RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

JOURNÉES LISA FRANCE

Martin BOUTELIER

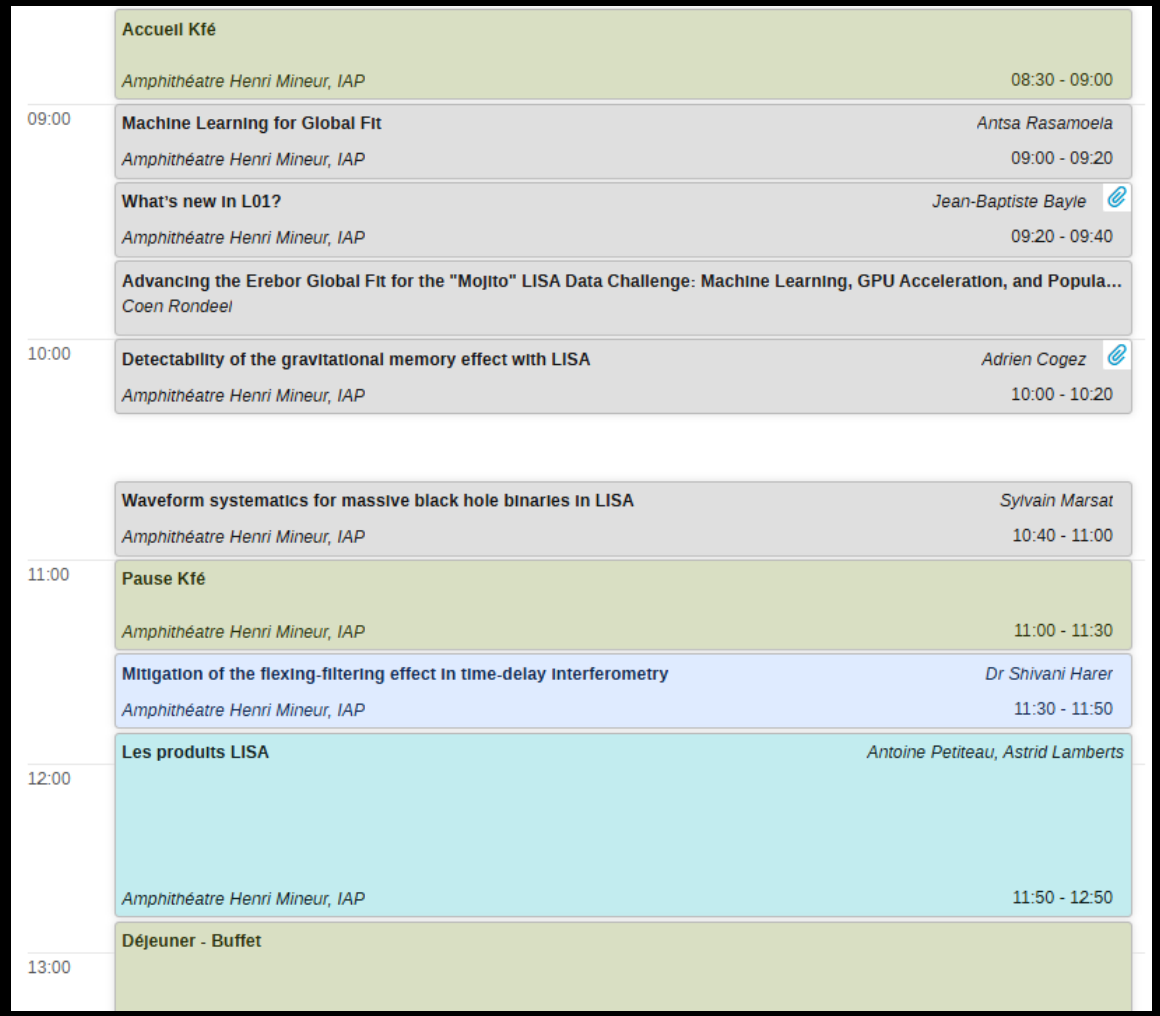
4-5 MAI 2026 – IAP

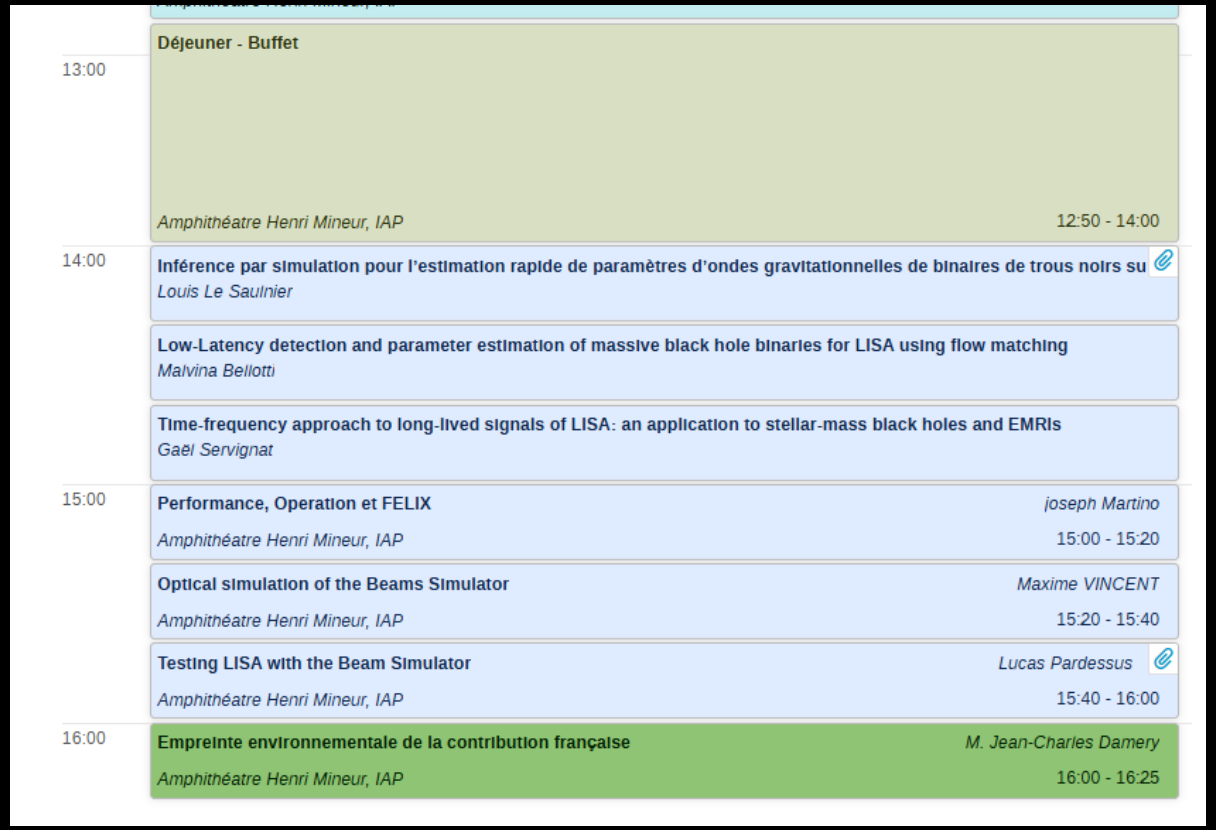
PRACTICAL INFORMATION

- Wifi connexion : Eduroam
- Stickers with name and affiliation are available in the forum, one for each day!
- Lunch break will be organized in the forum. Half of dishes are vegetarians
- Group photo is organized just before the lunch ! Do not miss the slot !
- End of Journées LISA France foreseen Tuesday, not later than 4.30 PM
- For online attendance, keep your microphone muted and raise your hand if you want to ask questions

AGENDA

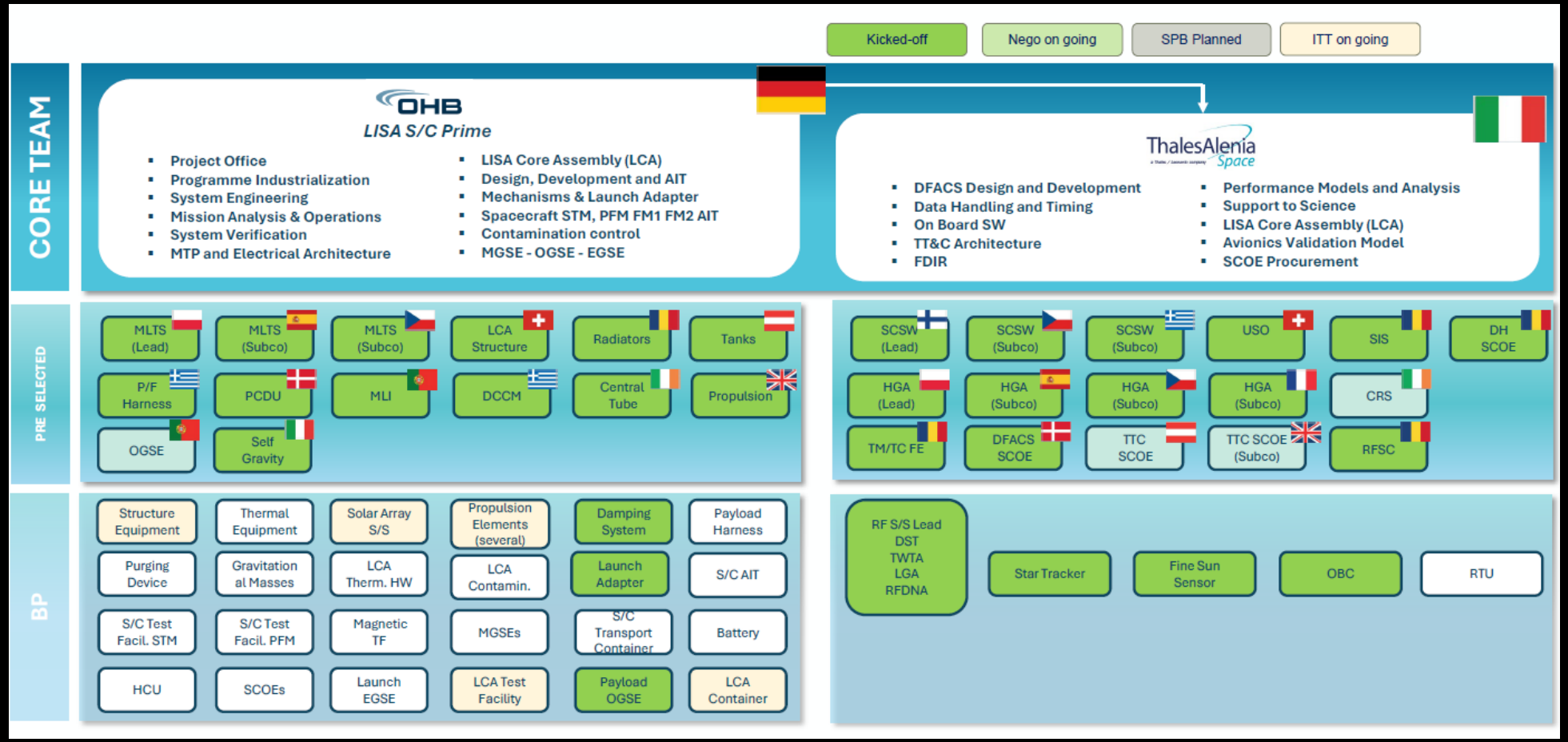
14:00	**Introduction - Informations générales**	*Martin Boutelier*	
	Amphithéatre Henri Mineur, IAP	14:00 - 14:20	
	News from ESA	*Dr Oliver Jennrich*	
	Amphithéatre Henri Mineur, IAP	14:20 - 14:35	
	Avancement du projet LISA en France	*Jean-Charles Damery*	
	Amphithéatre Henri Mineur, IAP	14:35 - 15:05	
15:00	**Avancement DDPC**	*Anne-Therese Nguyen et al.*	
	Amphithéatre Henri Mineur, IAP	15:05 - 15:25	
	Avancement LISA Science Team	*Astrid Lamberts*	
	Amphithéatre Henri Mineur, IAP	15:25 - 15:40	
	Avancement Consortium	*Marta Volonteri*	
	Amphithéatre Henri Mineur, IAP	15:40 - 16:05	
16:00	**Pause Kfé**		
	Amphithéatre Henri Mineur, IAP	16:05 - 16:25	
	AstroColibri	*Fabian Schussler*	
	Amphithéatre Henri Mineur, IAP	16:25 - 16:45	
	Gravitational radiation reaction for compact binary systems at 4.5 post-Newtonian order	*Emeric Seraille*	
17:00	*Amphithéatre Henri Mineur, IAP*	16:45 - 17:05	
	Separation of Milky Way bulge and disk in LISA residual data	*M. Solano Felicio*	
	Amphithéatre Henri Mineur, IAP	17:05 - 17:25	
	Presentation of the External Data work package	*Dr Adrian MACQUET*	
	Amphithéatre Henri Mineur, IAP	17:25 - 17:45	
	Summary of contributions of CEA to DDPC and P&O	*Dr Nicolas Dagoneau*	
18:00	*Amphithéatre Henri Mineur, IAP*	17:45 - 18:05	
	Fast localization of EMRI sources using the coronagraphic TDI variable for LISA	*Hugo Alexandre*	
	Amphithéatre Henri Mineur, IAP	18:05 - 18:25	


Accueil Kfé
Amphithéatre Henri Mineur, IAP
08:30 - 09:00
09:00
Machine Learning for Global Fit
Antsa Rasamoela
Amphithéatre Henri Mineur, IAP
09:00 - 09:20
What's new in L01?
Jean-Baptiste Bayle
Amphithéatre Henri Mineur, IAP
09:20 - 09:40
Advancing the Erebor Global Fit for the "Mojito" LISA Data Challenge: Machine Learning, GPU Acceleration, and Popula...
Coen Rondeel
10:00
Detectability of the gravitational memory effect with LISA
Adrien Cogez
Amphithéatre Henri Mineur, IAP
10:00 - 10:20
Waveform systematics for massive black hole binaries in LISA
Sylvain Marsat
Amphithéatre Henri Mineur, IAP
10:40 - 11:00
11:00
Pause Kfé
Amphithéatre Henri Mineur, IAP
11:00 - 11:30
Mitigation of the flexing-filtering effect in time-delay interferometry
Dr Shivani Harer
Amphithéatre Henri Mineur, IAP
11:30 - 11:50
Les produits LISA
Antoine Petiteau, Astrid Lamberts
12:00
Amphithéatre Henri Mineur, IAP
11:50 - 12:50
Déjeuner - Buffet
13:00


Déjeuner - Buffet
13:00
Amphithéatre Henri Mineur, IAP
12:50 - 14:00
14:00
Inférence par simulation pour l'estimation rapide de paramètres d'ondes gravitationnelles de binaires de trous noirs su
Louis Le Saulnier
Low-Latency detection and parameter estimation of massive black hole binaries for LISA using flow matching
Malvina Bellotti
Time-frequency approach to long-lived signals of LISA: an application to stellar-mass black holes and EMRIs
Gaël Servignat
15:00
Performance, Operation et FELIX
joseph Martino
Amphithéatre Henri Mineur, IAP
15:00 - 15:20
Optical simulation of the Beams Simulator
Maxime VINCENT
Amphithéatre Henri Mineur, IAP
15:20 - 15:40
Testing LISA with the Beam Simulator
Lucas Pardessus
Amphithéatre Henri Mineur, IAP
15:40 - 16:00
16:00
Empreinte environnementale de la contribution française
M. Jean-Charles Damery
Amphithéatre Henri Mineur, IAP
16:00 - 16:25

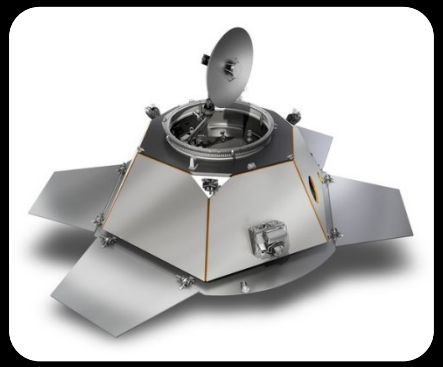
ESA MISSION UPDATE

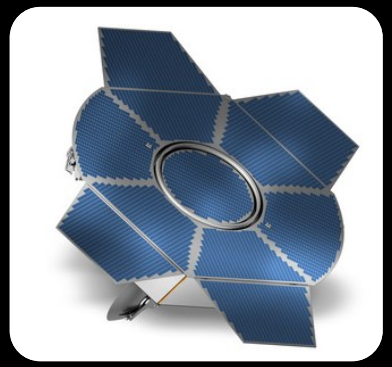
- Industrial consortium build-up

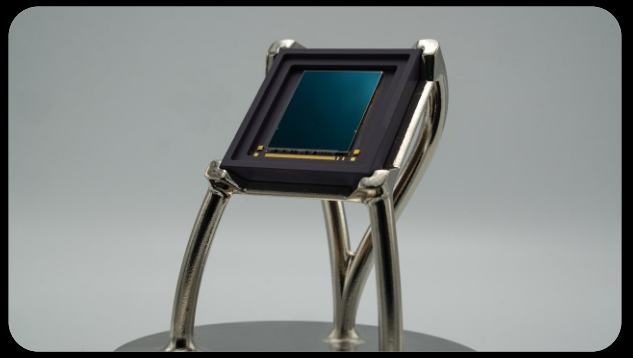


ESA MISSION UPDATE

- Great achievements in 2024 – 2025 on LISA subsystems :
  - Spacecraft System Requirement Review successfully completed and spacecraft PDR design freeze (imminent)
  - PDR of Constellation Acquisition Sensor successfully completed
  - PDR of Micro Propulsion Electronic Unit successfully completed
  - Close out of GRS PDR
  - Close out of IDS PDR

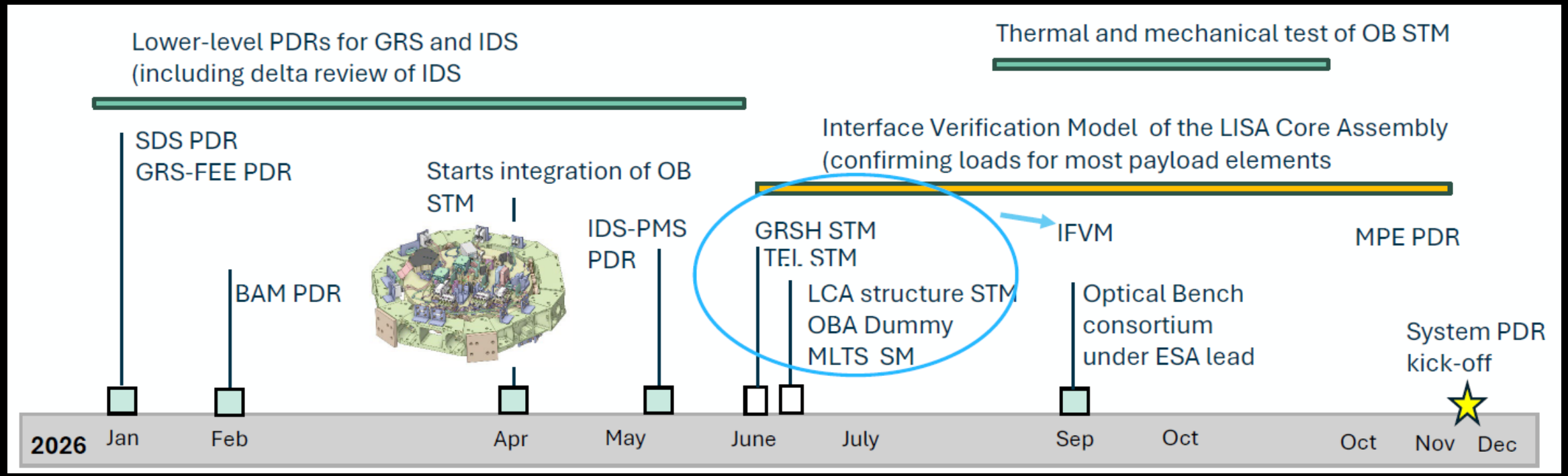






ESA MISSION UPDATE

- Several challenges in 2026 :



NASA'S POTENTIAL WITHDRAWAL

- FY2026:
  - Rejection of White House budget proposal last september by House of representant and Senate
  - Shutdown between 1st october and 13 november
  - Minibus provides a 24,4 B$ budget for NASA for FY2026 on 6th of January 2026 that preserve most of scientific missions
- FY2027:
  - New President's budget request for NASA that bears striking resemblance with 2026's one…
- Impact on scientific mission :
  - ESA is studying alternative to NASA contribution for LISA and other Cosmic Vision missions (Athena and Envision)

Mission Terminations in the FY 2027 President's Budget Request for NASA

Astrophysics	Earth Science	Heliophysics	Planetary Science
10 projects (45% of current portfolio)	17 projects (41% of current portfolio)	17 projects (57% of current portfolio)	10 projects (29% of current portfolio)
COSI	Aqua	ACE	DAVINCI
Fermi	Atmosphere Observing System (AOS-PMM)	AWE	VERITAS
Chandra	Aura	CODEX	New Horizons
LISA contribution	CLARREO Pathfinder	EUVST	Juno
ULTRASAT contribution	Copernicus Polar Ice and Snow Topography Altimeter (AMR-CR contribution)	EZIE	OSIRIS-APEX
Athena contribution	CYGNSS	Geospace Dynamics Constellation	Mars Odyssey
NICER	DSCOVR	GOLD	MAVEN
Euclid contribution	GLIMR	HelioSwarm	Rosalind Franklin Rover participation
XRISM contribution	INCUS	IBEX	VenSAR (EnVision contribution)
UVEX	OCO-2	IRIS	Mars Express participation
	OCO-3	MMS	
	PolSIR	SOHO	
	SAGE-III	Solar-B participation	
	SBG-TIR	THEMIS-ARTEMIS	
	SBG-VSWIR	TIMED	
	Terra	TRACERS	
		Wind	

This list does not include some Earth Science missions zeroed out in the PBR, but identified as being funded pending results of the 2026 senior review.

Published April 8th, 2026. More information: planetary.org/save-nasa-science

THE PLANETARY SOCIETY

NASA'S POTENTIAL WITHDRAWAL

- ESA strategy to mitigate the risk of a (partial) NASA withdrawal :
  - Develop European alternatives for NASA contribution : telescope, laser, charge management device
  - Organize the contract with 4 phases (validated by IPC):

Phase 1
12 months of activities
Technologic maturation, industrial update

Phase 2
Develop QM for TEL, LAS and CMD

Phase 3
Develop 1 FM set (2 TEL, 2 LAS, 2 CMD)

Phase 4
Develop 3FM set (2 TEL, 2 LAS, 2 CMD)

To be terminated Q1 2027

- In //, bilateral meeting ESA/NASA to maintain the collaboration:
  - LISA is a top priority of NASA science directorate
  - Activities funded for FY2026
  - NASA perimeter potentially impacted

NASA'S POTENTIAL WITHDRAWAL

Procurement scheme

- Laser system:
  - ✓ Direct negotiation with a consortium lead by STI (DE)
  - ✓ EM already developed, with the required performances
  - ✓ Activity stopped in 2023 following NASA commitment
  - ✓ Contract proposal received, approved by IPC in march
- Telescope :
  - ✓ Open competition won by a consortium lead by Thales (FR)
  - ✓ Contract proposal approved by IPC in January
  - ✓ Contract KO in Feb 2026
  - ✓ Delivery date compatible with actual LISA schedule
- Charge management device: high LPF heritage
  - ✓ Open competition won by a consortium lead by Thales (CH)
  - ✓ Contract proposal approved by IPC in April

MLA UPDATE

- Since the adoption, a lot of evolution in hardware responsibility:
  - Belgium is no more responsible for the Beam Alignment Mecanism
  - Denmark is no more responsible through PRODEX for the Phasemeter Control Unit
  - UKSA is no more responsible for the Optical Bench Assembly
  - A second facility for the integration of the Optical Benches will be built

  → ESA has took over all those responsiblities and want to reflect it in MLA

- Evolution also on DDPC implication :
  - New European countries have joined the DDPC effort : Portugal, Greece, Ireland

  → We will take the opportunity to update the MLA

EMPREINTE ENVIRONNEMENTALE

EVALUATION OF ENVIRONMENTAL FOOTPRINT OF THE FRENCH CONTRIBUTION TO LISA MISSION

- Industrial contract for this study has been set up

- First results will be presented by J-C Damery (see Tuesday afternoon tallk in AOB session)

ROUGH ESTIMATION FOR JOURNÉES LISA FRANCE 2026 :

Total distance: ~47 000 km

Carbone footprint due to transport : ~500 kg eCO^2

Error margin: ~60%

Sources : Calculez les émissions de carbone de vos trajets | Agir pour la transition écologique
1point5 | Applications