Ultrafast interference dynamics of polariton condensates

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Strong radiation-matter interaction between

**Excitons** confined in QWs & **Photons** confined in Fabry-Perot resonator

forms a **POLARITON**

They CONDENSE (BEC-like)

Properties:
- **Bosons**
  - $\Omega_R$ Rabi splitting
- **Exciton component:** **strong interactions**
- **Photonic component:** low mass ($10^{-5}m_e$)
- Optical access to the wavefunction (energy, density, spin and phase)

A CIVIS e-journey into Nano
15 December 2020
Experimental Details

REAL-SPACE

Spectrometer

CCD + Streak camera

Resolution of 8 ps

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Interference of two remote condensates
Thank you for your attention!!