Magnetic ordering of Co$_{0.33}$NbS$_2$ under pressure

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2H-NbS$_2$ is a layered material that has a superconducting transition at 6 K and this transition is pressure independent.[1] Upon intercalation of Co atoms between NbS$_2$ metallic layers superconductivity is suppressed. Co atoms in Co$_{0.33}$NbS$_2$ form triangular lattice and at ambient pressure there is antiferromagnetic ordering at 26 K. Hydrostatic pressure suppresses the ordering to lower temperatures[2] and at $p = 2$ GPa magnetic ordering disappears. The ordering mechanism is not fully understood yet, although super-exchange and RKKY interactions are natural candidates. At pressures above 3 GPa minimum in resistivity followed by logarithmic rise of resistivity with lowering temperature appears. This indicates Kondo screening of magnetic moments on Co ions and Kondo spin liquid formation. No superconductivity was found between these two phases down to dilution temperatures.[3] Disappearance of magnetic ordering with pressure is confirmed with elastic neutron scattering experiment and phase diagram of Co$_{0.33}$NbS$_2$ is presented.