

# 13<sup>th</sup> International Stellarator Workshop

## Imaging Systems for the H-1 Helic

John Howard, Clive Michael, Fenton Glass, Scott Collis and the H-1 team

We describe multi-channel active and passive, non-perturbing diagnostic systems spanning the spectrum from the far-infrared to visible. System design principles and new technologies are described. The systems are combined to allow spatially and temporally resolved assessment of particle transport and force balance. To illustrate the performance of these systems, we present results for low field discharges in argon, and for electron and ion-cyclotron heated discharges in H/He at 0.5T.

Among the systems to be described are

- The scanning far-infrared interferometer
- The MOSS imaging camera
- The Tomographic MOSS 2-d imaging system

We also discuss novel imaging approaches to electron temperature measurement and an electro-optic infrared imaging system for absolute thermography .