

Engine Combustion Network

ECN5

Topic 7 - Spray B

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Institute for Combustion and Gas Dynamics
Reactive Fluids



Context / Perspectives

Understanding combustion processes

Predictive CFD codes in engines

SPRAY A/C/D



"The Shire"

SPRAY B



ENGINE

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SPRAY A/C/D



SPRAY B

ENGINE



Single hole

3-holes injector

No flow motion

3-holes injector
+ Swirl

Free jet

3-holes injector
+ Swirl
+ Engine geometry

Real
injectors
EOI
Multiple
Injections

Multi-hole
injectors
(spray-spray
interactions,
internal
flow)

Flow motion
(Swirl)

Confinement
(spray-wall
interactions)

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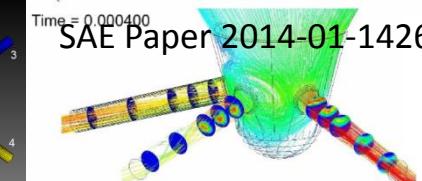
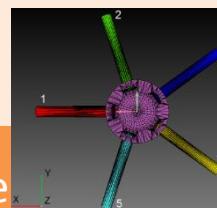


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SPRAY A/C/D



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Acknowledgements



Sandia
National
Laboratories



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Offen im Denken