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Power and Pressure Fluctuations in Elastic Turbulence YONGGUN JUN, VICTOR STEINBERG, Weizmann Institute of Science — Power P fluctuations injected to the system and pressure p fluctuations in a swirling flow of polymer solutions in a wide range of polymer concentrations c were simultaneously measured in elastic turbulence regime. They show non-Gaussian statistics that strongly resemble statistical behavior of P and p in hydrodynamic turbulence. Together with this fact, weak dependence of the statistics of rescaled variables on c may suggest that there are universal mechanisms determining the intermittent statistics of P and p . We also show that the study of the statistics of p provides a way to study statistics of the elastic stresses in elastic turbulence otherwise currently unattainable.

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