

CHIBA CAMPAIGN 2021

7/26 – 8/8



Daily Report (2021/08/01)

► AEROSOL analysis

AOD from Sky radiometer & MAX-DOAS

by Irie Lab. M1 Takeru Ohno

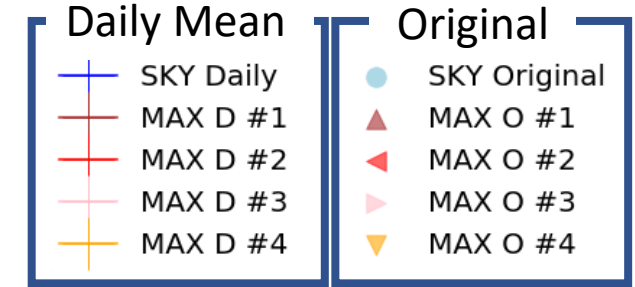
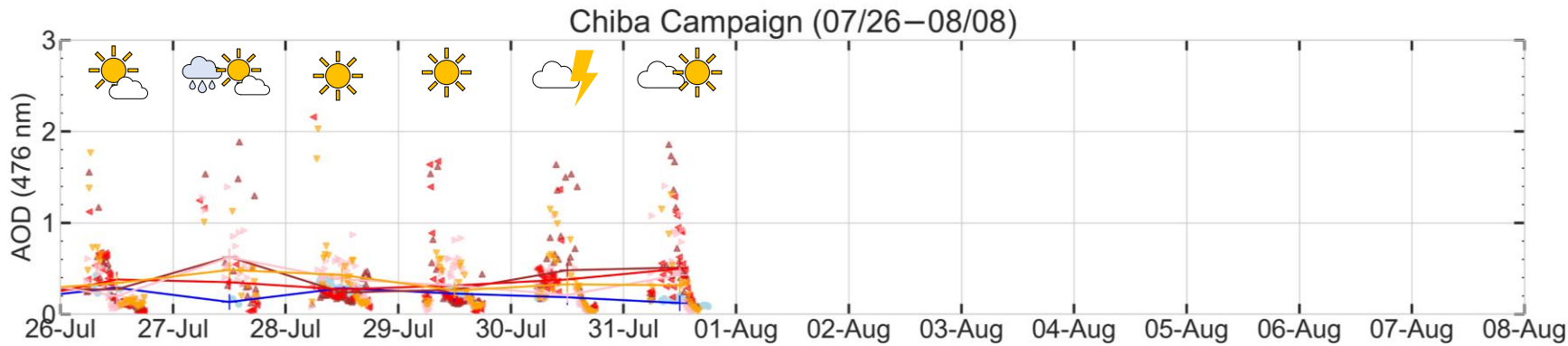
MAX-DOAS
Measurement Directions



Irie et al., 2017

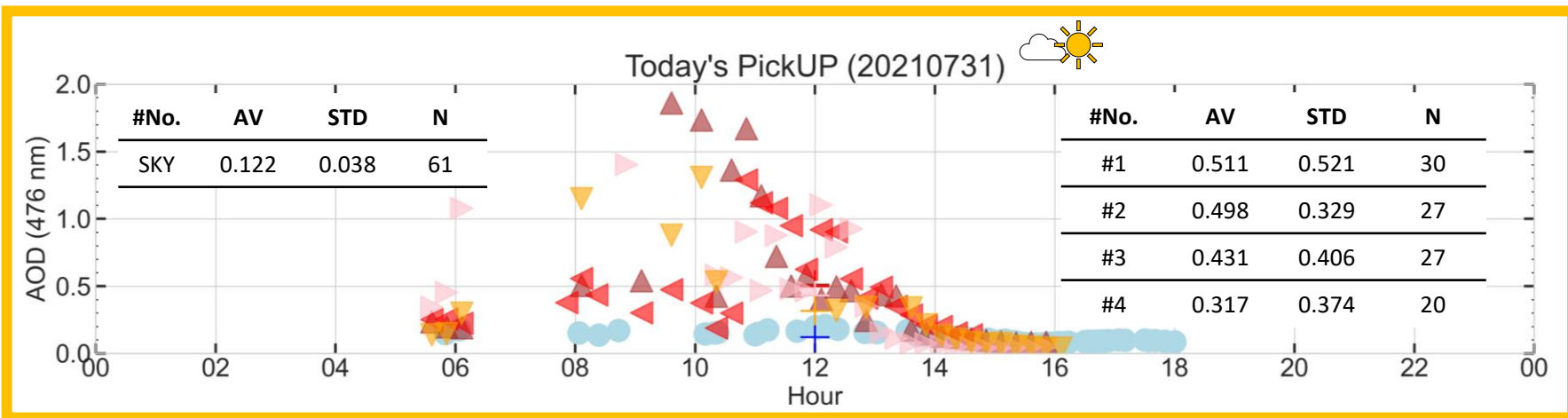
AOD from Sky radiometer(476 nm) & MAX-DOAS(476 nm)

AOD(476 nm) from Sky radiometer and MAX-DOAS

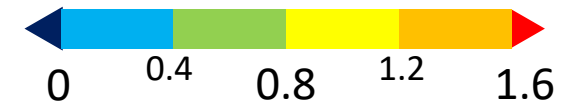


Sky Cloud Flag≠0

Today's AOD



✂️ Wavelength interpolation of Sky radiometer AOD from 500 nm to 476 nm $\Rightarrow \tau_{476} = \tau_{500} \left(\frac{476}{500} \right)^{-AE}$



(Fig. Irie et al., 2017)

AEC (MAX-DOAS)

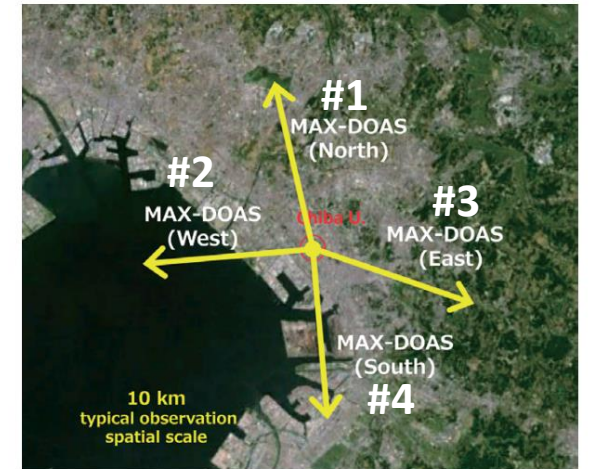
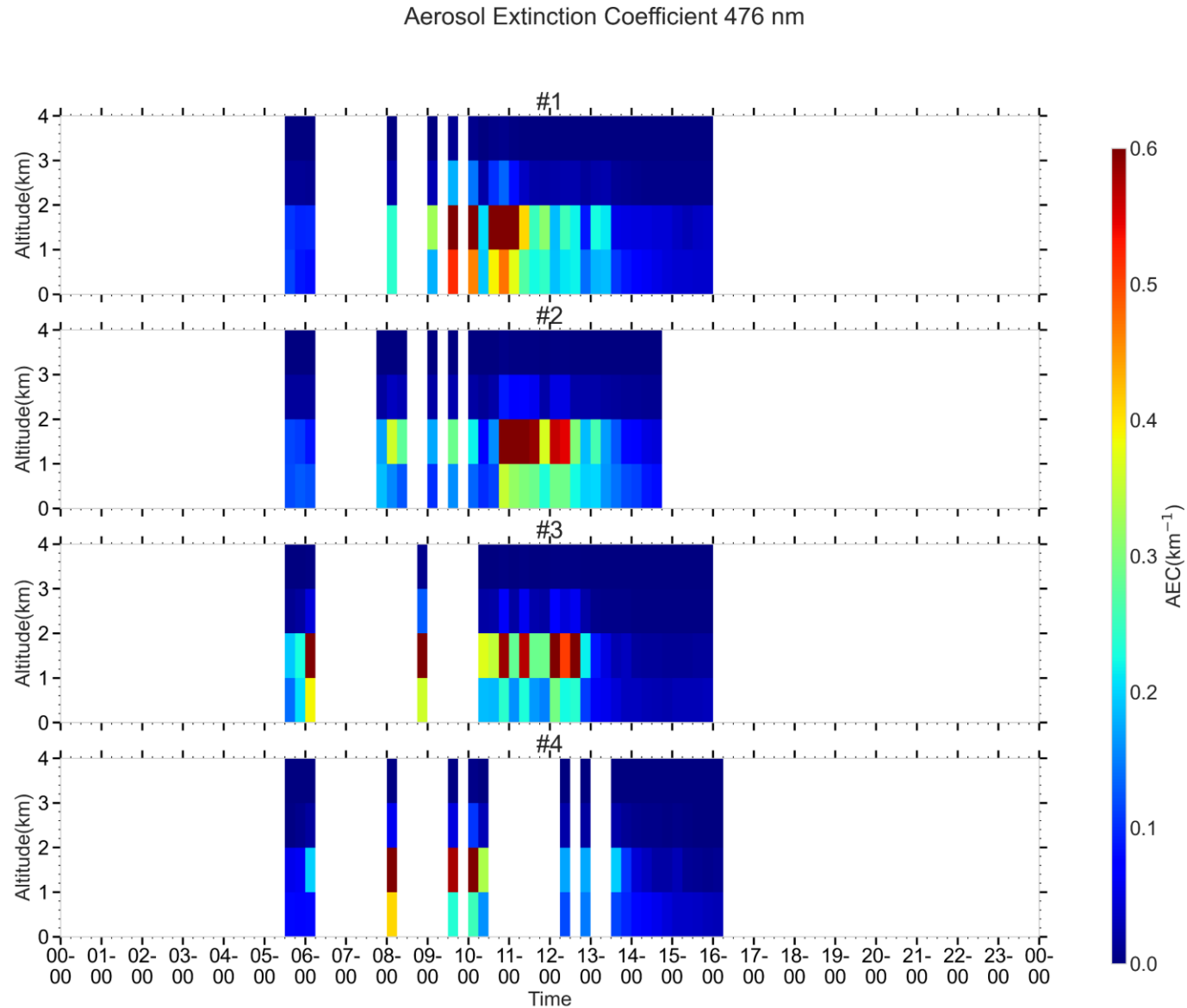
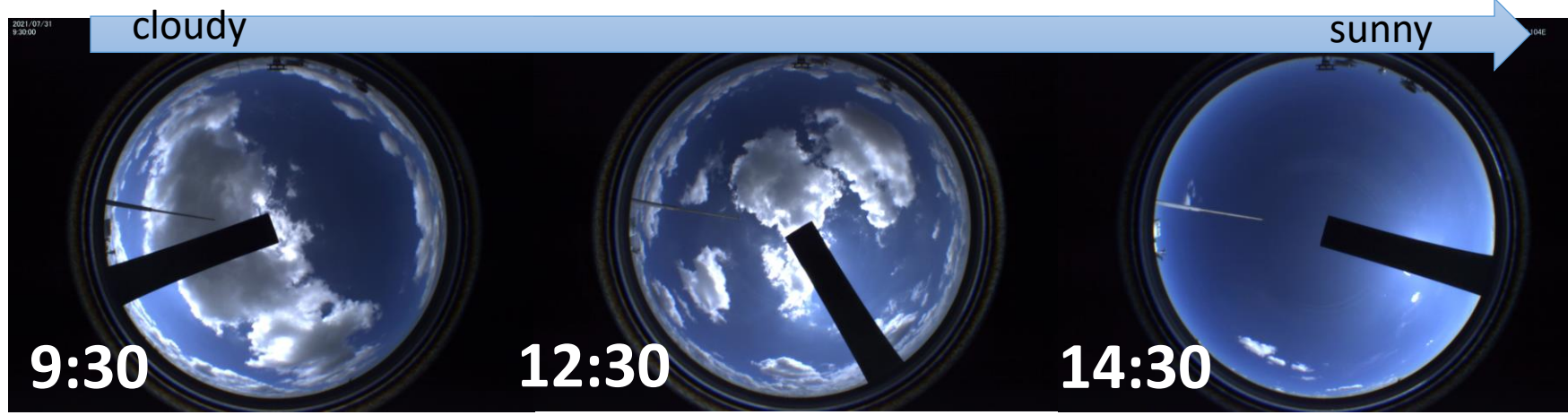
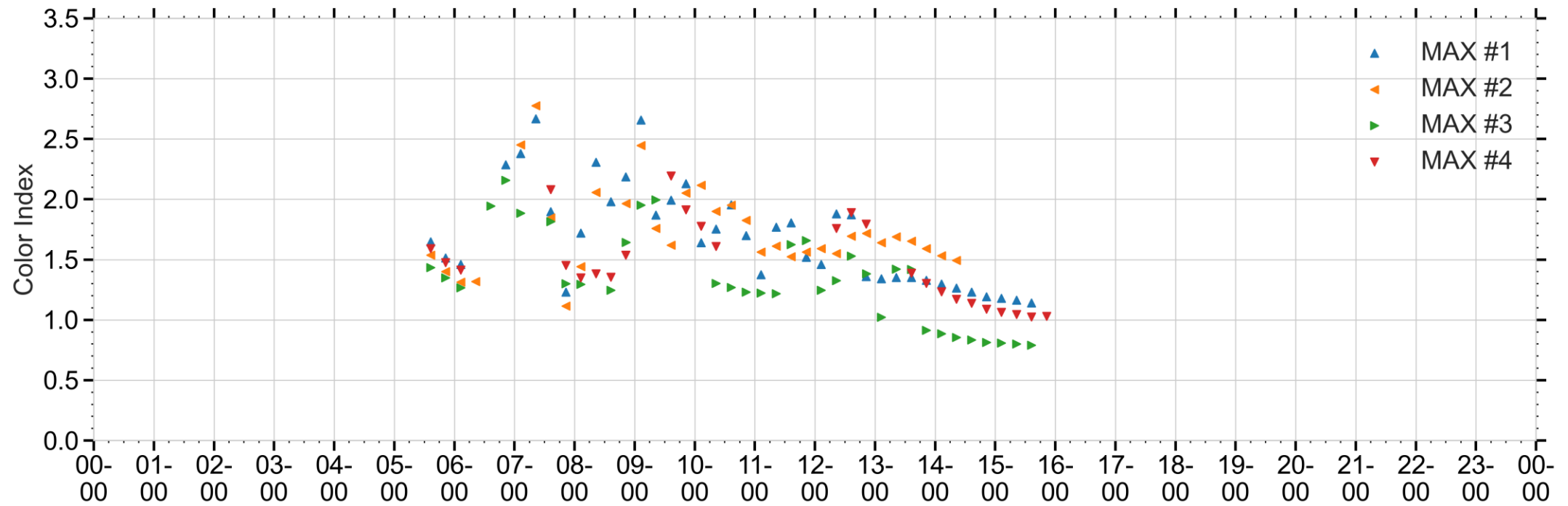


Fig. 5 Schematic illustration of observations by the North-, West-, East-, and South-viewing MAX-DOAS instruments (this set is called the 4AZ-MAXDOAS system) located at the SKYNET Chiba site (Chiba University).

Irie et al., 2017

Color Index(MAX-DOAS)



Color Index(CI)

$$CI = \frac{I_{\text{Longwave}}}{I_{\text{shortwave}}} = \frac{I_{500}}{I_{380}}$$

Takashima et al., 2009