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Seasonal Investigation of Variance in Short Period Mesospheric Wave Structure at Low Latitudes. HEMA KARNAM, Department of Electrical and Computer Engineering, MIKE TAYLOR, Centre for Atmospheric and Space Sciences and Physics Department, JAKE GUNTHER — As a part of the Maui-MALT program, the Utah State University Mesospheric Temperature Mapper (MTM) has operated continuously at Maui-Hawaii since November 2001. Over 1000 nights of high quality data on Mesospheric temperatures using the near infra red OH and O₂ emission layers (centered at 87 and 94 km respectively) have been obtained over the past four years. In this study, we have analyzed data from 2003 (295 nights) to perform an initial investigation of the variance in OH and O₂ signal in the frequency band corresponding to short period (12 min- 1 hour) . This was done by spectrally filtering the data into selected bands (approximately 1 hour wide). The data have been used to study variability in wave content on a night-to-night as well as a seasonal basis. Short period waves were present throughout the year and indicate no obvious summer to winter difference in wave power. On sporadic nights throughout the year, both OH and O₂ show remarkable enhancements of wave power (factor of 10). Here, we present the results of this initial study.

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