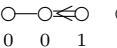
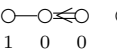
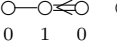
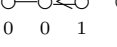
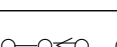
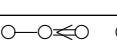
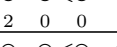
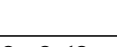
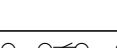


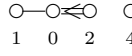
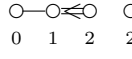
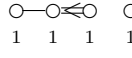
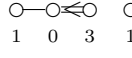
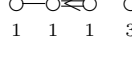
PREHOMOGENEOUS SPACES ASSOCIATED WITH NILPOTENT ORBITS IN TYPE FI

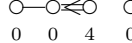
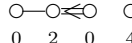
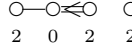
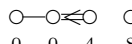
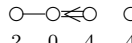
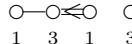
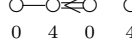
STEVEN GLENN JACKSON AND ALFRED G. NOËL

Nilpotent orbits in type FI				
Orbits	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	7	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		2	1	$(0, 0, 1, 1)$
2		1	4	$(-1, 1, 0, 1)$
		2	5	$(0, 0, 1, 1)$
3		1	4	$(1, 0, 0, 1)$
		2	4	$(0, 0, 1, 1)$
4		1	6	$(2, 0, -1, 1)$
		2	6	$(0, 2, -1, 1)$
		3	1	$(0, 0, 1, 1)$
5		1	6	$(2, 0, -1, 1)$ $(-1, 1, 0, 1)$ $(0, 2, -1, -1)$
		2	4	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		3	1	$(0, 0, 1, 1)$
6		2	14	$(0, 0, 1, 1)$
7		2	10	$(0, 0, 1, 1)$
8		2	7	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		4	1	$(0, 0, 1, 1)$
9		2	4	$(1, 0, 0, 1)$
		4	4	$(0, 0, 1, 1)$
10		1	3	$(0, -1, 1, 1)$ $(1, 0, 0, -1)$
		2	5	$(-1, 1, 0, 1)$ $(2, -2, 1, 1)$ $(0, 0, 1, -1)$
		3	1	$(1, 0, 0, 1)$
<i>(continued on next page)</i>				

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	Diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
		4	2	$(0, 0, 1, 1)$
11		1	2	$(0, 1, -1, 1)$
		2	3	$(-2, 0, 1, 1)$ $(2, 0, -1, 1)$ $(0, 0, 1, -1)$
		3	2	$(-1, 1, 0, 1)$
		4	3	$(0, 2, -1, 1)$
		6	1	$(0, 0, 1, 1)$
12		1	2	$(1, 0, 0, -1)$
		2	4	$(2, -2, 1, 1)$ $(0, 2, -1, -1)$
		3	2	$(1, 0, 0, 1)$
		4	2	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		6	1	$(0, 0, 1, 1)$
13		1	4	$(0, -1, 1, 1)$ $(2, 0, -1, 1)$ $(2, -2, 1, -1)$ $(-1, 1, 0, -1)$
		2	3	$(-1, 1, 0, 1)$ $(2, -2, 1, 1)$ $(1, 0, 0, -1)$
		3	2	$(1, 0, 0, 1)$ $(0, 2, -1, -1)$
		4	2	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		5	1	$(0, 0, 1, 1)$
14		1	3	$(-2, 0, 1, 1)$ $(-1, 1, 0, -1)$
		2	5	$(-1, 1, 0, 1)$ $(0, 2, -1, -1)$
		3	3	$(0, 2, -1, 1)$
		5	1	$(0, 0, 1, -1)$
		6	1	$(0, 0, 1, 1)$
15		1	3	$(-2, 0, 1, 1)$ $(0, 1, -1, 1)$ $(1, 0, 0, -1)$
		2	3	$(0, -1, 1, 1)$ $(2, 0, -1, 1)$ $(0, 2, -1, -1)$
		3	3	$(-1, 1, 0, 1)$ $(2, -2, 1, 1)$ $(0, 0, 1, -1)$
		4	1	$(1, 0, 0, 1)$
<i>(continued on next page)</i>				

Nilpotent orbits in type <i>FI</i> (continued)				
Orbits	Diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
		5	1	$(0, 2, -1, 1)$
		6	1	$(0, 0, 1, 1)$
16		2	12	$(0, 2, -1, 1)$
		6	2	$(0, 0, 1, 1)$
17		2	8	$(2, -2, 1, 1)$ $(0, 0, 1, -1)$
		4	2	$(1, 0, 0, 1)$
		6	2	$(0, 0, 1, 1)$
18		2	6	$(2, 0, -1, 1)$ $(-1, 1, 0, 1)$ $(0, 2, -1, -1)$
		4	4	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		6	1	$(0, 0, 1, 1)$
19		2	7	$(2, 0, -1, 1)$ $(0, 0, 1, -1)$
		6	6	$(0, 2, -1, 1)$
		10	1	$(0, 0, 1, 1)$
20		2	5	$(-2, 0, 1, 1)$ $(2, 0, -1, 1)$ $(0, 2, -1, -1)$
		4	2	$(-1, 1, 0, 1)$
		6	4	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		10	1	$(0, 0, 1, 1)$
21		1	2	$(-2, 0, 1, 1)$ $(0, 1, -1, 1)$
		2	3	$(0, -1, 1, 1)$ $(2, 0, -1, 1)$ $(-1, 1, 0, -1)$
		3	2	$(2, -2, 1, 1)$ $(1, 0, 0, -1)$
		5	1	$(-1, 1, 0, 1)$
		6	2	$(1, 0, 0, 1)$ $(0, 2, -1, -1)$
		7	1	$(0, 0, 1, -1)$
		9	1	$(0, 2, -1, 1)$
		10	1	$(0, 0, 1, 1)$
22		2	8	$(2, -2, 1, 1)$ $(1, 0, 0, -1)$
		6	4	$(1, 0, 0, 1)$ $(0, 0, 1, -1)$
		10	2	$(0, 0, 1, 1)$
<i>(continued on next page)</i>				

Nilpotent orbits in type FI (continued)				
Orbits	Diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
23		2	4	$(0, -1, 1, 1)$ $(2, 0, -1, 1)$ $(2, -2, 1, -1)$ $(-1, 1, 0, -1)$
		4	3	$(-1, 1, 0, 1)$ $(2, -2, 1, 1)$ $(1, 0, 0, -1)$
		6	2	$(1, 0, 0, 1)$ $(0, 2, -1, -1)$
		8	2	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		10	1	$(0, 0, 1, 1)$
24		2	4	$(-2, 0, 1, 1)$ $(2, 0, -1, 1)$ $(2, -2, 1, -1)$ $(-1, 1, 0, -1)$
		4	2	$(0, -1, 1, 1)$ $(1, 0, 0, -1)$
		6	3	$(-1, 1, 0, 1)$ $(2, -2, 1, 1)$ $(0, 2, -1, -1)$
		8	1	$(1, 0, 0, 1)$
		10	2	$(0, 2, -1, 1)$ $(0, 0, 1, -1)$
		14	1	$(0, 0, 1, 1)$
25		2	6	$(-2, 0, 1, 1)$ $(0, 1, -1, 1)$ $(0, 2, -1, -1)$
		6	4	$(2, 0, -1, 1)$ $(-1, 1, 0, 1)$ $(0, 0, 1, -1)$
		10	3	$(0, 2, -1, 1)$
		14	1	$(0, 0, 1, 1)$
26		2	4	$(-2, 0, 1, 1)$ $(0, 1, -1, 1)$ $(2, -2, 1, -1)$ $(-1, 1, 0, -1)$
		6	3	$(0, -1, 1, 1)$ $(2, 0, -1, 1)$ $(1, 0, 0, -1)$
		10	3	$(-1, 1, 0, 1)$ $(2, -2, 1, 1)$ $(0, 2, -1, -1)$
		14	2	$(1, 0, 0, 1)$ $(0, 0, 1, -1)$
<i>(continued on next page)</i>				

Nilpotent orbits in type <i>FI</i> (continued)				
Orbits	Diagram	i	$\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$	Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{p}_{\mathbb{C}}$
		18	1	$(0, 2, -1, 1)$
		22	1	$(0, 0, 1, 1)$

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