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range of 5000–17000 K and the turbulent velocity – in the range of 11–13 km/s. The magnetic field was measured by two different methods, namely by the splitting of narrow emission peaks and by the amplitude of the Stokes *V* parameter (Fig. 2), was found to be 1300–2100 G. The values of the local magnetic fields in the flare may be even larger since the obtained results represent a longitudinal component of the magnetic field, with the assumption that the filling factor equals unity.

A program on processing the solar spectra scans

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We present a program on processing the solar spectra scans. It serves as a convenient tool for obtaining the spectral line profiles from the scans of spectrograms. The program is set to perform the following primary actions:

1. Convert optical densities of the spectrogram into spectral line intensities for the selected photometric section using the characteristic curves of the scanner and the photo-emulsion.

2. Calculate the correct wavelengths knowing the dispersion value for the line under processing.

3. Make additional adjustments including noise subtraction and smoothing.

The program provides user-friendly interface, displaying the processed line, the specified photometric section and the corresponding spectral profile preview (Fig. 1). The output is saved in a common *.dat file format. The program is suitable for scans obtained by both reflection and transmission scanning techniques and is readily-configured for use with the Epson Perfection V 550 scanner.
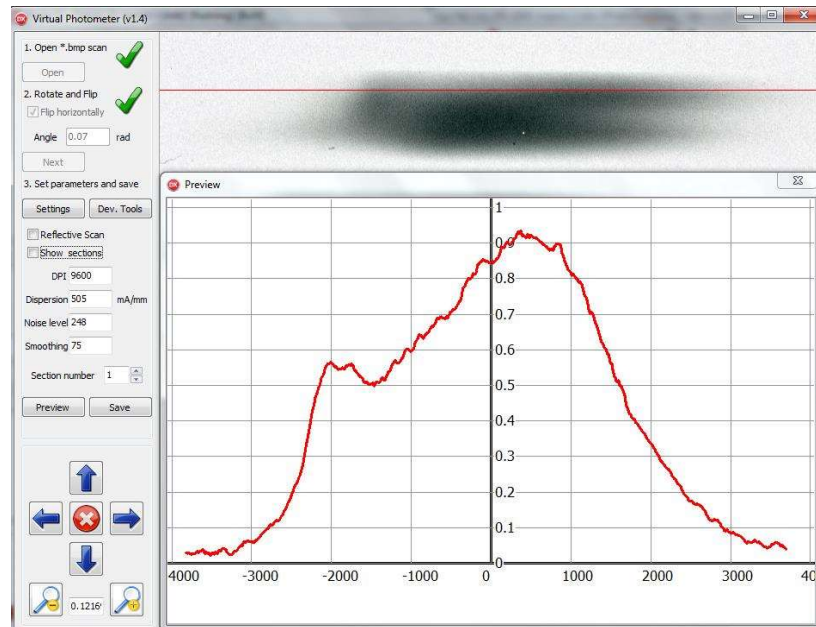
Fig. 1. Screenshot of the program. The processed scan is shown on the top of the screen, the preview of the selected section is in the center and the control panel is on the left.

The program is written in Delphi and has been extensively tested by comparing its output to the data obtained by the MF-4 microdensitometer for multiple lines and photometric sections. The spectral line profiles obtained by the two techniques are found to be well consistent and therefore the program is a reliable tool for processing the spectral data.