1093-32-365   **Claudio Meneses-Torres*** (`claudio@math.sunysb.edu`), Mathematics Department, Stony Brook University, Stony Brook, NY 11794, and **Leon Takhtajan**. *WZNW action and Kähler potentials on the moduli space of parabolic bundles over $\mathbb{P}^1$ *preliminary report**. Preliminary report.

The moduli problem of stable parabolic bundles over the Riemann sphere can be interpreted from a complex analytic perspective. This allows us to introduce canonical complex coordinates on the moduli space (analogous to the Bers' coordinates on Teichmüller spaces) and a suitable analog of uniformization. The identification of the tangent space at a point with a certain space of automorphic forms leads to the introduction of the parabolic Narasimhan-Atiyah-Bott metric on the Moduli space, which is analogous to the Weil-Petersson metric.

Secondly, for each stable parabolic bundle, a regularized WZNW action functional is defined on the space of singular Hermitian metrics with prescribed asymptotics at a finite set of points in the sphere. We prove that these functionals evaluated at their extrema give rise to a function on the moduli space that is a Kähler potential for the parabolic Narasimhan-Atiyah-Bott metric over the restriction to a certain analytic open subset. (Received August 20, 2013)

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