



**Figure 4.** The OH rotational distributions for reactions initiated in the HCl ( $v = 2, j = 1$ ) state. Panels (a) and (b) compare the QCT and experimental distributions for OH ( $v' = 0$ ) and ( $v' = 1$ ), respectively. The QCT distributions are compiled from propagating a total of 270 000 trajectories, weighted by the collision energy distribution function of Fig. 3(a) and normalized as described in text. The experimental results are taken from Ref. [21].