Trapezoidal Shim for Segmented Optics Assembly

Title: Trapezoidal Shim for Segmented Optics Assembly

Invention: Researchers at the University of Arizona have designed a paradigm-shifting space telescope technology. The technology produces ultra-lightweight, transmissive lenses that are fabricated economically in segments. The novel aspects of the technology facilitate quick assembly with very high precision alignment..

Background: Improvements in space telescope technology are needed. For example, mirror systems may be heavy, costly, and may comprise transmission loss and reduction in light throughput. Also, segmented mirror system has very sensitive alignment and assembly tolerance, which increases the overall system complexity and budget.

Advantages:
* quick assembly
* excellent alignment among segments
* lightweight
* very large aperture

Applications:
* space-based astronomy
* ground-based astronomy

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