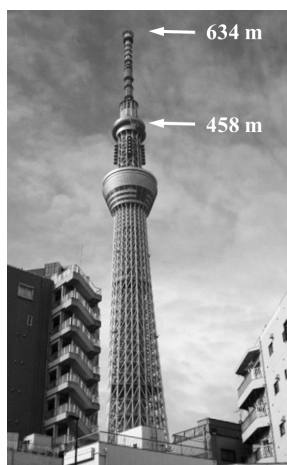
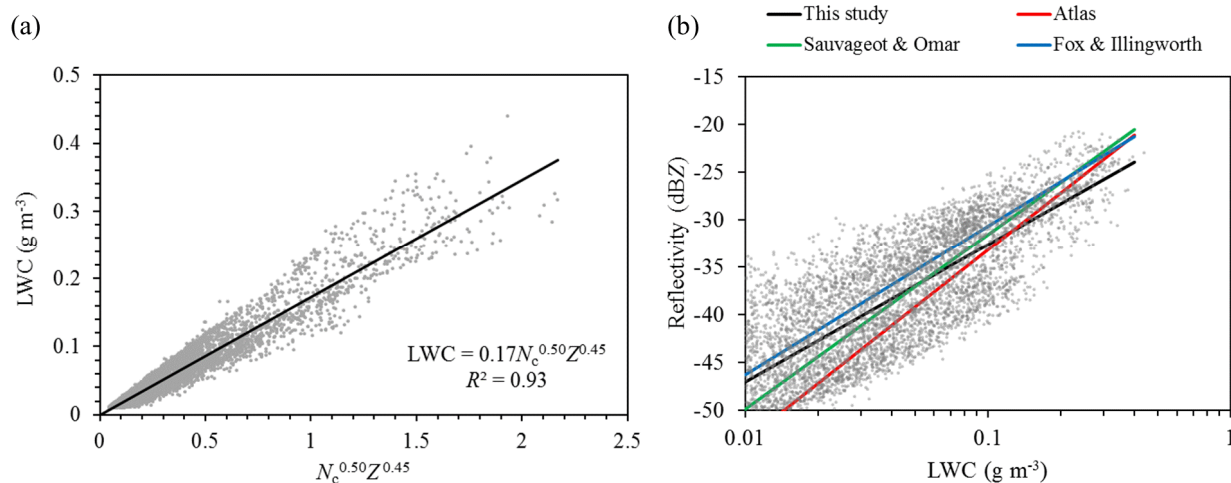


Misumi, R., Y. Uji, Y. Tobo, K. Miura, J. Uetake, Y. Iwamoto, T. Maesaka, and K. Iwanami, 2018: Characteristics of droplet size distributions in low-level stratiform clouds observed from Tokyo Skytree. *J. Meteor. Soc. Japan*, **96**, <https://doi.org/10.2151/jmsj.2018-040>.



←  
Figure 1. Tokyo Skytree.

↓ Figure 2. (a) Relationship between  $N_c^{0.50}Z^{0.45}$  and LWC. The solid line indicates the regression line. (b) Relationship between radar reflectivity and LWC observed from Tokyo Skytree (gray spots) and the regression line (black line). The Z–LWC relationships proposed by Atlas (1954), Sauvageot and Omar (1987), and Fox and Illingworth (1997) are indicated by red, green, and blue lines, respectively.



- Continuous observations of cloud droplet size distributions in low-level stratiform clouds have been conducted at a height of 458 m from Tokyo Skytree (Fig. 1; a 634-m-high broadcasting tower in Tokyo) using a cloud droplet spectrometer.
- The mean cloud droplet number concentration ( $N_c$ ), average diameters, and effective diameters of cloud droplets in non-drizzling clouds were  $213 \text{ cm}^{-3}$ ,  $7.3 \text{ }\mu\text{m}$ , and  $9.5 \text{ }\mu\text{m}$ , respectively, which are close to the reported values for continental stratiform clouds.
- The relationship between liquid water content (LWC;  $\text{g m}^{-3}$ ),  $N_c$  ( $\text{cm}^{-3}$ ), and radar reflectivity ( $Z$ ;  $\text{mm}^6 \text{ m}^{-3}$ ) was estimated as  $\text{LWC} = 0.17N_c^{0.50}Z^{0.45}$ , with a coefficient of determination ( $R^2$ ) of 0.93 (Fig. 2a).
- The Z–LWC relationship is close to those in the other studies when  $\text{LWC} < 0.4 \text{ g m}^{-3}$  (Fig. 2b).