

Now

$$\begin{pmatrix} C_{tt} & C_{ts} \\ C_{st} & C_{ss} \end{pmatrix}$$

$$= \begin{pmatrix} C_{tt}^{-1/2} & 0 \\ 0 & C_{ss}^{-1/2} \end{pmatrix} \begin{pmatrix} \mathbf{I} & C_{tt}^{-1/2} C_{ts} C_{ss}^{-1/2} \\ C_{tt}^{-1/2} C_{ts} C_{ss}^{-1/2} & \mathbf{I} \end{pmatrix}$$

$$\times \begin{pmatrix} C_{tt}^{-1/2} & 0 \\ 0 & C_{ss}^{-1/2} \end{pmatrix}$$

so can just consider processes. f  
s.t.  $\text{cov} f = \mathbf{I}$  !

and have  $\begin{pmatrix} \mathbf{I} & \rho_{ts} \\ \rho_{ts} & \mathbf{I} \end{pmatrix}$  (as  $C_{ts} = C_{st}$ !)

which has  $\det = \det(\mathbf{I} - \rho_{ts}^2)$

as  $\mathbf{I}, \rho_{ts}$  commute!