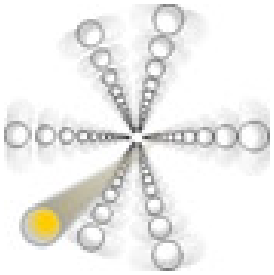

Contribution ID: **50** Type: **not specified**

Laboratory PolyCO Based X-ray Imaging of High-Pressure Fuel Sprays

Tuesday, 25 September 2012 18:40 (15 minutes)

Table-top experiment using a microfocus X-ray source for radiography and tomography has been used for investigating the structure of a gasoline pulsed spray flowing from a GDI injector for automotive applications. A Cu Kα X-ray source at 8.048 keV in combination with a polycapillary halflens has been used to focus the radiation on the spray while a CCD detector collected the resulting signal. The fuelling apparatus feeds an injector inserted in a high-pressure rotating device actuated with angular steps Delta(Teta)= 1°. The acquisition has been carried out on 180° angular trip at the injection pressure of 8.0 MPa. The image processing has permitted sinogram reconstructions of the jets by slices allowing a 360° spray access to the spatial and temporal distribution of the fuel downstream the nozzle tip.

Primary author: Dr ALLOCCA, Luigi (Istituto Motori - C.N.R.)

Co-authors: Dr HAMPAI, Dariush (LNF - INFN); Dr MARCHITTO, Luca (Istituto Motori - CNR); Prof. DABAGOV, Sultan (INFN Laboratori Nazionali di Frascati)

Presenter: Dr ALLOCCA, Luigi (Istituto Motori - C.N.R.)

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