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O'Neill Kingston* (oneillk@iastate.edu) and **Jonas Hartwig** (jth@iastate.edu). *Crystal Structure on Gelfand-Zeitlin-Zhelobenko Patterns*. Preliminary report.

In this talk, we begin by presenting the crystal structure of finite-dimensional irreducible representations of the Lie algebra \mathfrak{sl}_n in terms of Gelfand-Zeitlin patterns. We then define a crystal structure using the set of symplectic Zhelobenko patterns, parametrizing bases for finite-dimensional irreducible representations of \mathfrak{sp}_4 . This is obtained by a bijection with Kashiwara-Nakashima tableaux and the symplectic jeu de taquin of Sheats and Lecouvey. We offer some conjectures on the generalization of this structure to rank n . (Received July 15, 2019)