## Star Distances and Magnitudes

For the stars in Orion listed below, complete the table and label the diagram with "other" star names listed in the table (looking south from SLU at 9 pm on January 25) by using Appendix 2 and Atlas Chart 24 in the Field Guide. ${ }^{31}$
in the Field Guide. ${ }^{31}$

| ApX. 2 in order of |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BAYER <br> DESIGNATION | RA | VISUAL <br> MAGNTUDE <br> $(V)$ | ABSOLUTE <br> MAGITUDE <br> $\left(M_{V}\right)$ | DISTANCE <br> $(\mathrm{ly})$ | OTHER NAME |
| $\alpha$ Ori | $5^{h} 51^{m}$ | 0.5 | -5.0 | 522 | Betelgeuse |
| $\beta$ Ori | $5^{h} 15^{m}$ | 0.12 | -6.6 | 773 | Rigel |
| $\gamma$ Ori | $5^{h} 25^{m}$ | 1.64 | -2.8 | 243 | Bellatrix |
| $\kappa$ Ori | $5^{h} 48^{m}$ | 2.06 | -5.0 | 815 | Saiph |
| $\delta$ Ori | $5^{h} 32^{m}$ | 2.23 | -5.4 | 916 | Mintaka |
| $\varepsilon$ Ori | $5^{h} 36^{m}$ | 1.70 | -6.6 | 1342 | Alnilam |
| $\zeta$ Ori | $5^{h} 41^{m}$ | 2.05 | -5.5 | 817 | Alnitak |



List the stars in the above table in order of distance from the sun. (use the Bayer Designation ... both Greek letter and Constellation abbreviation). ${ }^{8}$
NEAREST

| Bellatrix | Betelgeuse | Rigel | Saiph | Alnitak | Mintaka | Alnilam |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

List the stars in the above table in order of increasing brightness as seen in the sky. ${ }^{8}$

| BRIGHTEST |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rigel | Betelgeuse | Bellatrix | Alnilam | Alnitak | Saiph | Mintaka |

List the stars in the above table in order of increasing brightness if they were all at the same distance (eg. 32.6 ly). ${ }^{8}$

| BRIGHTEST |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rigel Alnilam Alnitak Mintaka <br> Detelgeuse Saiph Bellatrix  |

