

# Telescopes and Detectors (XXIV.5 – XXIV.9)

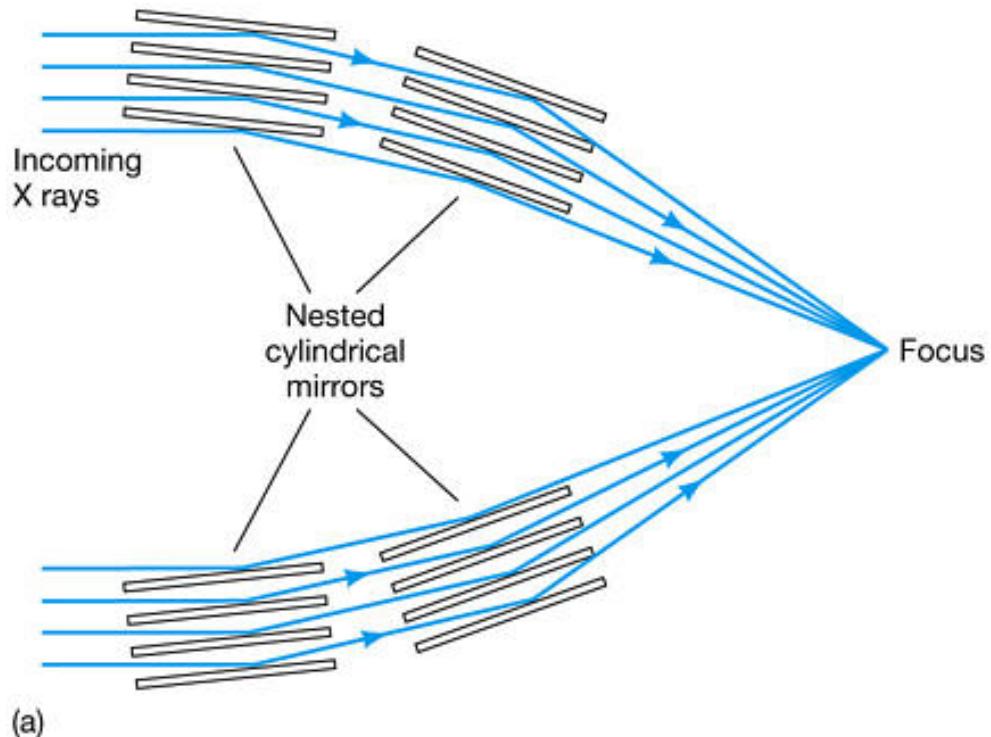
# Arecibo Observatory



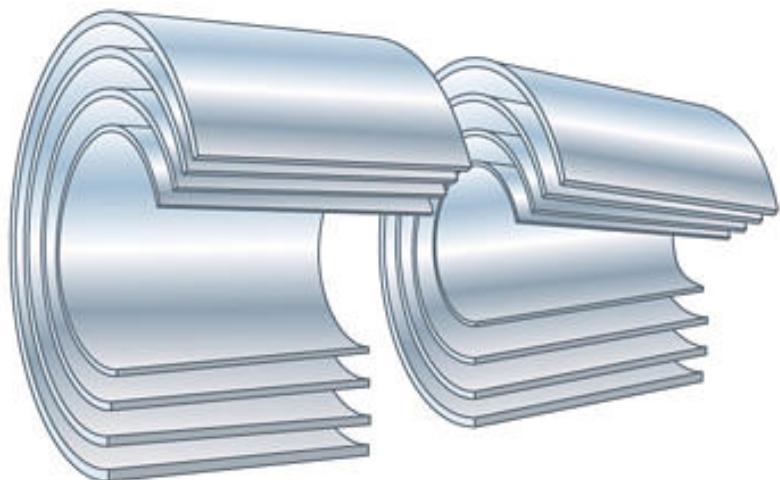
# Very Large Array (VLA)



# X-ray Nested Mirror Optics



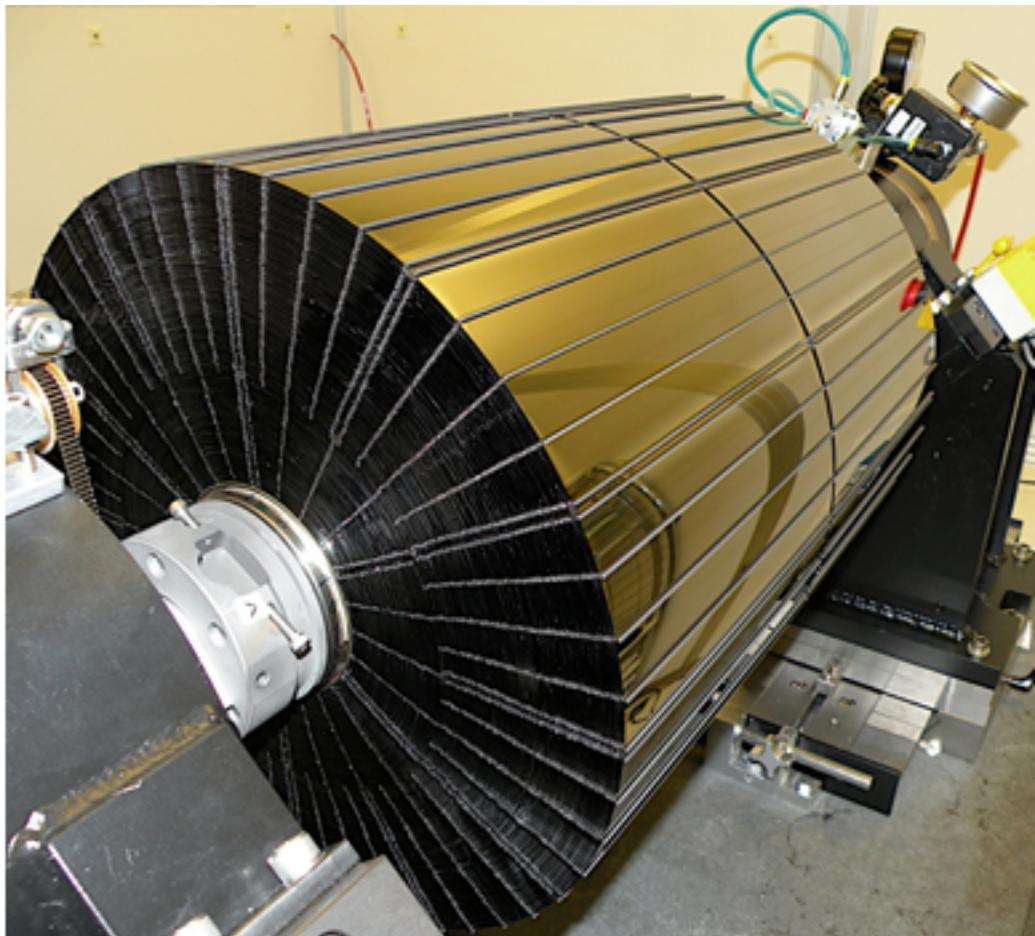
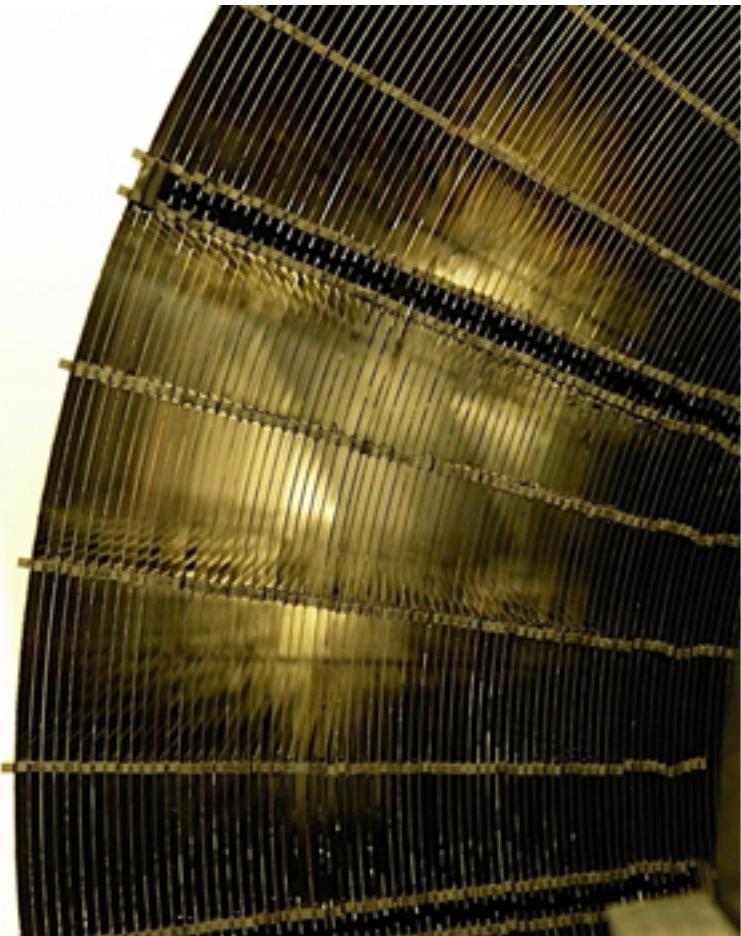
(a)

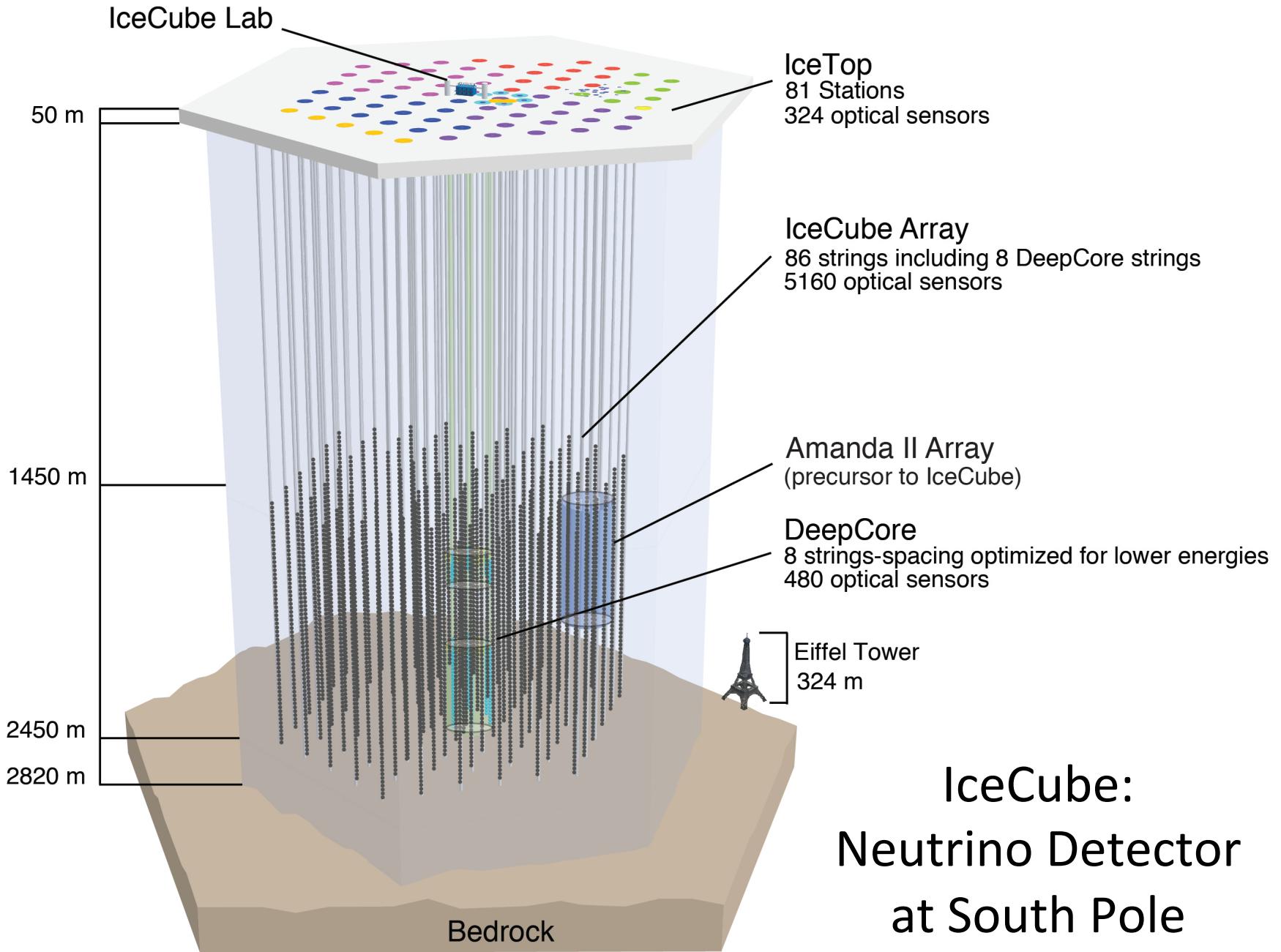


(b)

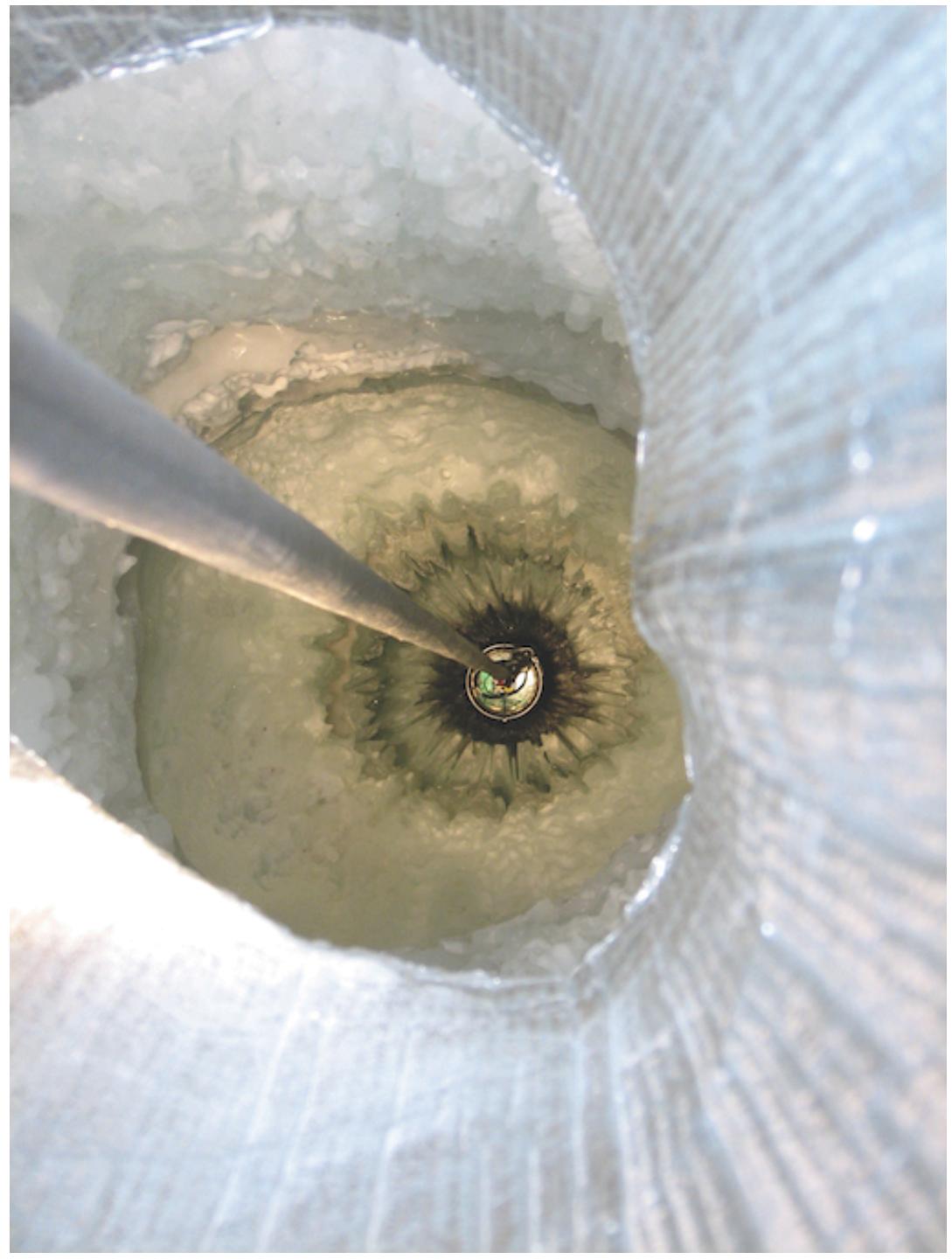
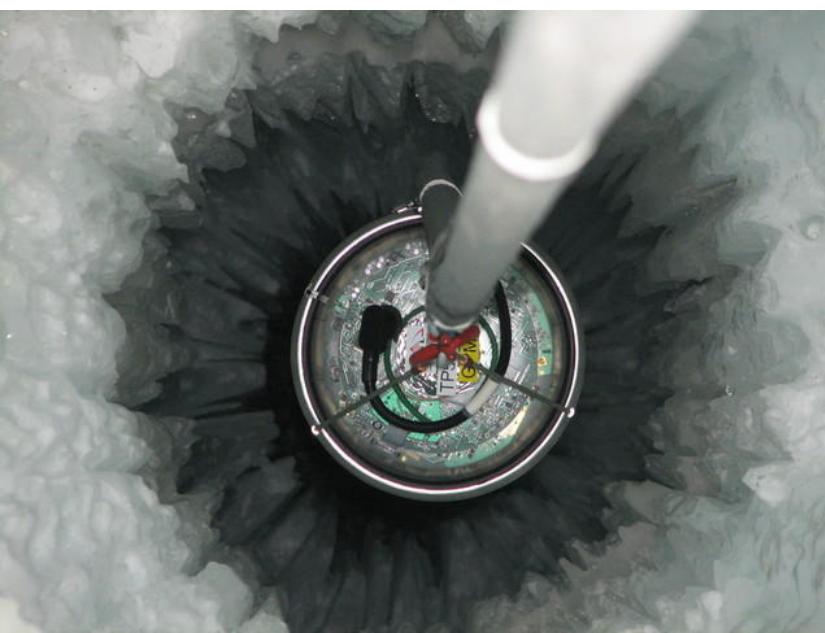
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# NuSTAR optics

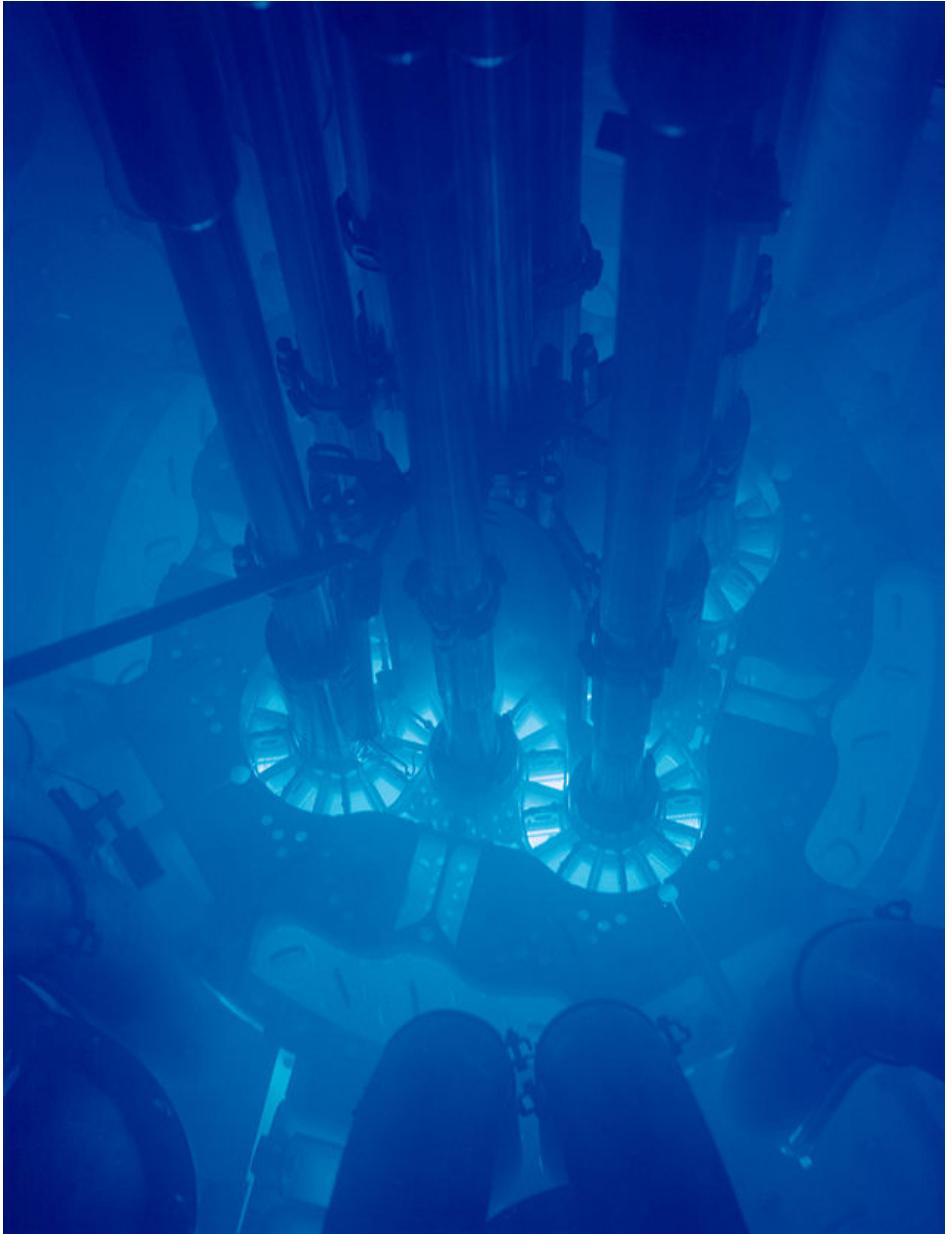




Cerenkov light detector  
being lowered into the ice

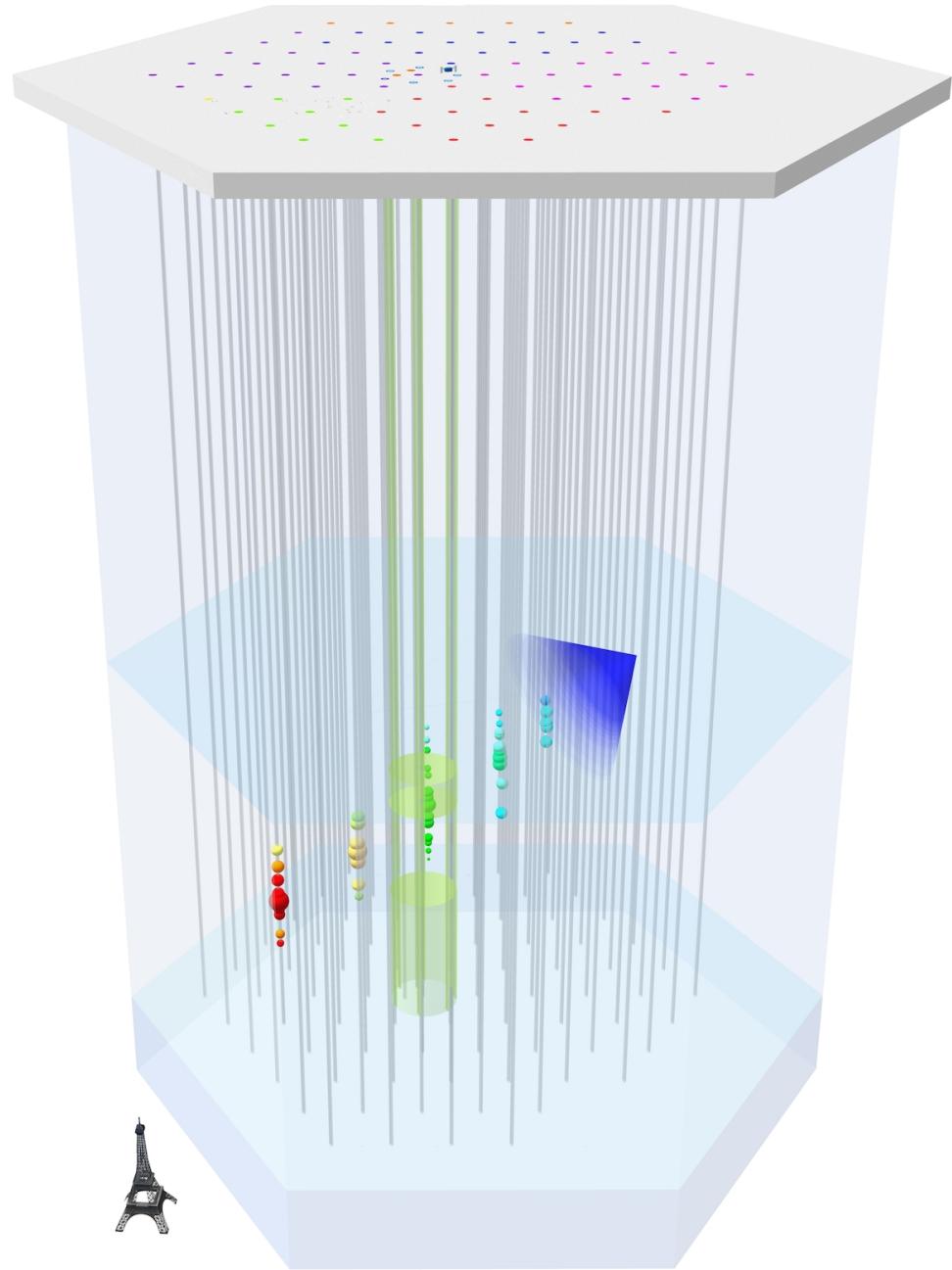


# Cerenkov light in underwater nuclear reactor

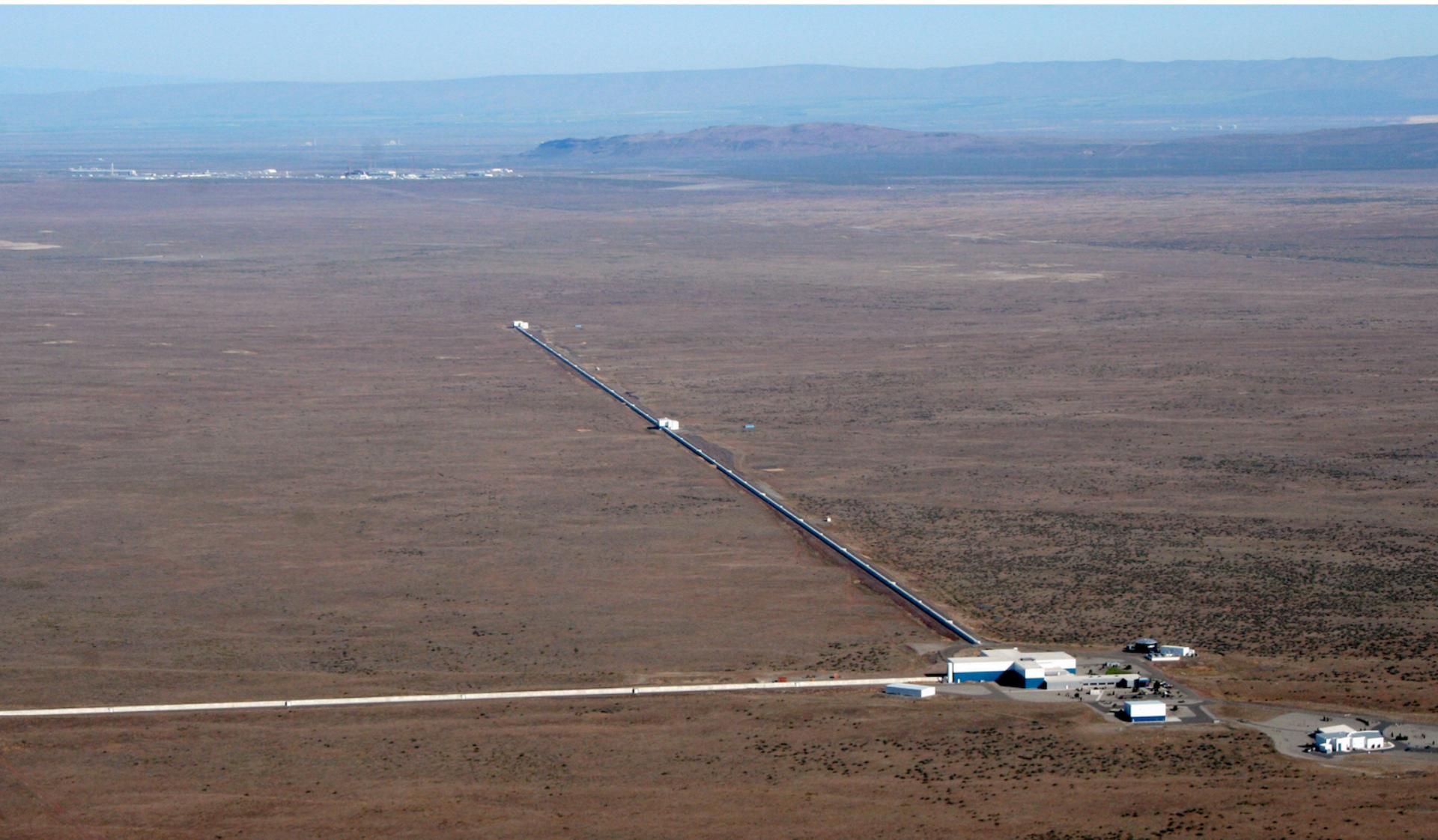


# IceCube Neutrino Detection Event

(red = earliest  
time,  
blue = latest  
time)

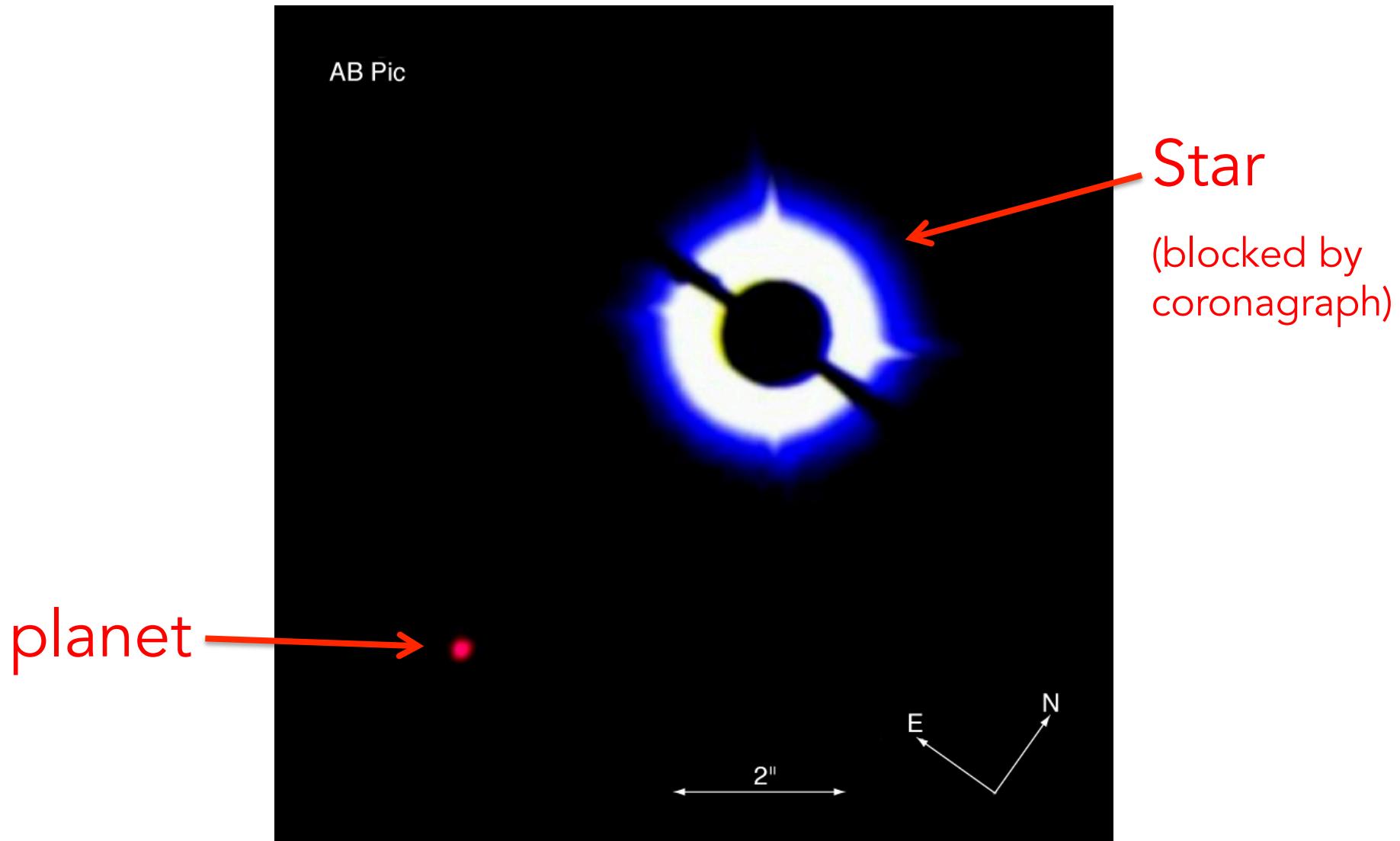


# LIGO detector in Hanford, WA

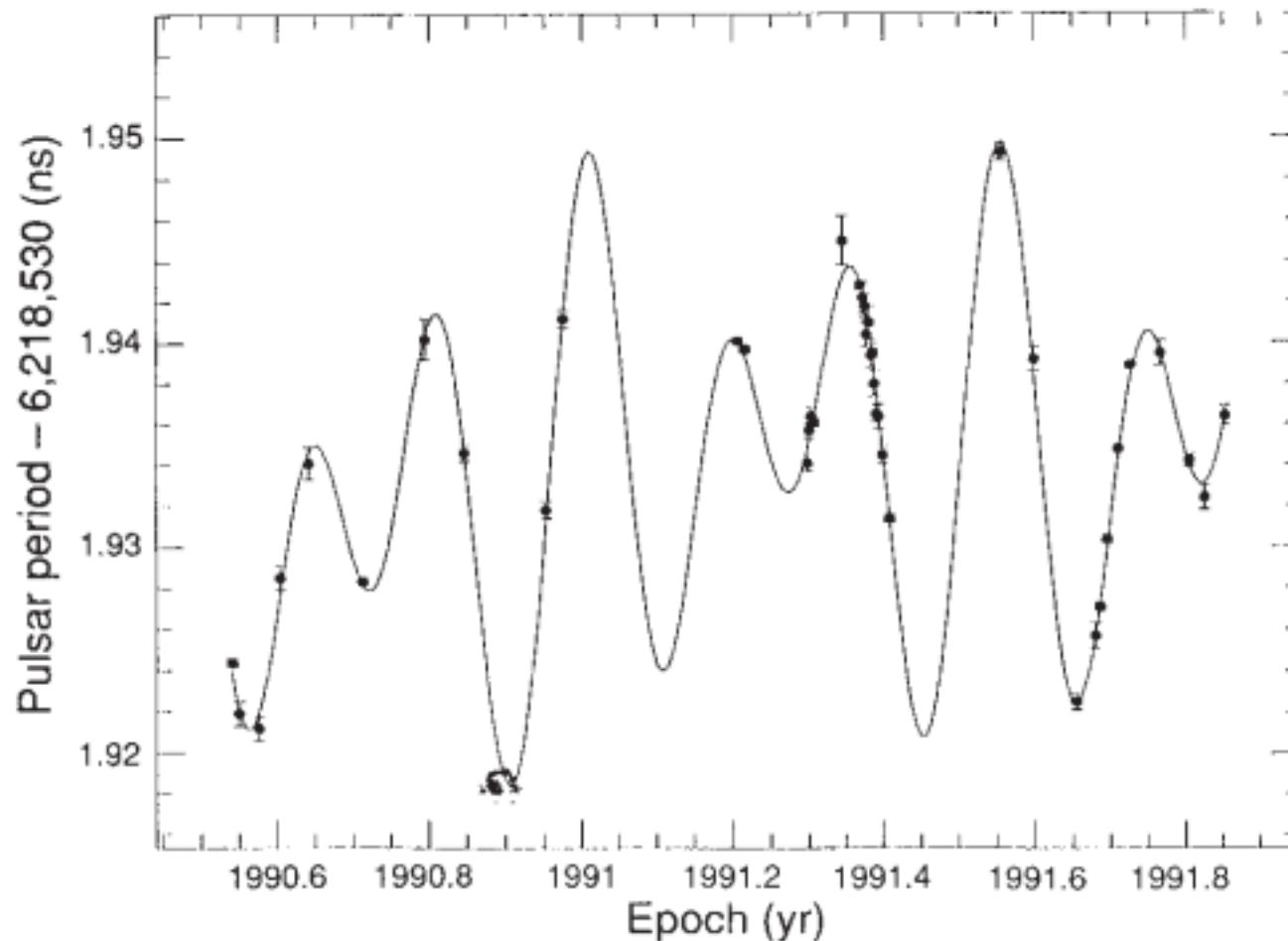


# Extrasolar Planets (XXV.2 – end)

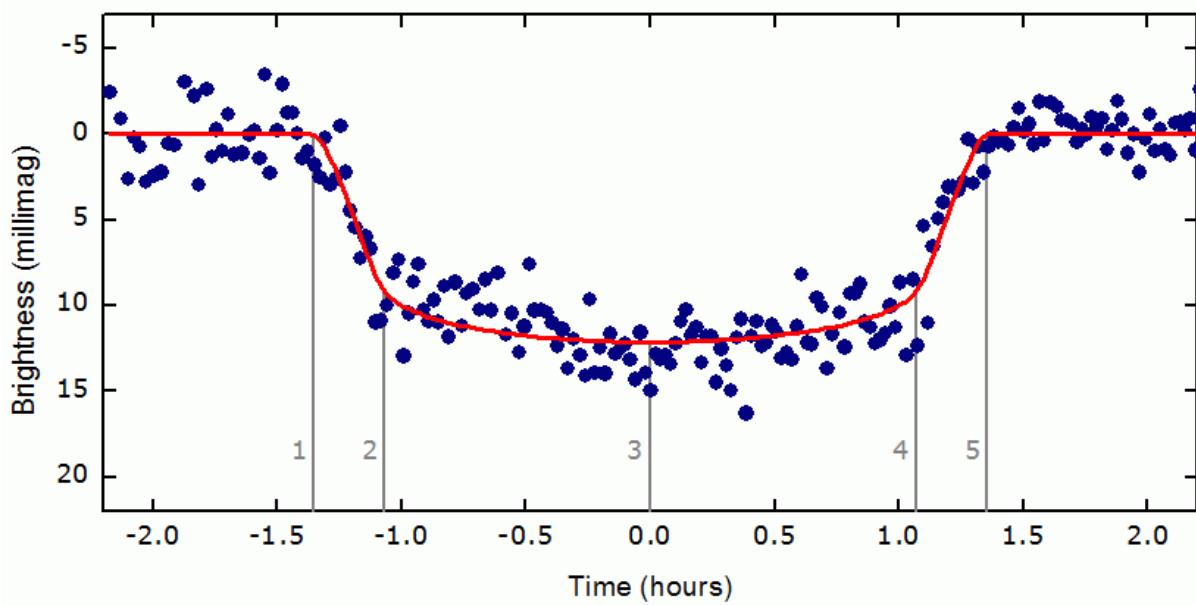
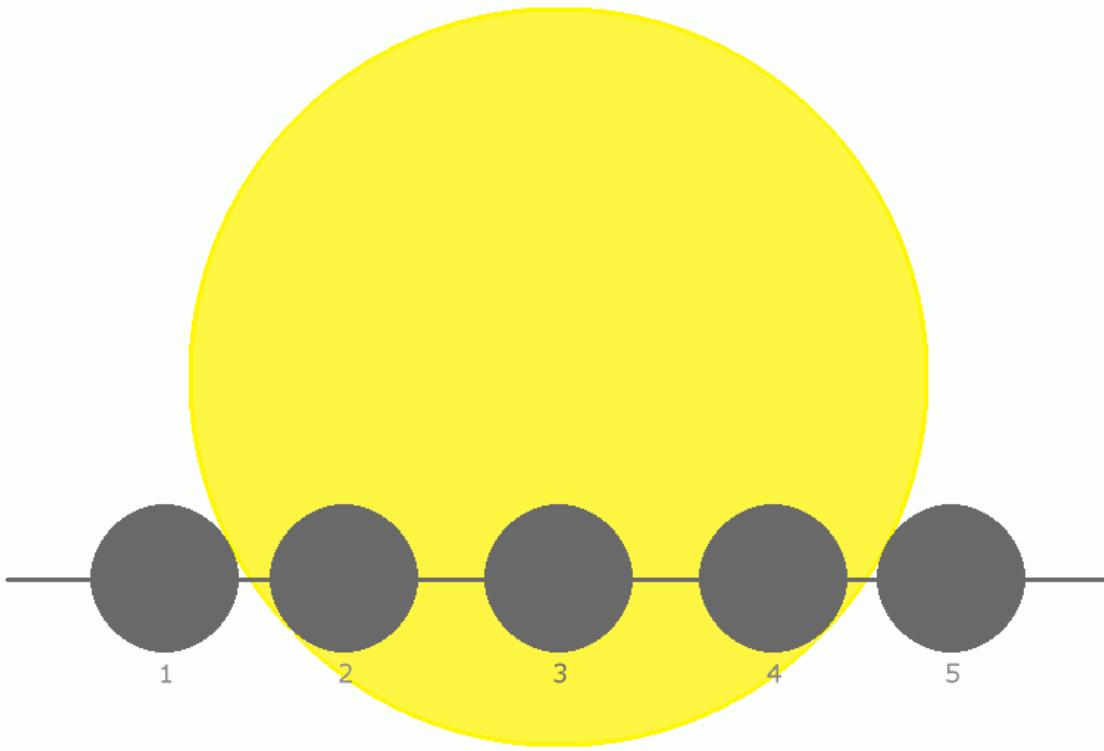
# Photographing Exoplanets



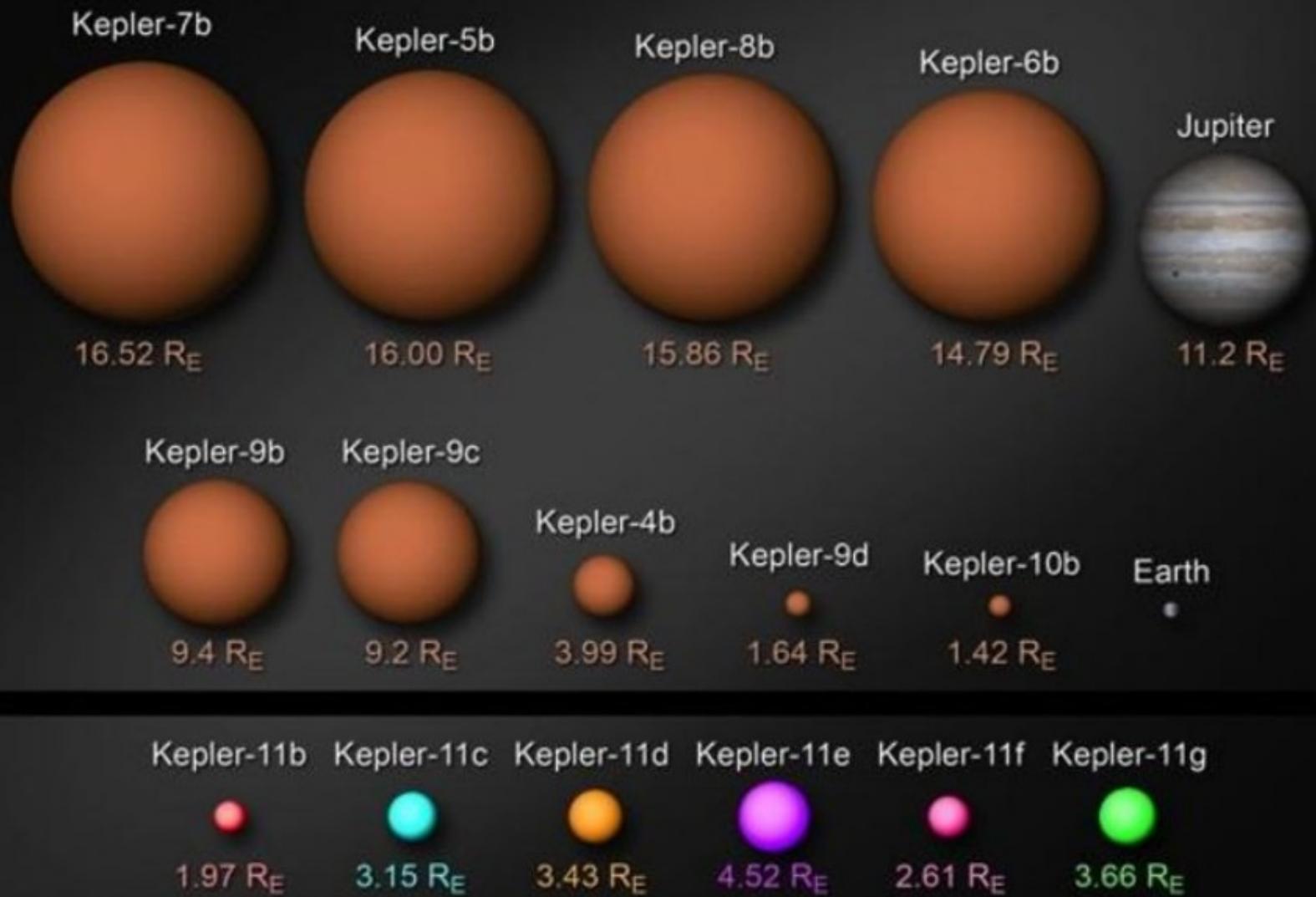
# Doppler-shifted period changes from pulsar with 3 planets



# Extrasolar Planet Transit Light Curve

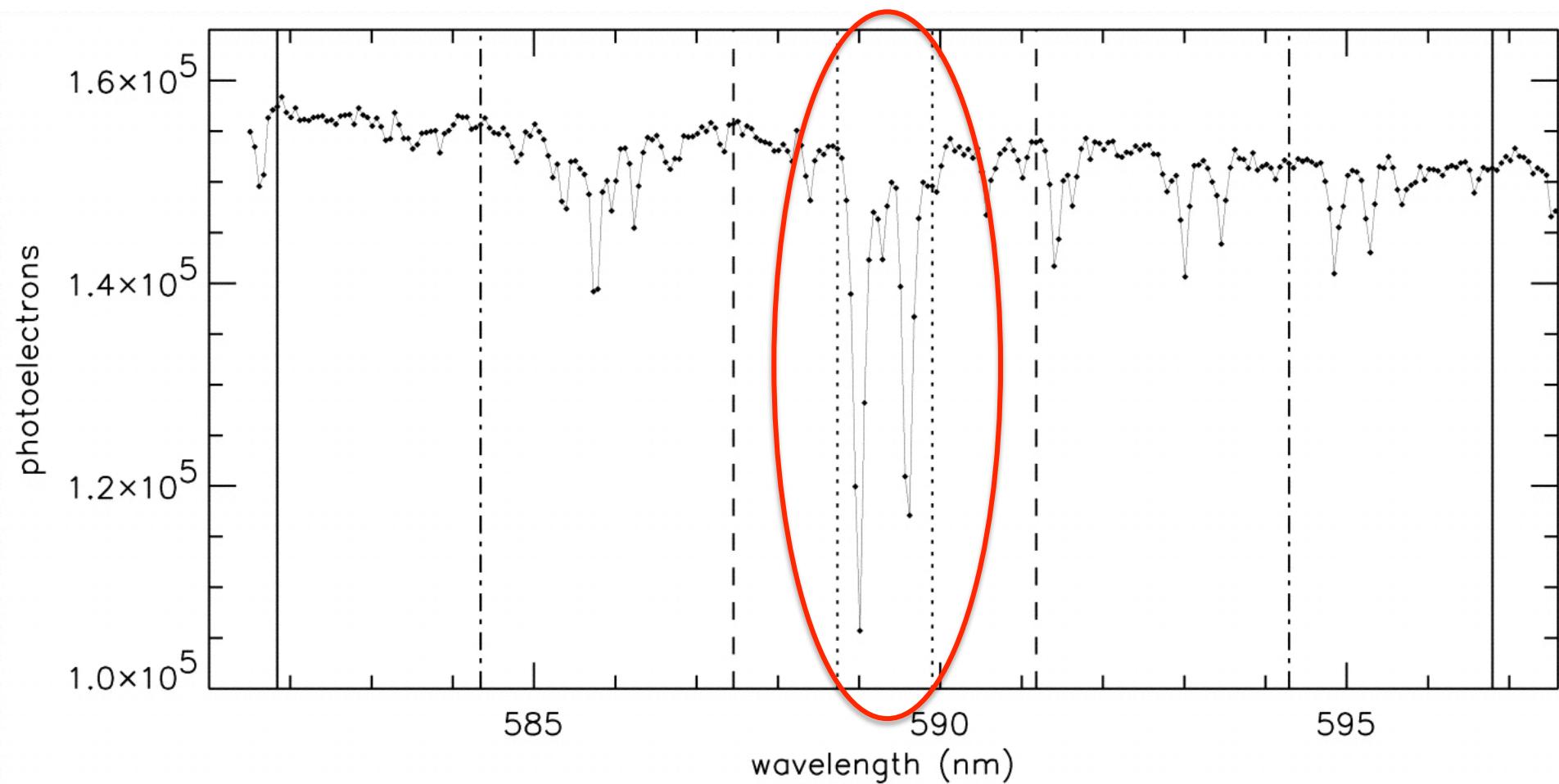


# Planet Sizes



Explore properties of extrasolar  
planets at  
**exoplanets.eu**

# Deepened Na lines in HD 209458

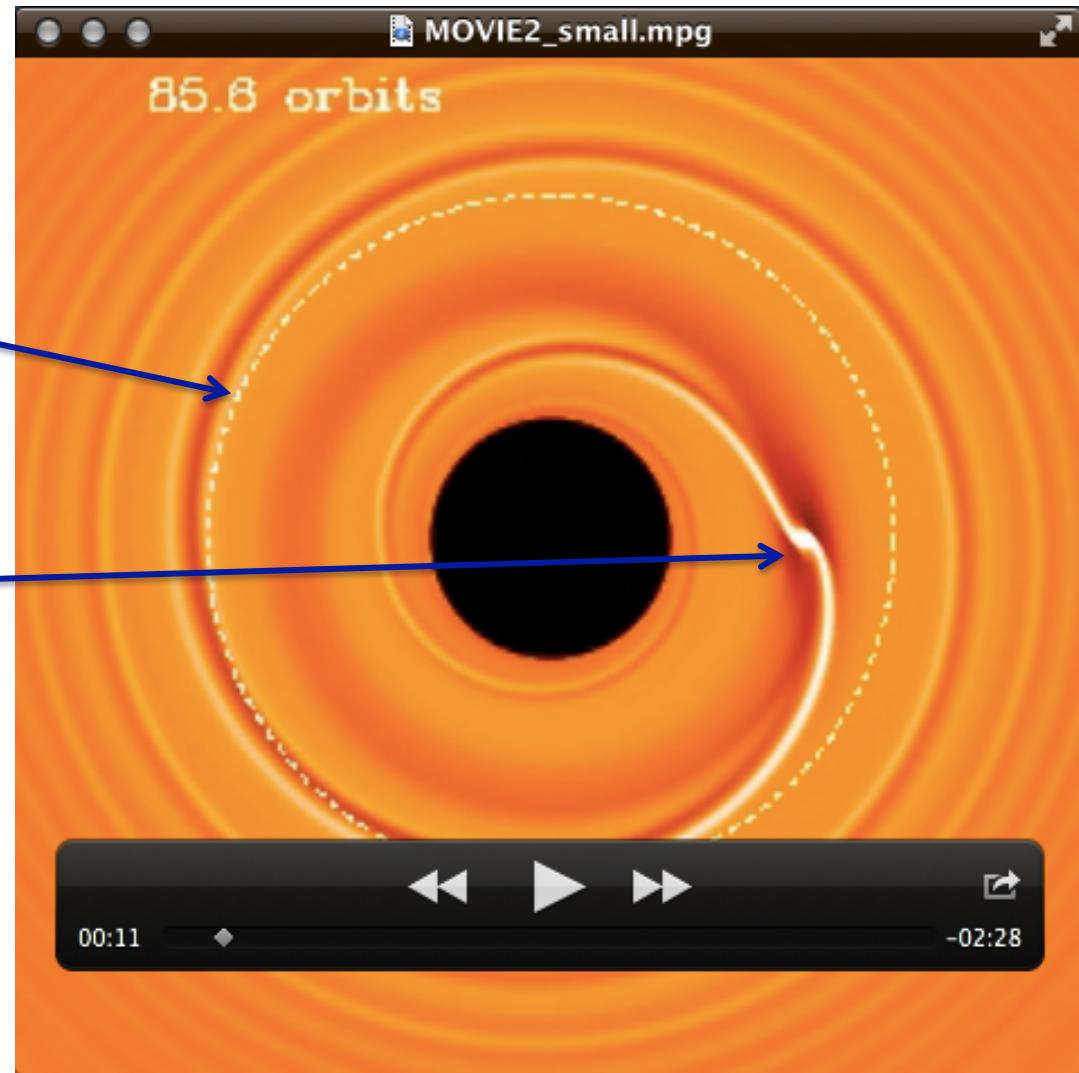


# Planetary Migration Simulation

(Movie 3, <http://www.maths.qmul.ac.uk/~masset/moviesmpeg.html>)

Original orbital  
distance of planet

Orbital distance of  
planet after  
migrating inward



# ALMA Image of HL Tau

Young star  
with planet-  
forming disk.

Forming  
planets are  
producing  
the ring-like  
structure.

