



Created by Philippe Lambert in 2016, the CIRIR (Center for International Research and Restitution on Impacts and on Rochechouart) is a non-profit association, which is aimed at promoting and enhancing impact studies, in general, and of Rochechouart, in particular - to the benefit of Science and the general public. The present Asteroid Day event is a practical example of **direct** outreach actions undertaken by the CIRIR associates toward public awareness on “Asteroid”.

Asteroid Day (also known as International Asteroid Day) is an annual global event which is held on June 30, the anniversary of the Tunguska event in 1908 when a meteor air burst levelled about 2,150 km² (830 sq mi) of forest in Siberia, Russia.

Asteroid Day was co-founded in 2014 (the year after the 2013 Chelyabinsk meteor air burst) by physicist Stephen Hawking, B612 Foundation president Danica Remy, Apollo 9 astronaut Rusty Schweickart, filmmaker Grigorij Richters, and Brian May (Queen guitarist and astrophysicist). Remy, Schweickart, Richters, and May initiated Asteroid Day in October 2014 which they announced during a press conference and was launched on December 3, 2014.

In 2016, the United Nations proclaimed Asteroid Day be observed globally on June 30 every year in its resolution. The event aims to raise awareness about asteroids and what can be done to protect the Earth, its families, communities, and future generations from a catastrophic event.

In this context, Philippe Lambert and CIRIR associates among which the Pierre de Lune association, the National Nature Reserve of the “Astrobleme de Rochechouart-Chassenon”, the city of Rochechouart, the communities of communities “Porte Océane du Limousin” (87) and “Charente Limousine” (16) and other partners, organize the 1st CIRIR edition of ASTEROID DAY. Proposing a series of entertainments for schoolchildren and the public detailed below, this event will be held in the emblematic city of Rochechouart. As all its neighbors in a 100 km² zone, Rochechouart is entirely built in “impactites” and stands at the bottom of an ancient crater (no longer visible to the eyes, but still expressed in the rocks of the region), as the result of the impact a large asteroid (10 to 50 billion tons), some 200 million years ago.



PROGRAM

1- “Asteroid Day - Young Artist contest” and exhibition – March-June 2023

This drawing competition is aimed at raising local children’s awareness about asteroids and the value (national and international) of the Rochechouart asteroid impact!

The contest is open to children from 4 to 13 years old under 'the auspices of participating schools. The theme is "ASTEROID" and any related features the children may know or imagine.... Children's works will be exhibited to the public from the beginning of June 2023, on the CIRIR website and in various places in the town of Rochechouart (shops, tourist office, Maison de la Réserve, CIRIR facilities, etc.). They will be evaluated by a jury composed of local officials and prestigious personalities from both the world of Art and Culture, and the world of Sciences and Technologies. The jury will award 3 prizes in 4 age groups.

2- Astronomy Exhibition - June-September 2023- downtown Rochechouart

In combination with the 20th anniversary of "Labyrinthe de la Voix" and "Ostensions" (UNESCO World Heritage), an exhibition of photos taken by local astronomers is organised. Pictures will be exhibited along a walking parcours in Rochechouart, throughout the summer season.

3- Planetarium – June 26- June 30-2023 - Maison du Temps Libre (MTL), Rochechouart

Installed in Rochechouart from June 26 to 30 -2023, the planetarium will receive schoolchildren during the days and the public in the late afternoons. On June 30, it will also be accessible to the public in the evening and at night as part of the evening entertainment for Asteroid Day.

4- - Meeting with researchers, posters and grants for young researchers - June 30- 2023 - 10 am to 5.30 pm – Rochechouart Castle- 6.00 pm to 8.30 pm, and 11 pm till over midnight- Maison du Temps Libre (MTL), Rochechouart

As the result of a contest open to young researchers, doctoral and post-doctoral students, a selection of candidate will display and present to the public, posters on their work on asteroids and related issues, (impact cratering, meteorites, planetary surfaces...). The posters will be installed for the duration of the entire week from June 26 to 30 in Rochechouart. They will be interpreted by the authors in person, at least on June 30, all day, in the evening and even at night, in parallel to the sky observation. In exchange for their intervention, the successful young researchers will receive a grant funded by the CIRIR. Some posters prepared by senior scientists may also be displayed. Some posters prepared by senior scientists may also be displayed. Posters by senior scientists will also be displayed, in direct link with the actuality of ongoing research and research projects on Rochechouart and other terrestrial impacts. (More details to come).

5- Escape Game – Spacebus France, exhibits, theme trails- - June 30- 2023 - 10 am to 5.30 pm – Rochechouart Castle- 6.00 pm to 8.30 pm and 11 pm till over midnight- Maison du Temps Libre (MTL), Rochechouart

SpaceBus France is a non-profit association created in 2017 and managed on a voluntary basis by Postdocs in astronomy to introduce astronomy through fun activities all led by astronomy professionals (researchers, doctoral students, engineers). The SpaceBus will receive schoolchildren and the public on June 30 during the day as well as in the evening and after 11 p.m. as part of the evening entertainment.

6- Stands, exhibits, games, guided theme tours- - June 30- 2023 -10 am to 5.30 pm – Rochechouart Castle- 6.00 pm to 8.30 pm and 11 pm till over midnight- Maison du Temps Libre (MTL), Rochechouart

A large variety of exhibits, displays, practice games related to fireballs, meteorite search, geological-archaeological and cultural heritage linked with the asteroid, will be proposed, including short thematic guided tours (geological, historical, art and culture) (more details coming soon).

Note that the Rochechouart castle is a Museum of Contemporary Art. It will open its new exhibition with the official launching ceremony scheduled precisely on June 30 at 5:30 p.m. Although this event is not directly linked to "ASTEROID DAY", the Museum of Contemporary Art of Rochechouart is member of the CIRIR (like essentially all the participant of our program), and is actively involved in our programme. The curator and

staff of the Museum, together with Michele Ciacciofera, acknowledged international artist, are forming the "art college" committee for the evaluation of the "Young Artists-Asteroid Day" contest.

7- Astronomy "Day and Night"- June 30- 2023 - 10 am to 5.30 pm – Rochechouart Castle- 6.00 pm to 8.30 pm and 11 pm till over midnight- Maison du Temps Libre (MTL), Rochechouart

In addition to the Planetarium and the SpaceBus, professional and amateur astronomers will animate, for the benefit of schoolchildren and the public, astronomy workshops including sun observations during the day. The FRIPON network and related meteor – meteorite search activities will also be presented. At nightfall, after the evening conference session (see next), the public will enjoy all the various activities mentioned above, plus night sky observations, as amateur and professional astronomers, researchers, and association(s) will interact with the public, and share their equipment and their skills to observe the night sky and talk about the Universe.

8- "Asteroid Day" – Official Ceremony and evening conferences "Worlds of Jupiter and Saturn"– June 30- 2023 - 8.30 pm - Maison du Temps Libre (MTL), Rochechouart

The "Asteroid Day" ceremony will start with the presentation of the winners of the "Asteroid Day - Young Artist contest" who will be honoured and called on stage by the jury to receive their prizes. The conference speakers, the animators of the various events, as well as all those who contribute to the event will then be introduced. Then will start the highlight of this "Asteroid Day 2023". **Jean Pierre Lebreton**, former scientific director of the Cassini-Huygens mission to ESA, will talk about the next **JUICE mission** (JUperiter ICy moons Explorer). This flagship mission of the European Space Agency (ESA) has been successfully launched on April 14, 2023 by an Ariane 5 rocket from Europe's spaceport in Kourou (French Guiana). JUICE will reach Jupiter in 2030 and will spend at least three years orbiting around this giant planet. It will make detailed observations of the major moons (the so-called Galilean moons). The mission will especially focus on the search for traces of life, and will seek possible answers to two key questions: 1 - What are the conditions that prevailed during the formation of planets and the emergence of life? And 2 - How does the Solar System work?

Beyond Jupiter, this evening conference session will transport us to Saturn and its satellite worlds with magnificent images and feedback from what it is today, and about the most remarkable space exploration mission of humanity. This is the **Cassini-Huygens mission** which mobilized jointly NASA and ESA in an adventure that has lasted more than 30 years. Jean Pierre Lebreton will tell us about it. He was Head of the European part of this international mission and he and his team achieved the prodigious feat of landing, under parachute, the Huygens lander on Titan, one of the most distant and most extraordinary moons of our Solar System.

Moreover, Humanity plans to return to Titan, which will also be addressed during the evening conference session. The **NASA mission Dragonfly**, ("Libellule" in French) is planned to continue, after Huygens, the in-situ exploration of the surface of Titan. It is aimed at studying the biochemistry of Titan to understand if it is compatible with possible existence of life, present or past, on the surface of Titan. Launch is scheduled for 2027, with plans to land in 2034. France is participating in the Dragonfly mission, with CNES (French Space Agency) and several laboratories in the Paris region, under the direction of LATMOS (Atmospheres, Environments and Space Observations Laboratory, Saint-Quentin-en-Yvelines University, UVSQ). LATMOS in the person of **Caroline Freissinet** will be on stage during this evening's public conference session, to tell us all about it. Caroline leads the team in charge of the design and management of the key instrument of the mission, for analysing the material on the surface of Titan. This instrument will be carried to surface by a giant drone designed by the Americans from APL/JHU (Applied Physics Laboratory/Johns Hopkins University), which, like a dragonfly, will land - from site to site - over a large area to carry out these analyses.

Note: Food and beverage can be purchased on site. People can also picnic in the parc surrounding the conference hall, where the outdoor animations will take place. The evening events are all free of charge.