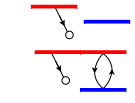
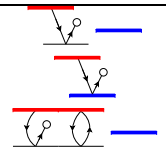
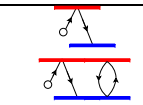
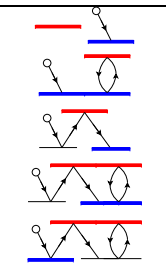
$\langle A-1\|a_i\|A\rangle$		$l^i r_0$	$\langle i\|\|l^{J_{A-1}}\|\|\rangle\, r_0$
		$l_a^{ij} r_j^a$	$\sum_{(aj)} \delta_{J_{aj}J_A}\delta_{M_{aj}M_A}\, \langle i\|\|l^{A-1}\|\|(aj^{-1})\rangle\, \langle(aj^{-1})\|\|r^A\|\|\rangle$
$\langle A-1\|a_a\|A\rangle$		$l^i t_i^a r_0$	$\sum_i \delta_{jj_i}\delta_{mm_i}\, \langle a\|\|t^0\|\|i\rangle\, \langle i\|\|l^{J_{A-1}}\|\|\rangle\, r_0$
		$l^i r_i^a$	$\sum_i \delta_{J_{A-1}j_i}\delta_{M_{A-1}m_i}\, \langle a\|\|r^{J_A}\|\|i\rangle\, \langle i\|\|l^{J_{A-1}}\|\|\rangle$
		$\frac{1}{2} l_b^{ij} t_{ij}^{ab} r_0$	$\frac{1}{2}\sum_{J_{ij}} \sum_{((ij)b)} \delta_{J_{ijb}j}\delta_{M_{ijb}m}\, \langle a\|\|t^0\|\|((ij)b^{-1})\rangle\, \langle((ij)b^{-1})\|\|l^{J_{A-1}}\|\|\rangle\, r_0$
		$l_b^{ij} t_i^a r_j^b$	$\sum_{(bj)} \delta_{J_A J_{bj}}\delta_{M_A M_{bj}} \sum_i \delta_{jj_i}\delta_{mm_i}\, \langle a\|\|t^0\|\|i\rangle\, \langle i\|l^{J_{A-1}}\|(bj^{-1})\rangle\, \langle(bj^{-1})\|\|r^{J_A}\|\|\rangle$
		$\frac{1}{2} l_b^{ij} r_{ij}^{ab}$	$\sum_{J_{ij}} \sum_{((ij)b)} \delta_{J_{A-1}J_{ijb}}\delta_{M_{A-1}M_{ijb}}\, \langle a\|\|r^A\|\|((ij)b^{-1})\rangle\, \langle((ij)b^{-1})\|\|l^{A-1}\|\|\rangle$
$\langle A\|a_a^\dagger\|A-1\rangle$		$l_a^i r_i$	$\sum_i \delta_{j_i J_{A-1}}\delta_{-m_i M_{A-1}}\, \langle\|\|r^{J_{A-1}}\|\|i\rangle\, \langle i\|\|l^{J_A}\|\|a\rangle$
		$\frac{1}{2} l_{ab}^{ij} r_{ij}^b$	$\frac{1}{2}\sum_{J_{ij}} \sum_{((ij)b)} \delta_{J_{ijb}J_{A-1}}\delta_{-M_{ijb}M_{A-1}}\, \langle\|\|r^{J_{A-1}}\|\|((ij)b^{-1})\rangle\, \langle((ij)b^{-1})\|\|l^{J_A}\|\|a\rangle$
$\langle A\|a_i^\dagger\|A-1\rangle$		$l^0 r_i$	$\delta_{jJ_{A-1}}\delta_{-mM_{A-1}} l^0\, \langle\|\|r^{J_{A-1}}\|\|i\rangle$
		$l_a^j r_{ij}^a$	$\sum_{(aj)} \delta_{J_{aj}J_A}\delta_{-M_{aj}M_A}\, \langle\|\|l^{J_A}\|\|(aj^{-1})\rangle\, \langle(aj^{-1})\|\|r^{J_{A-1}}\|\|i\rangle$
		$-l_a^j t_i^a r_j$	$-\sum_j \delta_{j_j J_{A-1}}\delta_{-m_j M_{A-1}} \sum_a \delta_{jj_a}\delta_{mm_a}\, \langle\|\|r^{J_{A-1}}\|\|j\rangle\, \langle j\|\|l^{J_A}\|\|a\rangle\, \langle a\|\|t^0\|\|i\rangle$
		$-\frac{1}{2} l_{ab}^{jk} t_i^a r_{jk}^b$	$-\frac{1}{2}\sum_{J_{jk}} \sum_{((jk)b)} \delta_{J_{A-1}J_{jkb}}\delta_{-M_{A-1}M_{jkb}} \sum_a \delta_{jj_a}\delta_{mm_a}\, \langle\|\|r^{J_{A-1}}\|\|((jk)b^{-1})\rangle\, \langle((jk)b^{-1})\|\|l^{J_A}\|\|a\rangle\, \langle a\|\|t^0\|\|i\rangle$
		$-\frac{1}{2} l_{ab}^{jk} t_{ik}^{ab} r_j$	$-\frac{1}{2}\sum_{J_{ab}} \sum_{((ab)k)} \delta_{jJ_{abk}}\delta_{mM_{abk}} \sum_j \delta_{j_j J_{A-1}}\delta_{-m_j M_{A-1}}\, \langle\|\|r^{J_{A-1}}\|\|j\rangle\, \langle j\|\|l^{J_A}\|\|((ab)k^{-1})\rangle\, \langle((ab)k^{-1})\|\|t^0\|\|i\rangle$

Table 1: Diagram representation of the overlap expressions. In the coupled expressions we have excluded constant angular momentum factors in the interest of brevity.