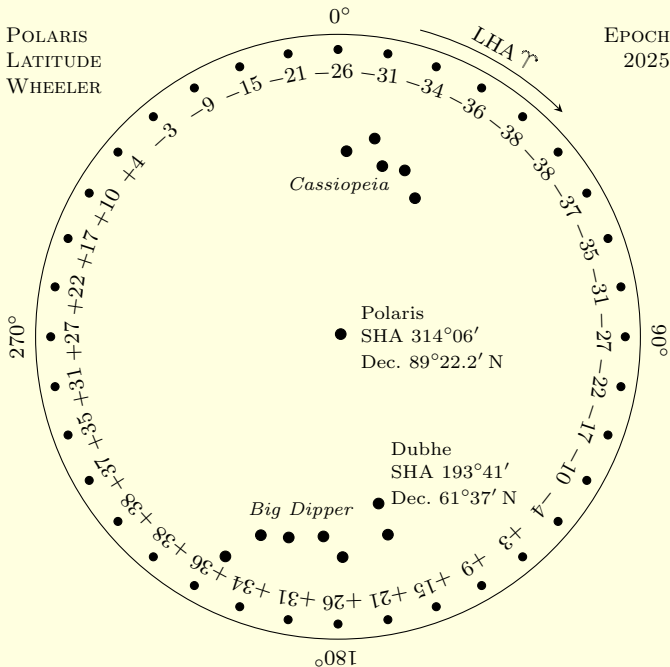


POLARIS  
LATITUDE  
WHEELER

EPOCH  
2025



Match Big Dipper  
in wheel with Big  
Dipper in sky.

Read minutes of  
correction (Q) for  
Polaris observation  
off top of wheel.

| He  | dip  | He   | dip  | Ha    | refr. | Ha  | refr. |
|-----|------|------|------|-------|-------|-----|-------|
| (m) |      | (ft) |      |       |       |     |       |
| 1.5 | 2.2' | 5    | 2.2' | 0°00' | 33.8' | 9°  | 5.9'  |
| 2   | 2.5' | 6    | 2.4' | 0°30' | 28.4' | 10° | 5.4'  |
| 2.5 | 2.8' | 8    | 2.7' | 1°00' | 24.1' | 12° | 4.5'  |
| 3   | 3.0' | 10   | 3.1' | 1°30' | 20.8' | 14° | 3.9'  |
| 3.5 | 3.3' | 12   | 3.4' | 2°00' | 18.1' | 16° | 3.4'  |
| 4   | 3.5' | 15   | 3.8' | 2°30' | 16.0' | 18° | 3.0'  |
|     |      |      |      | 3°    | 14.3' | 20° | 2.7'  |
|     |      |      |      | 4°    | 11.7' | 25° | 2.1'  |
|     |      |      |      | 5°    | 9.9'  | 30° | 1.7'  |
|     |      |      |      | 6°    | 8.5'  | 40° | 1.2'  |
|     |      |      |      | 7°    | 7.4'  | 50° | 0.8'  |
|     |      |      |      | 8°    | 6.6'  | 60° | 0.6'  |

Height of eye: He, Sextant altitude: Hs,  
Index error: IE (− ON the arc, + OFF the arc)

Apparent altitude:  $Ha = Hs \pm IE - dip$

True altitude:  $Ho = Ha - refr.$

Latitude:  $Lat. = Ho \pm Q$