Glossary and Definitions

- $\beta = 2\mu_0 \langle p \rangle / \langle B^2 \rangle$, where p is the pressure and $\langle\ \rangle$ denotes volume average.
- Aspect ratio $A = R/\langle a \rangle$, where $\langle a \rangle$ is the average minor radius, from the cross-sectional area
- Iota (ι) and iota-bar (ɩ = 1/q) are used interchangeably for the magnetic rotational transform.

- Unless otherwise specified, all equilibria, both fixed- and free-boundary, shown are calculated by the VMEC 3D equilibrium code, see Section 4.1. VMEC is an 'inverse' equilibrium solver, which solves directly for the shape of the flux surfaces. Thus its representation presumes that the flux surfaces are simply connected, without islands or stochastic regions.
- Unless otherwise specified, all Poincare plots shown are calculated by the PIES 3D equilibrium code, see Chapter 4.3. PIES is a 'forward' equilibrium solver, directly calculating the full three-dimensional magnetic field and current distribution, including simulating the effect of islands and stochastic regions by flattening the local pressure gradient. It determines the flux surface topology and shape by directly integrating the field-line orbits.
- Unless otherwise specified, all low-n stability calculations shown are calculated by the TERPSICHORE stability code, see Chapter 5.
- Unless otherwise specified, all infinite-n ballooning calculations discussed are calculated by the COBRA code, see Chapter 5.