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Gamma-ray Bursts in Inhomogeneous Interstellar Media JACOB FIELDS, DAVID NEILSEN, ERIC HIRSCHMANN, Brigham Young University, MATTHEW ANDERSON, Indiana University Bloomington — Gamma-ray bursts (GRBs) are among the most luminous electromagnetic phenomena in the known universe, but there is still much unknown about them. In particular, long GRBs show a high degree of variability in measured light intensity. Using a relativistic hydrodynamics simulation, we test the possibility that some of this variation might be due to interactions between a GRB blast wave and a dense, circumstellar shell of matter, similar to what might be generated by an aging star expelling the outer layers of its atmosphere.

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