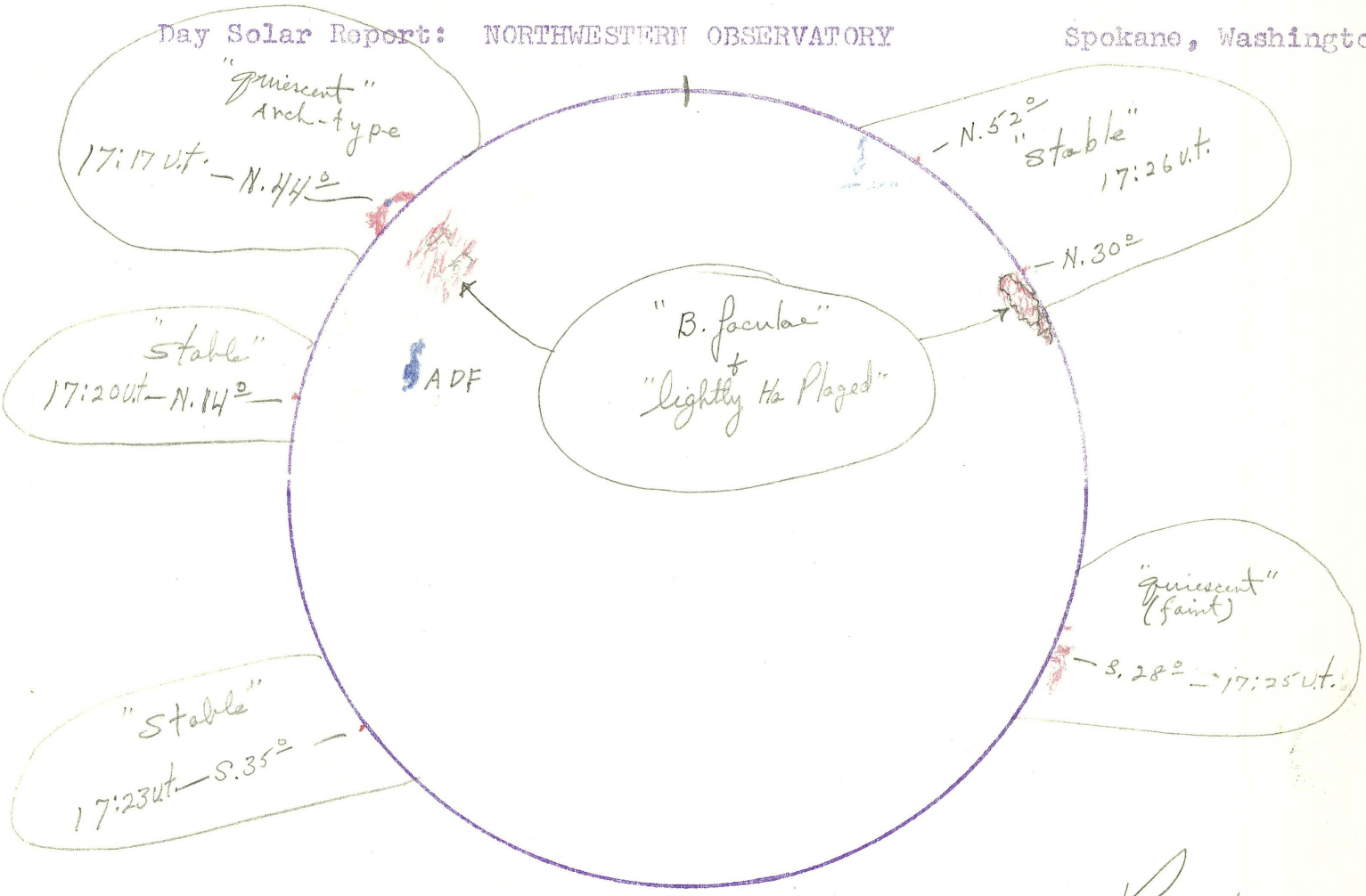
Day Solar Report: NORTHWESTERN OBSERVATORY Spokane, Washington




**Date:** 28 May, 1965. **Observer:** Kormenter

**Times:** 17:02 u.t. — "Plotter" — 17:07 U.T. — 17:11 U.T. — Spectrohelioscope → (Ha) — 17:30 U.T.

**Sky Condition:** clear

**Solar Limb:** fair, to excellent, by "spells".

**Apparatus Used:** 7" Image "Plotter" — 10" aperture tower Spectrohelioscope (Ha)

**Remarks:** ADF showing "repeated" + "intermittent" surges of activity over observing-period.

N.W. Hemisphere "B. faculae + lightly Ha plaged" region again carefully studied — See attached letter.

# NORTHWESTERN OBSERVATORY

[SOLAR RESEARCH LABORATORY]

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28 May, 1965.

Continuum = photosphere / 1
Facular = continuum / 1 + .5
Flocculi ?

Photometric Agreement ??
— if Any —

Miss Trotter
Dr. Billings

Please be advised that the active region you have shown on the Weekly Report Forms since 16 May; designated as A09, has been carefully studied here as it progressed onto the N.W. limb.

On the 27th, during the course of my daily spicules-program observations, I was immediately able to note the lack of these features in the true "facular" areas, and was able to obtain measurements for the higher-elevations of the "floccular", (Ha) shown materials. These appear as elevated "mounds", or, "hummocks" on the "sea of flocculi". These average heights were determined at 8", by a visual comparison with spicules at the edge of the fields. "Luminousity" for these materials were estimated at 1.5 times continum.

Following up these observations on the 28th; progression of area more fully onto the true limb gave better results. Complete lack of spicules-population on the floccular-areas was at once evident, while the intermediate areas between the flocculi were noted to contain spicules. Unlike the spicule as observed for the inactive areas, these lay in individual "clumps" of about 6-8 spicules per group. Each group was entirely isolated from the next by amounts corresponding to the floccular "sea" areas, as measured separately by other means. Again, the heights of raised flocculi were measured, and results yielded the same as for the 27th. Roughly------8" seconds--------.

One thing which was notable for this observation was the ability of the instruments to fully define materials laying upon the true limb, as well as many degrees towards the observer, on the fore-shortened solar-contour. Between these two areas one could easily note a single clump of 6-8 spicules---then an ######## "open" and floccular-area of many degrees---then another clump of spicules, etc. This effect was very startling------.

It is my belief that such observation was possible entirely through an activities-contrast. Since the floccular-areas were without spicules, it's lighting was dimished at H-alpha. On the other hand, the few groups of spicules became outstanding against such a back-drop, and the floccular-mounds or hummocks became exceedingly brilliant, as shown on the limb. These latter I feel may not be anything but granules, or groups of granules, which again, being without the normal spicules-populations, are fully shown as a part of the lower chromosphere, or upper photosphere-levels.

Iam inclined to feel that a very large facular-area, such as this, would be able to show many of these things. On the other hand, small facular-areas might not be "abundantly open" enough for sufficient contrast at H-alpha to overcome both instrumental and atmospheric encroachments.

BCP