Assessment of Alternative Divertor Configurations as an Exhaust Solution for DEMO

- Engineering constraints and use of readily available technologies (→ PF coils outside the TF coils) limit geometric modifications of the single-null divertor
  - XD and SXD on outer leg only
  - XD flux flaring limited by grazing angle of field at target
  - SXD without poloidal flux expansion and with limited target radius increase

- Simple divertor models suggest increase of tolerable residual power \((1 - f_{\text{rad,div}})P_{\text{sep}}\) by 10-50%
  - XD & SXD outer target only with XD performance possibly at the expensive of inner target

- Further benefits expected from ability to increase \(f_{\text{rad,div}}\)