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## Dark matter review: recent astronomical and particle physics results

*Wednesday 3 September 2014 09:00 (35 minutes)*

The dark matter is undoubtedly one of the greatest enigmas of the modern physics. Its another mysterious companion in the energy budget of the universe, the dark energy, remains fully unexplained, but the dark matter recently started to reveal its secrets. During last years we have marked several important observations in the area of a direct detection based on the particle physics methods, as well as in the area of astronomical indirect observations of the dark matter. Using this new knowledge we are starting to pin down the properties of the dark matter and we are able to exclude some of the former favourite particle candidates for this role. In my talk I will review these most recent advances and observations, I will mention the methods and approaches used in the data analysis, and I will present the current conclusions that we are able to draw concerning the nature and the origin of the dark matter.

**Primary author:** PROUZA, Michael (Institute of Physics Prague)

**Presenter:** PROUZA, Michael (Institute of Physics Prague)

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