Experimental report

25/01/2024

Proposal: 5-32-939 **Council:** 10/2022

Title: Field dependence of magnetic correlations in the 2D van der Waals magnet CrI3

Research area: Physics

This proposal is a continuation of 5-42-562

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Samples: CrI3

Instrument	Requested days	Allocated days	From	To
D33	3	3	16/06/2023	19/06/2023

Abstract:

Two-dimensional (2D) van der Waals (vdW) materials have become the subject of intense interest in condensed matter physics because of their rich diversity of optical, electronic and topologically non-trivial states arising in the monolayer limit. One typical vdW magnet is CrI3. It has recently been found that even in the bulk this material exhibits a much richer magnetic behaviour then previously assumed. We have used SANS to investigate the magnetic phase separation that occurs and in with this proposal we would like to finalise our study by investigating the field dependence for the distinct magnetic regimes.