Solid Planets

Planet Property / Inspector Label	Type	camelCase (for scripting)	Min	Max	Shader Feature	Procedural Texture Rebuild	Description
Alienization	Float	alienization	0.00	1.00	No	Biome 1, Biome 2	A hue shifter and the higher it is the more different the colors are. E.g. a forest is green but using the alienization slider you can make it orange and purple.
Specular Color	Color	specularColor	n/a	n/a	Yes	None	The color tint of specular reflection on liquid.
Continent Seed	Float	continentSeed	0	255	No	Composition	The random seed used for continent formation. Change this if you want to have a planet with different shore line and continent formation.
Continent Size	Float	continentSize	0.00	1.00	Yes	None	Sets the size of continents where 0 is small and 1 is large.
Continent Complexity	Float	continentComplexity	0.00	1.00	No	Composition	Warps the composition map to create more complex features and coast lines.
Coastal Detail	Float	coastalDetail	0.00	1.00	Yes	None	Sets the smoothness and complexity of shores and coastlines. 0 is smooth and 1 is detailed and complex.
Coastal Reach	Float	coastalReach	0.00	1.00	Yes	None	Affects the archipelago, i.e. number of little islands around coastlines.
Liquid Level	Float	liquidLevel	0.00	1.00	Yes*	None	Liquid / water coverage of planet. 0 = no water, 1 = only water. *) Generates a lookup texture when changed so performance cost is higher than other shader features.
Liquid Color	Color	liquidColor	n/a	n/a	Yes	None	Color of liquid / water. Usually very dark blues look good.
Liquid Opacity	Float	liquidOpacity	0.00	1.00	Yes	None	Transparency of liquid / water. 0 = fully transparent, 1 = fully opaque. Tip: Liquid Opacity set to 0 can block out areas of lava.
(Liquid) Shallow Distance	Float	liquidShallowDistance	0.00	1.00	Yes	None	Transparency crossfade region between liquid and land. 0 = sharp coastlines, 1 = long crossfade distance.
(Liquid) Specular Power	Float	liquidSpecularPower	0.00	1.00	Yes	None	Specular reflection coverage. 0 = large area, 1 = small area.
Polar Ice	Material	polarIce	0.00	1.00	No	Polar Ice	Material used for polar caps.
Polar Caps	Float	polarCapAmount	0.00	1.00	Yes*	None	Size of polar caps, how far polar ice reaches from poles towards equator. 0 = no polar caps, 1 = coverage to polar circle. *) Generates a lookup texture when changed so performance cost is higher than other shader features.
Ice Color	Color	iceColor	n/a	n/a	Yes	None	Color to replace where polar caps cover liquid.
Atmosphere Color	Color	atmosphereColor	n/a	n/a	Yes	None	Color of atmosphere.
(Atmosphere) External Size	Float	atmosphereExternalSize	0.00	1.00	Yes	None	Size of external atmosphere, how far out it reaches from planet.
(Atmosphere) External Density	Float	atmosphereExternalDensity	0.00	1.00	Yes	None	Density / thickness of external atmosphere.
(Atmosphere) Internal Density	Float	atmosphereInternalDensity	0.00	1.00	Yes	None	Thickness of atmosphere that covers the planet, i.e. rim lighting.
Twilight Color	Color	twilightColor	n/a	n/a	Yes	None	Color tint of region between night and day to simulate dusk/dawn twilight zones.
Clouds Opacity	Float	cloudsOpacity	0.00	1.00	Yes	None	Transparency of clouds. 0 = invisible (and disabled), 1 = full opacity. Note Cloud Opacity is applied after Cloud Layers and Cloud Coverage so even with opacity set to 1 clouds can be invisible if coverage or layers are set low.
Clouds Seed	Float	cloudsSeed	0	255	No	Clouds	Random seed used for cloud noise generators.

Clouds Color	Color	cloudsColor	n/a	n/a	Yes	None	Color of clouds.
Clouds Roughness	Float	cloudsRoughness	0.00	1.00	No	Clouds	Normal/bump map of clouds.
Clouds Coverage	Float	cloudsCoverage	0.00	1.00	No	Clouds	Opacity of Clouds after Clouds Layer 1 + 2 + 3 have been combined.
Clouds Layer 1	Float	cloudsLayer1	0.00	1.00	No	Clouds	Individual layers of different styles of clouds. Layer 1-3 are blended together and is then affected by Clouds Coverage and Clouds Opacity.
Clouds Layer 2	Float	cloudsLayer2	0.00	1.00	No	Clouds	Individual layers of different style of clouds.
Clouds Layer 3	Float	cloudsLayer3	0.00	1.00	No	Clouds	Individual layers of different style of clouds.
Clouds Sharpness	Float	cloudsSharpness	0.00	1.00	No	Clouds	Sharpness, contrast, detail of clouds.
Clouds Tiling	Float	cloudsTiling	1	40	Yes	None	How many times cloud texture is tiled around the planet. Tip: Use 2-6 times for planets fully visible and increase to higher values if viewed from close distance to avoid repetition.
Clouds Speed	Float	cloudsSpeed	0.00	1.00	Yes	None	How fast the clouds rotate around the planet.
Clouds Height	Float	cloudsHeight	0.00	1.00	Yes	None	How much the cloud shadows should be offset from clouds.
Clouds Shadow	Float	cloudsShadow	0.00	1.00	Yes	None	Strength of shadow (shadow distance is affected by cloud height).
Lava Amount	Float	lavaAmount	0.00	1.00	Yes	None	How much molten lava should exists. For small cracks, use very low numbers, e.g. 0.001 – 0.01. If you want to break up the pattern, consider using a fully transparent Liquid with no Shallow distance to block areas where lava would otherwise be.
Lava	Material	lava	n/a	n/a	No	Lava	Texture to be used for lava.
Lava Complexity	Float	lavaComplexity	0.00	1.00	No	Composition	Warping/complexity modifier for lava. The composition texture contains a channel for lava coverage.
Lava Frequency	Float	lavaFrequency	0.00	1.00	Yes	None	Affects tiling of the lava texture resulting in 0 = large cracks and 1 = small cracks.
Lava Detail	Float	lavaDetail	0.00	1.00	Yes	None	Affects straightness of crack edges 0 = straight, 1 = warped.
Lava Reach	Float	lavaReach	0.00	1.00	Yes	None	Affects range of edges with hardened rock islands.
(Lava) Color Variation	Float	lavaColorVariation	0.00	1.00	No	Lava	Hue color shifting of lava texture. 0.5 = no change, 0 = shift hue left and 1 = shift hue right.
(Lava) Flow Speed	Float	lavaFlowSpeed	0.00	1.00	Yes	None	How fast the lava animation flows.
(Lava) Glow Amount	Float	lavaGlowAmount	0.00	1.00	Yes	None	Glowing effect around lava. 0 = no glow, 1 = max glow.
(Lava) Glow Color	Color	lavaGlowColor	n/a	n/a	Yes	None	Color of lava glow effect.
Surface Roughness	Float	surfaceRoughness	0.00	1.00	Yes	None	Normal / bump map strength of land areas. Also affects clouds.
Surface Tiling	Float	surfaceTiling	1	30	Yes	None	Tiling amount of surface biome textures. This can often be quite high, 10-20, especially if planets also have liquid and cloud coverage.
Composition	Material	composition	n/a	n/a	No	Composition	Material to be used for planet composition, i.e. continents and biomes are mixed together.
Composition Seed	Float	compositionSeed	n/a	n/a	No	Composition	Seed used for composition texture that affects composition map for biome blending.
Composition Tiling	Float	compositionTiling	1	10	Yes	None	Tiling amount of composition texture. For planets viewed from a distance, use a low value, 2-5 and for close distance where you see parts of planets you can have higher tiling values.

Composition Chaos	Float	compositionChaos	0.00	1.00	No	Composition	Chaos / warp effect of composition texture. Affects how biome blending edges appear.
Composition Balance	Float	compositionBalance	0.00	1.00	No	Composition	Balance between Biome 1 and Biome 2 surface texture where 0.5 is a 50/50 mix, 0 = only Biome 1 and 2 = only Biome 2.
Composition Contrast	Float	compositionContrast	0.00	1.00	No	Composition	Contrast / crossfading between Biome 1 and Biome 2 surface materials. 0 = sharp transition, 1 = heavily crossfaded transition.
Biome 1 Seed	Float	biome1Seed	0	255	No	Biome 1	Random seed used for texture generation.
Biome 1 Type	Material	biome1Type	n/a	n/a	No	Biome 1	Material used for biome.
(Biome 1) Chaos	Float	biome1Chaos	0.00	1.00	No	Biome 1	Chaos / warp effect of biome texture.
(Biome 1) Balance	Float	biome1Balance	0.00	1.00	No	Biome 1	Biome textures have two main textures internally – the balance blends between the two.
(Biome 1) Contrast	Float	biome1Contrast	0.00	1.00	No	Biome 1	Biome textures have two main textures internally, contrast dictates fading between the two textures where 0 = sharp and 1 = heavily crossfaded.
(Biome 1) Color Variation	Float	biome1ColorVariation	0.00	1.00	No	Biome 1	Slight hue shifting of biome texture where 0.5 is original color and <0.5 shifts color hue left and >0.5 shifts color hue right.
(Biome 1) Saturation	Float	biome1Saturation	0.00	1.00	No	Biome 1	Saturation of biome texture where 0.5 is original saturation value and <0.5 desaturates texture and >0.5 increases saturation.
(Biome 1) Brightness	Float	biome1Brightness	0.00	1.00	No	Biome 1	Brightness of biome texture where 0.5 is original brightness and <0.5 darkens texture and >0.5 brightens texture.
(Biome 1) Small Craters	Float	biome1CratersSmall	0.00	1.00	No	Biome 1	Strength of small craters on the biome texture.
(Biome 1) Medium Craters	Float	biome1CratersMedium	0.00	1.00	No	Biome 1	Strength of medium craters on the biome texture.
(Biome 1) Large Craters	Float	biome1CratersLarge	0.00	1.00	No	Biome 1	Strength of large craters on the biome texture.
(Biome 1) Craters Erosion	Float	biome1CratersErosion	0.00	1.00	No	Biome 1	Erosion strength of craters where 0 = no erosion and 1 = very eroded.
(Biome 1) Craters Diffuse	Float	biome1CratersDiffuse	0.00	1.00	No	Biome 1	Color variation of craters where 0 = no change in color.
(Biome 1) Canyons Diffuse	Float	biome1CanyonsDiffuse	0.00	1.00	No	Biome 1	Color variation of canyons where 0 = no change in color.
(Biome 1) Surface Bump	Float	biome1SurfaceBump	0.00	1.00	No	Biome 1	Normal / bump map strength of biome / surface textures.
(Biome 1) Craters Bump	Float	biome1CratersBump	0.00	1.00	No	Biome 1	Normal / bump map strength of craters.
(Biome 1) Canyons Bump	Float	biome1CanyonsBump	0.00	1.00	No	Biome 1	Normal / bump map strength of canyons.
Biome 2 Seed	Float	biome2Seed	0	255	No	Biome 2	Random seed used for texture generation.
Biome 2 Type	Material	biome2Type	n/a	n/a	No	Biome 2	Material used for biome.
(Biome 2) Chaos	Float	biome2Chaos	0.00	1.00	No	Biome 2	Chaos / warp effect of biome texture.
(Biome 2) Balance	Float	biome2Balance	0.00	1.00	No	Biome 2	Biome textures have two main textures internally – the balance blends between the two.
(Biome 2) Contrast	Float	biome2Contrast	0.00	1.00	No	Biome 2	Biome textures have two main textures internally, contrast dictates fading between the two textures where 0 = sharp and 1 = heavily crossfaded.
(Biome 2) Color Variation	Float	biome2ColorVariation	0.00	1.00	No	Biome 2	Slight hue shifting of biome texture where 0.5 is original color and <0.5 shifts color hue left and >0.5 shifts color hue right.
(Biome 2) Saturation	Float	biome2Saturation	0.00	1.00	No	Biome 2	Saturation of biome texture where 0.5 is original saturation value and <0.5 desaturates texture and >0.5 increases saturation.

(Biome 2) Brightness	Float	biome2Brightness	0.00	1.00	No	Biome 2	Brightness of biome texture where 0.5 is original brightness and <0.5 darkens texture and >0.5 brightens texture.
(Biome 2) Small Craters	Float	biome2CratersSmall	0.00	1.00	No	Biome 2	Strength of small craters on the biome texture.
(Biome 2) Medium Craters	Float	biome2CratersMedium	0.00	1.00	No	Biome 2	Strength of medium craters on the biome texture.
(Biome 2) Large Craters	Float	biome2CratersLarge	0.00	1.00	No	Biome 2	Strength of large craters on the biome texture.
(Biome 2) Craters Erosion	Float	biome2CratersErosion	0.00	1.00	No	Biome 2	Erosion strength of craters where 0 = no erosion and 1 = very eroded.
(Biome 2) Craters Diffuse	Float	biome2CratersDiffuse	0.00	1.00	No	Biome 2	Color variation of craters where 0 = no change in color.
(Biome 2) Canyons Diffuse	Float	biome2CanyonsDiffuse	0.00	1.00	No	Biome 2	Color variation of canyons where 0 = no change in color.
(Biome 2) Surface Bump	Float	biome2SurfaceBump	0.00	1.00	No	Biome 2	Normal / bump map strength of biome / surface textures.
(Biome 2) Craters Bump	Float	biome2CratersBump	0.00	1.00	No	Biome 2	Normal / bump map strength of craters.
(Biome 2) Canyons Bump	Float	biome2CanyonsBump	0.00	1.00	No	Biome 2	Normal / bump map strength of canyons.
Cities	Material	cities	0.00	1.00	No	Cities	Material used for night city lights.
(Cities) Random Seed	Float	citiesSeed	0	255	No	Cities	Random seed for city texture generator.
(Cities) Population	Float	citiesPopulation	0.00	1.00	No	Cities	Number of city lights on the night side of a planet.
(Cities) Advancement	Float	citiesAdvancement	0.00	1.00	No	Cities	Strength of “advanced civilizations” large cities.
(Cities) Glow	Float	citiesGlow	0.00	1.00	No	Cities	Glow strength of city lights.
(Cities) Tiling	Float	citiesTiling	1.00	10.00	Yes	None	Amount of tiling of city texture. Usually lower values 2-6.
Night Light Color	Color	citiesColor	n/a	n/a	Yes	None	Color of night city lights.

Gas Planets

Planet Property / Inspector Label	Type	camelCase (for scripting)	Min	Max	Shader Feature	Procedural Texture Rebuild	Description
Horizontal Tiling	Float	horizontalTiling	1.00	10.00	Yes	None	Horizontal tiling of the texture on the gas planet.
Vertical Tiling	Float	verticalTiling	1.00	10.00	Yes	None	Vertical tiling of the texture on the gas planet.
Gas Seed	Float	gasSeed	0	255	No	Everything except Palette	Random seed for the gas texture.
Turbulence Seed	Float	turbulenceSeed	0.00	255.00	No	Everything except Palette	Random seed for turbulence pattern.
Turbulence	Float	turbulence	0.00	1.00	No	Everything except Palette	Amount of turbulence.
Turbulence Scale	Float	turbulenceScale	0.00	1.00	No	Everything except Palette	Scale of turbulence (0 = largest, 1.0 = smallest)
Turbulence Disorder	Float	turbulenceDisorder	0.00	1.00	No	Everything except Palette	Disorder of turbulence – animates the turbulence with seamless loop if cycling from 0.0 – 1.0 and then restarting at 0.0.
Separation	Float	separation	0.00	1.00	No	Everything except Palette	Separation of colors/bands in the gas planet.
Smoothness	Float	smoothness	0.00	1.00	No	Everything except Palette	Smoothness of lines/bands around planet, applies horizontal blur where 0.0 is no horizontal blur and 1.0 is max horizontal blur.
Blurriness	Float	blurriness	0.00	1.00	No	Everything except Palette	Blurs planet textures. Be careful, degrades quality with higher amount of blur.
Palette	Float	palette	1.00	8.00	No	Palette	Palette index 1-8, different gradient palettes.
Detail	Float	detail	0.00	1.00	No	Palette	Adds noise to the palette for a more detailed gradient.
Detail Offset	Float	detailOffset	0.00	1.00	No	Palette	Changes the detail noise.
Contrast	Float	contrast	0.00	1.00	No	Palette	Alters contrast of the palette – be careful, may degrade quality. If you want to have less contrast in the gas planet it is strongly recommended to use the faintness and faintnessColor properties instead!
Hue	Float	hue	0.00	1.00	No	Palette	Color hue shifting of palette. 0.5 = original hue and 0.0 – 1.0 rotates through the entire hue spectrum.
Saturation	Float	saturation	0.00	1.00	No	Palette	Color saturation strength 0.0 = grayscale, 1.0 oversaturated.
Brightness	Float	brightness	0.00	1.00	No	Palette	Brightness/lightness of palette texture. Be careful, may degrade quality of planet as number of colors are reduced.
Banding	Float	banding	0.00	1.00	Yes	None	Shader-based feature similar to the separation property – ads banding to the planet.

Solidness	Float	solidness	0.00	1.00	Yes	None	Affects transparency of the atmospheric edge of the planet – 0.0 very low density and transparent edges, 1.0 = sharp edges with little atmospherical effect.
Faintness	Float	faintness	0.00	1.00	Yes	None	Overlay amount of faintnessColor – use this to dim a planet to faintnessColor to reduce contrast and get very subtle planets.
FaintnessColor	Color	faintnessColor	n/a	n/a	Yes	None	Color to dim to with the faintness property.
Roughness	Float	roughness	0.00	1.00	No	Everything except Palette	Normal mapping strength 0.0 = no normal/bump map, 1.0 strong normal/bump mapping.
Twilight Color	Color	twilightColor	n/a	n/a	Yes	None	Color for dusk/dawn transition between day and night of planet. To reduce the effect, use darker colors. Use black for no twilight effect.
Storm Mask Index	Float	stormMaskIndex	0.00	1.00	No	Storm Mask	Index of storm mask – this cycles the position of the storm around the planet. The index allows the storm to be drawn on only one tiled square. E.g. if planet tiles 4 times horizontally and 2 times vertically the storm index will have 8 slots and position the storm somewhere in the 4x2 tiled planet.
Storm Squash	Float	stormSquash	0.00	1.00	No	Everything except Palette	Amount storm should by squashed vertically – higher values will flatten the storm making it more oval.
Storm Color	Color	stormColor	n/a	n/a	Yes	None	Color that storm region should interpolate towards.
Storm Tint	Float	stormTint	0.00	1.00	Yes	None	Amount of tinting towards stormColor (0.0 = no tinting, 1.0 = full tinting to stormColor)
Storm Scale	Float	stormScale	0.00	1.00	No	Everything except Palette	o Size of the storm (0.0 = smallest, 1.0 = largest) – be aware, values between 0.5 and 1.0, especially with large stormNoise values may make the storm masking seam visible somewhat.
Storm Noise	Float	stormNoise	0.00	1.00	No	Everything except Palette	o Noise of storm – 0.0 = round, 1.0 = warped and unevenly distributed. Be aware of values between 0.5 and 1.0 as seam from masking could become somewhat visible.
Atmosphere Color	Color	atmosphereColor	n/a	n/a	Yes	None	o Color of internal planet rim lighting. Use darker colors for less prominent atmosphere.
Atmosphere Falloff	Float	atmosphereFalloff	0.00	1.00	Yes	None	o Falloff amount of rim lighting atmosphere. 0.0 = little falloff (more atmosphere) 1.0 = strong falloff (less atmosphere)