

**Figure 2**. 1: Mean excitation  $\langle n \rangle$  of the cotangent state as a function of the population of the second excited state  $|\alpha|^2$ . 2: Fluctuations in the mean excitations  $\sigma = (\langle n^2 \rangle - \langle n \rangle^2)/\langle n \rangle$ , showing sub-Poissonian statistics when  $\sigma < 1$ . Here,  $N_u = 3$ ,  $|\gamma|^2 = 0.65$ .