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Title: *Polar curves in noneuclidean geometry*

Abstract: Pairs of polar convex curves play an important role as boundaries of polar convex regions in the classical plane euclidean convex geometry (f.e. see Blaschke's inequality). Thus it is quite natural to define also appropriately such pairs in the context of plane noneuclidean geometry and to investigate them in detail.

We have to mention that already H.URBAN 1994 has introduced a purely local differential geometric theory of polar (dual) curves for the seven Cayley/Klein planes in the sense of O.GIERING. Our considerations supplement this theory in the special case of spherical convex resp. horocyclic convex curves in spherical resp. hyperbolic geometry. Hereby we may successfully apply the notion of a support function, formerly defined by us, in these geometries in the same manner, as we have done so for the investigation of curves of constant width. Now simplified facts in comparison to the euclidean case become to be evident, but also the necessity to add the pseudoriemannian complement of Klein's model of the hyperbolic plane to our considerations.

Finally the representation of polar curves by the support function allows a simple visualization of themselves as well as of their evolutes which will be verified by some examples.