Abstract Submitted for the DPP20 Meeting of The American Physical Society

Intermittent turbulence in Multi-Ion Plasmas in the LAPD¹ THOMAS LOOK, STEVE VINCENA, TROY CARTER, University of California, Los Angeles — Intermittent turbulence and associated density-enhancement events ("blobs") are observed in the edge of a wide range of magnetic confinement devices. In the edge of tokamak plasmas, convective transport associated with blob propagation can dominate particle transport. Most studies of intermittency and blob transport have been performed in single ion species plasmas even though fusion plasmas will need to be mixed ion (DT). We are carrying out a study of blobs in controlled mixtures of hydrogen and deuterium in the Large Plasma Device (LAPD). We will present data and analysis of the properties of blobs (size, velocity, amplitude, transport) as the D-H mix is varied.

¹Work supported by the US DOE and NSF, and performed at the Basic Plasma Science Facility, UCLA.

Thomas Look University of California, Los Angeles

Date submitted: 02 Jul 2020 Electronic form version 1.4