The SOPHIE search for northern extrasolar planets-XIX. A system including a cold sub-Neptune potentially transiting a V = 6.5 star HD88986

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Résumé

Transiting planets with orbital periods longer than 40 d are extremely rare among the 5000+ planets discovered so far. The lack of discoveries of this population poses a challenge to research into planetary demographics, formation, and evolution. In this talk, we present the detection and characterization of HD88986b, a potentially transiting sub-Neptune, possessing the longest orbital period among known transiting small planets ($<$ 4 R$_{\oplus}$)$with a precise mass measurement ({σ_M/M}> 25

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