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FAN TRIANGULATIONS OF A HYPERBOLIC PLANE OF POSITIVE CURVATURE

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We study the families $(\mathscr{F}_\lambda)$ of normal partitions of a 3-(1)-contour F of a hyperbolic plane $\widehat{H}$ of positive curvature into simple 4-contours whose hyperbolic diagonal lines are parallel to the base of F. A 3-(1)-contour with a given partition from a family $(\mathscr{F}_\lambda)$ (or some its normal subpartition) is called a fan. We construct fan partitions $\mathscr{P}_{\mathtt{e}}$, $\mathscr{P}_{\mathtt{h}}$, and $\mathscr{P}_{\mathtt{p}}$ of $\widehat{H}$ whose symmetry groups are generated by a shift along an elliptic (respectively, hyperbolic and parabolic) straight line. It is proved that the partitions $\mathscr{P}_{\mathtt{h}}$ and $\mathscr{P}_{\mathtt{p}}$ are normal. The partitions $\mathscr{P}_{\mathtt{h}}$ and $\mathscr{P}_{\mathtt{p}}$ whose cells are trihedrals present examples of the first triangulations of $\widehat{H}$.

Key words and phrases: hyperbolic plane $\widehat{H}$ of positive curvature, 3-(1)-contour, simple 4-contour, fan of $\widehat{H}$, normal partition of $\widehat{H}$, fan triangulation of $\widehat{H}$.

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