* character table

$C_4(c)$	$1(1)$	$2_{001}(1)$	$4^+_{001}(1)$	$4^-_{001}(1)$
A	1	1	1	1
B	1	1	-1	-1
$E^{(a)}$	1	-1	$-i$	i
$E^{(b)}$	1	-1	i	$-i$

* polar $\leftrightarrow$ axial conversion

$A\ (A)$ $B\ (B)$ $E^{(a)}\ (E^{(a)})$ $E^{(b)}\ (E^{(b)})$

* symmetric product

	A	B	$E^{(a)}$	$E^{(b)}$
A	A	B	$E^{(a)}$	$E^{(b)}$
B		A	$E^{(b)}$	$E^{(a)}$
$E^{(a)}$			B	A
$E^{(b)}$				B

* anti-symmetric product

A	B	$E^{(a)}$	$E^{(b)}$
$-$	$-$	$-$	$-$