Supplementary file

Exchange of heat radiation between human body and urban environment: characterization in visible, near-infrared and far-infrared regions

Takahiro Kono [1,*], Yuichiro Naruse [1], Jun Yamada [1] and Uma Maheswari Rajagopalan [1]

[1] Department of Mechanical Engineering, Shibaura Institute of Technology, 3-7-5 Toyosu, Koto-ku, Tokyo 135-8548, Japan

* Correspondence: kono.takahiro.f3@sic.shibaura-it.ac.jp

SA: Details of the processing of measurement results during calibration experiments

To reduce the effects of variation of light source and camera pixel on the calibration experiments, the average value was taken from the center area of the object captured by the cameras, as shown in the example for visible camera in following Figure S1.

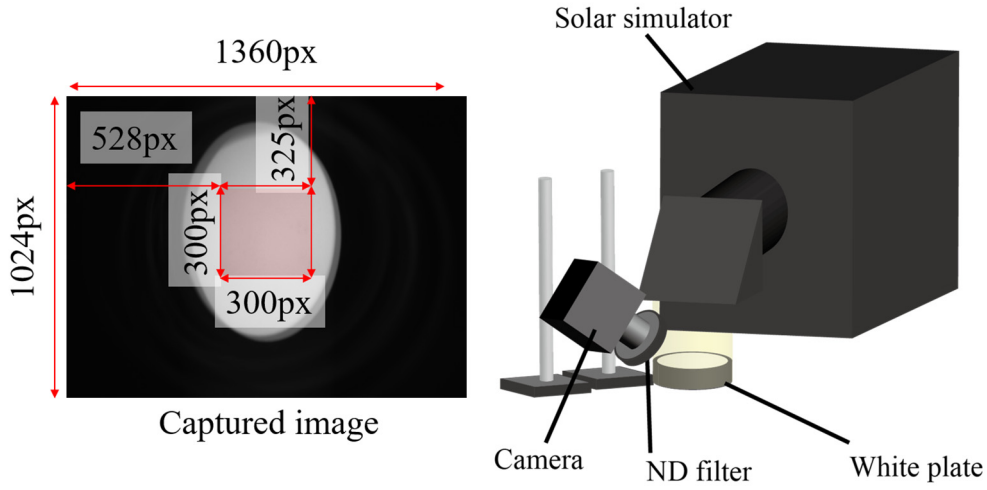

Figure S1. Example of a measured image using standard diffuse reflector taken by a visible light camera, where the red area is obtained as the average value.

The pixel specifications for each camera and the number of pixels used for obtaining the average

value are as following table.

Table S1. Specifications and the number of pixels used in the calibration experiments for each camera.

Type of camera	Total number of pixel	Number of pixels for averaging area
Visible wavelength	1024 × 1360	300 × 300
Near-infrared wavelength	512 × 634	150 × 150
Far-infrared wavelength	120 × 160	40 × 40

SB: Experimental equipment used for outdoor experiments

At each location, the equipment shown in Figure S2 was used to obtain panoramic images.

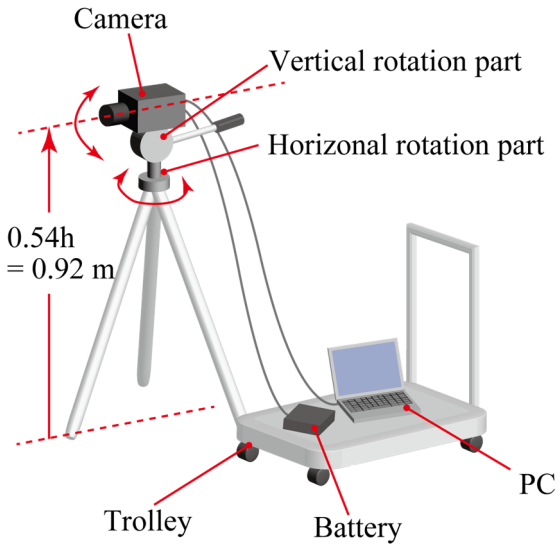

Figure S2. Schematic diagram of measurement using a camera attached with a rotation unit.

The camera height was fixed at 0.92 m from the ground level, according to the definition of the view factor. A mechanical unit that allows the camera to rotate horizontally and vertically was attached to the base of the camera. To enable outdoor experiments, the equipment was placed on a trolley to be moved with the camera using a mobile battery to move the PC and connection cords along with the camera.