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## **Welcome to the IMAX<sup>®</sup> Theater at the Maritime Aquarium. A few details for the film “Hubble” you are about to see:**

### **IMAX Projector:**

1. All scenes in this movie were shot by the IMAX<sup>®</sup> team on historic location, and as they actually happened, both on the ground and in space.
2. IMAX film dramatically increases resolution by running horizontally through the camera offering nearly 10 times the image size of standard 35 mm movie film.
3. Three times more IMAX film runs through the camera per minute than for a regular movie, producing crystal-clear images. The 43 minutes of IMAX film for Hubble is 17,028 feet long, more than 3 miles. IMAX film is strong enough to pull a truck.
4. An IMAX projector bulb is rated at 15,000 watts. Light from an IMAX projector mounted on the moon could be seen from earth with the naked eye.

### **Hubble Telescope:**

5. The Hubble telescope is in a stable 97-minute orbit around earth traveling about 5 miles per second, fast enough to go from New York to L.A. in 10 minutes.
6. All images of planets, stars, galaxies, and nebulae – in fact, everything you will see in this movie – are ACTUAL Hubble images and not CG animations or enhancements.
7. Sequential images taken by focusing at different distances let you to take a virtual trip to constellation Orion. Travel some 1,350 light years from earth in less than a minute.
8. Hubble’s eye will take you through and into stellar nurseries where “tadpole stars,” only recently discovered by astronomers, are shown in all their eerie splendor.
9. Toward the end of the film, you travel back in time 13 billion years through Hubble Ultra Deep Field images showing the farthest corner of the known universe ever seen by humans. Physicists estimate the universe to be 13.7 billion years-old. So you are very nearly seeing a picture of the beginning of time.
10. That 13 billion-years-away image required 412 Hubble orbits, each photographing the same exact spot. “Fine guidance sensors” on the telescope take repeated photos through a field of view no larger than President Roosevelt’s eye on a U.S. dime.

### **Connecticut Connections:**

11. The primary mirror and optics packages of the Hubble Telescope are Connecticut products! Originally built by Perkin Elmer in Danbury, that firm was acquired and renamed Goodrich ISR, and that company built the new fine guidance sensor you will see installed by NASA crews in the movie. United Technologies Hamilton-Standard in Windsor Locks is NASA’s primary contractor for space suits. Air Lock of Milford builds space suit helmets and other components.