

* character table

$D_3(1)$	1(1)	$2_{120}(3)$	$3_{001}^+(2)$
A_1	1	1	1
A_2	1	-1	1
E	2	0	-1

* polar \leftrightarrow axial conversion

$$A_1 (A_1) \quad A_2 (A_2) \quad E (E)$$

* symmetric product

	A_1	A_2	E
A_1	A_1	A_2	E
A_2		A_1	E
E			$A_1 + E$

* anti-symmetric product

A_1	A_2	E
-	-	A_2