

Plasma Rendering & FILD Synthetic Diagnostic

S.Pamela & J.Buchanan

CCFE, UKAEA, Culham Science Centre, OX143DB



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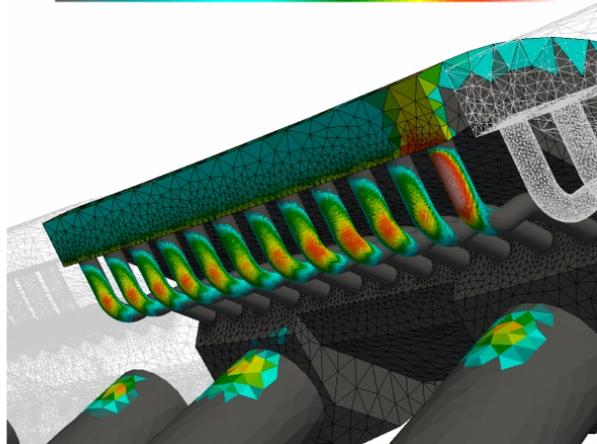
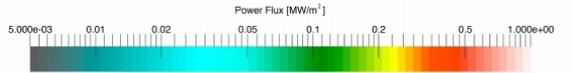
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FILD Synthetic Diagnostic



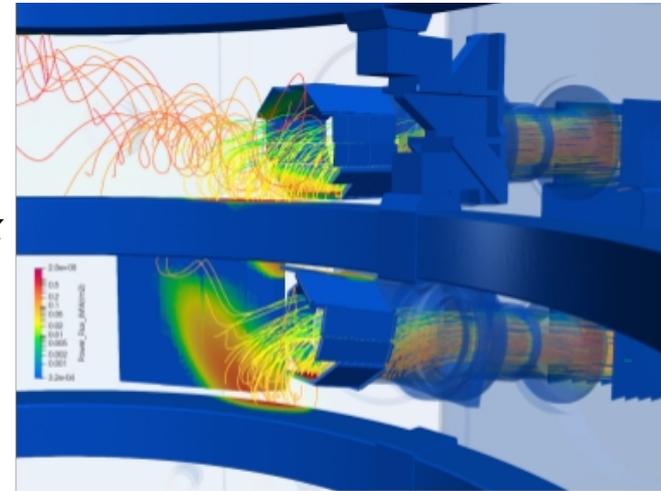
- Explore global variance reduction techniques with LOCUST-GPU to create synthetic fast ion diagnostics
- Exploit synthetic diagnostics to validate fast ion simulations against data in preparation for use on ITER

[R.Akers, 26th IAEA Fusion Energy Conference, Kyoto, TH/4-1, 2016]



*LOCUST
applied to ITER
(divertor-dome)*

*LOCUST
applied to
MAST-U
Beam Box*



Plasma Rendering



- Develop synthetic diagnostic of Wide-Angle Viewing Systems
- Use MITSUBA2 for inverse rendering problem
- Integration alongside CHERAB & RaySect
- Start with visible imaging, move to IR and metallic surfaces
- Start with MAST, move to JET-ILW ?

MITSUBA-2

<https://github.com/mitsuba-renderer/mitsuba2>



*Synthetic
diagnostic of
fast-visible
camera on
MAST-U with
JOREK
simulation*

