line of sight passes through a greater depth of bar material, which more than compensates for it being slightly further.

The features (i) can be discerned in many different data sets; the feature (ii) is harder to find, it just about shows up in the COBE maps of the bulge.

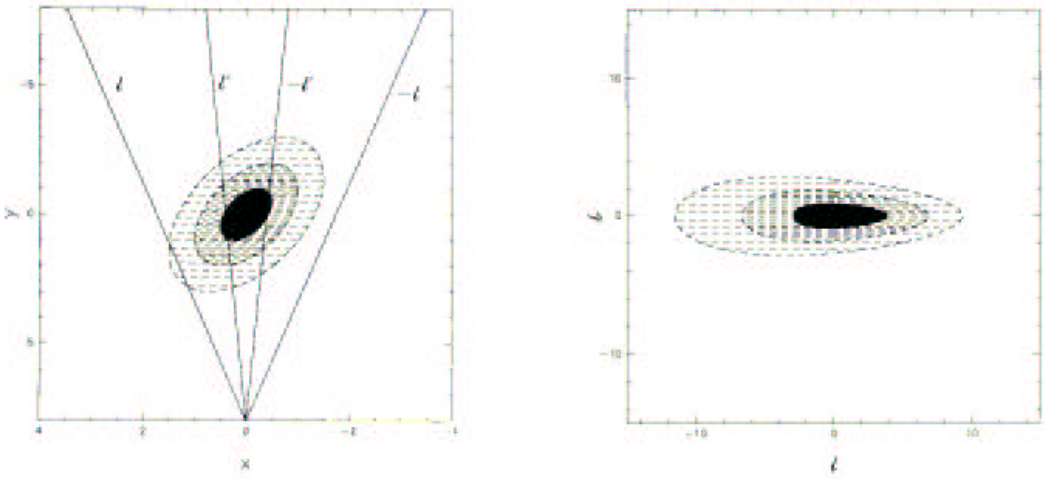

Figure 6.4: Schematic of the bar in the Milky Way Bulge, viewed from the North Galactic pole (left), and from the Sun (right). (From Blitz and Spergel, *ApJ*, 1991. The right panel uses minus the usual convention for l.)

The Sagittarius Dwarf

We'll end our discussion of galaxies with the Sagittarius Dwarf. It may seem amazing that this fairly substantial companion galaxy of the Milky Way remained undiscovered till 1993; the reason is that it's behind the bulge, and thus has the densest part of the Milky Way in the foreground as camouflage. We don't know yet how large the Sagittarius Dwarf is, because it can't be spotted against the foreground in an image. A lower limit on its size comes indirectly from microlensing surveys, because they detect RR Lyraes in their fields. Figure 6.5 shows its rough extent.

The Sagittarius Dwarf is presumably being tidally stretched as it falls into the Milky Way halo; that would explain its being long and thin. Has the Milky Way eaten many such galaxies in the past?

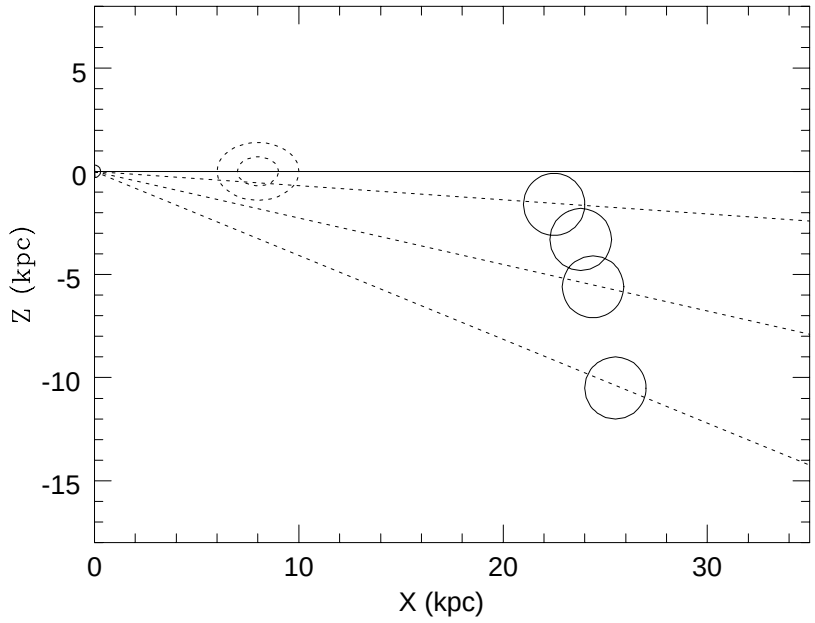

Figure 6.5: A partial map of the Sagittarius dwarf galaxy, from RR Lyraes. We are at $(0, 0)$, the ellipses around $(8.5, 0)$ represent the bulge, and the four circles indicate the four microlensing survey fields where the RR Lyraes were found. (From Minniti et al. 1997.)