



Contribution ID: 73

Type: **Poster**

## Spin-density Wave Order in the 2D Heavy Fermion System CePt<sub>2</sub>In<sub>7</sub>

*Friday, 16 September 2011 12:43 (2 minutes)*

The title compound is a recently discovered heavy fermion material where the spacing between Ce-In planes is drastically increased. Consequently, CePt<sub>2</sub>In<sub>7</sub> inherits a truly 2D electronic structure. It was recently discovered that CePt<sub>2</sub>In<sub>7</sub> is not only AF (TN=5.3 K) at ambient pressure but also becomes SC under pressure with a maximum transition temperature T<sub>c</sub>=2.1 K at P=3.12 GPa. At lower pressures an intriguing coexistence of the AF order and SC phase is found, and that with increasing pressure T<sub>c</sub> is increasing while TN decreases. The growth of the SC on the expense of the AF order suggests a crossover behavior of the Ce-4f electrons from localized to itinerant, similar to what is considered for the well known CeRhIn<sub>5</sub> compound. In the presented work the low-temperature microscopic magnetic properties of the quasi-2D heavy fermion compound, CePt<sub>2</sub>In<sub>7</sub> are investigated by using muSR. Clear evidence for the formation of a SDW order is presented. The magnetic order parameter fits well to a modified BSC gap-energy function in a strong-coupling scenario, possibly predicting the evolution of unconventional pairing in the pressure induced superconducting phase of this compound.

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Poster

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Multiple order parameter systems

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