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Conceptual design of M2/M3 Coating Plant for TMT

The Thirty Meter Telescope (TMT) is a joint venture of scientific institutions in Canada, China, India, Japan and the US to build a 30-m diameter optical-infra-red telescope. As part of India's contribution, the India-TMT Coordination Centre (ITCC) is developing various sub-systems needed for the telescope in collaboration with Indian industrial partners. The TMT will be a Ritchey-Chrétien telescope with the primary mirror consisting of 492 smaller (1.44-m) individual hexagonal mirror segments and a secondary (M2) and a Tertiary (M3) mirrors of 3.65-m and ~3.6-m in diameter respectively. With the intention to design, built and commission a coating plant for applying appropriate coating on the M2 and M3 mirrors, a conceptual design study was conducted recently. In this talk I will discuss about the key requirements that drove the design choice and explain how the design has been optimized to satisfy those requirements.

Presentation type

Oral

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