

## ABSTRACT

The different components of the DAFNE accelerator complex: LINAC, Damping Ring and two colliding rings are connected by a composite system of Transfer Lines which, thanks to adaptive configurations, are able to transport electron and positron beams at 510 MeV. Recently, thanks to the introduction of new diagnostics tools, the optics model of the DAFNE Transfer Lines has been improved and successfully used to make the collider operations more efficient.

The measurements done by using the new tools and their impact on the optics model optimization process are presented and discussed.

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## REFERENCES

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## "THE SWITCH"

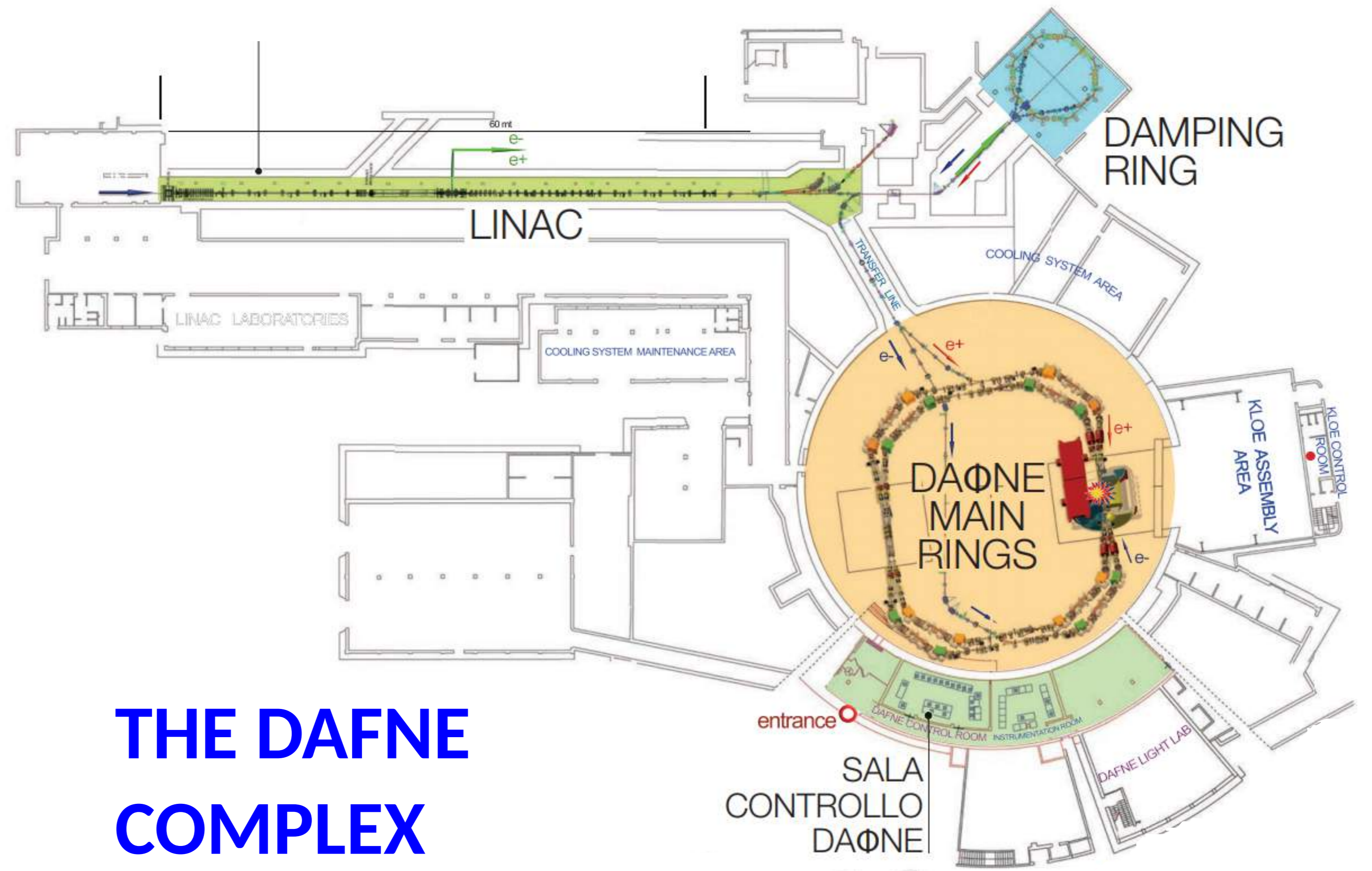
The DAFNE switch time was mainly dominated by the OCEM PSs that are feeding the TL quadrupoles and dipoles.

Due to their non-efficient communication protocol and their multi-drop connections, at the present time, it takes 100 ÷ 190 seconds to switch the whole TL from e to p and viceversa.

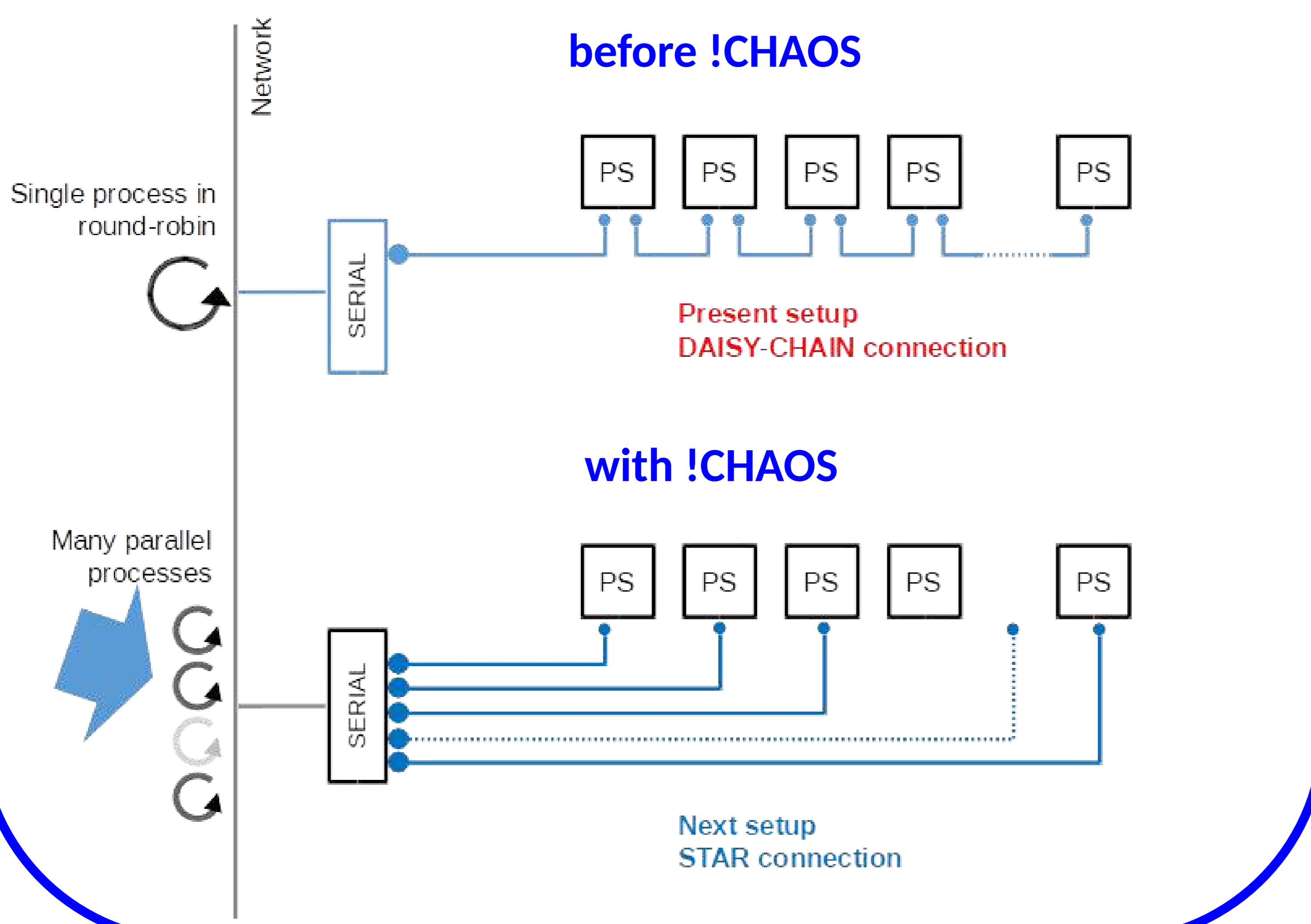
Machine operations and data analysis indicates that the **integrated luminosity could increase up to 20%** by reducing the switch time.



# !CHAOS



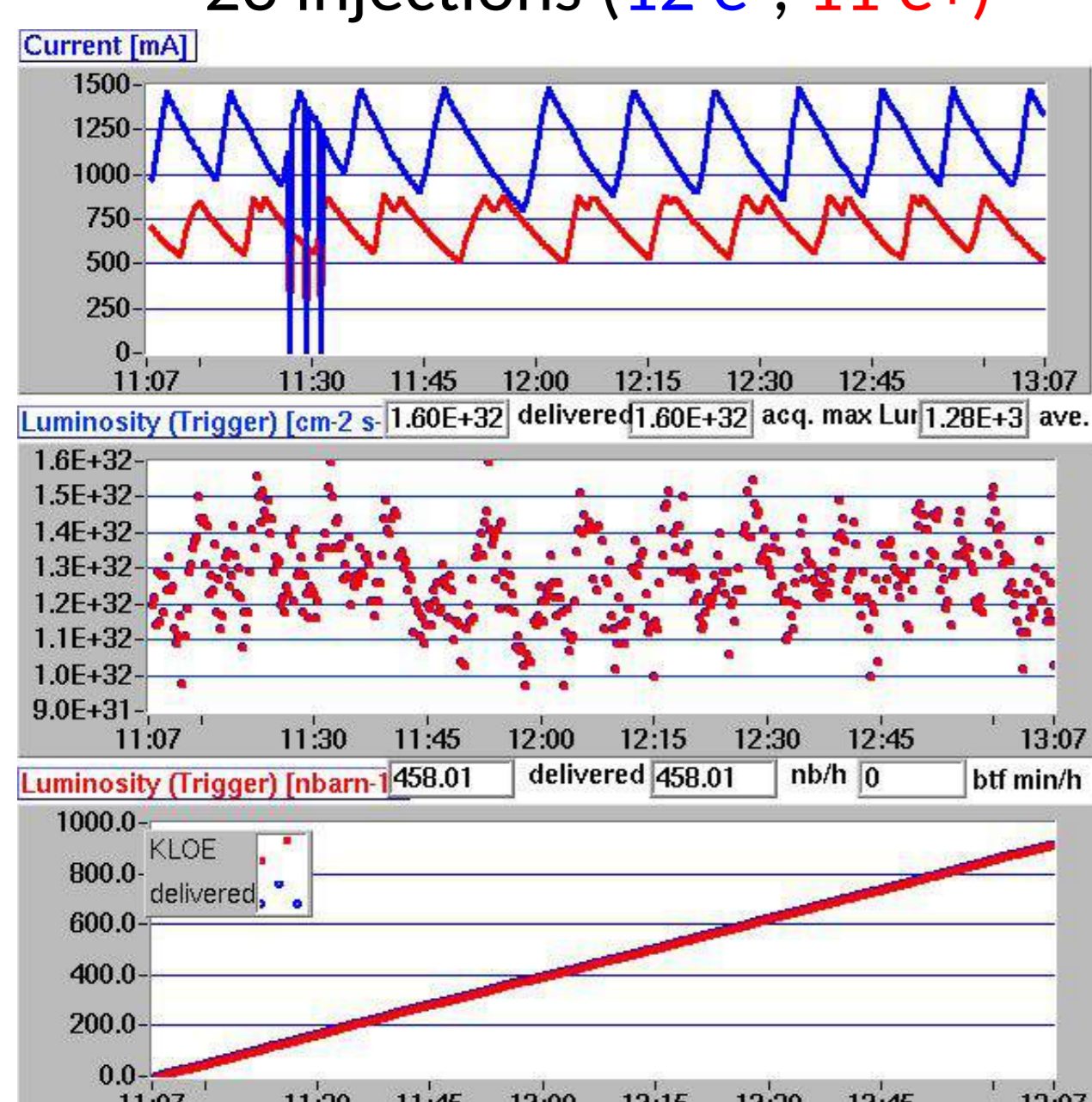
THE DAFNE COMPLEX



## THE LUMINOSITY



TUESDAY, MARCH 28th, 2017  
458 nb/hour delivered  
23 injections (12 e<sup>-</sup>, 11 e<sup>+</sup>)



SUNDAY, MARCH 11th, 2018  
630 nb/hour delivered  
42 injections (21 e<sup>-</sup>, 21 e<sup>+</sup>)

