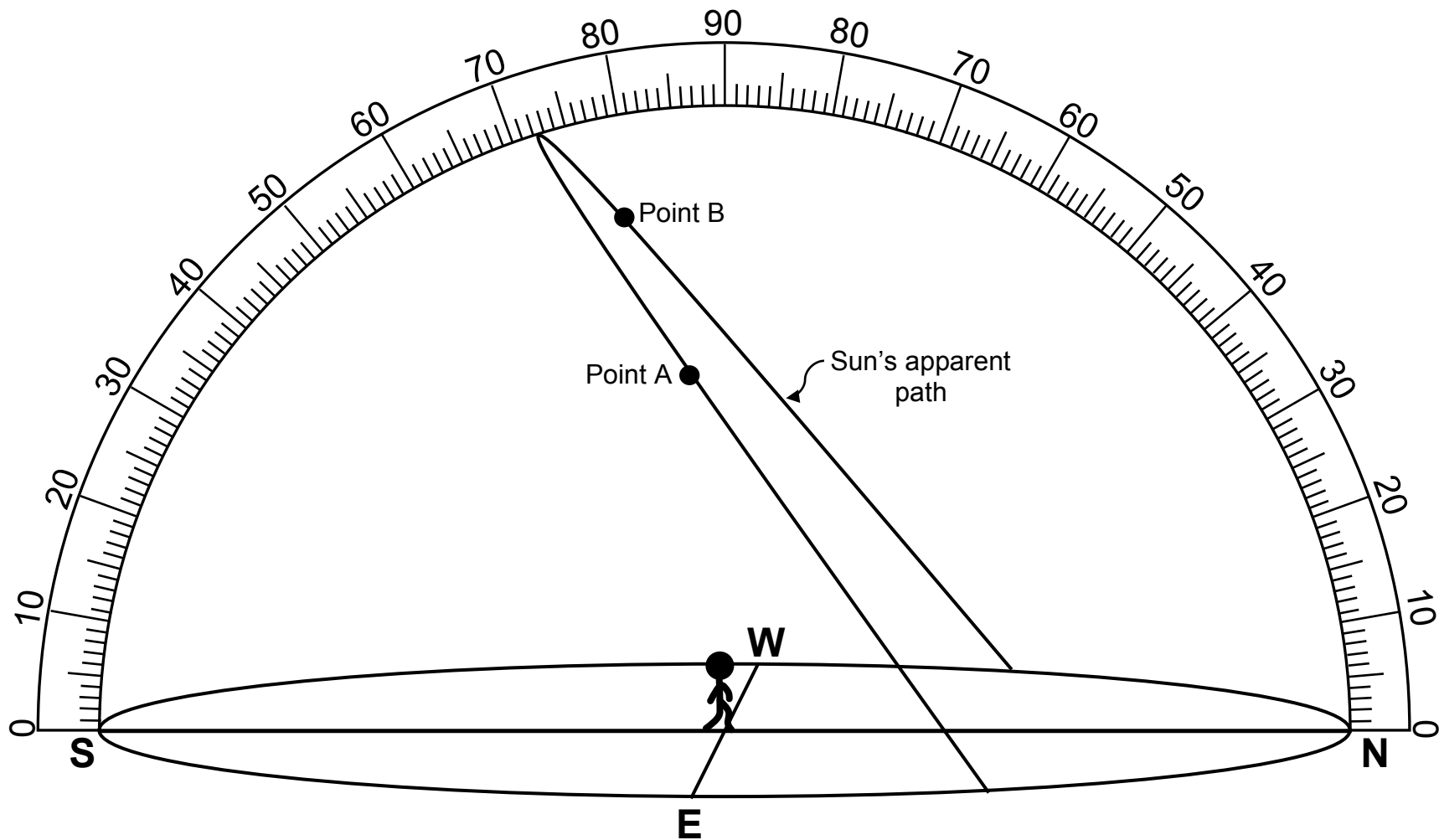


Station 1

The path of the Sun for the first day of a season in New York State is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the specific compass direction for sunrise and for sunset.
2. State the altitude of the Sun at noon.
3. Based on the direction of sunrise / sunset and the altitude of the noon Sun, state the date shown by this path of the Sun.
4. Point A marks the point on the arc that the Sun appeared at 9:00 a.m. on this day. Point B marks a time later in the day. The angular distance between point A and point B is 60° . Using this information and Earth's rate of rotation, calculate the time of the Sun at point B.

Station I

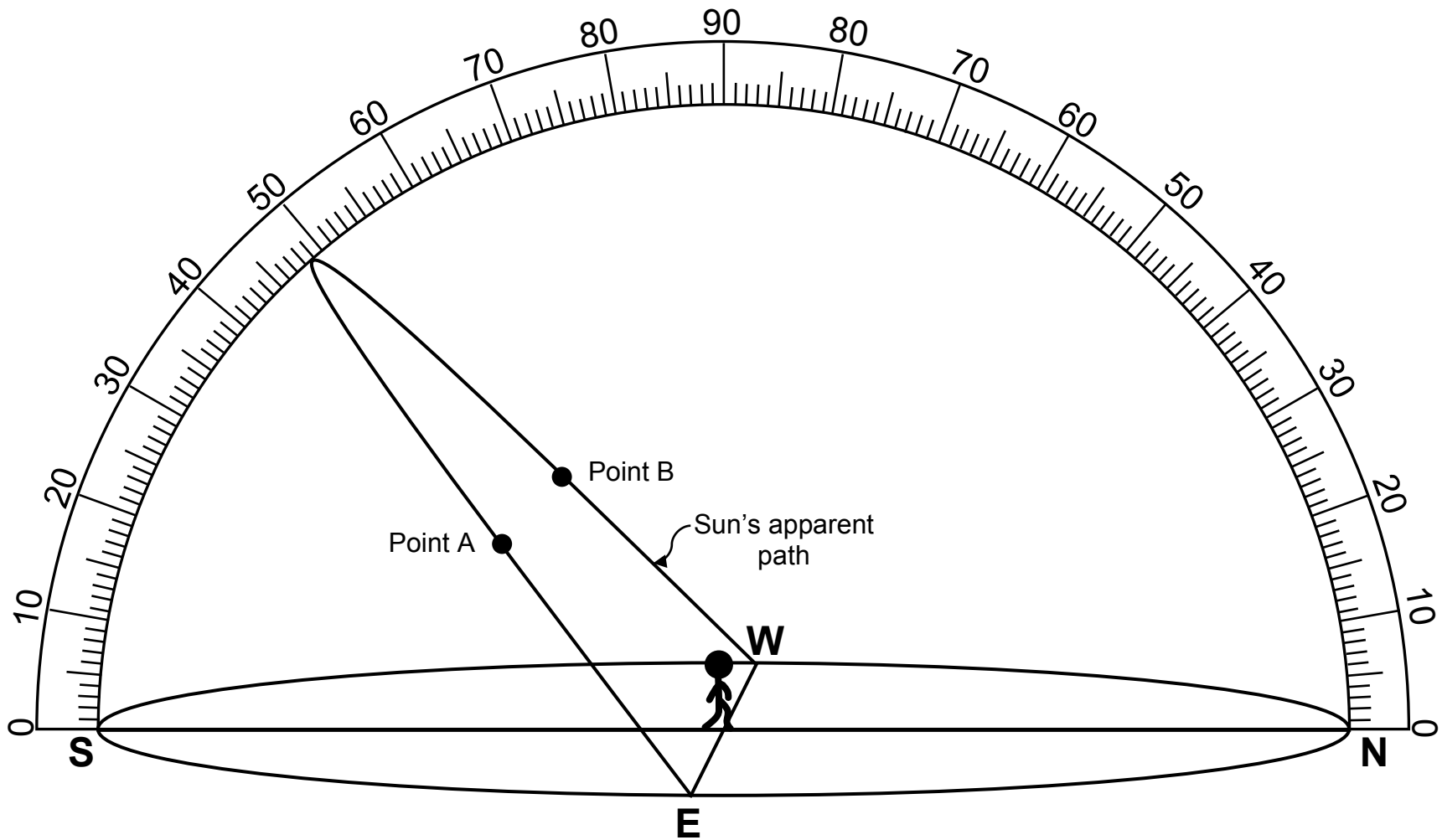


Station 2

The path of the Sun for the first day of a season in New York State is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the specific compass direction for sunrise and for sunset.
2. State the altitude of the Sun at noon.
3. Based on the direction of sunrise / sunset and the altitude of the noon Sun, state the date shown by this path of the Sun.
4. Point A marks the point on the arc that the Sun appeared at 9:00 a.m. on this day. Point B marks a time later in the day. The angular distance between point A and point B is 90° . Using this information and Earth's rate of rotation, calculate the time of the Sun at point B.

Station 2

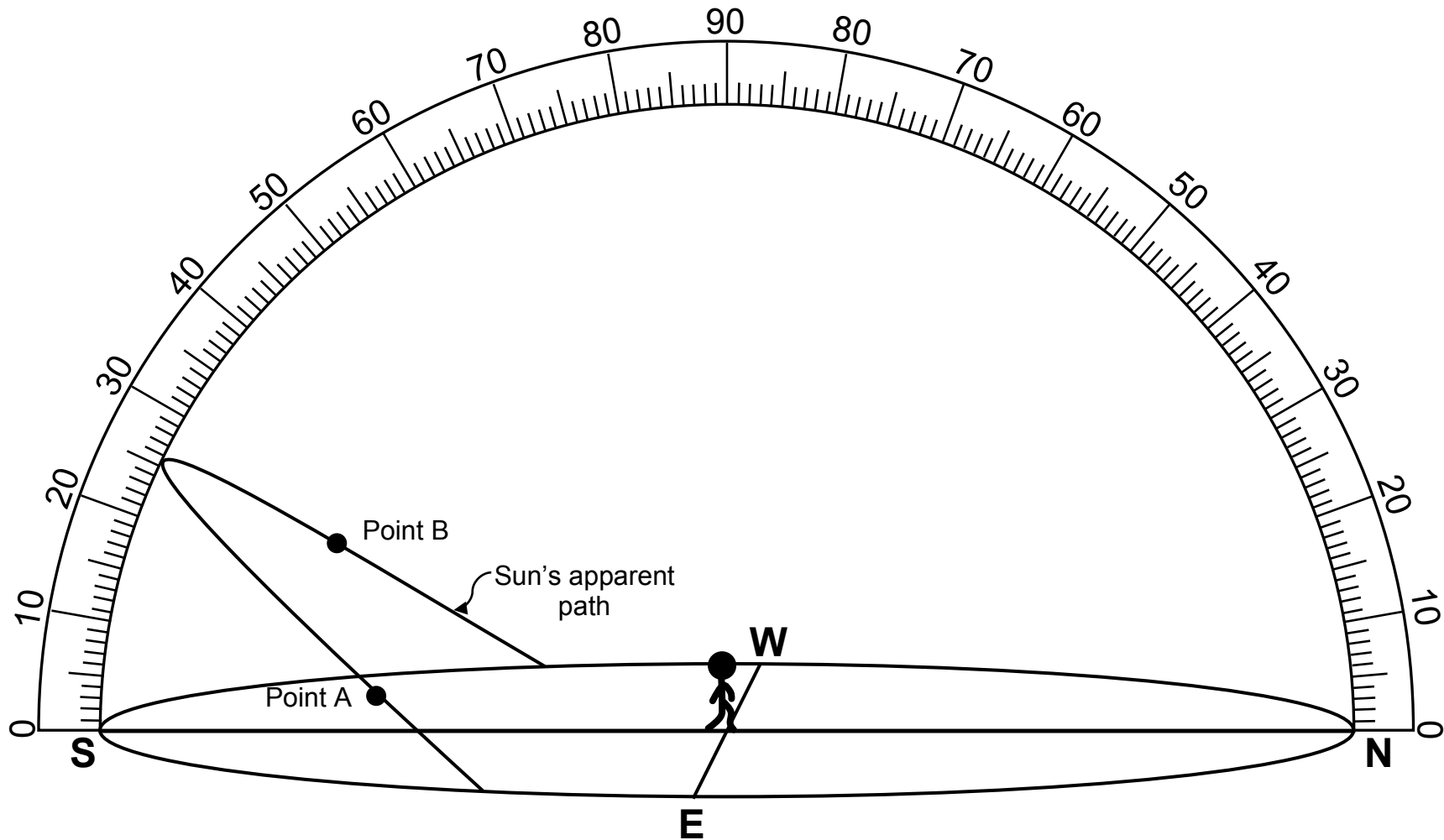


Station 3

The path of the Sun for the first day of a season in New York State is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the specific compass direction for sunrise and for sunset.
2. State the altitude of the Sun at noon.
3. Based on the direction of sunrise / sunset and the altitude of the noon Sun, state the date shown by this path of the Sun.
4. Point A marks the point on the arc that the Sun appeared at 9:00 a.m. on this day. Point B marks a time later in the day. The angular distance between point A and point B is 75° . Using this information and Earth's rate of rotation, calculate the time of the Sun at point B.

Station 3

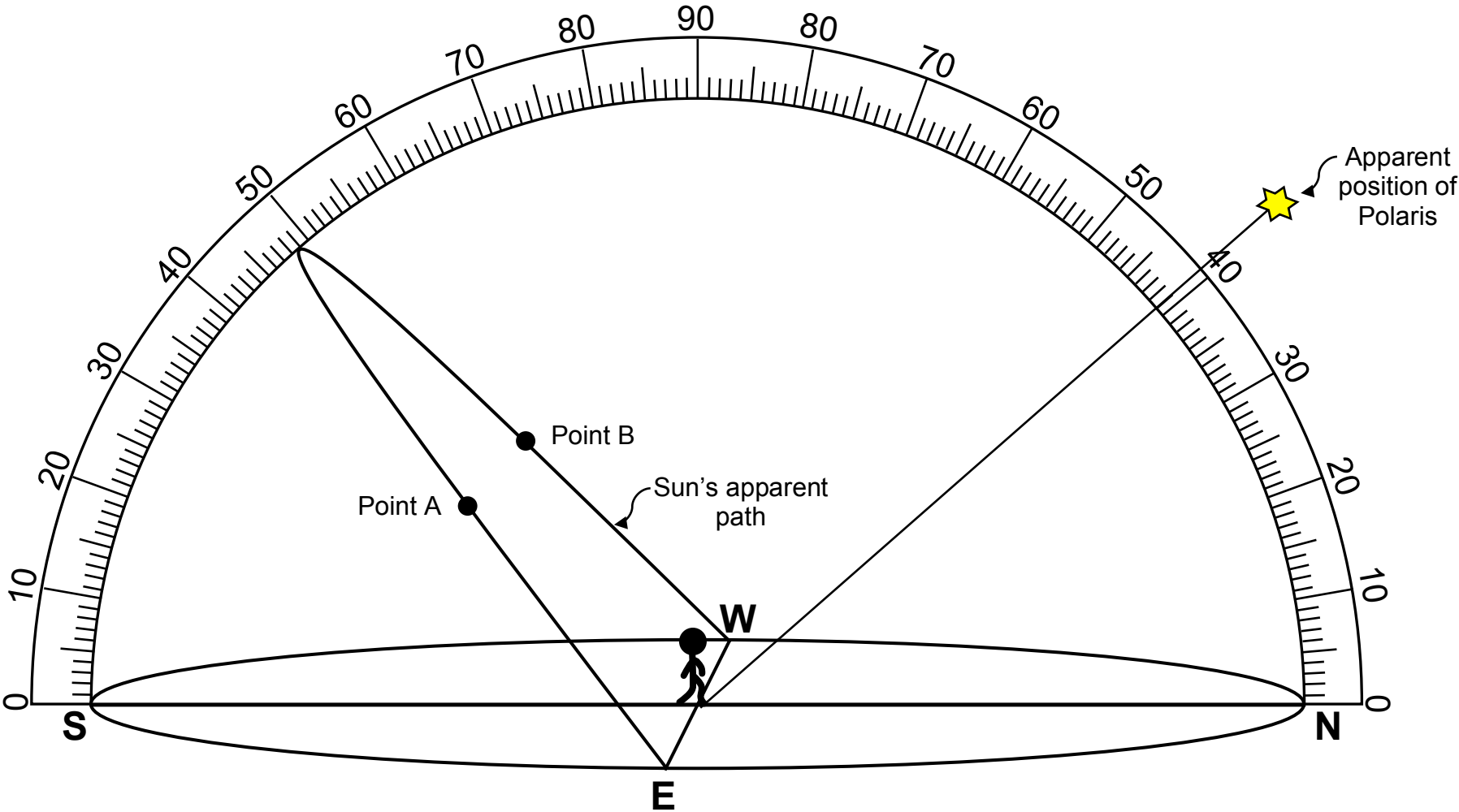


Station 4

The path of the Sun for the first day of a season in New York State is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the latitude of this observer.
2. State one city in New York State where this observer may be located.
3. State the compass direction of the observer's shadow at the times listed on your data page.
4. State the time of day the shadow will be shortest. Explain your reasoning.

Station 4

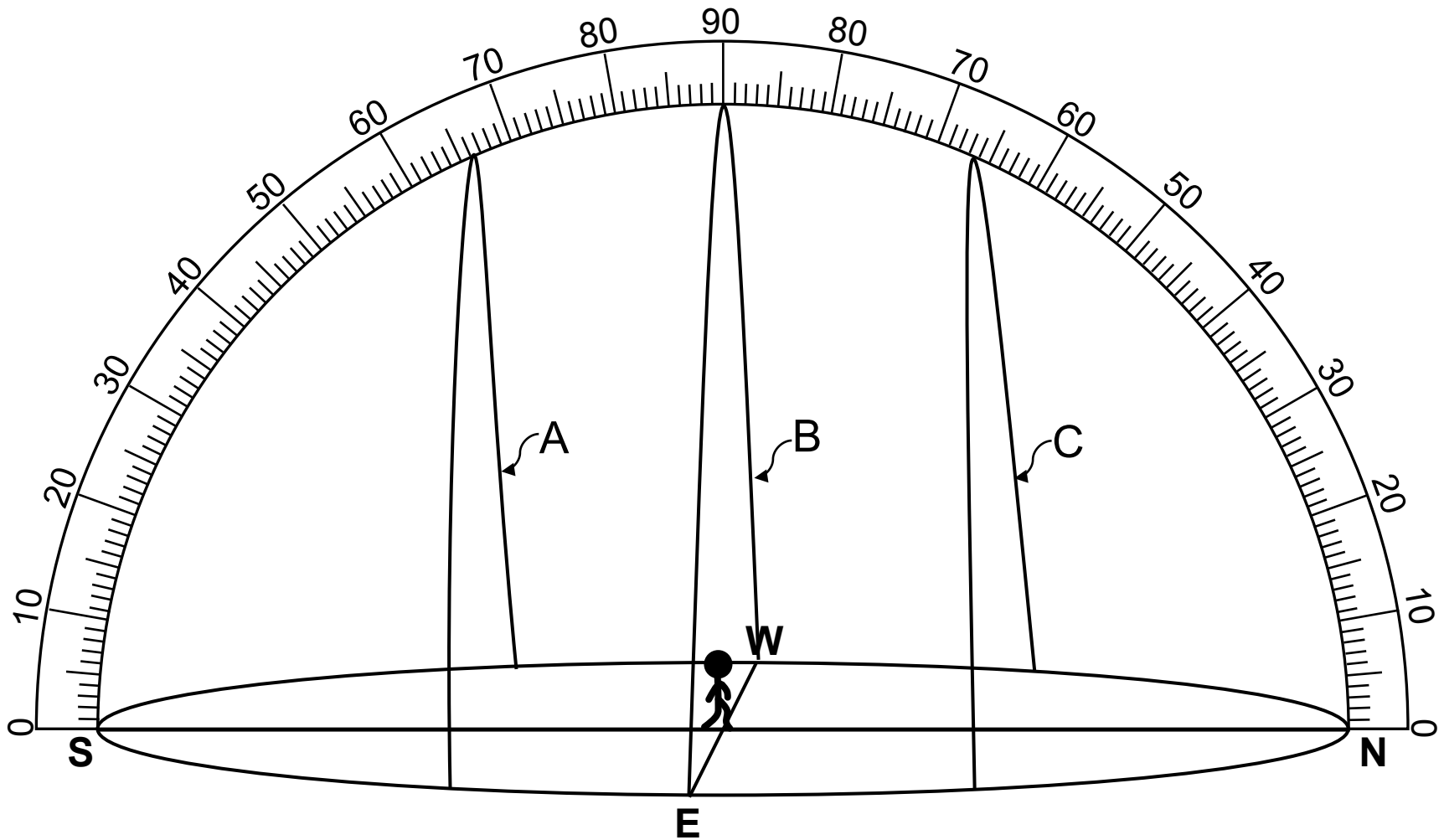


Station 5

The path of the Sun on the first day of each season in an unknown location is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the specific compass direction for sunrise and for sunset for path A, path B, and path C.
2. State the altitude of the Sun at noon for each path.
3. Based on the direction of sunrise / sunset, state the date shown by each path of the Sun
4. Based on the altitude of the Sun on these days, state the latitude of this observer. State one piece of evidence that led you to your answer.

Station 5

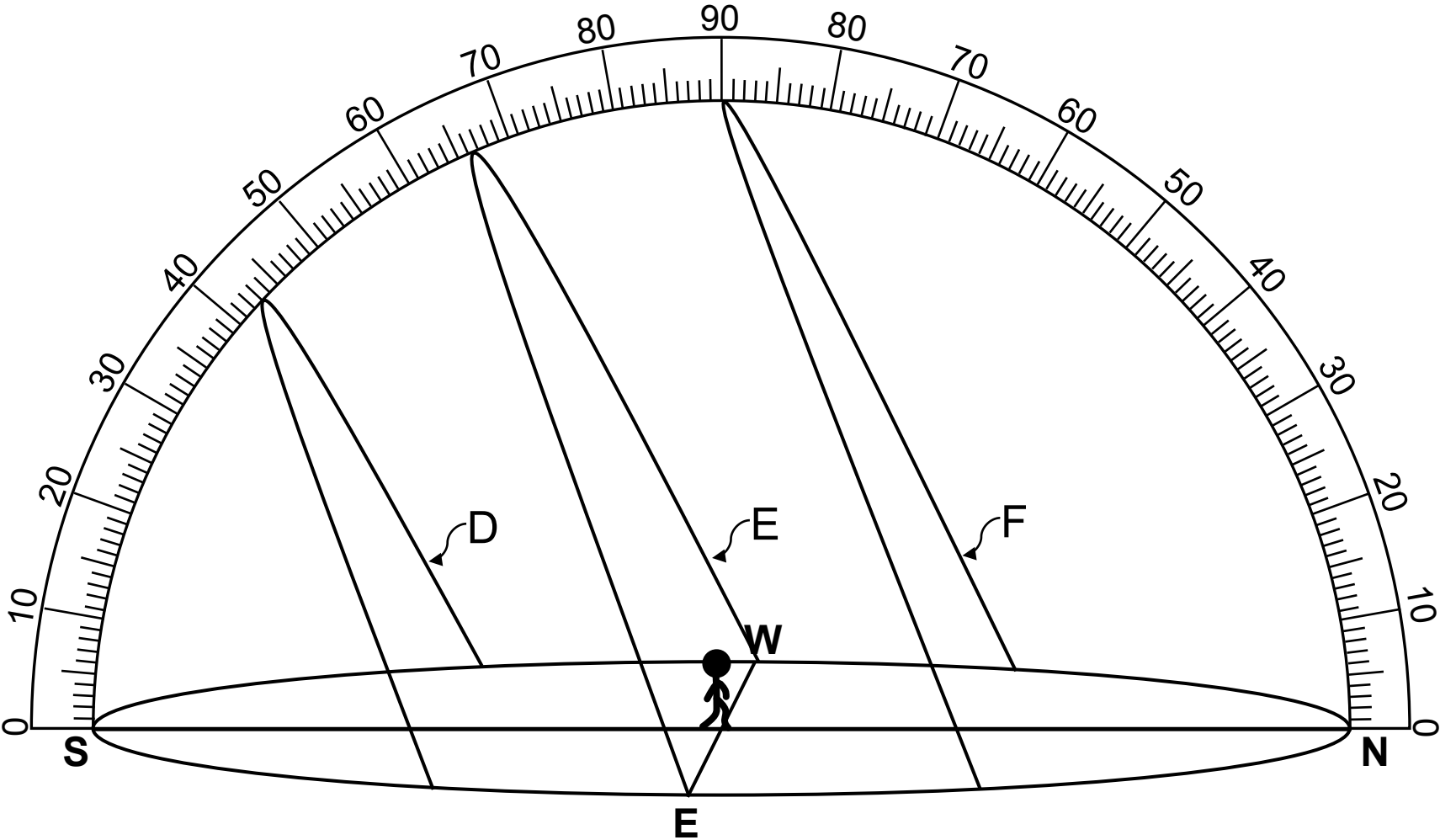


Station 6

The path of the Sun on the first day of each season in an unknown location is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the specific compass direction for sunrise and for sunset for path D, path E, and path F.
2. State the altitude of the Sun at noon for each path.
3. Based on the direction of sunrise / sunset, state the date shown by each path of the Sun
4. Based on the altitude of the Sun on these days, state the latitude of this observer. State one piece of evidence that led you to your answer.

Station 6

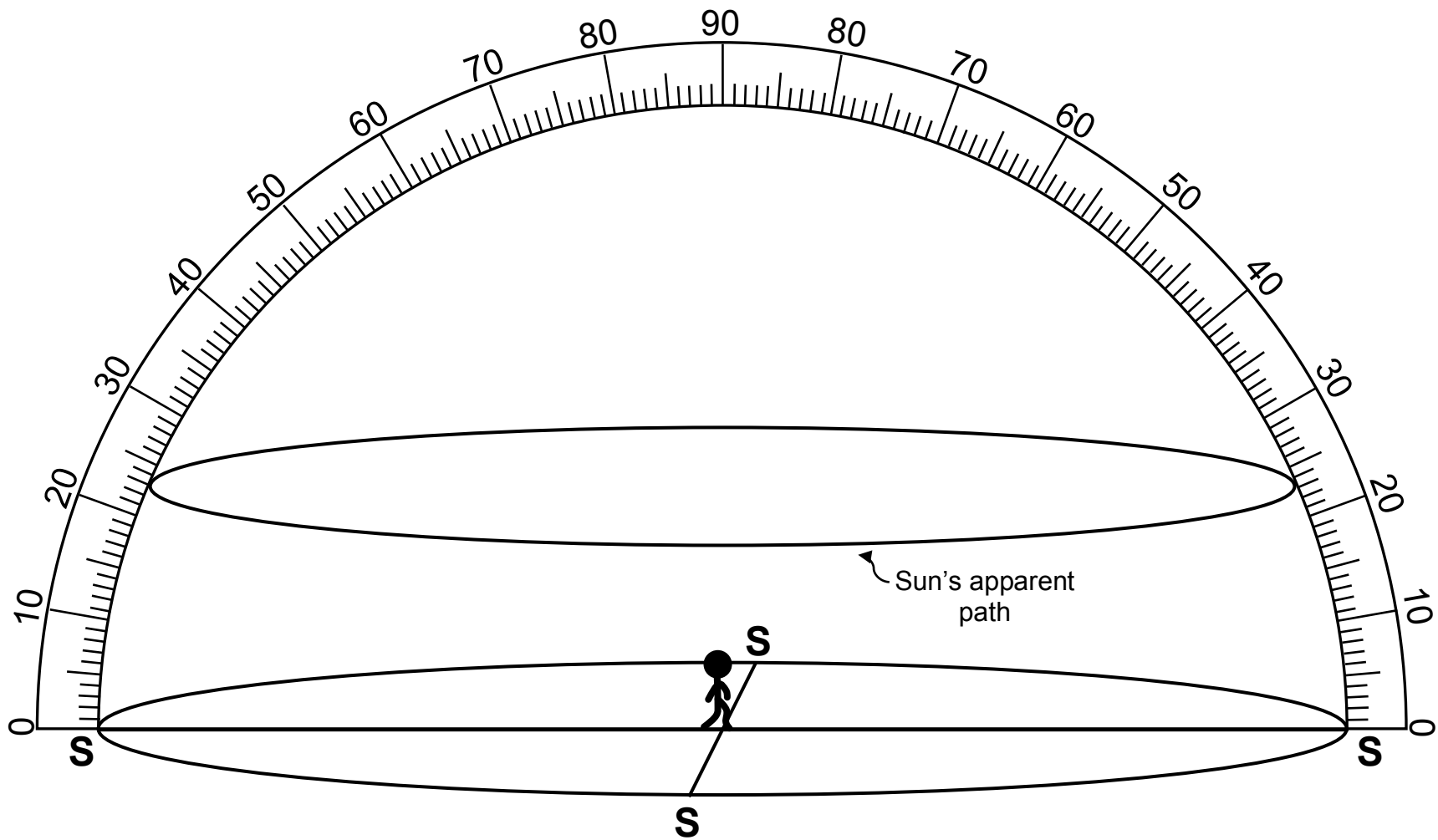


Station 7

The path of the Sun on the first day of a season in an unknown location is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the altitude of the path of the Sun on this day.
2. State the duration of insolation at this latitude on this day.
3. State the latitude of this observer. State one piece of evidence that led you to your answer.
4. State the altitude of Polaris at this latitude.

Station 7



Station 8

The path of the Sun on the first day of each season in an unknown location is shown by the diagram at this station. Using the diagram, determine the information described below. Record all information on your data page.

1. State the specific compass direction for sunrise and for sunset for path X, path Y, and path Z.
2. State the altitude of the Sun at noon for each path.
3. Based on the direction of sunrise / sunset, state the date shown by each path of the Sun
4. Based on the altitude of the Sun on these days, state the latitude of this observer. State one piece of evidence that led you to your answer.

Station 8

