TOP $\frac{|g\rangle+|e\rangle}{\sqrt{2}}$ LABEL1: $\frac{|g\rangle - |e\rangle}{\sqrt{2}}$ LABEL2: $\frac{|g\rangle+i|e\rangle}{\sqrt{2}}$ LABEL3: $\frac{|g\rangle - i|e\rangle}{\sqrt{2}}$ LABEL4: LABEL5: $|g\rangle$ LABEL6: $|e\rangle$ BOTTOM