

## I. Weather

(by Kazuo Matsushige)

### 1. Measurement methods

Surface temperature, humidity, wind direction, wind speed, and illuminance: Measured on the roof of the Main Laboratory of the Kasumigaura Water Research Station of the National Institute for Environmental Studies (Oyama, Miho-mura, Inashiki-gun, Ibaraki: 36°00.14'N, 140°22.58'E).

Precipitation and soil temperature: Measured in an open space near the Main Laboratory building. Soil temperature was measured at the depths of 10 cm and of 30 cm below the surface.

Air temperature, humidity, wind direction and wind speed: Measured on the roof of the intake tower of lake water, which is built 150 m offshore in the lake (36°00.22'N, 140°22.85'E).

Water level: Measured on the floor of the intake tower.

Water temperature: Measured at depths of 20 cm, 75 cm and 150 m.

Signals were recorded at intervals of a minute from 1985 to 1995, and of 10 minutes after 1996.

### 2. Measuring equipments

Items	1985 - 1996	since 1996	
Wind direction	Anemoscope (synchronized type) (Ogasawara-keiki Co. Ltd.)		
Wind Speed	Wind-mill type anemometer (pulse type) (Ogasawara-keiki Co. Ltd.)		
Temperature	Thermometer (crystal-oscillator type) (Ogasawara-keiki Co. Ltd.)	Platinum resistance thermometer (Yokogawa Weathac Co. Ltd.)	
Humidity	Hygrometer (Vaisala type) (Ogasawara-keiki Co. Ltd.)	Hygrometer (Vaisala type) (Yokogawa Weathac Co. Ltd.)	
Precipitation	Reversal bucket rain gauge (Ogasawara-keiki Co. Ltd.)		
Atmospheric pressure	Auto-recording aneroid barometer (Ogasawara-keiki Co. Ltd.)	High accuracy anemometer (Yokogawa Weathac Co. Ltd.)	
Solar radiation	Neo Pyranometers (Ogasawara-keiki Co. Ltd.)		
Water level	Water level gauge (floating type) (Ogasawara-keiki Co. Ltd.)	Ultrasonic water level gauge (Yokogawa Weathac Co. Ltd.) since 1996	Pressure type water level gauge (Yokogawa Weathac Co. Ltd.) since 1997
Water temperature	Platinum resistance thermometer (Ogasawara-keiki Co. Ltd.)	Platinum resistance thermometer (Yokogawa Weathac Co. Ltd.)	
Soil temperature	Platinum resistance thermometer (Ogasawara-keiki Co. Ltd.)	Platinum resistance thermometer (Yokogawa Weathac Co. Ltd.)	