

KAYNAKLAR :

<https://acikders.ankara.edu.tr/course/index.php?categoryid=262>



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3) Solar and Space Physics, National Research Council, 2013, the National Academy of Sciences

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9) An Astronaut's Guide to Life on Earth: What Going to Space Taught Me About Ingenuity, Chris Hadfield, 2013, Little, Brown and Company, ISBN 978-0-316-25301-7

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NEDEN UZAY ?

Haberleşme

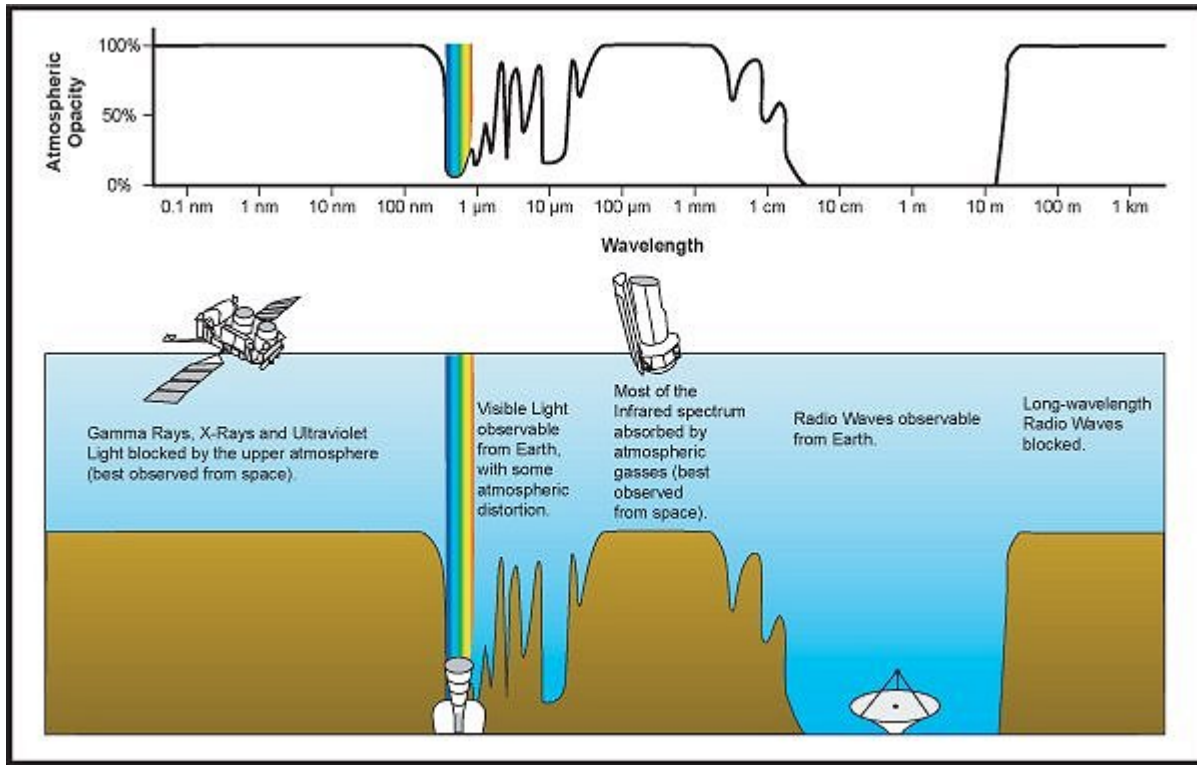
Askeri / Güvenlik

Meteoroloji

Yer Bilimleri : Uzaktan Algılama (CBS)

Arkeoloji, astronomi, ziraat, vd.

ASTRONOMİ / GÖKBİLİM : Gökcisimlerinden (gezegenler, yıldızlar, galaksiler vs.) bize ulaşan ölçülebilir tek nicelik EM ışınımıdır! Yer atmosferi sadece optik ve radyo bölgedeki ışınımı geçirdiği için (gama, X-ışın, IR, UV gibi) diğer EM bölgelerde incelemeler, **UZAYDAN** yapılmak zorundadır.



Günümüzdeki en sıcak gökbilimin araştırma konuları:

(1) NEO (Near Earth Objects) : Yer yörüngesiyle kesişebilecek gökcisimlerinin araştırılması (PAN-STARRS projesi)

(2) Exoplanets : Arşiv takibi için <http://exoplanetarchive.ipac.caltech.edu/>

Dünyadaki uzay ajansları:

ESA (European Space Agency)

NASA (National Aeronautics and Space Administration)

JAXA (Japan Aerospace Exploration Agency)

ISRO (Indian Space Research Organisation)

CNSA (China National Space Administration)

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TÜBİTAK Uzay Teknolojileri Araştırma Enstitüsü (<http://uzay.tubitak.gov.tr>)

GÖKTÜRK-2 Uydusu, Yörüngede 1. Yılı Tamamladı

Türkiye'nin yüksek çözünürlüklü yerli keşif uydusu GÖKTÜRK-2, yörüngede birinci yılını tamamladı. Dünya etrafında 5 bin tur atan uydusu, bir yılda 2 bin 400 görüntü çekti.

[devamı](#)

1 2 3 4 5 6 7 Tümü



Duyurular



İş İlanı

Uzay Teknolojileri Araştırma Enstitüsü'ne personel alımı yapılacaktır.

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09.01.2014



Tanıtım Materyalleri



Kariyer Fırsatları



Çocuklar İçin Uzay



CMMI Ön Denetimi Tamamlandı

TÜBİTAK UZAY bünyesinde yürütülen CMMI Seviye 3 çalışmaları kapsamında son dönemece gelindi.

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23.12.2013



GÖKTÜRK-2 Uydusu, Yörüngede 1. Yılı Tamamladı

Türkiye'nin yüksek çözünürlüklü yerli keşif uydusu GÖKTÜRK-2, yörüngede birinci yılını tamamladı. Dünya etrafında 5 bin tur atan uydusu, bir yılda 2 bin 400 görüntü çekti.

ESA (European Space Agency)



1975 yılında, uzayın keşfini amaçlayan, uluslararası bir organizasyon olarak kurulmuştur. Şu an 17 üyesi olan örgütün merkezi Fransa'nın başkenti Paris'tedir. ESA'nın uzay uçuş programı, özellikle de astronotların katılımı ile Uluslararası Uzay İstasyonu programı, gezegenler ve Ay için insansız keşif uçuşlarını içerir.

<http://www.esa.int/ESA>



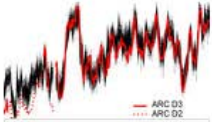
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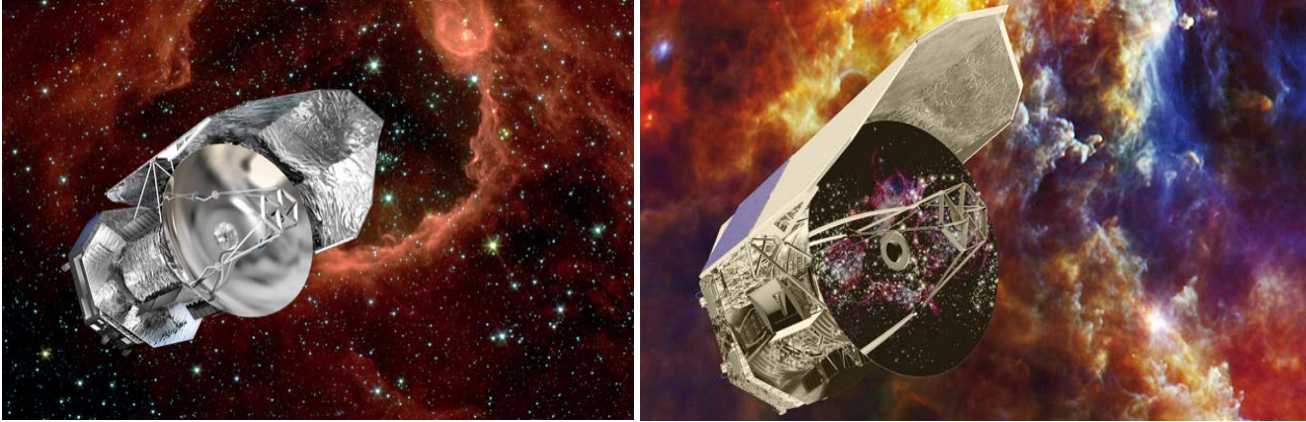
29 January 2014
The competition winners who helped us



Space Science Needs Long-Term Planning

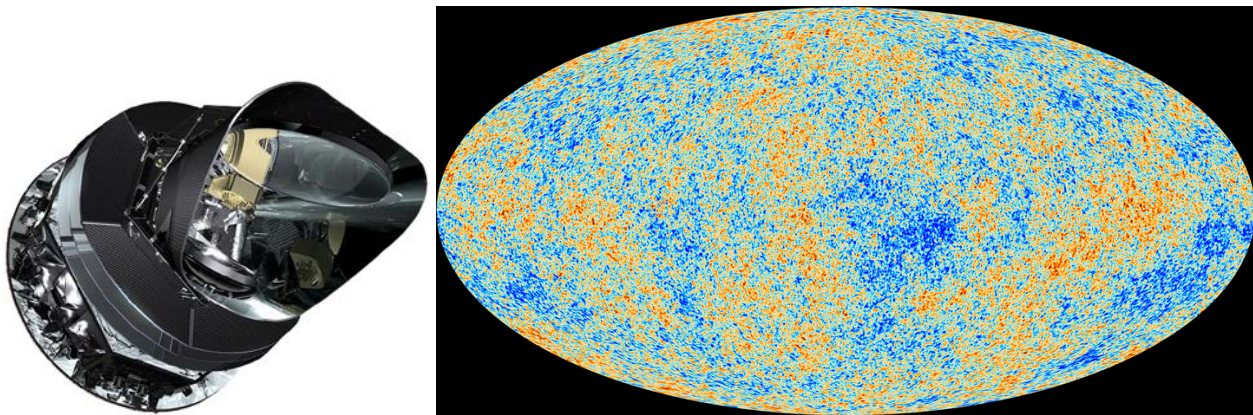
Horizon 2000 and Horizon 2000 Plus : Daha 1980'lerde planları yapılmaya başlanmıştır.

(1) HERSCHEL GÖZLEMEVİ:



The Herschel Space Observatory was a space observatory built and operated by the European Space Agency (ESA). It was active from **2009 to 2013**, and was the largest infrared telescope ever launched,[2] carrying a single **3.5-metre (11.5 ft) mirror** and instruments sensitive to the **far infrared and submillimetre wavebands (55–672 μm)**. **Herschel was the fourth cornerstone mission in the ESA science programme**, along with **Rosetta, Planck, and Gaia**. The United States, through NASA, participated in the programme.

(2) PLANCK GÖZLEMEVİ:



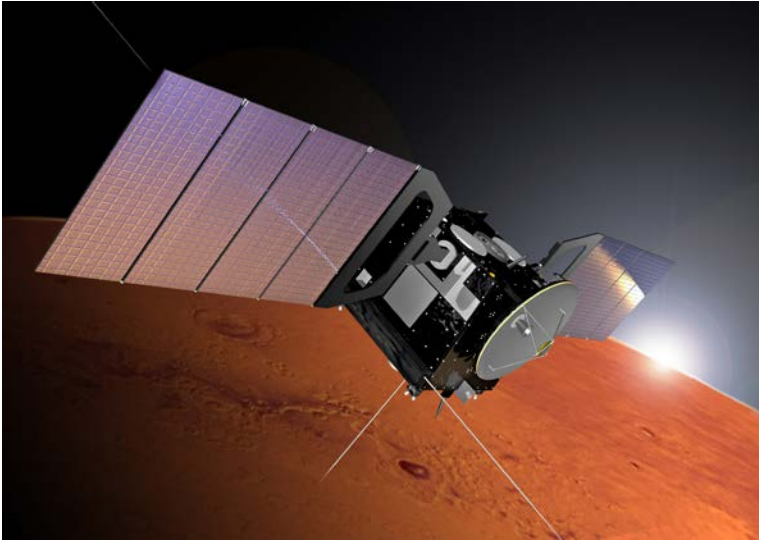
The anisotropies of the Cosmic microwave background (CMB) as observed by Planck.

Planck is a space observatory operated by the European Space Agency (ESA), and designed to **observe anisotropies of the cosmic microwave background (CMB) at microwave and infra-red frequencies**, with high sensitivity and small angular resolution. The project, initially called COBRAS/SAMBA, is named in honour of the German physicist **Max Planck (1858–1947)**, who won the Nobel Prize in Physics in 1918.

Planck **was launched in May 2009**, reaching the **Earth/Sun L2 point (*Lissajous type orbit*) by July**, and by February 2010 had successfully started a second all-sky survey.

At the end of its **mission Planck was put into a heliocentric orbit and passivated to prevent it from endangering any future missions**. The final **deactivation** command was sent to Planck in **October 2013**.

(3) MARS EXPRESS :



Mars Express is a space exploration mission being conducted by the European Space Agency (ESA). The Mars Express mission is **exploring the planet Mars**, and is the **first planetary mission attempted by the agency**. "Express" originally referred to the speed and efficiency with which the spacecraft was designed and built. However "Express" also describes the spacecraft's **relatively short interplanetary voyage**, a result of being launched when the orbits of Earth and Mars brought them closer than they had been in about 60,000 years.

Mars Express consists of two parts, the Mars Express Orbiter and the **Beagle 2**, a **lander** designed to perform exobiology and geochemistry research. Although the **lander failed to land safely on the Martian surface**, the **orbiter has been successfully performing scientific measurements since early 2004**, namely, high-resolution imaging and mineralogical mapping of the surface, radar sounding of the subsurface structure down to the permafrost, precise determination of the atmospheric circulation and composition, and study of the interaction of the atmosphere with the interplanetary medium.

Mars Express has been granted five mission extensions, the latest **until 2014**.



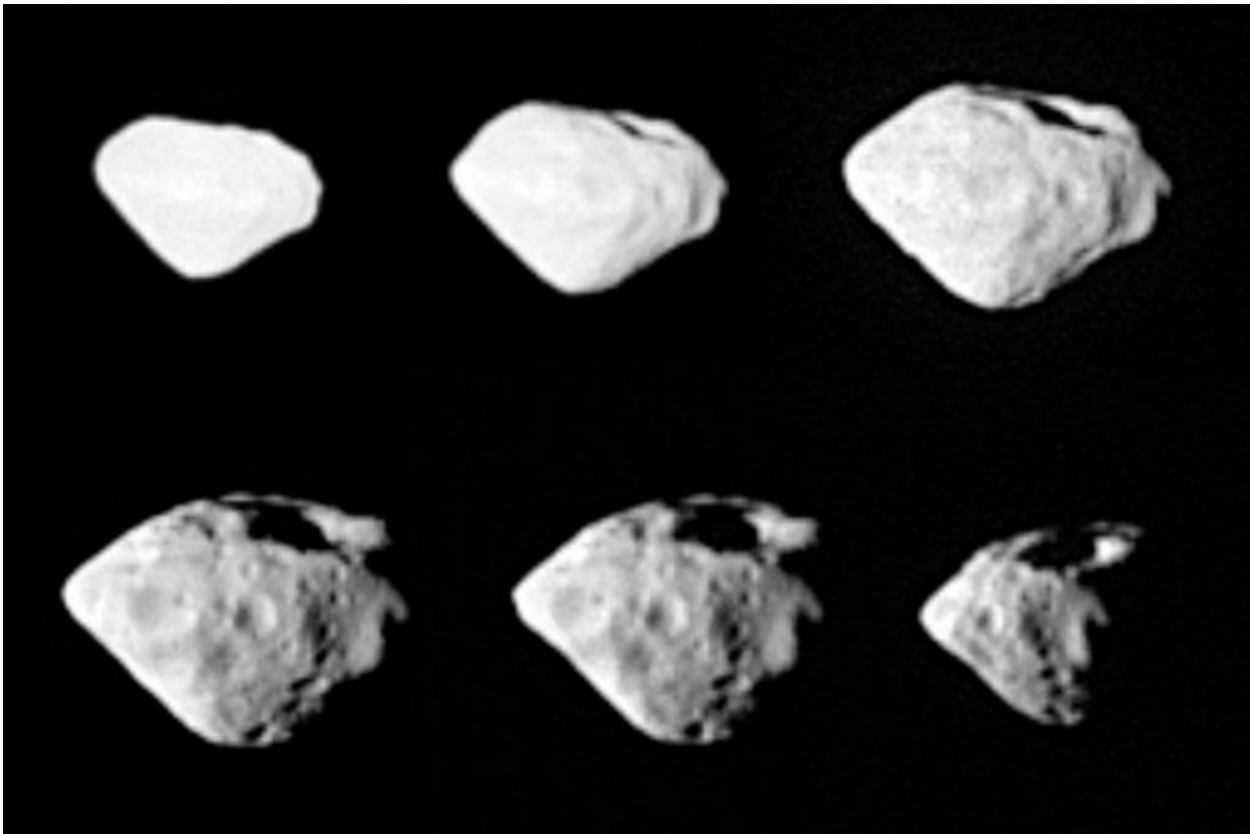
Phobos

(4) ROSETTA :

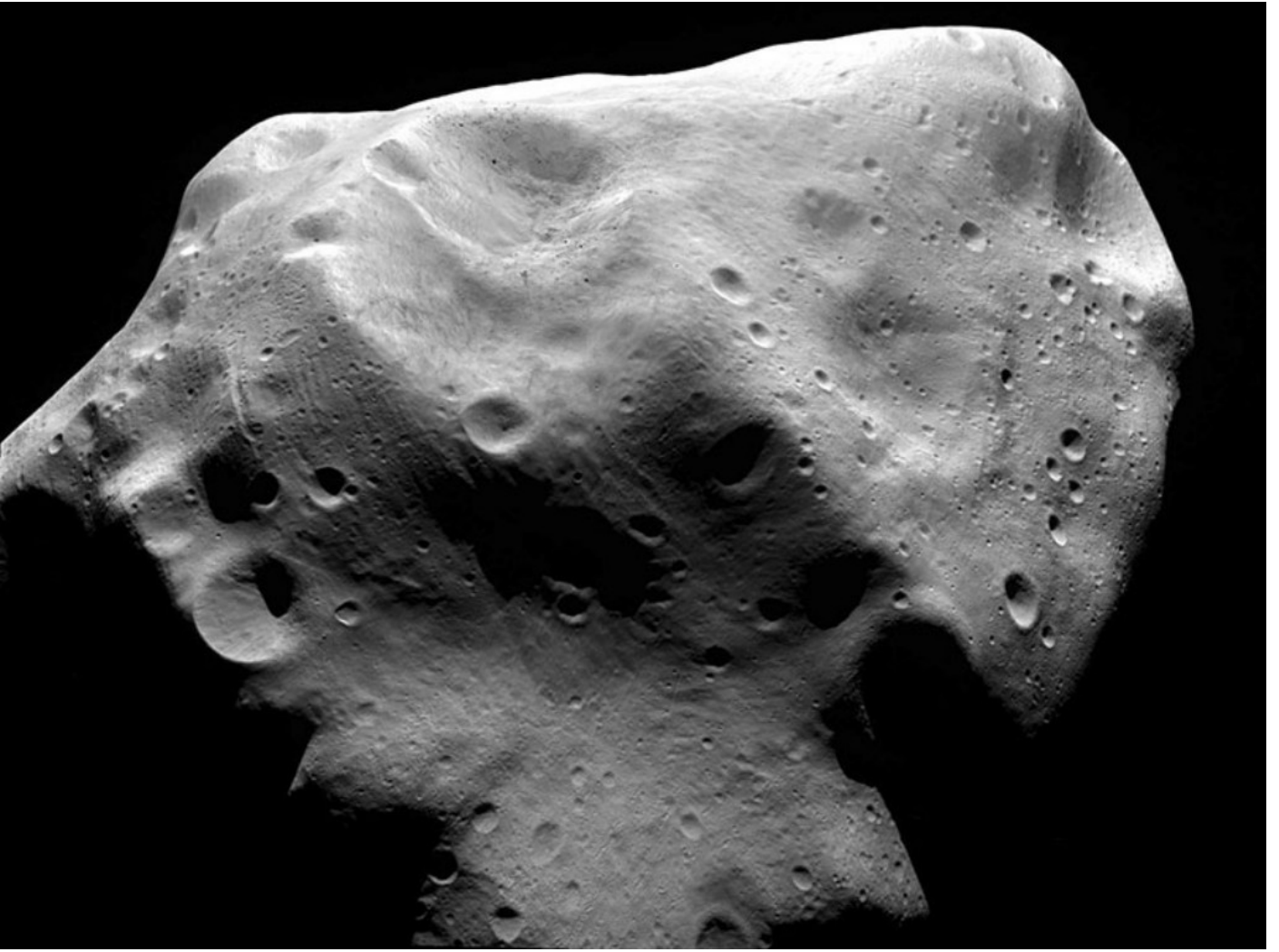
Rosetta is a robotic spacecraft built and launched by the ESA to perform a **detailed study of comet 67P/Churyumov–Gerasimenko**. It is part of the ESA Horizon 2000 cornerstone missions and is the first mission designed to both **orbit and land on a comet**.

Rosetta was **launched in March 2004** on an Ariane 5 rocket and will **reach the comet in August 2014**.

The spacecraft has already performed **two successful asteroid flyby missions on its way to the comet**. In 2007, Rosetta also performed **a Mars swingby (flyby), and returned images**. The craft completed its **fly-by of asteroid 2867 Šteins in September 2008** and of **21 Lutetia in July 2010**.

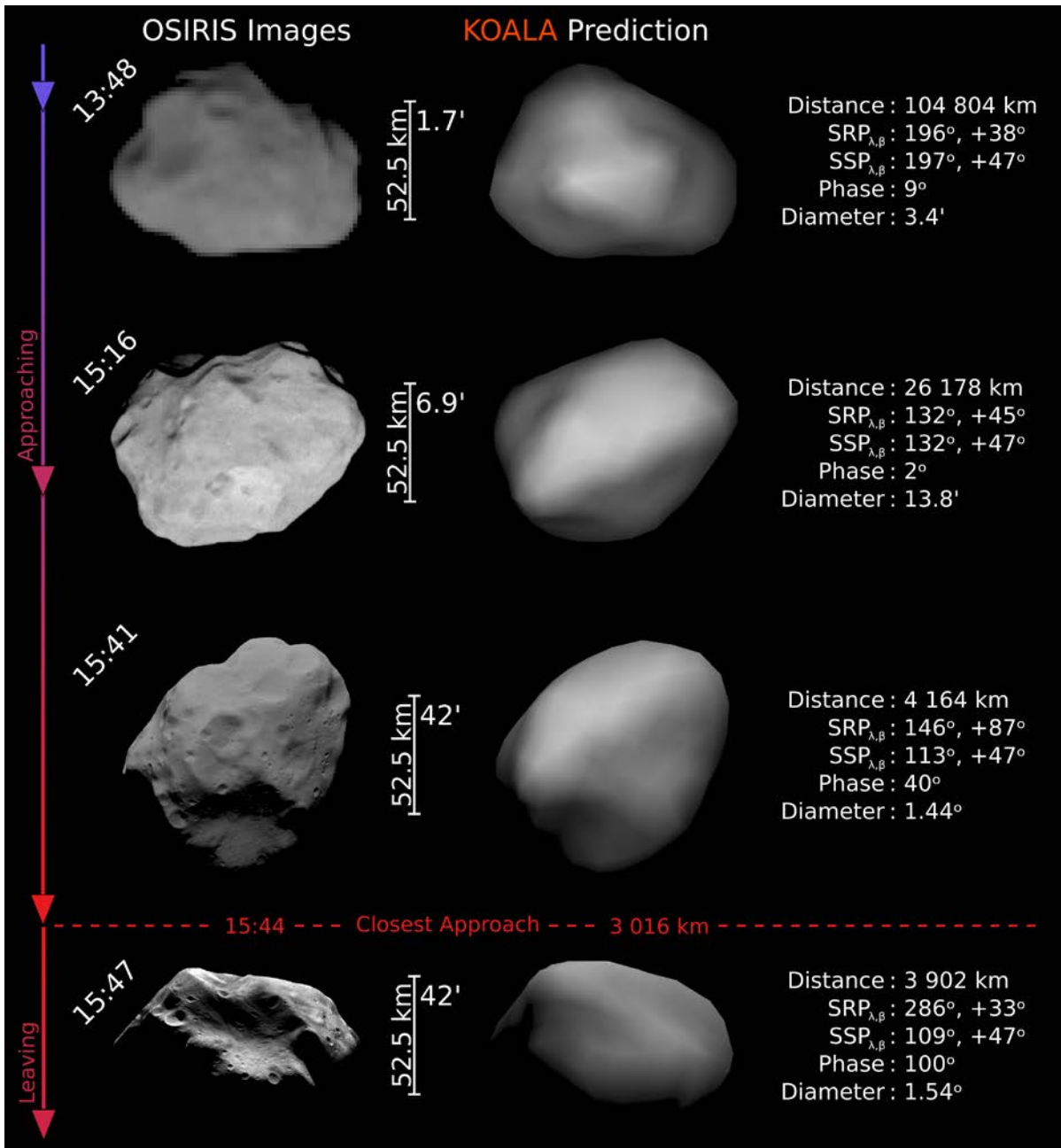


2867 Šteins

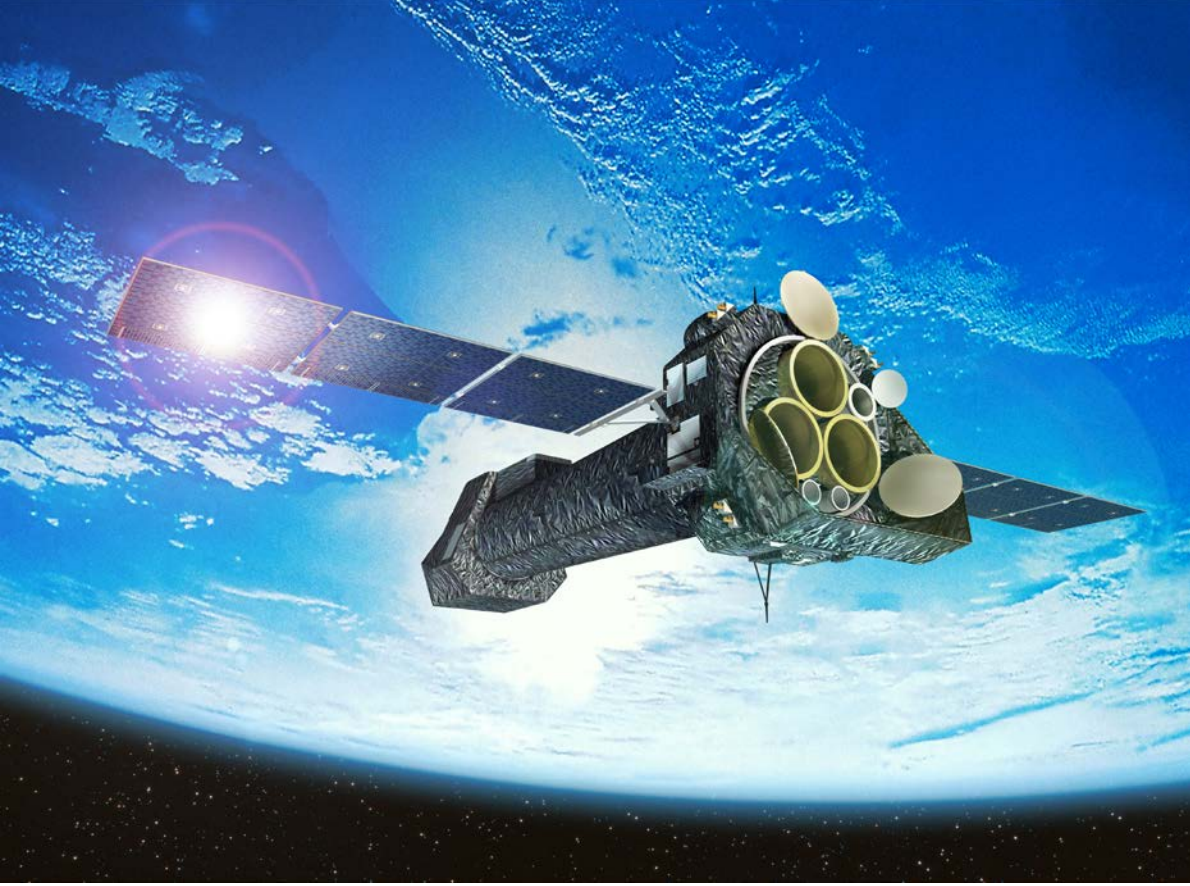


21 Lutetia

On 20 January 2014, Rosetta was taken out of a **31-month hibernation** mode and is continuing to its target ! ----> *uyanma filmi....*



(5) XMM-NEWTON X-IŞIN GÖZLEMEVİ : 15 yıldan uzun süredir gözlem yapıyor !



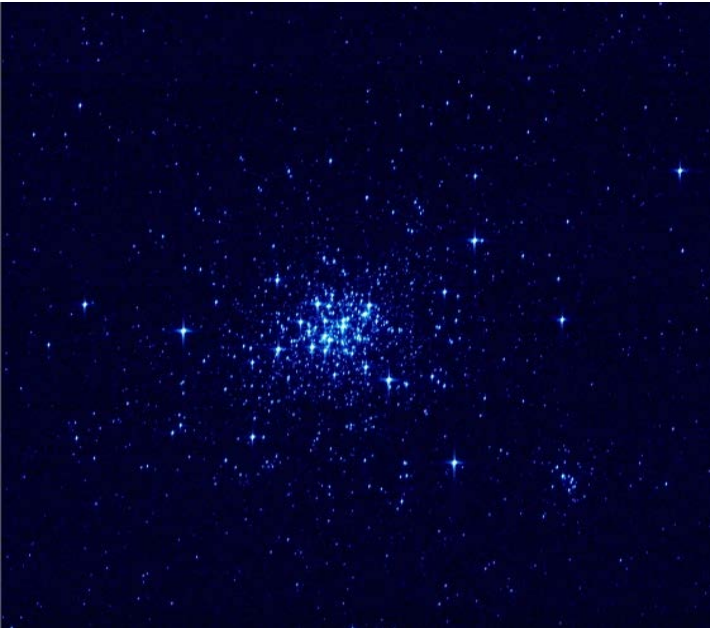
(6) INTEGRAL GAMA IŞIN GÖZLEMEVİ: 12 yıldan uzun süredir gözlem yapıyor !



(7) GAIA: Aralık 2013'te fırlatıldı !

Gaia is an unmanned space observatory of the European Space Agency (ESA) **designed for astrometry**. The mission aims to compile a **3D space catalogue** of approximately **1 billion astronomical objects** (approximately 1% of the Milky Way population). It is part of ESA's Horizon 2000 Plus long-term scientific program. Gaia will monitor each of its target stars about 70 times over a period of five years.

Gaia will create a precise three-dimensional map of stars throughout the Milky Way and map their motions. The spacecraft will be operated in a Lissajous **orbit around the Sun–Earth L2 Lagrangian point**.



NGC1818 (Credit: ESA/DPAC/Airbus DS)

NASA

(National Aeronautics and Space Administration)



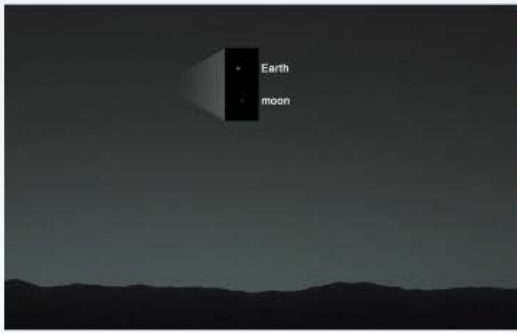
NASA, (National Aeronautics and Space Administration) (Ulusal Havacılık ve Uzay Dairesi). ABD'nin uzay programı çalışmalarından sorumlu olan kurum, 29 Temmuz 1958 yılında kurulmuştur. Daire, 1 Ekim 1958 tarihinden itibaren faaliyet göstermeye adım atmıştır. NASA, Ay'a dönük Apollo uçuşlarında, Skylab uzay istasyonu ve daha sonra uzay mekiği gibi çalışmalarla her zaman ABD'nin uzay çalışmalarına yön vermiştir. Günümüzde NASA, Uluslararası Uzay İstasyonunu desteklemekte ve yeni Ares I ve Ares V iniş araçlarını geliştirmektedir. Uzay programı çalışmalarının yanı sıra uzun vadeli sivil ve askeri roket çalışmaları da NASA'nın çalışma alanlarının arasındadır.

Cape Canaveral diye bilinen dev uzay üssünde fırlatma rampaları, uzay kontrol merkezleri, telekomünikasyon sistemleri gibi sayısız tesis yer almaktadır.

NASA'nın şimdiye kadar yaptığı uzay çalışmaları, büyük oranda başarıyla sonuçlanmış fakat ABD'ye milyarlarca dolara mal olmuştur. Özellikle Ay'ın fethiyle sonuçlanan Apollo programı, Skylab, uzay mekiği programları çok büyük harcamaları gerektirmiştir. Ancak 21. yüzyıla doğru gerçekleştirilmesi beklenen büyük uzay istasyonları, Ay istasyonu ve Mars seferi programları yanında, önceki harcamaların çok küçük kalacağı hesaplanmaktadır.

<http://www.nasa.gov/>

Mars Rover Curiosity Sees 'Evening Star' Earth



New images from NASA's Curiosity Mars rover show Earth shining brighter than any star in the Martian night sky. The rover's view of its original home planet even includes our moon, just below Earth. A human observer with normal vision, if standing on Mars, could easily see Earth and the moon as two distinct, bright "evening stars."



Olympics



Distant Universe



Space to Ground



Orion Test



Curiosity Rover



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Sunday, March 16: SpaceX 3 Commercial Resupply Services Launch, 4:41 a.m. EDT

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@MarsCuriosity captured this image of Earth from Mars 80mins after sunset on the 529th

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YAKIN UZAY

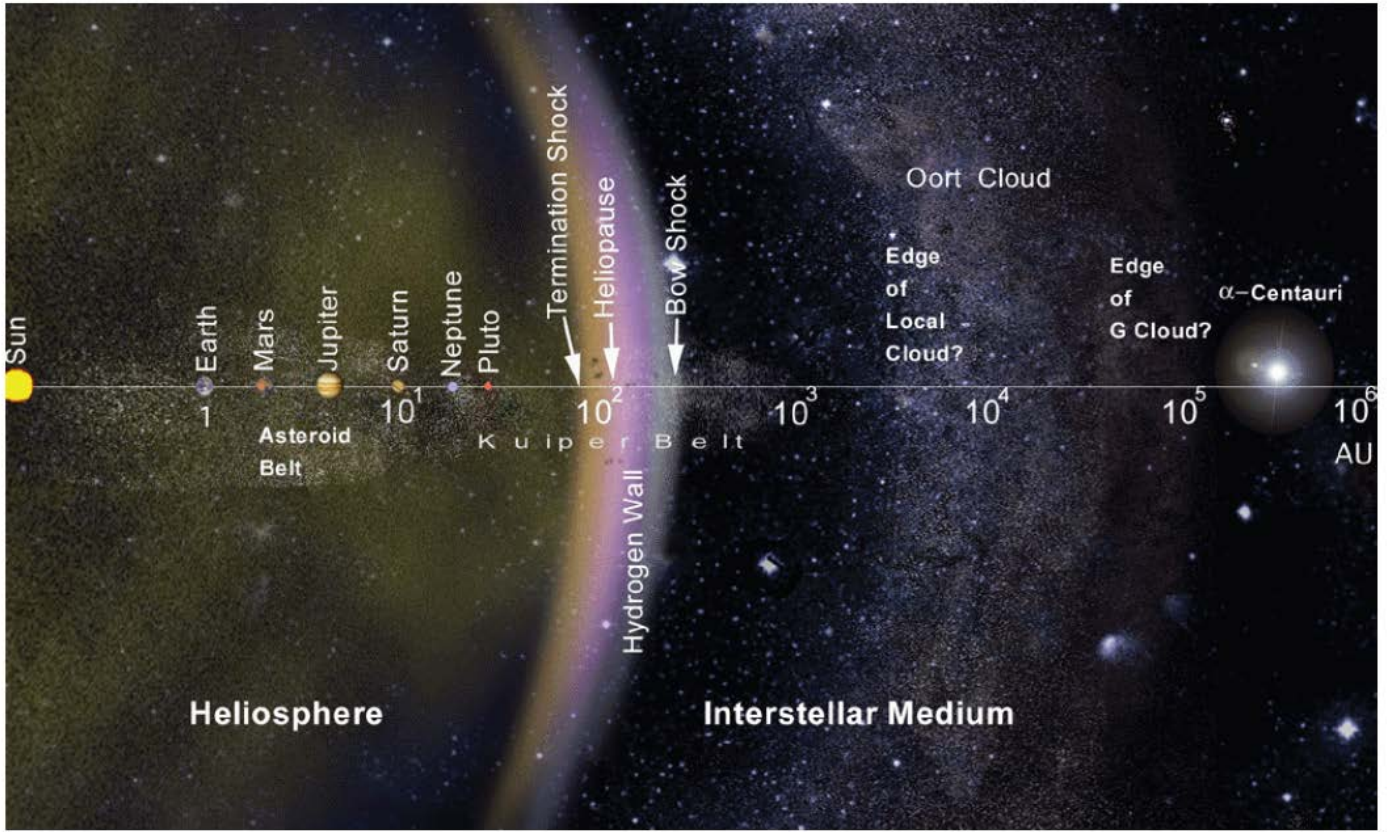
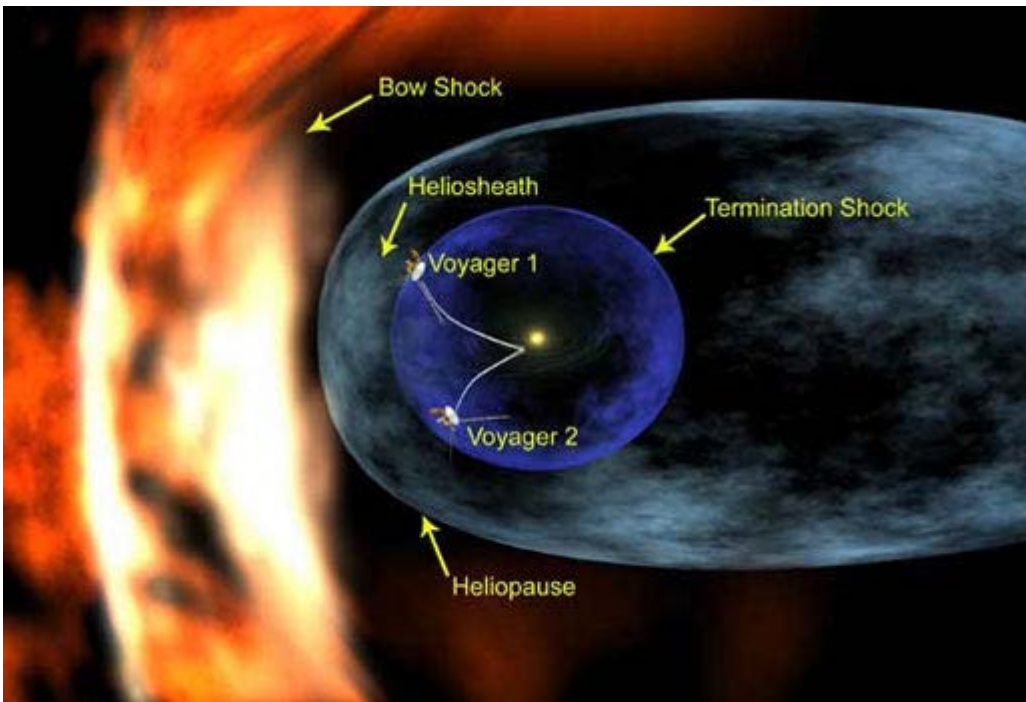


FIGURE 1.1 The solar system and its nearby galactic neighborhood are illustrated here on a logarithmic scale extending from <1 to 1 million AU. The Sun and its planets are shielded by a bubble of solar wind—the heliosphere—and the boundary between the solar wind and interstellar plasma is called the heliopause. Beyond this bubble is a largely unknown region—interstellar space. NOTE: The G cloud is a cloud of interstellar gas near the Local Interstellar Cloud in which the solar system is embedded. SOURCE: Image and text adapted from NASA and available at <http://interstellar.jpl.nasa.gov/interstellar/probe/introduction/scale.html>. Also see, "Living in the Atmosphere of the Sun," at http://sunearthday.nasa.gov/2007/locations/ttt_heliosphere_57.php.



Voyager 1 ve Voyager 2 1977 yılında ~ 1 ay arayla fırlatılmış uzay gemileri/sondalarıdır! ~ 40 yılda ulaşabildikleri sınıra bakınız!

11 yıl boyunca uzayda seyahat ederek Pluto ya ulaştı.

Işığın Yer e ulaşması 4 ile 7 saat arasında zaman almakta! (uzaklığı 4.25 milyar km ve 7.44 milyar km arasında değişmekte)

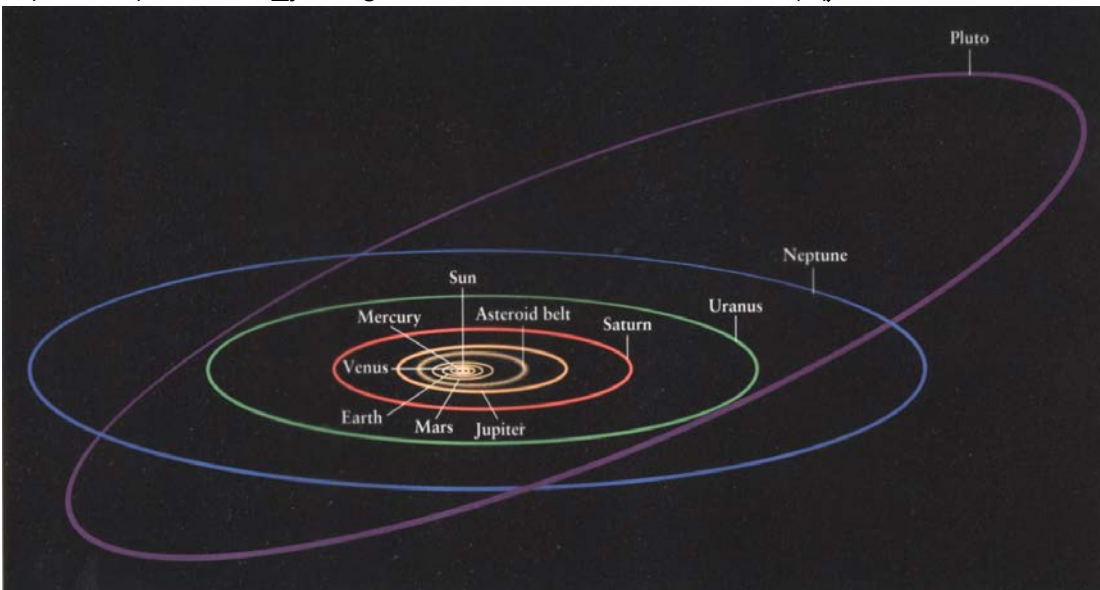
Pluto Güneş'e en uzaktayken 49.319 Astronomi Birimi (1AB ~ 149 500 000 km) uzaklıktayken; en yakinken 29.656 AB uzaklıktadır. Yani yörüngesi oldukça basıktır.

En ötede iken ışığın Yer'e ulaşması ~400 dk (6.7 saat) sürüyor! ($t = yol/c$)

En yakında iken ışığın Yer'e ulaşması ~238 dk (4 saat) sürüyor!

($c = 300\,000$ km/s)

e (basıklık) = 0.25; P_yörünge= 248 YIL; T= -230 C; **PLUTO**(X)



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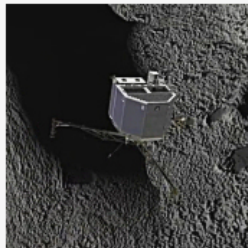
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- Fact Sheet
- Highlights from the Rosetta mission thus far
- Where is Rosetta?
- Comet viewer

Participants

- Mission Team
- Industry - Rosetta Orbiter
- Industry - Philae Lander
- Klim Churyumov
- Svetlana Gerasimenko

On 12 November 2014, ESA's Rosetta mission soft-landed its Philae probe on comet 67P/Churyumov-Gerasimenko, the first time in history that such an extraordinary feat has been achieved. During the next phase of the mission, Rosetta will accompany the comet through perihelion (August 2015) until the nominal end of the mission. On its 10 year journey towards comet 67P/Churyumov-Gerasimenko, the spacecraft has passed by two asteroids: 2867 Steins (in 2008) and 21 Lutetia (in 2010). The spacecraft entered deep-space hibernation mode in June 2011, and 'woke up' on 20 January 2014.

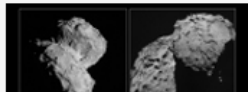
LATEST NEWS



Rosetta's lander faces eternal hibernation

12 February 2016 Silent since its last call to mothership Rosetta seven months ago, the Philae lander is facing conditions on Comet 67P/Churyumov-Gerasimenko from which it is unlikely to recover.

[Read more](#)



Inside Rosetta's comet

04 February 2016 There are no large caverns inside Comet

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15-Feb-2016 15:22 UT

Shortcut URL

<http://sci.esa.int/rosetta>



A new week in [#space](#) begins 222million km from Earth, 354million km from the Sun & 38km from [#67P](#) [#LivingWithAComet](#) <https://t.co/QlydHGv0gq>

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Highlights

