

$S = 0.74$, $\text{Tr}[\rho^2] = 0.54$: $\rho_{00} = 0.05$, $\text{Re}[\rho_{10}] = 0.02$, $\text{Im}[\rho_{10}] = 0.06$, $\rho_{1-1} = -0.18$

