Spin and hyperelliptic structures on log twisted abelian differentials
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We study a partial compactification of the moduli of abelian differentials using the theory of stable log maps by Abramovich-Chen and Gross-Siebert. Such a partial compactification admits a proper forgetful morphism to the Hodge bundle. We show that the spin parities can be distinguished over the boundaries. In the hyperelliptic case, we provide a modified partial compactification to remember the hyperelliptic involution over the boundary.

This is a joint work with Dawei Chen.