

Cross-Cutting Thrusts Task Force

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Renew Theme 5

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Theme and Panel chairs

Goals

- Identify compelling research thrusts that address broader science themes spanning configuration space
- Counteract configuration-organization of Theme 5, based on TAP.
- Encourage compelling, science-based thrusts
- Prepare for identifying thrusts in common with other Themes (e.g. Themes 2 & 3)

Candidate Cross-cutting thrusts

As discussed in conference calls:

- Transport and stability with 3D magnetic fields
- Coupling of energetic-particle modes and other instabilities
- Stability in low field configurations: ST, RFP, spheromak
- Sustainment and current drive in low field compact configurations, compatible with good confinement.
- Predictive modeling of confinement in general configurations
- Power exhaust handling (Theme 3)

Topics for discussion

- Rollup into larger thrusts reduces specificity
 - May make thrusts appear less compelling
 - May dilute focus on solving fusion challenges (e.g. as identified in Greenwald panel report)
- May be configuration-specific research needs
 - How to strike best balance?