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Detecting exoplanets: a subtle usage of light

The search for planetary systems other than the one we know around our Sun has begun to bear fruits just 20 years ago. It is now the object of a more and more intense and fruitful quest, thanks to a wide range of methods and instruments that capture the faint light that reaches us from these distant systems.
I will focus more specifically on how the analysis of different properties of light allows the detection and characterization of exoplanets. Through techniques such as coronagraphy, spectroscopy, polarimetry or ultra-precise photometry, and physical effects related to basic properties of light, such as Doppler effect, polarization, gravitational amplification or coherence, I will show that astronomers have been able to indeed detect exoplanets and accumulate a mass of results, often unexpected, on this population.
The prospects which open at the turn of the first quarter of the 21th century will be presented with an overview of different projects in space or from the ground that are under consideration.

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Classification de thématique: Light as a messenger