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Closing the loop on MROI TYLER MCCRACKEN, ALISA SHTROMBERG, MICHELLE CREECH-EAKMAN, New Mexico Tech, JOHN YOUNG, DAVID BUSCHER, CHRIS HANIFF, University of Cambridge — To produce a high quality science product, optical and near infrared interferometers must battle the shakes, bumps, and rattles of the environment while correcting for the constantly changing atmosphere. The planned Magdalena Ridge Observatory Interferometer (MROI) will have baselines up to 347 meters requiring beam transport of the same scale. Thus alignment of the beam transport system is crucial and can pose a significant reduction in time available for observations due to both the standard beginning of night alignment and how misalignments arising overnight are detected and corrected. For high contrast fringes to be continuously observed, the turbulent atmosphere must also be tracked and its effects minimized. This poster overviews some subsystems of the MROI responsible for minimizing the effort needed for alignment and correcting atmospheric effects with focus on the laboratory demonstration of the systems.

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