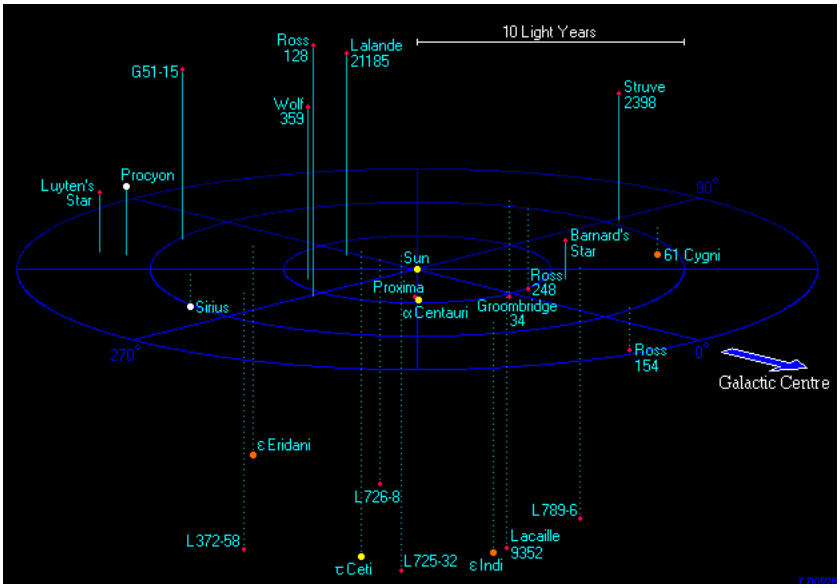
ICE: Earth-Centauri-Sirius-Eridani **O. Knill Math 21a**

The star Proxima Centauri is 4.4 light years away from the sun. It might orbit the star binary system α and β centauri. The brightest star we see in the night sky is **Sirius**. It is 8.6 light years away. The star **Epsilon Eridani** is the closest atar for which one has confirmed a planet. It is 10.5 light years away from us.

1) Assume the sun is at $(1,0,0)$, Proxima Centauri at $(5,2,0)$ and Sirius at $(-8,3,2)$. Find the equation of the plane through the three stars.

2) What is the distance of Epsilon Eridani, a star at $(-8,-3,-6)$ to that plane?



Source: http://www.atlasoftheuniverse.com, Map of the neaest stars.

Source: Caltech. Artist rendering of asteroid belts in Epsilon Eridani.