

PHOTOMETRIC STUDY OF THE DELTA SCUTI STAR DELTA SERPENTIS

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RESUMEN. Se presentan los resultados del análisis para encontrar las frecuencias de pulsación de la estrella variable Delta Ser.

ABSTRACT. The results of the analysis for determining the frequencies of pulsation of the variable star Delta Ser are presented.

Key words: PHOTOMETRY — STARS- δ SCUTI — STARS-PULSATION

The differential photoelectric photometry carried out from the observatories of Sierra Nevada, Spain and San Pedro Martir, Mexico is presented. The analysis of the data obtained indicates that Delta Ser is pulsating on two frequencies (Table 1). However, since its periods are relatively long and its pulsational amplitude is very small (only two hundreds of magnitude), the frequencies found for each season have aliasing problems. If the frequencies derived from the observations in Spain are considered, the periods correspond to the first and second overtones. On the other hand, the ratio of the frequencies obtained from the observations in Mexico corresponds to a non-radial mode of pulsation. The physical parameters deduced from the photometric calibration are: $M_V=1.25$ mag, $\log T_e=3.884$ and $\log g=3.649$.

TABLE 1. Pulsational Periods of Delta Serpentis.

Sierra Nevada				San Pedro Martir		
	Freq. (c/d)	Period (d)	Ampl. (mag)	Freq. (c/d)	Period (d)	Ampl. (mag)
W_1	6.4227	0.1557	0.0225	6.4082	0.1561	0.0113
$2W_1$			0.0027			0.0020
$3W_1$			0.0023			
W_2	7.8869	0.1268	0.0062	8.8822	0.1126	0.0072
$2W_2$			0.0022			0.0006

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