Snarlygribbly's Snow Machine v2

Contents

Overview

The Snow Machine is a python script for Poser that adds a layer of snow to an existing scene. This is done by manipulating bump maps. No geometry is added to the scene. For this reason, there is a practical limit if the amount of snow that can be added, typically about two inches. Anything over this and horizontal black lines begin to appear in the snow indicating that the bump maps are exceeding the ability of the underlying geometry to accept the changes.

Note also that the snow will not appear in preview mode. It is a shader effect that might only be visible at render time, depending upon your video card's OpenGL support and your Poser settings.

Installation -

Both Windows ('Snow Machine.py') and Mac (SSM2MAC.py) versions are included. You need not install both. Simply unzip the version you need to Poser's Python Script library, typically located (in Windows) at:

C:\Program Files\Smith Micro\Poser (version) \Runtime\Python\poserScripts\ScriptsMenu

It will show up on your scripts menu from within Poser.

Alternatively, the script can be run as a wacro from the Runtime\Python\poserScripts\Wacros\UserDefined folder.

Using the Snow Machine
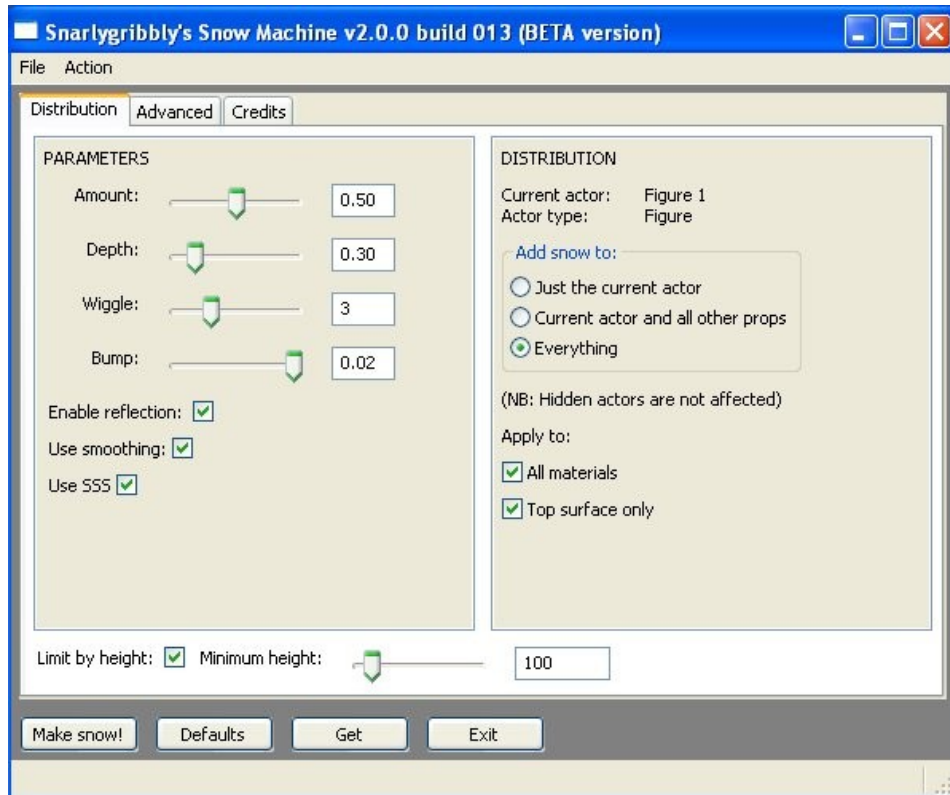
Set up your scene in Poser as usual. Make a test render to make sure the scene itself looks the way you want it to. Call the script by clicking on it from the Poser Scripts Menu. The control Panel will display.

The first screen is called the "Distribution" screen because it controls where and how much snow is added.

Amount

The Amount slider regulates how much snow has fallen. It gives results associated with just a "dusting" of snow with no great depth. It's value varies from .10 to .90. Examples:

Snow Amount = 0.25

Snow Amount = 0.90

Snow Depth = 0.3

Snow Depth = 1.65

Depth

   The depth control allows you to make the snow a bit deeper. Values here vary from 0 to 2. Note, the actual depth that you can achieve is a function of the underlying geometry. If you see horizontal black lines in your snow, pull this back a bit... you are exceeding the limits of the geometry being used.

Wiggle

Wiggle is the amount of unevenness in the snow surface. In nature, it is a product of how much wind was blowing as the snow fell. The values here range from 1 to 8

Wiggle = 0 1   Wiggle = 0 8

Bump

Bump is the amount of granularity introduced into the snow. Zero gives very smooth, pillowy snow. .02 is a more icy granular snow.

Bump = 0.00   Bump = 0.02

Checkboxes

Enable Reflection does just that. There will be reflections on your snow surface. This tends to give the effect that there are icy patches in the snow, and also mixes reflected environmental colours into your snow cover. Unchecking this box gives a less realistic, but much faster render.

Use Smoothing turns on Poser's smoothing function to make the undulations more gentle and natural. Leave it checked unless there is a specific problem with generated artefacts.

Use SSS is a Poser 9/Pro 2012 function that turns on SSS for the snowpack, giving it sub-surface scattering for added realism. Again, turning it off gives much faster rendering, but less realistic snow.

Distribution

Add snow to:

This selection box directs Snow Machine to add snow to only the selected actor, the current actor and all other Props (but NOT any Figures!) or everything in your scene. The first two are for "special effects" where you are planning to have different snow levels or settings in different parts of the render.

Apply to:

All materials is just that. Snow will be distributed normally. If you uncheck this option then the distribution options in 'Add snow to' are ignored and only the currently selected material is affected. To use this option it is best to run the Snow Machine from within the Material Room so that you can see which is the currently selected material.

Hidden actors

The Snow Machine ignores any objects in the scene whose Visible property is set to OFF or are part of a grouping set to hidden. You can use this feature to add snow selectively to objects in the scene.

Top Only tells Snow Machine to distribute the snow as a gentle fall straight down, covering only the surfaces facing upwards. Unchecking it coats all surfaces with snow as though the wind has covered everything with a frozen coat (see image below) .

Minimum Height

This check box/slider selects the lowest point where snow will be deposited. It is intended for use on things like mountain ranges. In the example below the minimum has been set at 100.

Command buttons

Make Snow applies the current settings to your scene. Depending on how many items are in your scene, this can take some time. Progress is displayed in the status bar at the bottom of the Snow Machine user interface.

Defaults returns the Snow Machine to factory settings.

Get populates the controls in the Snow Machine with values taken from the currently selected material. As usual, this is best used from within the Material Room so that it is clear which is the currently selected material..

Exit terminates the Snow Machine.

Advanced Tab

Snow Colour

This is the overall colour of the deposited snow. Its purpose is to allow the Snow machine to make other materials than just snow, which may be coloured differently.

Specular settings

These work like any other settings in the Poser Mat room. We suggest you leave these at factory settings unless you have a specific effect you are going for.

The **Snowy** button gives standard snow specularity.

The **Icy** button applies a more icy specular effect to the snow. It is recommended that you also use a low Depth and increased Reflectivity to achieve a convincing icy look to the snow.

Reflection

These settings allow the user to control the quality of the rendering process. Their use is standard to the Firefly rendering engine and goes beyond the scope of these instructions. (If you know what you are doing, have at them... if not, leave at defaults... you'll get good results!)

Note that these settings are ignored if the 'Use reflection' option has not been set.

Hints and tips

Render settings:

You should render with Gamma Correction switched on in the render settings to get the best results. Be sure to use the setting that's appropriate for your system: 2.2 for Windows, 1.8 for Mac users. If you do not have a version of Poser with that option then be very careful with your lighting. Raytracing must be set to ON for the snow's reflection to work.

Undo:

THERE IS NO UNDO FOR THIS SHADER. Save your scene before using it. If you need to undo the effect you will need to do so manually in the Material room, or reapply the original MAT files for your scene to overwrite the snow shader.

On the other hand, you can run this script as many times as you want on the same material. The script will detect the presence of the snow shader nodes and update them with your changed settings instead of creating new nodes.

Saving your settings

You can save and load your Snow Machine settings from the File menu.

Applying snow to some materials only

To apply snow to several Materials but not ALL of them, make a MAT Collection file using the 'select subset' option. Having made a MAT Collection made up of those materials you DON'T want covered in snow, run the Snow Machine and apply snow to ALL materials. Then apply you MAT Collection to revert the chosen materials back to their original form. Voila! Some materials now have snow and some don't. This can be much quicker than doing it one material at a time.

Hidden objects

Snow is never applied to HIDDEN objects. To apply snow to the entire scene except for a couple of props, make those props hidden first and then apply snow to the whole scene. Now make the props visible again. Snow everywhere except for those props!

Reflection and render times

For objects made up of hundreds of small bits, like trees with their leaves, uncheck 'Use reflection' otherwise the render will take an eternity. You'd effectively be making hundreds of tiny mirrors otherwise. Just set 'Use reflection' for all the other scene elements. Use the advice above regarding hidden objects to achieve this.

Snow Machine licence

Credits

Cover image:

Glitterati3D

User guide:

Basicwiz

Testers:

Basicwiz
Caisson
Christel
ericwalters
Featherwitch
Gareee
GeneralNutt
Glitterati3D
KageRyu
operaguy
perlk
foxylady
Robert Luis Rabello
Tool_Pepe
Wimdvb