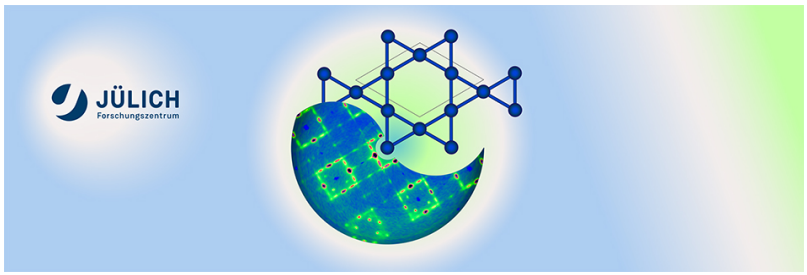

Beitrag ID: **79** Typ: **Poster**

Magnetic and Transport Properties of Mn3X (X = Ge, Sn) Weyl Semimetal

Dienstag, 7. Oktober 2025 18:03 (8 Minuten)

Topological quantum materials have attracted enormous attention since their discovery due to the observed anomalous transport properties, which originate from the non-zero Berry curvature. Mn3X compounds show interesting physical properties like Anomalous Hall Effect (AHE), Planar Hall effect (PHE), chiral magnetic effect, and non-local transport properties due to non-vanishing Berry flux emerging from the Weyl points [1]. It is widely believed that the magnetic structure and Weyl properties are intimately connected.
Nevertheless, the interpretation of negative longitudinal magnetoresistance (LMR), AHE, and PHE in Mn_3X compounds—particularly their connection to the chiral magnetic effect—remains a subject of ongoing debate. This presentation provides a concise overview of current insights into these phenomena, with a focus on experimental observations in Mn_3Sn and Mn_3Ge using neutron diffraction and complementary physical property measurement systems.

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Track Klassifizierung: Topological magnetism and magnons