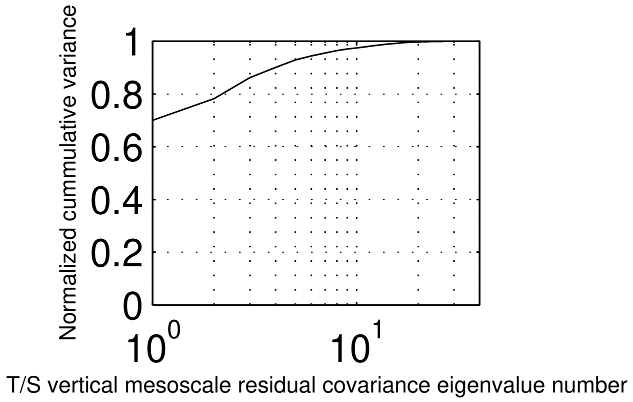
(a)



(b)

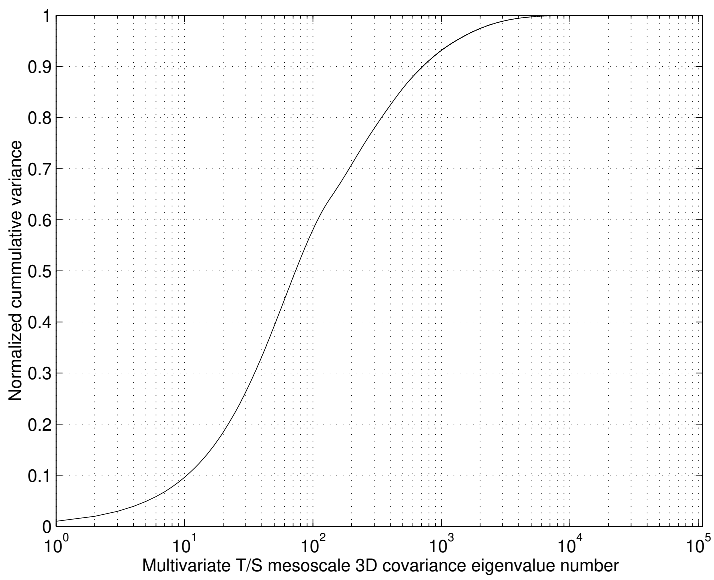


Fig. 12.

(a): Normalized cumulative variance of the mesoscale residuals of the tracer profiles, as a function of the eigenvalue number. As for Fig. 6, $\mathbf{C}^z_{\mathrm{trc}}$ is $[40 \times 40]$. The first T, S vertical EOF explains 70% of the mesoscale variance, the second 8%, the third 7% and the fourth less than 4%.

(b): Normalized cumulative variance of the mesoscale error covariance of the 3D tracer fields, $\mathbf{B}_{\mathrm{trc}}$ (eq. A13), as a function of the eigenvalue number. As for Fig. 7, $\mathbf{B}_{\mathrm{trc}}$ is $[108120 \times 108120]$. The dominant 100 eigenvectors explain 58% of the variance, the dominant 250, 75%, the dominant 500, 86%, and dominant 750, 90.5%.