Supplementary Data

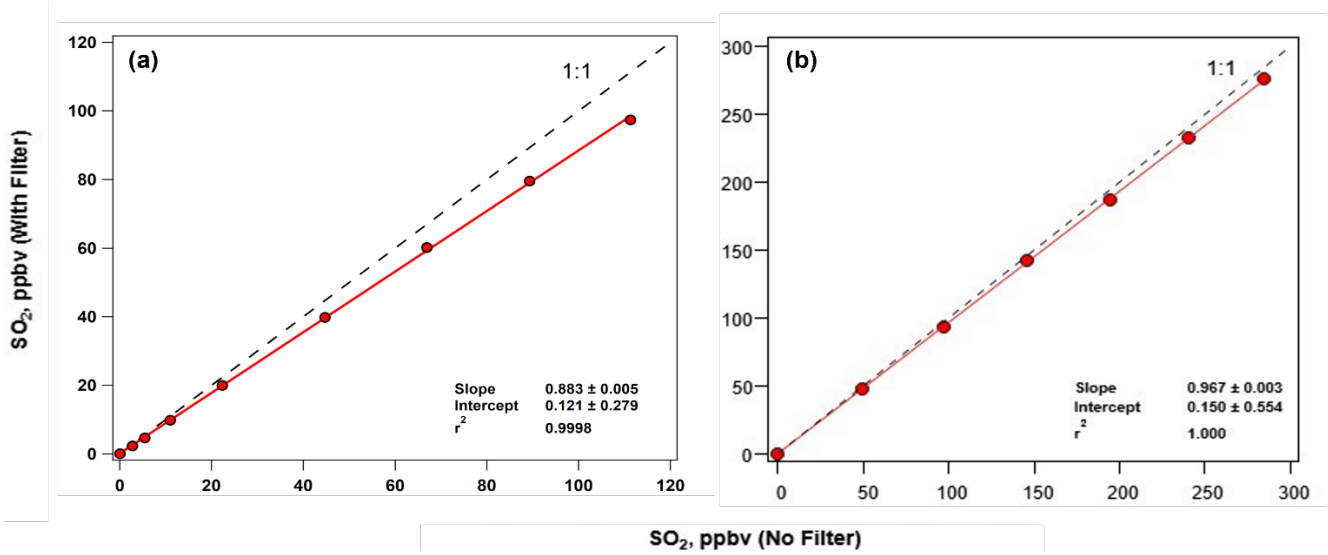

Figure S1: Response of Thermo 43*i*-TL SO_2 analyzer with (y-axis) and without (x-axis) an O_3 removal filter using a calibration system with (a) a processed zero air system and (b) a dry zero air gas cylinder.

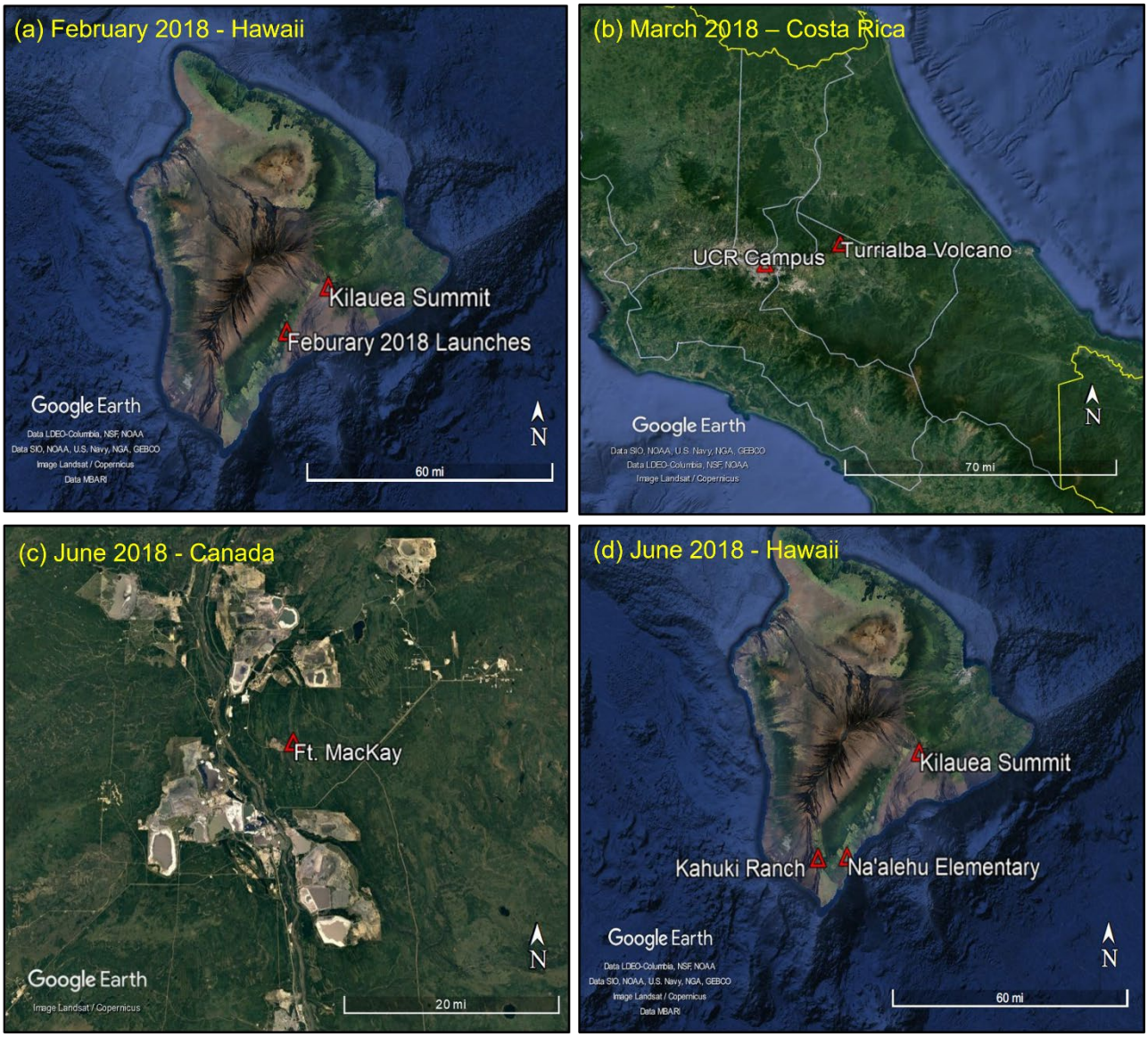

Figure S2: Field sites of SO_2 sonde launches (a) in Hawai'i during the H3C from February 3-10, 2018; (b) in Costa Rica on March 23, 2018; (c) in the Athabasca Oil Sands from June 10-16, 2018; and (d) in Hawai'i during BISOS in June 2018. Maps are from © Google Earth.