**Open Clusters**

In our Milky Way Galaxy, stars are found in two types of groupings, open and globular clusters. In this exercise, you will examine the characteristics of open clusters.

On a separate page, you have a blank grid which shows our Milky Way galaxy. The North Pole of the galaxy is at the very top and the South Pole at the bottom. The equator of the galaxy splits top and bottom across the middle. Plot the clusters found in Table 1 on the equal area projection of the celestial sphere than answer the following questions.

In what part of the galaxy are most open clusters found?

If you could describe a center of your plotted clusters, where would that center be? Or is it more like a line. Describe that line.

**Table I**

Positions of 33 Open Clusters

|  |  |  |
| --- | --- | --- |
| **Name** | **Galactic Longitude** | **Galactic Latitude** |
| Berkley 59 | 118 | 5 |
| NGC381 | 125 | -1 |
| NGC884 C Per | 135 | -4 |
| NGC1 342 | 155 | -15 |
| Berkley 15 | 162 | 1 |
| Collinder 69 | 195 | -12 |
| Collinder 89 | 188 | 4 |
| vdBergh 83 | 237 | -14 |
| Biurakan 13 | 214 | 2 |
| NGC2362 | 238 | -6 |
| Bochum 4 | 232 | 1 |
| NGC2451 | 252 | -7 |
| Ruprecht 46 | 238 | 6 |
| Collinder 185 | 255 | 0 |
| NGC2669 | 271 | -6 |
| vdb-Hagen 72 | 275 | -1 |
| Trumpler 12 | 284 | -4 |
| Bochum 11 | 288 | -1 |
| Loden336 | 291 | 2 |
| NGC4439 | 300 | 3 |
| Collinder 275 | 308 | 2 |
| Loden 1339 | 315 | -2 |
| Ruprecht 115 | 331 | -1 |
| vdb-Hagen 197 | 340 | 0 |
| NGC6334 | 351 | 0 |
| Ruprecht 129 | 0 | 0 |
| Collinder 367 | 7 | -2 |
| IC 4756 | 36 | 5 |
| Collinder 399 | 55 | 2 |
| Dolidze 2 | 78 | 4 |
| Berkley 90 | 85 | 4 |
| IC1 396 | 99 | 4 |