

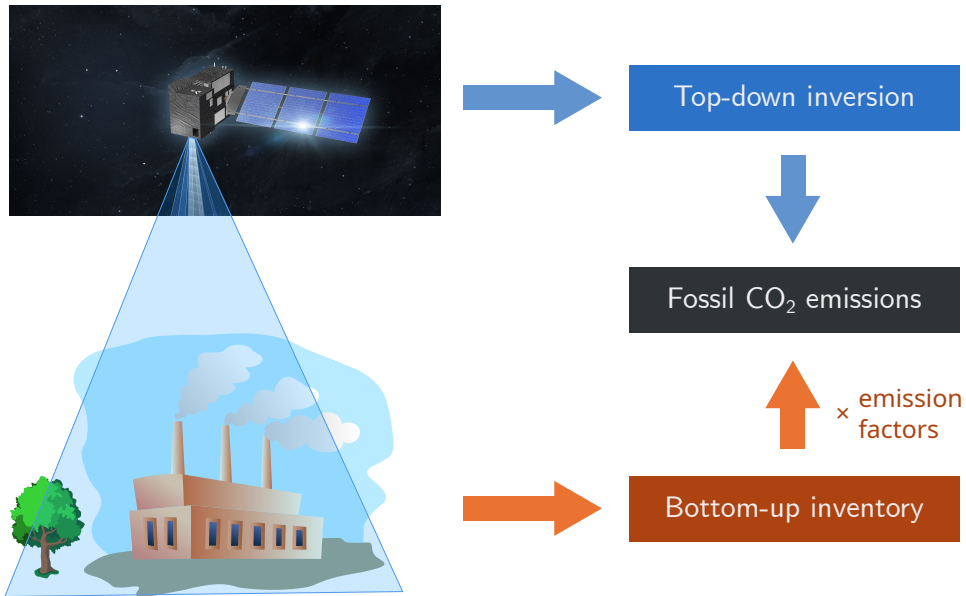
# Monitoring anthropogenic carbon dioxide emissions from space

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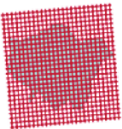




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# Space observations can support efforts to reduce fossil CO<sub>2</sub> emissions



# New satellites will provide an unprecedented coverage of atmospheric CO<sub>2</sub>

Requirements for XCO <sub>2</sub>	GOSAT2 (Japan)	OCO-2 (USA)	TanSat (China)	CO <sub>2</sub> M (EU)
Random Error and systematic biases	≤0.5 ppm (CO <sub>2</sub> ) ≤5ppb (CH <sub>4</sub> )	≤0.5 ppm	≤1-4 ppm	≤0.5-0.7 ppm
Spatial resolution	 74km <sup>2</sup>	 2.3x1.3km <sup>2</sup>	 2x2km <sup>2</sup>	 2x2km <sup>2</sup>
Swath width	 5-point sampling on 1000km track	 10km	 10km	 240 km
Revisit	3 days	16 days	16 days	2-3 days with 3 satellites
Orbit equator crossing	13:00 (ascending)	13:36 (ascending)	13:39 (ascending)	11:30 (descending)

From Janssens-Maenhout et al. (2020) BAMS

