SERIES C. SOLAR SPECTRA

C 5 Comparison of titanium oxide fluting in sun-spot and electric furnace λ 7100

6 Iron triplet λ 6302.7 in spectrum of spot near sun's limb, with nicol and compound half-wave plate, showing plane polarization across lines of force

7 Iron triplet λ 6302.7 in spectrum of spot near center of the sun, with nicol and compound quarter-wave plate, showing circular polarization along lines of force

8 Iron triplet λ 6173 in spectrum of sun-spot, March 9, 1916, showing right- and left-handed circular polarization by transmission of red and violet components of the line on same strip of quarter-wave mica, thus demonstrating the presence of two overlapping fields of opposite sign. Slit placed as shown on photograph of spot

9 Iron triplet λ 6173 in spectra of sun-spots, *a* and *b*, plane polarized light of spot near sun's limb, taken with nicol and (*a*=single, *b*=compound) half-wave plate; *c* and *d*, circularly polarized light of spot near center of sun, taken with nicol, and (*c*=single, *d*=compound) quarter-wave plate; *c* shows reversal of sign of charge of adjacent spots

10 Iron triplet λ 6302.7, showing different strengths of field in two sun-spots

11 Iron triplet λ 6173 in spectrum of sun-spot near limb, showing plane polarization compared with laboratory spectra of iron lines. Taken with nicol and half-wave plate

12 Iron triplet λ 6173 in spectrum of S. preceding spot of the great group of August 8, 1917, showing reversal of circularly polarized light. Taken with nicol and (*a*=single, *b*=compound) quarter-wave plate

13 Spectrum of sun-spot showing the lines λλ 6145.2 and 6145.5 weakened in the spot spectrum. Taken with nicol and compound quarter-wave plate

14 Spectrum of the "flash" (lower chromosphere) showing magnesium lines, green carbon fluting, etc.

15 Spectra of opposite points on the sun's limb, latitude 0° to 90°, showing displacements of lines due to solar rotation

*SUN SPOT SPECTRUM MAP

5 strips on each photograph. Scale on 8x10 prints is 3.7 mm per Angstrom

C 16 Region λλ 3900—4150
17 " 4150—4400
18 " 4400—4650