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Title: Additive unit representations in rings over global fields – A survey

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We give an overview on recent results concerning additive unit representations. Furthermore the solutions of some open questions are included. We focus on rings of integers in number fields and in function fields of one variable over perfect fields. The central problem is whether and how certain rings are (additively) generated by their units. In the final section we deal with matrix rings over quaternions and over Dedekind domains. Our point of view is number-theoretic whereas we do not discuss the general algebraic background.

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