of solar particles as indicated by magnetic storms on the earth, with the 10 cm solar index and with System I and System II rotation. No correlation has been found with the 10 cm solar index. In the case of solar particles, the fact that Jupiter was in opposition at the time of the measurements would lead one to expect that particles causing magnetic storms on the earth following a flare on the sun might reasonably be expected to arrive in the vicinity of Jupiter a few days later (first suggested by Drake). No strong correlation of this sort has been noted in these measurements. However, there is a slight suggestion of elevated temperatures following an importance 3+ flare on May 10 and the intense aurora of May 11 and 12.

Each of the 28 daily measures is the average of 4 or 5 drift curves taken over a period of 2 hours. When plotted against time, these 28 measurements are highly suggestive of a cyclical variation. An attempt has been made to correlate this data with System I and System II rotation. In the case of System I no significant correlation was observed but in the case of System II an elevated temperature has been noted at a longitude of 200°. This enhancement of about 30 per cent appears to lie between 175° and 225°. While rather significant when subjected to a statistical test, the amount of data is limited and this conclusion should be considered tentative. Correlation might actually be more pronounced with a system differing from both Systems I and II but sufficient data is not available at the time this is written. The mean temperature obtained from all data is 2496°K with a standard deviation of 450°.

REFERENCES

- Mayer, C. H., McCullough, T. P. and Sloanaker, R. M. 1958, *Ap. J.* **127**, 11.
 Drake, F. D. and Ewen, H. I. 1958, *Proc. Inst. Radio Engrs.* **46**, 53.
 Alsop, L. E., Giordmaine, J. A., Mayer, C. H. and Townes, C. H. 1958, *A. J.* **63**, 301.
 McClain, E. F. and Sloanaker, R. M. 1959, *Proc. URSI-IAU, Radio Astr. Symp. Paris* 1958, 61.
 Stanley, G. J. 1959, private communication.

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McDonald, Jean K. *Radial velocities of stars in the Praesepe Cluster.*

Radial velocities have been determined from 200 spectrograms of 66 stars with apparent magnitude ≤ 9.2 , in the region of the Praesepe

Cluster. The linear dispersions at $H\gamma$ were principally 51 Å/mm and 90 Å/mm.

The observation program was planned in 1952 with the advice of R. J. Trumpler, who kindly provided a list of the velocities he had determined for stars of this cluster. His observations had been limited to stars within 1° of the cluster center, and our program was revised accordingly to concentrate principally on the zone 1° to 2.5° from the center.

Within the 2.5° circle, there are 97 stars with magnitudes ≤ 9.2 , of which 47 lying within 1° of the center were included in Trumpler's list. Of these 47 stars, 19 were included in my observation program and the mean difference in the radial velocities, in the sense Trumpler minus McDonald, is +1.2 km/sec.

Of the 50 observed stars that lie within the 1° to 2.5° zone, 34 are believed to be non-members, 6 from parallax and proper motion data and 28 from radial-velocity determinations, 4 show variable velocity, and the remaining 12 stars, listed in the table, are undoubtedly cluster members. The three marked with asterisks have been identified previously as cluster members by H. L. Johnson from color-magnitude studies.

The mean velocity given by Trumpler for 57 cluster stars within 1° of the center, brighter than magnitude 10.3 was +32.9 km/sec, which agrees with the mean velocity of the 12 stars in the Table.

	m_v	Type	Velocity
H.D. 72358	8.4	F5	+29.7 km/sec
72779*	6.6	G0	33.9
72846*	8.3	A2	32.2
73045*	8.5	A0	27.1
73555	8.3	F8	34.4
73620	9.1	F0	35.4
74587	9.1	A5	32.7
74656	8.1	A0	31.6
74718	8.6	A5	32.1
74720	8.2	A2	35.3
74780	9.0	A5	36.3
74814	9.2	K0	33.6

Mean velocity +32.9 $\pm$ 0.50 km/sec.

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McLaughlin, Dean B. *The Be spectrum variable π Aquarii.*

π Aquarii is one of the best examples of large variations of the "V/R type," in which the relative strengths of apparently double hydrogen emission lines vary in a cyclic manner. Large shifts of the emissions and the central absorption lines accompany these changes. Strongest redward emissions occur with greatest negative