COSMIC RAY STARS AT MOUNTAIN ALTITUDES

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ABSTRACT

Nuclear emulsion plates, Ilford G5, 300 microns thick and 2" x 3" in size were flown to Bangkok in December 1962 and the plates were exposed at Doi Intanone, Doi Suthep and Wat Suan Dok (latitude 18° N) the altitudes being 2,595, 1,650 and 313 meters respectively. Some of the plates were then developed in January 1963 to determine background cosmic ray events. Subsequently some of the plates were devaloped in 49 days and 92 days to determine the increase of cosmic ray stars at the above-mentioned places. The total rate of production of stars in 92 days and the rate of production of stars greater than 5 prongs are found to be 24.41 ± 0.47 stars per c.c. per day, 16.21 ± 0.52 stars /c.c./day, 13.78 ± 0.55 stars /c.c./day and 0.118 ± 0.03 stars /c.c./day, 0.17 ± 0.05 stars /c.c./day, 0.56 ± 0.11 stars /c.c./day at Wat Suan Dok, Doi Suthep and Doi Intanone respectively. The frequency distributions of ____ stars were found to be in agreement with those of other workers.

It was also found that, contrary to general belief, the total number of stars, the number of stars greater than two prongs, and the number of stars greater than three prongs decrease with altitudes. Only the number of stars greater than 4 prongs and the number of stars greater than 5 prongs increase with altitude.

PREFACE

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