

# Requirements for Runaway Electron Avoidance in ITER Disruption Mitigation Scenario by Shattered Pellet Injection

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## Highlight

- A new 1.5D disruption simulator INDEX has shown that the amount of material that can be assimilated for RE avoidance strongly depends on stored thermal energy of target plasmas.
- Optimized injection schemes utilizing injection capabilities up to 24 barrels in the ITER DMS have been discussed, such as staggered injection scheme for 15MA Hydrogen L-mode.

**This work contributes to a high priority issue for ITER: “Optimization of shard size, velocity, amount, composition of SPI to achieve RE avoidance”**

## Figure

Predictions of pre-thermal quench volume average density (inside  $q=2$  surfaces) that can be raised by SPI with different pellet compositions and velocity

