

Abstract Submitted  
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**Dynamics of a quasi-2D  $S=1/2$  spin-dimer Heisenberg antiferromagnet under hydrostatic pressure**<sup>1</sup> GERARD PERREN, JOHANNES MOELLER, NSM group, ETH Zurich, Switzerland, DAN HUEVONEN, National Institute of Chemical Physics and Biophysics, Tallinn, Estland, ANDREY PODLESNYAK, Oak Ridge National Laboratory, Oak Ridge, USA, ANDREY ZHELUDEV, NSM group, ETH Zurich, Switzerland — We present Inelastic Neutron Scattering measurements (INS) under hydrostatic pressure on a quasi-2D  $S = 1/2$  spin-dimer Heisenberg antiferromagnet. At high pressure, the observed dynamic structure factor  $S(\vec{Q}, \omega)$  features Goldstone modes, which is a key signature of long-range (magnetic) order. This is in good agreement with recent  $\mu$ SR findings and the presence of a pressure-induced quantum critical point at a moderate pressure [1]. Furthermore, we suggest an explanation for an apparent contradiction with a previous INS study performed under similar conditions [2].

[1] M. Thede *et al.*, *Phys. Rev. Lett.* **112**, 087204

[2] T. Hong *et al.*, *Phys. Rev. B* **82**, 184424

<sup>1</sup>SNSF

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