

			CO <sub>2</sub>	CO
Airborne measurements	NASA DC-8 aircraft	Instrument Time response Precision Accuracy	LI-COR 1 s < 0.1 ppmv 0.25 ppmv (Vay et al., 2003)	DACOM 1 s < 1 % or 0.1 ppbv 2 % (Warner et al., 2010)
Ground site measurements	Baengnyeong (37.97° N, 124.63° E)	Instrument Data intervals	– –	Teledyne gas analyzer 1 h
	Fukue (32.75° N, 128.68° E)	Instrument Data intervals	– –	Thermo 48C 1 h
	Olympic Park (37.52° N, 127.12° E)	Instrument Data intervals	– –	KENTEK CO analyzer 5 min
	Taehwa (37.31° N, 127.31° E)	Instrument Data intervals	LI-COR LI-7500 1 h	Thermo 48i 1 h
	Yonsei (37.56° N, 126.94° E)	Instrument Data intervals	G2201-I CO <sub>2</sub> /CH <sub>4</sub> carbon stable isotope analyzer 30 min	– –
	Ship measurements	R/V <i>Jangmok</i>  R/V <i>Onnuri</i>	Instrument Data intervals Instrument Data intervals	– – – –
Satellite measurements	OCO-2	Date product	OCO-2 level 2 v7 full product XCO <sub>2</sub>	– –
		Resolution	2.25 × 1.29 km Global coverage ~ 16 days	–
		Revisit time	13:18–13:33 LT	–
		Uncertainty	1–2 ppm XCO <sub>2</sub> (Wunch et al., 2017; Osterman et al., 2016)	–
	GOSAT	Date product	Level 2 V02	–
		Resolution	10.5 × 10.5 km ~ 12 days	–
		Revisit time	~13:00 LT	–
		Uncertainty	2 ppm for retrieval errors of XCO <sub>2</sub> (Morino et al., 2011; Crisp et al., 2012; OCO-2 Science Team et al., 2015)	–
	MOPITT	Date product	–	TIR/NIR level 2 v6 XCO
		Resolution	–	22 × 22 km ~ 3–4 days
		Revisit time	–	10:30 LT
		Uncertainty	–	0.09 × 10 <sup>18</sup> molecules cm <sup>-2</sup> for total column retrieval; (Deeter et al., 2014)
IASI	Date product	–	level 2 FORLI XCO	
	Resolution	–	12 km × 12 km twice a day	
	Revisit time	–		
	Uncertainty	–	< 13 % for FORLI (De Wachter et al., 2012)	