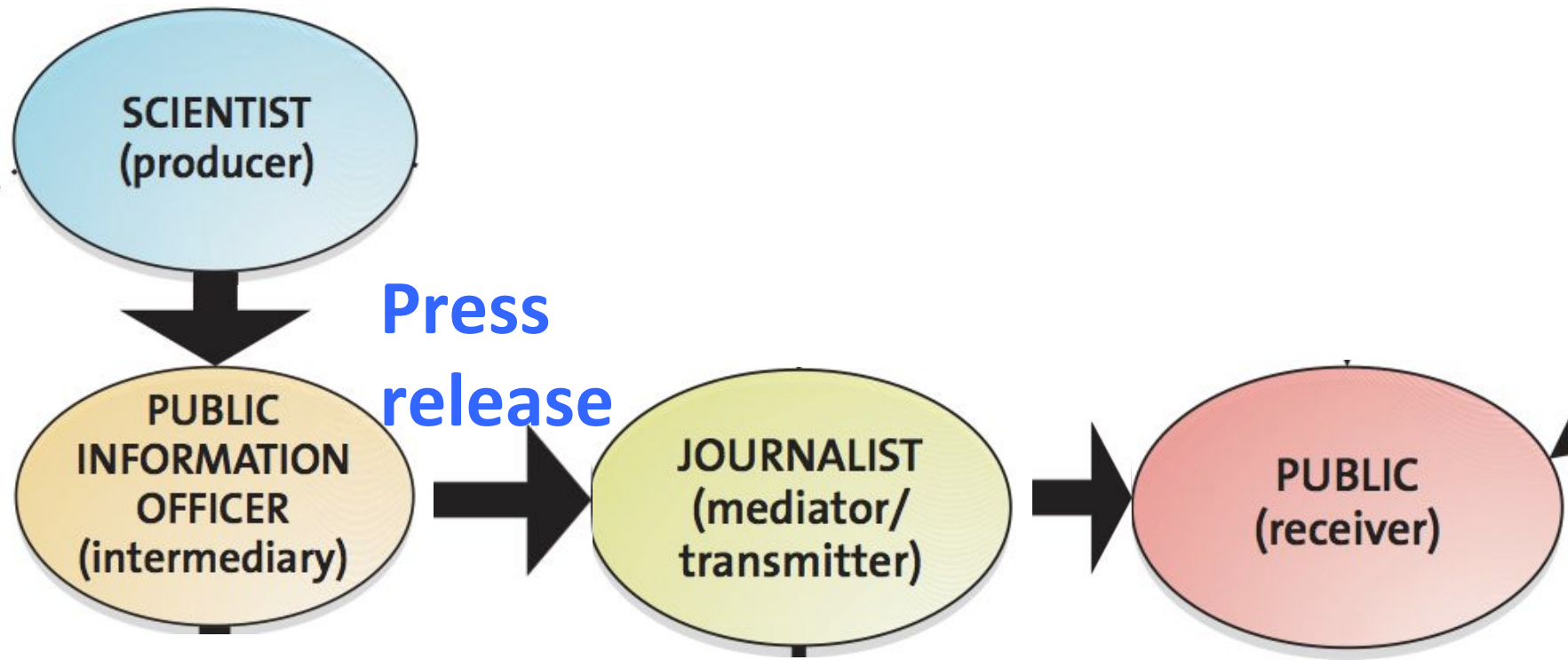


Press releases
Comunicados de imprensa

Jorge Meléndez

Divulgação em Astronomia – AGA0421

O Modelo linear (melhor custo/benefício)



Press release: objetivos

- **Aumentar o conhecimento de ciência e o método científico no grande público, através dos jornalistas**

Byproducts:

- Visibilidade da instituição (Universidade, Institutos de Pesquisa, Agências de Fomento) ou de projetos específicos (p.ex., instrumentação)
- **Brasil:** melhora autoestima da população (Brasil também faz ciência –existe vida além do futebol)

Estrutura do press release

título

- Descrever o conteúdo da matéria porem não é necessariamente uma manchete
- O título é muito importante pois os jornalistas revisam muitos press-releases, então o título tem que ser atraente

Primeiro parágrafo (Lead):

geralmente estilo “resumo” jornalístico

- Six golden questions (**não necessariamente todas**)
- **Who?** = who did the research;
- **What?** = what is the main point;
- **Where?** = location of research group or event;
- **When?** = time of the publication or event;
- **Why?** = why is it news?
- **How?** = how the research was done.

Quem?, **O que?**, **Quando?**, **Onde?**, **Por que?**, **Como?**

Press releases: **conteúdo**

- Use active voice:

Passiva: O twitter for criado em 2006 por Jack Dorsey

Ativa: Jack Dorsey criou o twitter em 2006

Passiva: Foi demonstrado anteriormente que ataques cardíacos **podem ser causados** pelo alto estresse

Voz Ativa: ?

Press releases: **conteúdo**

Passiva: Foi demonstrado

anteriormente que ataques cardíacos
podem ser causados pelo alto estresse

Voz Ativa: Cientistas mostraram

anteriormente que o alto estresse **pode**
causar ataques cardíacos

Press releases: **quotes**

Incluir “*quotes*” (citações) dos cientistas envolvidos na pesquisa. **Tip: o PIO pode dar dicas sobre o seu *quote***

<http://www.eso.org/public/news/eso1429/>

Ueda explains: *“For the first time there is observational evidence for merging galaxies that could result in disc galaxies. This is a large and unexpected step towards understanding the mystery of the birth of disc galaxies.”*

Press releases: **quotes**

Incluir “*quotes*” (citações) dos cientistas envolvidos na pesquisa.

http://www.keckobservatory.org/recent/entry/planet_found_with_an_80000_year_orbit

“Planets are much brighter when viewed in infrared rather than visible light, because their surface temperature is lower compared to other stars,” **Naud said**

Press releases: **embargo**

Permite aos jornalistas trabalhar nas suas matérias antes da notícia ser anunciada. Geralmente uns 3 dias antes do embargo a matéria é liberada para jornalistas

2013

EMBARGOED UNTIL 28 August 2013 at 17:00 CEST

Oldest Solar Twin Discovered

— VLT provides new clues to help solve lithium mystery

Press releases: **timing**

- Difusão na 6af à noite terá pouco impacto
- 2af de manha também não é ideal
- Ficar atento a outras notícias para não competir com a atenção dos jornalistas.

Ex.: não divulgar um press release no dia de inauguração das Olimpíadas(!)

Evitar datas das reuniões da AAS
(American Astronomical Society)

Press releases: **contacts**

- Verificar que os cientistas estarão disponíveis até no mínimo 48h após o release
- Verificar todos os contatos. Incluir código internacional para os telefones.

http://www.keckobservatory.org/recent/entry/keck_observatory_gives_astronomers_first_glimpse_of_monster_galaxy_formatio

SCIENCE CONTACTS:

Erica Nelson

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New Haven, Connecticut, USA

Tel: +1-203-432-0573

E-mail: erica.nelson@yale.edu

Marijn Franx

Leiden Observatory

Leiden University, The Netherlands

Tel: +31 71 527 5870

E-mail: franx@strw.leidenuniv.nl

Press releases: **references**

- Normalmente (mas não sempre) o release está associado a um artigo.
- No final do press release incluir a citação completa, e o link do artigo ou pre-print.

<http://www.eso.org/public/news/eso1429/>

More information

These observation results were published in *The Astrophysical Journal Supplement* (August 2014) as Ueda et al. "Cold Molecular Gas in Merger Remnants. I. Formation of Molecular Gas Discs".

Links

- [Research paper on Astro-Ph](#)

Press releases: **references**

- É recomendável a citação do artigo, mas o Keck prefere no máximo dar o link

http://www.keckobservatory.org/recent/entry/planet_found_with_an_80000_year_orbit

MAUNA KEA, HAWAII – A team of researchers has discovered and photographed a gas giant only 155 light years from our solar system, adding to the short list of exoplanets discovered through direct imaging. It is located around GU Psc, a star with one-third the mass of the Sun and located in the constellation Pisces. [See the article in *The Astrophysical Journal*.](#)

Press releases: **checklist**

- Keep it short and simple.
- Include a short, simple heading, not a headline.
- Answer all six golden questions in the first paragraph: Who? What? Where? Why? When? and How?
- Choose your angle carefully.
- Use direct quotes where possible.
- Keep the text concise and interesting, but provide all complementary details in the Notes for Editors section.
- Include the date and time of release, and the name, address and telephone number — including international country code — of your contact(s).
- Time your release publication for maximum impact.

Dicas para destacar a sua notícia

- How to recognize a good story?
- Qual ângulo usar para destacar a sua notícia?
- **Se um (ou mais) dos critérios a seguir são satisfeitos, provavelmente você terá uma boa matéria.**

Datas comemorativas

- Viagens espaciais
- Descobertas
- Aniversarios
- Ano internacional da Física
- etc

Dica para destacar notícias: *timing*

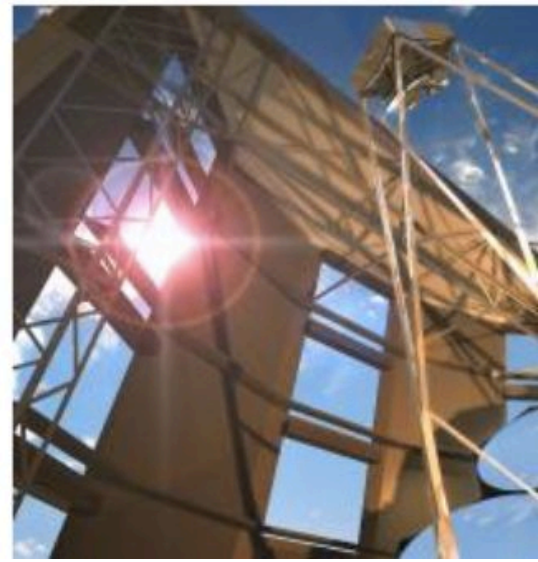
- Ontem astrônomos da USP descobriram uma supernova
- FAPESP assina acordo para fazer parte do GMT

São Paulo, Brazil to Join Giant Magellan Telescope Project

24 July 2014

Joint news release with the Giant Magellan Telescope Organization

Pasadena, CA & São Paulo, Brazil — The São Paulo Research Foundation (FAPESP), Brazil, has taken a critical step towards joining the Giant Magellan Telescope (GMT) project. The GMT, an astronomical observatory of unprecedented scale, will allow astronomers to probe the formation of stars and galaxies shortly after the Big Bang, to measure the masses of black holes and to discover and characterize planets around other stars. The giant telescope will be located at the Las Campanas Observatory, high in the Chilean Andes, and will begin scientific operations at the start of the next decade. The University of Texas at Austin is a founding partner in the GMT project.



Dica para destacar notícias:

relevance

- Algo que afete diretamente a vida das pessoas
- Exemplo (fictício): astrônomos do Observatório Nacional descobrem asteroide em rota de colisão com a Terra

Dica para destacar notícias:

proximidade

- Algo que seja de interesse local (p.ex. São Paulo) ou nacional (Brasil)

USP integra projeto mundial de construção de telescópio gigante

Publicado em Pesquisa, USP Online Destaque por Breno França em 5 de setembro de 2014 |   

A comunidade científica da USP comemora o recente ingresso em um projeto que promete render muitos frutos a longo prazo para a Universidade. Com o apoio da Fundação de Amparo à Pesquisa do Estado de São Paulo (Fapesp), a USP se tornou uma das 11 instituições sócio-fundadoras do Giant Magellan Telescope (GMT), um telescópio gigante que está sendo construído nos Estados Unidos e deve se tornar o segundo maior do mundo em alguns anos.

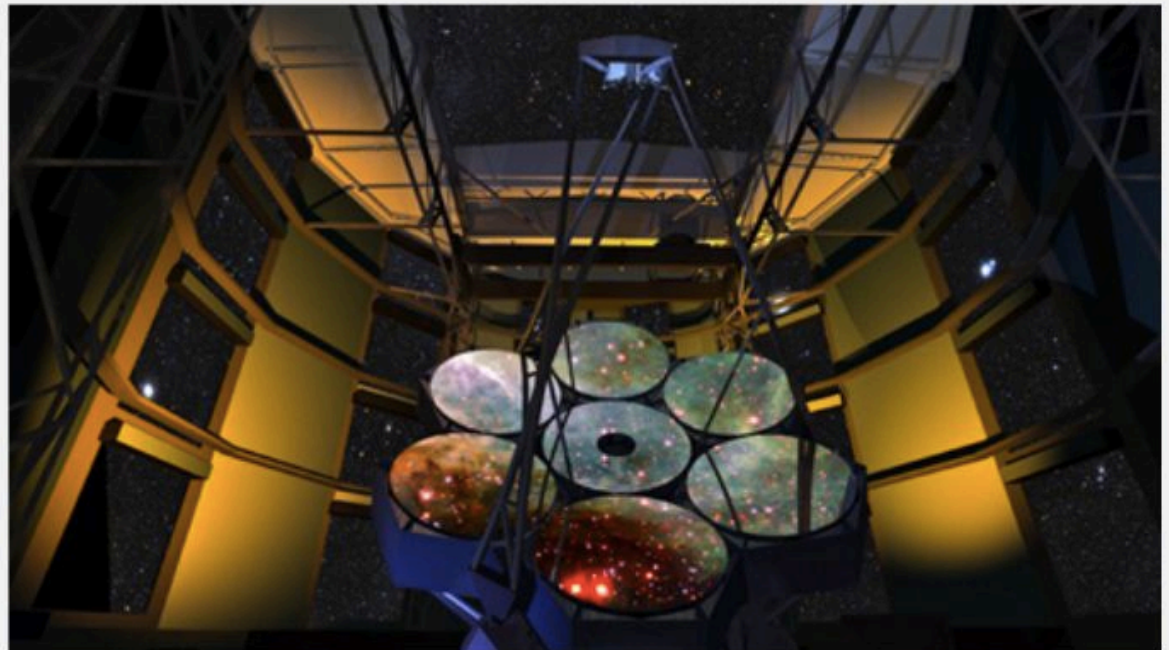


Foto: Giant Magellan Telescope / Divulgação

Dica para
destacar
noticias:
proximidade

O primeiro exoplaneta brasileiro

POR SALVADOR NOGUEIRA

15/07/15 © 15:23



☰ MENU



CIÊNCIA E SAÚDE

15/07/2015 11h01 - Atualizado em 15/07/2015 15h50

Brasileiros descobrem novo planeta semelhante a Júpiter

Exoplaneta foi encontrado com a ajuda de telescópio do ESO, no Chile. Achado abre possibilidade de sistema planetário parecido com o nosso.

Dica para destacar notícias: *implicações*

- Algo que tenha profundas implicações

Une planète autour de 51 Pegasi

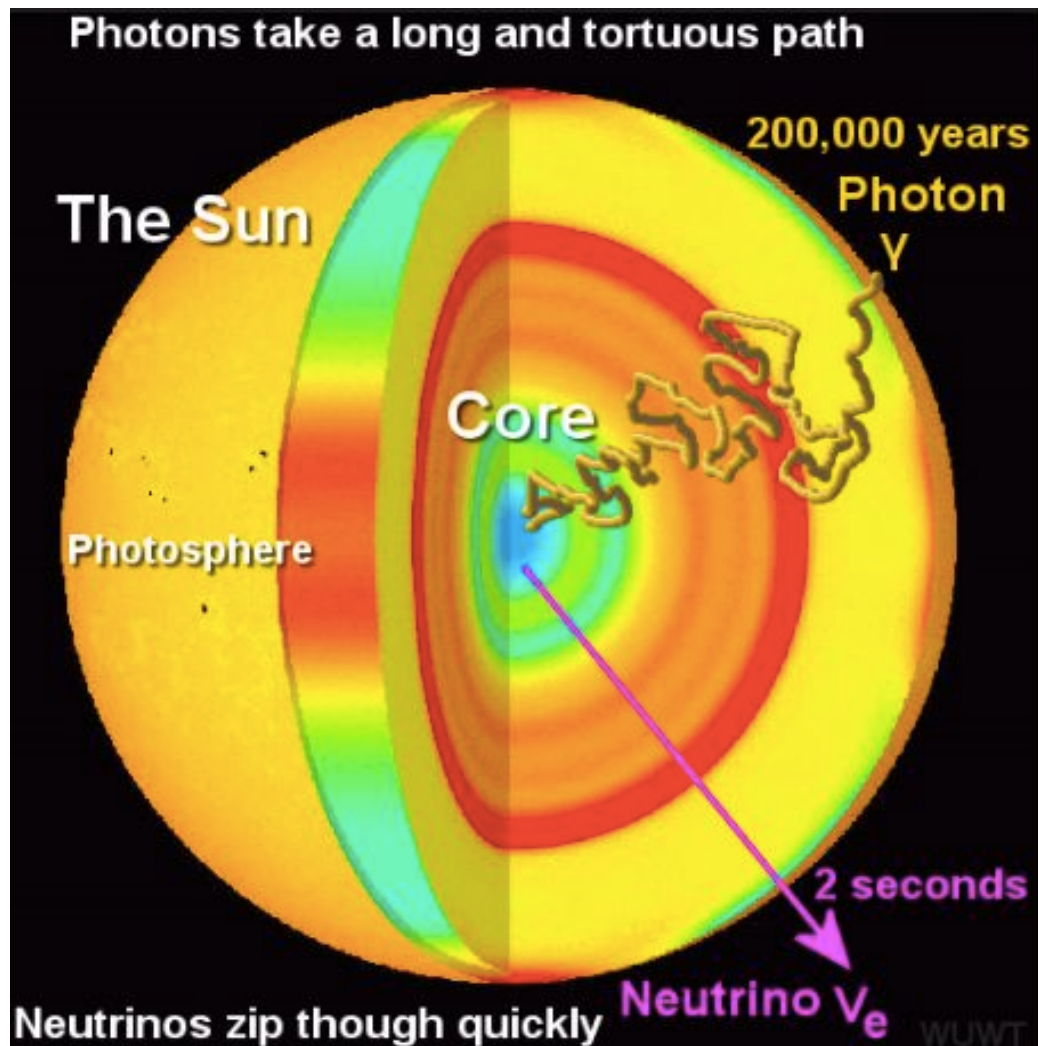


**Michel et Didier dans la salle
d'observation du 1m93 OHP**

Le 6 Octobre 1995, Michel Mayor et Didier Queloz (Observatoire de Genève) ont annoncé la découverte d'un objet de masse planétaire (0.5 fois Jupiter) en orbite autour de l'étoile de type solaire 51 Peg. Cette découverte est basée sur un an d'observations faites à l'OHP avec le spectrographe [ELODIE](#), L'annonce fut faite à Florence (Italie), lors de la *Ninth Cambridge Workshop on Cool Stars, Stellar Systems and the Sun* .

Dica para destacar notícias: *conflito*

Descoberta que resolve uma controvérsia



Problema dos neutrinos solares conflito entre o número predito e observado passando pela Terra.

Problema astrofísico?
Problema instrumental?
Problema da física de partículas?

Dica para destacar notícias: *aspecto humano*

Exemplo:

- *“Astronomer discovers new galaxies while raising three children and teaching women’s self-defence in her spare time”.*

Dica para destacar notícias:

aspecto humano



Karen Masters

@KarenLMasters

Astronomer @ICGPOrsmouth

@PortsmouthUni. Project Scientist for
@GalaxyZoo. Part of @MaNGAsurvey,
@SDSSurveys. Parent of two young
children.



Ivan Ramirez

@astroChasqui FOLLOWS YOU

Soccer fan. Peruvian. Astronomer.

IAG

19^a SEMANA
ARTE
CULTURA

APRESENTAÇÃO MUSICAL

26/09/2014 14h no Auditório IAG

DOIS VIOLÕES
E
UMA VOZ

GABRIEL MARTINS PALMA PEREZ (METEOROLOGIA)

CARMEN DOS SANTOS GODOY URA (GEOFÍSICA)

LEONARDO YOSHIAKI KAMIGAUTI (GEOFÍSICA)

BOSSA NOVA, MPB, E ROCK.

JANINE ARAÚJO CARMO
MARCELA OLIVEIRA
ELVIS CANTELLI
RENATO NISHIKAWARA

UMA BREVE APRESENTAÇÃO DE VOZ E VIOLÃO
DE ALGUNS CLÁSSICOS DO SAMBA E DA MPB.

$V=(2G/R^{1/2})$

LUCAS PAIVA

ANA CLARA BEZERRA SÁ
&
JÔNATAS BARRETO

1) RADIOACTIVE; IMAGINE DRAGONS

2) JUST GIVE ME A REASON; PINK FT. NATE RUESS

ANA CLARA BEZERRA SÁ
&
ELIELSON SOARES

1) TREM DAS ONZE – ADONIRAN BARBOSA

2) TELEGRAMA – ZECA BALEIRO

3) CHUVA - FALAMANSÁ

Dica para destacar noticias:

BBC
NEWS

aspecto humano

Friday, 3 August 2007

Queen star hands in science PhD

Queen guitarist Brian May has handed in his astronomy PhD thesis - 36 years after abandoning it to join the band.

May recently carried out observational work in Tenerife, where he studied the formation of "zodiacal dust clouds".

The subject forms the basis of a 48,000-word thesis for Imperial College, London, where 60-year-old May studied before becoming a rock star.



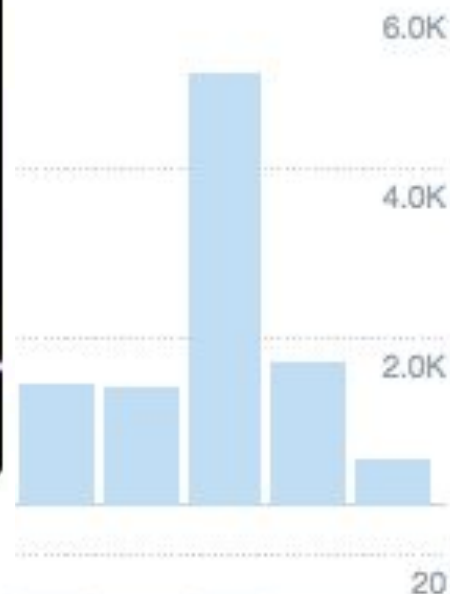


Jorge Melendez @DrJorgeMelendez · Sep 19

Rock e Astronomia:

@DrBrianMay é guitarrista e Doutor em Astronomia

#rockinrio 🎸



10



13



Sep 13

Sep 20

20

Dica para destacar noticias: *aspecto humano*

<http://www.wired.com/2014/01/sepideh-documentary-sundance/>

An Iranian Girl, Battling to Be an Astronomer

BY ANGELA WATERCUTTER 01.23.14 | 9:30 AM | PERMALINK

PARK CITY, Utah – Sepideh – Reaching for the Stars is an earnest and inspiring documentary about a teenage Iranian girl who dreams of being an astronomer.



Dica para destacar noticias: *mystery*

<http://www.space.com/27246-supernova-mystery-solved-hubble-telescope.html>

20-Year-Old Supernova Mystery Finally Solved

By Elizabeth Howell, Space.com Contributor | September 24, 2014

A star-explosion mystery that puzzled astronomers for more than two decades has finally been solved.

Researchers using data gathered by NASA's [Hubble Space Telescope](#) have determined that the supernova SN 1993J — which was first observed in 1993, as its name suggests — occurred because one star nabbed hydrogen from another.



<http://www.space.com/13374-ancient-supernova-mystery-solved.html>

2,000-Year-Old Supernova Mystery Solved By NASA Telescopes

SPACE.com Staff | October 24, 2011 02:01pm ET

Dica para destacar notícias:

major discovery

- Novo tipo de objeto astronômico

Space  on **NBC NEWS.com**

Astronomers identify ‘super planetary nebula’

New class of cosmic object has unusually strong radio sources

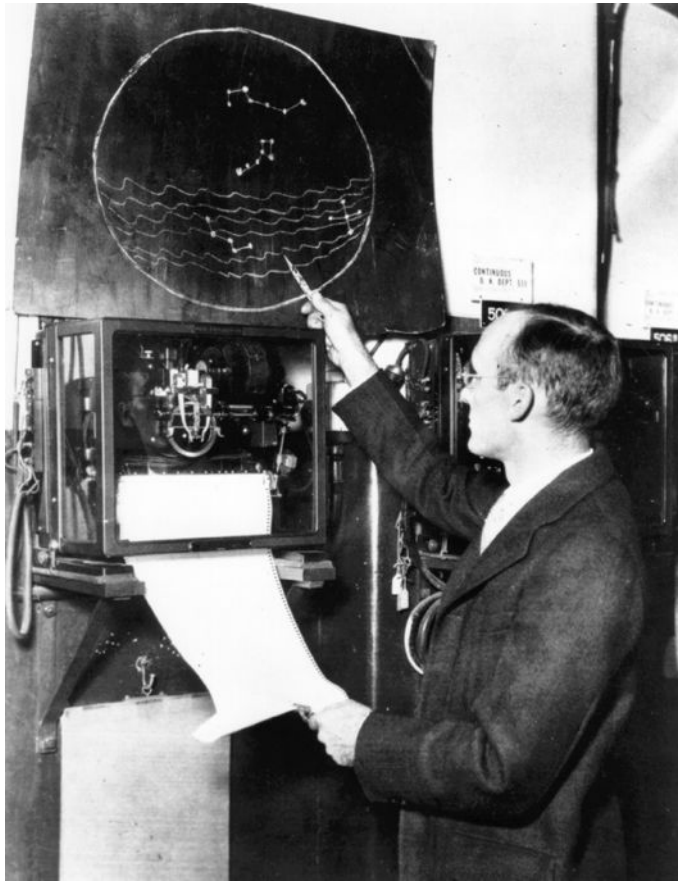
http://www.nbcnews.com/id/32420577/ns/technology_and_science-space/t/astronomers-identify-super-planetary-nebula/

Dica para destacar notícias:

major discovery

- Novo tipo de fenômeno

The New York Times of May 5, 1933



NEW RADIO WAVES TRACED TO CENTRE OF THE MILKY WAY

Mysterious Static, Reported
by K. G. Jansky, Held to
Differ From Cosmic Ray.

DIRECTION IS UNCHANGING

Recorded and Tested for More
Than Year to Identify It as
From Earth's Galaxy.

ITS INTENSITY IS LOW

Only Delicate Receiver is Able to
Register—No Evidence of
Interstellar Signaling.

Dica para destacar notícias:

major discovery

- Ganho considerável sobre um tema

<http://www.scientificamerican.com/article/gravity-waves-cmb-b-mode-polarization/>

**SCIENTIFIC
AMERICAN™**

Mar 17, 2014 | By Clara Moskowitz

Talvez apenas poeira ...

Mas se fosse verdade seria um *major discovery*

Gravitational Waves from Big Bang Detected

A curved signature in the cosmic microwave background light provides proof of inflation and spacetime ripples

Physicists have found a long-predicted twist in light from the big bang that represents the first image of ripples in the universe called gravitational waves, researchers announced today. The finding is direct proof of the theory of inflation, the idea that the universe expanded extremely quickly in the first fraction of a nanosecond after it was born.

Dica para destacar notícias:

ново ângulo interessante

- Confirmação de um resultado antigo usando novas observações



<http://www.skyandtelescope.com/astronomy-news/resolving-pleiades-distance-problem-08282014/>

Resolving the Pleiades Distance Problem

By: Kelly Beatty | August 28, 2014

A new measurement, made using **radio interferometry**, argues that the distance to the Pleiades star cluster measured by ESA's Hipparcos satellite is decidedly wrong — and that ground-based astronomers had it right all along.

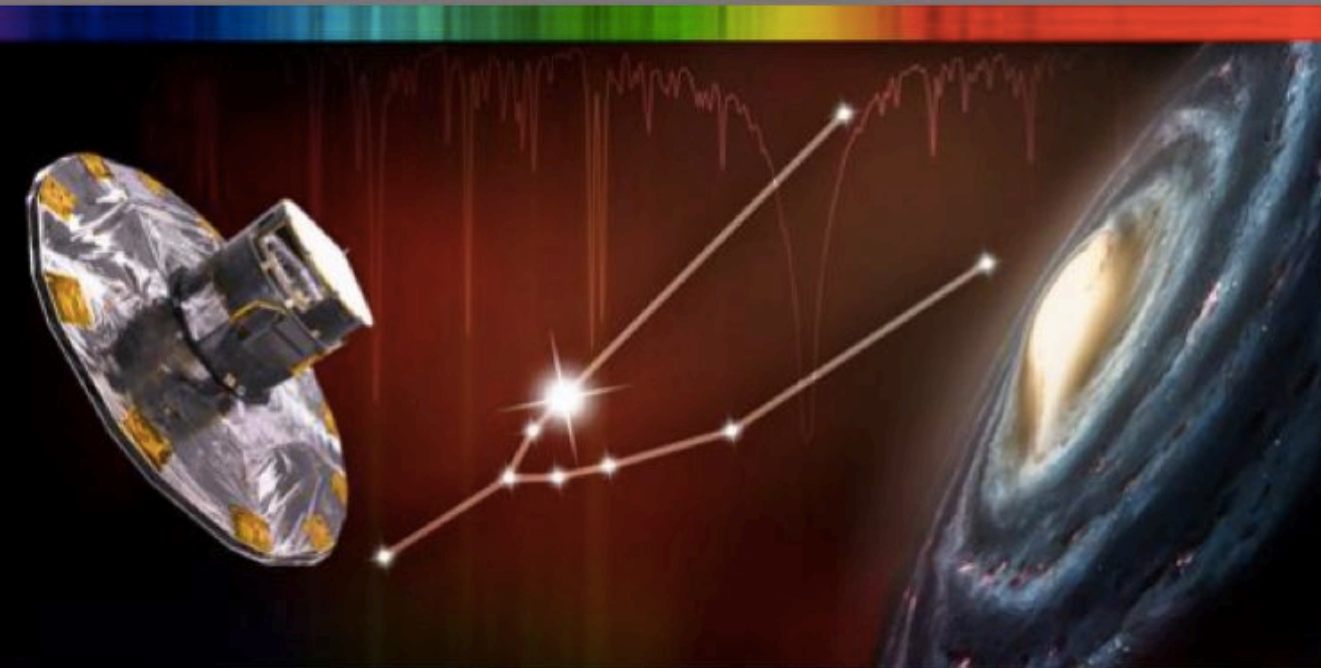


Dica para destacar notícias: *recorde*

First, largest, most distant, fastest, oldest, etc.

<http://www.cam.ac.uk/research/news/spectral-ruler-is-first-standardised-way-to-measure-stars>

Spectral 'ruler' is first standardised way to measure stars



Published

24 Jun 2014

Image

The first standardised way to measure stars has been developed for Gaia mission

Credit: Amanda Smith/Institute of Astronomy

Share

A team of astronomers have created the first standardised set of measurement guidelines for analysing and cataloguing stars.

Dica para destacar notícias: *recorde*
First, largest, most distant, fastest, oldest,
etc.

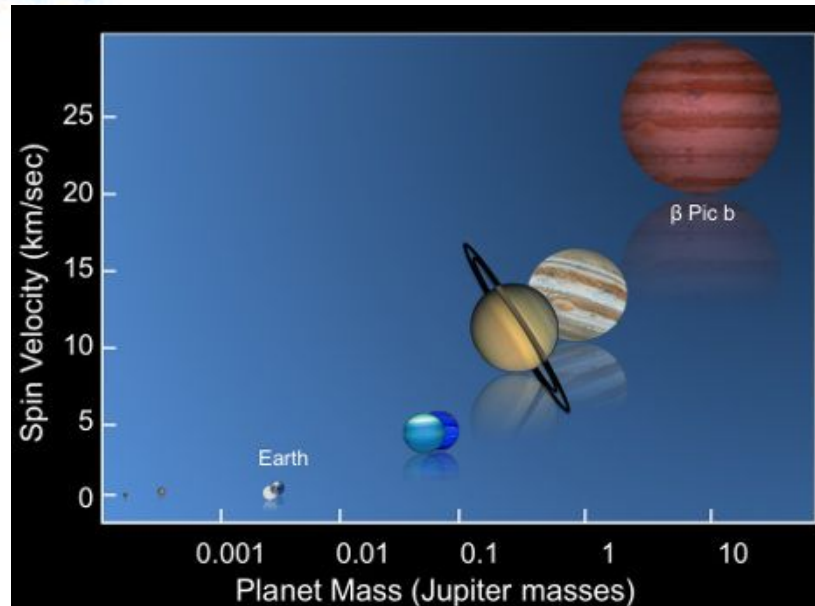
ESO press release

<http://www.eso.org/public/news/eso1414/>

Length of Exoplanet Day Measured for First Time

VLT measures the spin of Beta Pictoris b

30 April 2014



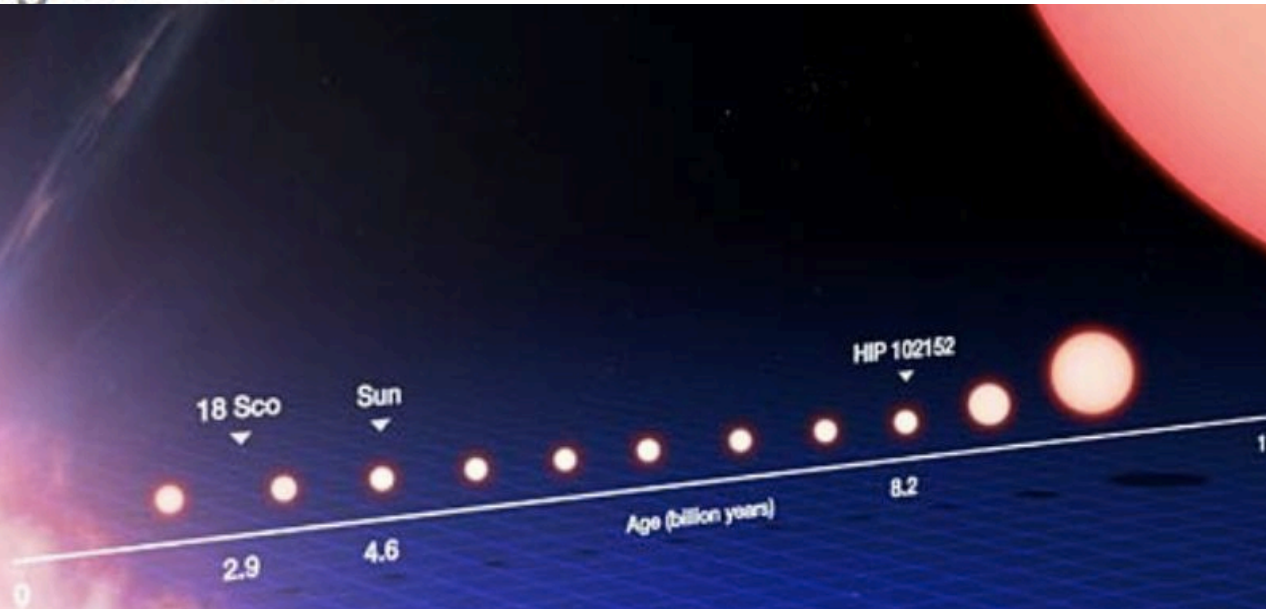
Dica para destacar notícias: *recorde*
First, largest, most distant, fastest, **oldest**,
etc.

<http://www.eso.org/public/news/eso1337/>

Oldest Solar Twin Identified

ESO's VLT provides new clues to help solve lithium mystery

28 August 2013



Dica para destacar notícias: *recorde*

First, largest, **most distant**, fastest, oldest, etc.



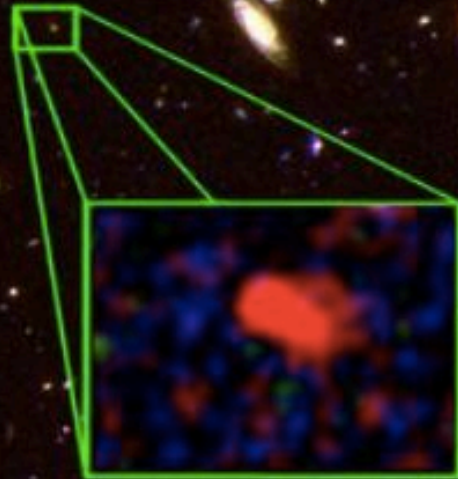
<http://news.nationalgeographic.com/news/astrophysicists-discover-the-most-distant-galaxy-yet/>

Astronomers Discover the Most Distant Galaxy Yet

Its light blasted into space when the universe was only 700 million years old.

By Andrew Fazekas
National Geographic

PUBLISHED OCTOBER 23, 2013



Dica para destacar notícias: *recorde*
First, largest, most distant, fastest, oldest,
etc.

<http://www.eso.org/public/news/eso0915/>

Lightest exoplanet **yet** discovered

21 April 2009



Artist's impression of the newly discovered planetary system Gliese 581

Dica para destacar notícias:

sexy topics

Temas que sempre capturam a atenção do público, mesmo não sendo necessariamente grandes descobertas (p.ex., buracos negros, exoplanets, vida extraterrestre, sistema solar, futuro da Terra e do Sol, clima espacial)

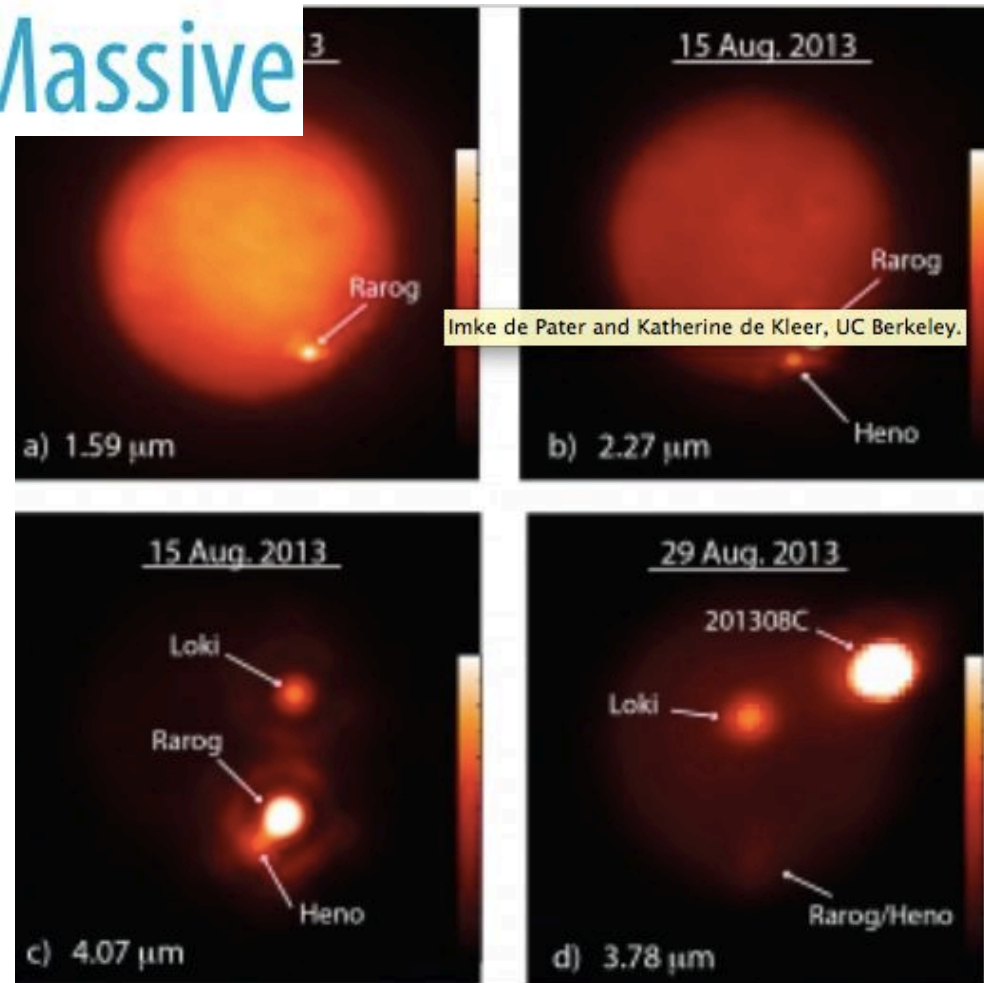
Dica para destacar noticias:

sexy topics: solar system

W. M. KECK OBSERVATORY
On the summit of Mauna Kea, Island of Hawai'i

Observations Reveal Massive Eruptions on Jupiter's Moon Io

AUGUST 4, 2014



http://www.keckobservatory.org/recent/entry/keck_gemini_observatories_reveal_massive_eruptions_on_io

Dica para destacar noticias: *beleza*

An exceptionally beautiful image.

eso1416 — Photo Release

A Star Cluster in the Wake of Carina

21 May 2014



Dica para destacar notícias: *beleza*

An exceptionally beautiful image.

Gemini Observatory Image Release

For Immediate Release – May 4, 2011

Gemini Images a Psychedelic Stellar Nursery



Julia I. Arias and Rodolfo H. Barbá Departamento de Física, Universidad de La Serena (Chile), and ICATE-CONICET (Argentina).

A portion of the Lagoon nebula imaged by Argentinean astronomers Julia Arias and Rodolfo Barbá using the Gemini South telescope with the Gemini Multi-Object Spectrograph.

Dica para destacar notícias: *publicação em revista de renome*

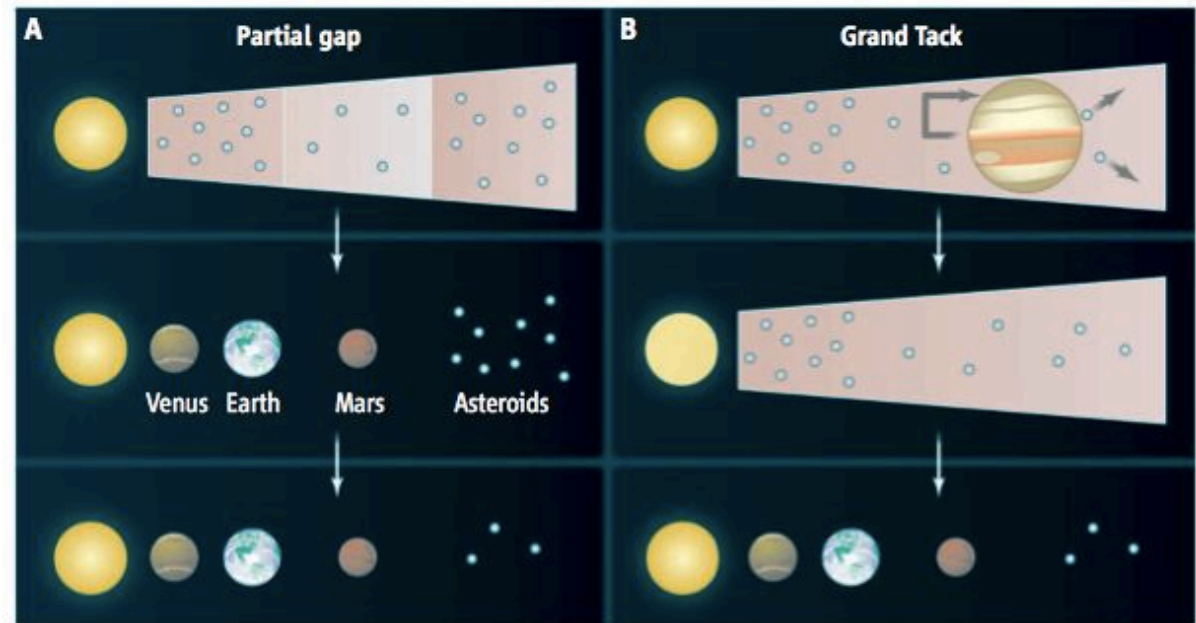
Artigos na *Nature* ou *Science*

PLANETARY SCIENCE

Forming Terrestrial Planets

John Chambers

Recent numerical models may provide a clearer understanding of the forces that shape planetary systems.



Forming Terrestrial Planets

John Chambers

Science **344**, 479 (2014);



Stunted growth. Two ways to stop Mars growing larger. (A) If the solar nebula (shown in pink) had a partial gap near Mars' orbit, the growth of solid bodies would have been less effective, reducing the final mass of Mars while allowing Earth and Venus to grow larger. Separate events then depleted the asteroid belt. (B) In the Grand Tack model, Jupiter's orbit crossed the asteroid belt twice, removing most planetary building blocks from the region beyond Earth's orbit and reducing the mass of Mars and the asteroid belt.

Dica para destacar notícias:

publicação em revista de renome

nature

International weekly journal of science

Nature 513, 526–529 (25 September 2014)

Water vapour absorption in the clear atmosphere of a Neptune-sized exoplanet

Jonathan Fraine, Drake Deming, Bjorn Benneke, Heather Knutson, Andrés Jordán, Néstor Espinoza, Nikku Madhusudhan, Ashlee Wilkins & Kamen Todorov

Nature 513, 526–529 (25 September 2014) | doi:10.1038/nature13785

Received 04 April 2014 | Accepted 07 August 2014 | Published online 24 September 2014

NATURE | NEWS

Wet exoplanet has clear skies

Neptune-sized orb is smallest alien world known to have water

Alexandra Witze

24 September 2014




Dica para destacar notícias:

publicação em revista de renome

Nature 508, 72–75 (03 April 2014) | doi:10.1038/nature13155

Received 23 December 2013 | Accepted 11 February 2014 | Published online 26 March 2014

A ring system detected around the Centaur (10199) Chariklo

F. Braga-Ribas, B. Sicardy, J. L. Ortiz, C. Snodgrass, F. Roques, R. Vieira-Martins, J. I. B. Camargo, M. Assafin, R. Duffard, E. Jehin, [J. Pollock](#), R. Leiva, M. Emilio, D. I. Machado, C. Colazo, E. Lellouch, J. Skottfelt, M. Gillon, N. Ligier, L. Maquet, G. Benedetti, P. Gomes, P. Kervella, H. Monteiro, R. Sfair  *et al.*

NATURE | NEWS

Asteroids can have rings, too

Chariklo is the first body after the giant planets found to have a ring system

Elizabeth Gibney

26 March 2014



Dica para destacar notícias: *crosslinking*

Carona usando outra notícia da mesma ou outra área

Manifestación en Madrid con el lema 'Sin ciencia no hay futuro' **ALICIA RIVERA** | Madrid | 27 SEP 2013

El anuncio de incremento presupuestario de un 1,3% en I+D para 2014 es recibido como un jarro de agua fría por muchos investigadores

Exemplo:
fazer matéria
sobre
impacto da
crise na
Astronomia
Espanhola



Dica para destacar notícias: *crosslinking*

Carona usando outra notícia da mesma ou outra área

<http://www.space.com/23234-earth-extremophiles-alien-life-search.html>

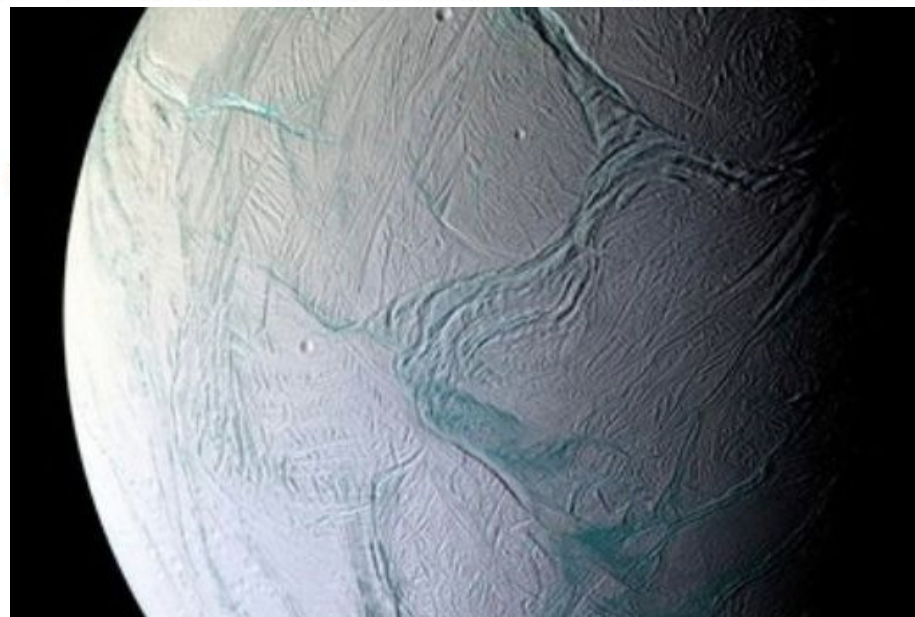
SPACE
.COM

How Earth's 'Extremophiles' Could Aid Alien Life Search

by Elizabeth Howell, SPACE.com Contributor |

October 21, 2013

Exemplo: fazer matéria sobre Laboratório de Astrobiologia da USP



Anatomy of a press release

<http://www.eso.org/public/news/eso1337/>



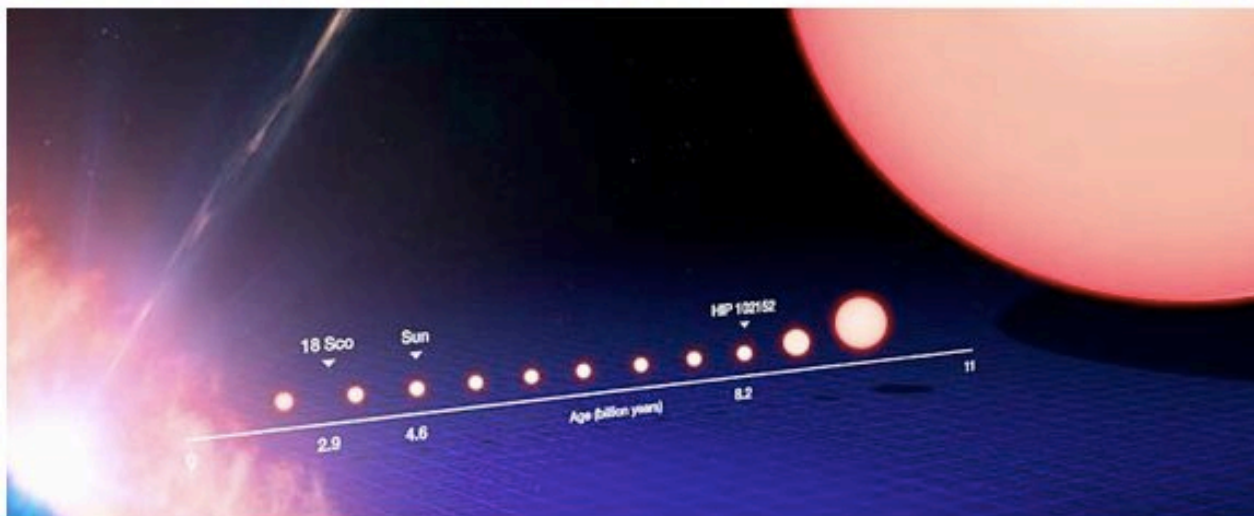
ESO Headquarters
Karl-Schwarzschild-Str. 2, 85748 Garching bei München, Germany

[eso1337](#) – Science Release

EMBARGOED UNTIL 28 August 2013 at 17:00 CEST

Oldest Solar Twin Discovered

ESO's VLT provides new clues to help solve lithium mystery



Anatomy of a press release

1. Logo



ESO Headquarters
Karl-Schwarzschild-Str. 2, 85748 Garching bei München, Germany

2. Endereço

eso1337 – Science Release

3. Release type

5. Release number

Oldest Solar Twin Discovered

ESO's VLT provides new clues to help solve lithium mystery

4. Release date:

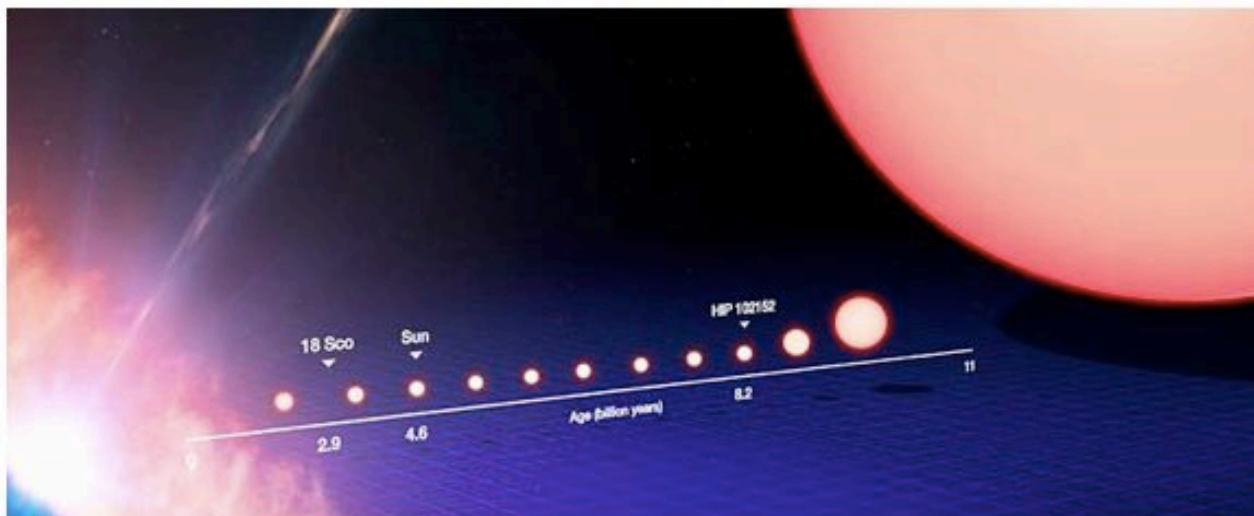
Immediately or embargo

EMBARGOED UNTIL 28 August 2013 at 17:00 CEST

6. Title

(short, precise & sexy)
É bom ter “mini-Lead”
após o título

Additional material



Anatomy of a press release

7. First paragraph. Entire results in a few sentences.

Who? What? Where? Why? When? How?

An international team led by astronomers in Brazil has used ESO's Very Large Telescope to identify and study the oldest solar twin known to date. Located 250 light-years from Earth, the star HIP 102152 is more like the Sun than any other solar twin — except that it is nearly four billion years older. This older, but almost identical, twin gives us an unprecedented chance to see how the Sun will look when it ages. The new observations also provide an important first clear link between a star's age and its lithium content, and in addition suggest that HIP 102152 may be host to rocky terrestrial planets.

8. Texto principal. Curto,

apenas alguns parágrafos (até 5 linhas por parágrafo)

Astronomers have only been observing the Sun with telescopes for 400 years — a tiny fraction of the Sun's age of 4.6 billion years. It is very hard to study the history and future evolution of our star, but we can do this by hunting for rare stars that are almost exactly like our own, but at different stages of their lives. Now astronomers have identified a star that is essentially an identical twin to our Sun, but 4 billion years older — almost like seeing a real version of the twin paradox in action [1].

9. Quotes

Jorge Melendez (Universidade de São Paulo, Brazil), the leader of the team and co-author of the new paper explains: *"For decades, astronomers have been searching for solar twins in order to know our own life-giving Sun better. But very few have been found since the first one was discovered in 1997. We have now obtained superb-quality spectra from the VLT and can scrutinise solar twins with extreme precision, to answer the question of whether the Sun is special."*

Anatomy of a press release

The team studied two solar twins [2] — one that was thought to be younger than the Sun (18 Scorpii) and one that was expected to be older (HIP 102152). They used the UVES spectrograph on the Very Large Telescope (VLT) at ESO's Paranal Observatory to split up the light into its component colours so that the chemical composition and other properties of these stars could be studied in great detail.

They found that HIP 102152 in the constellation of Capricornus (The Sea Goat) is the oldest solar twin known to date. It is estimated to be 8.2 billion years old, compared to 4.6 billion years for our own Sun. On the other hand 18 Scorpii was confirmed to be younger than the Sun — about 2.9 billion years old.

Studying the ancient solar twin HIP 102152 allows scientists to predict what may happen to our own Sun when it reaches that age, and they have already made one significant discovery. *“One issue we wanted to address is whether or not the Sun is typical in composition,”* says Melendez. *“Most importantly, why does it have such a strangely low lithium content?”*

Lithium, the third element in the periodic table, was created in the Big Bang along with hydrogen and helium. Astronomers have pondered for years over why some stars appear to have less lithium than others. With the new observations of HIP 102152, astronomers have taken a big step towards solving this mystery by pinning down a strong correlation between a Sun-like star's age and its lithium content. Our own Sun now has just 1% of the lithium content that was present in the material from which it formed. Examinations of younger solar twins have hinted that these younger siblings contain significantly larger amounts of lithium, but up to now scientists could not prove a clear correlation between age and lithium content [3]

10. Usar analogias ou explicações simples.

Espectrógrafo: (instrumento) to split up the light into its component colours

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TalaWanda Monroe (Universidade de São Paulo), the lead author on the new paper, concludes: “We have found that HIP 102152 has very low levels of lithium. This demonstrates clearly for the first time that older solar twins do indeed have less lithium than our own Sun or younger solar twins. We can now be certain that stars somehow destroy their lithium as they age, and that the Sun’s lithium content appears to be normal for its age.” [4]

A final twist in the story is that HIP 102152 has an unusual chemical composition pattern that is subtly different to most other solar twins, but similar to the Sun. They both show a deficiency of the elements that are abundant in meteorites and on Earth. This is a strong hint that HIP 102152 may host terrestrial rocky planets [5].

11. Se necessário, dar detalhes no final

Notes

[1] Many people have heard of the **twin paradox**: one identical twin takes a space journey and comes back to Earth younger than their sibling. Although there is no time travelling involved here, we see two distinctly different ages for these two very similar stars — snapshots of the Sun’s life at different stages.

[2] Solar twins, solar analogues and solar-type stars are categories of stars according to their similarity to our own Sun. Solar twins are the most similar to our Sun, as they have very similar masses, temperatures, and chemical abundances. Solar twins are rare but the other classes, where the similarity is less precise, are much more common.

[3] Previous studies have indicated that a star’s lithium content could also be affected if it hosts giant planets ([eso0942](#), [eso0118](#), [Nature paper](#)), although these results have been debated ([ann1046](#)).

[4] It is still unclear exactly how lithium is destroyed within the stars, although several processes have been proposed to transport lithium from the surface of a star into its deeper layers, where it is then destroyed.

[5] If a star contains less of the elements that we commonly find in rocky bodies, this indicates that it is likely to host rocky terrestrial planets because such planets lock up these elements as they form from a large disc surrounding the star. The suggestion that HIP 102152 may host such planets is further reinforced by the radial velocity monitoring of this star with ESO’s HARPS spectrograph, which indicates that inside the star’s habitable zone there are no giant planets. This would allow the existence of potential Earth-like planets around HIP 102152; in systems with giant planets existing close in to their star, the chances of finding terrestrial planets are much less as these small rocky bodies are disturbed and disrupted.

Anatomy of a press release

More information

12a. Dar referência do artigo

This research was presented in a paper to appear in “High precision abundances of the old solar twin HIP 102152: insights on Li depletion from the oldest Sun”, by TalaWanda Monroe et al. in the *Astrophysical Journal Letters*.

13. Crédito a toda a equipe

The team is composed of TalaWanda R. Monroe, Jorge Meléndez (Universidade de São Paulo, Brazil [USP]), Iván Ramírez (The University of Texas at Austin, USA), David Yong (Australian National University, Australia [ANU]), Maria Bergemann (Max Planck Institute for Astrophysics, Germany), Martin Asplund (ANU), Jacob Bean, Megan Bedell (University of Chicago, USA), Marcelo Tucci Maia (USP), Karin Lind (University of Cambridge, UK), Alan Alves-Brito, Luca Casagrande (ANU), Matthieu Castro, José-Dias do Nascimento (Universidade Federal do Rio Grande do Norte, Brazil), Michael Bazot (Centro de Astrofísica da Universidade de Porto, Portugal) and Fabrício C. Freitas (USP).

ESO is the foremost intergovernmental astronomy organisation in Europe and the world’s most productive ground-based astronomical observatory by far. It is supported by 15 countries: Austria, Belgium, Brazil, the Czech Republic, Denmark, France, Finland, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom. ESO carries out an ambitious programme focused on the design, construction and operation of powerful ground-based observing facilities enabling astronomers to make important scientific discoveries. ESO also plays a leading role in promoting and organising cooperation in astronomical research.

Links

12b. Link do artigo

▲ [Research paper](#)

14. Imagens, material adicional

Contacts

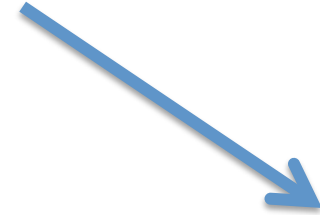
15. Contatos

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Press release para crianças



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Oldest Solar Twin Identified

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28 August 2013

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Bringing news from across the Universe to children all around the world

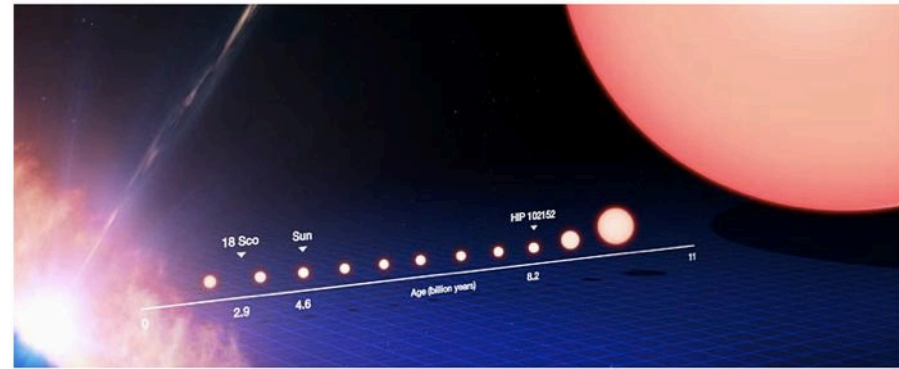


ESO press release para crianças



The Future's Bright

The Sun looks so calm and peaceful in the sky but its light is immensely powerful. It sustains all life on Earth and it can be very harmful to stay out in it for too long. To study the Sun, astronomers have built special telescopes to safely view it. But we've only had these for a few hundred years. This means we've only been studying the Sun for a tiny part of its life. Without a time machine it's really hard to study what our star was like in the past, or what it will be like in the future. To get around this, astronomers look for stars that are as similar to the Sun as possible, but at different points in their lives. We call these stars “solar twins”. This picture shows a selection of them; ranging from the youngest on the left to the oldest on the right. Studying these rare “solar twins” allows astronomers to see what our star used to be like, and what it will be like in the future.



Not very far from Earth (compared to the huge vastness of space) astronomers have just discovered the oldest solar twin ever! The star is almost double the age of the Sun: at 8.2 billion years old it is 2/3rds the age of the Universe. The star is called HIP 102152 and you can see it labelled to the right of this picture. This solar twin gives us a great opportunity to see what the Sun will be like when it gets old!

So, what will the Sun be like in 4 billion years? Well, it will be much brighter for a start. By this time the Sun will be so hot that Earth's oceans will have boiled away. The ice caps will have melted forever and snow will be ancient history. Like our neighbouring planet, Venus, Earth will become a dry, empty landscape unable to support life of any kind. But you're not planning on living that long anyway, right?

Cool fact: A final twist in the story is that both the Sun and its new solar twin show an unusually small amount of certain chemicals. These are the chemicals that are common on Earth. This is a clue that this alien star might also be the parent of several rocky planets!

Dicas finais sobre elaboração de press releases

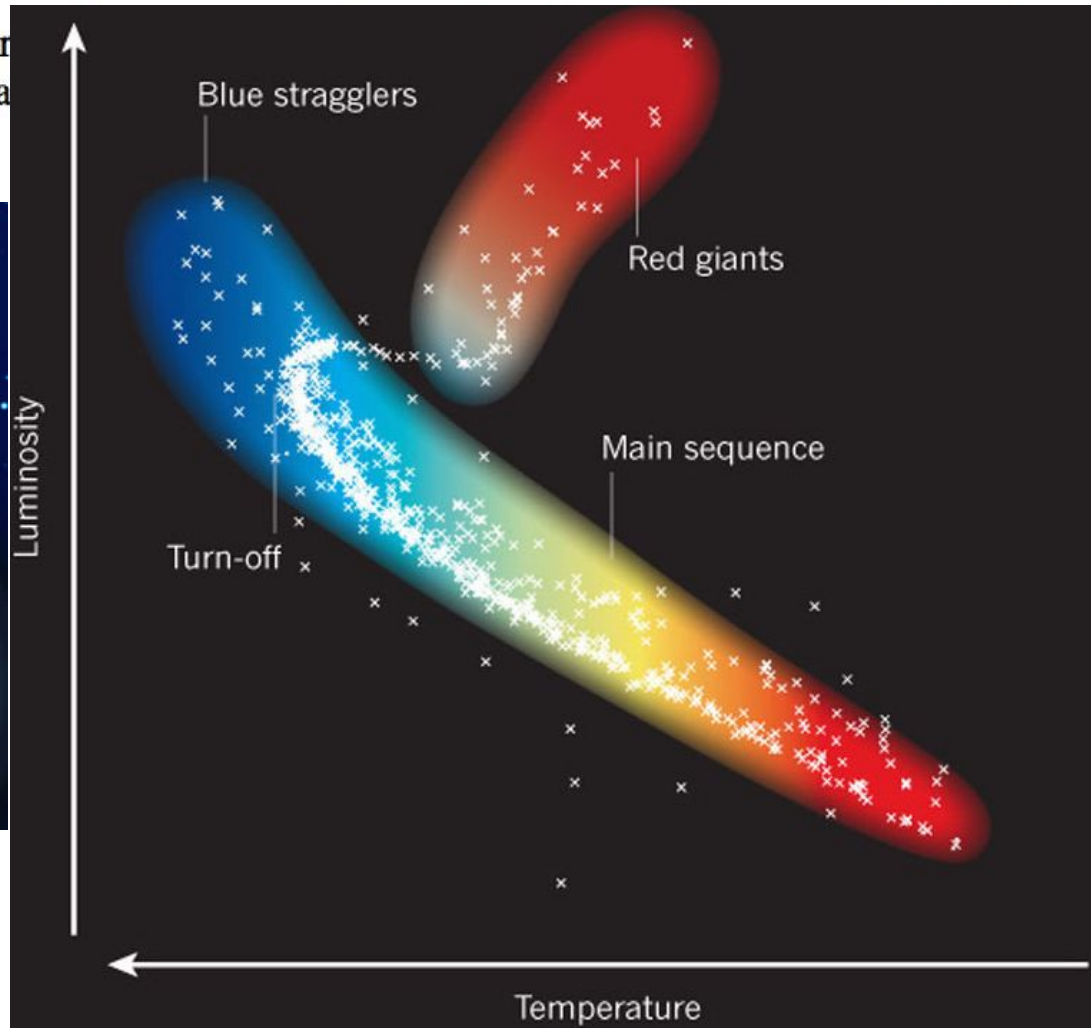
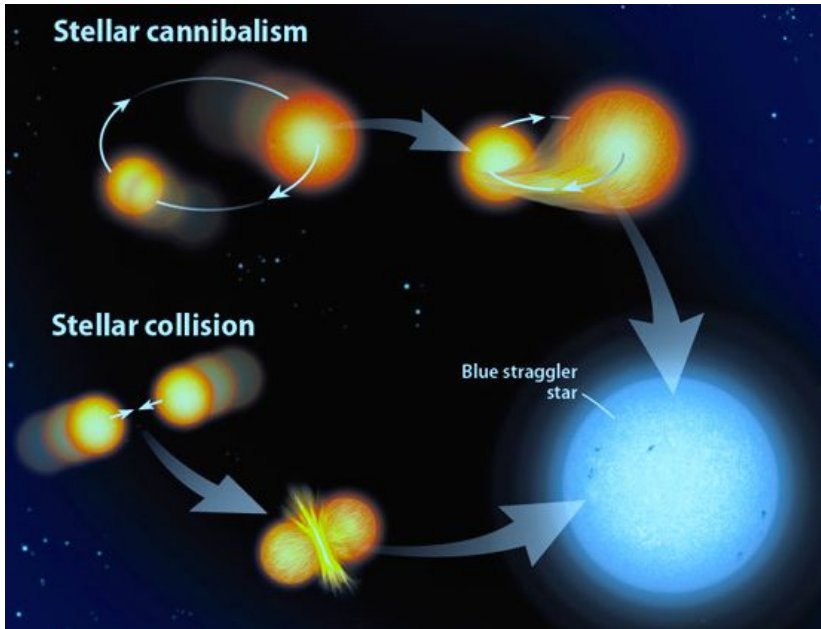
- **Existe um ou mais ângulos adequados para destacar a notícia?** Se não existir um ângulo adequado, talvez a história não seja boa para o público em geral
- Não faça *press release* de artigos em preparação ou em processo de arbitragem. **Aguarde até o artigo ser aceito.**

Homework#6. Deadline: 9/outubro

Press release sobre artigo do Lucas

HIP 10725: The First Solar Twin/Analogue Field Blue Straggler★

Lucas Schirbel¹, Jorge Meléndez¹, Amanda I. Kar
Lugaro⁶, Martin Asplund², Marcelo Tucci Maia



Homework#6. Deadline: 9/outubro

Press release sobre artigo do Lucas

HIP 10725: The First Solar Twin/Analogue Field Blue Straggler★

Lucas Schirbel¹, Jorge Meléndez¹, Amanda I. Karakas², Iván Ramírez³, Matthieu Castro⁴, Marcos A. Faria⁵, Maria Lugaro⁶, Martin Asplund², Marcelo Tucci Maia¹, David Yong², Louise Howes², and J. D. do Nascimento Jr.^{4,7}

- Incluir todas as partes do press-release mencionadas na aula (título/sub-título, primeiro parágrafo, corpo (incluindo “quotes”), referência do artigo)
- O primeiro parágrafo: 4+/-2 linhas de texto
- Corpo: 5+/-1 parágrafos, sendo que cada parágrafo pode ter 5+/-2 linhas de texto. Pelo menos mencionar 2 “quotes” nesses parágrafos.
- Pode ser incluído texto ou material adicional (figuras)