# Maya FX tutorial: making a shock wave/ sonic boom effect with Maya fluid and nparticle

#### Step 1:

Go into the FX menu in Maya.

- Click on the nParticles window and then click on the create emitter option box.
- Make sure the emitter type is set to volume, that the rate is set to 500, and the volume emitter attributes is set to cylinder.
- Scroll to the bottom to volume speed attributes and change away from axis to 30.
- Now hit create.

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#### Step 2:

• Press the play button and pause around frame 25.

- Here we can adjust our particle system to be the way we actually want it to while viewing it in the perspective window.
- Select the particle system in the window.



- Select emitter1 in the attribute editor.
- Change away from axis to 50.
- Change the rate (particle/sec) to 4000.

#### <u>Step 3:</u>

- Set a key on the rate when the emitter is at frame 1.
- Change the rate to 0 and set a key on the rate when the emitter is at frame 10.



## <u>Step 4:</u>

- Click on nucleus1 in the attribute editor and change gravity to 0.
- Click on nParticleShape1 and find Lifespan in the dropdown. Change lifespan Mode to Random range, change lifespan to: 0.800, change Lifespan Random to: 0.400.



### <u>Step 5:</u>

- Go to Fluids at the top of the screen. Select the 3D Container option box.
- Make sure add emitter option box is turned off and select apply and close.



• With the particle system and box selected, go back to Fluids, and select add/edit contents -> emit from object.

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• Make sure your options match the image above. Hit apply and close.

## <u>Step 6:</u>

- Select fluid1.
- Go into the attribute editor and select fluidEmitter1.
- Change the options as shown in the images below.

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- Go into fluidShape1 and go into the lighting tab. Then turn on self-shadow and turn shadow opacity to 1.
- It should look like the image below.



## <u>Step 7:</u>

• Go into the outliner and hide the nParticle1.

• Change the attributes to match below.

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#### <u>Step 8:</u>

- In the fluidEmitter1 under fluid attributes, check motion streak on.
- Go up to basic emitter attributes and key rate(percent) at 500 at frame 1.
- Then set the key to 0 at frame 15.
- Go to windows -> animation editors -> Graph editor
- In the outliner, under nParticle1, click fluidEmitter1.
- Make your graph look like the one below.



• Click fluid1 in the outliner, open contents details under fluidshape1, then open density. Change dissipation to 3.

# • Copy the values below.

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Step 9:

- Create a plane and place it under the cloud.
- With the plane and cloud selected, go to fluids -> make collide.

• You can add lights to the scene as needed and change the color of the fluid/cloud.



Link to referenced video: https://www.youtube.com/watch?v=BpMQvaUUHYg&feature=emb\_logo

Note: If we want magic particles, unhide the nParticle1 in the outliner.

• This could be used in combination with 2D effects.