

$$g = \frac{a}{c} \Big| \frac{b}{d} \in {}^{r:r} \mathbb{C}_{r:r}^U$$

$$cg^{-1} = \frac{\alpha}{\gamma} \Big| \frac{\beta}{\delta} \in {}^{2r} \mathbb{R}_{2r}^\Omega$$

$$\vartheta = \xi + \eta i \in \mathbb{S}^{2r-1}$$

$$\vartheta \underline{cg^{-1}} = \xi \Big| \eta \frac{\alpha}{\gamma} \Big| \frac{\beta}{\delta} = \underline{\xi\alpha + \eta\gamma} \Big| \underline{\xi\beta + \eta\delta} \in \mathbb{C}_r \Rightarrow \overline{\vartheta \underline{cg^{-1}}} \left(\vartheta \underline{cg^{-1}} \right) \in S_1^{\mathbb{C}}$$

$$\overset{t}{\vartheta} \vartheta \in S_1 \Rightarrow \overset{t}{\vartheta} \vartheta \tilde{\times} g \in S_1$$

collinear