

on laboratory spectra, the masking and blending of numerous lines, and the necessity for calculating and predicting certain results which can be observed in solar spectra but which cannot be reproduced exactly in the laboratory. In spite of these and numerous other obstacles, the work of interpreting solar and laboratory spectra is proceeding with remarkable success. ---Eugene S. Henning

NEW SUNSPOTS VISIBLE to the naked eye. First observed as a single spot July 19th, it is now about 75 degrees square, not quite as large as the one in February. Find it near the rim of the upper left quadrant.

OUR SINCERE THANKS to Miss Grace Scholz and the others who published "Star Dust" during the editor's absence. A large part of this issue also is due to her efforts.

By the way, who would like the pleasure of getting it out this coming year? Bids are open.

OUR 5-INCH TELESCOPE is now firmly mounted at the Naval Observatory and boasts an electric drive. The sliding roof, finder, etc., are in working order, altho the horizontal tube sticks a little. Several members merit the association's gratitude for their work on the telescope and shelter.

One of "our" buildings was reclaimed by the Observatory for experimental work. A few persons observe regularly, but if we could show that the one transit house is inadequate for the Astronomers and their scopes, more space might be allotted to the amateurs.

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Secretary - Mrs. Wm. P. Harris, Jr., 4315 Chesapeake Street N.W.; Woodley 3284.

Editor - Mabel Sterns, 2517 K Street N.W., Dis. 9422

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LEO SCOTT OFFICIAL MEMBER OF 1947  
ECLIPSE EXPEDITION

Leo Scott, President of the National Capital Astronomers, has been assigned to assist Dr. Irvine C. Gardner of the Bureau of Standards, with the corona cameras at the solar eclipse in Brazil next May. NCA may well take pride in the distinction bestowed upon an amateur astronomer.

The National Geographic Society-Army Air Forces Eclipse Expedition will be organized and financed largely by the National Geographic Society. Mr. M. M. Payne of the Society staff will go to Brazil in August to inspect possible sites for the eclipse station. More details regarding the expedition will be released at that time. It is hinted that Dr. J. O. LaGorce and Dr. Lyman J. Briggs will be among the officials. So far it is not known who will be photographers from National Geographic.

Army Air Forces will transport all personnel and equipment to Brazil. The Bureau of Standards will participate in the scientific expedition, as will Georgetown College Observatory.

Father Paul McNally and Father Francis J. Heyden of Georgetown will endeavor to determine the time of contact, by means of multiple exposures. With a large number of consecutive photographs, the time of second contact can be measured precisely. For that purpose they will use a 5-inch visual telescope with two 3-inch Ross lenses on the same mounting, one of

63 inches focal length, the other, 21 inches. In addition, Father Heyden hopes to photograph the southern Milky Way in red and blue light before leaving that hemisphere.

The Naval Observatory is not taking part.

THE FOURTH ANNUAL CONVENTION of the amateur astronomers of America, July 5-7, 1946, at Detroit, Michigan, was a complete success from the viewpoint of the delegates who came from all parts of the country. Such great interest was shown and such a wide field of activity was covered that it was difficult at times to remember that this was a convention of amateurs. Also, the convention was a clear indication of how much more can be accomplished when a national organization of amateurs is completed and adjusted to bring these activities into focus.

The NCA was represented by George L. Skirm as delegate, Irene Warthen as alternate, Mabel Sterns, and Edwin V. Smith. Mr. Skirm was chairman of the fourth convention session and a member of the committee on national organization. Miss Sterns was chairman in charge of part of the second convention session covering publicity work and methods, and is now chairman of the committee to select a place and date for the convention in 1947.

The convention was under the auspices of the Detroit Astronomical Society and the Northwest Detroit Astronomical Society. Great credit is due the Detroit astronomers for the excellent program, for the selection of interesting speakers, for the trips to observatories at Lake Angelus and Ann Arbor, and for the arrangements with the Cranbrook Institute of Science and the Cranbrook School. At future conventions the latter may be equalled but it is difficult to see how such arrangements could be surpassed.

In the closing session, the convention approved the work accomplished by the committee on national organization and directed that the committee complete the draft of the constitution. The committee will then proceed to obtain the adoption of this constitution by organized local groups of amateur astronomers. Hence, it is reasonable to expect that the NCA will be invited to join other amateurs in the organization and operation of the Amateur Astronomers League.

Further details of the convention will be reported at the September meeting of the NCA.

—George L. Skirm

"THE SPECTRUM OF THE SUN" was the subject of Dr. Charlotte M. Sitterly's lecture at the June meeting. The problems involved in identifying elements and compounds in the sun by means of spectral lines and bands were clearly described. Over 26,000 lines and their corresponding intensities have been carefully recorded in the range 2914 (violet) to 13,300 (infra red) Angstrom units. As a result of this work, 66 of the 96 chemical elements have been identified in the sun. Eighteen compounds of the above elements have been detected. Hydrogen, oxygen, and helium are very abundant in the sun, but most of the other elements appear in roughly the same proportion as in the earth or in meteorites.

The development of sensitive infra-red photographic plates has resulted in greater knowledge about the long wave end of the solar spectrum and the identification of several non-metals not previously known to be present. The short wave end of the spectrum is obscured by atmospheric ozone and awaits the development of observation rockets capable of penetrating the offending layer.

Some of the difficulties requiring a thoroughly scientific approach are the effect of small impurities