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Measurement of energy gaps of integer and fractional quantum Hall states in suspended bilayer graphene devices YANMENG SHI, YONGJIN LEE, SHI CHE, ZIQI PI, TIM ESPIRITU, KEVIN MYHRO, PETR STEPANOV, NATHANIAL GILLGREEN, Univ of California - Riverside, DMITRY SMIRNOV, National High Magnetic Field Laboratory, FL, CHUN NING LAU, Univ of California - Riverside — Single- and few-layer graphene have emerged as interesting 2D systems for the investigation of novel integer and quantum Hall states. Recently clear fractional quantum Hall states in bi-layer graphene have been observed, though studies of the magnitudes of the gaps and their dependence on electric field are very limited. Here, using dual-gated suspended bilayer graphene device, we measure the Landau level gaps for the nu=1 and nu=2/3 states, and explore their dependence on electric field.

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