



Elettra Sincrotrone Trieste

A NEW REAL-TIME PROCESSING PLATFORM FOR ELETTRA 2.0 STORAGE RING

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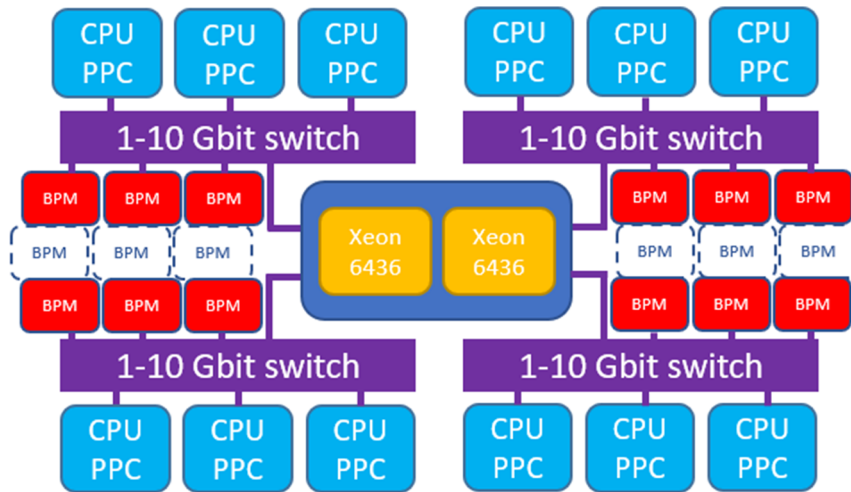


Gold Members





DPDK and feedback systems



- **DPDK** is a network stack bypass technique
- **Fast Orbit Feedback** running in userspace on CPU isolated cores without interacting with Linux, coding in C

ELETTRA

12 CPU PPC [RTAI] → 10 kHz

1 Intel server [DPDK] → 20 kHz

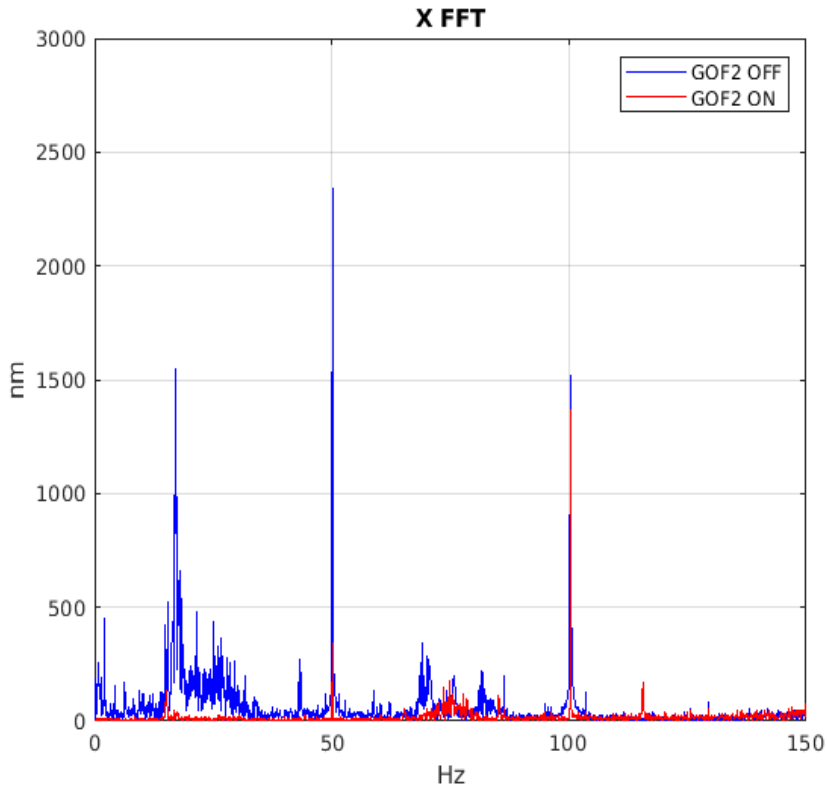
ELETTRA 2

1 Intel server [DPDK] → 40-100 kHz

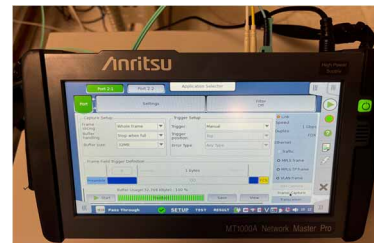
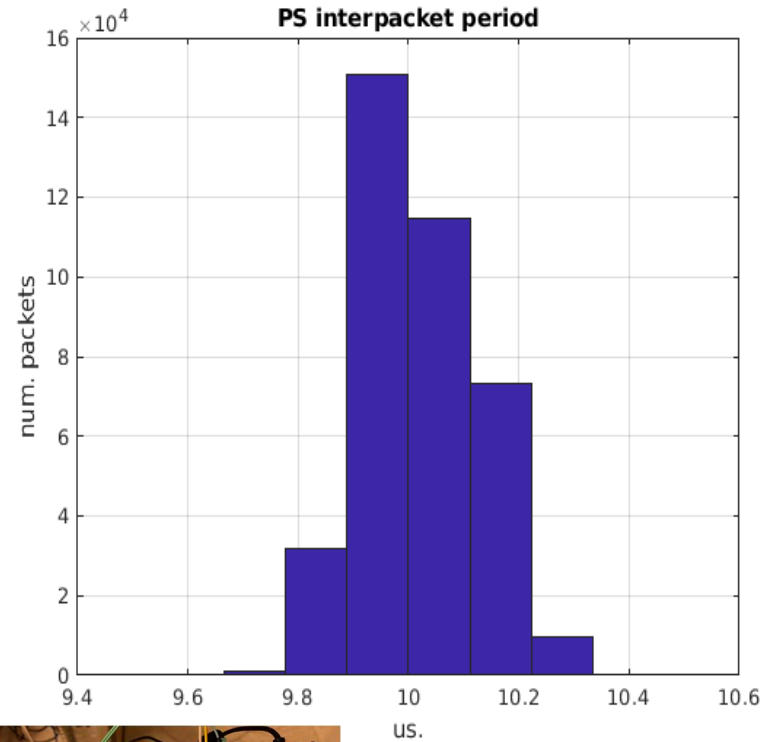
1344 power supplies, 171 beam position monitors
acquired/controlled at feedback rate

DPDK performance

Feedback **OFF** / **ON**
20 kHz



100 kHz
Server ↔ Power supply





Elettra
Sincrotrone
Trieste

Thank you!