**Electronic Scattering on Frustrated Magnetic System:  
From Antiferromagnetism to the Kondo State in Co1/3NbS2 Under Pressure**

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Systems with triangular magnetic structure, where the magnetic moments are antiferromagnetically coupled, are interesting to study because of usually complex phase diagrams resulting from competing interactions. Co1/3NbS2 is a layered compound where Co ions are intercalated between NbS2 host layers forming a triangular lattice with antiferromagnetic ordering at 26 K. This is seen as a kink in the in plane electrical resistivity, while the electrical resistivity along the c-axes changes from positive to negative temperature coefficient below the transition temperature.

Hydrostatic pressure suppresses the magnetic ordering temperature to zero at 2 GPa.[1] A disappearance of magnetic ordering with pressure was recently confirmed with the elastic neutron scattering experiment.[2] The ordering mechanism is not yet fully understood, although those scenarios that include super-exchange and the RKKY interactions are natural candidates. At pressures above 3 GPa a minimum in the resistivity appears at 2 K followed by a logarithmic rise of the resistivity at lower temperature.[2] This indicates that the Kondo screening of Co magnetic moments leads to the formation of the Kondo spin liquid.

Our experimental measurements are complemented with the density functional theory calculations. The preliminary results suggest that the pressure driven competition between ferro- and antiferromagnetic ordering results in the disappearance of magnetic order.

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1. N. Barišić, *et al.*, Phys. Rev. B **84** (2011) 075157.

2. J. Jaćimović, *et al.*, in preparation