

**High-Current Proton and Deuteron ECR Source Developments at CEA,** O. DELFERRIERE , A. FRANCE, R. GOBIN, P.A. LEROY, CEA-Saclay, M. DELAUNAY, A. FARCHI, CEA-Grenoble - A high-current (~100 mA) proton and deuteron ECR source is under development. Preliminary results have shown that a  $75 \text{ mA/cm}^2$  beam current can be extracted at 10 kV through a 3 mm diameter aperture. The proton fraction is higher than 80% with a nitride coating on the plasma electrode. Optimization of the microwave efficiency in the 10 kV source installed at Grenoble, and the developments on the 100 kV source installed at Saclay are presented.