

Investigating Chromospheric and Transition Region Morphological Structures Seen in IRIS and ALMA Observations

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We present observations of a plage region obtained simultaneously by IRIS and ALMA on April 22, 2017. IRIS spectra were obtained at a fast (26 s cadence) 16-step dense raster mode with slit positions intersecting both plage and quiet sun. The corresponding ALMA observations were taken at $\lambda=1.3$ mm (Band 6). The ALMA field of view (FOV) contained the area observed with the IRIS rasters, enabling us to perform a detailed analysis on the morphology and dynamics of fibril-like structures and transient brightenings in the chromosphere and low transition region. We analyze the spectra from IRIS and use brightness temperature maps derived from the ALMA observations as an estimate of the local temperature for the mid-to-high chromosphere. This work demonstrates the benefits of synergy between IRIS and ALMA.