Kernel-phase

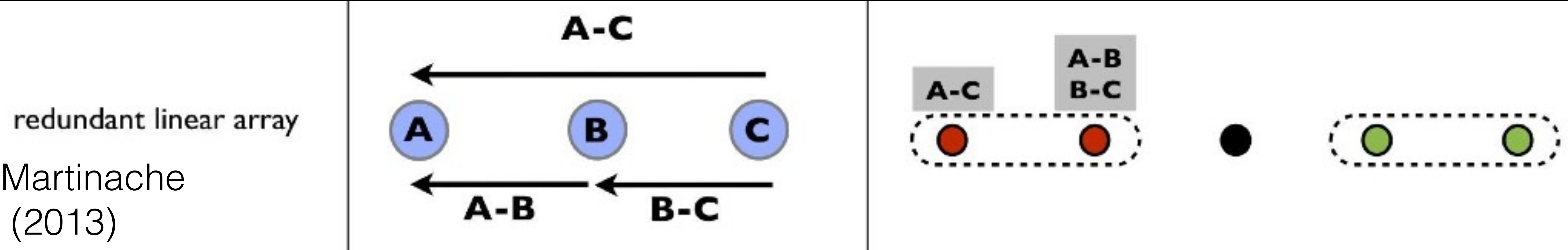
$$\boldsymbol{\Phi} = \boldsymbol{\Phi}_0 + \mathbf{R}^{-1} \bullet \mathbf{A} \bullet \boldsymbol{\varphi} \qquad \mathbf{R}^{-1} = \begin{bmatrix} 1 & 0 \\ 0 & \tfrac{1}{2} \end{bmatrix} \qquad \mathbf{A} = \begin{bmatrix} 1 & 0 & -1 \\ 1 & 0 & -1 \end{bmatrix}$$

$\mathbf{K} \bullet \mathbf{A} = 0$ is again trivial: $\qquad \mathbf{K} = \begin{bmatrix} 1 & -1 \end{bmatrix}$

Multiplying by **R** and **K** we have:

$$\mathbf{K} \bullet \mathbf{R} \bullet \boldsymbol{\Phi} = \mathbf{K} \bullet \mathbf{R} \bullet \boldsymbol{\Phi}_0$$

In this case, we have only 1 kernel-phase



Martinache (2013)

Kernel-phases are phase-like observables which are independent of errors introduced by the telescope

They are calculated using a transfer matrix based on the geometry of the apertures