

Asteroid Models with Blender

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Described here are simple steps to load an asteroid OBJ file. Data are obtained from:

<http://astro.troja.mff.cuni.cz/projects/asteroids3D/web.php>

Durech, J., Sidorin, V., & Kaasalainen, M. 2010, A&A, 513, A46

An example blend file created with these steps as well as data can be found at:

<http://www.cv.nrao.edu/~bkent/computing/kentPASP.html>

Opening an OBJ mesh file

1. Start Blender (Double click the icon or ./blender from the command line).
2. Right click to select the default Cube object and press '**X**' to delete it.
3. In the upper left corner choose *File-> Import -> Wavefront (*.obj)*.
4. If the user desires, the object can be scaled using the Transform dialog toward the right side of the GUI, or by pressing the '**S**' key.

Animating the Object

1. Right click to select the asteroid mesh object.
2. Press the "**I**" key to insert a Rotation keyframe.
3. At the bottom of the GUI, change the frame to halfway between the first and final frame. In the example blend file, this is set to 600 frames. Choose frame 300.
4. Rotate the asteroid mesh by 180 degrees. This can be accomplished in the Transform dialog by entering 180 degrees about the axis of rotation chosen by the user.
5. Press the "**I**" key to insert another "*Rotation*" keyframe.
6. Rotate the asteroid mesh to 360 degrees. This can be accomplished in the Transform dialog by entering 360 degrees about the axis of rotation chosen by the user.
7. Press the "**I**" key to insert a final "*Rotation*" keyframe.

Animating and Rendering the Sequence

1. To see a preview of the animation, Choose *View->Camera* (last option) and then click the **Play** button at the bottom of the GUI. Press the square Stop button to halt the animation.
2. Choose the Render tab.
3. At the bottom of the Render dialog, Change the output to "*AVI JPEG*". The "**Stamp**" option is useful as it prints metadata about the animation over the video. Scroll back to the top of the dialog and Click **Animate**. A video file will be generated.