	$\frac{h^{2}(A_{a1z}+A_{a2z}+A_{b1z}+A_{b2z})}{4}$	0	0	0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$		0		$\frac{\sqrt{2}h^2(-A_{a2x}+A_{a2y}+A_{b2x}-A_{b2y})}{8}$		0	0	0	0	0 ]
	0	$\frac{\hbar^2(A_{a1z}-A_{a2z}+A_{b1z}-A_{b2z})}{4}$	0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$	0		$\frac{\sqrt{2}h^2(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y})}{8}$		0	0	$\frac{\sqrt{2}\hbar^2\left(-A_{a1x}+A_{a1y}+A_{b1x}-A_{b1y}\right)}{8}$	0	0	0	0
	0	0	$\frac{h^2(-A_{a1z}+A_{a2z}-A_{b1z}+A_{b2z})}{4}$	0	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y})}{8}$	0		$\frac{\sqrt{2}h^2(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$	$\frac{\sqrt{2}h^{2}\left(-A_{a1x}-A_{a1y}+A_{b1x}+A_{b1y}\right)}{8}$	0	0	$\frac{\sqrt{2}h^{2}\left(-A_{a2x}+A_{a2y}+A_{b2x}-A_{b2y}\right)}{8}$	0	0	0	0
	0	0	0	$-\frac{h^2(A_{a1x}+A_{a2x}+A_{b1x}+A_{b2x})}{4}$	0	$\frac{\sqrt{2}h^2\left(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y}\right)}{8}$	$\frac{\sqrt{2}h^2(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$	0	0	$\frac{\sqrt{2}h^{2}(-A_{a1x}-A_{a1y}+A_{b1x}+A_{b1y})}{8}$	$\frac{\sqrt{2}h^2(-A_{a2x}-A_{a2y}+A_{b2x}+A_{b2y})}{8}$	0	0	0	0	0
	0	$\frac{\sqrt{2}h^{2}(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$	$\frac{\sqrt{2}h^2(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y})}{8}$	0	0	0	0	0	$\frac{h^2(A_{a1x}+A_{a2x}-A_{b1x}-A_{b2x})}{4}$	0	0	0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$	$\frac{\sqrt{2}h^2(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y})}{8}$	0
	$\frac{\sqrt{2}h^{2}(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$	0	0	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y})}{8}$	0	0	0	0	0	$\frac{h^2(A_{a1x}-A_{a2x}-A_{b1x}+A_{b2x})}{4}$	0	0	$\frac{\sqrt{2}h^2(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$	0	0	$\frac{\sqrt{2}h^2(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y})}{8}$
	$\frac{\sqrt{2}h^{2}(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y})}{8}$	0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$	0	0	0	0	0	0	$\frac{\hbar^2(-A_{a1s}+A_{a2s}+A_{b1s}-A_{b2s})}{4}$	0	$\frac{\sqrt{2}h^2(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y})}{8}$	0	0	$\frac{\sqrt{2}h^2(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$
77	0	$\frac{\sqrt{2}h^{2}(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y})}{8}$		0	0	0	0	0	0	0	0	$\frac{h^2(-A_{a1z}-A_{a2z}+A_{b1z}+A_{b2z})}{4}$	0	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y})}{8}$		0
THF coupled -	0	$\frac{\sqrt{2}h^{2}\left(-A_{a2x}-A_{a2y}+A_{b2x}+A_{b2y}\right)}{8}$		0	$\frac{h^2(A_{a1z}+A_{a2z}-A_{b1z}-A_{b2z})}{4}$	0	0	0	0	0	0	0	0	$\frac{\sqrt{2}h^2(A_{a2x}-A_{a2y}-A_{b2x}+A_{b2y})}{8}$	$\frac{\sqrt{2}h^{2}\left(A_{a1x}-A_{a1y}-A_{b1x}+A_{b1y}\right)}{8}$	0
	$\frac{\sqrt{2}h^{2}\left(-A_{a2x}+A_{a2y}+A_{b2x}-A_{b2y}\right)}{8}$	0		$\frac{\sqrt{2}h^{2}(-A_{a1x}-A_{a1y}+A_{b1x}+A_{b1y})}{8}$	0	$\frac{h^2(A_{a1z}-A_{a2z}-A_{b1z}+A_{b2z})}{4}$	0	0	0	0	0	0	$\frac{\sqrt{2}h^{2}\left(A_{a2x}+A_{a2y}-A_{b2x}-A_{b2y}\right)}{8}$	0	0	$\frac{\sqrt{2}h^2\left(A_{a1x}-A_{a1y}-A_{b1x}+A_{b1y}\right)}{8}$
	$\frac{\sqrt{2}h^{2}\left(-A_{a1x}+A_{a1y}^{5}+A_{b1x}-A_{b1y}\right)}{8}$	0		$\frac{\sqrt{2}h^{2}(-A_{a2x}-A_{a2y}^{5}+A_{b2x}+A_{b2y})}{8}$	0	0	$\frac{\hbar^2(-A_{a1s}+A_{a2s}+A_{b1s}-A_{b2s})}{4}$	0	0	0	0	0	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}-A_{b1x}-A_{b1y})}{8}$	0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}-A_{a2y}-A_{b2x}+A_{b2y})}{8}$
	0	$\frac{\sqrt{2}h^{2}\left(-A_{a1x}+A_{a1y}+A_{b1x}-A_{b1y}\right)}{8}$	$\frac{\sqrt{2}h^{2}\left(-A_{a2x}+A_{a2y}+A_{b2x}-A_{b2y}\right)}{8}$	0	0	0	0	$\frac{h^2(-A_{a1z}-A_{a2z}+A_{b1z}+A_{b2z})}{4}$	0	0	0	0	0	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}-A_{b1x}-A_{b1y})}{8}$	$\frac{\sqrt{2}h^{2}\left(A_{a2x}+A_{a2y}-A_{b2x}-A_{b2y}\right)}{8}$	0
	0	0	0	0		$\frac{\sqrt{2}h^{2}(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$		0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}+A_{a2y}-A_{b2x}-A_{b2y})}{8}$	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}-A_{b1x}-A_{b1y})}{8}$	0	$-\frac{\hbar^{2}(A_{a1z}+A_{a2z}+A_{b1z}+A_{b2z})}{4}$	0	0	0
	0	0	0	0	$\frac{\sqrt{2}h^2(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$	0		$\frac{\sqrt{2}h^2(A_{a1x}+A_{a1y}+A_{b1x}+A_{b1y})}{8}$		0	0	$\frac{\sqrt{2}h^{2}(A_{a1x}+A_{a1y}-A_{b1x}-A_{b1y})}{8}$	0	$\frac{h^{2}(-A_{a1z}+A_{a2z}-A_{b1z}+A_{b2z})}{4}$	0	0
	0	0	0	0	$\frac{\sqrt{2}h^2(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y})}{8}$	0		$\frac{\sqrt{2}h^2(A_{a2x}+A_{a2y}+A_{b2x}+A_{b2y})}{8}$	$\frac{\sqrt{2}h^2(A_{a1x}-A_{a1y}-A_{b1x}+A_{b1y})}{8}$	0	0	$\frac{\sqrt{2}h^{2}(A_{a2x}+A_{a2y}-A_{b2x}-A_{b2y})}{8}$	0	0	$\frac{h^2(A_{a1s}-A_{a2s}+A_{b1s}-A_{b2s})}{4}$	0
	0	0	0	0	0	$\frac{\sqrt{2}h^2\left(A_{a1x}-A_{a1y}+A_{b1x}-A_{b1y}\right)}{8}$	$\frac{\sqrt{2}h^{2}(A_{a2x}-A_{a2y}+A_{b2x}-A_{b2y})}{8}$	0	0	$\frac{\sqrt{2}h^{2}(A_{a1x}-A_{a1y}-A_{b1x}+A_{b1y})}{8}$	$\frac{\sqrt{2}h^{2}(A_{a2x}-A_{a2y}-A_{b2x}+A_{b2y})}{8}$	0	0	0	0	$\frac{h^2(A_{a1x}+A_{a2x}+A_{b1x}+A_{b2x})}{4}$

$$\begin{array}{c} \left|1,1\right> \otimes \left|+\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,0\right> \otimes \left|+\frac{1}{2},+\frac{1}{2}\right> \\ \left|0,0\right> \otimes \left|+\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,-1\right> \otimes \left|+\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,-1\right> \otimes \left|+\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,0\right> \otimes \left|+\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,0\right> \otimes \left|+\frac{1}{2},-\frac{1}{2}\right> \\ \left|0,0\right> \otimes \left|+\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,-1\right> \otimes \left|+\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,1\right> \otimes \left|-\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,0\right> \otimes \left|-\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,0\right> \otimes \left|-\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,1\right> \otimes \left|-\frac{1}{2},+\frac{1}{2}\right> \\ \left|1,1\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,0\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \\ \left|0,0\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \\ \left|0,0\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,-1\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,-1\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \\ \left|1,-1\right> \otimes \left|-\frac{1}{2},-\frac{1}{2}\right> \end{array}$$

	$h^{2}(Aa_{1}+Aa_{2}+Ab_{1}+Ab_{2})$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 ]	
	0	$\frac{\hbar^2(Aa_1-Aa_2+Ab_1-Ab_2)}{4}$	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	$-\frac{\hbar^{2}(Aa_{2}+Ab_{2})}{4\sqrt{2}}$	0	0	$-\frac{\hbar^{2}(Aa_{1}+Ab_{1})}{4\sqrt{2}}$	0	0	0	0	
	0	0	$\frac{\hbar^2(-Aa_1+Aa_2-Ab_1+Ab_2)}{4}$	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	$-\frac{\hbar^{2}(Aa_{1}+Ab_{1})}{4\sqrt{2}}$	0	0	$-\frac{\hbar^{2}(Aa_{2}+Ab_{2})}{4\sqrt{2}}$	0	0	0	0	
	0	0	0	$-\frac{\hbar^2(Aa_1+Aa_2+Ab_1+Ab_2)}{4}$	0	$\frac{h^2(Aa_1+Ab_1)}{4\sqrt{2}}$	$\frac{h^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$-\frac{\hbar^{2}(Aa_{1}+Ab_{1})}{4\sqrt{2}}$	$-\frac{\hbar^{2}(Aa_{2}+Ab_{2})}{4\sqrt{2}}$	0	0	0	0	0	
	0	$\frac{h^2(Aa_2+Ab_2)}{4\sqrt{2}}$	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	0	0	0	$\frac{h^2(Aa_1+Aa_2-Ab_1-Ab_2)}{4}$	0	0	0	0	0	0	0	
$H_{ m HF,iso} =$	0	0	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	0	0	0	$\frac{\hbar^2(Aa_1-Aa_2-Ab_1+Ab_2)}{4}$	0	0	$\frac{h^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	
	0	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	0	0	0	0	$\frac{h^2(-Aa_1+Aa_2+Ab_1-Ab_2)}{4}$	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	
	0	$\frac{-h^2(Aa_1+Ab_1)}{4\sqrt{2}}$	$\frac{-\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	0	0	0	0	0	· ·	$\frac{\hbar^2(-Aa_1-Aa_2+Ab_1+Ab_2)}{4}$	0	$\frac{\hbar^{2}(Aa_{1}+Ab_{1})}{4\sqrt{2}}$	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	
	0	0	0	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	$\frac{h^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	$\frac{-\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	$\frac{-\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	$-\frac{\hbar^2(Aa_1+Aa_2+Ab_1+Ab_2)}{4}$	0	0	0	
	0	0	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	$\frac{\hbar^2\!(-Aa_1\!+\!Aa_2\!-\!Ab_1\!+\!Ab_2)}{4}$	0	0	
	0	0	0	0	$\frac{h^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	$\frac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$\frac{\hbar^2(Aa_1-Aa_2+Ab_1-Ab_2)}{4}$	0	
	0	0	0	0	0	$\tfrac{\hbar^2(Aa_1+Ab_1)}{4\sqrt{2}}$	$\frac{\hbar^2(Aa_2+Ab_2)}{4\sqrt{2}}$	0	0	$\frac{\hbar^{2}(Aa_{1}+Ab_{1})}{4\sqrt{2}}$	$\frac{\hbar^{2}(Aa_{2}+Ab_{2})}{4\sqrt{2}}$	0	0	0	0	$\frac{\hbar^2(Aa_1+Aa_2+Ab_1+Ab_2)}{4}$	

	f a/a					$b^2(A_{kn_n}-A_{kn_n})$	$h^2(A_{b1x} - A_{b1y})$			s2(A A - )	h2(A-1A-1-)					1
	$h^{\omega}\left(\frac{\alpha_{0}1_{0}}{4} + \frac{\alpha_{0}2_{0}}{4} + \frac{\alpha_{1}1_{0}}{4} + \frac{\alpha_{1}2_{0}}{4}\right)$	0	0	0	0	4	4	0	0	4	4	0	0	0	0	0
	0	$h^{2}\left(\frac{A_{014}}{4} - \frac{A_{024}}{4} + \frac{A_{014}}{4} - \frac{A_{024}}{4}\right)$	0	0	$\frac{\hbar^2(A_{h2x}+A_{h2y})}{4}$	0	0	$\frac{h^2(A_{k1x}-A_{k1y})}{4}$	$\frac{\Lambda^2(A_{a2x}+A_{a2y})}{4}$	0	0	$\frac{h^2(A_{a1x}-A_{a1y})}{4}$	0	0	0	0
	0	0 /	$h^{2}\left(-\frac{A_{n1s}}{4} + \frac{A_{n2s}}{4} - \frac{A_{k1s}}{4} + \frac{A_{k2s}}{4}\right)$	0	$\frac{\hbar^2(A_{h1x}+A_{h1y})}{4}$	0	0	$\frac{h^2(A_{k2\alpha}-A_{k2\alpha})}{4}$	$\frac{\Lambda^2(A_{a1x}+A_{a1y})}{4}$	0	0	$\frac{h^2(A_{a2x}-A_{a2y})}{4}$	0	0	0	0
	0	0	0	$h^2 \left( -\frac{A_{a1a}}{A} - \frac{A_{a2a}}{A} - \frac{A_{b1a}}{A} - \frac{A_{b2a}}{A} \right)$	0	$\frac{\Lambda^2(A_{b1x}+A_{b1y})}{A}$	$\Lambda^2 (A_{h2x} + A_{h2y})$	0	0	$\frac{h^2(A_{a1x}+A_{a1y})}{A}$	$\frac{\hbar^2(A_{n2x}+A_{n2y})}{4}$	0	0	0	0	0
	0	$\frac{\hbar^2(A_{k2x}+A_{k2y})}{A}$	$\frac{h^2(A_{b1x}+A_{b1y})}{A}$	0	$h^2 \left( \frac{A_{a1a}}{A} + \frac{A_{a2a}}{A} - \frac{A_{b1a}}{A} - \frac{A_{b2a}}{A} \right)$	0	0	0	0	0	0	0	0	$\frac{\hbar^2(A_{a2x}-A_{a2y})}{4}$	$h^2(A_{a1x}-A_{a1y})$	0
$H_{\mathrm{HF}_{\mathrm{arrenan}}} =$	$\frac{h^2(A_{k2x}-A_{k2y})}{A}$	0	0	$\frac{\hbar^2(A_{b1x}+A_{b1y})}{4}$	0	$h^2 \left( \frac{A_{a2a}}{4} - \frac{A_{a2a}}{4} - \frac{A_{b2a}}{4} + \frac{A_{b2a}}{4} \right)$	0	0	0	0	0	0	$\frac{\hbar^2(A_{a2x}+A_{a2y})}{4}$	0	0	$\frac{\hbar^2(A_{\alpha1y}-A_{\alpha1y})}{4}$
	$\frac{h^{2}(A_{k2x}-A_{k2y})}{4} \\ \frac{h^{2}(A_{k2x}-A_{k2y})}{4}$	0	0	$\frac{\hbar^{2}(A_{b2x}+A_{b2y})}{4}$	0	0	$h^2 \left( -\frac{A_{a1s}}{4} + \frac{A_{a2s}}{4} + \frac{A_{b1s}}{4} - \frac{A_{b2s}}{4} \right)$	0	0	0	0	0	$\frac{\hbar^2(A_{a1x}+A_{a1y})}{4}$	0	0	$\frac{\hbar^2(A_{\alpha2\alpha}-A_{\alpha2\alpha})}{4}$
	0	$\frac{\hbar^2 \left(A_{b1x} - A_{b1y}\right)}{4}$	$\frac{h^2(A_{b2x}-A_{b2y})}{4}$	0	0	0	0	$h^2 \left( -\frac{A_{n1s}}{4} - \frac{A_{n2s}}{4} + \frac{A_{11s}}{4} + \frac{A_{12s}}{4} \right)$	0	0	0	0	0	$\frac{\Lambda^2(A_{a1x}+A_{a1y})}{4}$	$\frac{\hbar^2(A_{\alpha2\sigma}+A_{\alpha2\gamma})}{4}$	0
	0	$\frac{h^2(A_{\alpha 2x} + A_{\alpha 2y})}{4}$	$\frac{h^2(A_{n1x}+A_{n1y})}{4}$	0	0	0	0	0	$h^2 \left( -\frac{A_{a1s}}{4} - \frac{A_{a2s}}{4} + \frac{A_{b1s}}{4} + \frac{A_{b2s}}{4} \right)$	0	0	0	0	$\frac{h^2(A_{b2x}-A_{b2y})}{4}$	$\frac{\hbar^2 \left(A_{b1x} - A_{b1y}\right)}{4}$	0
	$\frac{h^{2}(A_{n2x}-A_{n2y})}{4}$ $\frac{h^{2}(A_{n1x}-A_{n1y})}{4}$	0	0	$\frac{\hbar^2(A_{n1x}+A_{n1y})}{4}$ $\hbar^2(A_{n2x}+A_{n2y})$	0	0	0	0	0	$h^2 \left( -\frac{A_{a1s}}{4} + \frac{A_{a2s}}{4} + \frac{A_{b1s}}{4} - \frac{A_{b2s}}{4} \right)$	0	0	$\frac{\hbar^2 \left(A_{k2x} + A_{k2y}\right)}{4}$	0	0	$h^2(A_{b1x}-A_{b1y})$
	$\frac{\hbar^2 \left(A_{\alpha 1 x} - A_{\alpha 1 y}\right)}{4}$	0	0	$\frac{\hbar^2(A_{\alpha2\sigma}+A_{\alpha2g})}{4}$	0	0	0	0	0	0	$h^2 \left( \frac{A_{a1s}}{4} - \frac{A_{a2s}}{4} - \frac{A_{b1s}}{4} + \frac{A_{b2s}}{4} \right)$	0	$\frac{\hbar^2 \left(A_{b1w} + A_{b1w}\right)}{4}$	0	0	$\frac{\hbar^2 \left(A_{b2x} - A_{b2y}\right)}{4}$
	0	$\frac{\hbar^2 \left(A_{n1x} - A_{n1y}\right)}{4}$	$\frac{h^2(A_{n2x}-A_{n2y})}{4}$	0	0	0	0	0	0	0	0	$h^2 \left( \frac{A_{a1s}}{4} + \frac{A_{a2s}}{4} - \frac{A_{b1s}}{4} - \frac{A_{b2s}}{4} \right)$	0	$\frac{\hbar^2 \left(A_{h1x} + A_{h1y}\right)}{4}$	$\frac{\hbar^2(A_{b2x}+A_{b2y})}{4}$	0
	0	0	0	0	0	$\frac{L^2(A_{n2x}+A_{n2y})}{4}$	$\frac{L^2(A_{n1x}+A_{n1y})}{4}$	0	0	$\frac{\Lambda^2(A_{h2x}+A_{h2y})}{4}$	$\frac{\hbar^2 \left(A_{b1x} + A_{b1y}\right)}{4}$	0 /	$h^2 \left(-\frac{A_{a1s}}{4} - \frac{A_{a2s}}{4} - \frac{A_{b1s}}{4} - \frac{A_{b2s}}{4}\right)$	0	0	0
	0	0	0	0	$\frac{h^2(A_{a2x}-A_{a2y})}{4}$	0	0	$\frac{h^2(A_{n1x}+A_{n1y})}{4}$ $h^2(A_{n2x}+A_{n2y})$	$\frac{h^2(A_{b2x}-A_{b2y})}{4}$	0	0	$\frac{\hbar^2(A_{b1x}+A_{b1y})}{4}$	0	$h^2\left(-\frac{A_{41x}}{4} + \frac{A_{42x}}{4} - \frac{A_{41x}}{4} + \frac{A_{42x}}{4}\right)$	0	0
	0	0	0	0	$\frac{h^2(A_{a1x}-A_{a1y})}{4}$	0	0	$\frac{\hbar^2 \left(A_{n2x} + A_{n2y}\right)}{4}$	$\frac{\hbar^2 \left(A_{b1x} - A_{b1y}\right)}{4}$	0	0	$\frac{\hbar^2 \left(A_{h2x} + A_{h2y}\right)}{4}$	0	0	$h^2 \left( \frac{A_{a1a}}{4} - \frac{A_{a2a}}{4} + \frac{A_{b1a}}{4} - \frac{A_{b2a}}{4} \right)$	0
	0	0	0	0	0	$\frac{\hbar^2 \left(A_{a1x} - A_{a1y}\right)}{4}$	$\frac{\hbar^2 \left(A_{a2x}-A_{a2y}\right)}{4}$	0	0	$\frac{\hbar^2 \left(A_{h1x} - A_{h1y}\right)}{4}$	$\frac{\hbar^2 \left(A_{h2x} - A_{h2y}\right)}{4}$	0	0	0	0	$\hbar^{2}\left(\frac{A_{a1s}}{4} + \frac{A_{a2s}}{4} + \frac{A_{b1s}}{4} + \frac{A_{b2s}}{4}\right)$

 $\begin{vmatrix} +\frac{1}{2}, +\frac{1}{2}, +\frac{1}{2}, +\frac{1}{2} \rangle \\ | +\frac{1}{2}, +\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2} \rangle \\ | +\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2}, +\frac{1}{2} \rangle \\ | +\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle \\ | +\frac{1}{2}, -\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2} \rangle \\ | +\frac{1}{2}, -\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2} \rangle \\ | +\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle \\ | +\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle \\ | -\frac{1}{2}, +\frac{1}{2}, +\frac{1}{2}, +\frac{1}{2} \rangle \\ | -\frac{1}{2}, +\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2} \rangle \\ | -\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle \\ | -\frac{1}{2}, -\frac{1}{2}, +\frac{1}{2}, -\frac{1}{2} \rangle \\ | -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, +\frac{1}{2} \rangle \\ | -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle \\ | -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle \\ | -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2} \rangle$