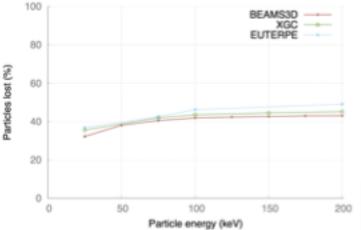
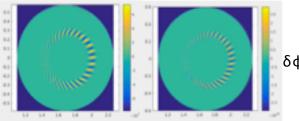
## **Confinement in stellarators with the global GK code XGC**

Energetic particle loss proportion at t = 0.05s, initial p = 0.125

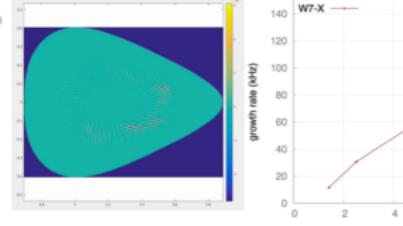


Below: Successful benchmark of (right) XGC stellarator version for ITG case in tokamak.

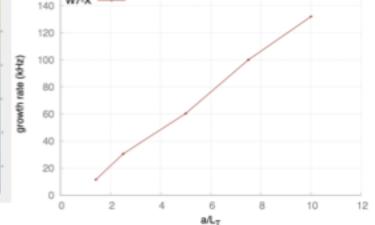


Left: XGC stellarator version successfully benchmarked for energetic particle orbit tracing with BEAMS3D, EUTERPE codes (Wendelstein 7-X)

> Below right: Calculated electrostatic ITG growth rates in the Wendelstein 7-X stellarator for a reference case. *Left:* ITG mode structure ( $\delta \phi$ ) in triangle-shaped stellarator segment.









XGC stellarator progress, M. D. J. Cole et al., IAEA-CN-258/298