

THE MINIMAL COMPLETE CLASS FOR THE VECTOR OF VARIANCE  
COMPONENTS

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*Abstract:* The main result of this paper gives the minimal complete class for invariant quadratic estimation of variance components in random effects models. It is shown that the problem of invariant quadratic estimation reduces to the linear estimation in a linear model for which the class of unique linear Bayes estimators and of their limits is minimal. This result extends the previous work of Klonecki and Zontek [1], where the minimal complete class has been established only for balanced random effects models.

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**Key words and phrases:** -

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