

Service d'Astrophysique  
SÉMINAIRE

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Jeudi 18 septembre 11h00

CEA Saclay, Orme des Merisiers Bât 709, p 220

EXTREMELY MASSIVE YOUNG STELLAR CLUSTER

Danielle ALLOIN

SAP

At the inner Lindblad resonance in the barred spiral active galaxy NGC1365, we have discovered a number of new sources, compact and bright, which popup at mid-infrared and radio wavelengths, while they are invisible in the optical and near-infrared. Imaging and spectroscopy in the mid-infrared have been collected at the VLT with VISIR, and are used to unveil the nature of such sources. Using several age indicators (nebular emission lines, CO absorption bands in the near-infrared and radio spectral indices) and two modelling tools (STARBURST+CLOUDY and GRASIL), we find that these sources correspond to star clusters at an age of about 7 Myrs, extremely massive,  $10^7 M_{\odot}$ , and still embedded in their parent molecular material (large extinction values). This poses a number of questions which will be discussed : How did they form and how can they be so massive? How is it that, at this age, they are still like or a steady - state? What is their life - time?

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Le cafe sera servi 10 minutes avant

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