

KOUROU TO COMETS VIA DARMSTADT

Relevant General Information:

The European Space Agency (ESA) contributed significantly to Comet Research by launching 2 robotic space probes named Giotto and Rosetta. Giotto probe was launched on Ariane Rocket flight V14 in 1985 to explore Halley's Comet which passed by the earth in 1985-86. Rosetta Probe was launched 2004 on Ariane Rocket flight V158 and its lander Philae landed on Comet Churyumov-Gerasimenko.

Aim and Scope:

This exhibit is the history and story of specific rocket launches from Kourou, French Guiana which ultimately culminated into the robotic probes reaching Comets. It also covers the way these robotic probes were controlled from their control stations especially Darmstadt, Germany and how they achieved their objectives.

Personal Research and Bibliography:

The collector cum exhibitor has researched the space science and postal history concerning Comets, Comet probes, Ariane rockets, launch and control sites information by reading, studying philatelic material and referring websites. Books referred to are 'Space in the Tropics: From Convicts to Rockets in French Guiana' by Peter Redfield. and 'Giotto to the comets' by Nigel Calder.

Presentation and Treatment:

Astronomy and General Information is in Black. Information about date and place of cancellation is in Blue. Being an Astrophilately exhibit, importance has been given to the place and date of cancellation on launch station and control station related covers. Items which are rarely seen in the collecting journey are marked as RARE.

Plan:

- A) History : Pg 2 to Pg 3
- B) Giotto launches from Kourou on Ariane V14 : Pg 4
- C) Giotto reaches Halley's Comet : Pg 5
- D) Giotto is Reactivated: Pg 6
- E) Rosetta launches from Kourou on Ariane V158: Pg 7
- F) Philae lands on Comet Churyumov-Gerasimenko : Pg 8



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French 1995 stamp issue recognising Ariane Rocket Launches from French Guiana.

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Fascimile Signatures of Giotto Mission Scientists.
Cancellation at Kourou, French Guiana on
Giotto Launch Date 2nd July 1985.

GIOTTO



ARIANE V14

La Comète de Halley qui a fait sa dernière apparition en 1910 1911 réapparaîtra en 1985 1986.

Cette fois-ci plusieurs véhicules spatiaux, dont la sonde "GIOTTO" de l'A.S.E., vont prendre "un gros plan" de la Comète Halley et explorer sur place son noyau et sa chevelure.

Maitre d'ouvrage : Agence Spatiale Européenne.
Maitre d'œuvre : BRITISH AEROSPACE
Poids au Lancement : 960 kg
Masse en orbite : 430 kg
Fin de mission : 1986 rencontre avec la Comète de Halley.

Directeur CSG
M. LEFEVRE



CPAP V 14
G. LE GUERN



DDO
M. RABE



Chef de Projet GIOTTO
D. DALE



COEL
J.-M. AGASSE



Chef de Mission
Y. GUERIN



KOUROU, le.....
No 01038



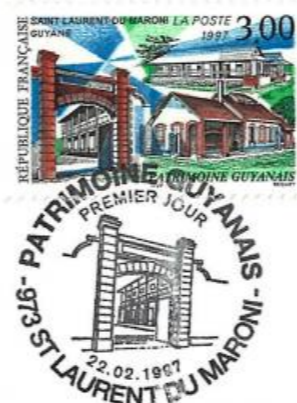
D ROMAIN Imprimeur / St-Brieuc



Kourou is located in French Guiana, South America. French Guiana is the largest outermost region within the European Union. It is the only remaining French Colony in South America. Till the middle of 20th Century Kourou was a village. It is located about 60 Kms for the French Guianese Capital Cayenne. Kourou did not have its own post office also. Letters were postmarked at St Laurent du Maroni Postoffice like this 1909 cancellation shown above. This RARE picture postcard depicts Kourou at the turn of the 20th century.



ST-LAURENT-DU-MARONI Guyane



L'illustration de notre feuillet a été confiée à Pierre Béquet, dessinateur du timbre émis.



Si la Guyane est de nos jours associée à l'aventure spatiale, il n'en a pas toujours été ainsi et l'image du bagne demeure dans notre mémoire collective. C'est le 31 mars 1852 que le premier convoi de bagnards en partance pour la Guyane quittait le port de Brest. C'est un décret-loi promulgué le 17 juin 1938 qui abroge les bagnes mais les rapatriements ne commenceront qu'en 1947. De 1852 à 1947, 74.000 condamnés seront envoyés en Guyane.

Situé au bord du fleuve Maroni, à un endroit relativement salubre et éloigné de toute agglomération, le camp de la transportation de St-Laurent-du-Maroni fut bâti et entretenu par les forçats. Le camp, qui n'était accessible que par la rivière, fut agrandi par étapes successives. Les bagnards étaient ensuite ventilés vers d'autres camps (St Jean du Maroni, îles du Salut).

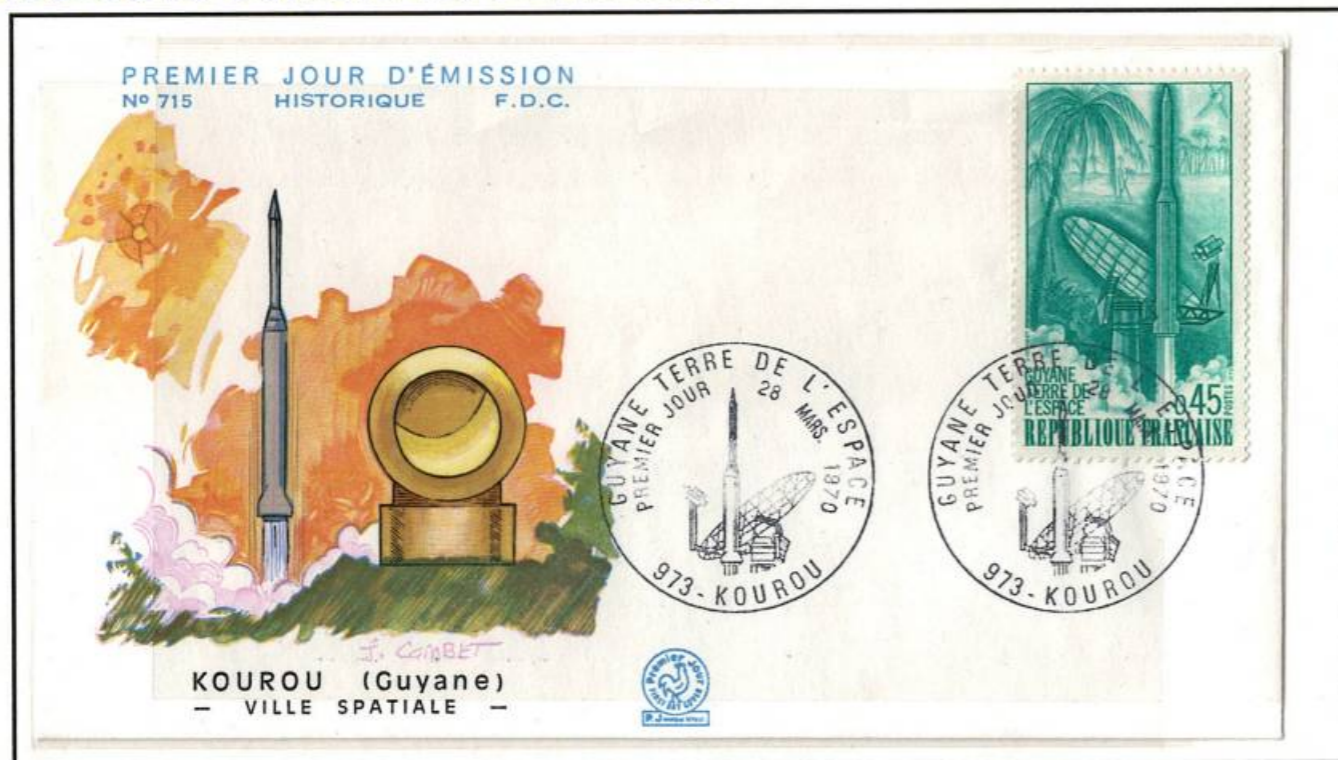
L'une de ces îles, l'île du Diable, a été rendue célèbre

par le séjour qu'y fit le capitaine Dreyfus de 1895 à 1899. La vie au bagne était très dure et la mortalité très grande. La loi du 30 mai 1854 avait institué l'obligation du «doublement». Tout condamné à moins de 8 ans de travaux forcés devait résider dans la colonie pendant un temps identique, à l'expiation de sa peine. Si la peine dépassait ces 8 ans, il devait y résider toute sa vie. L'abandon du camp en 1946 le vouait à sa disparition, les bâtiments étant envahis par la végétation. Acheté par la commune et classé en partie monument historique en 1947, le camp a été dégagé par l'armée en 1990. Des travaux de restauration ont été entrepris en 1993 et la totalité classée monument historique en 1994. Les bâtiments abritent maintenant des activités sportives et culturelles.

Le timbre nous montre le portail d'entrée du camp, les anciens bâtiments, cuisine et chapelle, et au dessus les cases pour les détenus.

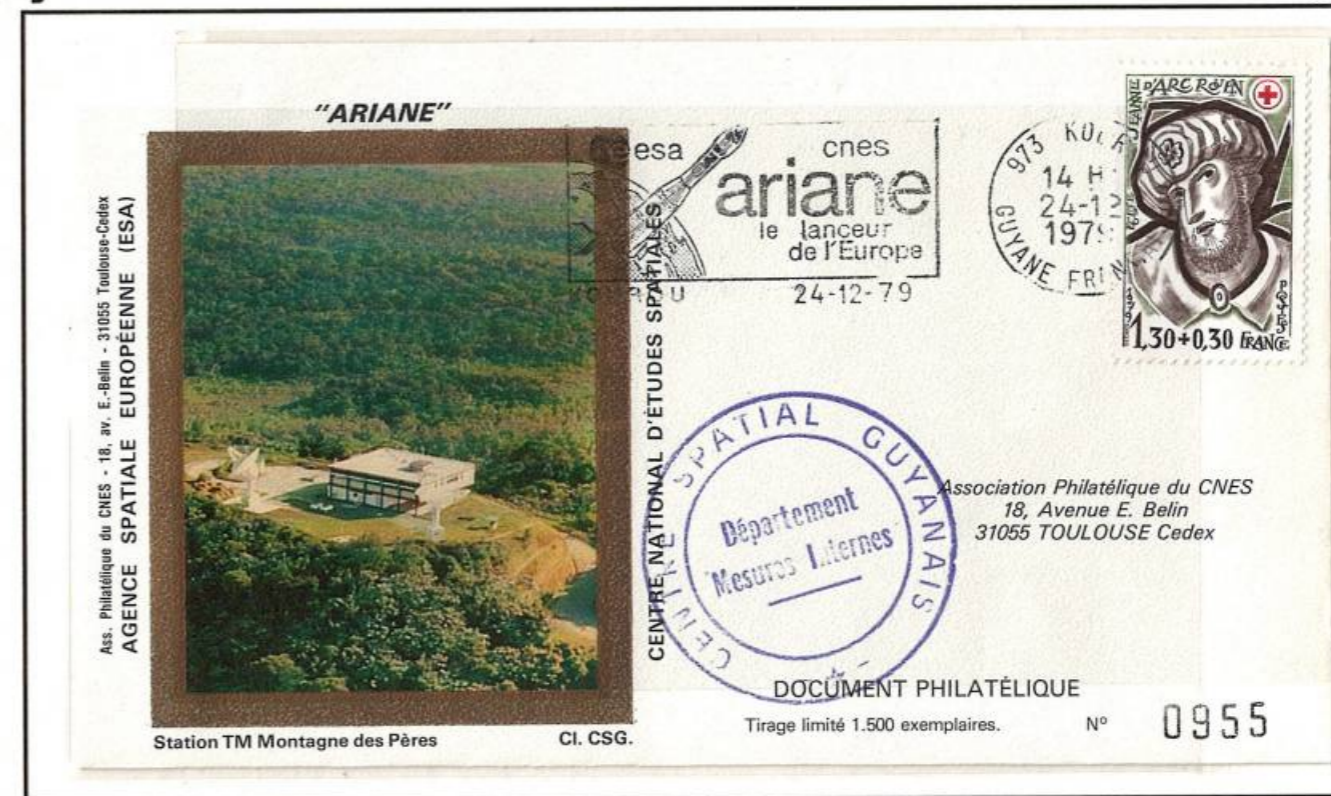
Kourou and St Laurent du Maroni were French Penal locations where prisoners from France were jailed. The prison operated from 1850s right upto the 1950s. It was notorious both for the staff's harsh treatment of detainees and the tropical climate and diseases that contributed to high mortality. The picture next to the stamp and cancellation shows the present and the past of Kourou. It depicts the prison gate depicting its past and the Ariane rocket depicting its present. Cancellation at St Laurent du Maroni.

In 1965, Kourou was selected to be the spaceport of France by the French Space Agency CNES (Centre National D'Etudes Spatiales) for its space programme due to its proximity to the equator, easy access to the ocean and thin population density. The Post office at Kourou was opened in 1967 with its own postmark. Shown here is a RARE 1967 cancellation at Kourou.

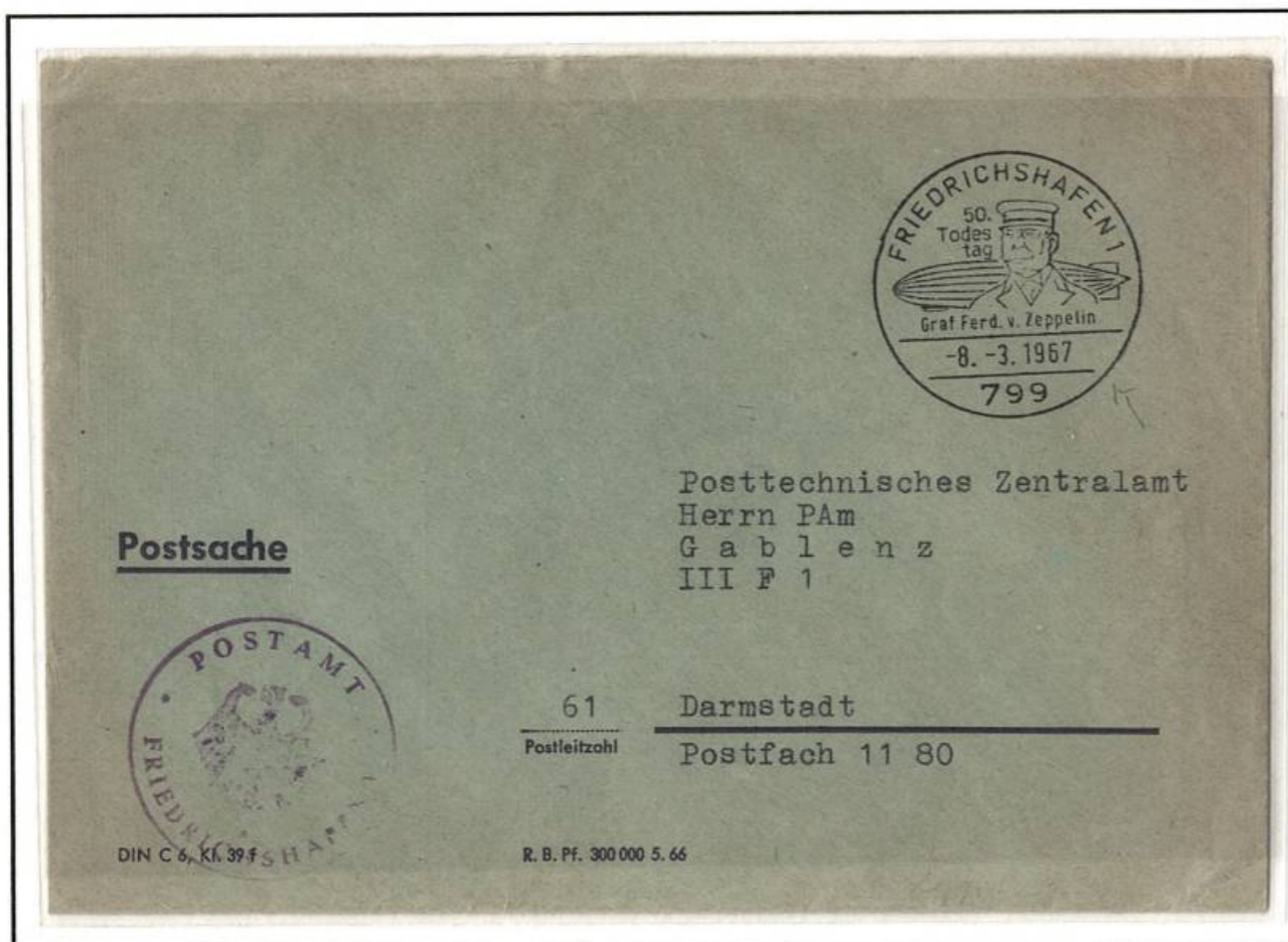


The First Rocket to be launched from Kourou by CNES was the Diamant B on 10th March 1970. It carried MIKA and WIKA satellites made jointly with Germany. The post office at Kourou was closed for a few days after launch. It opened on 28th March 1970 when a stamp was issued to commemorate the launch. Above FDC has 28th March 1970 cancellation at Kourou.

A) History



CNES decided to share Kourou site with ESA (European Space Agency) the inter governmental space agency of multiple European Countries in 1975. ESA developed the Ariane Rocket. Ariane 1, a four-stage launch vehicle which launched at Ensemble de Lancement Ariane 1 (ELA-1), Centre Spatial Guyanais, Kourou, French Guiana. The rocket was designed to place two communications satellites into a geosynchronous orbit. Cover shows launch date 24th December 1979 cancellation at Kourou. Note the cancellation cachet shows the words 'CNES' and 'ESA'.



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Ariane Rockets were named after Greek Goddess Ariadne, whose crown was thrown into the sky to create a constellation. Stamp and FDC show Ariadne painted by Angelika Kauffmann



European Space Operations Centre (ESOC) was established at Darmstadt, Germany in 1967. This cover is posted from Friedrichshafen to Darmstadt. Most of the initial aviation engineers at ESOC worked at Dornier Flugzeugwerke & ZF located in Friedrichshafen. Cancellation shows Zeppelin Airship. As Zeppelins too were manufactured in earlier days at Friedrichshafen.



On 27th March 1982, European Space Agency announced the Giotto mission to the world. It was a robotic probe that would be launched few years later to explore Halley's Comet during its 1985-86 sighting. German Giotto Mission Special Cancellation - 27th March 1982 during Budingen Phil 82 exhibition.

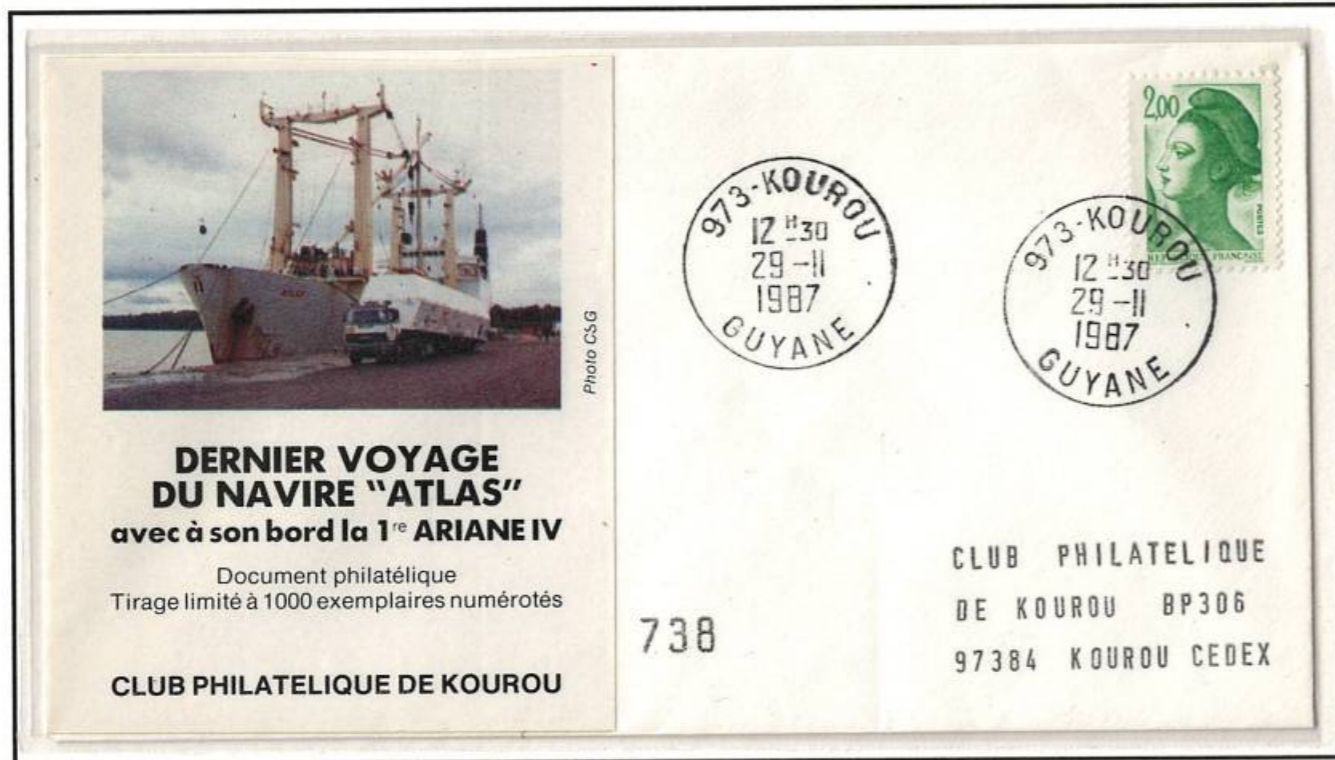


Giotto was named after Italian painter Giotto di Bondon who eternalised the Halley's comet as the Star of Bethlehem in his painting the Adoration of the Magi

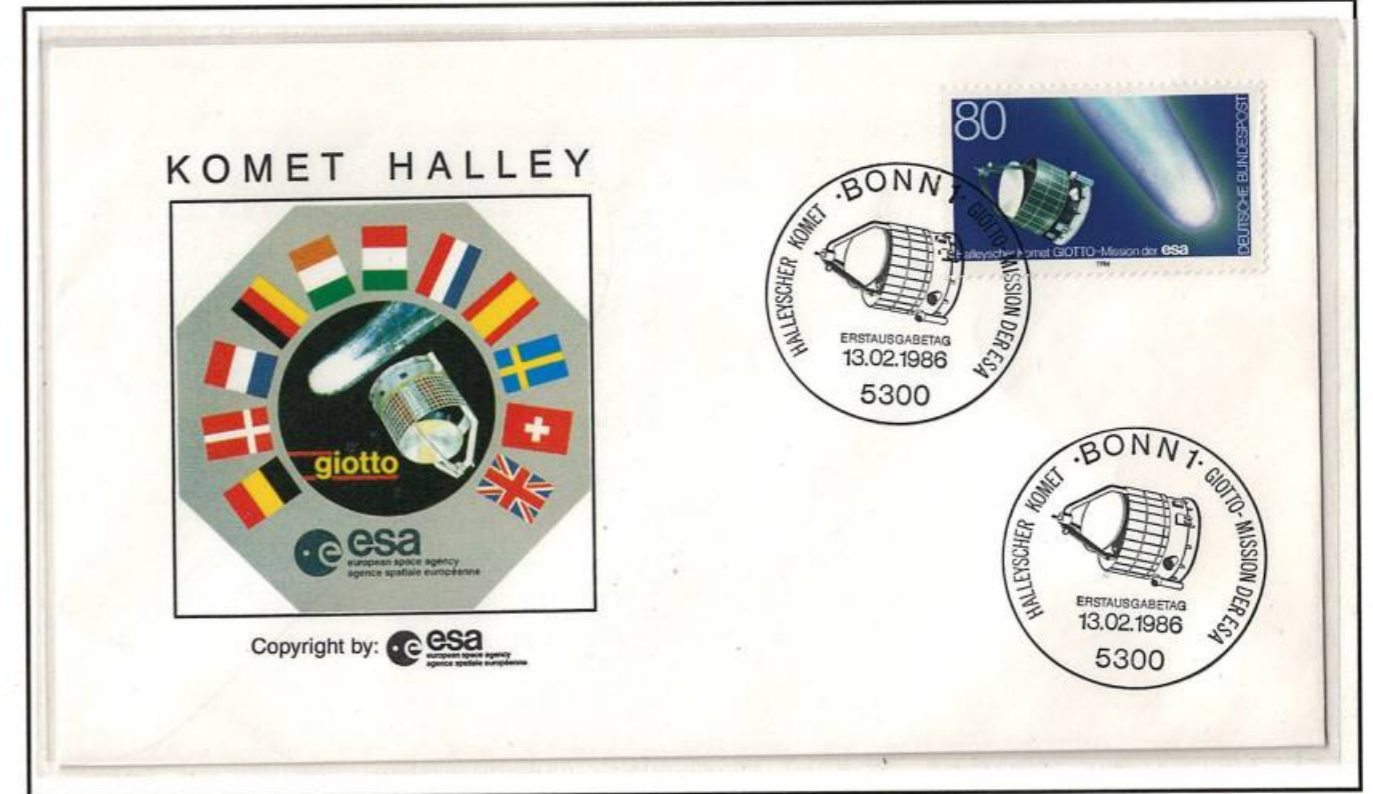


Giotto was launched on Ariane V14 Rocket from Kourou on 2nd July 1985. ESA Official Cachet. with Launch Date 2nd July 1985 cancellation at Kourou.

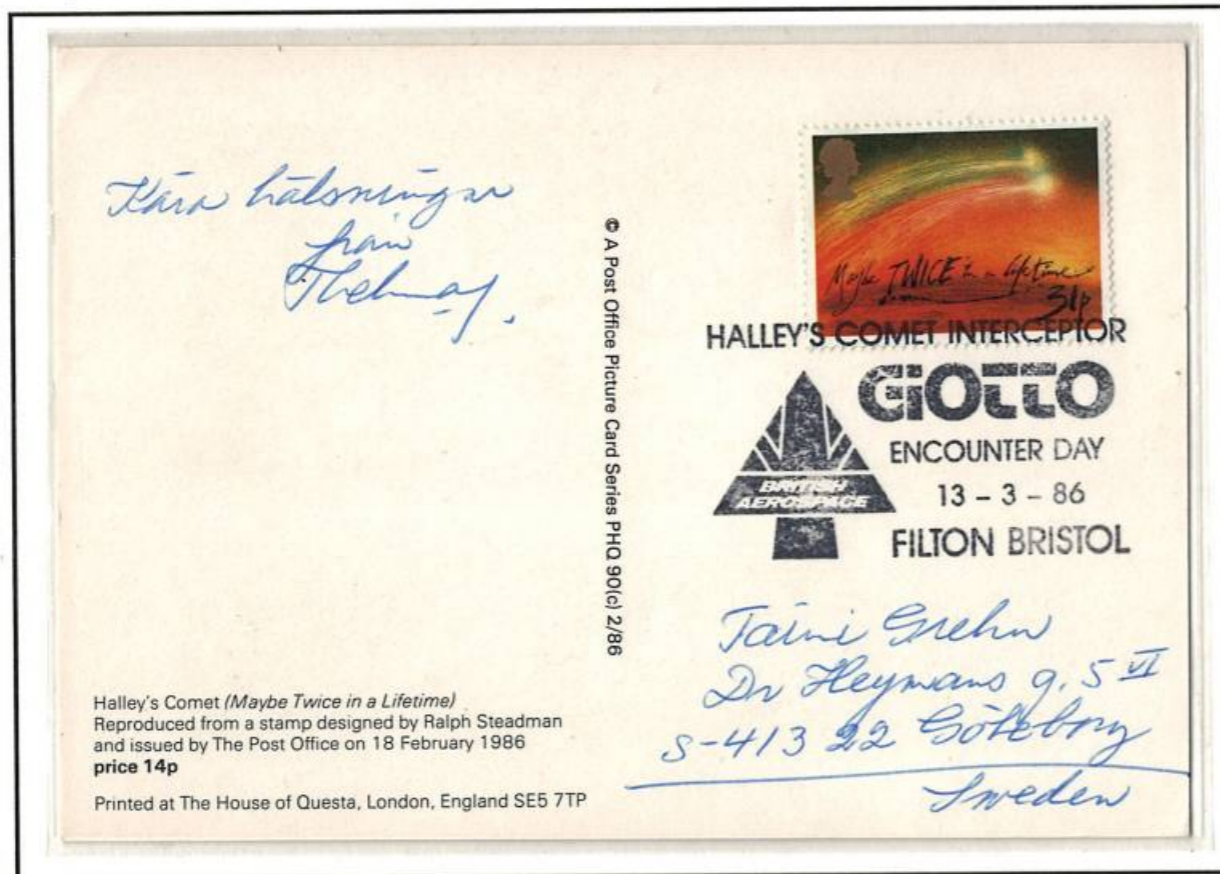




Before Giotto started on its journey to Halley's comet, it undertook another journey before launch. Giotto was transported by ship from Continental Europe to Kourou on the Atlas Ship. Shown here is cover with cancellation of Kourou during the last journey of the Atlas Ship to Kourou.



On 13th Feb 1986, Giotto entered the tail of Halley's comet. This is a 13th Feb 1986 cancellation at German Space Agency HQ at Bonn. Cover also shows flags of various countries which were partners in the European Space Agency programme. Stamp used is German Halley's comet issue showing Giotto probe



Giotto reached close to the Nucleus of Halley's Comet on 13th March 1986 and took interesting pictures of the comet. Giotto was manufactured at British Aerospace's facility in Bristol UK. This is a 13th March 1986 Giotto Encounter Day special cancellation at Bristol, UK on UK Halley's comet stamp issue.



On 14th March 1986, Giotto transmitted the first pictures of the Halley's Comet. This is a 14th March 1986 cancellation at ESA's Darmstadt control centre from where Giotto was controlled.



After its primary mission to Halley's comet was complete, Giotto was sent into sleep mode in late 1986. On 19th February 1990, Giotto was reactivated from its long sleep by the ESA control centre in Darmstadt. This is a 19th February 1990 meter franking at Darmstadt.



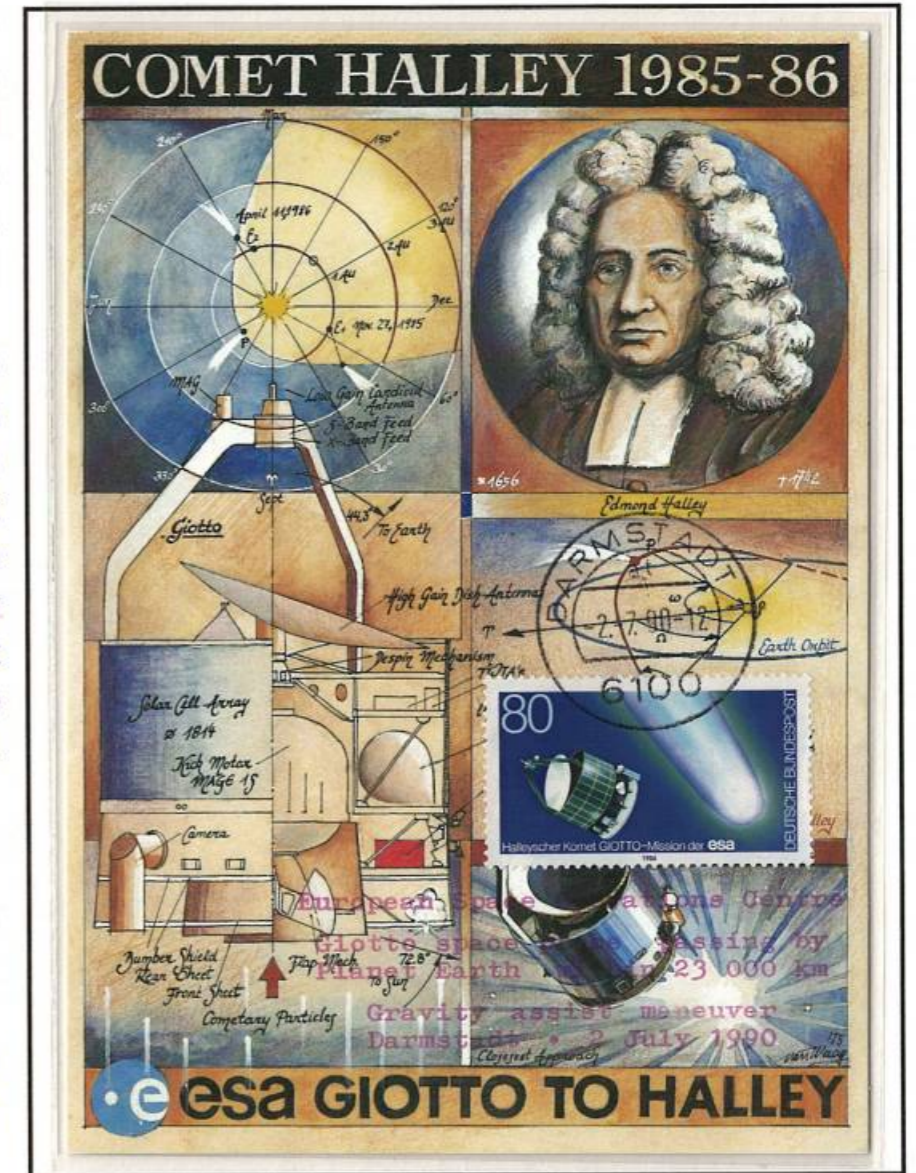
Its secondary and final mission to Comet Grigg-Skjellerup was successful too. The probe flew by the Comet Grigg-Skjellerup on 10 July 1992 which it approached to a distance of about 200 km. This is a 10th July 1992 cancellation at ESA control centre at Darmstadt. Postcard shows the official insignia of the Giotto mission on the left.

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Maxi Card showing Giotto's erstwhile mission trajectory and Edmund Halley the namesake after whom Halley's comet is named

On 2nd July 1990 on a close approach to Earth, Giotto was remaneuvered for its next mission to Comet Grigg-Skjellerup. It would take 2 years to reach the comet. MaxiCard shows 2nd July 1990 cancellation at Darmstadt control centre from where the command was given.

Giotto became the first space probe in history to visit 2 comets. ESA's Weilheim DSN Station, Germany offered secondary tracking support to Giotto. This is a 10th July 1992 cancellation on Comet Grigg-Skjellerup encounter day at Weilheim.

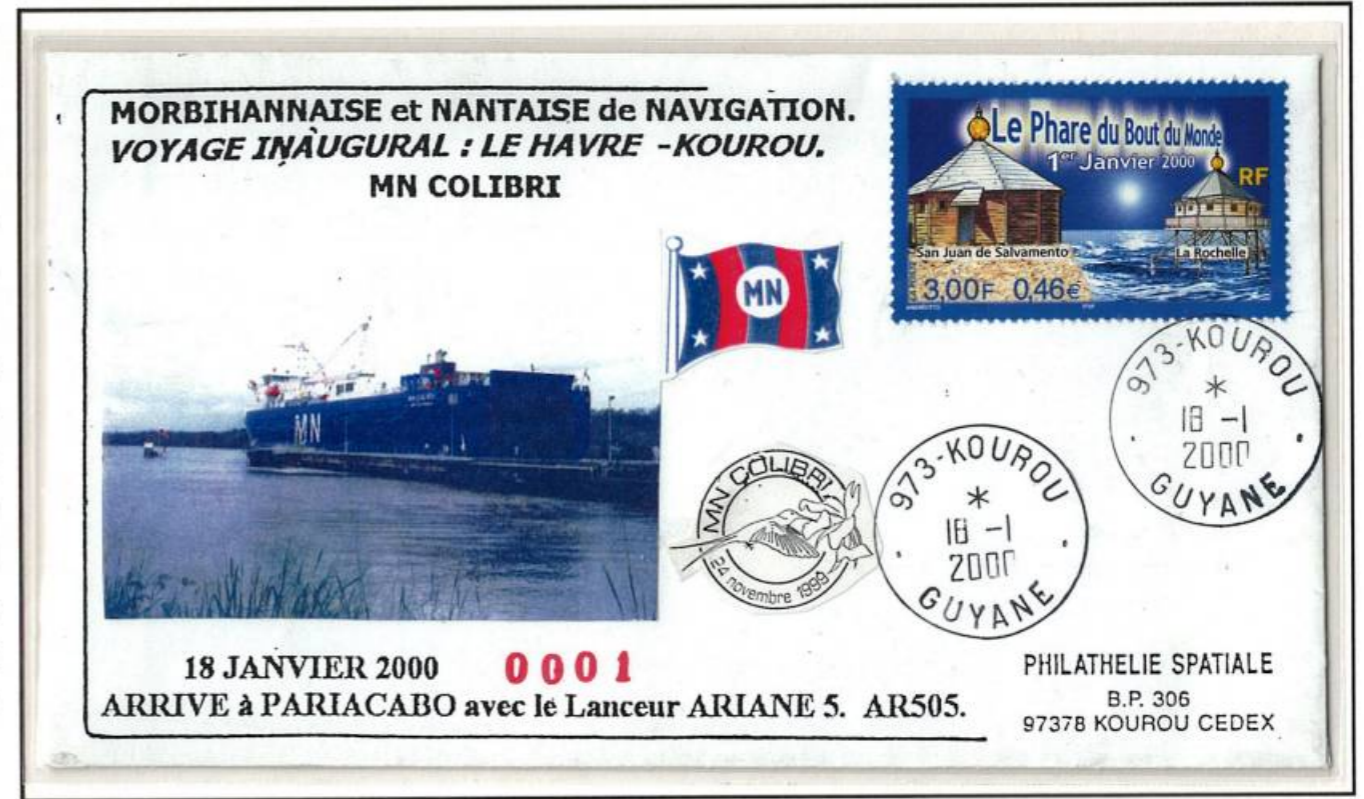


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 Rosetta and Ariane V158 rocket was moved from Continental Europe to Kourou on a ship named MN Colibri. This is the inaugural day cancellation at Kourou on 18 Jan 2000 when the MN Colibri ship had its first docking at Kourou



Rosetta spacecraft was named after the Rosetta stone found in Egypt



On 2nd March 2004, Rosetta was launched from Kourou on Ariane V158 Rocket on a journey to Comet 67P/Churyumov-Gerasimenko. Launch Date 2nd March 2004 cancellation at Kourou.

2nd March 2004 Rosetta Launch Date Cancellation at Kourou. On observing the cover on the left and top, we see two numbers, V158 and 518. Both numbers have separate significance as ESA started giving separate numbers for the Vehicle and the Launch. The Vehicle/Rocket in this case was V158 whereas the launch number was 518.



The Rosetta spacecraft had a lander within it named Philae which landed on Comet Churyumov-Gerasimenko. The Philae Lander was named after the Philae Temple Complex in Egypt.



On its journey from Earth to Comet Churyumov-Gerasimenko, supplementary tracking support was provided by ESA's Libreville Tracking station in Gabon. This is a 2nd March 2004 launch date cancellation at Libreville. Cover shows pictures of the Comet nucleus, Rosetta Spacecraft and the Philae lander.



Rosetta's Philae lander successfully made the first soft landing on a comet nucleus when it touched down on Comet Churyumov-Gerasimenko on 12 November 2014. Germany commemorated this achievement in 2019 with the stamp issue above. (I still wonder why the stamp issue from Germany was 5 years after this great success of story of the human race and European engineering!)

On 30th September 2016, ESA Darmstadt announced deorbital and last contact with the Rosetta Spacecraft. This is a 30th September 2016 cancellation at Darmstadt.

In its journey of 12 Years, Rosetta flew by Planet Mars, Asteroid 2867 Steins, Asteroid 21 Lutetia. And the mission culminated by its Lander Philae successfully landing on Comet 67P/Churyumov-Gerasimenko.

