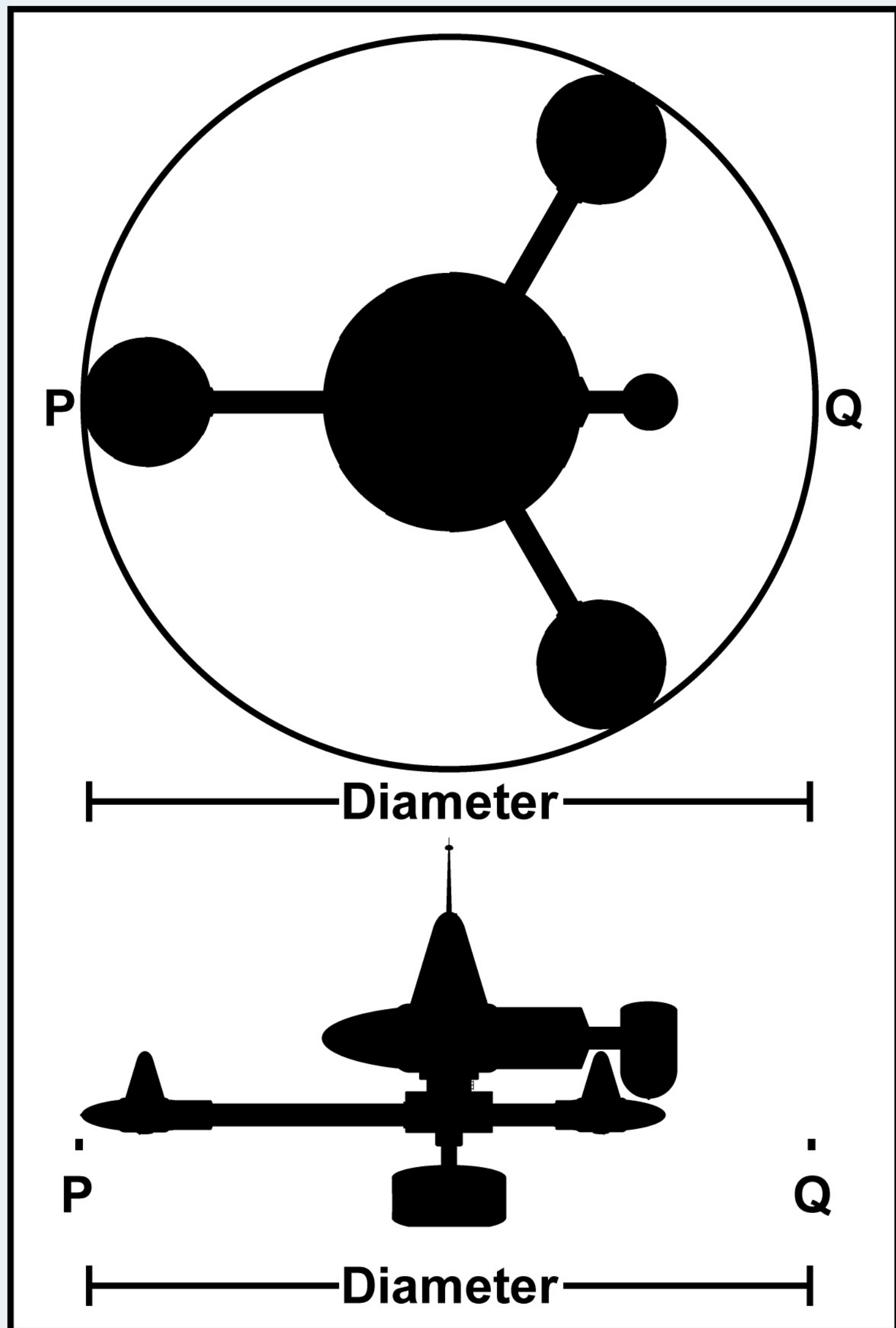
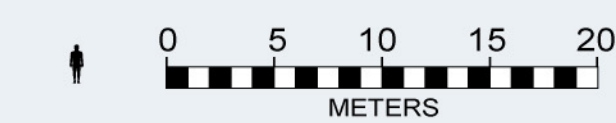




CONSTRUCTION NOTES

I started by drawing the outline of the entire station, and then compared it to other ships, of known dimensions to help determine the size. There is no consensus: a huge range exist amongst the sources, from a diameter of 815 meters (2,674 feet), to "roughly the same size as - or slightly bigger than - a Constitution-Class starship, which is 289 meters (947 feet) long, to a diameter of 200 meters (656 feet). The plastic model made by AMT comes with a tiny Constitution-Class model which suggests the K-7 Space Station has a diameter over 3,000 meters (9,842 feet).

There are 4 methods to help determine the size of the K-7 Space Station:

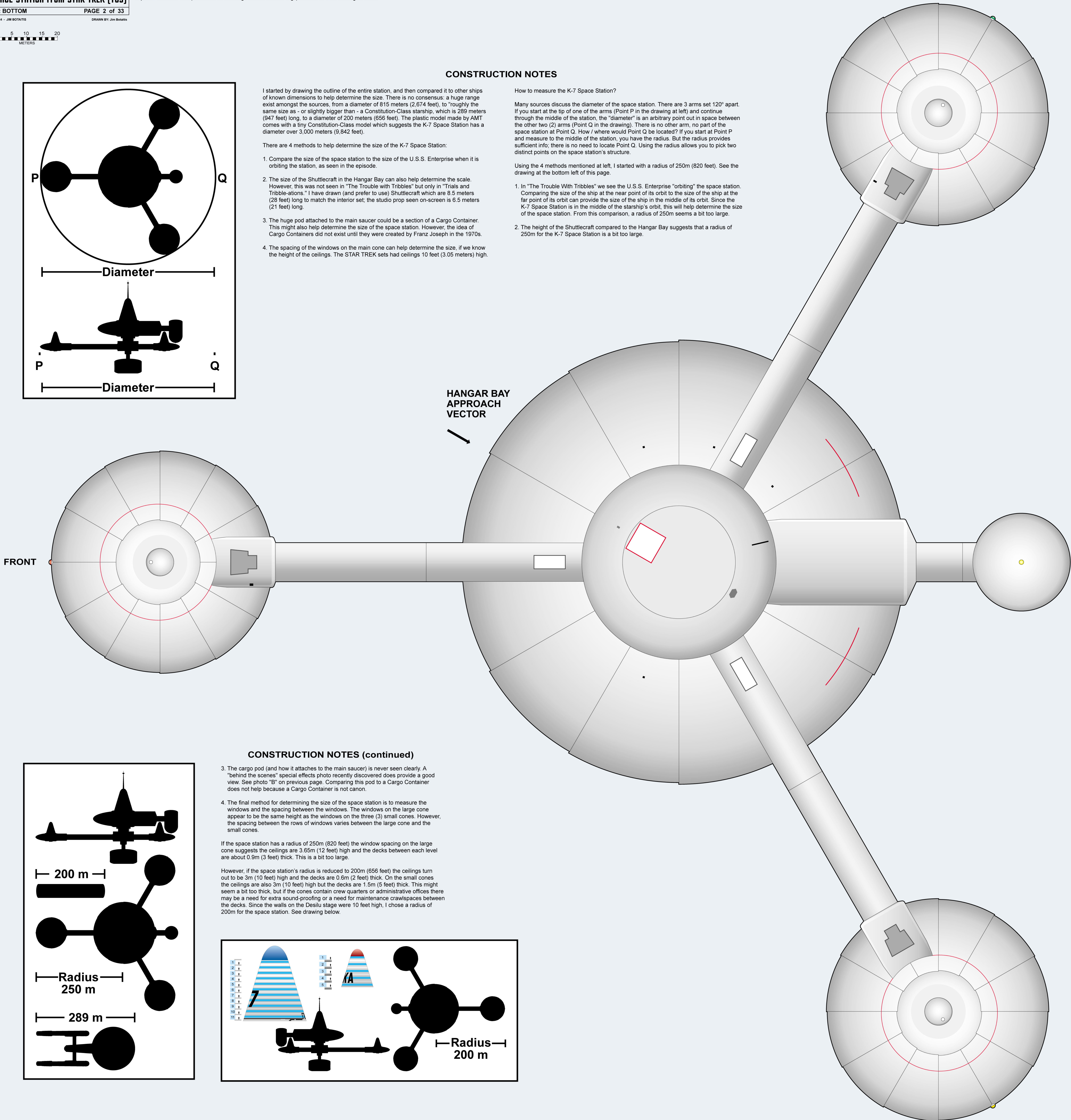
1. Compare the size of the space station to the size of the U.S.S. Enterprise when it is orbiting the station, as seen in the episode.
2. The size of the Shuttlecraft in the Hangar Bay can also help determine the scale. However, this was not seen in "The Trouble with Tribbles" but only in "Trials and Tribble-ations." I have drawn (and prefer to use) Shuttlecraft which are 8.5 meters (28 feet) long to match the interior set; the studio prop seen on-screen is 6.5 meters (21 feet) long.
3. The huge pod attached to the main saucer could be a section of a Cargo Container. This might also help determine the size of the space station. However, the idea of Cargo Containers did not exist until they were created by Franz Joseph in the 1970s.
4. The spacing of the windows on the main cone can help determine the size, if we know the height of the ceilings. The STAR TREK sets had ceilings 10 feet (3.05 meters) high.

How to measure the K-7 Space Station?

Many sources discuss the diameter of the space station. There are 3 arms set 120° apart. If you start at the tip of one of the arms (Point P in the drawing at left) and continue through the middle of the station, the "diameter" is an arbitrary point out in space between the other two (2) arms (Point Q in the drawing). There is no other arm, no part of the space station at Point Q. How / where would Point Q be located? If you start at Point P and measure to the middle of the station, you have the radius. But the radius provides sufficient info; there is no need to locate Point Q. Using the radius allows you to pick two distinct points on the space station's structure.

Using the 4 methods mentioned at left, I started with a radius of 250m (820 feet). See the drawing at the bottom left of this page.

1. In "The Trouble With Tribbles" we see the U.S.S. Enterprise "orbiting" the space station. Comparing the size of the ship at the near point of its orbit to the size of the ship at the far point of its orbit can provide the size of the ship in the middle of its orbit. Since the K-7 Space Station is in the middle of the starship's orbit, this will help determine the size of the space station. From this comparison, a radius of 250m seems a bit too large.
2. The height of the Shuttlecraft compared to the Hangar Bay suggests that a radius of 250m for the K-7 Space Station is a bit too large.



CONSTRUCTION NOTES (continued)

3. The cargo pod (and how it attaches to the main saucer) is never seen clearly. A "behind the scenes" special effects photo recently discovered does provide a good view. See photo "B" on previous page. Comparing this pod to a Cargo Container does not help because a Cargo Container is not canon.
4. The final method for determining the size of the space station is to measure the windows and the spacing between the windows. The windows on the large cone appear to be the same height as the windows on the three (3) small cones. However, the spacing between the rows of windows varies between the large cone and the small cones.

If the space station has a radius of 250m (820 feet) the window spacing on the large cone suggests the ceilings are 3.65m (12 feet) high and the decks between each level are about 0.9m (3 feet) thick. This is a bit too large.

However, if the space station's radius is reduced to 200m (656 feet) the ceilings turn out to be 3m (10 feet) high and the decks are 0.6m (2 feet) thick. On the small cones the ceilings are also 3m (10 feet) high but the decks are 1.5m (5 feet) thick. This might seem a bit too thick, but if the cones contain crew quarters or administrative offices there may be a need for extra sound-proofing or a need for maintenance crawlspaces between the decks. Since the walls on the Desilu stage were 10 feet high, I chose a radius of 200m for the space station. See drawing below.

