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Distribution of Lightning and Moist Convection on Jupiter

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Prevalent lighting has been observed by multiple instruments on-board the Juno spacecraft currently in Jupiter orbit (Brown et al., 2018; Imai et al., 2018). Lightning is a proxy for moist convection in the atmosphere. Here we report on the distribution of lighting derived from Juno Microwave Radiometer observations through 18 orbits. To date, we have detected more than 1600 individual discharges. Lightning is found most frequently poleward of 45 degrees in both hemispheres, however the northern hemisphere has a higher lightning frequency. We find that lightning favors the belts over the zones. We will report on the lightning flash rate as a function of location on the planet. We will describe the meteorological context in which active convection is found using co-located images from the JunoCam instrument.