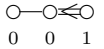
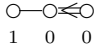
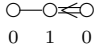
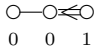
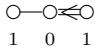
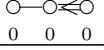
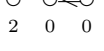
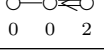
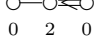
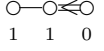


**PREHOMOGENEOUS SPACES ASSOCIATED WITH NILPOTENT  
ORBITS IN TYPE  $FI$**

STEVEN GLENN JACKSON AND ALFRED G. NOËL

<b>Nilpotent orbits in type <math>FI</math></b>				
Orbits	$K_c$ Diagram	$i$	$\dim \mathfrak{g}_c^i \cap \mathfrak{k}_c$	Highest weights of $\mathfrak{g}_c^i \cap \mathfrak{k}_c$
1		1	7	$(2, 0, 0, 0)$ $(0, 0, 0, 2)$
2		1	4	$(0, 1, 0, 0)$
		2	2	$(2, 0, 0, 0)$ $(0, 0, 0, 2)$
3		1	4	$(1, -1, 1, 0)$
		2	3	$(2, 0, 0, 0)$
4		1	6	$(2, 0, 0, 0)$
		3	1	$(0, 0, 0, 2)$
5		1	6	$(1, 1, -1, 0)$ $(-2, 2, 0, 0)$ $(0, 0, 0, 2)$
		2	2	$(0, 1, 0, 0)$
		3	1	$(2, 0, 0, 0)$
6		4	1	$(0, 0, 0, 2)$
7		2	4	$(0, 1, 0, 0)$
		4	1	$(2, 0, 0, 0)$
8		2	7	$(2, 0, 0, 0)$ $(0, 0, 0, 2)$
9		2	4	$(1, -1, 1, 0)$
		4	3	$(2, 0, 0, 0)$
10		1	3	$(2, -1, 0, 0)$ $(-1, 0, 1, 0)$
		2	4	$(-2, 2, 0, 0)$ $(1, -1, 1, 0)$ $(0, 0, 0, 2)$
		3	1	$(0, 1, 0, 0)$
		4	1	$(2, 0, 0, 0)$

*(continued on next page)*

2000 *Mathematics Subject Classification.* 17B05;17B10;17B20;22E30.

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

Nilpotent orbits in type $FI$ (continued)				
Orbits	$K_c$ Diagram	$i$	$\dim \mathfrak{g}_c^i \cap \mathfrak{k}_c$	Highest weights of $\mathfrak{g}_c^i \cap \mathfrak{k}_c$
11		1	2	$(1, 1, -1, 0)$
		2	3	$(-2, 2, 0, 0)$
		3	2	$(0, 1, 0, 0)$
		4	2	$(2, 0, 0, 0)$ $(0, 0, 0, 2)$
12		1	2	$(1, 1, -1, 0)$
		2	2	$(0, -2, 2, 0)$ $(0, 0, 0, 2)$
		3	2	$(1, -1, 1, 0)$
		4	3	$(2, 0, 0, 0)$
13		1	4	$(0, -2, 2, 0)$ $(-1, 2, -1, 0)$ $(2, -1, 0, 0)$ $(0, 0, 0, 2)$
		2	2	$(-1, 0, 1, 0)$ $(1, 1, -1, 0)$
		3	2	$(-2, 2, 0, 0)$ $(1, -1, 1, 0)$
		4	1	$(0, 1, 0, 0)$
		5	1	$(2, 0, 0, 0)$
14		1	3	$(1, 1, -1, 0)$ $(0, 0, 0, 2)$
		3	3	$(-2, 2, 0, 0)$
		4	2	$(0, 1, 0, 0)$
		5	1	$(2, 0, 0, 0)$
15		1	3	$(0, -2, 2, 0)$ $(-1, 2, -1, 0)$ $(2, -1, 0, 0)$
		2	2	$(-1, 0, 1, 0)$ $(1, 1, -1, 0)$
		3	3	$(-2, 2, 0, 0)$ $(1, -1, 1, 0)$ $(0, 0, 0, 2)$
		4	1	$(0, 1, 0, 0)$
		5	1	$(2, 0, 0, 0)$
16		4	6	$(2, 0, 0, 0)$
17		2	4	$(1, -1, 1, 0)$
		4	4	$(2, 0, 0, 0)$ $(0, 0, 0, 2)$
18		2	6	$(1, 1, -1, 0)$ $(-2, 2, 0, 0)$ $(0, 0, 0, 2)$

(continued on next page)

Nilpotent orbits in type $FI$ (continued)				
Orbits	$K_c$ Diagram	$i$	$\dim \mathfrak{g}_c^i \cap \mathfrak{k}_c$	Highest weights of $\mathfrak{g}_c^i \cap \mathfrak{k}_c$
		4	2	$(0, 1, 0, 0)$
		6	1	$(2, 0, 0, 0)$
19		4	6	$(2, 0, 0, 0)$
		8	1	$(0, 0, 0, 2)$
20		2	2	$(1, 1, -1, 0)$
		4	4	$(-2, 2, 0, 0)$ $(0, 0, 0, 2)$
		6	2	$(0, 1, 0, 0)$
		8	1	$(2, 0, 0, 0)$
21		1	2	$(0, -2, 2, 0)$ $(2, -1, 0, 0)$
		3	2	$(-1, 2, -1, 0)$ $(0, 0, 0, 2)$
		4	2	$(-1, 0, 1, 0)$ $(1, 1, -1, 0)$
		5	1	$(1, -1, 1, 0)$
		7	1	$(-2, 2, 0, 0)$
		8	1	$(0, 1, 0, 0)$
		9	1	$(2, 0, 0, 0)$
22		4	5	$(1, -1, 1, 0)$ $(0, 0, 0, 2)$
		8	3	$(2, 0, 0, 0)$
23		2	4	$(0, -2, 2, 0)$ $(-1, 2, -1, 0)$ $(2, -1, 0, 0)$ $(0, 0, 0, 2)$
		4	2	$(-1, 0, 1, 0)$ $(1, 1, -1, 0)$
		6	2	$(-2, 2, 0, 0)$ $(1, -1, 1, 0)$
		8	1	$(0, 1, 0, 0)$
		10	1	$(2, 0, 0, 0)$
24		2	2	$(-1, 2, -1, 0)$ $(2, -1, 0, 0)$
		4	3	$(0, -2, 2, 0)$ $(1, 1, -1, 0)$ $(0, 0, 0, 2)$
		6	1	$(-1, 0, 1, 0)$
		8	2	$(-2, 2, 0, 0)$ $(1, -1, 1, 0)$
		10	1	$(0, 1, 0, 0)$
		12	1	$(2, 0, 0, 0)$
25		4	5	$(1, 1, -1, 0)$ $(-2, 2, 0, 0)$

(continued on next page)

Nilpotent orbits in type $FI$ (continued)				
Orbits	$K_c$ Diagram	$i$	$\dim \mathfrak{g}_c^i \cap \mathfrak{k}_c$	Highest weights of $\mathfrak{g}_c^i \cap \mathfrak{k}_c$
		8	3	$(0, 1, 0, 0)$ $(0, 0, 0, 2)$
		12	1	$(2, 0, 0, 0)$
26		4	3	$(0, -2, 2, 0)$ $(-1, 2, -1, 0)$ $(2, -1, 0, 0)$
		8	3	$(-1, 0, 1, 0)$ $(1, 1, -1, 0)$ $(0, 0, 0, 2)$
		12	2	$(-2, 2, 0, 0)$ $(1, -1, 1, 0)$
		16	1	$(0, 1, 0, 0)$
		20	1	$(2, 0, 0, 0)$

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