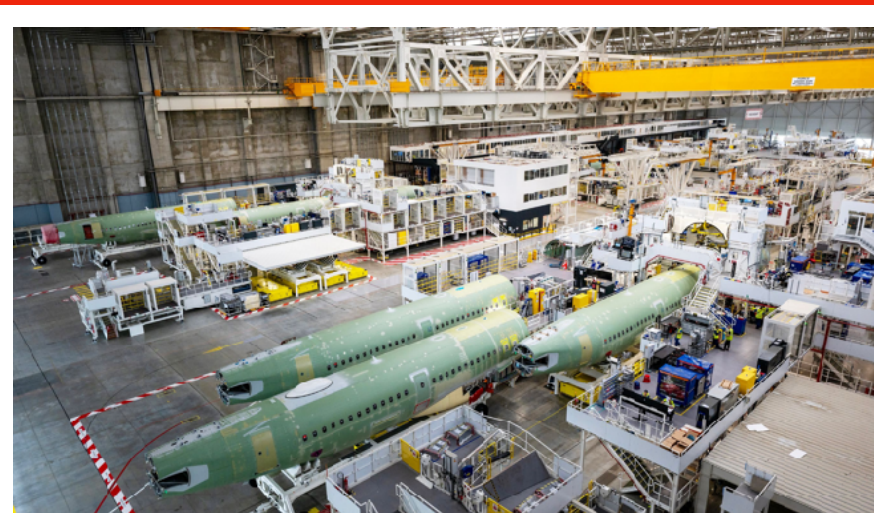
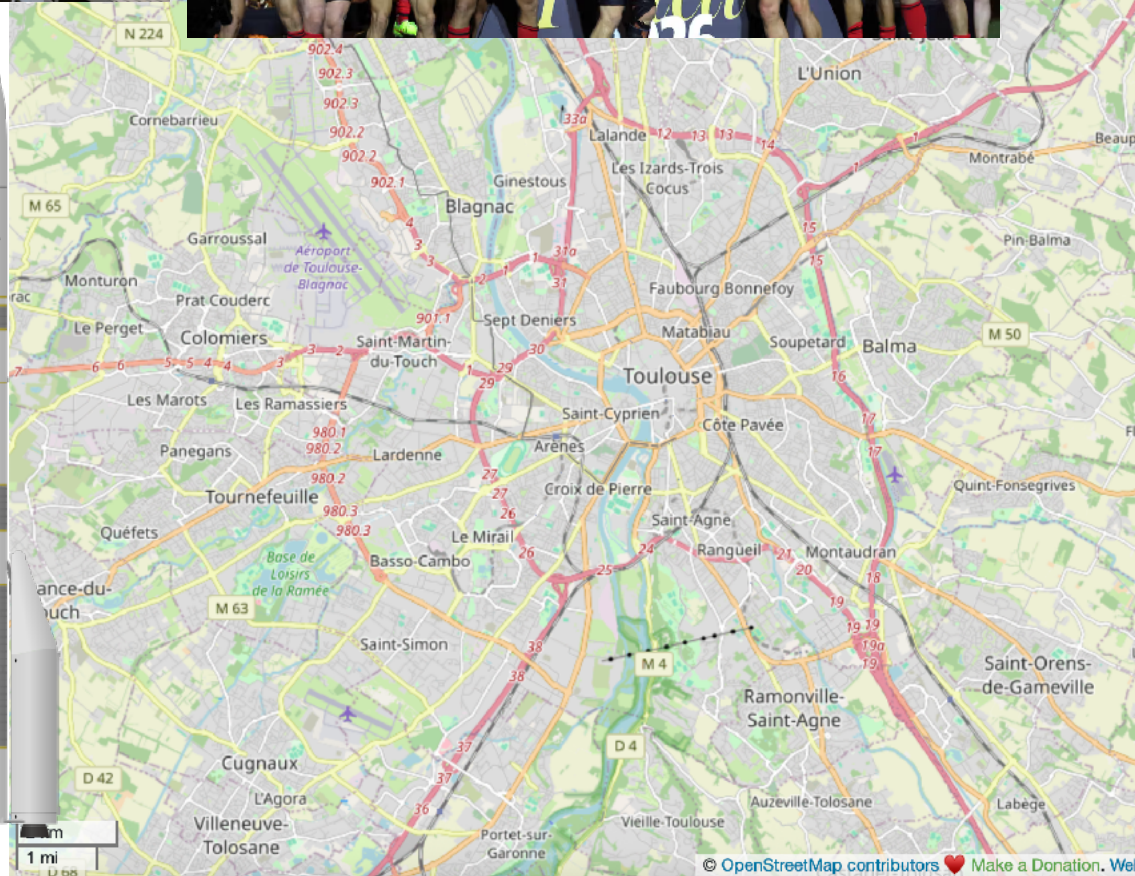


Gravitational Waves in Toulouse



AIRBUS

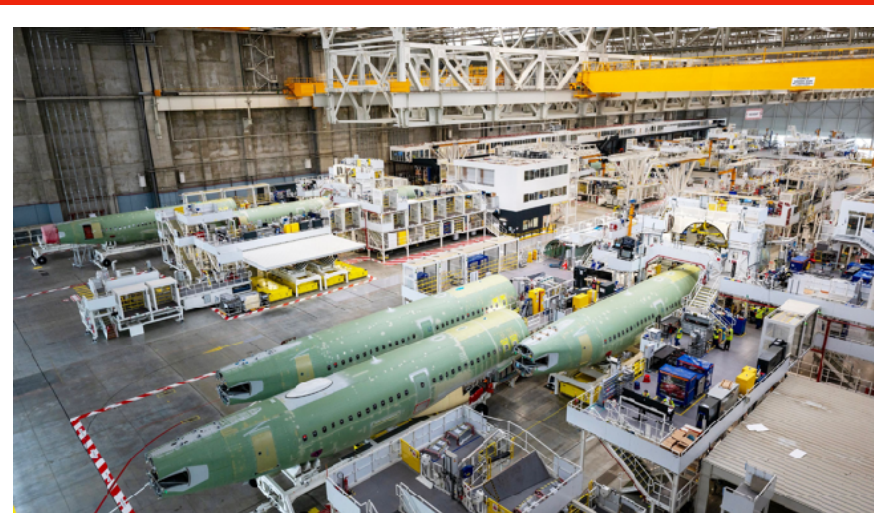


Université de Toulouse

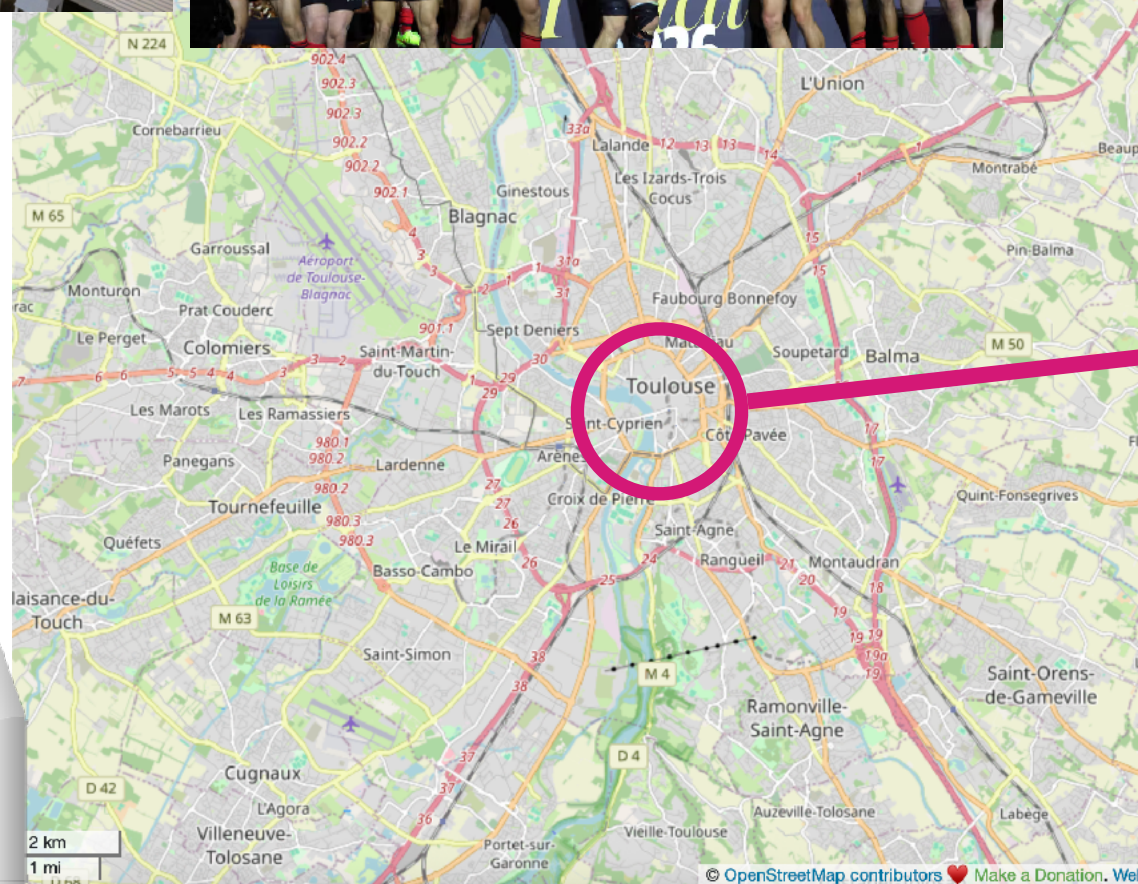


UNIVERSITÉ TOULOUSE Jean Jaurès

Gravitational Waves in Toulouse



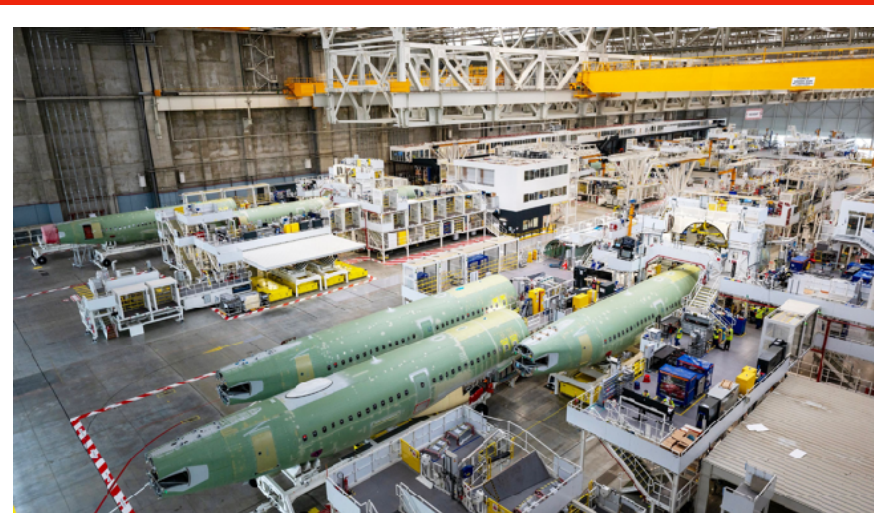
AIRBUS



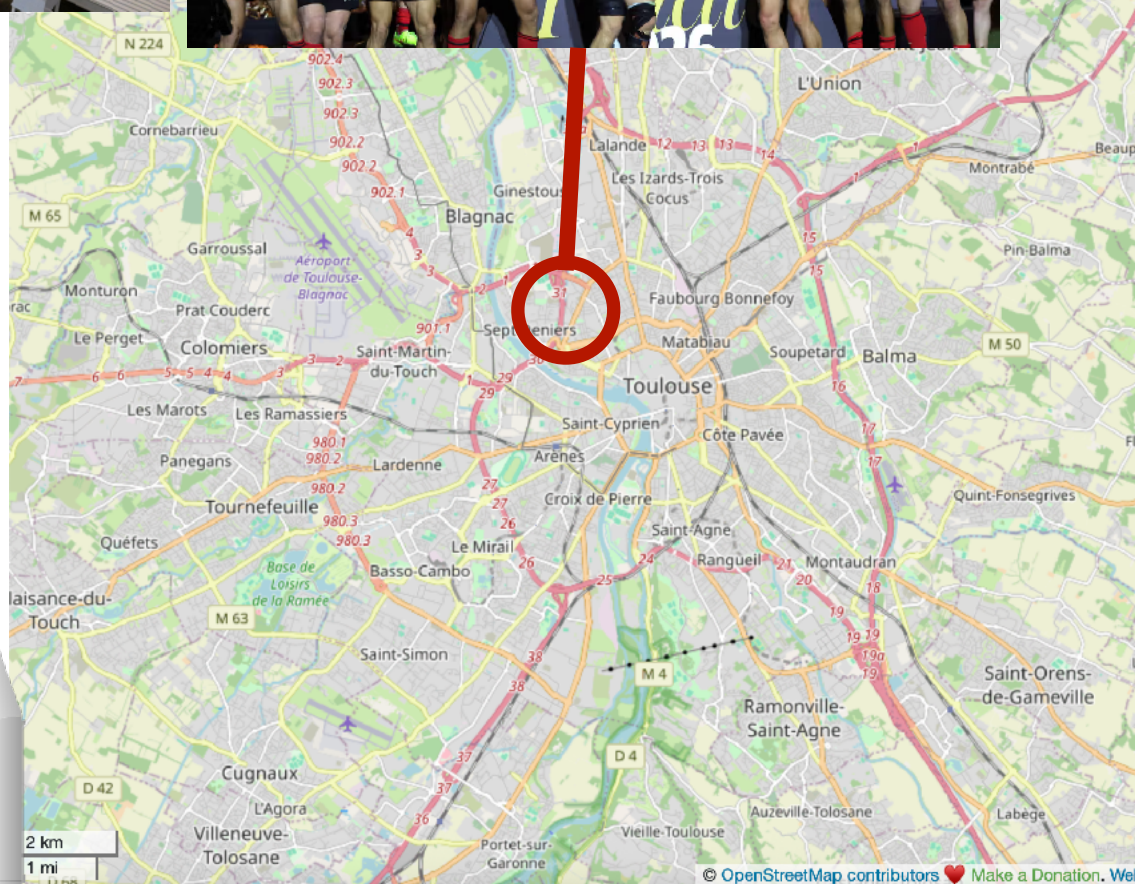
Université de Toulouse



Gravitational Waves in Toulouse



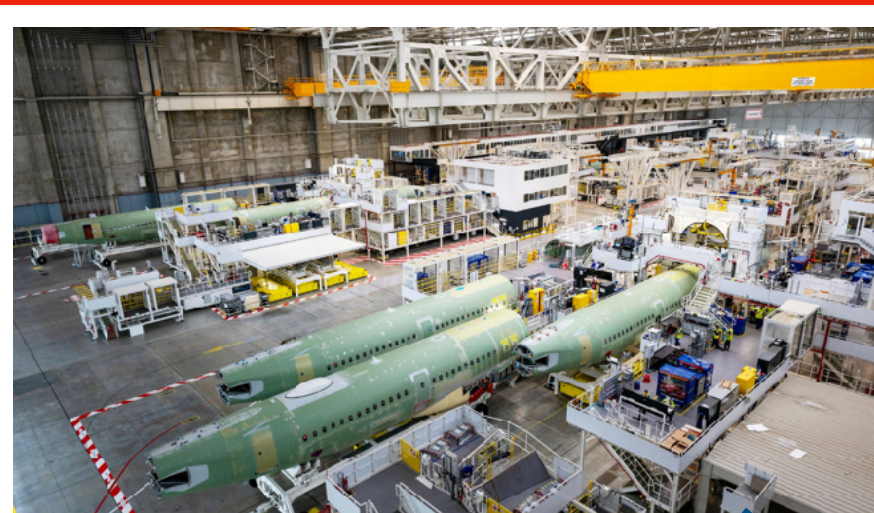
AIRBUS



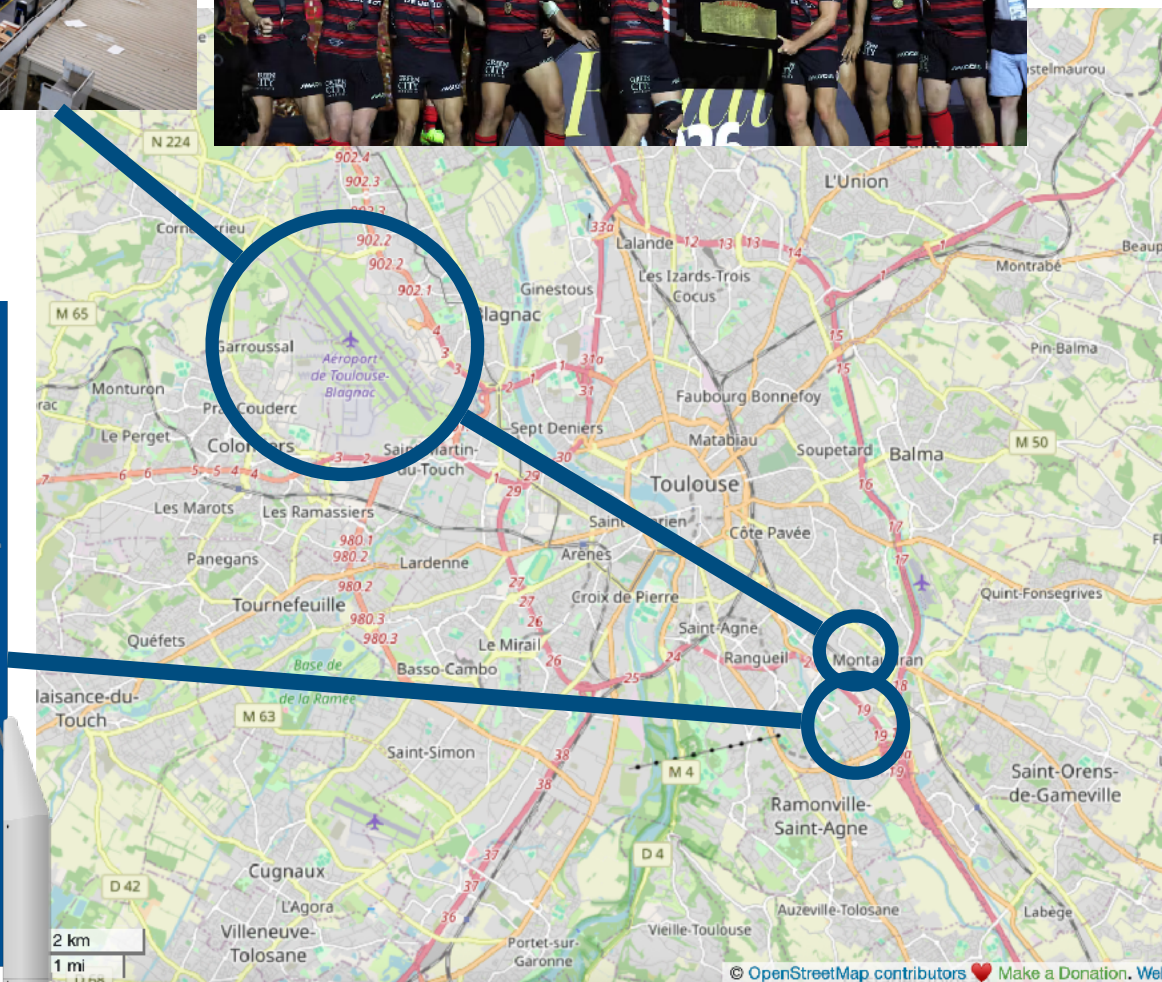
Université de Toulouse



Gravitational Waves in Toulouse



AIRBUS

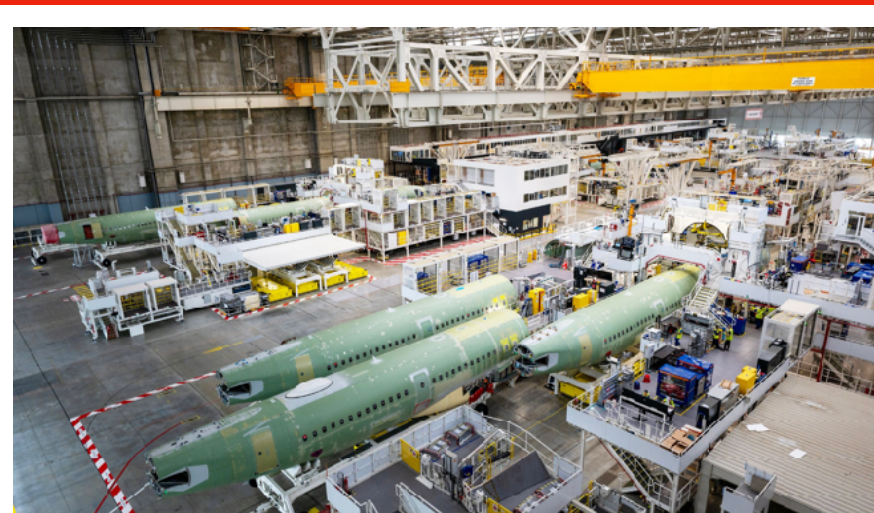


Université de Toulouse

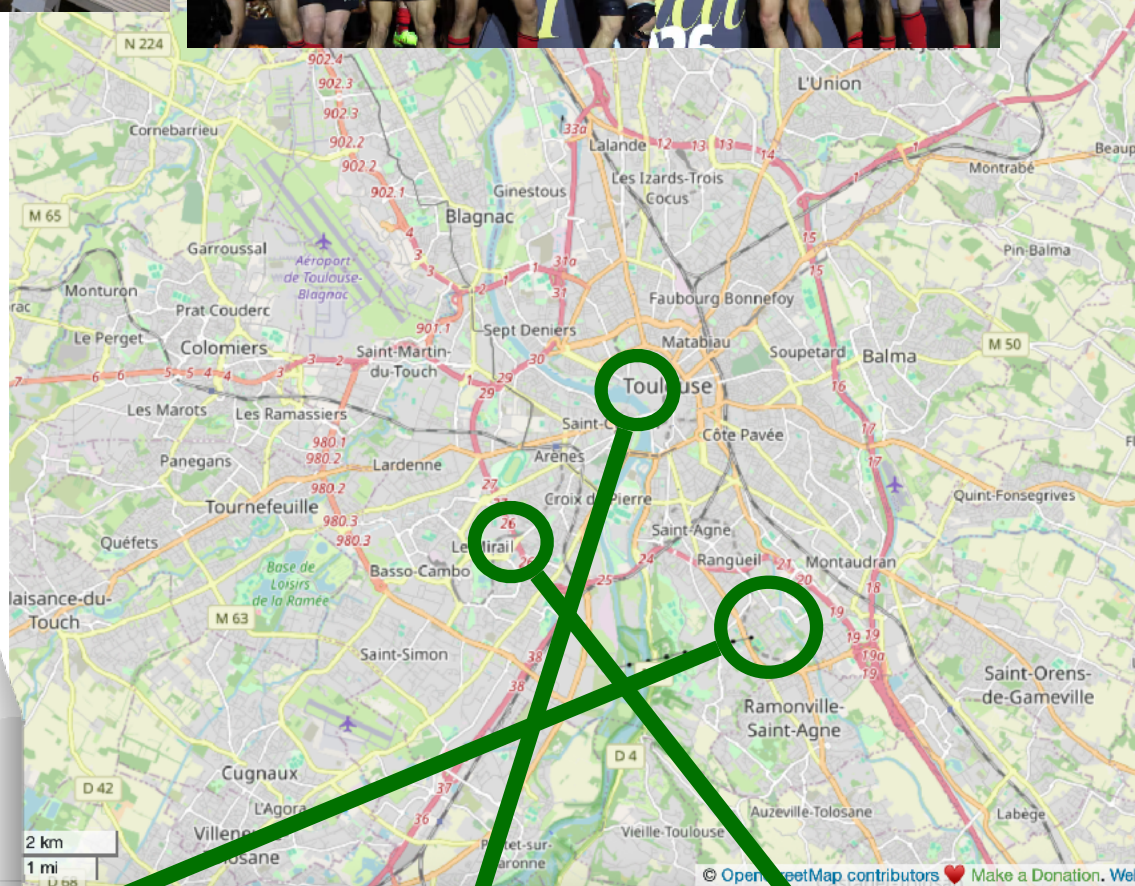


UNIVERSITÉ TOULOUSE Jean Jaurès

Gravitational Waves in Toulouse



AIRBUS



**Université
de Toulouse**



Gravitational Waves in Toulouse

Toulouse

Toulouse, surnommée la ville rose du Sud de la France pour la couleur de ses briques, est réputée pour sa convivialité. **Avec plus de 120.000 étud...

Lire plus ▾

Classement des meilleures villes étudiantes 2026

Rang

1 sur 50

Points

78,0 sur 103

Attractivité



8,0/10

Formation



15,0/20

Vie étudiante



23,0/30

Cadre de vie



22,5/33

Emploi



9,5/10

Part d'étudiants ⓘ

11.56%

Prix de l'abonnement étudiant au réseau de transports ⓘ

162.00 €

Loyer moyen d'un studio ⓘ

539 €

TROUVEZ
VOTRE
ALTERNANCE
SUR
letudiant.fr

JE POSTULE

AIRBUS

CR
CENTRE
D'ÉTUDES

UT
de Toulouse

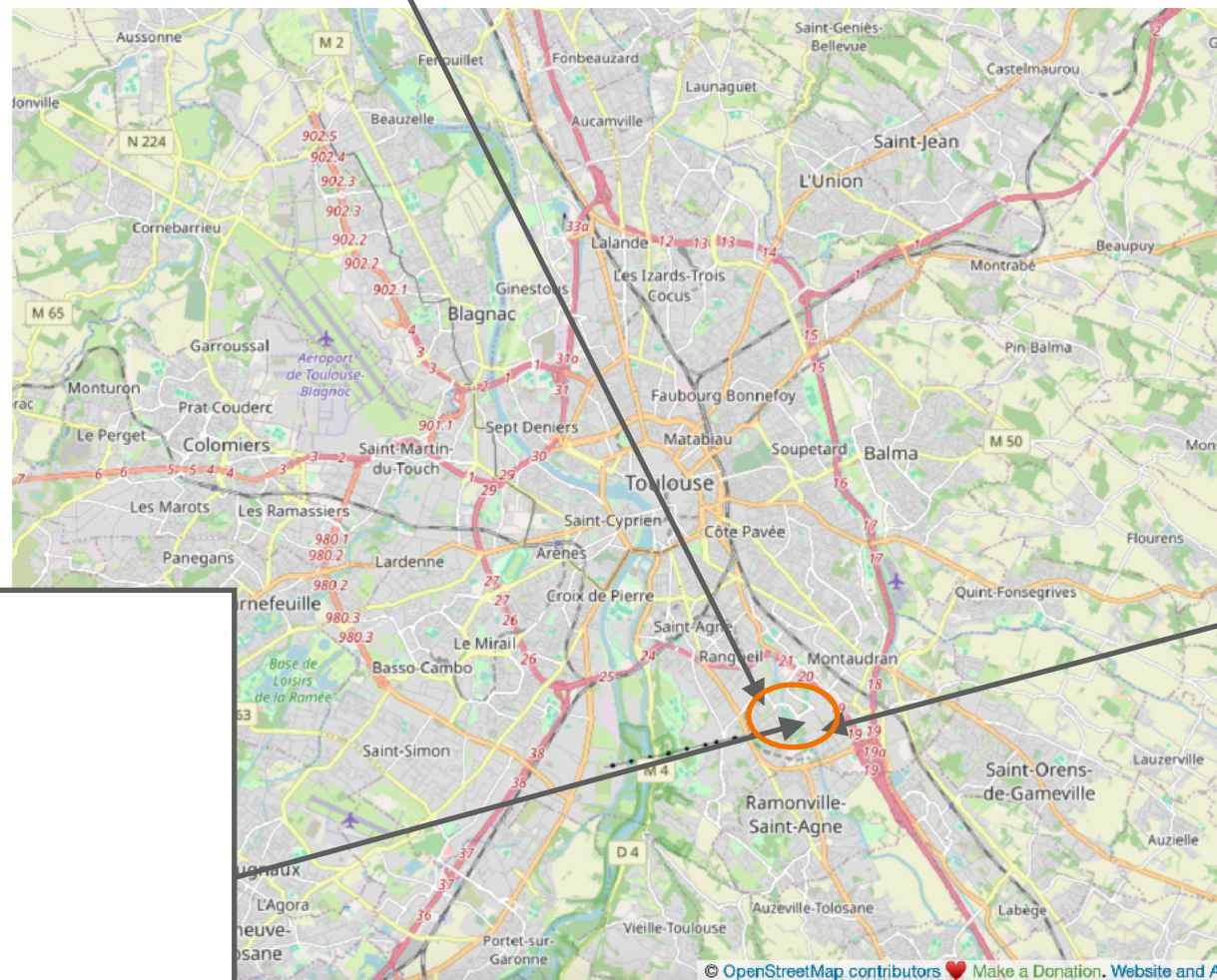


6



UNIVERSITÉ TOULOUSE
Jean Jaurès

Gravitational Waves in Toulouse



Laboratoire des 2 infinis - Toulouse



The Laboratoire des 2 infinis - Toulouse (L2IT) was established in 2020 with the objective to pursue fundamental research with innovative numerical and theoretical approaches applied to data collected by large-scale cutting-edge experiments



Laboratoire des 2 infinis - Toulouse



The laboratory has 4 main research themes/ groups, each one associated to large-scale experimental/computing facilities/collaborations



Gravitational waves



Particle physics



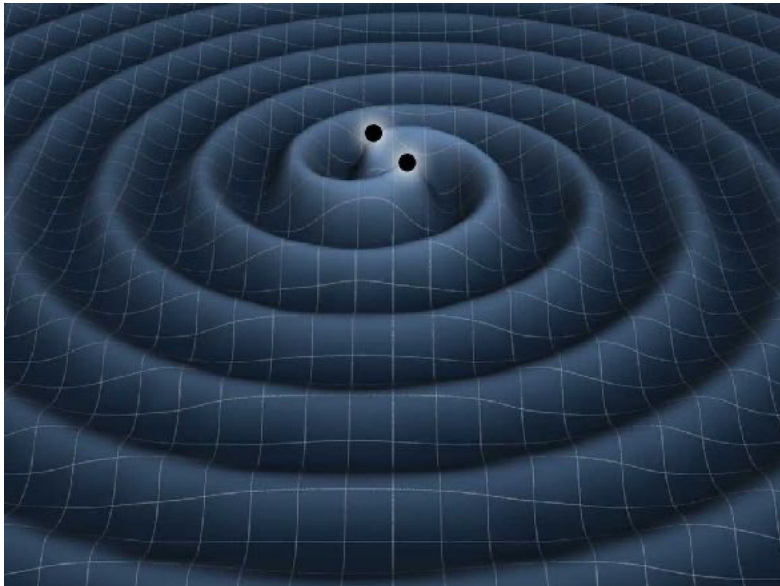
Nuclear physics



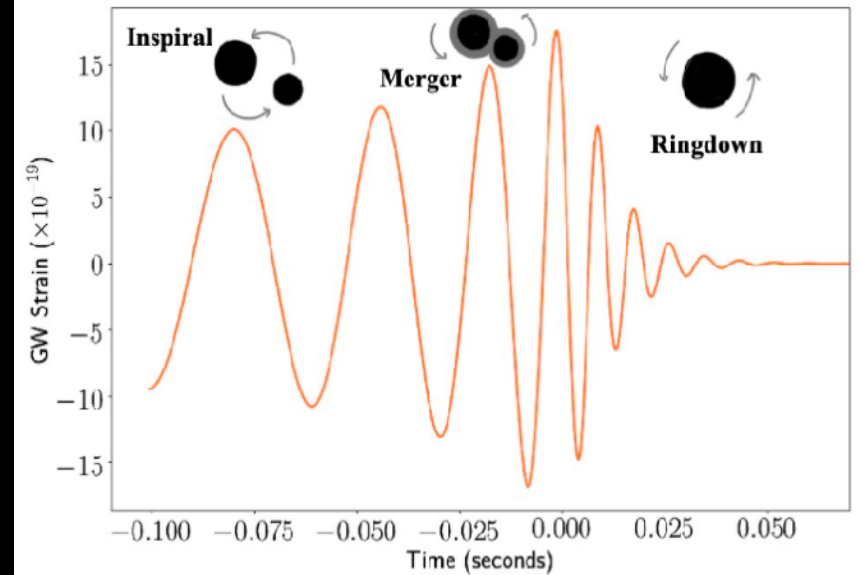
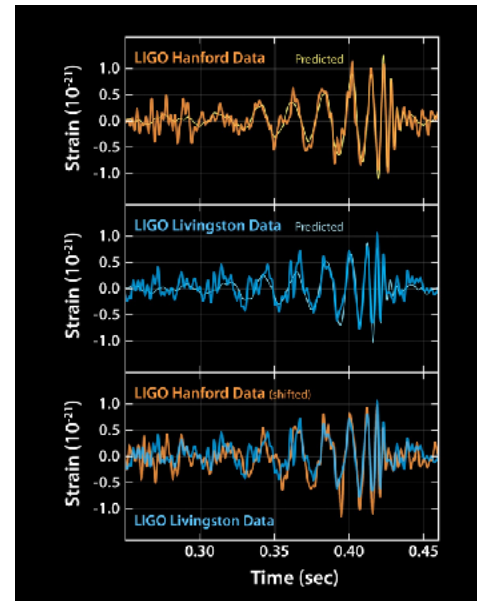
**Computing,
algorithms & data**

Équipe “ondes gravitationnelles” L2IT

Main research topics of the GW group

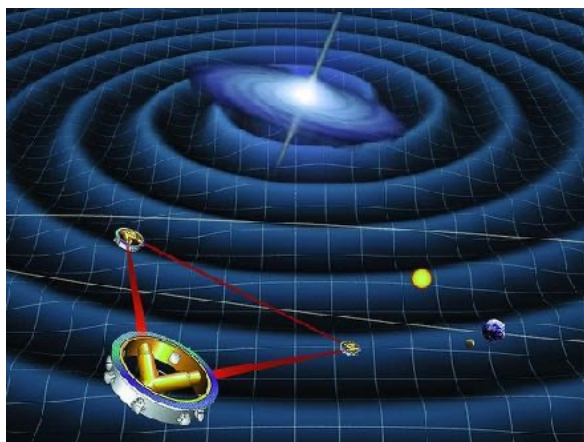


Cosmology, astrophysics and fundamental physics with GWs

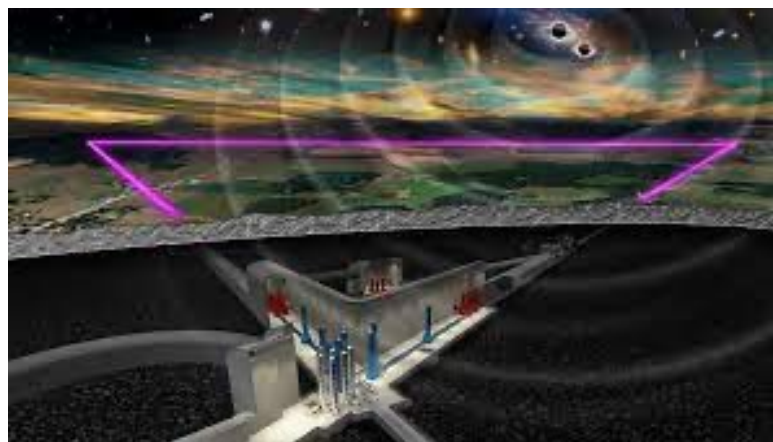


GW data analysis

Participation in large international collaboration



LISA



Einstein Telescope



Virgo

Methodologies : state-of-the-art data analysis, Bayesian inference, theoretical and numerical modelling, artificial intelligence / machine learning, ...

Équipe “ondes gravitationnelles” L2IT

Permanent members

- John G. Baker
- Christelle Buy
- Sylvain Marsat
- Nicola Tamanini (group leader)

EQUIPE OG en 2026

Permanent members contributing from other L2IT groups

- Catherine Biscarat (Computing, Algorithms and Data group)
- Mathieu Dubois (Computing, Algorithms and Data group)
- Maxime Pigou (Computing, Algorithms and Data group)
- Antsa Rasamoela (Computing, Algorithms and Data group)

—————> Experts in numerical computing

Non-permanent members contributing from other L2IT groups

- Emma Mauger (Computing, Algorithms and Data group)
- Senwen Deng (Computing, Algorithms and Data group)
- Krzysztof Findeisen (Computing, Algorithms and Data group)

—————> Engineering support for DDPC development

Postdocs

- Alice Spadaro

PhD students

- Tom Bertheas (jointly with the LPENS Paris)
- Zheng Wu
- Vasco Gennari
- Manuel Piarulli
- Clément Jacquet

—————> GW cosmology (dark energy)
—————> GW astrophysics (triple systems)
—————> GW cosmology (spectral sirens)
—————> GW fundamental physics (tests of GR)
—————> Optics simulation for GW detectors (Virgo)

Interns and students

- Valentina Panteleeva (remote internship)
- Youssef Gebreel
- Asad Mahdi
- Frédéric Jalabert

Associate members and current long term visitors

- Tanguy Delmond (PhD student at CNES)
- Francesco Nobili (PhD student at Università dell’Insubria, Italy)
- Ivan Martin Vilchez (Postdoc at CNES)
- Adrien Maquet (Research engineer at IRAP)

INSTITUT DE RECHERCHE EN ASTROPHYSIQUE ET PLANÉTOLOGIE

Observer et comprendre l'Univers

L'IRAP est solidaire de l'Ukraine.

Également animé par le souvenir de fructueuses collaborations scientifiques, l'IRAP salue et soutient les collègues Russes opposants à la guerre et menacés

IRAP stands in solidarity with Ukraine.

Following a history of fruitful scientific collaboration, IRAP also extends its support to Russian who are opposed to the war with Ukraine and are compromised by the situation.

Qui sommes – nous ?

Les équipes de l'IRAP travaillent à l'étude et la compréhension de l'Univers et de son contenu : la Terre en tant que planète, son environnement spatial ionisé, le soleil et ses planètes, les étoiles et leurs systèmes planétaires, le milieu interstellaire, les galaxies, les objets compacts, les tous premiers astres et le Big Bang primordial. Cela se fait par l'observation, la modélisation et la théorie, l'instrumentation et des expériences de laboratoire.

Disposant d'un effectif de personnels techniques qualifiés dans le domaine de la conception, la construction, l'intégration et l'exploitation d'instruments au sol et dans l'espace, l'IRAP est un pôle majeur de l'instrumentation en astrophysique, au niveau international. Il participe aussi à de très nombreux services nationaux d'observation (SNO) de l'INSU.



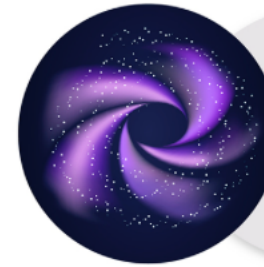
IRAP

The objects studied at IRAP can be grouped under 8 themes:



Univers

Univers naissant, univers lointains, premières structures et objets



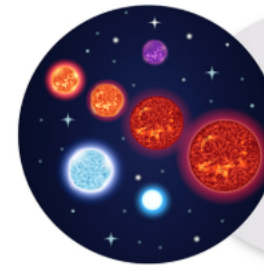
Hautes énergies

Objets compacts, trous noirs et pulsars, rayonnement cosmique et accélération de particules



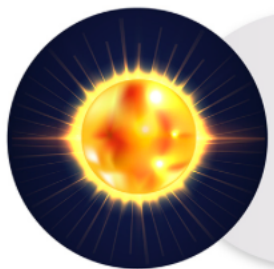
Milieu Interstellaire

Milieu interstellaire, cycle de la matière



Objets stellaires

Objets stellaires et leurs cortèges planétaires



Soleil - Plasmas

Soleil, plasmas spatiaux et astrophysiques, météo de l'espace



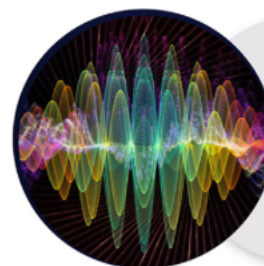
Objets planétaires

Objets planétaires, surface et environnements



Sismologie

Sismologie, géophysique, petits corps



Signal-Image

Traitement Signal Image

IRAP

Univers

Univers naissant, univers lointains, premières structures et objets

Hautes énergies

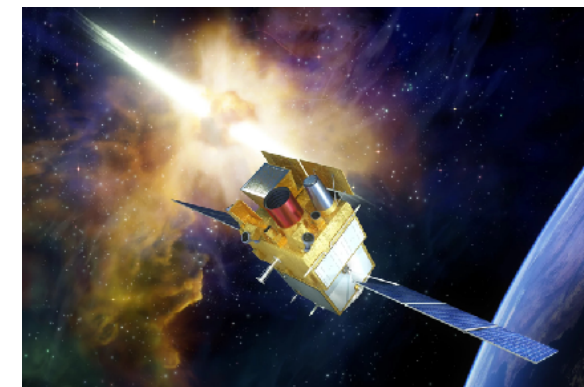
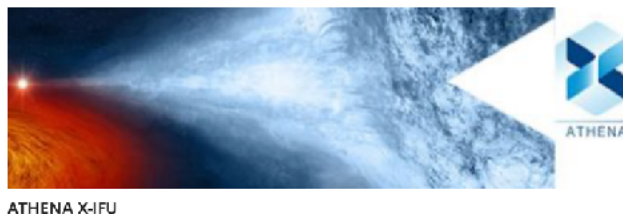
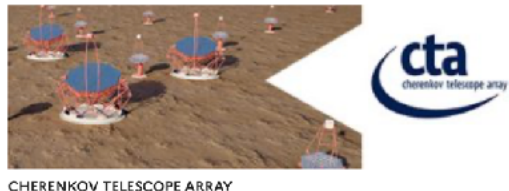
Objets compacts, trous noirs et pulsars, rayonnement cosmique et accélération de particules

GALAXIES, HIGH ENERGY ASTROPHYSICS AND COSMOLOGY (GAHEC)

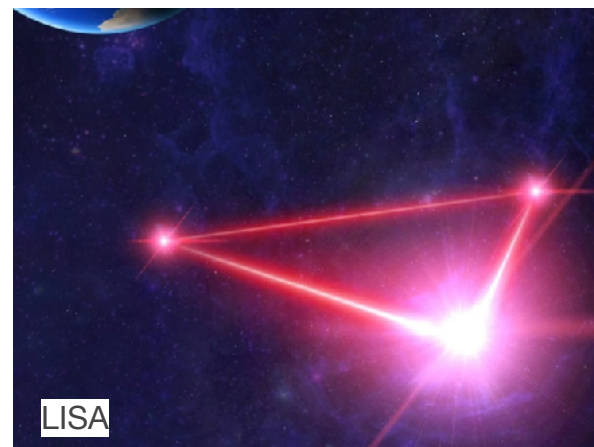
- Astrophysics of compact objects
- Cosmology and fundamental physics
- Galaxies and large structures
- Particle acceleration and explosive phenomena

Increasing interest and involvement in GWs research

- **New collaborations with L2IT**
- **Ongoing collaborations with CNES**
- **Committments to LISA DDPC**



The Franco-Chinese SVOM satellite (artist's view), a cooperative venture between CNES-CNRS-CEA (France) and CNSA (China). CNES/CNSA



Some galaxies of different shapes captured by Euclid. Credit: ESA.

CNES - Toulouse

- **Core supporting agency for LISA Project overall**
- **Leadership of Distributed Data Processing Centre (DDPC)**
 - Project Management
 - Engineering
 - Related R&D
- Responsible for **optical hardware testing**
- **Funding agency for LISA Project in France**
 - DDPC contributions
 - LISA Science:
 - CNES postdocs
 - CNES doctoral students

