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**Tables of Plethysms for the Non-compact  $Sp(10, R)$  Group**

$< s; (0) > \otimes \{5\}$	$< s2; (0) >$ $+ < s2; (62) >$ $+ < s2; (741) >$ $+ 2 < s2; (84) >$ $+ 2 < s2; (93) >$ $+ < s2; (97) >$ $+ 3 < s2; (10 4) >$ $+ < s2; (11 21) >$ $+ 3 < s2; (12 ) >$ $+ 3 < s2; (13 1) >$ $+ 6 < s2; (14 2) >$	$+ < s2; (4) >$ $+ < s2; (64) >$ $+ < s2; (761) >$ $+ 2 < s2; (86) >$ $+ < s2; (941) >$ $+ 2 < s2; (10 ) >$ $+ 2 < s2; (10 51) >$ $+ 3 < s2; (11 3) >$ $+ 3 < s2; (12 2) >$ $+ < s2; (13 21) >$ $+ 3 < s2; (15 1) >$	$+ < s2; (4^2) >$ $+ < s2; (6^2) >$ $+ 2 < s2; (8) >$ $+ 2 < s2; (8^2) >$ $+ 2 < s2; (95) >$ $+ 2 < s2; (10 2) >$ $+ 5 < s2; (10 6) >$ $+ 2 < s2; (11 41) >$ $+ < s2; (12 31) >$ $+ 4 < s2; (13 3) >$ $+ 5 < s2; (16 ) >$	$+ < s2; (6) >$ $+ < s2; (73) >$ $+ < s2; (82) >$ $+ < s2; (91) >$ $+ < s2; (961) >$ $+ < s2; (10 31) >$ $+ < s2; (11 1) >$ $+ 2 < s2; (11 5) >$ $+ 7 < s2; (12 4) >$ $+ 3 < s2; (14 ) >$
$< s; (1) > \otimes \{1^5\}$	$< s2; (1^5) >$ $+ < s2; (621) >$ $+ < s2; (74) >$ $+ 2 < s2; (841) >$ $+ < s2; (94) >$ $+ 2 < s2; (10 21) >$ $+ < s2; (11 1^2) >$ $+ 3 < s2; (12 1^3) >$ $+ < s2; (13 2) >$	$+ < s2; (41^3) >$ $+ < s2; (641) >$ $+ < s2; (76) >$ $+ 2 < s2; (861) >$ $+ 2 < s2; (951) >$ $+ < s2; (10 3) >$ $+ < s2; (11 2) >$ $+ 3 < s2; (12 21) >$	$+ < s2; (4^2 1) >$ $+ < s2; (6^2 1) >$ $+ 2 < s2; (81^3) >$ $+ < s2; (91^2) >$ $+ < s2; (96) >$ $+ 3 < s2; (10 41) >$ $+ 3 < s2; (11 31) >$ $+ < s2; (12 3) >$	$+ < s2; (61^3) >$ $+ < s2; (731) >$ $+ < s2; (821) >$ $+ 2 < s2; (931) >$ $+ 2 < s2; (10 1^3) >$ $+ 2 < s2; (10 5) >$ $+ 2 < s2; (11 4) >$ $+ 3 < s2; (13 1^2) >$

$$\begin{aligned}
< s; (0) > \otimes \{41\} & \quad < s2; (2) > \quad + < s2; (4) > \quad + < s2; (42) > \quad + < s2; (4^2) > \\
& + < s2; (51) > \quad + < s2; (53) > \quad + < s2; (541) > \quad + 2 < s2; (6) > \\
& + 2 < s2; (62) > \quad + < s2; (631) > \quad + 3 < s2; (64) > \quad + < s2; (651) > \\
& + 2 < s2; (6^2) > \quad + 2 < s2; (71) > \quad + < s2; (721) > \quad + 3 < s2; (73) > \\
& + 2 < s2; (741) > \quad + 3 < s2; (75) > \quad + 2 < s2; (761) > \quad + < s2; (7^2) > \\
& + 3 < s2; (8) > \quad + 4 < s2; (82) > \quad + 2 < s2; (831) > \quad + 6 < s2; (84) > \\
& + 3 < s2; (851) > \quad + 5 < s2; (86) > \quad + 2 < s2; (871) > \quad + 3 < s2; (8^2) > \\
& + 4 < s2; (91) > \quad + 2 < s2; (921) > \quad + 6 < s2; (93) > \quad + 5 < s2; (941) > \\
& + 7 < s2; (95) > \quad + 6 < s2; (961) > \quad + 6 < s2; (97) > \quad + 4 < s2; (10) > \\
& + < s2; (10 1^2) > \quad + 7 < s2; (10 2) > \quad + 5 < s2; (10 31) > \quad + 11 < s2; (10 4) > \\
& + 7 < s2; (10 51) > \quad + 12 < s2; (10 6) > \quad + 6 < s2; (11 1) > \quad + 4 < s2; (11 21) > \\
& + 10 < s2; (11 3) > \quad + 9 < s2; (11 41) > \quad + 13 < s2; (11 5) > \quad + 6 < s2; (12) > \\
& + 2 < s2; (12 1^2) > \quad + 11 < s2; (12 2) > \quad + 8 < s2; (12 31) > \quad + 17 < s2; (12 4) > \\
& + 9 < s2; (13 1) > \quad + 7 < s2; (13 21) > \quad + 17 < s2; (13 3) > \quad + 8 < s2; (14) > \\
& + 4 < s2; (14 1^2) > \quad + 16 < s2; (14 2) > \quad + 13 < s2; (15 1) > \quad + 9 < s2; (16) >
\end{aligned}$$

$$\begin{aligned}
< s; (1) > \otimes \{21^3\} & \quad < s2; (21^3) > \quad + < s2; (41^3) > \quad + < s2; (421) > \quad + < s2; (4^2 1) > \\
& + < s2; (51^2) > \quad + < s2; (531) > \quad + < s2; (54) > \quad + 2 < s2; (61^3) > \\
& + 2 < s2; (621) > \quad + < s2; (63) > \quad + 3 < s2; (641) > \quad + < s2; (65) > \\
& + 2 < s2; (6^2 1) > \quad + 2 < s2; (71^2) > \quad + < s2; (72) > \quad + 3 < s2; (731) > \\
& + 2 < s2; (74) > \quad + 3 < s2; (751) > \quad + 2 < s2; (76) > \quad + < s2; (7^2 1) > \\
& + 3 < s2; (81^3) > \quad + 4 < s2; (821) > \quad + 2 < s2; (83) > \quad + 6 < s2; (841) > \\
& + 3 < s2; (85) > \quad + 5 < s2; (861) > \quad + 2 < s2; (87) > \quad + 4 < s2; (91^2) > \\
& + 2 < s2; (92) > \quad + 6 < s2; (931) > \quad + 5 < s2; (94) > \quad + 7 < s2; (951) > \\
& + 6 < s2; (96) > \quad + < s2; (10 1) > \quad + 4 < s2; (10 1^3) > \quad + 7 < s2; (10 21) > \\
& + 5 < s2; (10 3) > \quad + 11 < s2; (10 41) > \quad + 7 < s2; (10 5) > \quad + 6 < s2; (11 1^2) > \\
& + 4 < s2; (11 2) > \quad + 10 < s2; (11 31) > \quad + 9 < s2; (11 4) > \quad + 2 < s2; (12 1) > \\
& + 6 < s2; (12 1^3) > \quad + 11 < s2; (12 21) > \quad + 8 < s2; (12 3) > \quad + 9 < s2; (13 1^2) > \\
& + 7 < s2; (13 2) > \quad + 4 < s2; (14 1) >
\end{aligned}$$

$\langle s; (0) \rangle \otimes \{32\}$	$\langle s2; (2^2) \rangle$	$+ \langle s2; (4) \rangle$	$+ \langle s2; (42) \rangle$	$+ \langle s2; (4^2) \rangle$
	$+ \langle s2; (51) \rangle$	$+ \langle s2; (521) \rangle$	$+ \langle s2; (53) \rangle$	$+ \langle s2; (541) \rangle$
	$+ \langle s2; (5^2) \rangle$	$+ \langle s2; (6) \rangle$	$+ 3 \langle s2; (62) \rangle$	$+ \langle s2; (631) \rangle$
	$+ 3 \langle s2; (64) \rangle$	$+ 2 \langle s2; (651) \rangle$	$+ 2 \langle s2; (6^2) \rangle$	$+ 2 \langle s2; (71) \rangle$
	$+ 2 \langle s2; (721) \rangle$	$+ 3 \langle s2; (73) \rangle$	$+ 3 \langle s2; (741) \rangle$	$+ 3 \langle s2; (75) \rangle$
	$+ 2 \langle s2; (761) \rangle$	$+ \langle s2; (7^2) \rangle$	$+ 2 \langle s2; (8) \rangle$	$+ \langle s2; (81^2) \rangle$
	$+ 5 \langle s2; (82) \rangle$	$+ 3 \langle s2; (831) \rangle$	$+ 7 \langle s2; (84) \rangle$	$+ 5 \langle s2; (851) \rangle$
	$+ 6 \langle s2; (86) \rangle$	$+ 4 \langle s2; (871) \rangle$	$+ 4 \langle s2; (8^2) \rangle$	$+ 4 \langle s2; (91) \rangle$
	$+ 4 \langle s2; (921) \rangle$	$+ 6 \langle s2; (93) \rangle$	$+ 7 \langle s2; (941) \rangle$	$+ 9 \langle s2; (95) \rangle$
	$+ 7 \langle s2; (961) \rangle$	$+ 7 \langle s2; (97) \rangle$	$+ 3 \langle s2; (10) \rangle$	$+ 2 \langle s2; (10 1^2) \rangle$
	$+ 9 \langle s2; (10 2) \rangle$	$+ 6 \langle s2; (10 31) \rangle$	$+ 12 \langle s2; (10 4) \rangle$	$+ 10 \langle s2; (10 51) \rangle$
	$+ 13 \langle s2; (10 6) \rangle$	$+ 6 \langle s2; (11 1) \rangle$	$+ 7 \langle s2; (11 21) \rangle$	$+ 12 \langle s2; (11 3) \rangle$
	$+ 12 \langle s2; (11 41) \rangle$	$+ 16 \langle s2; (11 5) \rangle$	$+ 5 \langle s2; (12) \rangle$	$+ 4 \langle s2; (12 1^2) \rangle$
	$+ 13 \langle s2; (12 2) \rangle$	$+ 11 \langle s2; (12 31) \rangle$	$+ 20 \langle s2; (12 4) \rangle$	$+ 10 \langle s2; (13 1) \rangle$
	$+ \langle s2; (13 1^3) \rangle$	$+ 11 \langle s2; (13 21) \rangle$	$+ 18 \langle s2; (13 3) \rangle$	$+ 6 \langle s2; (14) \rangle$
	$+ 6 \langle s2; (14 1^2) \rangle$	$+ 20 \langle s2; (14 2) \rangle$	$+ 14 \langle s2; (15 1) \rangle$	$+ 9 \langle s2; (16) \rangle$

$\langle s; (1) \rangle \otimes \{2^2 1\}$	$\langle s2; (2^2 1) \rangle$	$+ \langle s2; (41^3) \rangle$	$+ \langle s2; (421) \rangle$	$+ \langle s2; (4^2 1) \rangle$
	$+ \langle s2; (51^2) \rangle$	$+ \langle s2; (52) \rangle$	$+ \langle s2; (531) \rangle$	$+ \langle s2; (54) \rangle$
	$+ \langle s2; (5^2 1) \rangle$	$+ \langle s2; (61^3) \rangle$	$+ 3 \langle s2; (621) \rangle$	$+ \langle s2; (63) \rangle$
	$+ 3 \langle s2; (641) \rangle$	$+ 2 \langle s2; (65) \rangle$	$+ 2 \langle s2; (6^2 1) \rangle$	$+ 2 \langle s2; (71^2) \rangle$
	$+ 2 \langle s2; (72) \rangle$	$+ 3 \langle s2; (731) \rangle$	$+ 3 \langle s2; (74) \rangle$	$+ 3 \langle s2; (751) \rangle$
	$+ 2 \langle s2; (76) \rangle$	$+ \langle s2; (7^2 1) \rangle$	$+ \langle s2; (81) \rangle$	$+ 2 \langle s2; (81^3) \rangle$
	$+ 5 \langle s2; (821) \rangle$	$+ 3 \langle s2; (83) \rangle$	$+ 7 \langle s2; (841) \rangle$	$+ 5 \langle s2; (85) \rangle$
	$+ 6 \langle s2; (861) \rangle$	$+ 4 \langle s2; (87) \rangle$	$+ 4 \langle s2; (91^2) \rangle$	$+ 4 \langle s2; (92) \rangle$
	$+ 6 \langle s2; (931) \rangle$	$+ 7 \langle s2; (94) \rangle$	$+ 9 \langle s2; (951) \rangle$	$+ 7 \langle s2; (96) \rangle$
	$+ 2 \langle s2; (10 1) \rangle$	$+ 3 \langle s2; (10 1^3) \rangle$	$+ 9 \langle s2; (10 21) \rangle$	$+ 6 \langle s2; (10 3) \rangle$
	$+ 12 \langle s2; (10 41) \rangle$	$+ 10 \langle s2; (10 5) \rangle$	$+ 6 \langle s2; (11 1^2) \rangle$	$+ 7 \langle s2; (11 2) \rangle$
	$+ 12 \langle s2; (11 31) \rangle$	$+ 12 \langle s2; (11 4) \rangle$	$+ 4 \langle s2; (12 1) \rangle$	$+ 5 \langle s2; (12 1^3) \rangle$
	$+ 13 \langle s2; (12 21) \rangle$	$+ 11 \langle s2; (12 3) \rangle$	$+ \langle s2; (13) \rangle$	$+ 10 \langle s2; (13 1^2) \rangle$
	$+ 11 \langle s2; (13 2) \rangle$	$+ 6 \langle s2; (14 1) \rangle$	$+ \langle s2; (15) \rangle$	

$$\begin{aligned}
< s; (0) > \otimes \{31^2\} = & < s2; (31) > + < s2; (42) > + < s2; (431) > + < s2; (51) > \\
& + < s2; (521) > + 2 < s2; (53) > + < s2; (541) > + < s2; (5^2) > \\
& + < s2; (6) > + < s2; (61^2) > + 2 < s2; (62) > + 2 < s2; (631) > \\
& + 3 < s2; (64) > + 2 < s2; (651) > + < s2; (6^2) > + 3 < s2; (71) > \\
& + 2 < s2; (721) > + 4 < s2; (73) > + 4 < s2; (741) > + 5 < s2; (75) > \\
& + 3 < s2; (761) > + 2 < s2; (7^2) > + < s2; (8) > + 2 < s2; (81^2) > \\
& + 5 < s2; (82) > + 5 < s2; (831) > + 6 < s2; (84) > + 6 < s2; (851) > \\
& + 7 < s2; (86) > + 5 < s2; (871) > + 2 < s2; (8^2) > + 4 < s2; (91) > \\
& + 5 < s2; (921) > + 9 < s2; (93) > + 8 < s2; (941) > + 10 < s2; (95) > \\
& + 9 < s2; (961) > + 10 < s2; (97) > + 3 < s2; (10 ) > + 4 < s2; (10 1^2) > \\
& + 8 < s2; (10 2) > + 9 < s2; (10 31) > + 13 < s2; (10 4) > + 13 < s2; (10 51) > \\
& + 14 < s2; (10 6) > + 8 < s2; (11 1) > + < s2; (11 1^3) > + 8 < s2; (11 21) > \\
& + 14 < s2; (11 3) > + 15 < s2; (11 41) > + 20 < s2; (11 5) > + 3 < s2; (12 ) > \\
& + 6 < s2; (12 1^2) > + 14 < s2; (12 2) > + 16 < s2; (12 31) > + 21 < s2; (12 4) > \\
& + 11 < s2; (13 1) > + < s2; (13 1^3) > + 14 < s2; (13 21) > + 23 < s2; (13 3) > \\
& + 6 < s2; (14 ) > + 10 < s2; (14 1^2) > + 20 < s2; (14 2) > + 17 < s2; (15 1) > \\
& + 7 < s2; (16 ) >
\end{aligned}$$

$$\begin{aligned}
< s; (1) > \otimes \{31^2\} = & < s2; (31^2) > + < s2; (421) > + < s2; (43) > + < s2; (51^2) > \\
& + < s2; (52) > + 2 < s2; (531) > + < s2; (54) > + < s2; (5^21) > \\
& + < s2; (61) > + < s2; (61^3) > + 2 < s2; (621) > + 2 < s2; (63) > \\
& + 3 < s2; (641) > + 2 < s2; (65) > + < s2; (6^21) > + 3 < s2; (71^2) > \\
& + 2 < s2; (72) > + 4 < s2; (731) > + 4 < s2; (74) > + 5 < s2; (751) > \\
& + 3 < s2; (76) > + 2 < s2; (7^21) > + 2 < s2; (81) > + < s2; (81^3) > \\
& + 5 < s2; (821) > + 5 < s2; (83) > + 6 < s2; (841) > + 6 < s2; (85) > \\
& + 7 < s2; (861) > + 5 < s2; (87) > + 4 < s2; (91^2) > + 5 < s2; (92) > \\
& + 9 < s2; (931) > + 8 < s2; (94) > + 10 < s2; (951) > + 9 < s2; (96) > \\
& + 4 < s2; (10 1) > + 3 < s2; (10 1^3) > + 8 < s2; (10 21) > + 9 < s2; (10 3) > \\
& + 13 < s2; (10 41) > + 13 < s2; (10 5) > + < s2; (11 ) > + 8 < s2; (11 1^2) > \\
& + 8 < s2; (11 2) > + 14 < s2; (11 31) > + 15 < s2; (11 4) > + 6 < s2; (12 1) > \\
& + 3 < s2; (12 1^3) > + 14 < s2; (12 21) > + 16 < s2; (12 3) > + < s2; (13 ) > \\
& + 11 < s2; (13 1^2) > + 14 < s2; (13 2) > + 10 < s2; (14 1) > + 3 < s2; (15 ) >
\end{aligned}$$