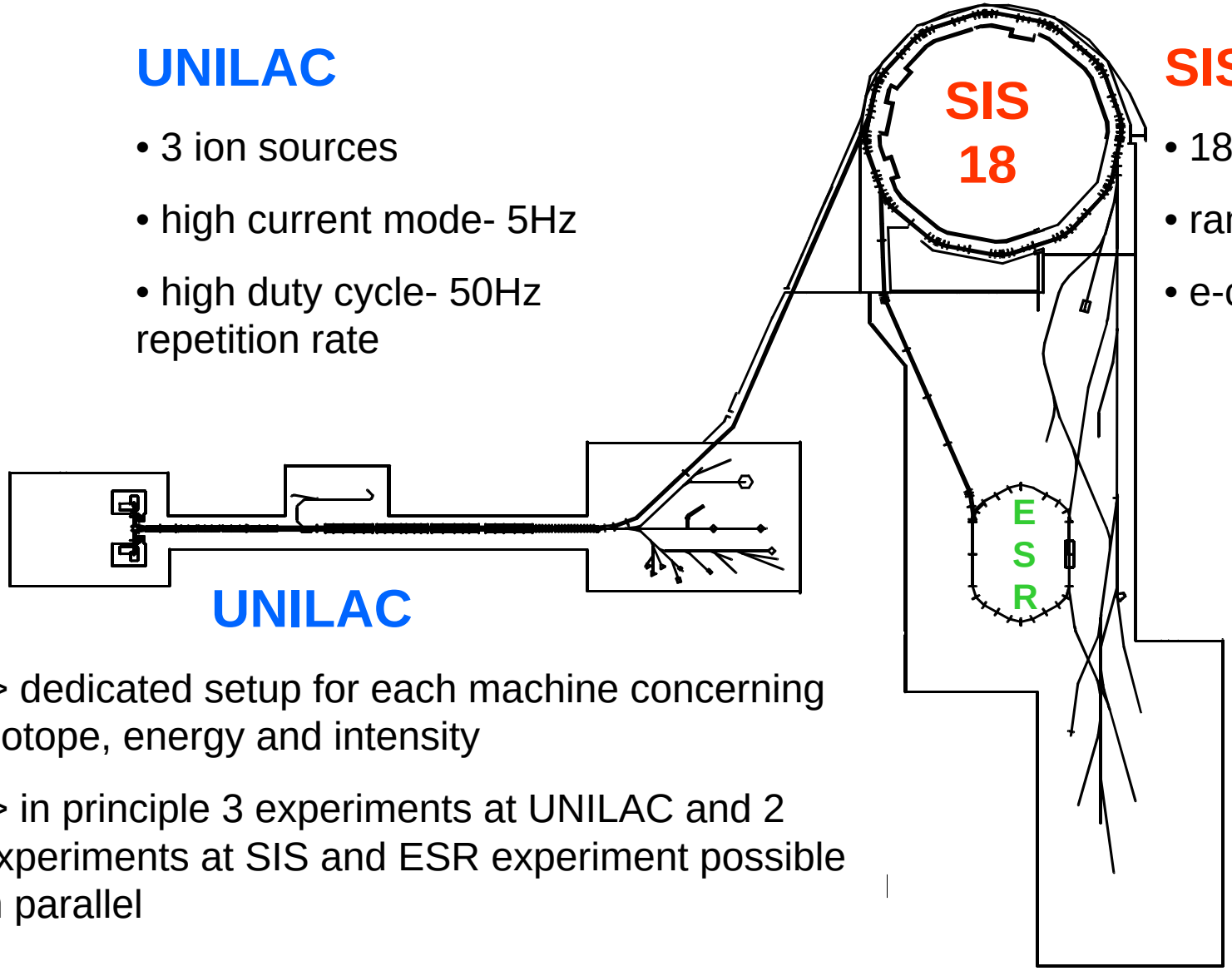
UNILAC and SIS Operation Status and Outlook

- parallel operation
- beam time statistics 2007
- beam intensities at UNILAC and SIS
- upgrade measures for the accelerators
- summary

Parallel Operation

UNILAC

- 3 ion sources
- high current mode- 5Hz
- high duty cycle- 50Hz repetition rate



SIS 18

- 18.7 Tm
- ramp rate 1.3T/s
- e-cooler operation

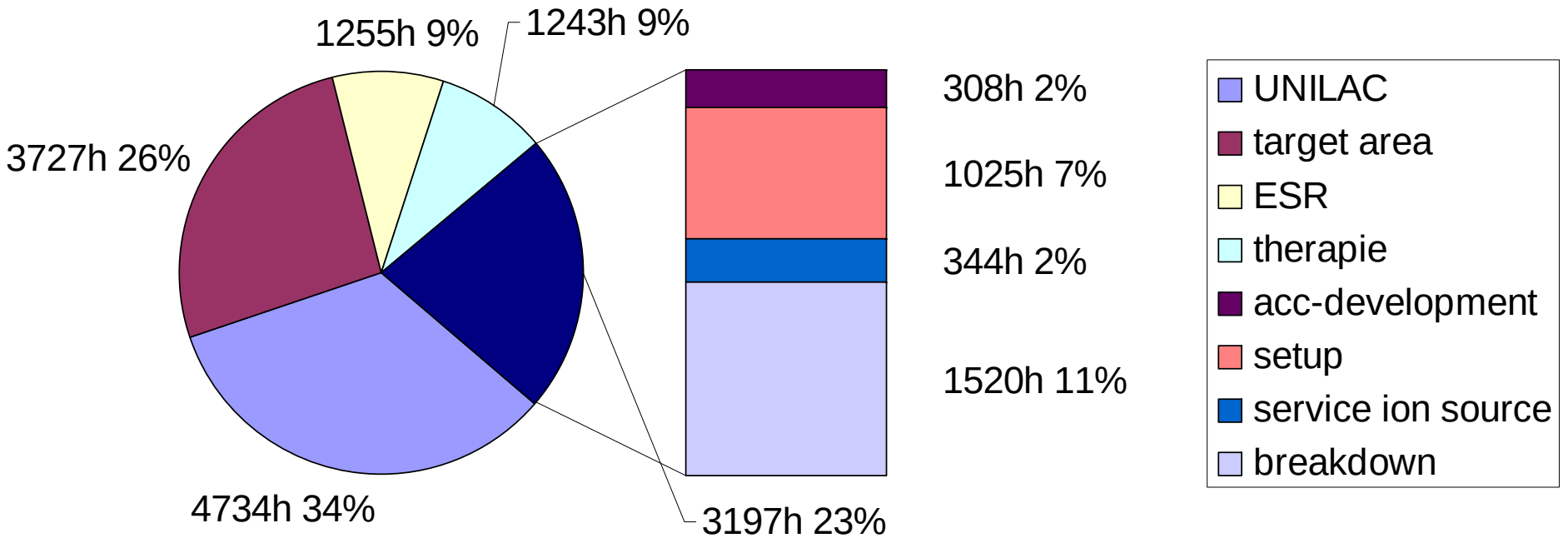
ESR

Investigation and manipulation of beam parameters

-> dedicated setup for each machine concerning isotope, energy and intensity

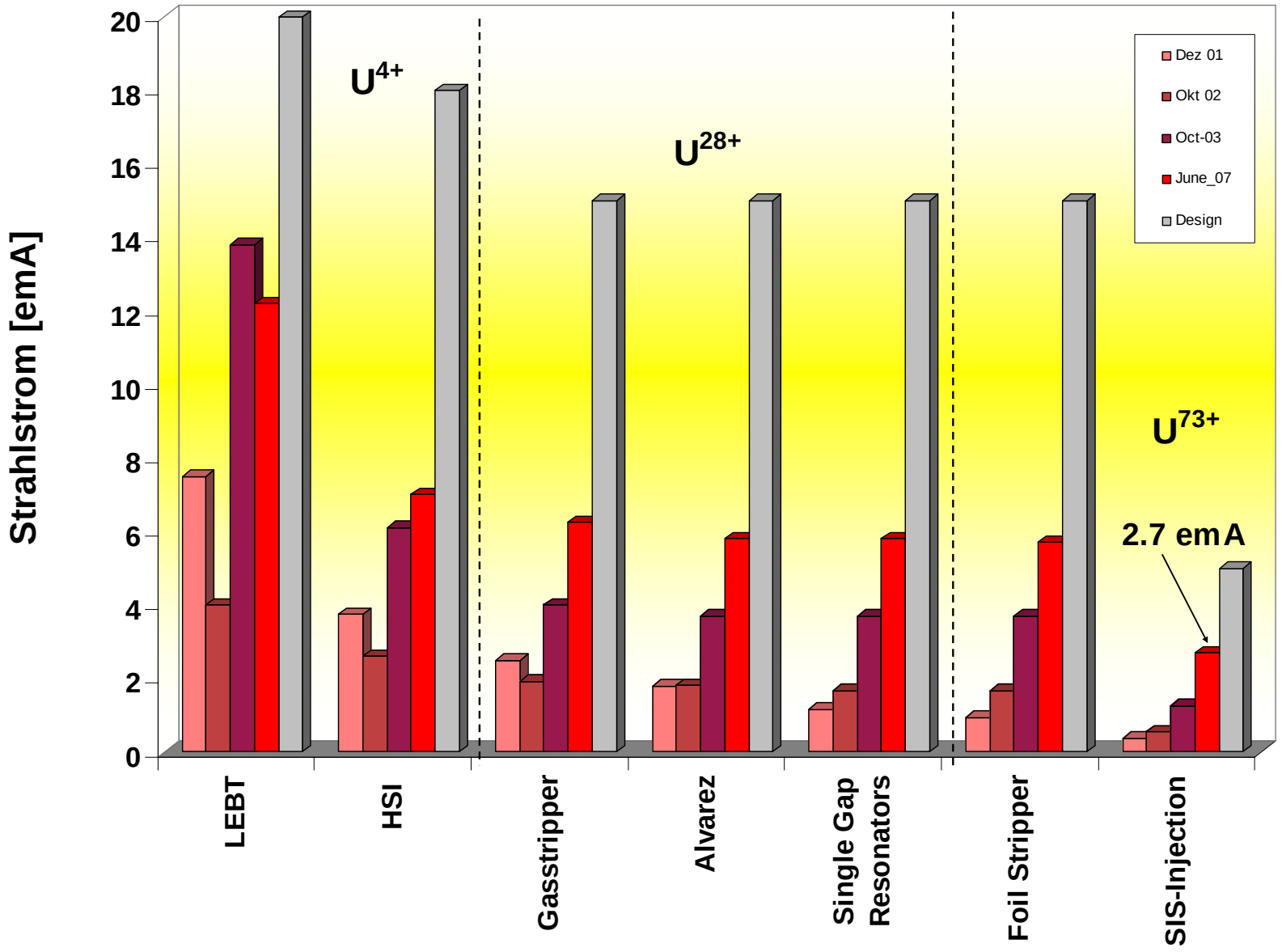
-> in principle 3 experiments at UNILAC and 2 experiments at SIS and ESR experiment possible in parallel

Total Beam Time 2007

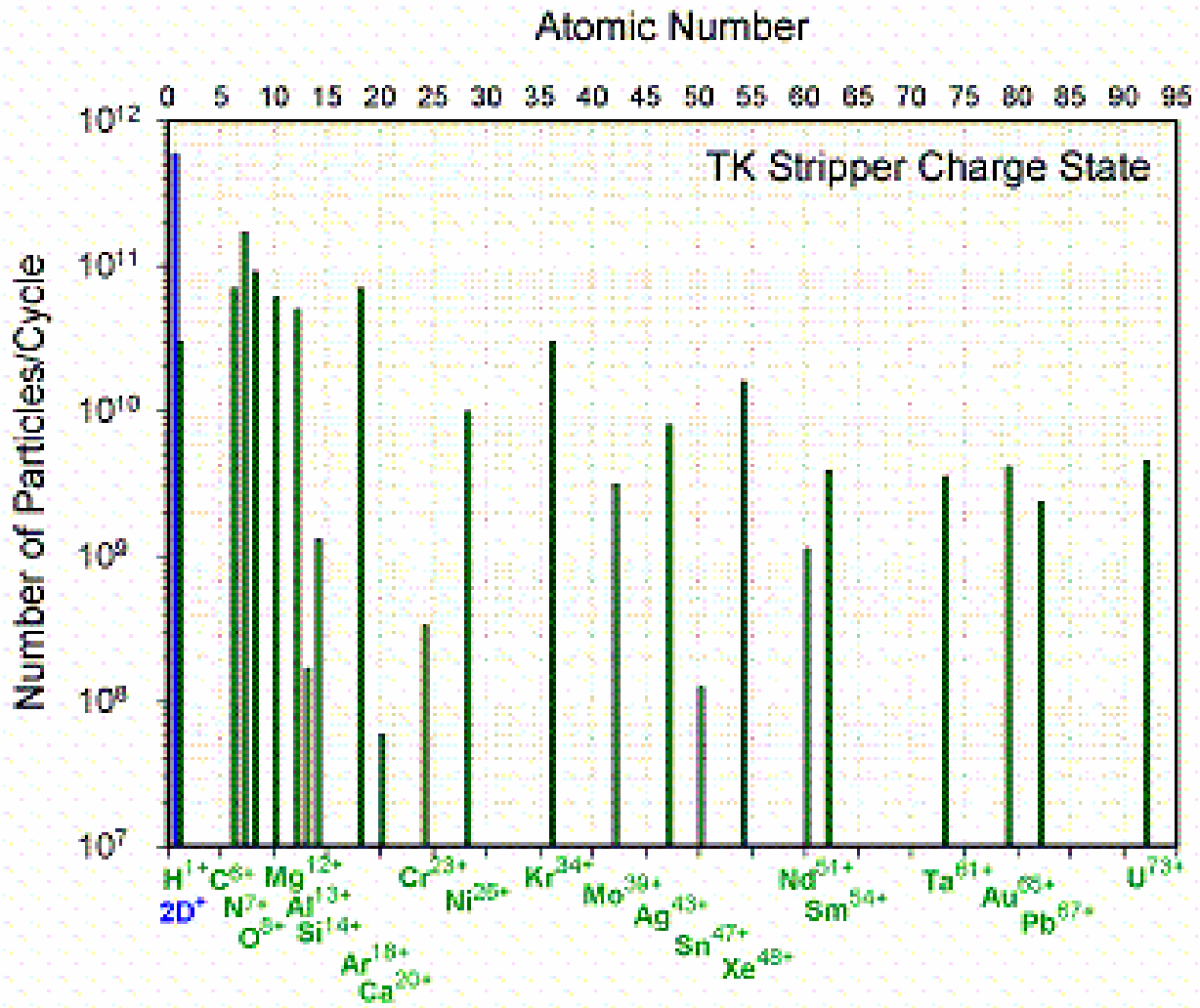


- Operation time 5936 h

Status UNILAC for U Beam



Available SIS Intensities



Upgrade UNILAC

- MEVVA operation for Au-ions, 28Ghz ECR

-> increase in peak intensity

- new charge separator in transfer channel
- new power supplies in poststripper section

-> better matching of high intensity beams (heavy ions)

Upgrade SIS

- increase in ramp rate to 4T/s
- -> increased duty cycle
- improvement of extraction efficiency
- -> better transmission
- new injection beam line
- upgrade of vacuum system
- -> performance for low charged ions
- improvement of spill structure
- -> which particular requests? number of users?

Summary and Outlook

- light ions (gases) -> performance is ok
- heavy ions, highly charged -> factor 5 below the limit
- heavy ions, low charge state (FAIR) -> technical upgrade is organized
- additional limits in machine performance due to parallel operation
- for proper scheduling detailed beam parameters are necessary
- the machine reliability has to be observed
- a successful beamtime requires intensive communication (already in advance)