1135-16-1396 **Robert Won*** (wonrj@wfu.edu) and **Calum Spicer**. *Simple $\mathbb{Z}$-graded domains of Gelfand-Kirillov dimension 2.* Preliminary report.

Let k be an algebraically closed field of characteristic zero and let A_1 be the first Weyl algebra over k. Smith proved that the category of $\mathbb{Z}$-graded A_1-modules is equivalent to the category of quasicoherent sheaves on a quotient stack. Won extended this result to certain $\mathbb{Z}$-graded generalizations of the Weyl algebra. Here, we study simple $\mathbb{Z}$-graded domains A of Gelfand-Kirillov dimension 2. Bell and Rogalski classified these rings up to graded Morita equivalence. We show that the category of $\mathbb{Z}$-graded A-modules is equivalent to the category of quasicoherent sheaves on a quotient stack. (Received September 21, 2017)