

the program, catalogs are needed of spectral lines for the stellar spectrum and comparison spectrum produced adequately in the form of separate files. Approximation of dispersion dependence and computations of reference line wavelengths of comparison spectrum are carried out by virtue of n-degree of polynomial (the degree is chosen from minimum deviations, commonly,

a polynomial from a square to the fifth power is used). Calculation of Zeeman and Doppler stellar line shifts is carried out by using a dispersion curve constructed. The computations of corrections and errors in measurements is made according to the standard procedure of spectrogram reduction.

## LOW ENERGY TIMER

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**ABSTRACT.** It was describe the simplest scheme of low energy timer for founding of the CCD-matrix storage time.

**Key words:** timer, CCD-matrix.

For realising a lot of different astrophysical tasks with high resolution measurements some problems arise, that connected with additional heat radiation in the measurement technics.

This timer has been designed as the devise for founding of the CCD-matrix storage time.

The scheme of this device is shown on the Fig.1. The device has been assembled on the base of two reversing counters CMOS series. The carrier at use  $R_z - 7A472$  is  $5mA$  at supply voltage is near  $5V$  (the analog, that assembled on the found of TTL, has the dissipated power more then factor by 10). The timer generates low-level impulses in the output, and they are equal by the duration ones of input signals. Then the system works in the TV standart. It is simpliest regime for storing drive. This scheme gives the possibility to drive the storage time to 256 TV frames. The storage time is established by the micro-connector (MC). Moreover, the timer may be used to telescop driving.

