

# IFMP Seminar

**Date** Tuesday, November 15, 2022, at 14:50

**REC/C213**

**BigBlueButton:**

<https://selfservice.zih.tu-dresden.de/link.php?m=188421&p=5ea57030> (TUD)

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**Speaker** **Pau Jorba Cabré**

*Kiutra GmbH*

**Title** **Neutron depolarization measurements on  
HgCr<sub>2</sub>Se<sub>4</sub> under pressure**

**Abstract** To probe the dependence of the magnetic interactions on structure and atomic distances, the pressure dependent magnetic phase diagram of chromium spinel HgCr<sub>2</sub>Se<sub>4</sub> was investigated. The pressure was applied with purposely built diamond anvil cells. The magnetic state of the samples was probed by neutron depolarization, where a pair of focusing neutron supermirror guides was used, increasing the signal intensity by a factor 20. Given the strong competition between FM and AFM exchange in HgCr<sub>2</sub>Se<sub>4</sub> and parent compounds, the different ground states and physical phenomena observed are likely a consequence of complex coupling of structural distortions with the magnetic degrees of freedom.

Host: M. Rahn