

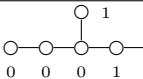
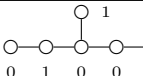
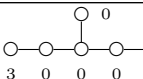
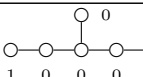
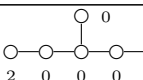
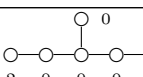
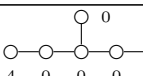
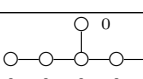
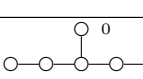
PREHOMOGENEOUS SPACES ASSOCIATED WITH NILPOTENT ORBITS IN TYPE EVII

STEVEN GLENN JACKSON AND ALFRED G. NOËL

Nilpotent orbits in type EVII				
Orbit	$K_{\mathbb{C}}$ diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
1.		1	16	$(-1, 0, 1, 0, 0, 0)$
		2	1	$(1, 0, 0, 0, 0, 0)$
2.		1	16	$(0, 0, 0, 0, 1, -1)$
		2	1	$(0, 0, 0, 0, 1, -2)$
3.		1	16	$(0, 1, 0, 0, 0, -1)$
		2	10	$(1, 0, 0, 0, 0, 0)$
4.		1	16	$(-1, 1, 0, 0, 0, -1)$
		2	10	$(0, 0, 0, 0, 1, -2)$
5.		1	16	$(0, 0, 0, 0, 1, -1)$ $(-1, 0, 1, 0, 0, 0)$
		2	2	$(0, 0, 0, 0, 1, -2)$ $(1, 0, 0, 0, 0, 0)$
6.		2	27	$(1, 0, 0, 0, 0, 0)$
7.		2	27	$(0, 0, 0, 0, 1, -2)$
8.		2	11	$(0, 0, 0, 0, 1, -2)$ $(1, 0, 0, 0, 0, 0)$
9.		2	11	$(0, 0, 0, 0, 1, -2)$ $(1, 0, 0, 0, 0, 0)$
10.		2	12	$(0, 0, 0, 0, 1, -2)$ $(1, 0, 0, 0, 0, 0)$
<i>(continued on next page)</i>				

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Key words and phrases. Lie group, nilpotent orbit, prehomogeneous space.

Nilpotent orbits in type EVII (continued)				
Orbit	$K_{\mathbb{C}}$ diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
11.		1	12	$(0, 0, 0, 1, -1, 0, -1)$ $(0, -1, 0, 1, -1, 1, 0)$
		2	5	$(0, 0, 0, 0, 0, 1, -2)$ $(0, -1, 0, 0, 1, 0, 0)$ $(0, 1, 0, 0, -1, 1, 0)$
		3	4	$(1, 0, 0, 0, 0, 0, 0)$
12.		1	12	$(1, -1, -1, 1, 0, 0, -1)$ $(0, 0, -1, 1, 0, 0, 0)$
		2	5	$(1, 1, -1, 0, 0, 0, -1)$ $(0, -1, 1, 0, 0, 0, -1)$ $(1, 0, 0, 0, 0, 0, 0)$
		3	4	$(0, 0, 0, 0, 0, 1, -2)$
13.		1	8	$(0, 0, 0, 0, 1, -1, -1)$
		2	9	$(0, 0, 0, 0, 0, 1, -2)$ $(0, 1, 0, 0, 0, -1, 1)$
		3	8	$(-1, 0, 1, 0, 0, 0, 0)$
		6	1	$(1, 0, 0, 0, 0, 0, 0)$
14.		1	8	$(-1, 0, 1, 0, 0, 0, 0)$
		2	9	$(-1, 1, 0, 0, 0, 0, -1)$ $(1, 0, 0, 0, 0, 0, 0)$
		3	8	$(0, 0, 0, 0, 1, -1, -1)$
		6	1	$(0, 0, 0, 0, 0, 1, -2)$
15.		2	16	$(0, 0, 0, 0, 1, -1, -1)$ $(-1, 0, 1, 0, 0, 0, 0)$
		4	2	$(0, 0, 0, 0, 0, 1, -2)$ $(1, 0, 0, 0, 0, 0, 0)$
16.		2	10	$(0, 0, 0, 0, 0, 1, -2)$ $(0, 1, 0, 0, 0, -1, 1)$ $(-1, 0, 0, 0, 0, 1, 0)$
		4	8	$(-1, 0, 1, 0, 0, 0, 0)$
		6	1	$(1, 0, 0, 0, 0, 0, 0)$
17.		2	26	$(0, 0, 0, 0, 0, 1, -2)$ $(-1, 0, 1, 0, 0, 0, 0)$
		6	1	$(1, 0, 0, 0, 0, 0, 0)$
18.		2	26	$(0, 0, 0, 0, 1, -1, -1)$ $(1, 0, 0, 0, 0, 0, 0)$
		6	1	$(0, 0, 0, 0, 0, 1, -2)$
19.		2	10	$(1, 0, 0, 0, 0, -1, 0)$ $(-1, 1, 0, 0, 0, 0, -1)$ $(1, 0, 0, 0, 0, 0, 0)$
		4	8	$(0, 0, 0, 0, 1, -1, -1)$
(continued on next page)				

Nilpotent orbits in type EVII (continued)				
Orbit	$K_{\mathbb{C}}$ diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
20.		6	1	$(0, 0, 0, 0, 1, -2)$
		2	10	$(-1, 1, 0, 0, 0, -1)$ $(0, -1, 1, 0, 0, -1)$ $(0, -1, 0, 0, 1, 0, 0)$ $(0, 1, 0, 0, 0, -1, 1)$
		4	8	$(0, 0, 0, 0, 1, -1, -1)$ $(-1, 0, 1, 0, 0, 0, 0)$
21.		6	2	$(0, 0, 0, 0, 1, -2)$ $(1, 0, 0, 0, 0, 0, 0)$
		2	17	$(0, 0, 0, 0, 1, -1, -1)$ $(0, 1, 0, 0, 0, -1, 1)$ $(-1, 0, 0, 0, 0, 1, 0)$
		6	9	$(0, 0, 0, 0, 0, 1, -2)$ $(-1, 0, 1, 0, 0, 0, 0)$
22.		10	1	$(1, 0, 0, 0, 0, 0, 0)$
		6	9	$(0, 0, 0, 0, 1, -1, -1)$ $(1, 0, 0, 0, 0, 0, 0)$
		2	17	$(1, 0, 0, 0, 0, -1, 0)$ $(-1, 1, 0, 0, 0, 0, -1)$ $(-1, 0, 1, 0, 0, 0, 0)$

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