1131-18-189 **Kent Barton Vashaw*** (kvasha1@lsu.edu). *The Prime Spectra of 2-Categories.*

We describe a general theory of prime, completely prime, semiprime, and primitive ideals of (abelian) 2-categories and the positive parts of $\mathbb{Z}_+$-rings. On the one hand, these notions provide a bridge between prime spectra of noncommutative rings and total positivity. On the other hand, they lead to a natural set of integrality conditions under which a quotient algebra by a prime ideal is categorifiable. As an application of the general theory we obtain monoidal categorifications of the quantization of coordinate rings of Richardson varieties for arbitrary symmetric Kac-Moody algebras. This is a joint work with Milen Yakimov. (Received July 14, 2017)