least-squares solution from 57 velocity measures made at the David Dunlap Observatory since 1951. They are as follows: $P = 359.7$ days, $\gamma = +7.1$ km/sec, $K = 51.3$ km/sec, $e = 0.27$, $\omega = 265^\circ$, $T = \text{JD } 5138$, $a \sin i = 2.44 \times 10^8$ km, $f(m) = 4.5 \odot$. The large mass function means that the stars are themselves massive unless there is a very large departure from the mass-luminosity relation.

Other stars with such large mass functions are eclipsing systems. It is suggested that this star should be examined photometrically at the time of superior conjunction of the primary.

*David Dunlap Observatory,
Richmond Hill, Ontario.*

Hepburn, Nannielou. A photometric study of the solar corona.

Photometric measurement of the solar corona as photographed by the Naval Research Laboratory expedition to Khartoum, Sudan, on February 25, 1952 is described and related to other measurements and theoretical studies. In particular the variation of white light intensity with radius is compared to van de Hulst's model of the corona, and coefficients are derived for his equations which produce curves more nearly fitting the observed intensities. The removal of the F corona and calculation of electron densities according to van de Hulst's model appears to give consistent results here.

These measurements extend from the solar limb out to about 2.5 solar radii from the center of the sun, so that a combination of the results with those obtained by the French expedition to Khartoum, headed by Bernard Lyot, is of considerable interest. Their photometric and polarimetric measurement of the white light corona extends from about 2.5 solar radii out to more than 20 radii. The variation in brightness with radius as measured here appears to be a direct extension of the far corona as measured by the French both in the equatorial and polar regions. This indicates that the assignment of absolute intensities to these measures by reference to van de Hulst's model is in agreement with the direct absolute intensity measurements. It has also been possible to compare their measurement of the variation with position angle of the red and green coronal lines near the great streamer with variations in the white-light corona. Although the center of the streamer appears to lie about 10° north of the emission line maximum, an examination of the white-light corona near the

limb ($\rho = 1.15$) shows a very close correlation of white-light intensity with the emission lines.

*Naval Research Laboratory,
Washington, D. C.*

Herzog, Leonard F. and Pinson, William H., Jr. Sr and Rb abundances, elemental and isotopic, and a minimum age for the Homestead meteorite.

The Homestead meteorite is a typical chondrite containing 11 per cent metal phase and about 6 per cent sulfide phase. The combined silicate and sulfide phases were extracted and analyzed by isotope dilution for Rb and Sr. Uncontaminated Sr was extracted by an ion exchange column technique, and its isotopic composition was determined. Precision and accuracy will be discussed.

Duplicate analyses gave the following results: Rb, $4.0 \pm 0.4 \mu \text{ gm/gm Sr}$, 11.9 ± 0.4 .

The following table compares the isotopic composition of the Homestead Sr to present day Sr.

Sr isotope abundance	84	86	87	88
Homestead	0.0057	0.0973	0.0735	0.8235
Normal Sr (A. O. Nier)	0.0056	0.0986	0.0702	0.8256

The lowest abundance of ^{87}Sr found terrestrially is 0.0690, in an anorthosite dated geologically as about 2×10^9 years. This suggests that the initial ^{87}Sr terrestrial abundance was slightly lower than this.

Using $\lambda = 1.13 \times 10^{-11}/\text{year}$ for ^{87}Rb , and assuming as the initial abundance 0.0702, the present terrestrial abundance of ^{87}Sr , a minimum age of $3.1 \pm 0.3 \times 10^9$ years is calculated for the Homestead meteorite. Assuming the reasonable value 0.0690, the lowest abundance of ^{87}Sr found terrestrially, an age of $4.2 \pm 0.4 \times 10^9$ years is calculated.

The oldest meteorite ages obtained are about 4.6×10^9 years (Patterson 1953, Wasserberg 1954). Assuming this age for the Homestead meteorite, the initial isotopic abundance of ^{87}Sr was 0.0685 of total Sr. This figure is of interest in that it again demonstrates the constancy of isotope abundances throughout the solar system in so far as samples are available.

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Wasserburg, G. J. and Hayden, R. J. 1955. *Phys. Rev.*, Second Ser., 97, 86.

*Department of Geology and Geophysics,
Massachusetts Institute of Technology,
Cambridge, Mass.*