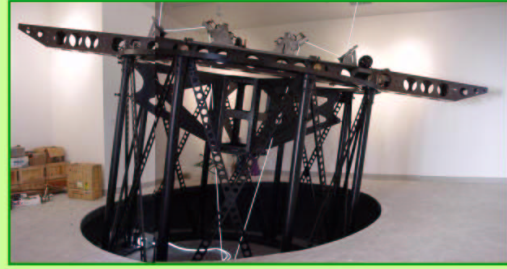


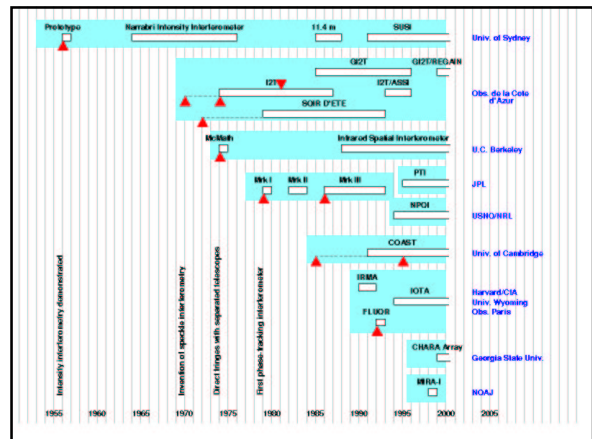
Summary of optical/IR projects

See also "Optical Long Baseline Interferometry News",
 edited by Peter Lawson:
<http://huey.jpl.nasa.gov/olbin/>

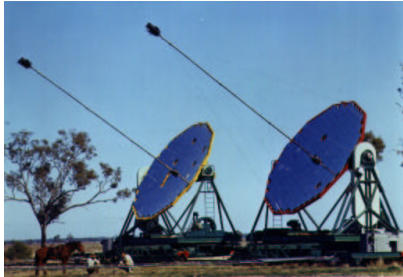
Michelson's 20-ft Interferometer



Michelson and Pease: 50ft Interferometer (1929)



Narrabri Intensity Interferometer



Two 6.9m apertures. Maximum baseline 188m (1964-1976).

Mark III (Mount Wilson)



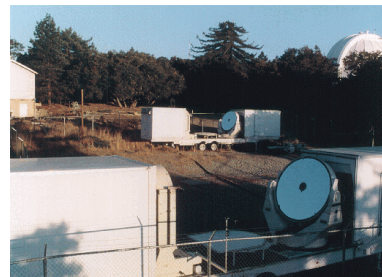
Two 25cm apertures. Maximum baseline 12m. (1986-1993).

GI2T (Nice, France)



Two 1.5m apertures. Maximum baseline 65m.

ISI (Mount Wilson)



Mid-infrared heterodyne (11 micron).
Two 1.65m apertures. Maximum baseline 32m.

SUSI (Narrabri)



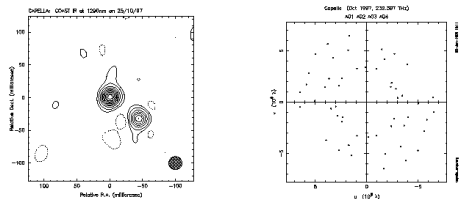
Two 14cm apertures. Maximum baseline 640m.

COAST (Cambridge, UK)



Five 40m apertures. Maximum baseline 22m.

COAST infrared image of binary star (Capella)



Wavelength: 1.3 microns (25 October 1997). Lowest contours are 4% of peak flux. Noise level consistent with the (u,v) coverage.

IOTA/FLUOR (Arizona)



Three 45cm apertures. Maximum baseline 38m.

NPOI (Arizona)

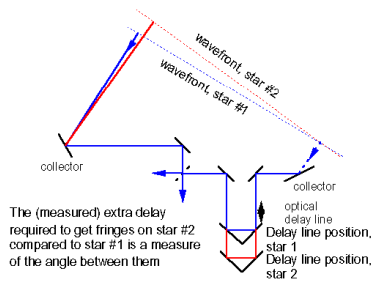


Six 50cm apertures. Maximum baseline 437m.

Palomar Testbed Interferometer (PTI; Mount Palomar)

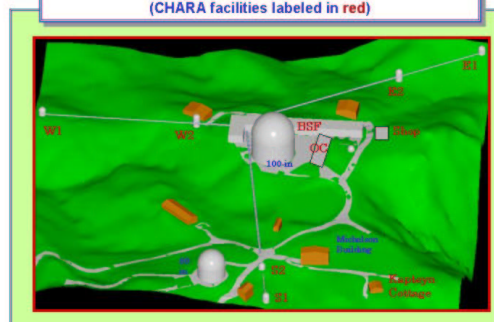


Astrometry with an Interferometer



CHARA

Layout on Mt. Wilson
(CHARA facilities labeled in red)



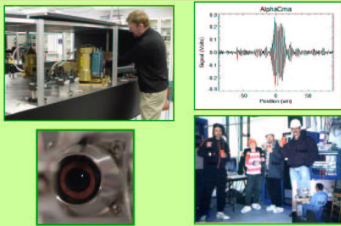
Mt. Wilson – October 2000



Telescope Enclosure Installation



First Starlight Fringes – 23 Nov 99



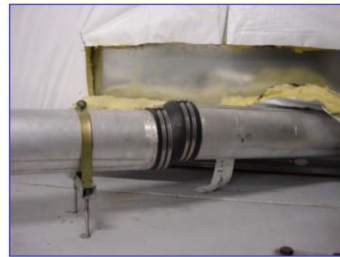
What a Difference a Few Months Make



150-foot Solar Tower – Now this is pretty!



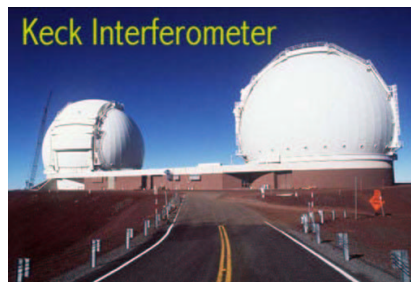
Vacuum Tubes Deflecting under Load – Now this isn't pretty!



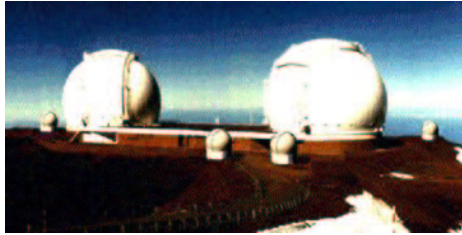
Nor is this!



Keck

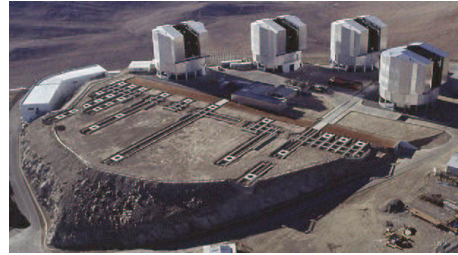


Two 10m + four 1.8m apertures



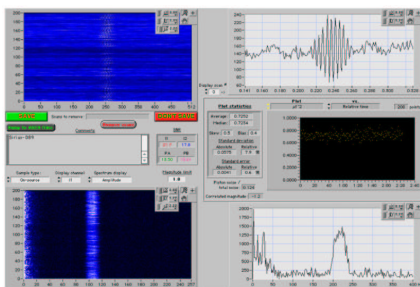
Artist's impression of final array.

VLT



Four 8m plus three 1.8m apertures.

VLT first fringes with siderostats

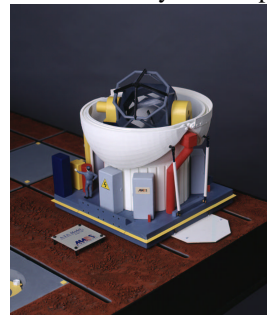


'First Fringes' from Sirius with VLT

ESO PR Photo 10a/01 (18 March 2001)

© European Southern Observatory

VLT Auxiliary Telescope



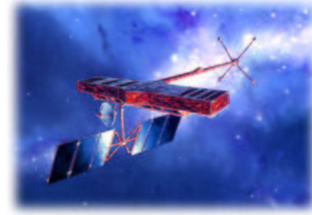
1.8 aperture

Large Binocular Telescope (LBT; Arizona)



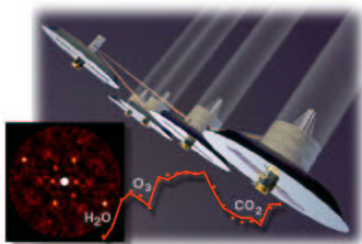
Two 8.4m apertures. Baseline up to 22.8m (full (u,v) coverage).

Space Interferometry Mission (SIM)



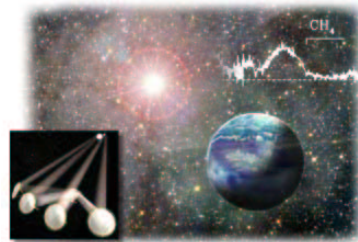
Two 30cm apertures on fixed 10m baseline. Launch 2009.

Terrestrial Planet Finder (TPF)

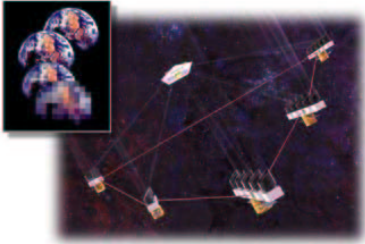


Four 3.5m apertures. Baseline 75-1000m. Launch 2012

Life Finder (LI)

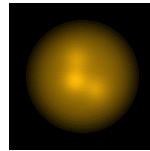


Planet Imager (PI)

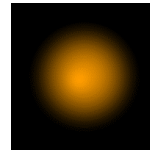


Arrays of 8m apertures. Baselines up to 6000km. Launch 20??

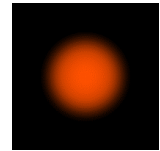
Betelgeuse



700 nm (WHT)

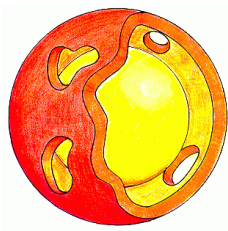


905 nm (COAST)

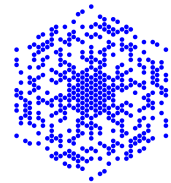


1290 nm (COAST)

Betelgeuse

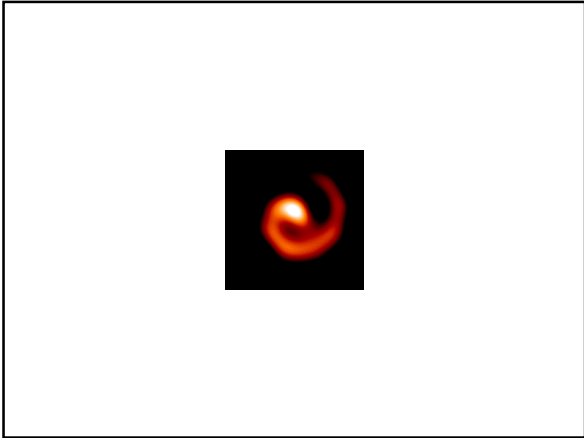
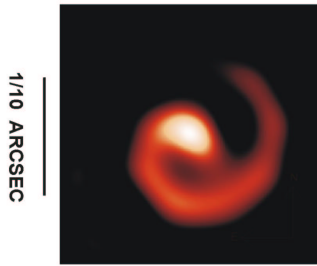


Aperture masking with the Keck



WR 104 at 2.27 Microns

April 98



Interacting Binary Wind Model of Spiral Outflow Around WR 104

