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| **Summer Placement Project Proposal** |
| Supervisor(s): Dr Amalia Coldea  Nominees in case of absence: Dr Pascal Reiss  Duration of Placement: 4 July – 23 September 2016  Date restrictions: none |
| **Section 1: Project description:**  Project title: Transport properties of novel quantum materials  This project is to investigate the transport properties of novel quantum materials, such as iron-based superconductors and Dirac materials. The student will look at the role of impurities n determining their electronic behaviour in a series of new single crystals in preparation for high magnetic field experiments.  Resistivity measurements will be first performed as a function of temperatures down to 4K in order to screen suitable crystals and possibly also in high magnetic fields in Oxford. |
| **Section 2: Special requirements (skills and experience required):**  Required skills: good knowledge of condensed matter physics as well as electrical measurements.  Desired skills: Good organisation and patience in order to achieve low contact resistance on single crystals is highly desirable. |