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Novel Adaptive Optics System for the 6.5 meter MMT telescope P. MCGUIRE, M. LLOYD-HART, R. ANGEL, G. ANGELI, D. MCCARTHY, T. RHOADARMER, R. JOHNSON, T. ROBERTS, M. LANGLOIS, B. FITZPATRICK, W. DAVISON, J. BURGE, R. SARLOT, J. HUGHES, S. MILLER, S. SCHALLER, CAAO, Steward Obs, U.Arizona, B. JACOBSEN, Nikon, C. SHELTON, W.M.Keck Obs, P. SALINARI, C. DEL VECCHIO, G. BRUSA, Obs. Arcetri, R. BIASI, Microgate, D. GALLIENI, ADS/MedioLario, D. SANDLER, T. BARRETT, Thermotrex — The Multiple Mirror Telescope (MMT) is currently being upgraded to a single 6.5 meter diameter mirror and will see first light at prime focus in early 1999. We are constructing an F/15 adaptive optics (AO) system which will be an integral part of the new MMT, removing the effect of atmospheric turbulence so that images near the diffraction limit in the near-infrared can be achieved. The deformable element of this system is a 64 cm diameter secondary mirror composed of a 1.6 mm thick thin glass shell and 336 voice coil actuators operating at 1 kHz. This is the first system that uses the secondary mirror as the correcting element, which means thermal background is minimized. Results to be presented include the laboratory testing of the AO system components with a solid secondary, data taken with the wavefront sensor camera at prime focus of the new MMT, and tests of the secondary mirror control system. (supported by AFOSR)

[X] Prefer Oral Session
[ ] Prefer Poster Session

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