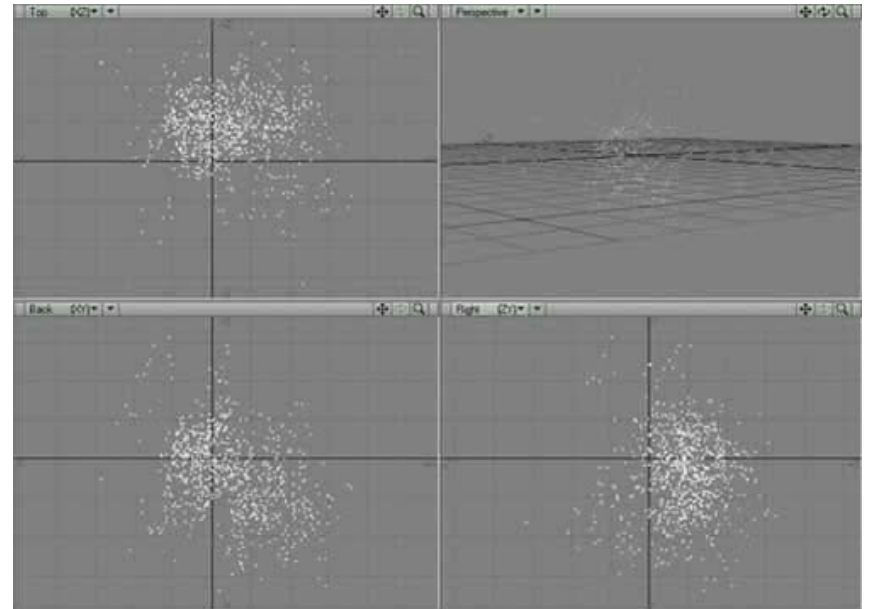


# Asteroid Field

By Ken Hibdon

# Step 1: Modeler

- Use the 'Spray Points' tool under the 'Create' tab to make a bunch of points.
- Now, use the 'Zoom' tool, under the 'Display' tab, to get a grid size of about 100m.
- Use the 'Size' tool, under the 'Modify' tab, to stretch your points until they fill your current view.
- Now, save your object and close Modeler.

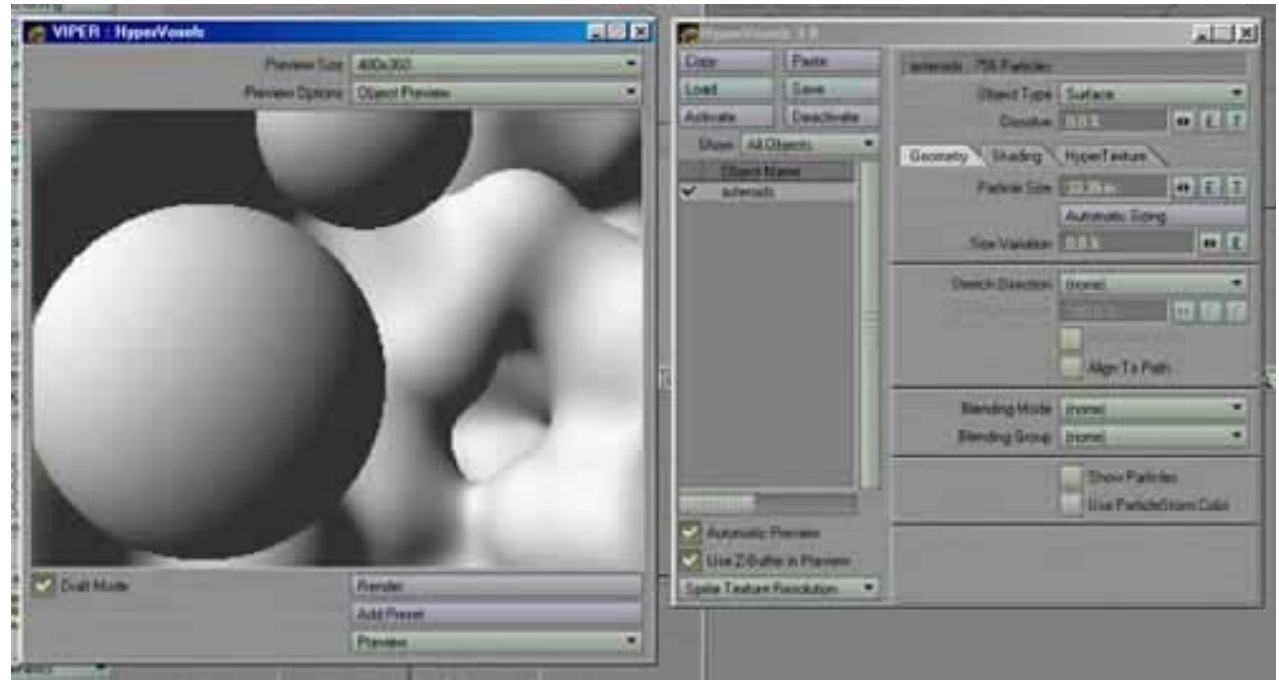


# Step 2: Layout: The Field

- Load your asteroid object and position the camera close to it.
- 'Scene' tab => 'Volumetrics' (^F6) => 'Add Volumetric' => HyperVoxels
- Double click on 'HyperVoxels 3.0' to open the option menu.
- Open Viper, so you can see what happens.

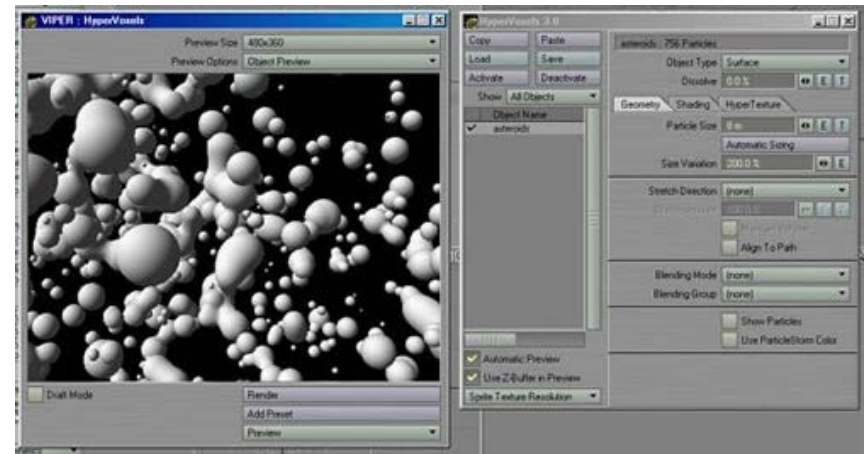
# Step 2: Continued

- Select your asteroid object in the Hyper Voxels Menu and click 'Activate.'
- Then, press 'Render' in Viper.



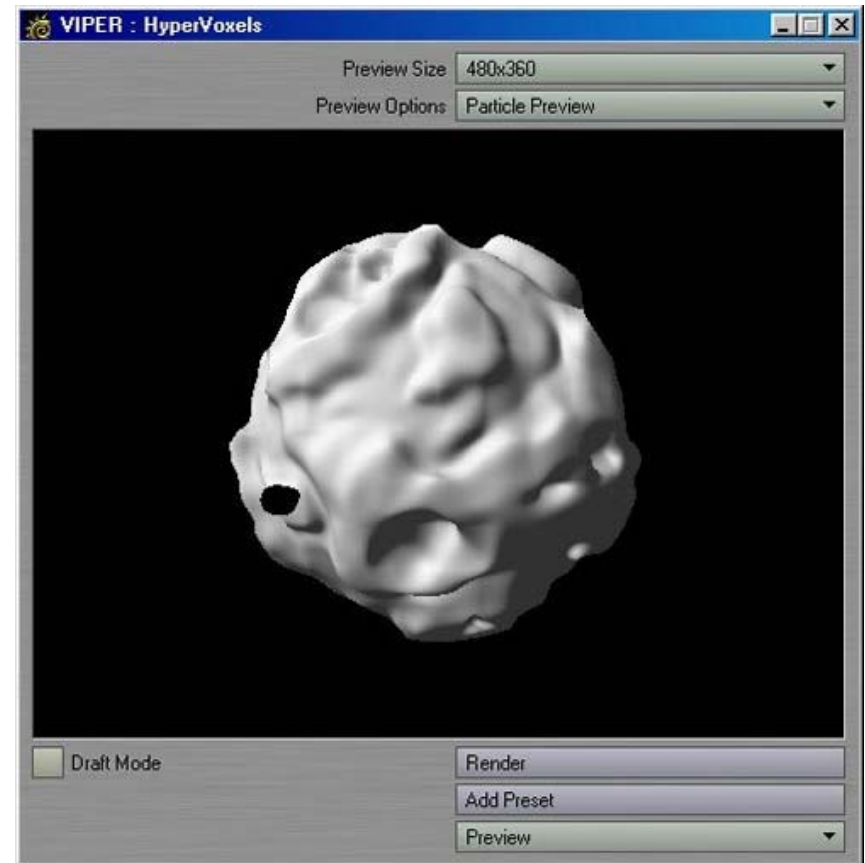
# Step 2: Continued

- Resize the particles. In the Hyper Voxels menu, set the size to about 10 meters.
- To make the asteroids more random, set the Size Variation to 200%.



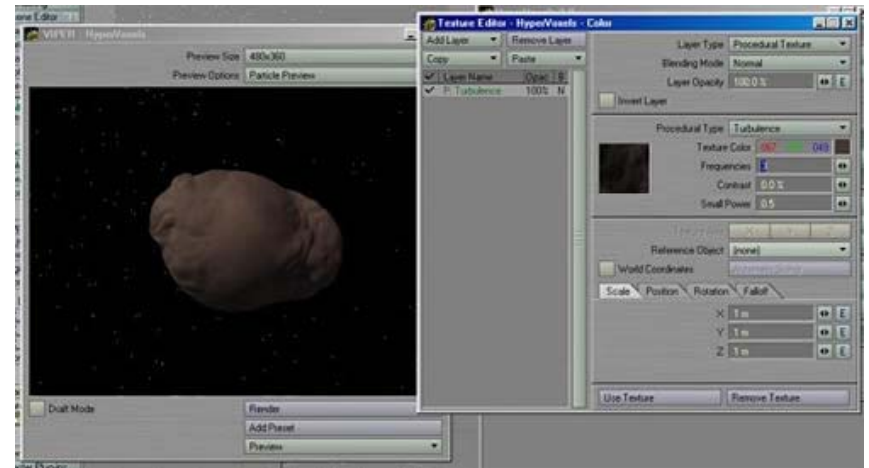
# Step 3: Layout: The Rocks

- In Viper, select 'Particle Preview' under 'Preview Options.' This allows you to work with just one asteroid, instead of all of them.
- In the Hyper Voxels menu, go to 'Hyper Texture.'
- Look through the different texture until you find one you like.
- Pictured, is Smokey1, but Dented works very well, too.
- Play with the various settings until you're happy.



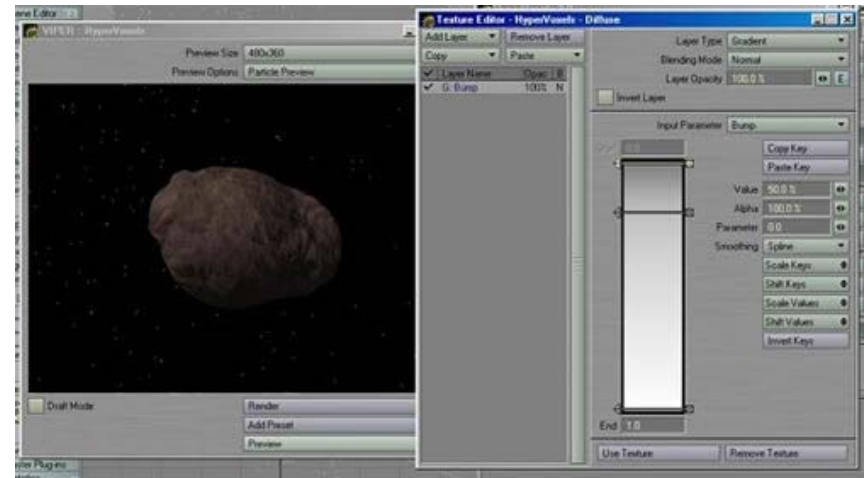
# Step 3: Continued

- Go to the 'Shading' tab in Hyper Voxels.
- Choose a base color, then press the 'T' next to it.
- Select a texture map you like.
- If you want, you can add multiple layers, but it's not necessary.



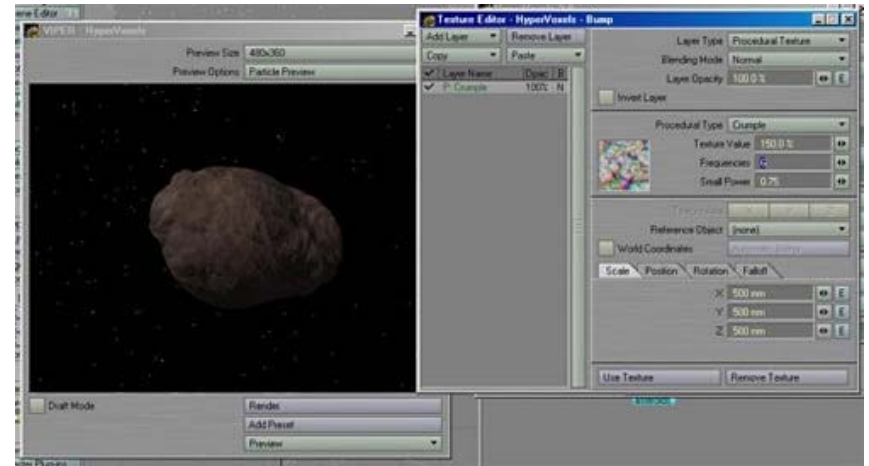
# Step 3: Continued

- In the 'Diffuse' channel, add a gradient.
- Parameter 0.0 = Value 50%
- Parameter 0.2 = Value 75%
- Parameter 1.0 = Value 100%
- Of course, these settings are just a suggestion to get the inside darker.



# Step 3: Continued

- Add a texture under the 'Bump' channel.
- Set a 'Procedural Texture' to use the 'Crumple' texture.
- Alter the settings to get a nice effect.



# Step 4: Render

- You should get something that looks like this...
- It's a very nice asteroid field.
- After doing all this, you should adjust your lighting to match whatever you're trying to do.
- Original Tutorial:  
<http://newtek.com/products/lightwave/tutorials/specialfx/asteroid/index.html>

