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8 Appendix A

Table 1: Commutator table for the Lie algebra

(a)	$\mathbf{v}_1$	$\mathbf{v}_2$	$\mathbf{v}_3$	$\mathbf{v}_4$	$\mathbf{v}_5$
$\mathbf{v}_1$	0	0	0	$\mathbf{v}_4$	$-\mathbf{v}_5$
$\mathbf{v}_2$	0	0	$\mathbf{v}_2$	0	0
$\mathbf{v}_3$	0	$-\mathbf{v}_2$	0	0	0
$\mathbf{v}_4$	$-\mathbf{v}_4$	0	0	0	$-2\mathbf{v}_1$
$\mathbf{v}_5$	$\mathbf{v}_5$	0	0	$2\mathbf{v}_1$	0

Table 2: Adjoint table .

Ad	$\mathbf{v}_1$	$\mathbf{v}_2$	$\mathbf{v}_3$	$\mathbf{v}_4$	$\mathbf{v}_5$
$\mathbf{v}_1$	$\mathbf{v}_1$	$\mathbf{v}_2$	$\mathbf{v}_3$	$e^{\epsilon}\mathbf{v}_4$	$e^{-\epsilon}\mathbf{v}_5$
$\mathbf{v}_2$	$\mathbf{v}_1$	$\mathbf{v}_2$	$\mathbf{v}_3-\epsilon\mathbf{v}_2$	$\mathbf{v}_4$	$\mathbf{v}_5$
$\mathbf{v}_3$	$\mathbf{v}_1$	$e^{-\epsilon}\mathbf{v}_2$	$\mathbf{v}_3$	$\mathbf{v}_4$	$\mathbf{v}_5$
$\mathbf{v}_4$	$\mathbf{v}_1+\epsilon\mathbf{v}_4$	$\mathbf{v}_2$	$\mathbf{v}_3$	$\mathbf{v}_4$	$\mathbf{v}_5+2\epsilon\mathbf{v}_1$
$\mathbf{v}_5$	$\mathbf{v}_1-\epsilon\mathbf{v}_5$	$\mathbf{v}_2$	$\mathbf{v}_3$	$\mathbf{v}_4-2\epsilon\mathbf{v}_1$	$\mathbf{v}_5$