“Jupiter’s auroral regions exhibit vibrant mid-infrared emission of stratospheric CH4, C2H2, C2H4 and further hydrocarbons, which demonstrates that auroral processes are somehow modifying the thermal structure and composition of the neutral stratosphere. The exact mechanisms for these processes are however still not understood. In order to better understand how Jupiter’s stratosphere and magnetosphere are coupled, we present an analysis of high-resolution mid-infrared spectra measured by the TEXES spectrograph from December 2014 to May 2017. Results will be compared with Juno’s science data as well as Earth-based supporting observations for the Juno mission.”