

1086-VI-1906      **K Kaphle\*** (kaflek@gmail.com), **F H Ruymgaart** and **G Gaines**. *A note on testing problem of equality of two covariance operators*. Preliminary report.

Eigenvalues of covariance operators play an important role in analysis of functional data. There are various methods of testing equality of two covariance operators when the eigenvalues are simple. These methods needs to be generalized for covariance operators with multiple eigenvalues. We have derived probabilistic results for random perturbations of a covariance operator with eigenvalues of unknown multiplicities. Statistical applications of these results relating to the testing problem will be discussed. (Received September 24, 2012)