962-30-1012 **Yohei Komori** (komori@scisv.sci.osaka-cu.ac.jp), 3-3-138, Sugimoto, Sumiyoshi-ku, 558-8585 Osaka, Osaka, Japan, **Toshiyuki Sugawa** (sugawa@kusm.kyoto-u.ac.jp), Yoshida-Honmachi, Sakyo-ku, 606-8502 Kyoto, Kyoto, Japan, **Masaaki Wada** (wada@ics.nara-wu.ac.jp), Kita-Uoya Nishimachi, 630-8506 Nara, Nara, Japan, and **Yasushi Yamashita*** (yamasita@ics.nara-wu.ac.jp), Kita-Uoya Nishimachi, 630-8506 Nara, Nara, Japan. *An algorithm deciding the discreteness of a given Mobius group generated by two loxodromic elements with parabolic commutator.*

Let $F_2 =< a, b >$ be a free group with two generators a, b, and $\rho : F_2 \to \mathrm{PSL}(2, C)$ a strictly type preserving representation, i.e. $\mathrm{tr}[\rho(a), \rho(b)] = -2$. We denote by X the set of all such ρ up to conjugacy. If the image $\rho(F_2) \subset \mathrm{PSL}(2, C)$ is discrete, it is called a *punctured torus group* and studied by many people. But, in general, it is very difficult to decide the discreteness of a given subgroup of $\mathrm{PSL}(2, C)$. Our result is that "there is an effective method so that we can show the discreteness or indiscreteness of the group $\rho(F_2)$ for almost all $\rho \in X$. We have a computer program of this algorithm and produced some pictures of discrete loci for several slices of X. One of our products is the pictures of Bers embedding of the Teichmüller spaces for once punctured tori. We can expect to observe a self-similarity of the boundary of a Bers slice by our computation. There are some previous works for linear slices of X. The reader can compare the pictures of McMullen, Wright and ours at McMullen's Web site(http://abel.math.harvard.edu/ ctm/gallery.html) (Received October 01, 2000)