

## EXPLORING THE UNIVERSE BY COSMIC OBSERVATORIES

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Astronomical observations play, historically, a key role in a discovery by the world citizens their place in the Universe. In this contribution we briefly outline the history of astronomical and astrophysical science, their place and role in the society social and industrial development. Particular attention is paid for main achievements in cosmic era astronomy. We analyze an impact of recent results of astroparticle physics on an understanding of the Universe. Contemporary astrophysics becomes a unique experimental basis for modern fundamental interaction theory. Relevant energies rise up to Planck ones ( $10^{28}$  eV), exceeding considerably the Large Hadron Collider (LHC, CERN) scale  $10^{13}$  eV. Recent discoveries of dark matter and energy lead to a new view on the structure and evolution of our Universe: Within so called brane cosmology our Universe is only one cell of huge inflationary Multiverse with about  $10^{500}$  other universes exhibiting various properties. Anthropic arguments and future of our Universe in respect with terrestrial and extraterrestrial systems are discussed.