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Astronomy and Cosmology at ENS

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LPENS, Conf IV
Domaines : astro-ph

Titre : *The evolution of dusty star-forming galaxy populations from the end of the reionization to nowadays*

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Résumé : *About half of the energy emitted by stars in galaxies was absorbed by dust and re-emitted in the far-infrared. This phenomenon is particularly dramatic for the UV radiation from young stars tracing the star formation. Estimating this intrinsic UV emission is key to understand the star formation across cosmic times. We thus need to know both the amount of UV and far-infrared emitted by the galaxies. During the last decade, Herschel and ALMA have pushed our knowledge of the dusty Universe up to the end of the reionization. It is now clear that very dusty objects exist very early in the Universe and a large fraction of the star formation budget at very high redshift (z 6) is still hidden by dust. I will review the main results from the last years and discuss the consequence on our understanding of galaxy formation. Finally, I will discuss how the SPICA mission can improve our knowledge of this dusty Universe. In particular, the B-BOP instrument will offer us the first opportunity to detect the polarized signal from high-redshift dusty galaxies.*