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Figure 3 consists of two panels. The top panel is a line plot showing the probability distribution $P_{\omega}^{(R)}(q)$ versus $\omega_q^{(R)}$. The x-axis ranges from -90 to 90, and the y-axis ranges from 0 to 0.06. Four curves are plotted: blue, orange, green, and red, corresponding to different values of α . The curves show peaks at approximately $\omega_q^{(R)} = -70, -10, 30, 60$. The bottom panel is a histogram plot showing the distribution of $S_{\omega}^{(R)}(s_R)$ versus $S_{\omega}^{(R)}(s_R)$. The x-axis ranges from 0 to 70, and the y-axis (Counts) ranges from 0 to 1500. Four histograms are plotted: blue, orange, green, and red, corresponding to the same values of α . The blue histogram is centered around 48, while the orange, green, and red histograms are centered around 5.