

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION

R. B. AMMONS, EDITOR
UNIVERSITY OF MONTANA
411 KEITH AVENUE
MISSOULA, MONTANA 59801 USA



Volume 37

Number 7

July 1981

SOLAR ACTIVITY DURING JULY 1981

Sunspot information is summarized for July in the graph at the bottom of this page and the table of daily numbers on page 2. Although the smoothed mean of AAVSO sunspot numbers continued its fall from 147.0 for December 1980 to 144.9 for January 1981, actual numbers increased greatly from a monthly mean of 99.0 in June to 154.3 in July. This July value of mean AAVSO sunspot numbers has only been exceeded in 1981 by the mean of 169.2 in April. Final daily AAVSO numbers decreased to 49 on July 8, then increased irregularly to a high of 242 on July 25. Sunspot activity itself began at a moderate level, then decreased to the monthly low by the 8th, as a cluster of 3 middle-sized groups (15+ spots in each) and 2 smaller groups rotated around the limb, leaving only scattered small groups visible. Activity increased sharply over the next two weeks as 3 groups (25+ individual spots each) rotated onto the face of the sun, one of them developing quite complex structure. On the 22nd these were joined by the reappearing cluster of groups seen the early part of month. The largest group in this region then developed rapidly as it crossed the disc, to 100+ individual spots by the 26th. Over the last few days of the month the number of spot groups dropped by 5, and the large group decreased in complexity with about 50 spots by the 31st.

A summary for July of solar-flare-associated enhancements of amplitude of very-low-frequency (VLF) radio signals appears on page 2. 234 high-certainty Sudden Enhancements of Signal (SESs) were detected in the records of 17 members of the AAVSO Indirect Solar Flare Patrol. This is the second largest number of SESs for 1981; the largest being 235 in April. No SESs were detected on July 1 or 14, while 25 were noted on July 26. SESs were concentrated in the second half of the month. The tremendous amount of high-quality information contained in the SES table itself makes presentation of further data or analyses unnecessary.

Both sunspot and radio observers are to be congratulated on the high quality of their contributions in July.



