Time Of Day System Free [v1.2.7].
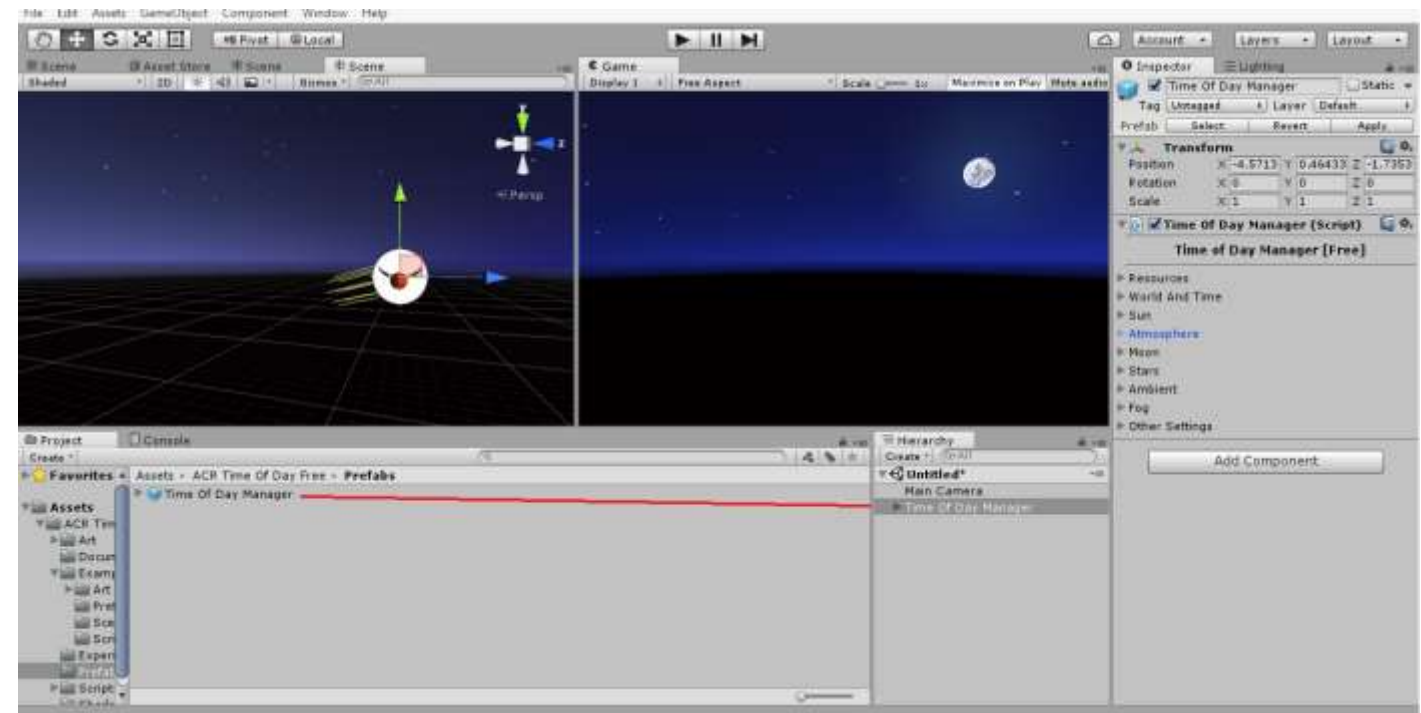
About.

❖ With this package you can create Basic Day/Night cycle, also it includes a system of curves and gradients to control the parameters of the lighting, sky, moon, stars, fog,etc,

Getting Started.

❖ Drag the prefab "Assets/Time Of Day System Free/Prefabs/Time Of Day Manager" into your hierarchy.

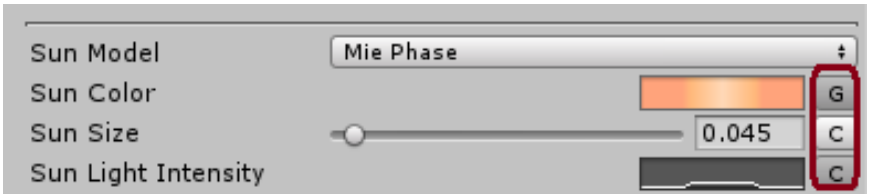❖ **Note:** Make sure that there are no additional lights in the scene.

Or

❖ Drag the script "Assets/Time Of Day System Free/Scripts/TimeOfDayManager" to empty gameObject and assign the required components and resources.
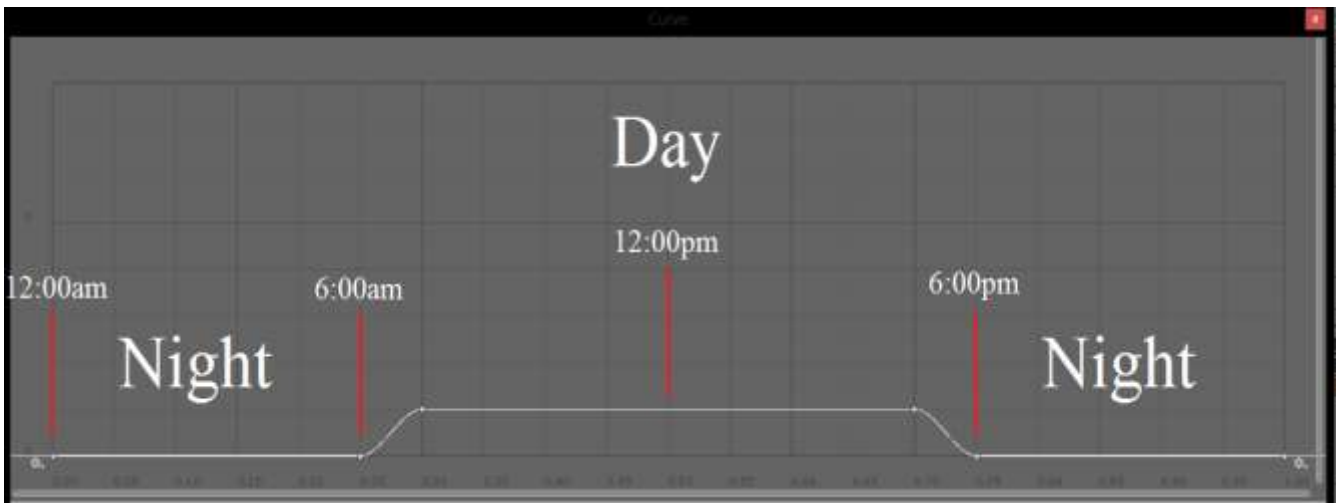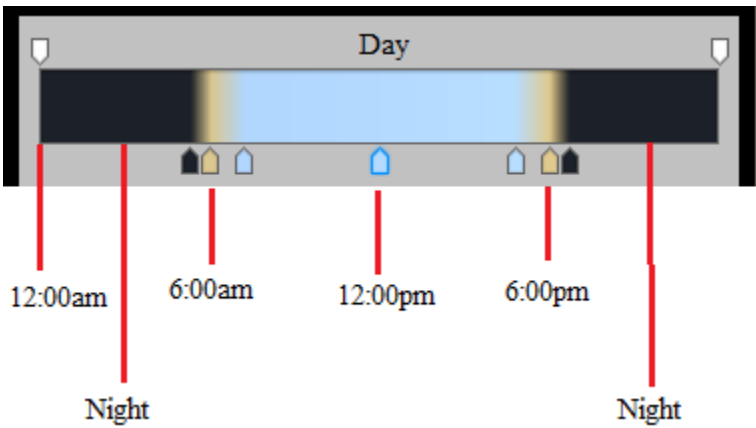
Curves and Gradients.

- ❖ You can choose to use curves or gradients:
  - ➢ Press "C" button to actívate curves.
  - ➢ Press "G" button to activate gradients.

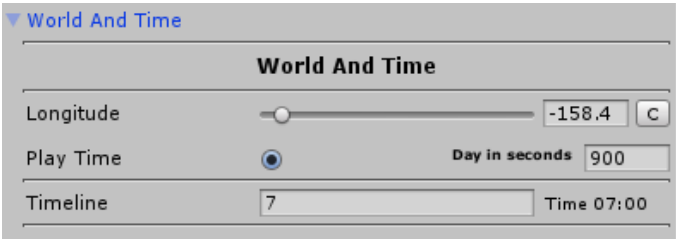- ❖ You can be guided with the images to set the curves and gradients.

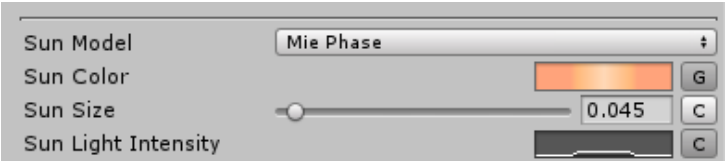0 = 12:00am, 0.25 = 6:00am, 0.5 = 12:00pm, 0.75 = 6:00pm.

0 = 12:00am, 25 = 6:00am, 50 = 12:00pm, 75 = 6:00pm.

World And Time.

- ❖ **Longitude:** This is the longitude of the world.
- ❖ **Day In Secods:** The day in seconds(60 = 1minute, 3600 = 1hour, 86400 = 24 hours).
- ❖ **Time Line:** This is the timeline.

Sun.

- ❖ Sun Type: This is the sun type(miePhase and sunSpot).
- ❖ **Sun Color:** This is the color of the sun and sun directional light.
- ❖ **Sun Size:** This is the size of the sun.
- ❖ **Sun Light Intensity:** This is the intensity of the sun directional light.
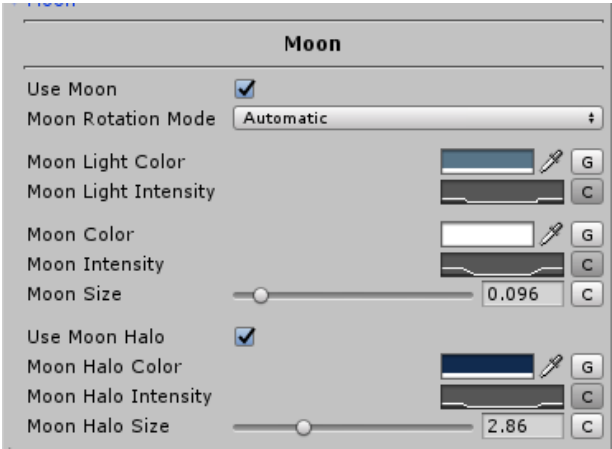
Atmosphere.
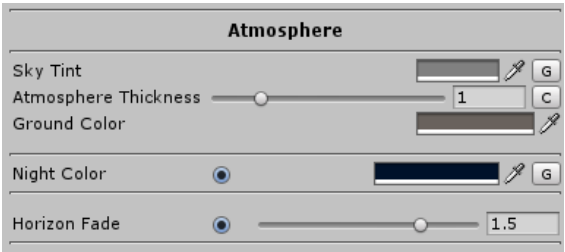
- ❖ **Sky Tint:** This is sky tint, It affects the wavelength.
- ❖ **Atmosphere Thickness:** This is thickness of the atmosphere, It affects the Rayleigh.
- ❖ **Ground Color:** This is the ground color.
- ❖ **Night Color:** This is sky color at night.
- ❖ **Horizon Fade :** This is the fade of the moon and stars on the horizon.
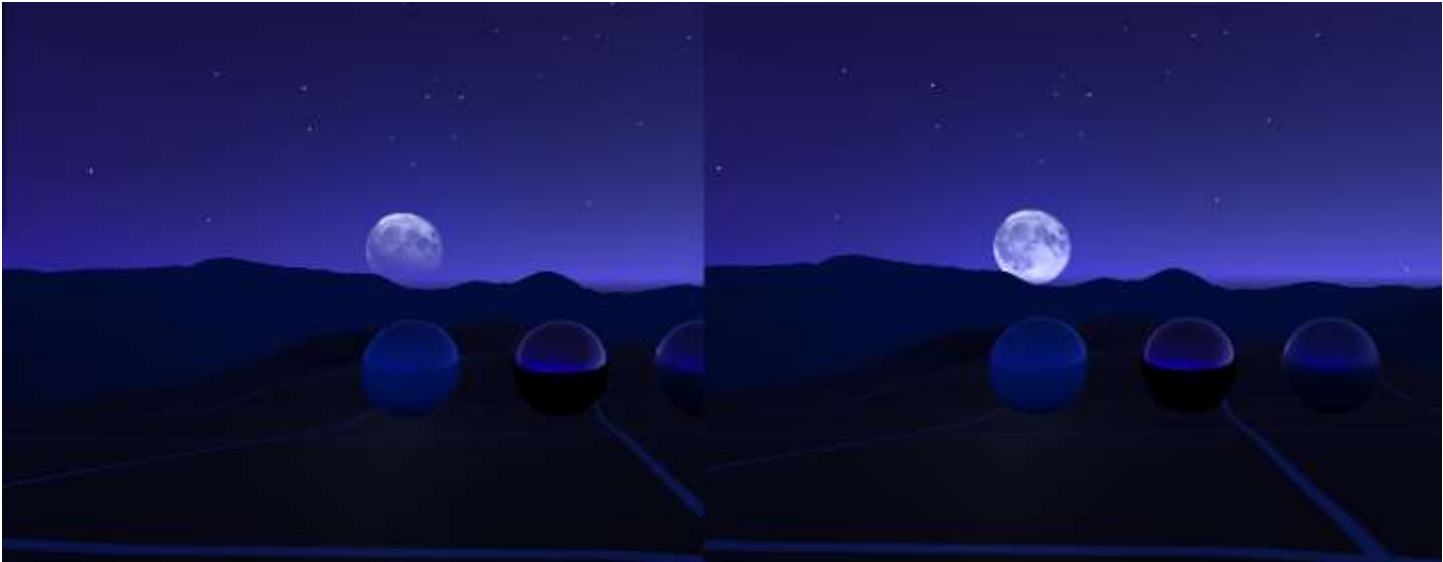
Horizon Fade.

Moon.

- ❖ **Moon Rotation Mode:**
  - ➢ **Automatic :** Rotate moon in the opposite direction to the sun.
  - ➢ **Custom** : Custom rotation moon.
    - ▪ **Moon Yaw:** This is the rotation in the y axis.
    - ▪ **Moon Pitch:** This is the rotation in the x axis.
- ❖ **Moon Light Color:** This is the color of the moon directional light.
- ❖ **Moon Light Intensity:** This is the Intensity of the moon directional light.
- ❖ **Moon Color:** This is the color of the moon texture.
- ❖ **Moon Size:** This is the size of the moon texture.
- ❖ **Moon Halo Color:** This is the color of the moon halo.
- ❖ **Moon Intensity:** This is the intensity of the moon texture.
- ❖ **Moon Halo Size:** This is the size of the moon halo.

Moon Texture Settings.
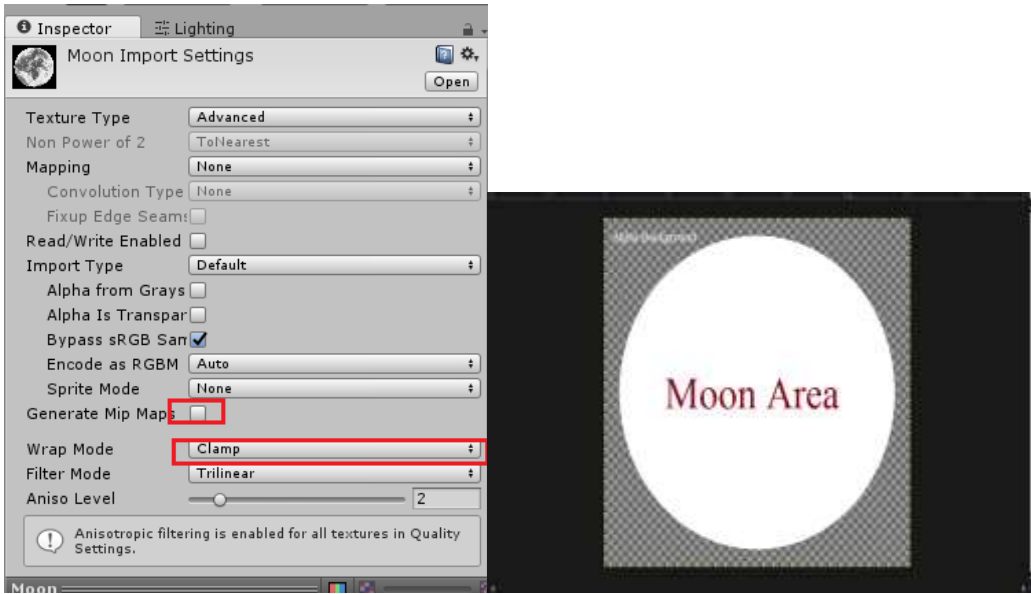
Stars.
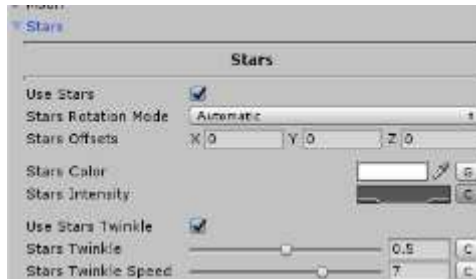
- ❖ **UseStars:** Enable/Disable the stars.
- ❖ **Stars Rotation Mode:** Rotaion mode of the stars.
- ❖ **Stars Offset:** Offsets of the stars cubemap.
- ❖ **Stars Color:** This is the color of the stars cubemap.
- ❖ **Stars Intensity:** This is the intensity of the stars cubemap.
- ❖ **UseStarsTwinkle :** Enable/Disable stars twinkle.
- ❖ **Stars Twinkle :** This is the twinkling of stars.
- ❖ **Stars Twinkle Speed :** This is the twinkling speed of stars.

Ambient.
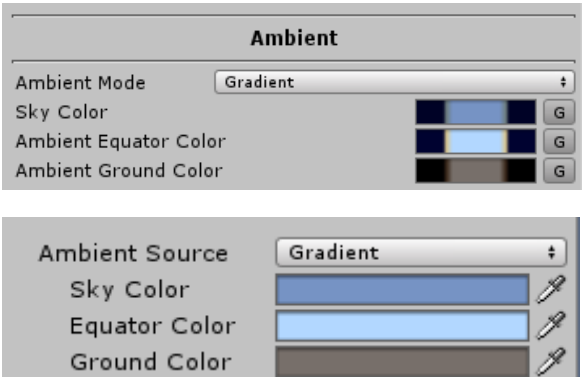
❖ Here they are controlled properties of the ambient using curves and gradients.

See: https://docs.unity3d.com/Manual/GlobalIllumination.html

Reflection Probe.

❖ Settings for reflection probe.

See https://docs.unity3d.com/Manual/class-ReflectionProbe.html
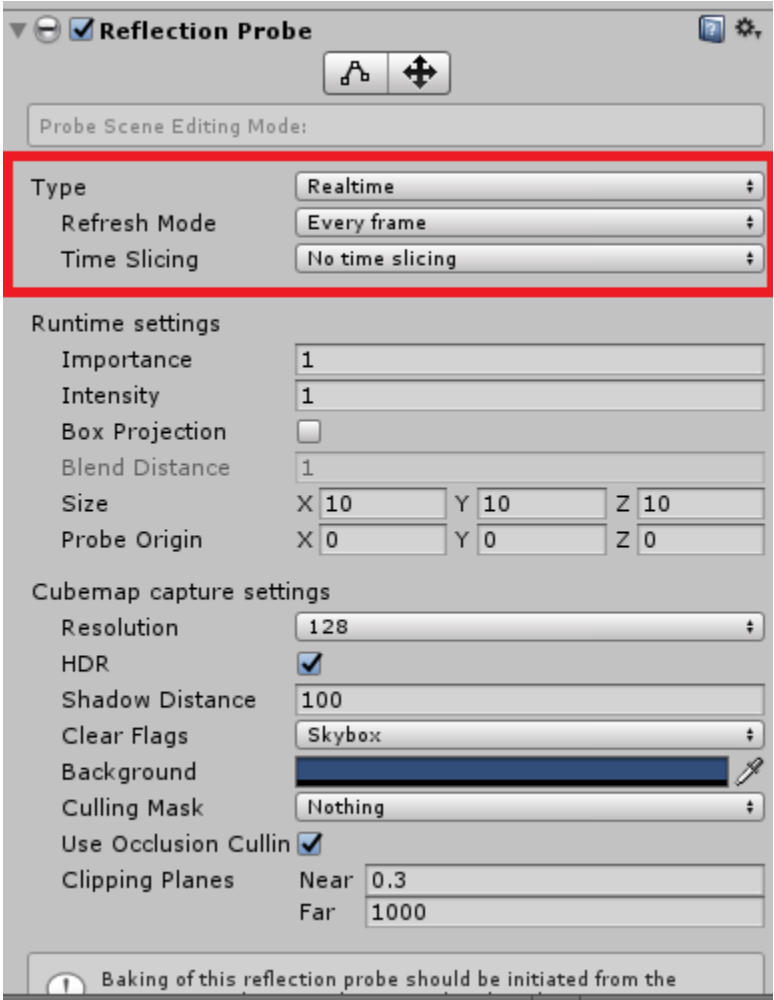
Fog.
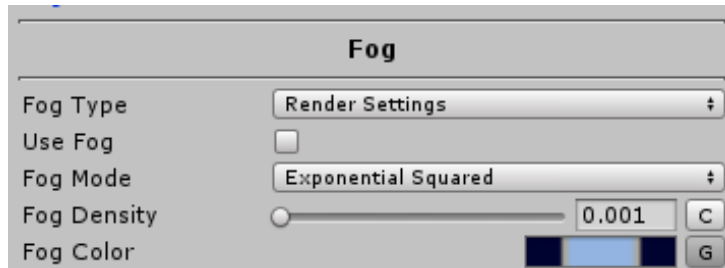
❖ **Fog Type :**
  ➢ Render Settings : Render settings fog values.
  ➢ Evaluate Only Only evaluate curves and gradients of the fog.
  ➢ Off : Enable/Disable fog.

❖ Here they are controlled properties of the fog using curves and gradients.

See: https://docs.unity3d.com/Manual/GlobalIllumination.html

Other Settings

❖ **Exposure:** This is HDR exposure.

Scripting.

Namespace.

To access the class " Time Of Day Manager", you must use this namespace.

❖ **AC.TimeOfDaySystemFree**

Example :

```
using UnityEngine;
using System.Collections;
using AC.TimeOfDayFree;

public class Test : MonoBehaviour
{

}
```

Important Properties.

❖ **CGTime:** This property is used to evaluate the curves and gradients,

Example :

```
AnimationCurve exampleCurve = new AnimationCurve();

void Update()
{
    float exampleFloat  = exampleCurve.Evaluate(CGTime);
}
```

❖ **timeline:** This is the current time or timeline, the range is 0 – k_DayDuration (default is 24).
❖ **Hour :** This is the current hour.
❖ **Minute :** This is the current minute.
❖ **TimeString :** For UI time.
❖ **IsDay :** Day state.
❖ **IsNight :** Night state.

Public Properties And Variables.

Variables.

- ❖ skyMaterial.
- ❖ moonTexture
- ❖ starsCubemap.
- ❖ starsNoiseCubemap.
- ❖ playTime.
- ❖ useWorldLongitudeCurve.
- ❖ worldLongitudeCurve.
- ❖ dayInSeconds.
- ❖ timeline.
- ❖ useSunColorGradient.
- ❖ sunColorGradient.
- ❖ useSunSizeCurve.
- ❖ sunSizeCurve.
- ❖ useSunLightIntensityCurve.
- ❖ sunLightIntensityCurve.
- ❖ useSkyTintGradient.
- ❖ useAtmosphereThicknessCurve.
- ❖ atmosphereThicknessCurve.
- ❖ groundColor.
- ❖ useNightColor.
- ❖ useNightColorGradient.
- ❖ nightColorGradient.
- ❖ useHorizonFade.
- ❖ useHorizonFadeCurve.
- ❖ horizonFadeCurve.
- ❖ useMoon.
- ❖ moonRotationMode.
- ❖ useMoonYawCurve.
- ❖ moonYawCurve
- ❖ useMoonPitchCurve.
- ❖ moonPitchCurve.
- ❖ useMoonLightColorGradient.
- ❖ moonLightColorGradient.
- ❖ useMoonLightIntensityCurve.
- ❖ moonLightIntensityCurve.
- ❖ useMoonColorGradient.
- ❖ moonColorGradient.
- ❖ useMoonIntensirtCurve.
- ❖ moonIntensityCurve.
- ❖ useMoonSizeCurve.
- ❖ moonSizeCurve.
- ❖ useMoonHalo.
- ❖ useMoonHaloGradient.
- ❖ moonHaloGradient.
- ❖ useMoonHaloSizeCurve
- ❖ moonHaloSizeCurve.
- ❖ useMoonHaloIntensityCurve.
- ❖ moonHaloIntensityCurve.
- ❖ useStars.
- ❖ starsRotationMode.
- ❖ starsOffets-

- ❖ useStarsColorGradient.
- ❖ starsColorGradient.
- ❖ useStarsIntesnityCurve.
- ❖ starsIntensityCurve.
- ❖ useStarsTwinkle.
- ❖ useStarsTwinkleCurve.
- ❖ starsTwinkleCurve,
- ❖ useStarsTwinkleSpeed.
- ❖ starsTwinkleSpeed.
- ❖ useAmbientSkyColorGradient.
- ❖ ambienSkyColorGradient.
- ❖ useAmbientEquatorColorGradient.
- ❖ ambientEquiatorColorGradient.
- ❖ useAmbientGroundColorGradient.
- ❖ ambientGroundColorGradient.
- ❖ useAmbientIntensityCurve.
- ❖ ambientIntensityCurve.
- ❖ fogMode.
- ❖ useRenderSettingsFog.
- ❖ useFogDensityCurve.
- ❖ fogDensityCurve.
- ❖ useFogStartDistanceCurve.
- ❖ fogStartDistanceCurve
- ❖ useFogEndDistanceCurve.
- ❖ fogEndDistanceCurve
- ❖ useFogColorCurve
- ❖ fogColorCurve.
- ❖ useExposureCurve.
- ❖ exposureCurve.

Properties.

- ❖ WorldLongitude.
- ❖ WorldRotation(private set).
- ❖ Hour.
- ❖ Minute.
- ❖ TimeString.
- ❖ CGTime.
- ❖ SunColor.
- ❖ SunSize.
- ❖ SunLightIntensity.
- ❖ SunDirection.
- ❖ SunMatrix(private set).
- ❖ IsSunLight(private set).
- ❖ SkyTint.
- ❖ AtmosphereTickness.
- ❖ NightColor.
- ❖ HorizonFade.
- ❖ MoonYaw.
- ❖ MoonPitch.
- ❖ MoonLightColor.
- ❖ MoonLightIntensity.
- ❖ MoonColor.
- ❖ MoonIntensity.
- ❖ MoonSize.
- ❖ MoonHaloColor.
- ❖ MoonHaloSize.
- ❖ MoonHaloIntensity.
- ❖ MoonDirection.
- ❖ IsMoonLight(private set).

- ❖ StarsColor.
- ❖ StarsIntensity.
- ❖ StarsTwinkle.
- ❖ StarsTwinkleSpeed.
- ❖ AmbientSkyColor.
- ❖ AmbientEquatorColor.
- ❖ AmbientGroundColor.
- ❖ AmbientIntensity.
- ❖ FogDensity.
- ❖ FogStartDistance.
- ❖ FogEndDistance.
- ❖ FogColor.
- ❖ Exposure.