Meteor spectrum obtained by a DSLR camera

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Spectral observations started in the middle of July 2010.
Equipment

Canon 300D DSLR Camera and Porst 1.8/35mm lens.

Meteor spectrum obtained by a DSLR camera
New method - two crossed diffraction gratings

Thin plastic type 500 lpm diffraction gratings.

Dew Heater

300D Camera

Meteor spectrum obtained by a DSLR camera
New method - two crossed diffraction gratings

White light source spectrum obtained with single grating.
New method - two crossed diffraction gratings

FOV of the system with single grating.
New method - two crossed diffraction gratings

White light source spectrum obtained with two crossed grating. Suprisingly not four but eight spectras are visible.
New method - two crossed diffraction gratings

FOV of the system with crossed gratings.
First meteor spectrum captured after 2 weeks of observations.
Raw meteor spectrum after substraction of background.
We used spectrum of Vega to calibrate spectral response of Canon 300D DSLR camera.
Spectrum calibration

Meteor spectrum before and after calibration.

RAW

CALIBRATED

Meteor spectrum obtained by a DSLR camera
Spectral lines identification

Spectrum typical for low velocity fireballs

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Meteor spectrum obtained by a DSLR camera
Trajectory of the fireball

PFN 32 Chelm

PFN 40 Otwock

Location

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Meteor spectrum obtained by a DSLR camera
Orbital elements of the fireball

Radiant located in Antihelion source, close to Alpha Capricornids radiant

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