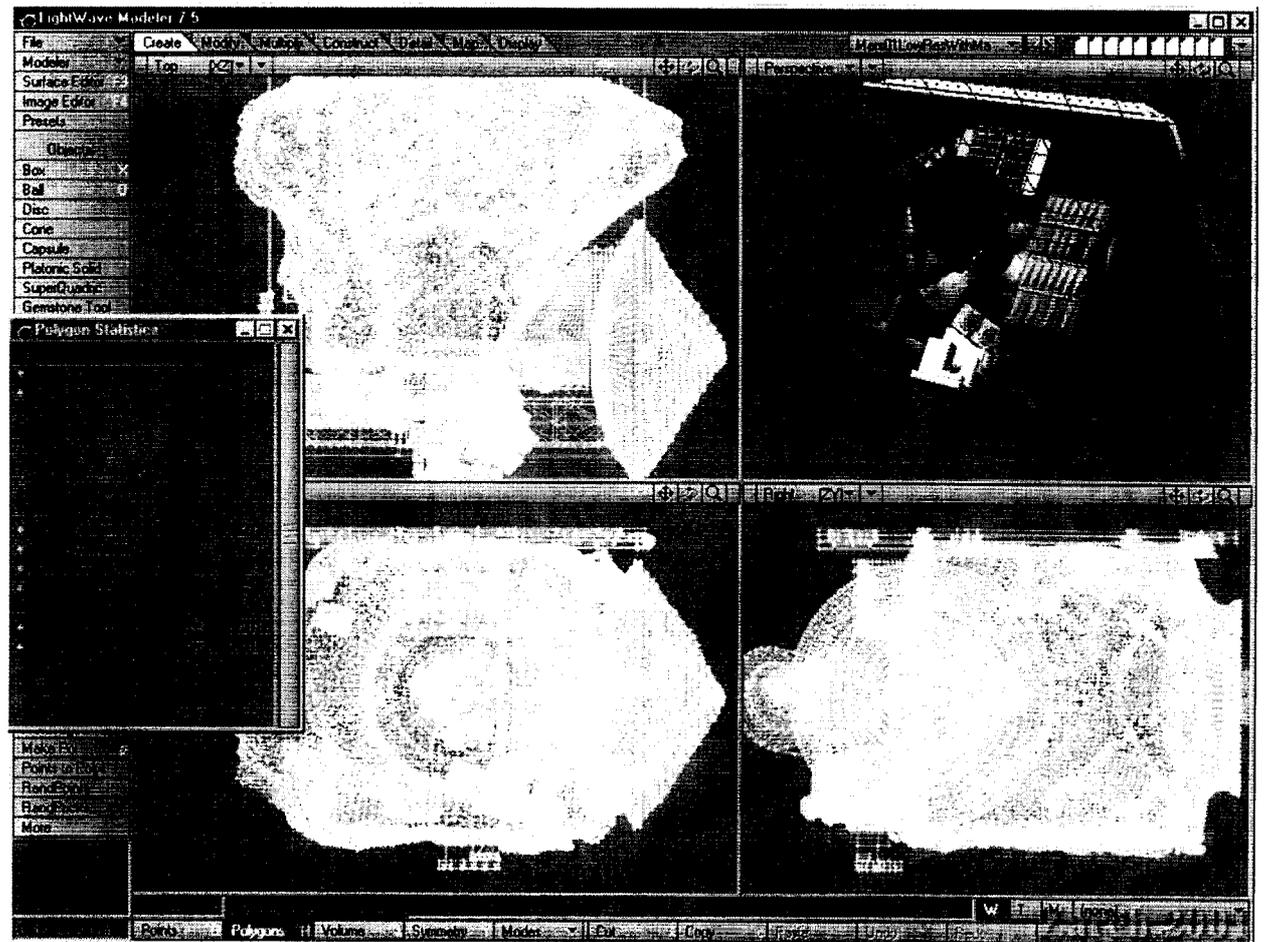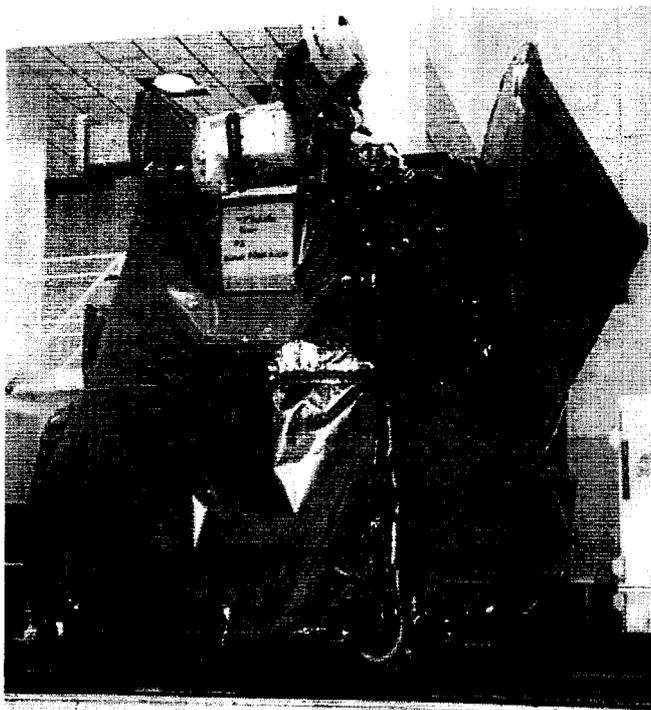# Creating the Mars Orbit Insertion (MOI) Visualizations for Mars Odyssey
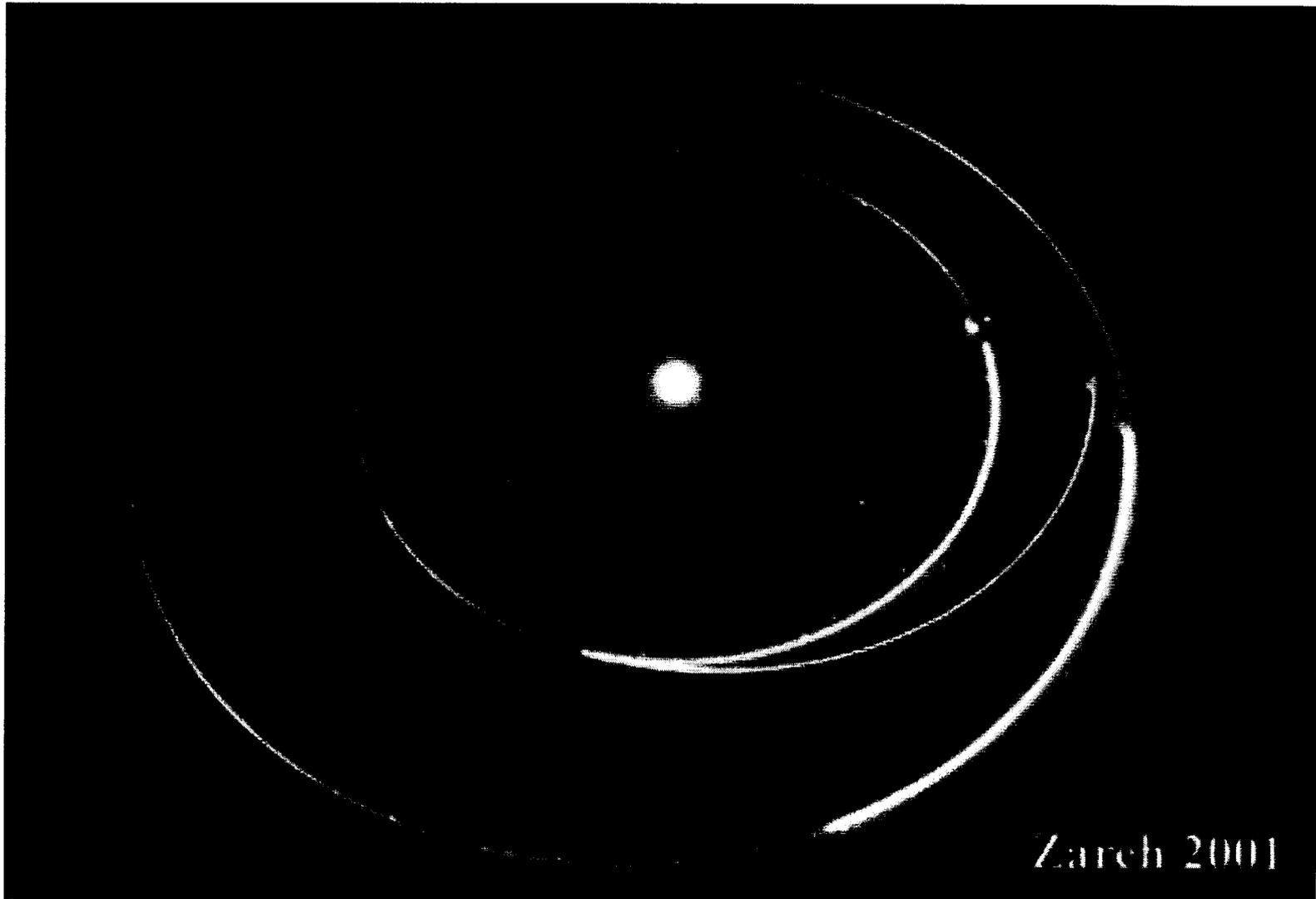
Zareh Gorjian

November 4,2002

In close coordination with key personnel from the Mars Odyssey team a series of 18 animations were produced in time for the MOI event and press conference. The resulting animations were shown on CNN, ABC, NBC, CBS, Tech TV and other news outlets as well as in programs such as "Live From Mars" which JPL aired to various schools across the country. This presentation will have 5 parts which will detail how the animations were produced and how Odyssey team members contributed to the work to make it as accurate and informative as possible.

Part 1: Modeling the Odyssey spacecraft. How reference information from LMA and other sources was used and what were the technically challenging parts of modeling Odyssey and how were those challenges overcome.

Part 2: Breaking down the information to be conveyed to a specific
number of shots, which communicated the various stages of
the mission and operation of the instruments clearly and quickly.

Part 3: Getting accurate trajectory information and position information for the spacecraft, Sun, Earth and Mars. This includes accurate spacecraft configuration information as well (for example position of solar panels for each shot etc.)

Part 4: Animating and rendering the animations. What software and
hardware tools were used and what media formats were the final
animations produced in.

- LightWave 3D 7.5
- Debabilizer
- Photoshop
- Perception PVR
- Sony Betacam deck
- VHS deck
- CD writer

Part 5: The animations will be shown in their entirety.