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A family of blocking semiovals containing conics. Preliminary report.

A blocking semioval is a set of points in a projective plane that is both a blocking set (every line meets the set, but the set contains no line) and a semioval (there is a unique tangent line at each point). A family of blocking semiovals in $PG(2, q^2)$ will be constructed where each blocking semioval consists of the points of a conic together with points from a related unital which are interior to the conic. An emphasis will be placed on the associated polarities, which commute. The potential for constructing blocking semiovals in non-Desarguesian planes using similar techniques will also be discussed. (Received September 14, 2010)