

Formation of the first halos, galaxies and magnetic fields

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Cosmic objects with magnetic fields (quasars, AGNs) are observed at redshifts $z \geq 7$ and more (for instance, for $z = 10.073 \pm 0.002$) indicates the early creation of magnetic fields. The observations of the cosmic telescope JWST show that the first galaxies were formed at redshifts $z \simeq 15 - 20$. The early formation of galaxies creates favourable conditions for high impact of the Compton scattering of the relic radiation photons and electrons on the electron temperature and leads to the partial separation of electrons and protons. Together with turbulent motions such separation stimulates creation of magnetic fields on a galactic scale.

Author: LARCHENKOVA, Tatiana

Presenter: LARCHENKOVA, Tatiana

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