spots. It is to be noted that sunspot-numbers such as those from Zürich can be obtained from the number of groups and spots given in the Table by the formula \( N = k (10g+s) \), where \( k \) for Mount Wilson is about 0.7.

Mount Wilson Observatory is now supplying corrections and additions to the sunspot-data which are broadcast in the URSIgram. So far as possible, these additional and corrected values will be used in this tabular summary and will be designated as such in footnotes to the Table.

Beginning January 15, 1936, all areas on the Sun with temperatures much lower than their surroundings will be counted as sunspots at the Mount Wilson Observatory. The value of \( k \) for Mount Wilson used in forming the Wolf numbers will thus be made smaller than heretofore and more nearly constant during the cycle.

Beginning January 1, 1934, the magnetic information of the URSIgram is for Cheltenham, Maryland, instead of Tucson, Arizona. In addition to this change in observatory, the data cover the 24 hours ending 8 A. M., 75° west meridian mean time, instead of the 24 hours ending at 7 A. M., 105° west meridian mean time.

The columns headed solar constant show (1) the value in calories of the solar constant, and (2) by letters s, f, and u whether the determination was satisfactory, fair, or unsatisfactory, respectively.

In accordance with information received from Dr. C. G. Abbot, Secretary of the Smithsonian Institution, transfer from Table Mountain to Montezuma solar-constant values was made as of October 23, 1934. Table Mountain for a considerable time has been 0.012 calorie above Montezuma, and above the scale of 1913 to 1930. Hence the value of October 23, 1934, and succeeding values are on a scale 0.012 calorie lower than previous ones.

The table of Kennelly-Heaviside Layer heights is self-explanatory.

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COMMENTS ON SUNSPOT-OBSERVATIONS

[The following comments by Doctors Nicholson and Brunner were made in response to queries concerning large differences in sunspot-numbers as reported by different observatories.—C. C. Ennis]

MOUNT WILSON OBSERVATORY

The number of sunspots depends largely on the definition of a sunspot. Each penumbral area may be considered as one spot regardless of the number of umbrae in it. According to this definition a sunspot may have several umbrae. Some observers call very small penumbral areas without an umbra "faint markings" but not spots. Thus the counts by different observers may differ greatly. The number of groups is not subject to such large percentage differences. I think the Zürich observers count condensations of all sorts as spots.

During this phase of the solar cycle the number of small condensations is large and the Wolf number \( N \) based on the counts from Mount Wilson and from Zürich will be very different. This difference can be taken care of by the factor \( k \) in the equation \( N = k (10g+s) \) but since the difference is in \( s \) and not in \( g \), the value of \( k \) will vary with the phase of the cycle. It seems advisable to report to Science Service the number of