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Overview of the RFX-mod fusion science program MARIA ESTER PUIATTI, PIERO MARTIN, Consorzio RFX - Associazione EURATOM-ENEA per la fusione, Padova, Italy, RFX-MOD TEAM¹ — RFX-mod is a 2 MA reversed field pinch device (major radius $R=2$ m, minor radius $a=0.457$ m) equipped with a system of 192 feedback controlled active coils. This paper describes the recent results of the RFX fusion science program. The 2011 experimental campaign has been dedicated to exploration of RFP confinement in the current range above 1 MA, with particular attention to the optimization of MHD active control and electromagnetic boundary, and to the control of first wall properties and of density profiles. RFX-mod has been operated also as a tokamak, aiming at exploiting and optimizing operation at $q_{edge} \approx 2$ with active control of MHD instabilities and resistive wall modes in particular. Results on properties of $q_{edge} \approx 2$ tokamak discharges will be presented.

¹Consorzio RFX - Associazione EURATOM-ENEA per la fusione, Padova, Italy

Piero Martin
Consorzio RFX - Associazione EURATOM-ENEA
per la fusione, Padova, Italy

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