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## MESSENGER observations of short, large-amplitude magnetic structures (SLAMS) in the Mercury foreshock

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We have investigated approximately four years of MESSENGER data to identify short, large-amplitude magnetic structures (SLAMS) in the Mercury foreshock. Defining SLAMS as well-defined structures with a magnetic field strength of at least a factor of 3 higher than the background magnetic field, when MESSENGER is located in the solar wind, we find 435 SLAMS. The SLAMS are found either in regions of a general ultra-low frequency (ULF) wave field, at the boundary of such a ULF wave field, or isolated from the wave field. We investigate several properties of the SLAMS, such as temporal scale size, amplitude, and polarization. We find that SLAMS are mostly found during periods of low interplanetary magnetic field strength, indicating that they are more common for higher solar wind Alfvénic Mach number ( $M_A$ ). We use the Tao solar wind model to estimate solar wind parameters to verify that  $M_A$  is indeed larger during SLAMS observations than otherwise. Finally, we also investigate how SLAMS observations are related to foreshock geometry.