tinents protruding from oceans of water. As Urey has shown, the CO_2 would be fixed in the rocks in the form of carbonates because of its chemical reaction with silicates in the presence of water. On the other hand, if protruding land masses were absent, the fixation of CO_2 could not continue after the formation of a thin buffer layer of carbonates. Hence, if the surface of Venus is completely covered with water, the chemical argument ceases to be valid.

In our opinion clouds of H_2O best explain the observed characteristics of the surface of Venus. We indicate how the working hypothesis that an ocean of water completely covers the planet is consistent with current theories of the development of planetary atmospheres and hydrospheres.

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Newkirk, Gordon A., Jr.* A statistical study of prominence excitation.

In order to study the relations which exist between the excitation and the kinematic behavior of a prominence, the author has measured emission line ratios of a number of prominences which have been classified according to the Menzel-Evans scheme. The measurement was greatly facilitated by a special photometer, constructed at Sacramento Peak, which permitted the comparison of the prominence spectrum with a carefully calibrated, juxtaposed, synthetic spectrum. The spectrograms employed were the routine, Sacramento Peak coronal plates. Prominence movies permitted the kinematic classification of each prominence examined. Although a total of twelve emission lines appeared on the plates, only the pair H_2 and D_3 were of sufficient strength in all spectra for their ratio to constitute a reasonably broad criterion of excitation.

In addition to measuring the emission line intensities, I also checked each spectrum for the following features:

- (1) The presence of a continuous spectrum from the prominence.
- (2) Any anomalies (abnormal strengthening, broadening, or radial velocity shifts) in the coronal lines at 6702, 6374, or 5303 Å.
- (3) The presence of the yellow coronal line at 5694 Å.

A natural division seems to exist between those prominences where $1 < H\alpha/D_3 < 35$ and those where $H\alpha/D_3 \geq 35$. High excitation objects fall

* On leave to U. S. Army.

in the former group; low excitation, in the latter. The division of the various kinematic types into high and low excitation objects appears below:

High Excitation	Low Excitation
Loops	Hedges
Trees	Mounds
Coronal Streamers	

The data were insufficient to permit classification of the other types of prominences. One fact which emerged from the study is that, among the 52 prominences examined, there seems to be no disposition toward high or low excitation of either the spot or the non-spot prominences. Likewise, the prominence continuum appears as frequently among the high excitation objects as among the low. It is of particular interest that coronal anomalies occur almost exclusively near the prominences of high excitation.

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Owren, Leif and John W. Firor. Motion of a discrete solar radio source at 207 Mc/sec.

The east-west positions of a solar source of enhanced radio radiation relative to its mean position have been measured with an accuracy of about $10''$. An interferometer working at a frequency of 207 Mc/sec was used. A position determination was made about every 40 seconds for two hours around noon on 15 March 1954. The source did not remain fixed on the sun but moved about a minute of arc several times. The largest motions had a time scale of several minutes of time. The motions were not strongly correlated with the total power received from the sun at 200 Mc/sec. The motions are probably not due to scintillations in the earth's ionosphere or changes in relative intensity of two sources on the sun.

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Pecker, Jean-Claude and Walter Orr Roberts. Solar corpuscles responsible for geomagnetic disturbances.

Some years ago C. W. Allen presented an extensive analysis of geomagnetic storms, and offered suggestions for their explanation in terms of streams of corpuscles originating in the sun.¹ We offer a qualitative hypothesis, that incorporates Allen's suggestions and identifies the solar source of corpuscular emission responsible