

Status of the Tore Supra CIMES Project

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On Tore Supra, the Lower Hybrid Current Drive (LHCD) 3.7 GHz system is being upgraded in the frame of the CIMES project [1]. Since the end of 2001, several technological components are under manufacturing or have been installed. Two majors pieces are still under development: the new antenna, based on the Passive Active Multijunction (PAM) concept [2], and the new klystron TH2103C specified to provide 700 kW on a VSWR equal to 1.4 [3].

An overview of the present state of the system is presented. The results obtained last summer on the klystron prototype PT4 are detailed as the tube was running continuously, during hours, at a power level of 750 kW on matched load and up to 670 kW on unmatched load. The description of the latest manufactured antenna components is given. The successes and the difficulties linked to these developments are described. The solutions to overcome these difficulties are explained.

[1] B. Beaumont et al., *Fusion Engin. and Design* **56-57**, 667-672 (2001)

[2] J-H. Belo et al., *Fusion Engin. and Design*, **74**, 283-288 (2005)

[3] F. Kazarian et al., *Fusion Engin. and Design*, **74**, 425-429 (2005)