

Abstract Submitted
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Overview of the RFX fusion science program PIERO MARTIN, MARIA ESTER PUIATTI, Consorzio RFX, RFX TEAM — RFX-mod is a toroidal device for fusion plasma magnetic confinement, which can be operated both as a reversed field pinch and as tokamak. In the former configuration it can reach plasma current up to 2 MA, while as a tokamak current is limited to 0.15 MA, due to the toroidal field available. This paper provides an overview of the 2013 RFX physics, both from an experimental and theoretical/numerical point of view. Highlights of the program concern MHD stability feedback control studies - both on physics and engineering – applied to the RFP and tokamak configurations, edge physics, in particular as far the RFP density behavior is concerned, 3D physics, progress in understanding transport mechanisms, and results of advanced numerical simulations. Initial results on the exposure of various material samples to the RFX plasmas will also be presented. Results on the physics of low qedge tokamak (qedge less than 2) will be discussed.

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