

$$\sum_{i=1}^N \frac{P(H_S|x_{GW}, x_{\nu,i})}{P(H_0|x_{GW}, x_{\nu,i}) + P(H_C|x_{GW}, x_{\nu,i})} + \sum_{i,j} \frac{P(H_S|x_{GW}, x_{\nu,i}, x_{\nu,j})}{P(H_0|x_{GW}, x_{\nu,i}, x_{\nu,j}) + P(H_C|x_{GW}, x_{\nu,i}, x_{\nu,j})} + \dots$$