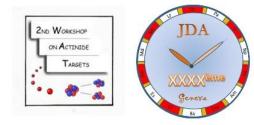
40èmes Journées des Actinides & 2nd Workshop on Actinide Targets



Contribution ID: 11 Type: oral

Quadrupolar interactions in UPd3 observed by inelastic neutron scattering

Monday, 29 March 2010 09:20 (20 minutes)

UPd3 is a rare example of a compound where the low temperature ordered phase involves the alignment of electric quadrupoles of the f-electrons on neighbouring ionic sites, rather than their magnetic dipole moments. We show inelastic neutron spectra of the dispersion of crystal field excitations in UPd3, which are consistent with RPA calculations assuming quadrupolar exchange interactions between the f-electrons on the hexagonal U4+ sites.

Primary author: Dr LE, Manh Duc (Helmholtz Zentrum Berlin für Materialen und Energie)

Co-authors: Prof. MCEWEN, Keith A (University College London); Dr BEWLEY, Robert I (ISIS Facility, STFC Rutherford Appleton Laboratory); Dr GUIDI, Tatiana (ISIS Facility, STFC Rutherford Appleton Laboratory)

Presenter: Dr LE, Manh Duc (Helmholtz Zentrum Berlin für Materialen und Energie)

Session Classification: Strongly Correlated Systems II