

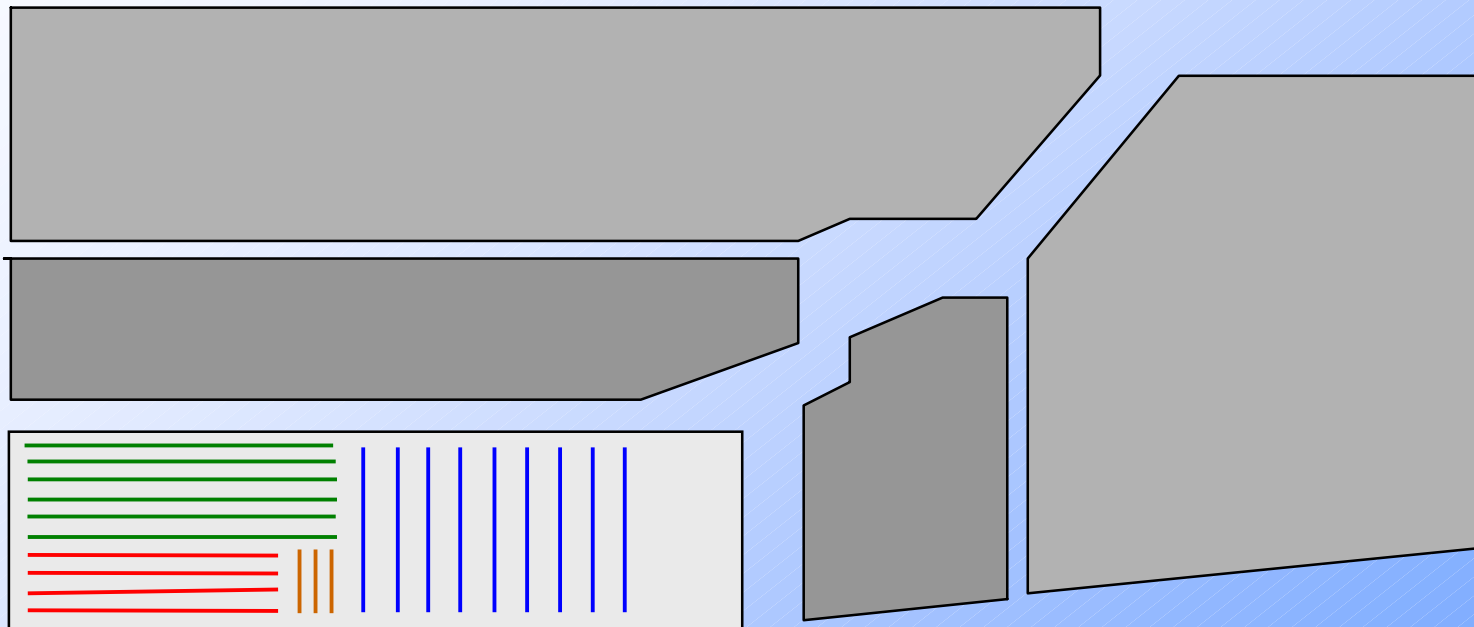
CMS-Tracker Optical Links

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- Introduction
- System description
- Component and System performance
- System integration and Cabling
- Environmental resistance and Reliability
- Quality Assurance
- Tendering
- Conclusions



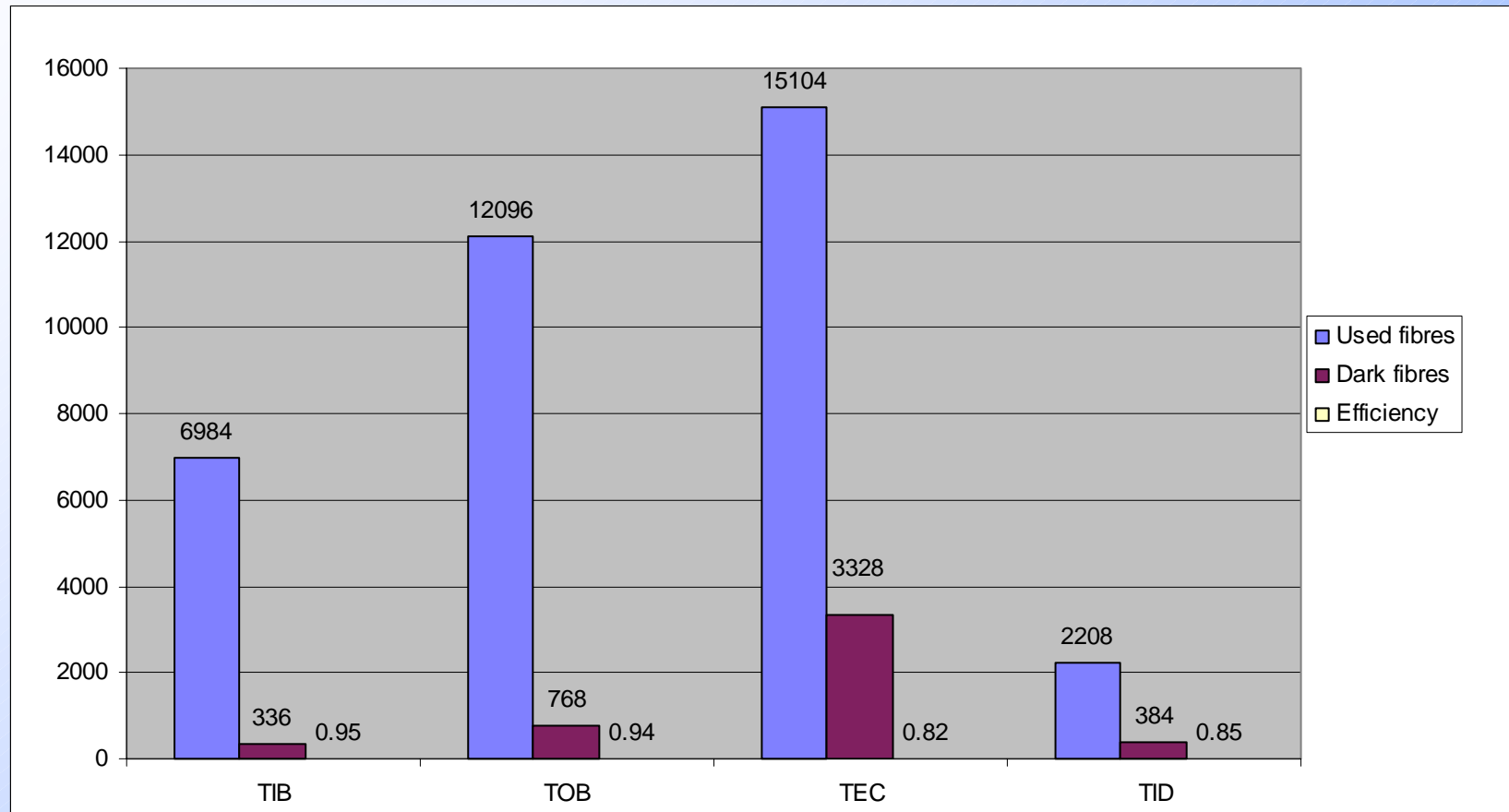
Tracker Sub-systems



- TIB
- TID
- TOB
- TEC

- One Optical System
- Different granularities

Quantities



- 45k fibres (including spares and control system)

Requirements

Environment: *(front-end)*

Hadronic Fluence*	3e14 cm ⁻²
Ionising Dose*	1.5e5 Gy
Temperature	-10 °C
B-Field	4T

* incl. 1.5 safety factor

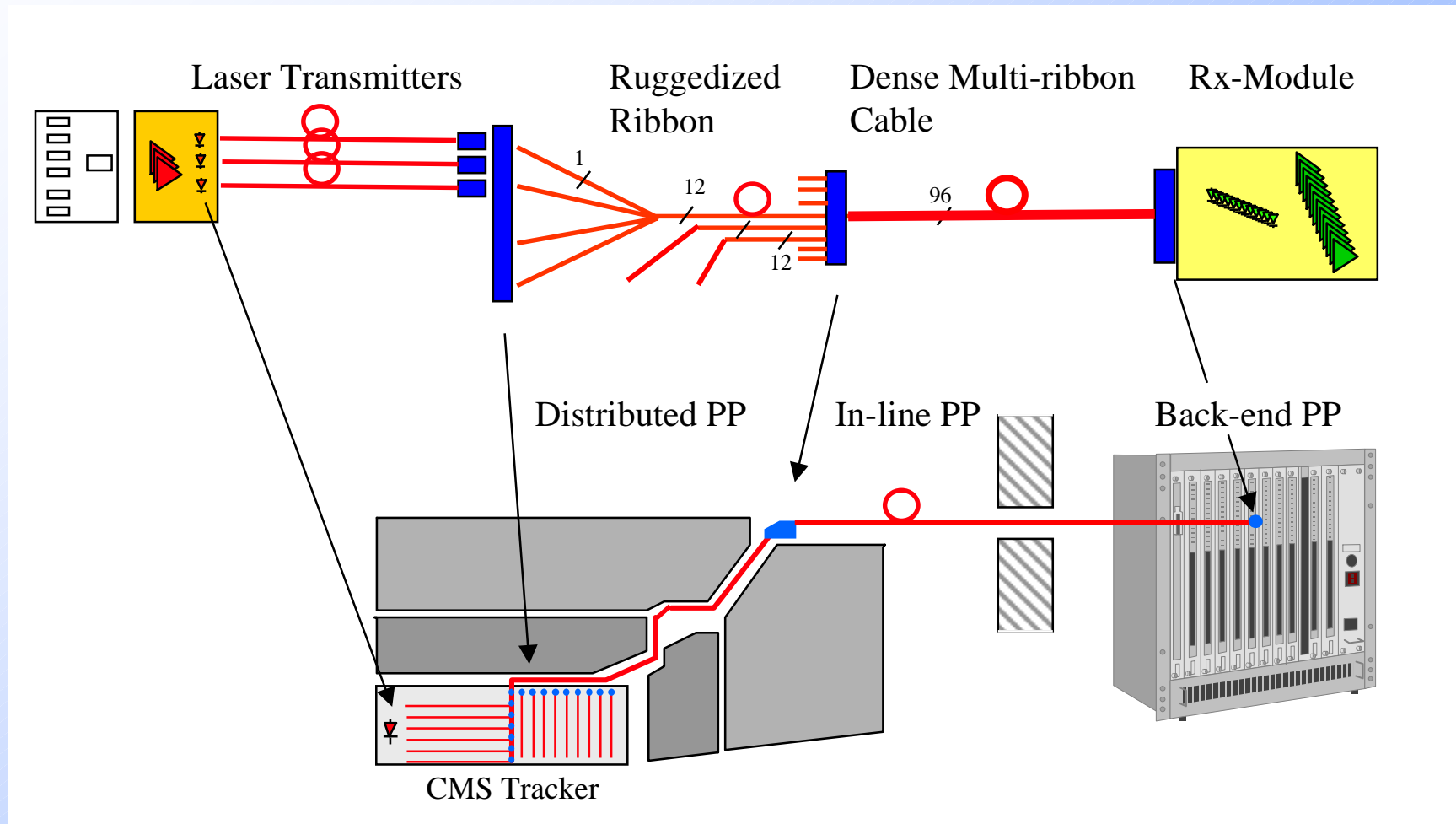
Functionality: *(Analogue Read-out)*

Linearity	1-2%
Dynamic Range	7-8 bits
Settling Time	<20ns
Gain	0.8 V/V

(Digital Control)

Bit-Rate	40Mb/s
Bit Error-Rate	10 ⁻¹²
In/Output Format	LVDS

Implementation: b) Architecture



Responsibilities

