ON AUGMENTED SCHOTTKY SPACES
AND AUTOMORPHIC FORMS, I

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0. Introduction

With respect to Teichmüller spaces, many beautiful results are obtained by Teichmüller, Ahlfors, Bers, Maskit, Kra, Earle, Abikoff, and others. For example, the boundary consists of b-groups, and the augmented Teichmüller space is defined by attaching a part of the boundary to the Teichmüller space. By using the augmented Teichmüller space, a compactification of the moduli space of Riemann surfaces is accomplished (cf. Abikoff [1], Bers [2]).

On the other hand Schottky spaces and Schottky groups are studied by Akaza, Bers, Chuckrow, Marden, Maskit, Zarrow, and Sato, but results about this direction are inferior in comparison with those about Teichmüller spaces. For example, the augmented Schottky space corresponding to the augmented Teichmüller space has not yet been defined in the "natural" way. However it is reasonable that Schottky spaces have properties similar to Teichmüller spaces and have rather useful properties in some aspects. With respect to this, Bers [3] introduced the augmented Schottky space in his sense, and studied automorphic forms on the fiber spaces over the space. The augmented Schottky space in the sense of Bers means the space which consists of all Schottky groups of genus $g \geq 2$ and all extended Schottky groups representing Riemann surfaces with only non-dividing nodes. Each point in the space are represented by the so called (λ, p, q)-method. However it seems that it is difficult to represent extended Schottky groups corresponding Riemann surfaces with dividing nodes by this method. If we do not attach such extended Schottky groups to the Schottky space, we can not define the augmented Schottky space corresponding to the augmented Teichmüller space. Then it gives rise to a problem whether or not the coordinates

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