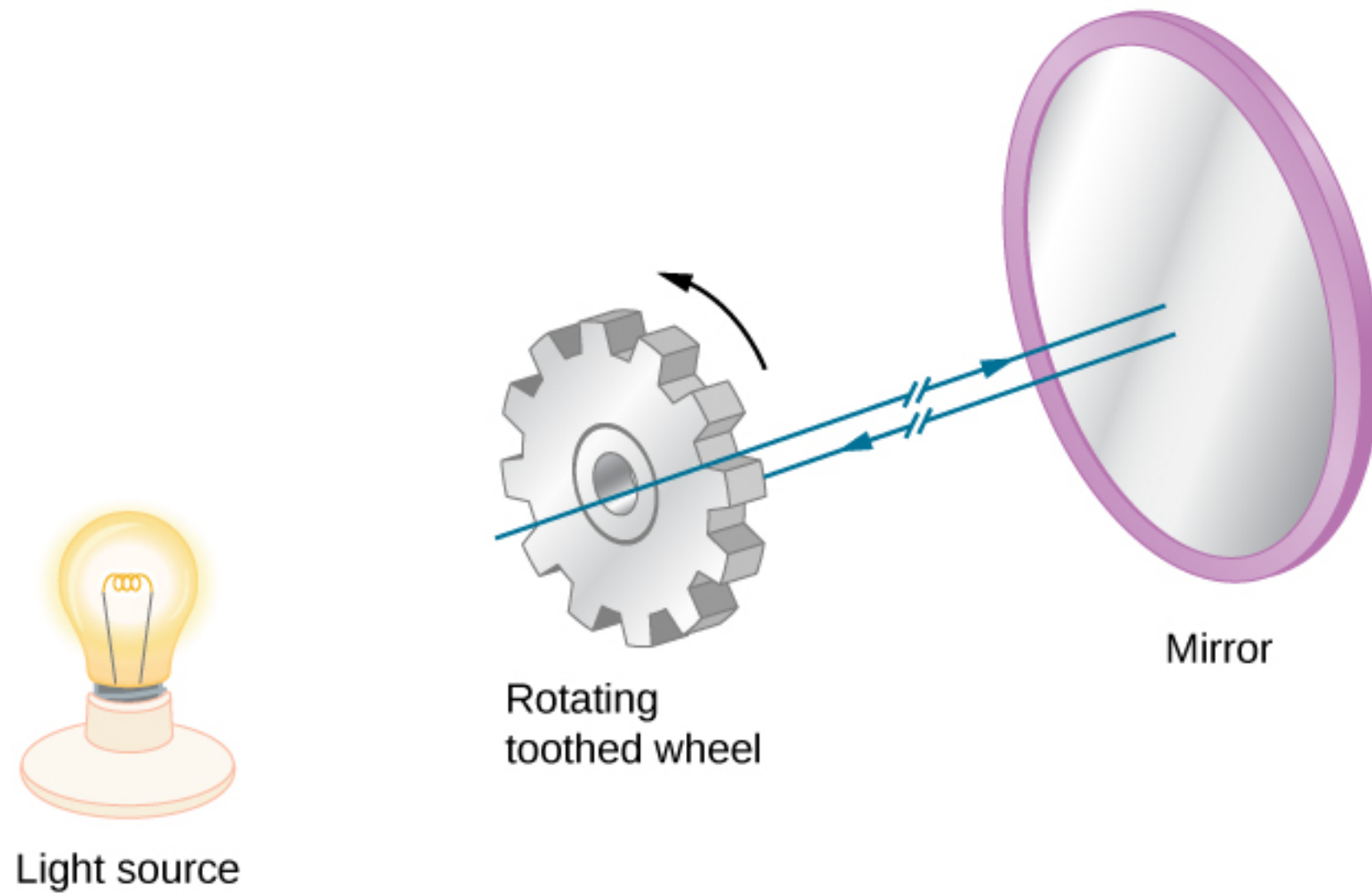
Delay of occultation



Speed of light?

- Suggests that light has a finite speed

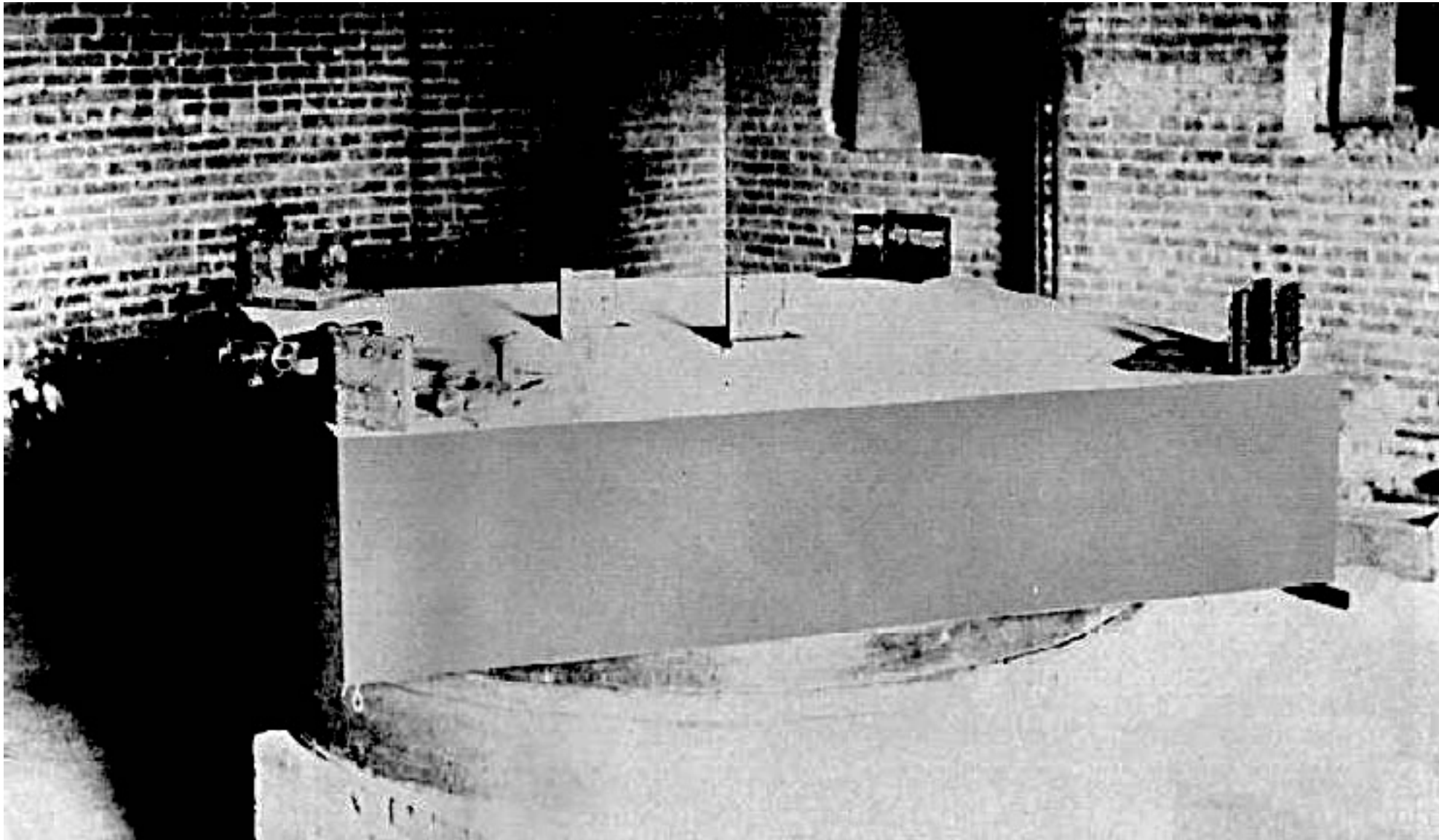
Early speed of light measurements



Victorian confusion

What is waving?

Speed of light, Michelson & Morley



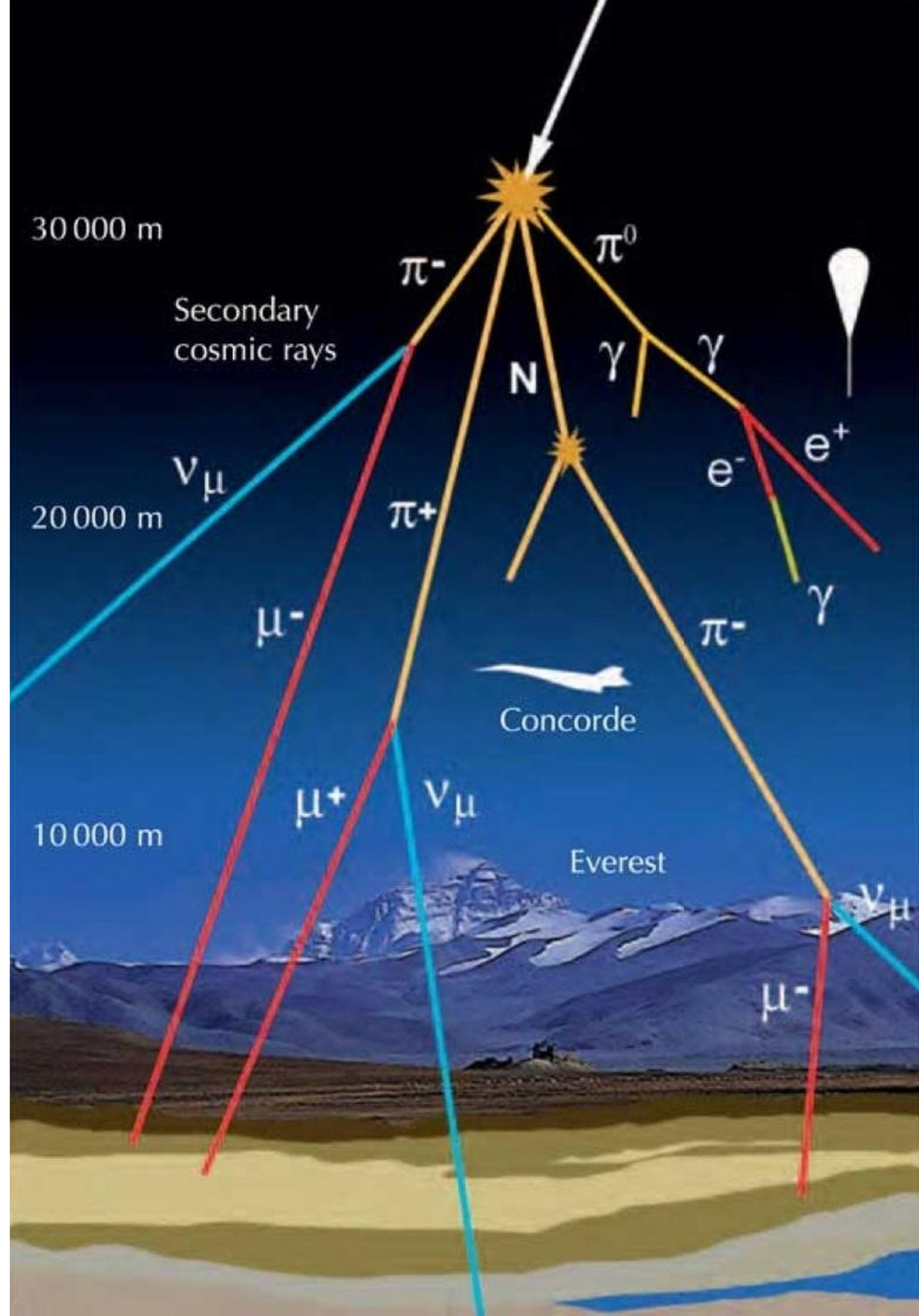
Relativity

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

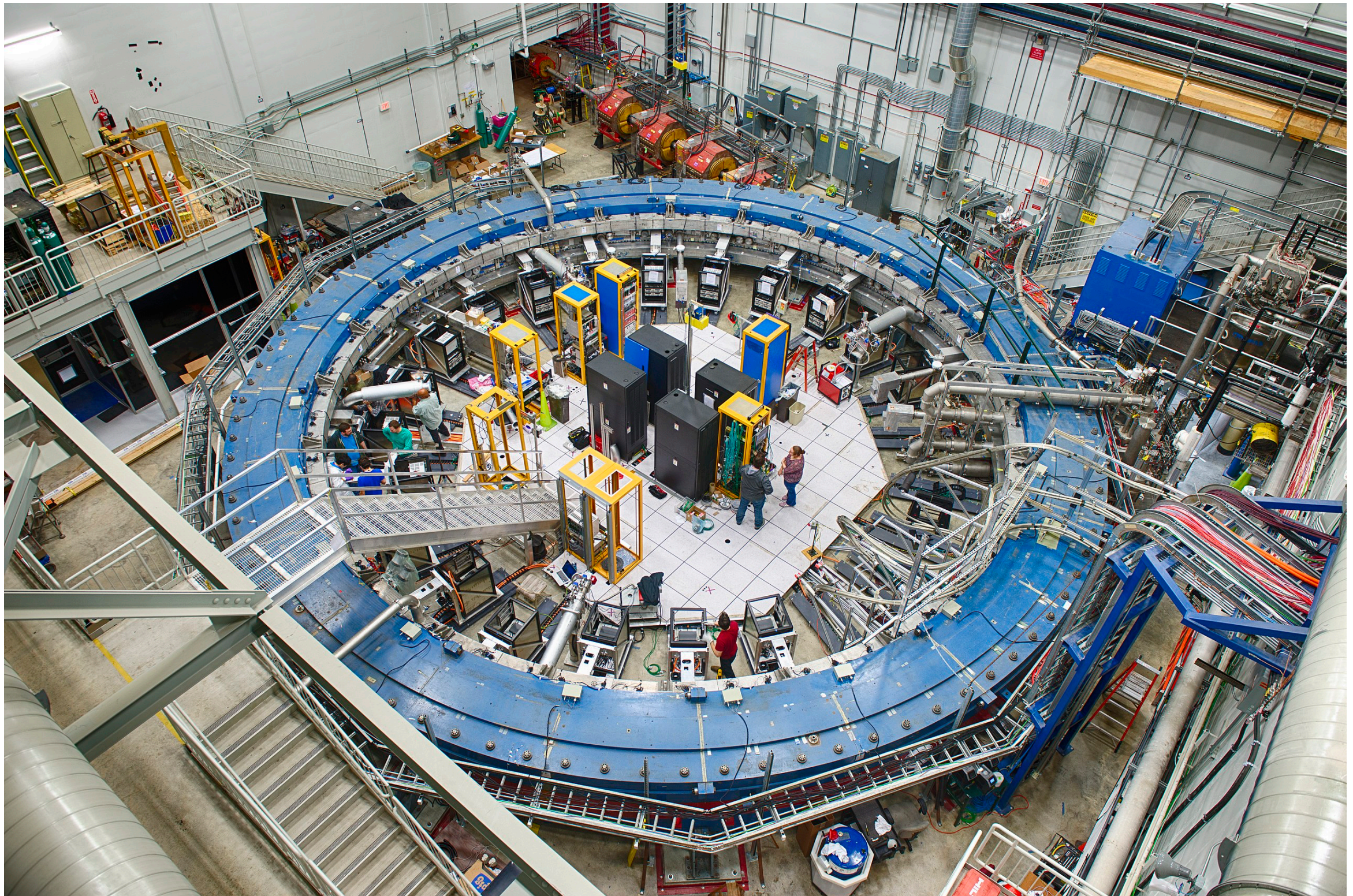
Non-additive speed

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!