A Locking Clamp That Enables High Thermal and Vibrational Stability for Kinematic Optical Mounts

Title: A Locking Clamp that Enables High Thermal and Vibrational Stability for Kinematic Optical Mounts

Invention: This technology is a simple apparatus that reduces the angular drift of an optical mount when subjected to thermal or vibrational perturbations. The novel device provides inexpensive mounts with the ability to achieve <2 μrad/C drift when exposed to unbalanced thermal shock either to one part of the mount itself or to the entire optical system.

Background: Current commercial kinematic optical mounts suffer from instability when exposed to fluctuations in temperature and vibrations. Often, the only way to mitigate the negative effects of such perturbations is through purchasing expensive high-end custom mounts.

Applications:
- Kinematic optical mounts

Advantages:
- Ease of use
- Inexpensive
- Can be used with existing kinematic mounts

Licensing Manager:
Amy Phillips
AmyP@tla.arizona.edu
(520) 621-9579

Refer to case number UA18-088

The University of Arizona, Tucson, Arizona
Inventors
Laird Close
Professor, Astronomy
Maggie Kautz
Student, Optical Sciences