

REVIEW OF SESSION 1.1 - RF SYSTEMS & COMPONENTS

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List of talks

Stefan Choroba	DESY	The TESLA RF System
Roberto Corsini	CERN	CTF3 A demonstration of the CLIC RF Power Source
Igor Syratchev	CERN	RF Pulse Compressor Systems for CTF3
Peter Pearce	CERN	Klystron-Modulators for the 3 TeV CLIC Scheme – An Overview

Stefan Choroba gave an overview of the TESLA RF system. Particular interesting is the successful high power test of the multibeam 1.3 GHz klystron and the careful analysis of the overall mains to RF power efficiency.

Roberto Corsini presented the plans for the CLIC Test Facility 3. This facility aims to demonstrate the efficient production of 30 GHz power by means of the CLIC drive beam scheme.

Igor Syratchevs showed a scheme for producing a flat compressed RF pulse with a phase programmed klystron and a single compact energy storage cavity (barrel open cavity). Although this scheme is presently foreseen for use in the CTF3 drive beam accelerator it could as well serve as a compact high power source for small linacs.

Peter Pearce gave a comprehensive overview of all the different klystrons needed in the present CLIC scheme. Compared with TESLA the relative low number of high power klystrons seems attractive, while the high number of special devices seems impractical (see table 1).

	TESLA	CLIC	
E_{CM}	0.5 TeV	3 TeV	
		drive beam accelerator	others
Number of Modulators & Klystrons	560	364	136 of 5 different types
average RF power per klystron	66 kW	500kW	10-500kW

Table 1 Klystron needs of TESLA and CLIC