21-cm signal from cosmic dawn

Anastasia Fialkov*[1]

[1]Ecole Normale Supérieure (ENS) – Ministère chargé de l'enseignement supérieur. – 45 rue d'Ulm, 75005, France

Résumé

In this talk I will discuss the neutral hydrogen signal from pre-reionization epoch, including the dark ages and the era when the first bright objects were formed. The signal from dark ages depends only on atomic physics and cosmology and therefore is relatively easy to predict. On the other hand, neutral hydrogen emission from the era of primordial star formation depends on (1) emission spectrum of first stars, (2) the relative motion between the dark matter halos and the in-falling gas, (3) the feedback of the starlight on star formation, etc. Most of these high-redshift effects are poorly constrained due to the lack of direct observations. I will point out how these physical phenomena affect the expected neutral hydrogen emission from high redshifts.

*Intervenant