Pulsation Modes and Fundamental Parameters of Mira Stars *(Abstract)*

Dominique Barthès
GRAAL (ESA 5024/CNRS), Université Montpellier II, F-34095 Montpellier Cedex 05, France

Abstract Linear pulsation models are generated using the absolute magnitudes of long period variables (LPVs) in the Large Magellanic Cloud (LMC) and in the solar neighborhood (HIPPARCOS parallaxes), as well as effective temperature estimates. The results support the hypothesis that linear modeling may be used, provided that a lower mixing length (possibly evolving along the asymptotic giant branch (AGB)) is adopted, as suggested by light curve analysis. Most Miras are found pulsating in the first overtone, though a significant number may be pulsating in the fundamental mode. Individual masses are derived. Several stars seem to depart from the standard core-mass-luminosity relation because of thermal pulsation.

Four Neglected Southern Mira Stars *(Abstract)*

Thomas A. Cragg
19 Belar St., Coonabarabran, N.S.W. 2357, Australia

Abstract This paper is a continuation of the study of several southern Mira stars presented at the 1996 Annual Meeting of the AAVSO in Cambridge, Massachusetts. The four stars herein included are 0828–44 CT Vel; 1553–23 BK Sco; 1557–23 TY Sco; and 2011–52 X Tel. X Tel is now on the regular observing list of the Royal Astronomical Society of New Zealand (RASNZ).