IDALAB

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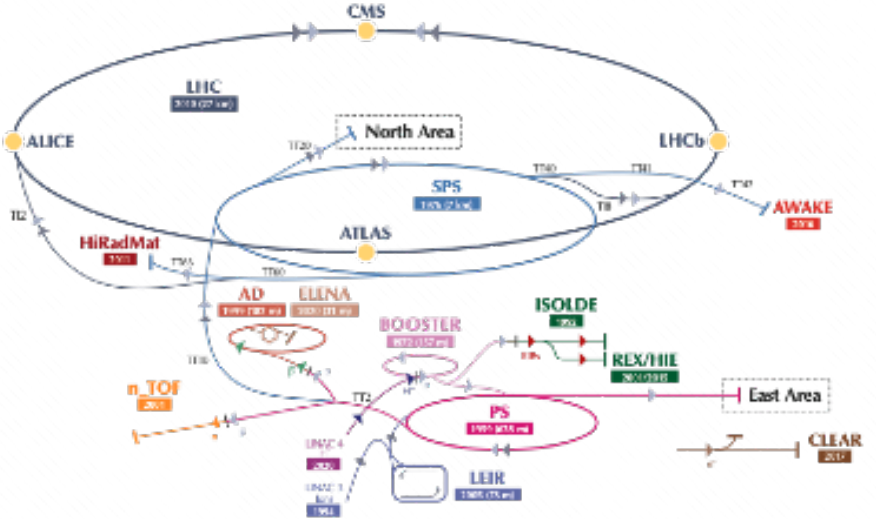
RL Coffee


CMS
LHC
ALICE
North Area
LHCb
SPS
ATLAS
AWAKE
HiRadMat
AD
ELENA
BOOSTER
ISOLDE
REX/HIE
n_TOF
East Area
PS
CLEAR
LEIR

Challenges of RL in accelerator control?

- Goal:

➡ Quickly recover performance

➡ Maintain performance

- Challenges:

➡ Not all physics can be modelled appropriately

➡ Especially in the low energy regime lack of models

➡ Long times needed to adjust after faults, resets, changes

- State representation sufficient for learning?

➡ Partial observable MDPs (POMDPs), another story?

- Sample efficiency - real world training feasible?

- Stability sufficient for real world training?

- Safety constrains?

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