

$$a_{lm}^E = \frac{1}{2} \left[+2\tilde{X}_{lm} + -2\tilde{X}_{lm} \right] ; a_{lm}^B = -\frac{1}{2i} \left[+2\tilde{X}_{lm} - -2\tilde{X}_{lm} \right]$$