

Achieving Low-Density Start-up by Reducing Error-Fields

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Reduce error fields during startup by reducing by OH pre-charge

- Use fiducial start-up except for
 - zero OH precharge
 - no early LFS gas puff and minimal CS gas
- Ramp I_p to about 700 kA and compare with fiducial
- If successful, try $\frac{1}{2}$ OH pre-charge to extend flattop
- Alternately use CHI to provide additional early current and allow some flattop
- Many low n_e discharges do not fail until flattop so challenge will be to get enough duration
- Will require at least 1 day of dedicated run time
 - Preferably in $\frac{1}{2}$ day chunks
 - Need good conditions