

$$1)C_k=\frac{1}{N_k}\sum_{1=1}^{N_k}X_k^iX_k^{iT}$$

$$2)C_{1\omega}=\boldsymbol{\lambda}C_{2\omega}$$

$$3)C_1=\frac{1}{N_1}\sum_{i=1}^{N_1}X_{1_i}X_{1_i}^TC_2=\frac{1}{N_2}\sum_{1=1}^{N_2}X_2X_2^T$$

$$4)\; C_{\text{whitened}}{=}C^{-1/2}$$

$$5)C_{1\omega}=\boldsymbol{\lambda}C_{2\omega}$$

$$6)Z=W^TX$$

$$7)var(Z_i)=\frac{1}{T}\sum_{t=1}^TZ_i[t]^2$$

$$8)F_i=\log(\frac{var(z_i)}{\sum var(z)})$$