

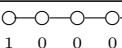
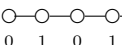
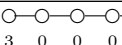
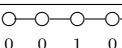
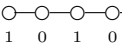
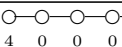
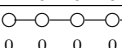
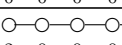
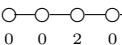
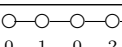
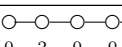
# PREHOMOGENEOUS SPACES ASSOCIATED WITH NILPOTENT ORBITS IN TYPE EV

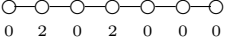
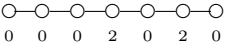
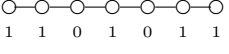
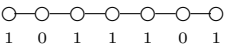
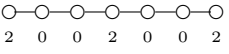
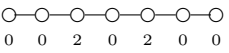
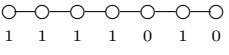
STEVEN GLENN JACKSON AND ALFRED G. NOËL

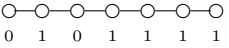
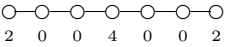
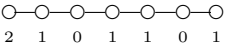
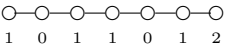
| Nilpotent orbits in type EV |                                                                                                                         |     |                                                                   |                                                                                   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Orbit                       | $K_{\mathbb{C}}$ diagram                                                                                                | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$   |
| 1.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 \end{array}$ | 1   | 16                                                                | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 2.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 0 & 1 & 0 & 0 & 0 & 1 & 0 \end{array}$ | 1   | 16                                                                | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                              |
|                             |                                                                                                                         | 2   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 3.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 0 & 2 & 0 & 0 & 0 & 0 & 0 \end{array}$ | 2   | 12                                                                | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 4.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 0 & 0 & 0 & 0 & 0 & 2 & 0 \end{array}$ | 2   | 12                                                                | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 5.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 1 & 0 & 0 & 1 & 0 & 0 & 1 \end{array}$ | 1   | 15                                                                | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$ |
|                             |                                                                                                                         | 2   | 6                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                              |
|                             |                                                                                                                         | 3   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 6.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 2 & 0 & 0 & 0 & 0 & 0 & 2 \end{array}$ | 2   | 12                                                                | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                              |
|                             |                                                                                                                         | 4   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 7.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 0 & 0 & 0 & 2 & 0 & 0 & 0 \end{array}$ | 2   | 16                                                                | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 8.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 1 & 1 & 0 & 0 & 1 & 0 & 0 \end{array}$ | 1   | 13                                                                | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$ |
|                             |                                                                                                                         | 2   | 6                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                              |
|                             |                                                                                                                         | 3   | 3                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 9.                          | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 0 & 0 & 1 & 0 & 0 & 1 & 1 \end{array}$ | 1   | 13                                                                | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                             |                                                                                                                         | 2   | 6                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                              |
|                             |                                                                                                                         | 3   | 3                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                           |
| 10.                         | $\begin{array}{ccccccc} \circ & \circ & \circ & \circ & \circ & \circ & \circ \\ 2 & 0 & 1 & 0 & 0 & 0 & 1 \end{array}$ | 1   | 12                                                                | $(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                             |
|                             |                                                                                                                         | 2   | 4                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                              |
|                             |                                                                                                                         | 3   | 4                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                          |
| (continued on next page)    |                                                                                                                         |     |                                                                   |                                                                                   |

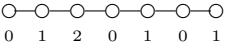
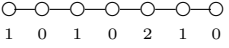
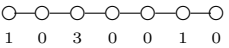
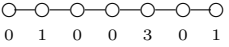
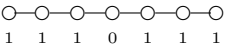
2000 *Mathematics Subject Classification.* 17B05;17B10;17B20;22E30.

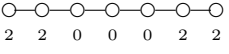
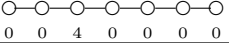
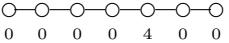
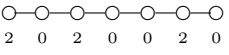
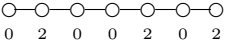
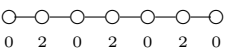
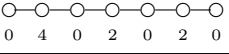
*Key words and phrases.* Lie group, nilpotent orbit, prehomogeneous space.

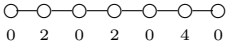
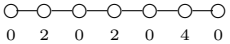
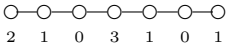
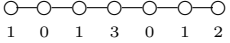
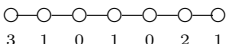
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                |
| 11.                                     |    | 1   | 12                                                                | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$                                                          |
|                                         |                                                                                     | 2   | 4                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                           |
|                                         |                                                                                     | 3   | 4                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                       |
|                                         |                                                                                     | 4   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 12.                                     |    | 1   | 12                                                                | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 2   | 8                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 3   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 13.                                     |    | 1   | 12                                                                | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                       |
|                                         |                                                                                     | 3   | 4                                                                 | $(1, 0, 0, 1, -1, 0, 0)$                                                                                       |
|                                         |                                                                                     | 4   | 3                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 14.                                     |    | 1   | 12                                                                | $(1, 0, 0, 0, 0, 1, -1)$                                                                                       |
|                                         |                                                                                     | 3   | 4                                                                 | $(0, 0, -1, 1, 0, 0, 1)$                                                                                       |
|                                         |                                                                                     | 4   | 3                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 15.                                     |   | 1   | 12                                                                | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
|                                         |                                                                                     | 2   | 8                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                              |
|                                         |                                                                                     | 3   | 4                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 16.                                     |  | 4   | 7                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 17.                                     |  | 4   | 7                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 18.                                     |  | 2   | 16                                                                | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 3                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 19.                                     |  | 2   | 16                                                                | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 3                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 20.                                     |  | 1   | 8                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 2   | 4                                                                 | $(0, -1, 1, 0, 1, -1, 0)$                                                                                      |
|                                         |                                                                                     | 3   | 8                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| 21.                                     |  | 2   | 16                                                                | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                        |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                |

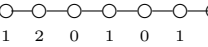
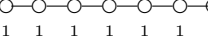
| Nilpotent orbits in type <b>EV</b> (continued) |                                                                                     |     |                                                                   |                                                                                                                                             |
|------------------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                          | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
| 22.                                            |    | 2   | 12                                                                | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 4   | 8                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 23.                                            |    | 2   | 12                                                                | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                        |
|                                                |                                                                                     | 4   | 8                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 24.                                            |    | 1   | 10                                                                | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                                |                                                                                     | 2   | 8                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                                |                                                                                     | 3   | 5                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 4   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 5   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 25.                                            |  | 1   | 9                                                                 | $(0, 0, -1, 2, -1, 0, 0)$<br>$(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
|                                                |                                                                                     | 2   | 6                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                                |                                                                                     | 3   | 6                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 4   | 4                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 5   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 26.                                            |  | 2   | 15                                                                | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                                |                                                                                     | 4   | 6                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 6   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 27.                                            |  | 2   | 12                                                                | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 4   | 9                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 28.                                            |  | 1   | 9                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$ |
| (continued on next page)                       |                                                                                     |     |                                                                   |                                                                                                                                             |

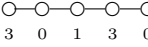
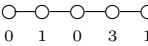
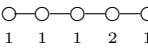
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
|                                         |                                                                                     | 2   | 6                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                              |
|                                         |                                                                                     | 3   | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 4                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 29.                                     |    | 1   | 9                                                                 | $(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                                                                                     | 2   | 6                                                                 | $(0, 0, 0, -1, 1, 1, -1)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 3   | 5                                                                 | $(0, -1, 1, 0, 0, 1, -1)$<br>$(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 4                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 30.                                     |  | 2   | 6                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                        |
|                                         |                                                                                     | 4   | 9                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$                                                                                                                   |
|                                         |                                                                                     | 6   | 6                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 31.                                     |  | 1   | 8                                                                 | $(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                             |
|                                         |                                                                                     | 2   | 7                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 3   | 6                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 2                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                    |
|                                         |                                                                                     | 6   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 32.                                     |  | 1   | 8                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$                             |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                                             |

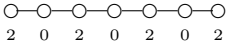
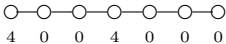
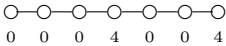
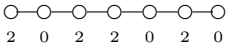
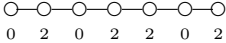
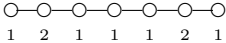
| Nilpotent orbits in type <b>EV</b> (continued) |                                                                                     |     |                                                                   |                                                                                                                                                                          |
|------------------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                          | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                          |
|                                                |                                                                                     | 2   | 7                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                                                           |
|                                                |                                                                                     | 3   | 6                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                        |
|                                                |                                                                                     | 4   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 5   | 2                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                 |
|                                                |                                                                                     | 6   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 33.                                            |    | 1   | 8                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                                                        |
|                                                |                                                                                     | 2   | 4                                                                 | $(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                                                    |
|                                                |                                                                                     | 3   | 6                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                                                                                                                    |
|                                                |                                                                                     | 4   | 5                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 34.                                            |  | 1   | 8                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                                                        |
|                                                |                                                                                     | 2   | 4                                                                 | $(0, 0, -1, 1, 1, -1, 0)$<br>$(1, 0, 0, 1, -1, 0, 0)$                                                                                                                    |
|                                                |                                                                                     | 3   | 6                                                                 | $(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                                                    |
|                                                |                                                                                     | 4   | 5                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 35.                                            |  | 1   | 8                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 3   | 6                                                                 | $(-1, 1, 0, 0, 1, -1, 0)$                                                                                                                                                |
|                                                |                                                                                     | 4   | 7                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 36.                                            |  | 1   | 8                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                                                                                     |
|                                                |                                                                                     | 3   | 6                                                                 | $(0, -1, 1, 0, 0, 1, -1)$                                                                                                                                                |
|                                                |                                                                                     | 4   | 7                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 37.                                            |  | 1   | 8                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
| (continued on next page)                       |                                                                                     |     |                                                                   |                                                                                                                                                                          |

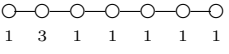
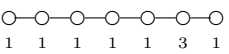
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
|                                         |                                                                                     | 2   | 7                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
|                                         |                                                                                     | 3   | 6                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                              |
|                                         |                                                                                     | 4   | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 5   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 6   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     |     |                                                                   |                                                                                                                                             |
| 38.                                     |    | 2   | 10                                                                | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$                              |
|                                         |                                                                                     | 4   | 9                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 39.                                     |  | 4   | 15                                                                | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 40.                                     |  | 4   | 15                                                                | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 41.                                     |  | 2   | 14                                                                | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 7                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 42.                                     |  | 2   | 14                                                                | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                           |
|                                         |                                                                                     | 4   | 7                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 43.                                     |  | 2   | 12                                                                | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 4   | 8                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 6   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 44.                                     |  | 2   | 8                                                                 | $(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                       |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                                             |

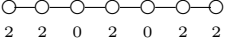
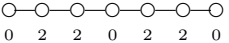
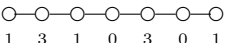
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                    |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$    |
|                                         |    | 4   | 8                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                               |
|                                         |                                                                                     | 6   | 4                                                                 | $(1, 0, 0, 0, 1, -1, 0)$                                                           |
|                                         |                                                                                     | 8   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                            |
|                                         |                                                                                     |     |                                                                   |                                                                                    |
| 45.                                     |    | 2   | 8                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$                              |
|                                         |                                                                                     | 4   | 8                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                               |
|                                         |                                                                                     | 6   | 4                                                                 | $(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 8   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                            |
| 46.                                     |    | 1   | 6                                                                 | $(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
|                                         |                                                                                     | 2   | 2                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                               |
|                                         |                                                                                     | 3   | 4                                                                 | $(0, -1, 1, 1, -1, 0, 0)$<br>$(1, 0, 1, -1, 0, 0, 0)$                              |
|                                         |                                                                                     | 4   | 5                                                                 | $(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                             |
|                                         |                                                                                     | 5   | 4                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                              |
|                                         |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                               |
|                                         |                                                                                     | 7   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                           |
|                                         |                                                                                     | 8   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                            |
| 47.                                     |  | 1   | 6                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$ |
|                                         |                                                                                     | 2   | 2                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                               |
|                                         |                                                                                     | 3   | 4                                                                 | $(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 4   | 5                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(-1, 1, 0, 0, 1, -1, 0)$                             |
|                                         |                                                                                     | 5   | 4                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$                              |
|                                         |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                               |
|                                         |                                                                                     | 7   | 2                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 8   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                            |
| 48.                                     |  | 1   | 7                                                                 | $(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                                                                                     | 2   | 4                                                                 | $(0, 0, 0, -1, 1, 1, -1)$<br>$(-1, 1, 0, 0, 1, -1, 0)$                             |
|                                         |                                                                                     | 3   | 5                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$  |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                    |

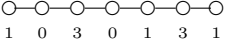
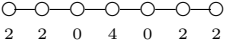
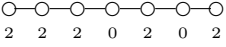
| Nilpotent orbits in type EV (continued) |                                                                                     |                          |                                                                   |                                                                                                                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$                      | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                                                       |
|                                         |                                                                                     | 4                        | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 5                        | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     | 7                        | 1                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                                                                              |
|                                         |                                                                                     | 8                        | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                                               |
| 49.                                     |    | 1                        | 7                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, -1, 1, 0, 1, -1, 0)$                                                                                                                    |
|                                         |                                                                                     | 2                        | 4                                                                 | $(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                                                                                                                                                |
|                                         |                                                                                     | 3                        | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                                                                                                                     |
|                                         |                                                                                     | 4                        | 5                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 5                        | 3                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     | 7                        | 1                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                                              |
|                                         |                                                                                     | 8                        | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                                               |
| 50.                                     |  | 1                        | 7                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                                                                                     | 2                        | 6                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 3                        | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 4                        | 4                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 5                        | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 6                        | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     | (continued on next page) |                                                                   |                                                                                                                                                                                                       |

| Nilpotent orbits in type EV (continued) |                                                                                   |     |                                                                                     |                                                                                                                                             |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                          | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                   | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
| 51.                                     |  | 7   | 1                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                   | 1   | 6                                                                                   | $(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                       |
|                                         |                                                                                   | 3   | 4                                                                                   | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$                                                                                       |
|                                         |                                                                                   | 4   | 7                                                                                   | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                   | 5   | 4                                                                                   | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                    |
|                                         |                                                                                   | 7   | 2                                                                                   | $(1, 0, 0, 0, 1, -1, 0)$                                                                                                                    |
|                                         |                                                                                   | 8   | 2                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 52.                                     |  | 1   | 6                                                                                   | $(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$                                                                                       |
|                                         |                                                                                   | 3   | 4                                                                                   | $(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                                                       |
|                                         |                                                                                   | 4   | 7                                                                                   | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                   | 5   | 4                                                                                   | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                    |
|                                         |                                                                                   | 7   | 2                                                                                   | $(0, -1, 1, 0, 0, 0, 1)$                                                                                                                    |
|                                         |                                                                                   | 8   | 2                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                   | 53. |  | 1                                                                                                                                           |
| 2                                       | 5                                                                                 |     |                                                                                     | $(0, 0, -1, 2, -1, 0, 0)$<br>$(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
| 3                                       | 4                                                                                 |     |                                                                                     | $(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
| 4                                       | 3                                                                                 |     |                                                                                     | $(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$                                                         |
| 5                                       | 4                                                                                 |     |                                                                                     | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                              |
| 6                                       | 3                                                                                 |     |                                                                                     | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
| 7                                       | 2                                                                                 |     |                                                                                     | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
| 8                                       | 1                                                                                 |     |                                                                                     | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| (continued on next page)                |                                                                                   |     |                                                                                     |                                                                                                                                             |

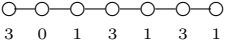
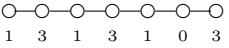
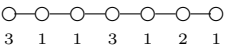
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
| 54.                                     |    | 2   | 12                                                                | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 4   | 8                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 6   | 4                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 55.                                     |    | 4   | 15                                                                | $(1, 0, 1, -1, 1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 0, 0, 0, 1)$                                                                                  |
|                                         |                                                                                     | 8   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 0, 1)$                                                                                                                  |
| 56.                                     |    | 4   | 15                                                                | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 4                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 57.                                     |    | 2   | 10                                                                | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 4   | 7                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 6   | 6                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 58.                                     |  | 2   | 10                                                                | $(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 4   | 7                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 6   | 6                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 2                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 59.                                     |  | 1   | 5                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                                                                                     | 2   | 4                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$                            |
|                                         |                                                                                     | 3   | 5                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                                             |

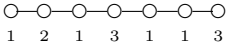
| Nilpotent orbits in type <b>EV</b> (continued) |                                                                                     |     |                                                                   |                                                                                                                                                                          |
|------------------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                          | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                          |
|                                                |                                                                                     | 4   | 4                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                                |                                                                                     | 5   | 4                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 7   | 1                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$                                                                                                                                                |
|                                                |                                                                                     | 8   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 9   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                                |                                                                                     |     |                                                                   |                                                                                                                                                                          |
| 60.                                            |    | 1   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                                |                                                                                     | 2   | 4                                                                 | $(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                          |
|                                                |                                                                                     | 3   | 4                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                          |
|                                                |                                                                                     | 4   | 4                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 5   | 3                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 6   | 2                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$                                                                                                                    |
|                                                |                                                                                     | 7   | 2                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$                                                                                                                    |
|                                                |                                                                                     | 8   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     | 9   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 61.                                            |  | 1   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
| (continued on next page)                       |                                                                                     |     |                                                                   |                                                                                                                                                                          |

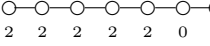
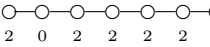
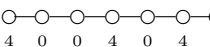
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                             |                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_C$ diagram                                                                       | $i$ | $\dim \mathfrak{g}_C^i \cap \mathfrak{k}_C$ | Highest weights of $\mathfrak{g}_C^i \cap \mathfrak{k}_C$                                                                                   |
|                                         |                                                                                     | 2   | 4                                           | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$                             |
|                                         |                                                                                     | 3   | 4                                           | $(0, 0, 0, 0, -1, 2, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$                             |
|                                         |                                                                                     | 4   | 4                                           | $(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 5   | 3                                           | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 6   | 2                                           | $(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                       |
|                                         |                                                                                     | 7   | 2                                           | $(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                       |
|                                         |                                                                                     | 8   | 2                                           | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 9   | 1                                           | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 62.                                     |  | 2   | 10                                          | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                                                                                     | 4   | 8                                           | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 6   | 5                                           | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 8   | 2                                           | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 10  | 1                                           | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 63.                                     |  | 2   | 8                                           | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 4   | 9                                           | $(0, -1, 1, 0, 1, -1, 0)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 6   | 4                                           | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 8   | 4                                           | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 64.                                     |  | 1   | 5                                           | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                           |
| (continued on next page)                |                                                                                     |     |                                             |                                                                                                                                             |

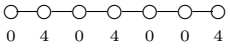
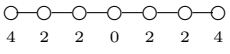
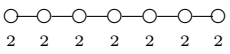
| Nilpotent orbits in type <b>EV</b> (continued) |                                                                                     |     |                                                                   |                                                                                                                                             |
|------------------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                          | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
|                                                |                                                                                     | 3   | 5                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$                                                                                      |
|                                                |                                                                                     | 4   | 7                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                              |
|                                                |                                                                                     | 5   | 3                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 7   | 2                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$                                                                                                                   |
|                                                |                                                                                     | 8   | 3                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 9   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                                |                                                                                     |     |                                                                   |                                                                                                                                             |
| 65.                                            |    | 1   | 5                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                                                           |
|                                                |                                                                                     | 3   | 5                                                                 | $(0, 0, 0, 0, -1, 2, -1)$<br>$(-1, 1, 0, 1, -1, 0, 0)$                                                                                      |
|                                                |                                                                                     | 4   | 7                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                                |                                                                                     | 5   | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 7   | 2                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$                                                                                                                   |
|                                                |                                                                                     | 8   | 3                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 9   | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 66.                                            |  | 2   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$                              |
|                                                |                                                                                     | 4   | 8                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                                |                                                                                     | 6   | 4                                                                 | $(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                                                                                      |
|                                                |                                                                                     | 8   | 5                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 10  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 12  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 67.                                            |  | 2   | 10                                                                | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
| (continued on next page)                       |                                                                                     |     |                                                                   |                                                                                                                                             |

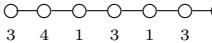
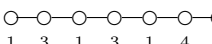
| Nilpotent orbits in type EV (continued) |                          |     |                                                                   |                                                                                                                                                                          |
|-----------------------------------------|--------------------------|-----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                          |
|                                         |                          | 4   | 7                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                          | 6   | 5                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                          | 8   | 3                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                          | 10  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 68.                                     |                          | 2   | 10                                                                | $(0, 0, 0, 0, -1, 2, -1)$<br>$(1, 1, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                              |
|                                         |                          | 4   | 7                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                           |
|                                         |                          | 6   | 5                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
|                                         |                          | 8   | 3                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                          | 10  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 69.                                     |                          | 4   | 15                                                                | $(1, 0, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                          | 8   | 6                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 70.                                     |                          | 4   | 15                                                                | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                                                     |
|                                         |                          | 8   | 6                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 71.                                     |                          | 2   | 8                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                          | 4   | 7                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                          | 6   | 6                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                          | 8   | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
| (continued on next page)                |                          |     |                                                                   |                                                                                                                                                                          |

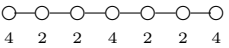
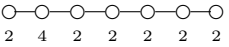
| Nilpotent orbits in type <b>EV</b> (continued) |                                                                                     |     |                                                                   |                                                                                                                                             |
|------------------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                          | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                             |
|                                                |                                                                                     | 10  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                        |
|                                                |                                                                                     | 12  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 72.                                            |    | 1   | 4                                                                 | $(0, 0, 0, -1, 2, -1, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                                                          |
|                                                |                                                                                     | 3   | 4                                                                 | $(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(1, 1, -1, 0, 0, 0, 0)$                                                          |
|                                                |                                                                                     | 4   | 6                                                                 | $(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
|                                                |                                                                                     | 5   | 3                                                                 | $(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                                                       |
|                                                |                                                                                     | 7   | 2                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$                                                                                       |
|                                                |                                                                                     | 8   | 4                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 9   | 2                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                    |
|                                                |                                                                                     | 11  | 1                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                    |
|                                                |                                                                                     | 12  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 73.                                            |  | 1   | 4                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$                                                          |
|                                                |                                                                                     | 3   | 4                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                          |
|                                                |                                                                                     | 4   | 6                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$ |
|                                                |                                                                                     | 5   | 3                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                                                                                       |
|                                                |                                                                                     | 7   | 2                                                                 | $(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                       |
|                                                |                                                                                     | 8   | 4                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                           |
|                                                |                                                                                     | 9   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                    |
|                                                |                                                                                     | 11  | 1                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                    |
|                                                |                                                                                     | 12  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                     |
| 74.                                            |  | 1   | 4                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                             |
| (continued on next page)                       |                                                                                     |     |                                                                   |                                                                                                                                             |

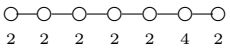
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                 |
|                                         |                                                                                     | 2   | 2                                                                 | $(0, 0, 0, 0, -1, 2, -1)$<br>$(-1, 1, 1, -1, 0, 0, 0)$                                                          |
|                                         |                                                                                     | 3   | 4                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$  |
|                                         |                                                                                     | 4   | 4                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$  |
|                                         |                                                                                     | 5   | 3                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$                              |
|                                         |                                                                                     | 6   | 2                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(-1, 1, 0, 0, 1, -1, 0)$                                                          |
|                                         |                                                                                     | 7   | 2                                                                 | $(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 8   | 3                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                               |
|                                         |                                                                                     | 9   | 2                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                            |
|                                         |                                                                                     | 11  | 1                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                        |
|                                         |                                                                                     | 12  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                         |
| 75.                                     |  | 1   | 4                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$ |
|                                         |                                                                                     | 2   | 2                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$                                                          |
|                                         |                                                                                     | 3   | 4                                                                 | $(0, 0, -1, 2, -1, 0, 0)$<br>$(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$  |
|                                         |                                                                                     | 4   | 4                                                                 | $(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$  |
|                                         |                                                                                     | 5   | 3                                                                 | $(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 6   | 2                                                                 | $(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                                                          |
|                                         |                                                                                     | 7   | 2                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$                                                           |
|                                         |                                                                                     | 8   | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                               |
|                                         |                                                                                     | 9   | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                            |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                 |

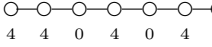
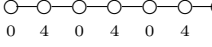
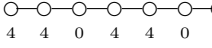
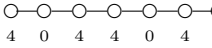
| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                                     |                                                                                                                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                   | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                          |
|                                         |                                                                                     | 11  | 1                                                                                   | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                 |
|                                         |                                                                                     | 12  | 1                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 76.                                     |    | 2   | 8                                                                                   | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |
|                                         |                                                                                     | 4   | 6                                                                                   | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 6   | 5                                                                                   | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 8   | 4                                                                                   | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 10  | 3                                                                                   | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 12  | 1                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     | 77. |  | 2                                                                                                                                                                        |
| 4                                       | 6                                                                                   |     |                                                                                     | $(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
| 6                                       | 5                                                                                   |     |                                                                                     | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
| 8                                       | 4                                                                                   |     |                                                                                     | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
| 10                                      | 3                                                                                   |     |                                                                                     | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
| 12                                      | 1                                                                                   |     |                                                                                     | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 78.                                     |  |     |                                                                                     | 4                                                                                                                                                                        |
|                                         |                                                                                     | 8   | 8                                                                                   | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
| (continued on next page)                |                                                                                     |     |                                                                                     |                                                                                                                                                                          |

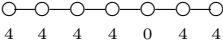
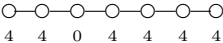
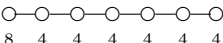
| Nilpotent orbits in type EV (continued) |                                                                                     |           |                                                                        |                                                                                                                                                                                         |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$<br>12 | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$<br>2 | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$<br>(1, 0, 0, 0, 0, 1)                                                                                   |
| 79.                                     |    | 4         | 13                                                                     | (1, 0, 1, -1, 0, 0, 0)<br>(0, -1, 1, 0, 0, 1, -1)<br>(0, 0, 0, -1, 1, 0, 1)                                                                                                             |
|                                         |                                                                                     | 8         | 8                                                                      | (1, 0, 0, 0, 0, 1, -1)<br>(0, -1, 1, 0, 0, 0, 1)                                                                                                                                        |
|                                         |                                                                                     | 12        | 2                                                                      | (1, 0, 0, 0, 0, 0, 1)                                                                                                                                                                   |
| 80.                                     |    | 2         | 6                                                                      | (-1, 2, -1, 0, 0, 0, 0)<br>(0, 0, 0, 0, -1, 2, -1)<br>(0, -1, 1, 1, -1, 0, 0)<br>(0, 0, -1, 1, 1, -1, 0)                                                                                |
|                                         |                                                                                     | 4         | 7                                                                      | (2, -1, 0, 0, 0, 0, 0)<br>(-1, 1, 0, 1, -1, 0, 0)<br>(0, -1, 1, 0, 1, -1, 0)<br>(0, 0, -1, 1, 0, 1, -1)<br>(0, 0, 0, 0, 0, -1, 2)                                                       |
|                                         |                                                                                     | 6         | 4                                                                      | (1, 1, -1, 0, 0, 0, 0)<br>(-1, 1, 0, 0, 1, -1, 0)<br>(0, -1, 1, 0, 0, 1, -1)<br>(0, 0, 0, 0, -1, 1, 1)                                                                                  |
|                                         |                                                                                     | 8         | 5                                                                      | (1, 0, 0, 1, -1, 0, 0)<br>(-1, 1, 0, 0, 0, 1, -1)<br>(0, 0, -1, 1, 0, 0, 1)                                                                                                             |
|                                         |                                                                                     | 10        | 2                                                                      | (1, 0, 0, 0, 1, -1, 0)<br>(0, -1, 1, 0, 0, 0, 1)                                                                                                                                        |
|                                         |                                                                                     | 12        | 2                                                                      | (1, 0, 0, 0, 0, 1, -1)<br>(-1, 1, 0, 0, 0, 0, 1)                                                                                                                                        |
|                                         |                                                                                     | 16        | 1                                                                      | (1, 0, 0, 0, 0, 0, 1)                                                                                                                                                                   |
| 81.                                     |  | 2         | 7                                                                      | (2, -1, 0, 0, 0, 0, 0)<br>(-1, 2, -1, 0, 0, 0, 0)<br>(0, -1, 2, -1, 0, 0, 0)<br>(0, 0, -1, 2, -1, 0, 0)<br>(0, 0, 0, -1, 2, -1, 0)<br>(0, 0, 0, 0, -1, 2, -1)<br>(0, 0, 0, 0, 0, -1, 2) |
|                                         |                                                                                     | 4         | 6                                                                      | (1, 1, -1, 0, 0, 0, 0)<br>(-1, 1, 1, -1, 0, 0, 0)<br>(0, -1, 1, 1, -1, 0, 0)<br>(0, 0, -1, 1, 1, -1, 0)<br>(0, 0, 0, -1, 1, 1, -1)<br>(0, 0, 0, 0, -1, 1, 1)                            |
|                                         |                                                                                     | 6         | 5                                                                      | (1, 0, 1, -1, 0, 0, 0)<br>(-1, 1, 0, 1, -1, 0, 0)<br>(0, -1, 1, 0, 1, -1, 0)<br>(0, 0, -1, 1, 0, 1, -1)<br>(0, 0, 0, -1, 1, 0, 1)                                                       |
|                                         |                                                                                     | 8         | 4                                                                      | (1, 0, 0, 1, -1, 0, 0)<br>(-1, 1, 0, 0, 1, -1, 0)<br>(0, -1, 1, 0, 0, 1, -1)<br>(0, 0, -1, 1, 0, 0, 1)                                                                                  |
| (continued on next page)                |                                                                                     |           |                                                                        |                                                                                                                                                                                         |

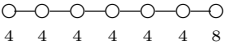
| Nilpotent orbits in type EV (continued) |                                                                                   |     |                                                                                     |                                                                                                                                              |   |                                                                                                                                              |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                          | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                   | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                              |   |                                                                                                                                              |
|                                         |                                                                                   | 10  | 3                                                                                   | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                            |   |                                                                                                                                              |
|                                         |                                                                                   | 12  | 2                                                                                   | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                         |   |                                                                                                                                              |
|                                         |                                                                                   | 14  | 1                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                      |   |                                                                                                                                              |
| 82.                                     |  | 1   | 3                                                                                   | $(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                                                           |   |                                                                                                                                              |
|                                         |                                                                                   | 3   | 3                                                                                   | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$                                                           |   |                                                                                                                                              |
|                                         |                                                                                   | 4   | 5                                                                                   | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$ |   |                                                                                                                                              |
|                                         |                                                                                   | 5   | 3                                                                                   | $(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |   |                                                                                                                                              |
|                                         |                                                                                   | 7   | 2                                                                                   | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$                                                                                        |   |                                                                                                                                              |
|                                         |                                                                                   | 8   | 4                                                                                   | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                               |   |                                                                                                                                              |
|                                         |                                                                                   | 9   | 2                                                                                   | $(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |   |                                                                                                                                              |
|                                         |                                                                                   | 11  | 1                                                                                   | $(1, 0, 0, 1, -1, 0, 0)$                                                                                                                     |   |                                                                                                                                              |
|                                         |                                                                                   | 12  | 2                                                                                   | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$                                                                                        |   |                                                                                                                                              |
|                                         |                                                                                   | 13  | 1                                                                                   | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |   |                                                                                                                                              |
|                                         |                                                                                   | 15  | 1                                                                                   | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                     |   |                                                                                                                                              |
|                                         |                                                                                   | 16  | 1                                                                                   | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                      |   |                                                                                                                                              |
|                                         |                                                                                   | 83. |  | 1                                                                                                                                            | 3 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$                                                           |
|                                         |                                                                                   |     |                                                                                     | 3                                                                                                                                            | 3 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$                                                           |
|                                         |                                                                                   |     |                                                                                     | 4                                                                                                                                            | 5 | $(0, 0, 0, 0, -1, 2, -1)$<br>$(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$ |
| 5                                       | 3                                                                                 |     |                                                                                     | $(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$                                                           |   |                                                                                                                                              |
| 7                                       | 2                                                                                 |     |                                                                                     | $(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                                                        |   |                                                                                                                                              |
|                                         |                                                                                   |     |                                                                                     |                                                                                                                                              |   |                                                                                                                                              |
| (continued on next page)                |                                                                                   |     |                                                                                     |                                                                                                                                              |   |                                                                                                                                              |

| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                          |
|                                         |                                                                                     | 8   | 4                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 9   | 2                                                                 | $(0, -1, 1, 0, 0, 1, -1)$<br>$(1, 0, 0, 0, 1, -1, 0)$                                                                                                                    |
|                                         |                                                                                     | 11  | 1                                                                 | $(0, 0, -1, 1, 0, 0, 1)$                                                                                                                                                 |
|                                         |                                                                                     | 12  | 2                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                    |
|                                         |                                                                                     | 13  | 1                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                                                 |
|                                         |                                                                                     | 15  | 1                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                 |
|                                         |                                                                                     | 16  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     |     |                                                                   |                                                                                                                                                                          |
| 84.                                     |    | 2   | 4                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$                                                         |
|                                         |                                                                                     | 4   | 5                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$                              |
|                                         |                                                                                     | 6   | 4                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                                                           |
|                                         |                                                                                     | 8   | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 10  | 2                                                                 | $(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$                                                                                                                   |
|                                         |                                                                                     | 12  | 3                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 14  | 2                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 16  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 20  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     |     |                                                                   |                                                                                                                                                                          |
| 85.                                     |  | 2   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                                                                          |

| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                          |
|                                         |                                                                                     | 4   | 5                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                             |
|                                         |                                                                                     | 6   | 5                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                              |
|                                         |                                                                                     | 8   | 4                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                           |
|                                         |                                                                                     | 10  | 3                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 12  | 2                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$                                                                                                                    |
|                                         |                                                                                     | 14  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
|                                         |                                                                                     | 16  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                  |
| 86.                                     |  | 2   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
|                                         |                                                                                     | 4   | 5                                                                 | $(0, 0, 0, 0, -1, 2, -1)$<br>$(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$                             |
|                                         |                                                                                     | 6   | 5                                                                 | $(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                              |
|                                         |                                                                                     | 8   | 4                                                                 | $(0, 0, -1, 1, 0, 1, -1)$<br>$(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                           |
|                                         |                                                                                     | 10  | 3                                                                 | $(0, -1, 1, 0, 0, 1, -1)$<br>$(1, 0, 0, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                        |
|                                         |                                                                                     | 12  | 2                                                                 | $(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                    |
|                                         |                                                                                     | 14  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                     |
| (continued on next page)                |                                                                                     |     |                                                                   |                                                                                                                                                                          |

| Nilpotent orbits in type EV (continued) |                                                                                     |           |                                                                        |                                                                                                                                   |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$<br>16 | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$<br>1 | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$<br>(1, 0, 0, 0, 0, 0, 1)                          |
| 87.                                     |    | 4         | 11                                                                     | (2, -1, 0, 0, 0, 0, 0)<br>(-1, 1, 1, -1, 0, 0, 0)<br>(0, -1, 1, 0, 1, -1, 0)<br>(0, 0, 0, -1, 1, 0, 1)                            |
|                                         |                                                                                     | 8         | 8                                                                      | (1, 0, 1, -1, 0, 0, 0)<br>(-1, 1, 0, 0, 1, -1, 0)<br>(0, -1, 1, 0, 0, 0, 1)                                                       |
|                                         |                                                                                     | 12        | 4                                                                      | (1, 0, 0, 0, 1, -1, 0)<br>(-1, 1, 0, 0, 0, 0, 1)                                                                                  |
|                                         |                                                                                     | 16        | 2                                                                      | (1, 0, 0, 0, 0, 0, 1)                                                                                                             |
| 88.                                     |    | 4         | 11                                                                     | (0, 0, 0, -1, 1, 1, -1)<br>(1, 0, 1, -1, 0, 0, 0)<br>(0, -1, 1, 0, 1, -1, 0)<br>(0, 0, 0, 0, 0, -1, 2)                            |
|                                         |                                                                                     | 8         | 8                                                                      | (0, -1, 1, 0, 0, 1, -1)<br>(1, 0, 0, 0, 1, -1, 0)<br>(0, 0, 0, -1, 1, 0, 1)                                                       |
|                                         |                                                                                     | 12        | 4                                                                      | (1, 0, 0, 0, 0, 1, -1)<br>(0, -1, 1, 0, 0, 0, 1)                                                                                  |
|                                         |                                                                                     | 16        | 2                                                                      | (1, 0, 0, 0, 0, 0, 1)                                                                                                             |
| 89.                                     |  | 4         | 9                                                                      | (2, -1, 0, 0, 0, 0, 0)<br>(-1, 1, 1, -1, 0, 0, 0)<br>(0, -1, 1, 1, -1, 0, 0)<br>(0, 0, 0, -1, 1, 1, -1)<br>(0, 0, 0, 0, -1, 1, 1) |
|                                         |                                                                                     | 8         | 8                                                                      | (1, 0, 1, -1, 0, 0, 0)<br>(-1, 1, 0, 1, -1, 0, 0)<br>(0, -1, 1, 0, 0, 1, -1)<br>(0, 0, 0, -1, 1, 0, 1)                            |
|                                         |                                                                                     | 12        | 5                                                                      | (1, 0, 0, 1, -1, 0, 0)<br>(-1, 1, 0, 0, 0, 1, -1)<br>(0, -1, 1, 0, 0, 0, 1)                                                       |
|                                         |                                                                                     | 16        | 3                                                                      | (1, 0, 0, 0, 0, 1, -1)<br>(-1, 1, 0, 0, 0, 0, 1)                                                                                  |
|                                         |                                                                                     | 20        | 1                                                                      | (1, 0, 0, 0, 0, 0, 1)                                                                                                             |
| 90.                                     |  | 4         | 9                                                                      | (1, 1, -1, 0, 0, 0, 0)<br>(-1, 1, 1, -1, 0, 0, 0)<br>(0, 0, -1, 1, 1, -1, 0)<br>(0, 0, 0, -1, 1, 1, -1)<br>(0, 0, 0, 0, 0, -1, 2) |
|                                         |                                                                                     | 8         | 8                                                                      | (1, 0, 1, -1, 0, 0, 0)<br>(0, 0, -1, 1, 0, 1, -1)<br>(-1, 1, 0, 0, 1, -1, 0)<br>(0, 0, 0, -1, 1, 0, 1)                            |
|                                         |                                                                                     | 12        | 5                                                                      | (1, 0, 0, 0, 1, -1, 0)<br>(-1, 1, 0, 0, 0, 1, -1)<br>(0, 0, -1, 1, 0, 0, 1)                                                       |
|                                         |                                                                                     | 16        | 3                                                                      | (1, 0, 0, 0, 0, 1, -1)<br>(-1, 1, 0, 0, 0, 0, 1)                                                                                  |
| (continued on next page)                |                                                                                     |           |                                                                        |                                                                                                                                   |

| Nilpotent orbits in type <b>EV</b> (continued) |                                                                                     |     |                                                                   |                                                                                                                                                                           |
|------------------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                          | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                           |
|                                                |                                                                                     | 20  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                   |
| 91.                                            |    | 4   | 8                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$  |
|                                                |                                                                                     | 8   | 7                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                               |
|                                                |                                                                                     | 12  | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                            |
|                                                |                                                                                     | 16  | 4                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                         |
|                                                |                                                                                     | 20  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                      |
|                                                |                                                                                     | 24  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                   |
| 92.                                            |  | 4   | 8                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, 0, 0, 0, -1, 2)$  |
|                                                |                                                                                     | 8   | 7                                                                 | $(0, 0, 0, -1, 1, 1, -1)$<br>$(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, 0, 0, -1, 1, 1)$                               |
|                                                |                                                                                     | 12  | 5                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                            |
|                                                |                                                                                     | 16  | 4                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                         |
|                                                |                                                                                     | 20  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                      |
|                                                |                                                                                     | 24  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                   |
| 93.                                            |  | 4   | 6                                                                 | $(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$ |
| (continued on next page)                       |                                                                                     |     |                                                                   |                                                                                                                                                                           |

| Nilpotent orbits in type EV (continued) |                                                                                     |     |                                                                   |                                                                                                                                                                           |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orbit                                   | $K_{\mathbb{C}}$ diagram                                                            | $i$ | $\dim \mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$ | Highest weights of $\mathfrak{g}_{\mathbb{C}}^i \cap \mathfrak{k}_{\mathbb{C}}$                                                                                           |
|                                         |                                                                                     | 8   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$  |
|                                         |                                                                                     | 12  | 5                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                               |
|                                         |                                                                                     | 16  | 4                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                            |
|                                         |                                                                                     | 20  | 3                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                         |
|                                         |                                                                                     | 24  | 2                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                      |
|                                         |                                                                                     | 28  | 1                                                                 | $(1, 0, 0, 0, 0, 1, -1)$                                                                                                                                                  |
|                                         |                                                                                     | 32  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                   |
| 94.                                     |  | 4   | 6                                                                 | $(2, -1, 0, 0, 0, 0, 0)$<br>$(-1, 2, -1, 0, 0, 0, 0)$<br>$(0, -1, 2, -1, 0, 0, 0)$<br>$(0, 0, -1, 2, -1, 0, 0)$<br>$(0, 0, 0, -1, 2, -1, 0)$<br>$(0, 0, 0, 0, -1, 2, -1)$ |
|                                         |                                                                                     | 8   | 6                                                                 | $(1, 1, -1, 0, 0, 0, 0)$<br>$(-1, 1, 1, -1, 0, 0, 0)$<br>$(0, -1, 1, 1, -1, 0, 0)$<br>$(0, 0, -1, 1, 1, -1, 0)$<br>$(0, 0, 0, -1, 1, 1, -1)$<br>$(0, 0, 0, 0, 0, -1, 2)$  |
|                                         |                                                                                     | 12  | 5                                                                 | $(1, 0, 1, -1, 0, 0, 0)$<br>$(-1, 1, 0, 1, -1, 0, 0)$<br>$(0, -1, 1, 0, 1, -1, 0)$<br>$(0, 0, -1, 1, 0, 1, -1)$<br>$(0, 0, 0, 0, -1, 1, 1)$                               |
|                                         |                                                                                     | 16  | 4                                                                 | $(1, 0, 0, 1, -1, 0, 0)$<br>$(-1, 1, 0, 0, 1, -1, 0)$<br>$(0, -1, 1, 0, 0, 1, -1)$<br>$(0, 0, 0, -1, 1, 0, 1)$                                                            |
|                                         |                                                                                     | 20  | 3                                                                 | $(1, 0, 0, 0, 1, -1, 0)$<br>$(-1, 1, 0, 0, 0, 1, -1)$<br>$(0, 0, -1, 1, 0, 0, 1)$                                                                                         |
|                                         |                                                                                     | 24  | 2                                                                 | $(1, 0, 0, 0, 0, 1, -1)$<br>$(0, -1, 1, 0, 0, 0, 1)$                                                                                                                      |
|                                         |                                                                                     | 28  | 1                                                                 | $(-1, 1, 0, 0, 0, 0, 1)$                                                                                                                                                  |
|                                         |                                                                                     | 32  | 1                                                                 | $(1, 0, 0, 0, 0, 0, 1)$                                                                                                                                                   |

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF MASSACHUSETTS, 100 MORRISSEY BOULEVARD,  
BOSTON, MA 02125-3393

*E-mail address:* `jackson@math.umb.edu`

*E-mail address:* `anoel@math.umb.edu`