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Invited lecture

OPTICAL SPECTROSCOPY WITH THE TECHNOLOGY OF VIRTUAL OBSERVATORY

P. Škoda

Astronomical Institute of the Academy of Sciences, Fričova 298, Ondřejov, Czech Republic

E-mail: skoda@sunstel.asu.cas.cz

The contemporary astronomy is flooded with a exponentially growing petabyte-scaled data volumes produced by powerful ground and space-based instrumentation as well as a product of extensive computer simulations and computations of complex numerical models. The efficient organisation and seamless handling of this information avalanche stored in a world-wide spread heterogeneous databases and the facilitation of extraction of new physical knowledge about the Universe is a primary goal of the rapidly evolving astronomical Virtual Observatory (VO). We give an overview of current spectroscopic capabilities of VO and identify the future requirements indispensable for detailed multi-wavelength analysis of huge amounts of spectra in a semi-automatic manner.