

Additions and Corrections

A. S. (Ed) Cheng, Ansis Upatnieks, and Charles J. Mueller: Investigation of Fuel Effects on Dilute, Mixing-Controlled Combustion in an Optical Direct-Injection Diesel Engine, *Energy & Fuels* **2007**, 21, 1989–2002.

Page 1992: In the Materials and Methods, a section within Diagnostics, right before the Engine-Out Emissions section, was missing in the original paper. This section is shown below. The references cited in this section are also shown, of which ref 26 was not in the original paper.

Spatially Integrated Natural Luminosity. Natural luminosity refers to the broadband light emitted from the combustion chamber during a fired cycle. Natural luminosity arises from both soot incandescence and chemiluminescence, but the contribution from soot incandescence has been shown to be 4–5 orders of magnitude higher than that from chemiluminescence during the mixing-controlled combustion phase.²⁶

Spatially integrated natural luminosity (SINL) is the instantaneous flux of natural luminosity integrated over the entire region of the combustion chamber, visible through the piston window. A SINL measurement was recorded every 0.5 CAD using a New Focus Model 2031 high-speed, large-area photoreceiver (400–1070 nm spectral sensitivity), equipped with a Nikkor 50 mm, f/1.4 lens. Each SINL curve shown in this work is an average over 60 fired cycles.

When certain assumptions are employed, SINL can serve as a relative measure of the average in-cylinder soot volume fraction,¹⁸ but in this study, SINL is used simply as a relative indicator of the presence of hot soot. Assuming similar soot particle properties and optical thicknesses of radiating soot clouds within the cylinder, higher SINL at a given crank angle indicates more radiant flux from hot soot from the viewable region of the combustion chamber into the spectral collection bandwidth of the photoreceiver.

(18) Mueller, C. J.; Martin, G. C. Effects of Oxygenated Compounds on Combustion and Soot Evolution in a DI Diesel Engine: Direct Luminosity Imaging. *SAE Tech. Pap. Ser.* **2002**, 2002-01-1631.

(26) Dec, J. E.; Espey, C. Chemiluminescence Imaging of Autoignition in a Diesel Engine. *SAE Tech. Pap. Ser.* **1998**, 982685.

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