



Supplement of

Characterising the methane gas and environmental response of the Figaro Taguchi Gas Sensor (TGS) 2611-E00

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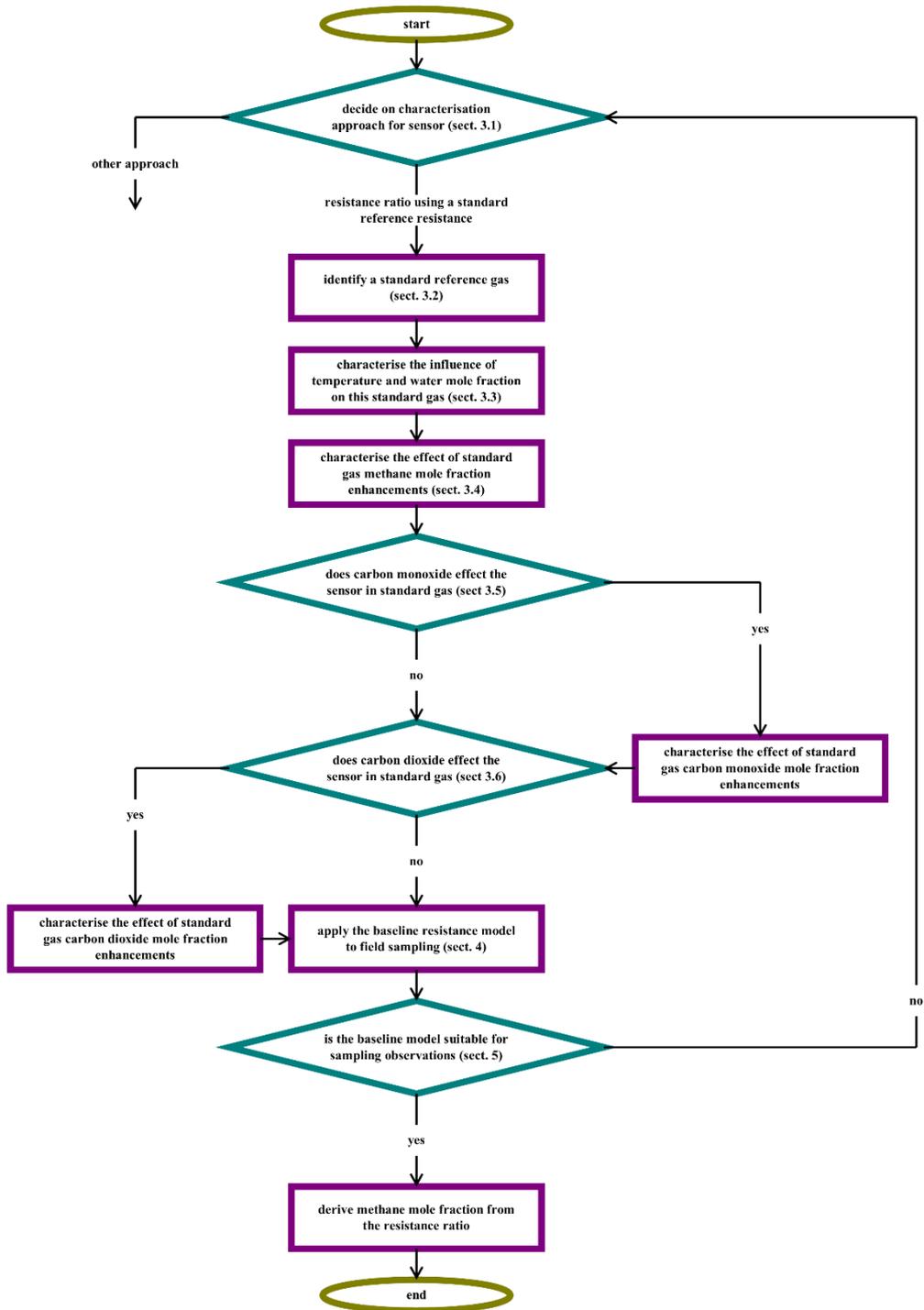


Figure S1: A flow chart illustrating the various steps that we followed in order to derive methane mole fraction from the Figaro TGS 2611-E00.

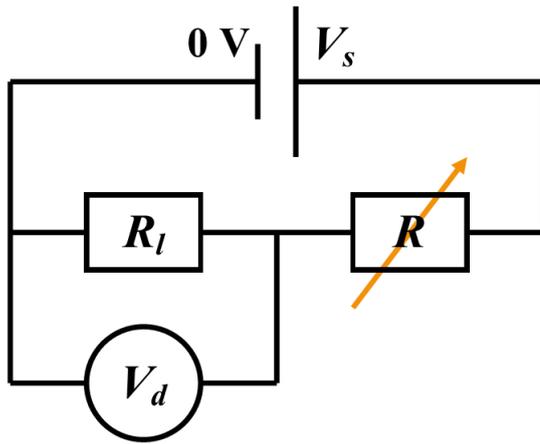


Figure S2: Circuitry used to measure the resistance of the Figaro sensing element. See text in Sect. 2.1 for labels.

LSCE009 Methane Transition

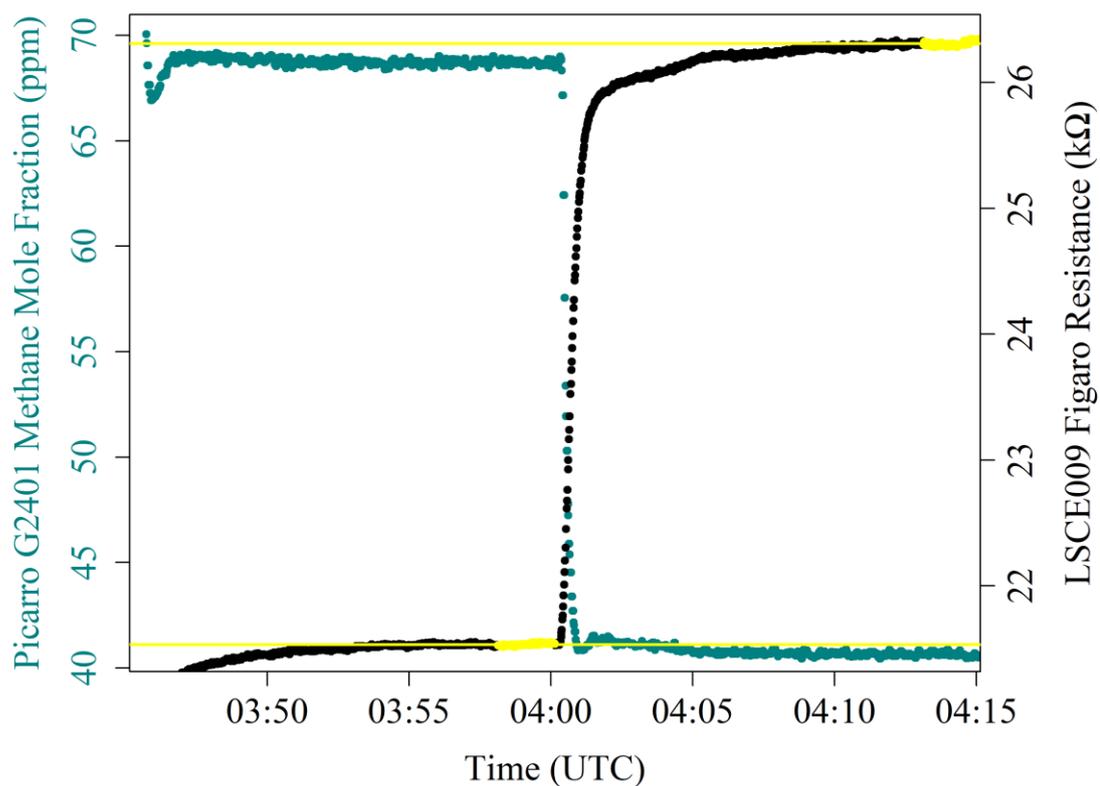


Figure S3: A methane mole fraction transition from 69 ppm to 41 ppm as recorded by the Picarro G2401 (dark cyan dots on left-hand axis) with corresponding LSCE009 Figaro resistance measurements made in System B (black dots on right-hand axis). 2 minutes of stable Figaro resistance sampling from the end of each sampling period (highlighted yellow dots) were used to derive resistance averages (horizontal yellow lines).

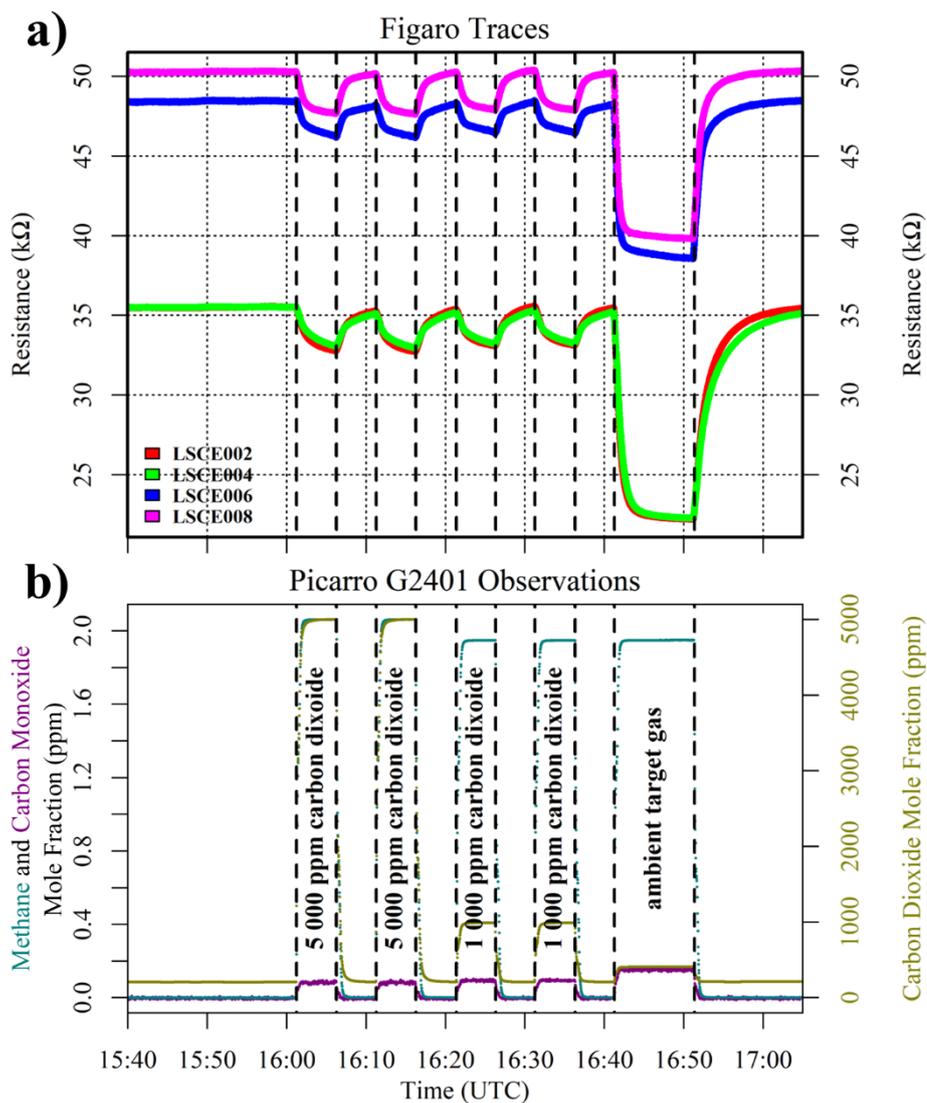


Figure S4: (a) Measured resistance for four Figaro sensors (coloured dots; see legend) in System B, under exposure to 5 000 ppm and 1 000 ppm carbon dioxide mole fraction, compared to gas from a zero-air generator. (b) Corresponding Picarro G2401 observations, with annotations indicating the sampled cylinder type. Areas not annotated correspond to gas from the zero-air generator. Methane (dark cyan) and carbon monoxide (dark magenta) mole fraction measurements are plotted on the left-hand axis. Carbon dioxide (dark yellow) mole fraction measurements are plotted on the right-hand axis.

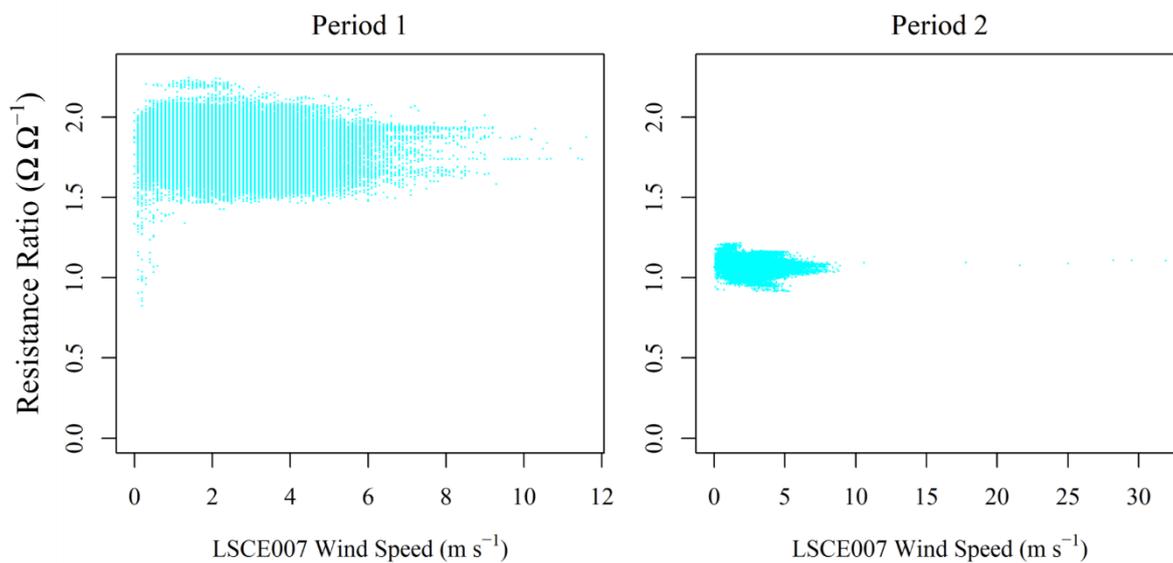


Figure S5: The ratio between measured Figaro resistance and standard 2 ppm [CH₄] reference resistance (cyan dots) from the SUEZ Amailloux landfill site for LSCE007, plotted against minute-averaged wind speed as measured by the LSCE007 anemometer, for wind directions between 180° and 270°. Data from period 1 is plotted on the left and data from period 2 is plotted on the right.