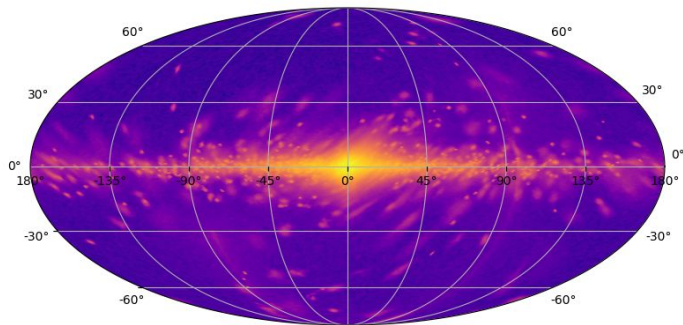
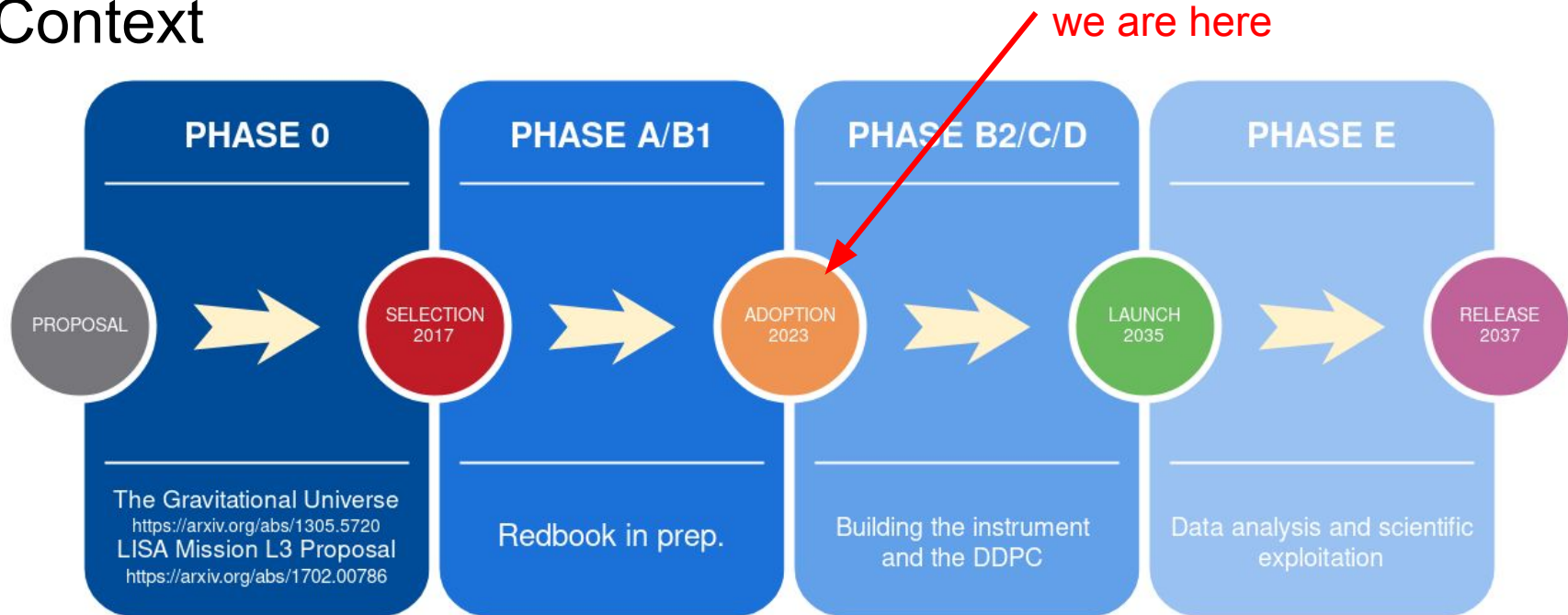


The LISA DDPC project at APC

Stas Babak, Philippe Bacon, Senwen Deng,
Cécile Cavet, Cecilio Garcia-Quiros, Natalia
Korsakova, Maude Le Jeune, Mangiagli
Alberto, Antoine Petiteau, Eric Plagnol,
Andrea Sartirana, and co.



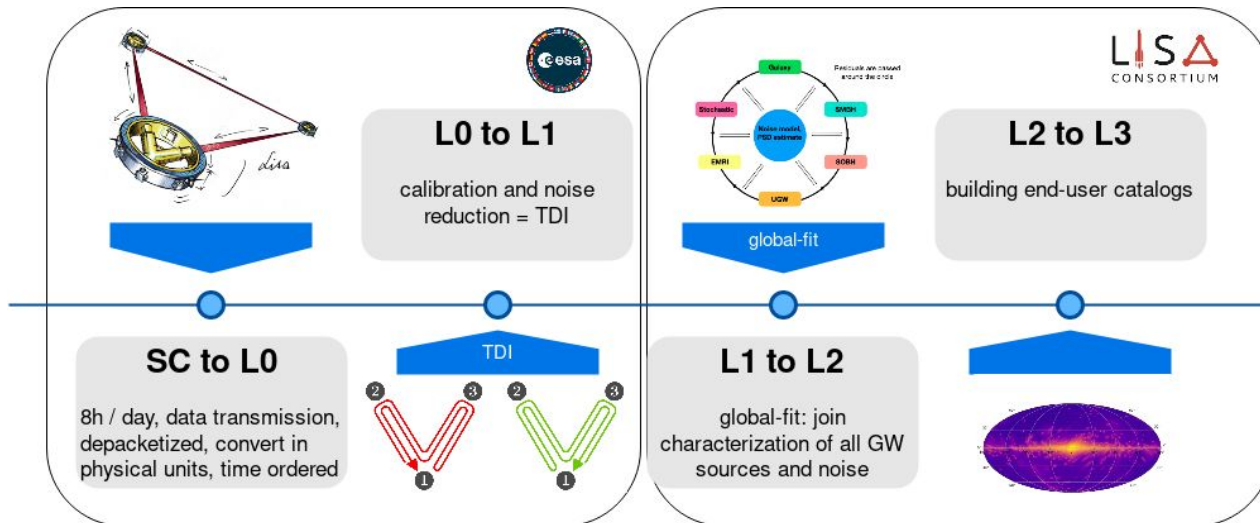
Context



The team

- ~10 members, ~7 FTE
- 50% engineers / 50% scientists
- involved in LISA since its beginning, with leading roles
- science: overlap with LIGO and PTA, IT: overlap with Euclid, SVOM

The Distributed Data Processing Center



- The LISA Data Challenge is the tool used to test the L1 -> L3 chain and is driving most of our activities
- data production : simulating LISA sky and noise with production standards (data distribution, software stack, orchestration, dev workflow, reproducibility, etc)
 - data analysis: in collaboration with L2IT, prototyping of a global-fit pipeline, results submitted in December 2022
 - evaluation: 5 submissions, only 2 tackling the global-fit problem, preliminary results in the redbook

Milestones for adoption

- Thanks to LDC, we roughly know the size / cost of the target infrastructure
- We have demonstrated our capability to solve the data analysis global-fit problem
- At APC, we are aiming at taking the responsibility of delivering the L1->L2 pipeline, with other French labs covering L0->L1 and L2->L3 parts.
- Associated cost estimate to be delivered in June to CNES
- Prototyping with LDC to be continued for the next 10 years with more realistic simulated data.

