1024-13-161   **Bruce Olberding*** (`olberdin@nmsu.edu`), Department of Mathematical Sciences, Las Cruces, NM. *Overrings of two-dimensional Noetherian domains representable by Noetherian spaces of valuation overrings.*

This talk is motivated by the problem of describing the integrally closed overrings of two-dimensional Noetherian domains. Let D be a Noetherian domain of Krull dimension 2, and let R be an integrally closed overring of D. Then every integrally closed overring H of D such that $H \subseteq R$ is of the form $H = (\bigcap_{V \in \Sigma} V) \cap R$, where Σ is a collection of valuation overrings of D. We describe the rings H such that Σ can be chosen to be a Noetherian subspace of the Zariski-Riemann space $X(D)$ of all valuation overrings of D. Finite character collections of valuation overrings of D are Noetherian subspaces of $X(D)$, and we obtain stronger structure theorems for H in this case where Σ has finite character. The techniques used are a mix of Noetherian and non-Noetherian commutative ring theory. (Received January 09, 2007)

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