1163-16-1086 **Peter D Goetz*** (peter.goetz@humboldt.edu) and **Andrew Conner**. *Global section rings and certain twisted tensor products.* Preliminary report.

Let A be a connected, $\mathbb{N}$-graded algebra over an algebraically closed field $\mathbb{K}$. Following the seminal work of M. Artin, J. Tate and M. Van den Bergh one can associate to A a certain inverse system of projective schemes: $\Gamma = \{\Gamma_n\}_{n\geq 1}$. The closed points of Γ_n are in one-to-one correspondence with the truncated point modules of A of length $n+1$. Let $B(\Gamma) = \mathbb{K} \oplus \bigoplus_{n\geq 1} H^0(\Gamma_n, \mathcal{O}_{\Gamma_n}(1))$. Then $B(\Gamma)$ can be given the structure of a graded $\mathbb{K}$-algebra. We call $B(\Gamma)$ *the global section ring associated to* Γ.

In this talk I will first discuss a theorem that characterizes, in terms of local cohomology, when $B(\Gamma)$ is generated in degree 1. In the second part, I will determine a presentation of the ring $B(\Gamma)$ in the case of a certain non-Artin-Schelter regular quadratic twisted tensor product of $\mathbb{K}[x, y]$ and $\mathbb{K}[z]$. Presentations of the global section rings of all quadratic twisted tensor products of $\mathbb{K}[x, y]$ and $\mathbb{K}[z]$ have recently been determined by the authors. (Received September 14, 2020)