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COORDINATED ULTRAVIOLET, OPTICAL AND RADIO OBSERVATIONS
OF EI Eri (= HD 26 337)
CALL FOR OBSERVATIONS

From 16 to 19 September 1988, the G5 IV single-line noneclipsing RS CVn-type system EI Eri (=HD 26337) will be concurrently observed with IUE, VLA, VLBI and several optical ground-based instruments with the main purpose of determining the size, location and physical characteristics of large-scale atmospheric structures.

The scheduled observations will provide high-resolution line profiles of Mg II h and k (IUE) and other lines at optical wavelengths, UV and optical continuum fluxes versus orbital or rotation phase. Radio fluxes and maps with VLA and VLBI will be also obtained to synthesize a 3-dimensional picture of EI Eri atmosphere, from photospheric up to coronal levels. We aim at covering two consecutive full orbital cycles in order to isolate short-term flare-like variations from those due to quasi-stable atmospheric structures, such as cool starspots, bright plages or coronal features, as they move across the projected stellar disc following the star's rotation.

The scientific rationale of this program is extensively discussed in several recent reviews (e.g., Linsky 1983, Rodonò 1986a, 1986b) and papers related to past observation campaigns on other stars, (Rodonò et al. 1986, 1987, Butler et al. 1986, Byrne et al. 1987, Andrews et al. 1988, Walter et al. 1987, Linsky et al. 1988, Neff et al. 1988). Essential data and information on previous photometry and spectroscopy of EI Eri may be found in Hall et al. (1987) and Fekel et al. (1987), respectively.

Unfortunately, EI Eri is not suitable for extensive ground-based coverage in September. However, we call for systematic optical photometry and spectroscopy that are already available or might be obtained in the fall of 1988. The interested observers are kindly requested to contact one of the undersigned about their observation plan and/or results.

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