1099-13-108 **Sean Sather-Wagstaff*** (sean.sather-wagstaff@ndsu.edu) and **Sandra Spiroff**. *On the structure of S_2-ifications of complete local rings.* Preliminary report.

Motivated by work of Hochster and Huneke, we investigate several constructions related to the S_2-ification T of a complete equidimensional local ring R: the canonical module, the top local cohomology module, topological spaces of the form $\operatorname{Spec}(R) - V(J)$, and the (finite simple) graph Γ_R with vertex set $\operatorname{Min}(R)$ defined by Hochster and Huneke. We generalize one of their results by showing, e.g., that the number of maximal ideals of T is equal to the number of connected components of Γ_R. We further investigate this graph by exhibiting a technique for showing that a given graph G can be realized as one of the form Γ_R. (Received February 02, 2014)