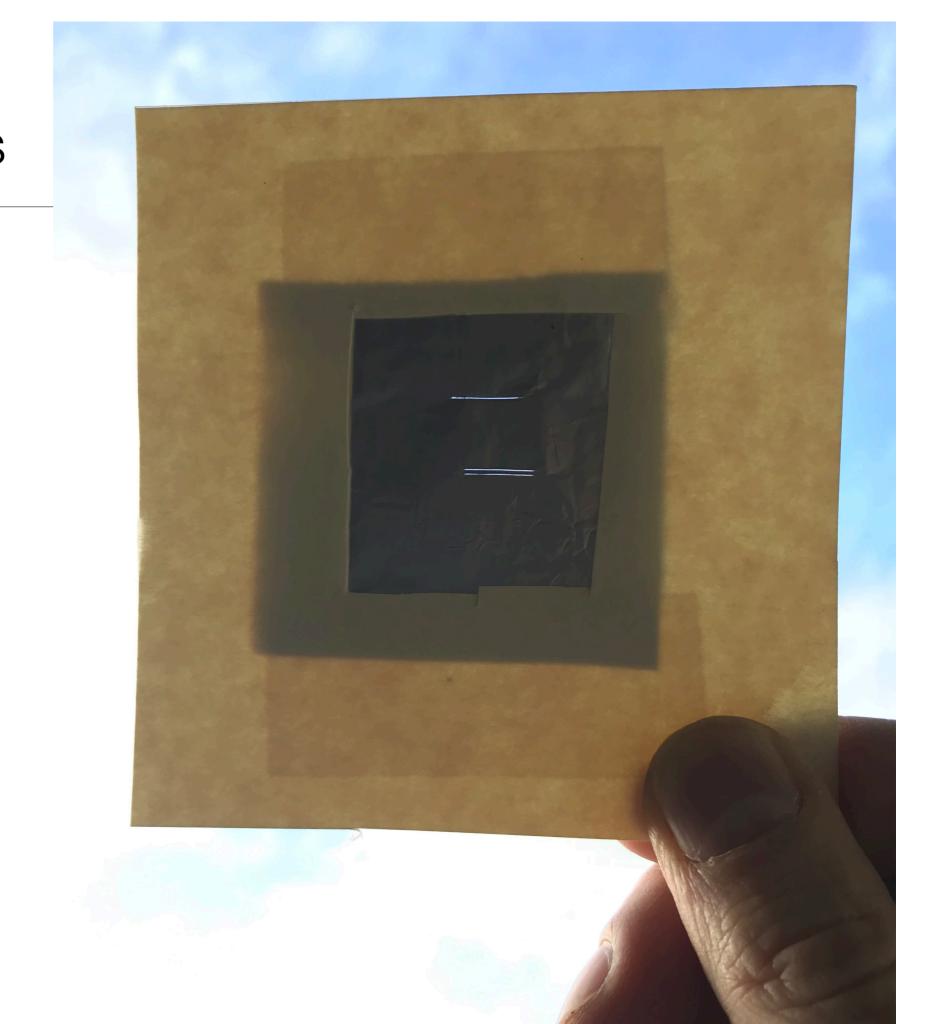
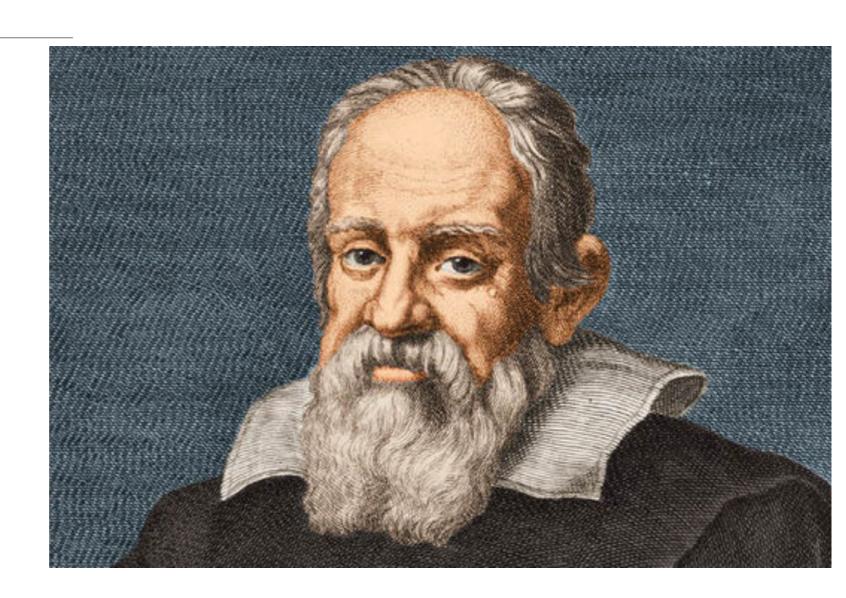
## Double slit hints



# Speed of light

#### Galileo 1564-1642

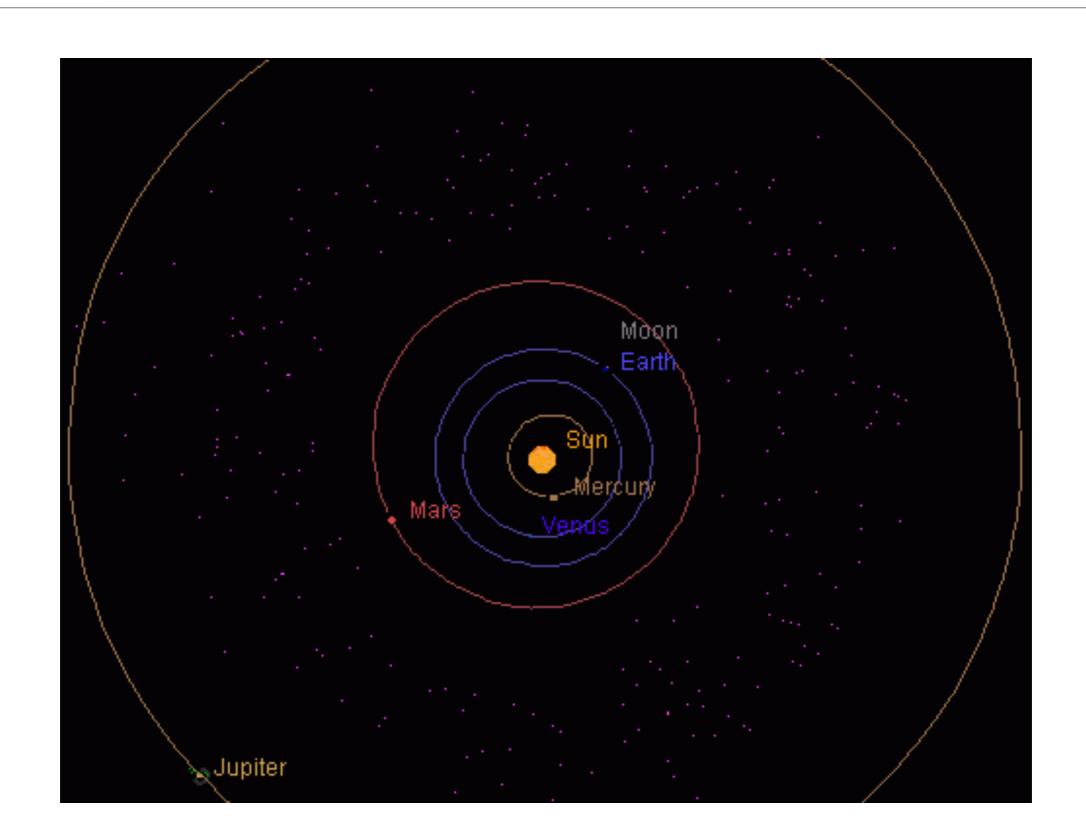
Built early telescope,1609



#### Galilean moons



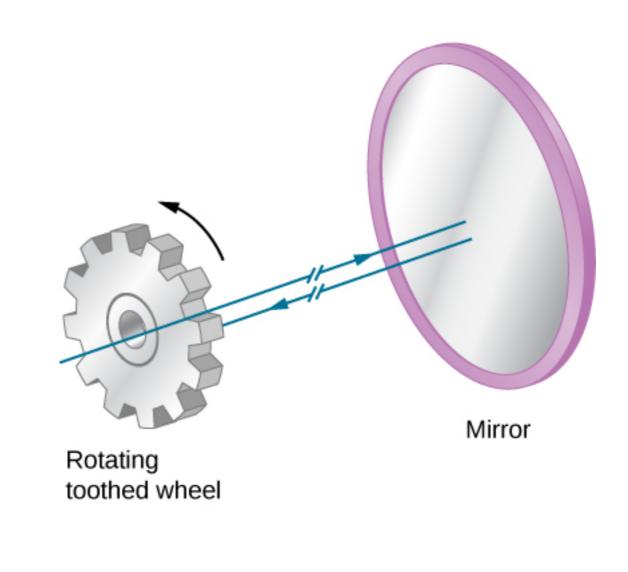
## Delay of occultation



#### Speed of light?

Suggests that light has a finite speed

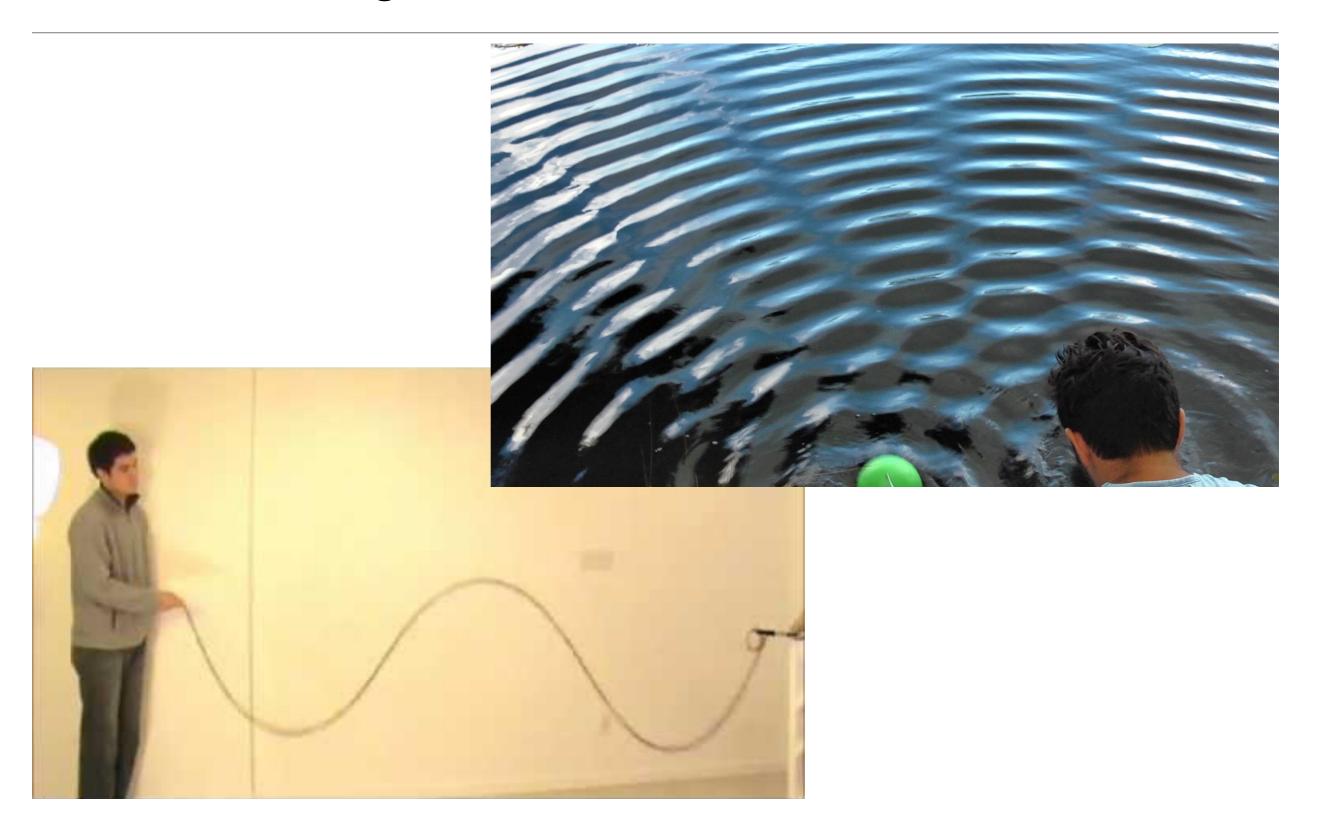
#### Early speed of light measurements



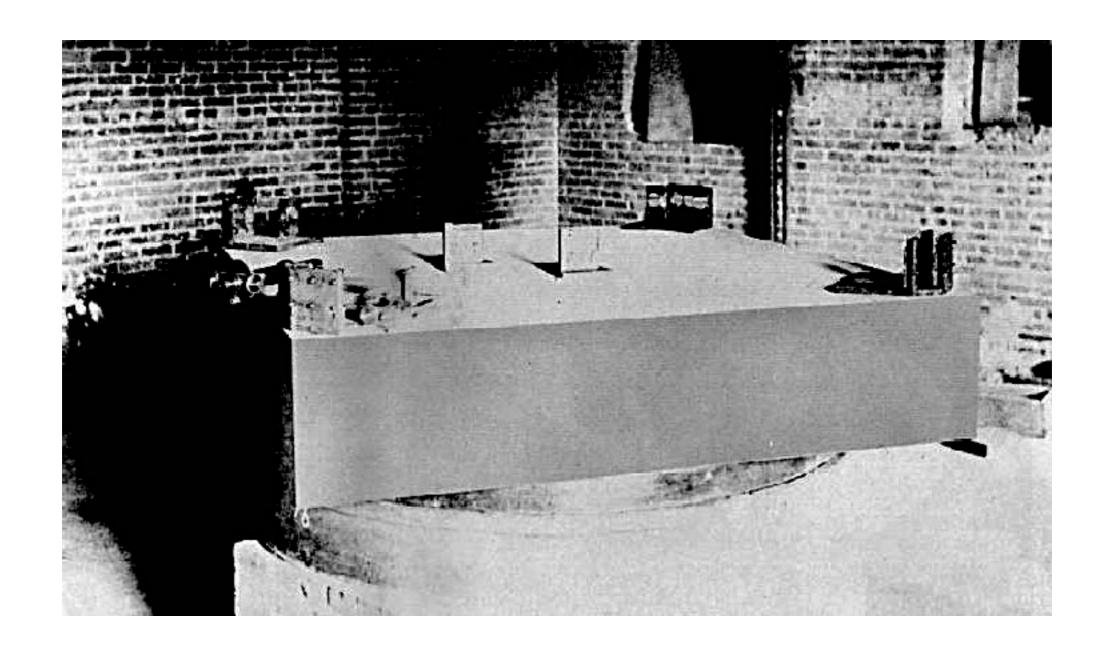


Victorian confusion

# What is waving?



#### Speed of light, Michelson & Morley



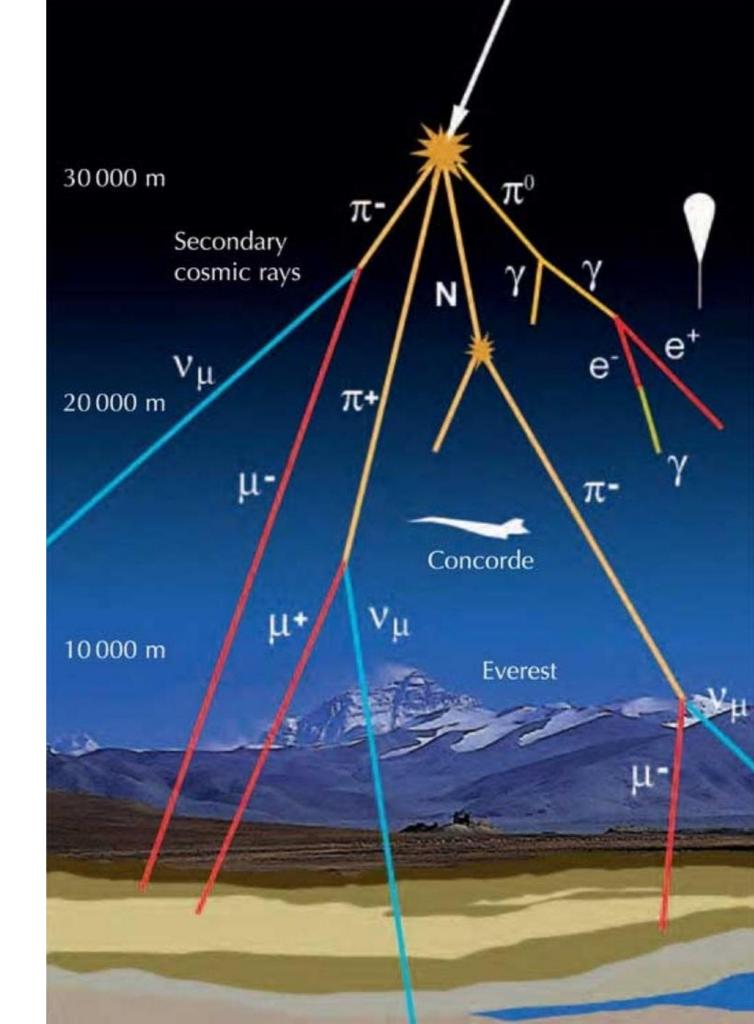
## Relativity

#### Speed of light constant for all observers

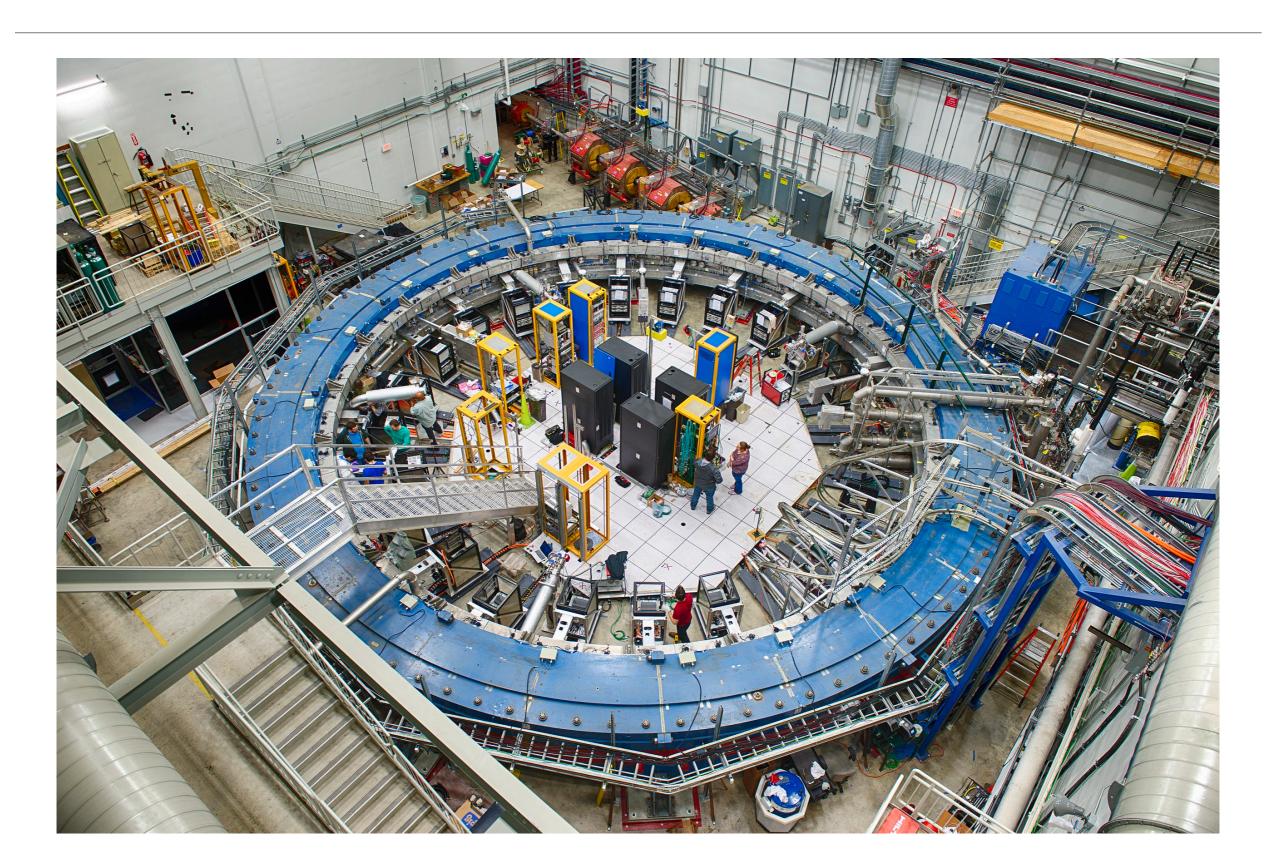
## Non-additive speed

#### 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!