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A local Torelli theorem for log symplectic manifolds

A log symplectic manifold is a holomorphic symplectic manifold whose two-form is allowed to have logarithmic poles on a hypersurface. I will describe the structure of the moduli space of such manifolds near the locus of log symplectic manifolds whose divisor has normal crossings. Generically, the moduli space is smooth and parameterized by the periods of the two-form, in parallel with the classical local Torelli theorems for compact hyperkähler manifolds. However, when the periods satisfy certain integer-linear conditions, we find new irreducible components of the moduli space corresponding to structures where the normal crossings divisor is deformed to a more interesting singularity type (e.g. elliptic). This talk is based on joint work with Mykola Matviichuk and Travis Schedler, and is a prequel to Matviichuk's talk, which will explain how these techniques can be used to obtain nontrivial global classification results, using projective spaces as an example.