Visualize the sun's rays anytime, anywhere, in any direction

BIPROGY

Sky Radiation Simulator

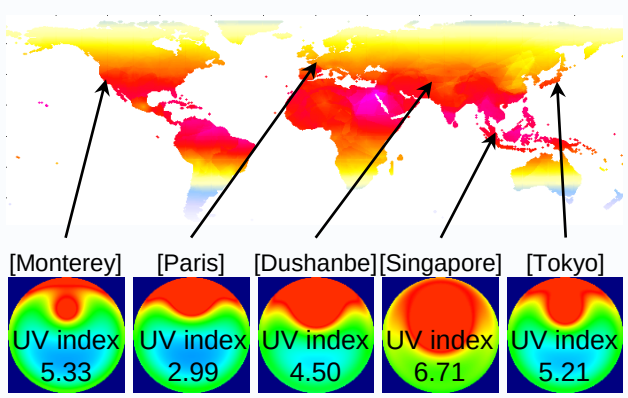
[Patent pending]

Unique simulation of the sun's rays anytime, anywhere.
-- New utilization of the sun's rays will begin

"Sky Radiation Simulator" can quantify the sunlight (ultraviolet rays, visible rays, infrared rays, amount of solar radiation) at a specified point anytime, anywhere, in any direction. It predicts the sun's rays according to any time, any place, and any direction, and contributes to the planning of specific measures for social issues from the perspective of "sun rays".

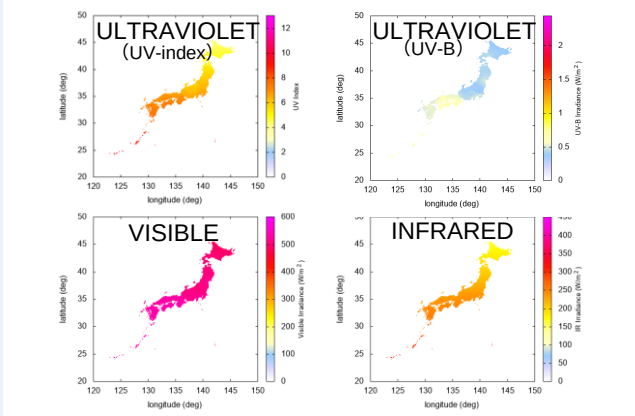
Can be simulated anywhere on earth

The specified point can be calculated from the latitude and longitude.



Any wavelength of the sun's ray

Analysis according to the intensity and integration of ultraviolet rays, visible rays, and infrared rays is possible.

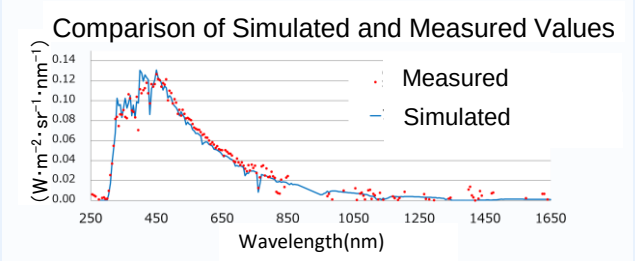


The difference in direction can be simulated

The intensity of solar radiation can be calculated according to the orientation and elevation/depression angle.

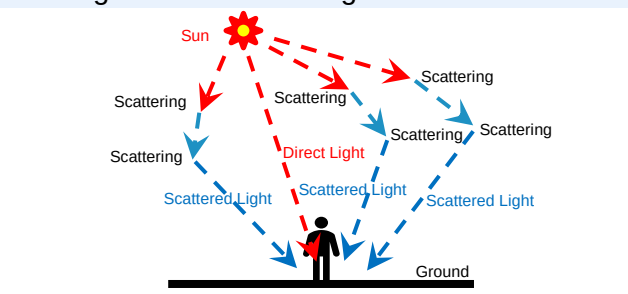
High-precision simulation

High-precision simulation results with few errors.



Intensity of direct light and scattered light

Since the scattering / absorption phenomenon in the atmosphere is calculated, the intensity of direct light and scattered light can be calculated.



Also supports calls from programs

Calls can be made from programs such as R&D, forecast / performance management, and smart device apps.

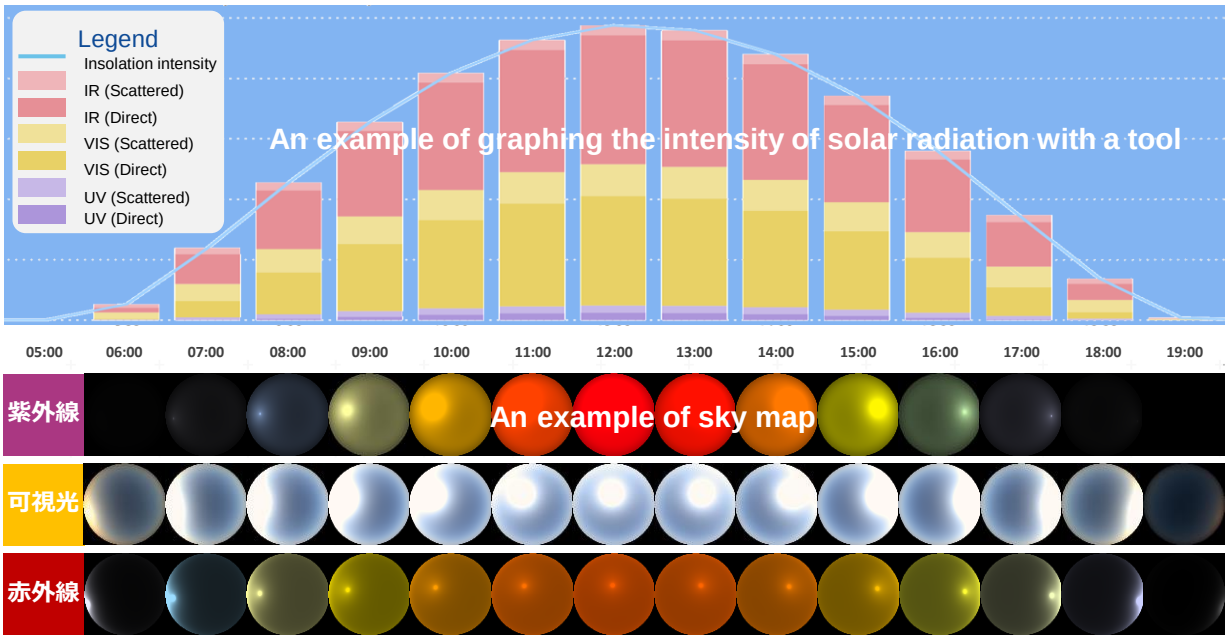
Foresight in sight

Utilization image of "Sky Radiation Simulator"

Image of digitization and visualization of sunlight

You can quantify and visualize the sun's rays, such as calculating the solar radiation intensity at any time in a certain place for each wavelength band and drawing an image of the sky map.

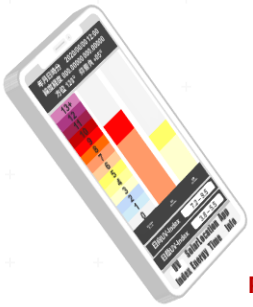
The data quantified by "Sky Radiation Simulator" can be used from programs and tools via files or API calls.

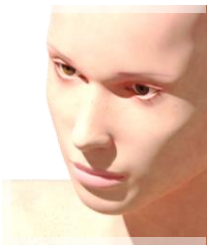


Application image of “Sky Radiation Simulator”

By using the result of "Sky Radiation Simulator" as one of the inputs and modeling the physical phenomenon related to the sun's rays with mathematical formulas, etc., precise physical simulation becomes possible. For example, calculation of the degree of influence of ultraviolet rays on the human body, prediction of deterioration of paint and material, prediction of effect of heat-shielding paint, prediction of temperature of solid, liquid, soil, and human body, prediction of solar power generation, prediction of growth of plants, it is a time series simulation such as.

Calculation of the degree of influence of ultraviolet rays on the human body





Calculate UV index

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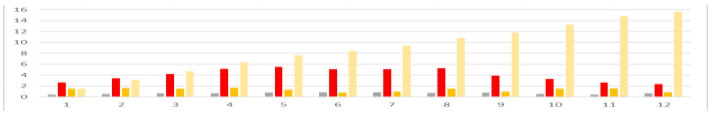
Present appropriate measures

Prediction of deterioration of paint and materials Predicting the effect of heat-shielding paint



Cumulative solar radiation energy

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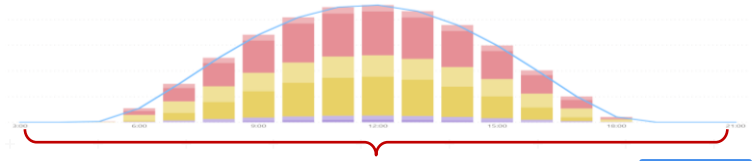
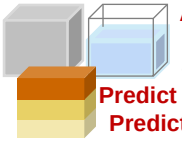
Predict the useful life of paint
Predict the cost-effectiveness of heat-shielding paint

Temperature prediction of solid, liquid, soil and human body, etc.





Apply the simulation results to the temperature calculation model

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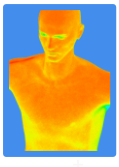
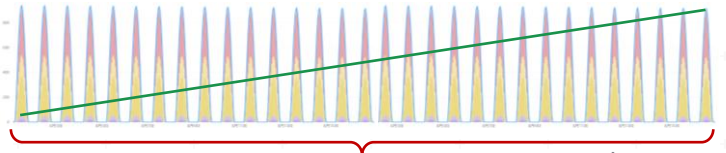
Predict the appropriate period of soil disinfection
Predict the condition of the human indoors and outdoors



Solar power generation forecast Growth forecast of plants, etc.



Apply the simulation results to the yield calculation model

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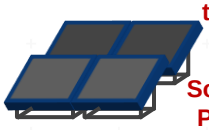

Solar power generation forecast
Predict the yield of plants, etc.

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About "Sky Radiation Simulator“
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