Automorphism group of the moduli space of parabolic bundles over a curve

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Abstract-

We find the automorphism group of the moduli space of parabolic bundles on a smooth curve (with fixed determinant and system of weights). This group is generated by: automorphisms of the marked curve, tensoring with a line bundle, taking the dual, and Hecke transforms (using the filtrations given by the parabolic structure). A Torelli theorem for parabolic bundles with arbitrary rank and generic weights is also obtained. These results are extended to the classification of birational equivalences which are defined over "big" open subsets (3-birational maps, i.e. birational maps giving an isomorphism between open subsets with complement of codimension at least 3).
Finally, an analysis of the stability chambers for the parabolic weights is performed in order to determine precisely when two moduli spaces of parabolic vector bundles with different parameters (curve, rank, determinant and weights) can be isomorphic.

Index Terms- Parabolic vector bundle; Moduli space; Automorphism group; Extended Torelli theorem; Birational geometry; Stability chambers

Citation: