

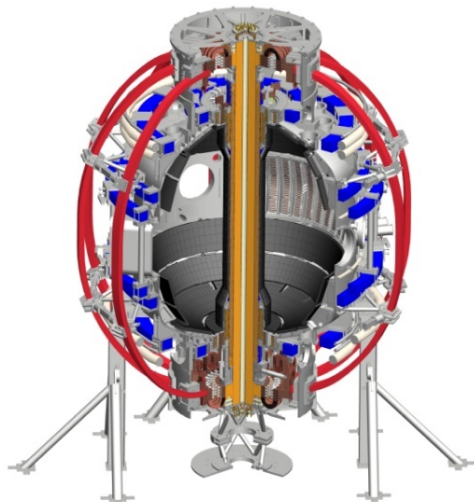
# Interaction of LGI with 3D fields

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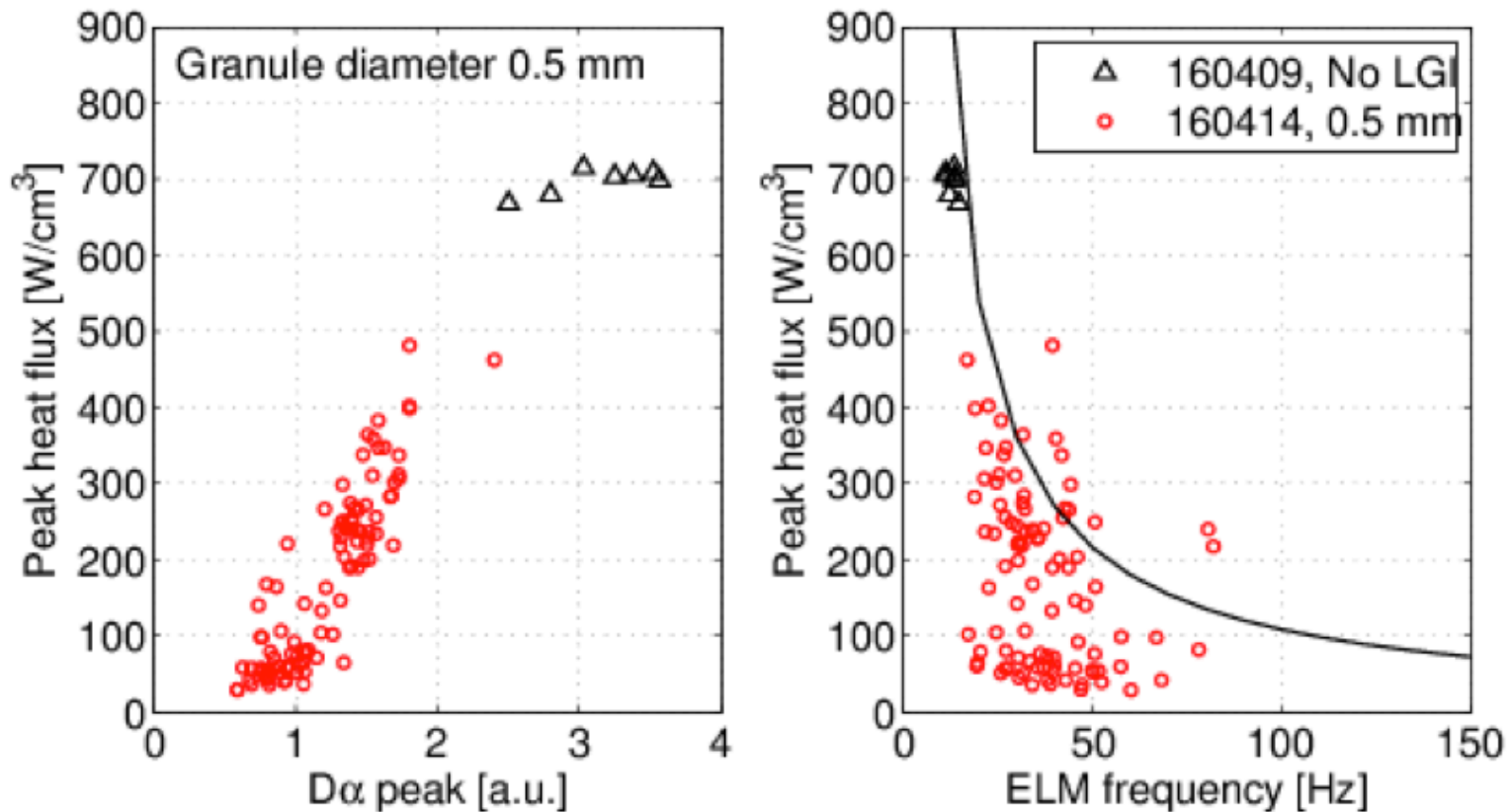
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# DIII-D LGI experiments

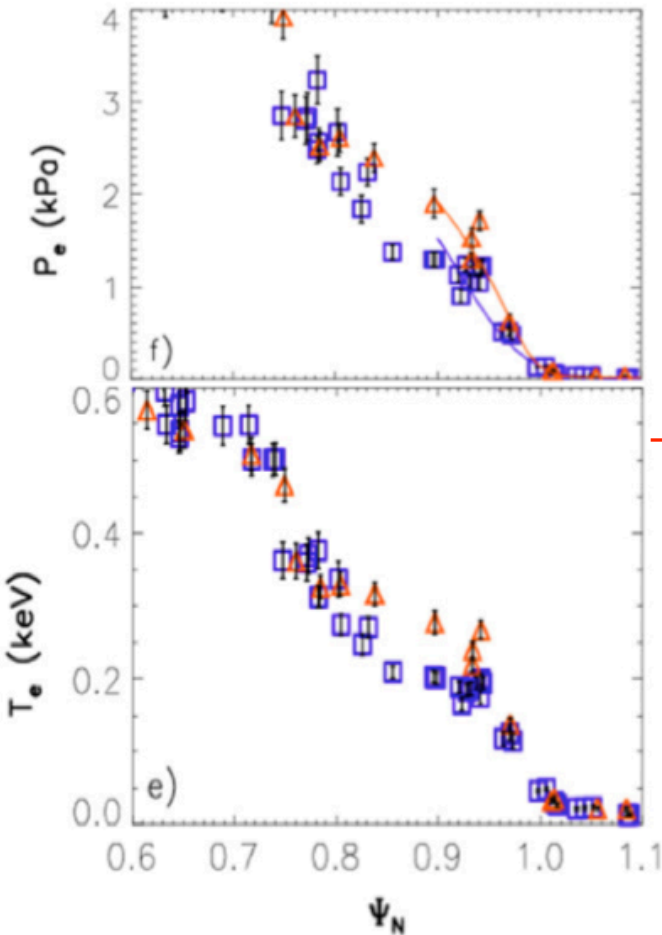


*A. Bortolon, NSTX Moday Physics Meeting (01/05/2015)*

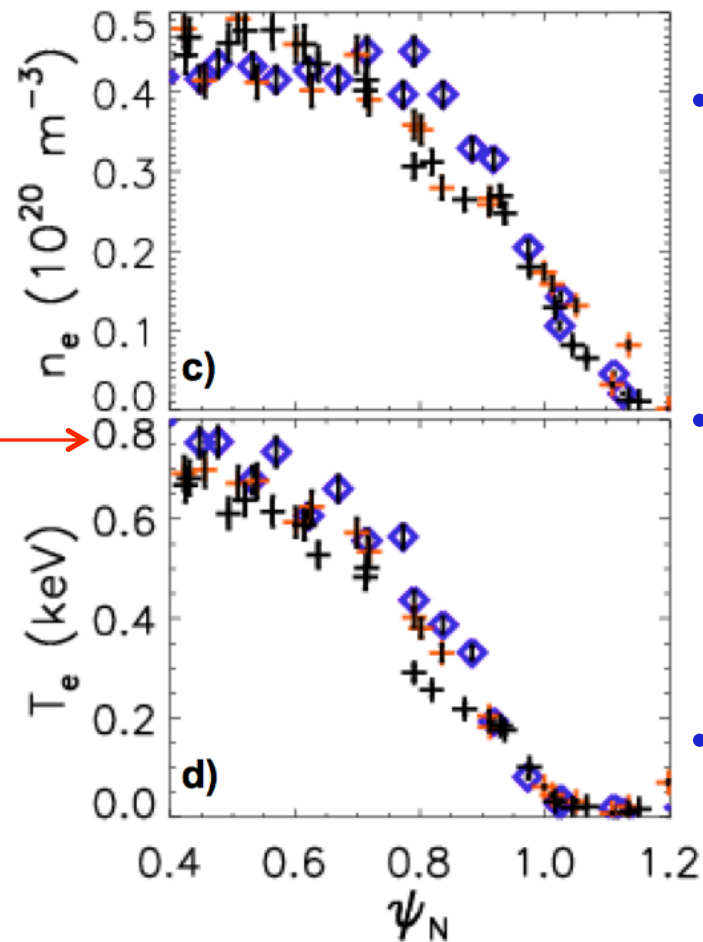
- LGI raised ELM frequency and reduced peak heat flux at DIII-D
- Profile change by LGI?
- No stability analysis done yet for LGI plasmas

# 3D field experiments in NSTX

Without Lithium coating



With Lithium coating



- 3D field steepened Te gradient in the pre-lithium condition
- 3D field flattened pedestal Te and  $n_e$  in the Post-lithium condition
- ELM triggering for both cases

J. Canik, NF 2010

J. Canik, EPS 2010

# Experimental plan

- Interaction of LGI and 3D field with amplitude below/above ELM triggering threshold could yield an interesting knob for ELM control
- Goal: Investigate ELM frequency and size with combined LGI and 3D field application
- Experimental plan:
  - 3D field application ( $n=2$  or  $n=3$ )
  - Change collisionality and plasma shape (triangularity)  $\rightarrow$  will change pedestal regime and affect the interaction with both LGI and 3D fields
  - Request 0.5 run day in total