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Magnetic turbulence associated with BBF observed by MMS

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Bursty bulk flows (BBFs), the transient high-speed flows in the magnetotail plasma sheet, play an important role in mass, momentum, and magnetic flux transport in the magnetotail plasma sheet. The plasma in the magnetotail plasma sheet can be stirred during a BBF. Prior studies indicate the BBF has a limited spatial scale and a short duration. Turbulence can appear near the boundary of BBF because of plasma shear flows. Turbulence is characterized by spectral scaling features, and the scaling feature is frequency dependent. The high-resolution (128 Hz) FluxGate Magnetometer of Magnetospheric Multiscale (MMS) mission provides an opportunity for studying the high-frequency scaling features of small-scale turbulence. In this study, we investigate the characteristics of small-scale BBF related magnetic turbulence observed by MMS. A comparison of scaling features of the high-frequency magnetic fluctuations during BBF and pre/post flow periods is also performed.