

IDENTIFICATIONS OF SOME HIGHLY-IONIZED IRON AND NICKEL LINES IN THE 200–400 Å REGION OF THE SOLAR SPECTRUM

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Abstract. A number of previously unclassified multiplets of FeXIV, XIII, XII, and XI produced by transitions of the type $3s^23p^n-3s3p^{n+1}$ are identified in the XUV spectrum of the Sun. The iron lines account for most of the previously unidentified strong lines between 330 and 370 Å. Solar observations of especial value for the investigation of the 300–400 Å region were the slitless spectroheliograms of September 22, 1968 (Purcell and Tousey, 1969) and November 4, 1969 (Tousey, 1971) – on which the image of a flare was recorded.

Other solar identifications in the same spectral region include the resonance lines of NiXVII and NiXVIII, and one $3p-3d$ multiplet of FeXIII. The solar blend at 417 Å involving the FeXV inter-combination line and SXIV is resolved.

References

- Purcell, J. D. and Tousey, R.: 1969, *Bull. A. A. S.* **1**, No. 3, 290.
Tousey, R.: 1971, *Phil. Trans. Roy. Soc. London A*, **270**, 59.

DISCUSSION

D. R. Flower: Can you make any comment on the relative intensity of the FeXV and SXIV lines at 417 Å?

K. G. Widing: Although no photometry is available at present, I would guess that in active regions SXIV is one-half the intensity of FeXV; in the solar flare SXIV may be 50 % stronger.