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Coherent dynamics of Landau-Levels in modulation doped GaAs quantum wells at high magnetic fields[1] CUNMING LIU, JAGANNATH PAUL, University of South Florida, JOHN RENO, CINT, Sandia National Laboratories, STEPHEN MCGILL, National High Magnetic Field Laboratory, DAVID HILTON, University of Alabama at Birmingham, DENIS KARAISKAJ, University of South Florida — By using two-dimensional Fourier transform spectroscopy, we investigate the dynamics of Landau-Levels formed in modulation doped GaAs/AlGaAs quantum wells of 18 nm thickness at high magnetic fields and low temperature. The measurements show interesting dephasing dynamics and linewidth dependency as a function of the magnetic field. The work at USF and UAB was supported by the National Science Foundation under grant number DMR-1409473. The work at NHMFL, FSU was supported by the National Science Foundation under grant numbers DMR-1157490 and DMR-1229217. This work was performed, in part, at the Center for Integrated Nanotechnologies, a U.S. Department of Energy, Office of Basic Energy Sciences user facility. Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under Contract No. DE-AC04-94AL85000.

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