Round: EXTRA B

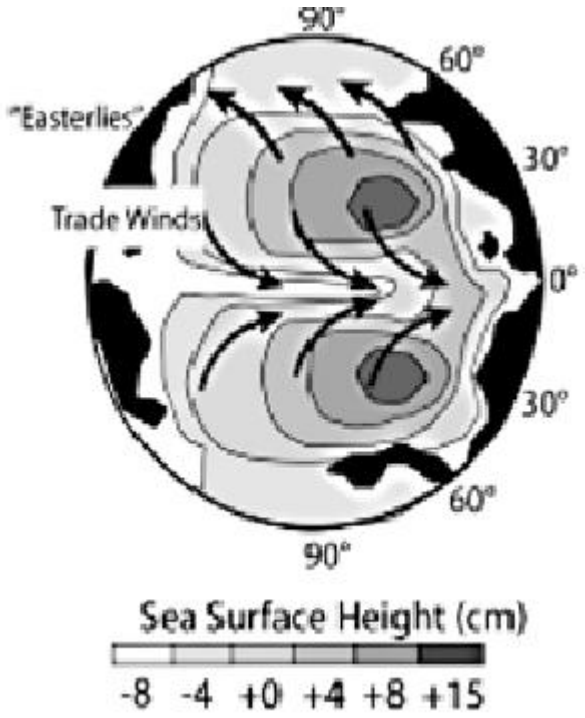

Figure 1: Altimetry map of planet

Black areas are exposed land and all other areas are ocean. Much like Earth, its axis of rotation is approximately perpendicular to its plane of revolution about Alpha Centauri. It is oriented with an axis closely parallel to Earth's, giving it a "North Pole," shown in Figure 1 as up, and providing the labeled "latitudes" (north at the top, south at the bottom). map clearly shows two areas of relatively high sea surface elevation at latitudes of about 30° in the Northern and Southern Hemisphere and a trough along the Equator.

1. Which direction does the planet spin? (4 pts)

2. Draw and label the wind fields between 0º-30º, 30º-60º in the Northern Hemisphere and Southern Hemisphere on Figure 1. (4 pts)

3. Why is there a trough in sea surface height running along the Equator? (4 pts)

4. Would you expect the sea surface temperature to be warmer on the east side (right) of the ocean or the west side (left) of the ocean at the Equator, or would the temperature be the same? Explain why. (4 pts)

5. Explain how Ekman Transport contributes to the sea surface maximums. (4 pts)