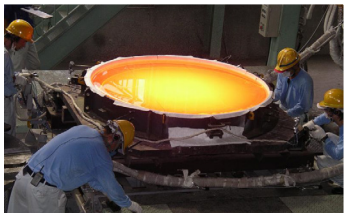
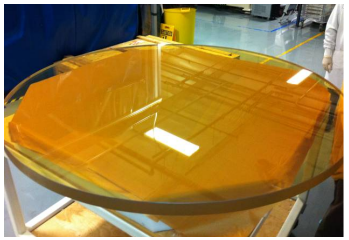
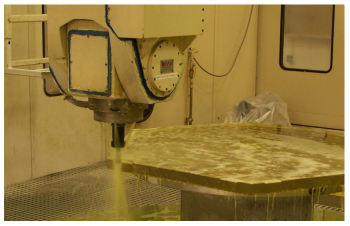
Thirty Meter Telescope
Primary Mirror Segment Fabrication

TMT







Produce 576 segment blanks

POLISHING

CUTTING

MOUNTING

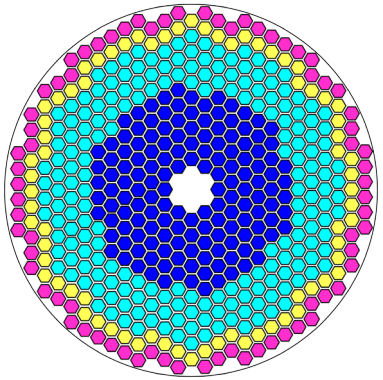
174 segments

86 segments

86 segments

230 segments

Testing & Ion Beam Figuring



30 m 望遠鏡
三十米望远镜
तीस मीटर दूरबीन
Thirty Meter Telescope
Télescope de Trente Mètres

Caltech

INDIA TMT

NAOC

国立天文台 NAOJ National Astronomical Observatory of Japan

NRC·CNRC Canada

THE UNIVERSITY OF CALIFORNIA 1868

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Primary Mirror Segment Fabrication

Japan producing all 492+82 spare blanks

- **Blank production approaching 50% completion (5/2018)**

Polishing, hex-cutting and mounting shared between Japan (174), China (86), India (86), USA (230)

- **20 polished segments in Japan (5/2018)**
- **116 blanks delivered to USA (3/2018)**

Final Ion Beam Figuring of all mounted segments takes place in USA

Segment production and processing is proceeding in phase with the development of the segment support assemblies.

Polishing and processing facilities are nearing completion in India, China and USA.

Segment surface test systems are in development at Arizona Optical Systems and KiwiStar Optics.

Segment surface polishing and final figuring requirements are about 2.5nm and 4.0nm RMS for spatial scales down to 50mm and 50mm to 0.8mm respectively.

Segment warping harness and adaptive optics system will correct most of the surface figure errors with spatial scales above about 50mm

The Thirty Meter Telescope will be constructed either on Maunakea, Hawaii or the Observatorio del Roque de los Muchachos, La Palma. Science operations are expected to begin in the late 2020s.