Introducción a la Astrofísica 2025

Perfil profesional - Aspectos propios de la disciplina

Clase 16: Investigación en astronomía: de la idea al paper!

Departamento de Física USACH

De la Idea al paper!

1. Tener una **idea**
2. Chequear que esa idea no haya sido explorada antes (Google, NASA ADS, ArXiv).
   O quizás si fue explorada unx la puede llevar un paso más allá!
3. Desarrollar la idea
4. Necesitas observaciones/experimentos para testear tu idea? (revisar archivos de datos)
5. Escribir una propuesta (para datos o **financiamiento**)
6. Análisis de datos. Si necesitas ayuda, búscala (invitar colaboradorxs).
7. A veces los resultados no son los esperados.
8. Preparar el paper
   8.1. Elegir una **revista** (journal). Es gratis o hay que pagar?
   8.2. Leer las instrucciones de cada revista
   8.3. Utiliza la herramienta del oficio (template de la revista en LaTeX)
9. Someter (submit) a la revista.
   9.1. Revisión? correcciones menores? mayores? rechazado!?
   9.2. En caso de aceptación o correcciones menores, se recomienda compartir con la comunidad
   a través de **ArXiv a las 20:00:00 GMT.**
10. **Paper aceptado. Compartir y comunicar!**


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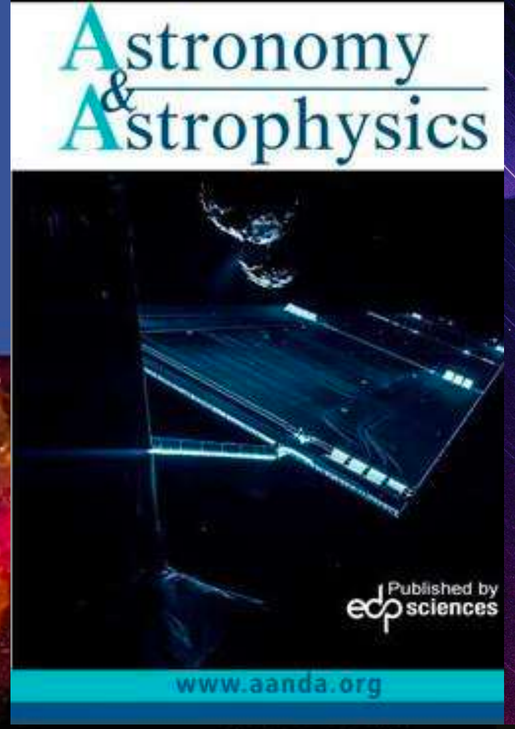
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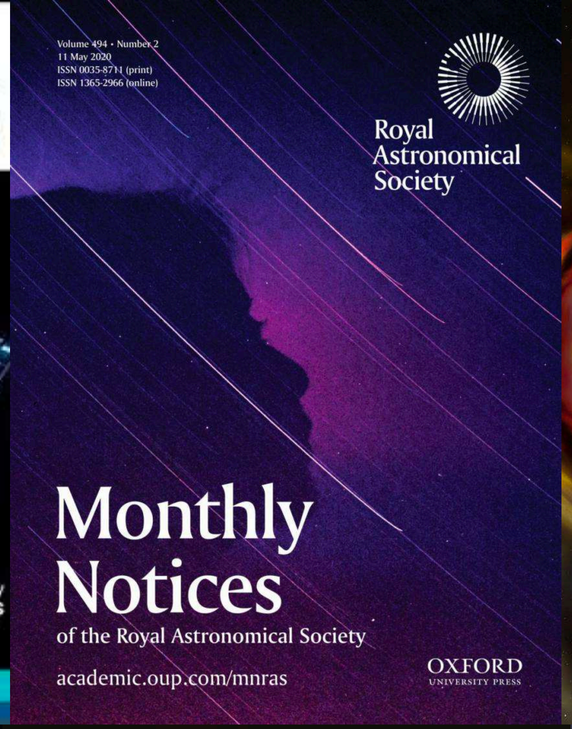
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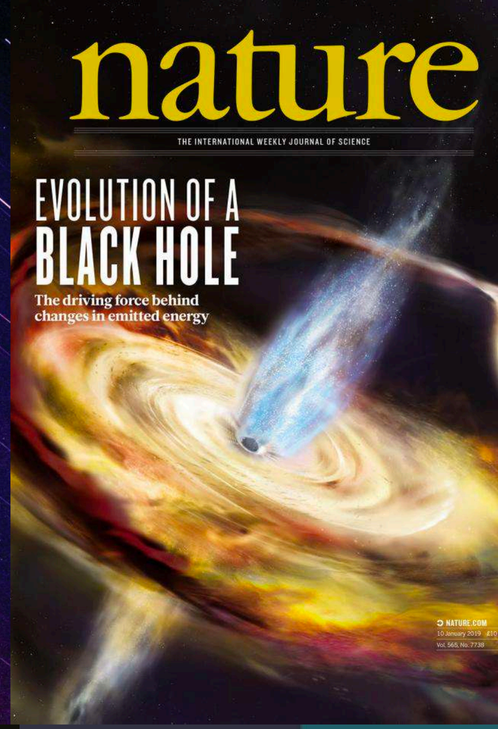
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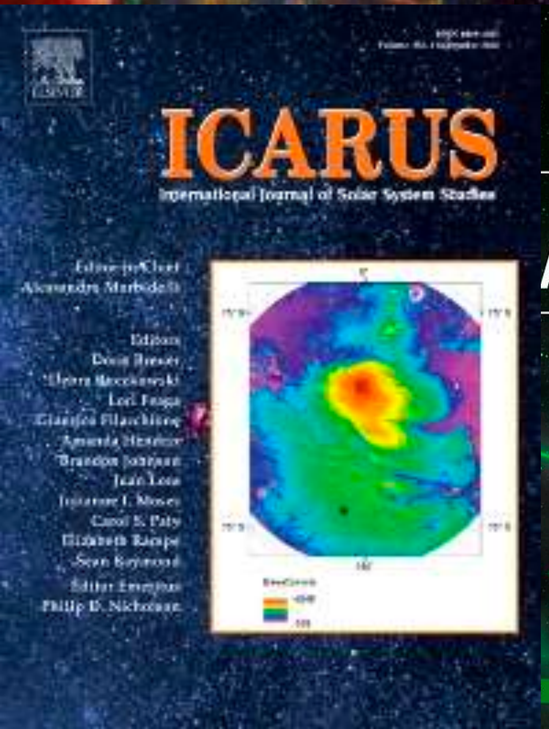
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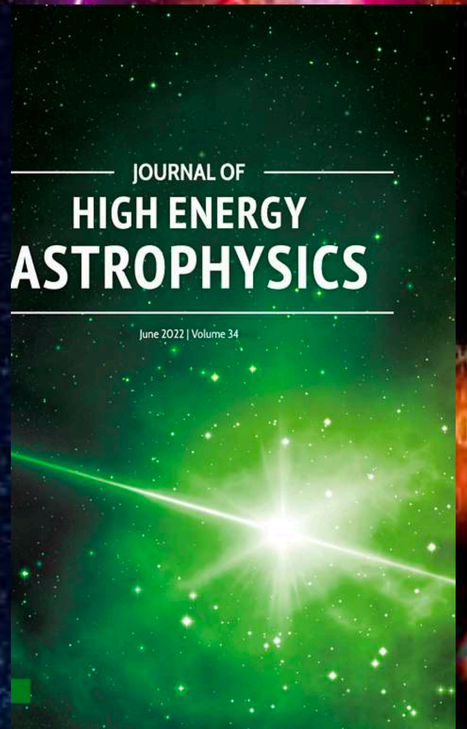
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"Unstoppable" hypersonic weapons ignite new arms race p.134
New bird species found on remote Indonesian islands pp. 140 & 167
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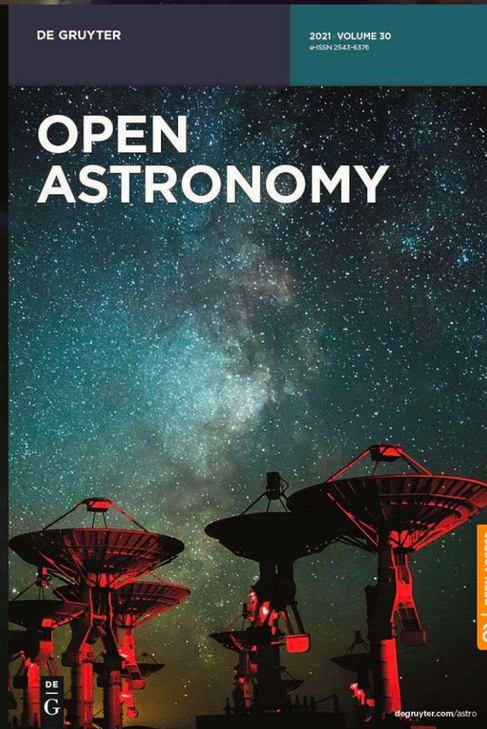
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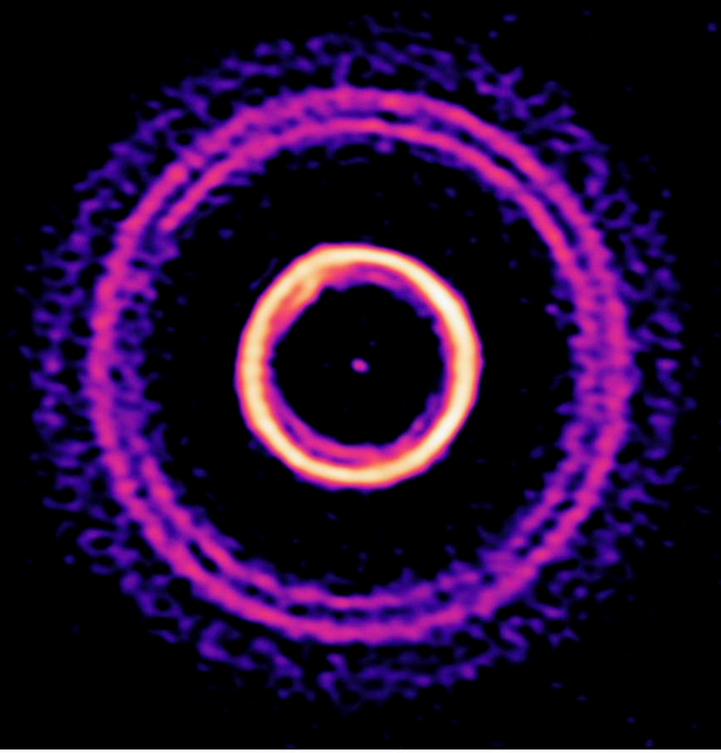


Image Releases

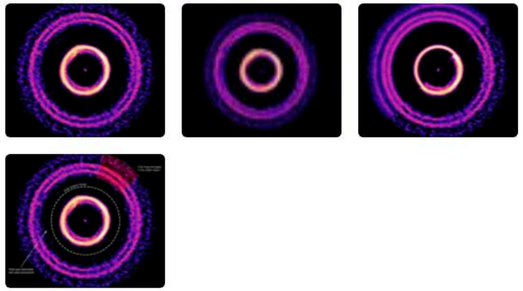
New ALMA Image Reveals Migrating Planet in Protoplanetary Disk

14 June, 2019 / Read time: **4 minutes**

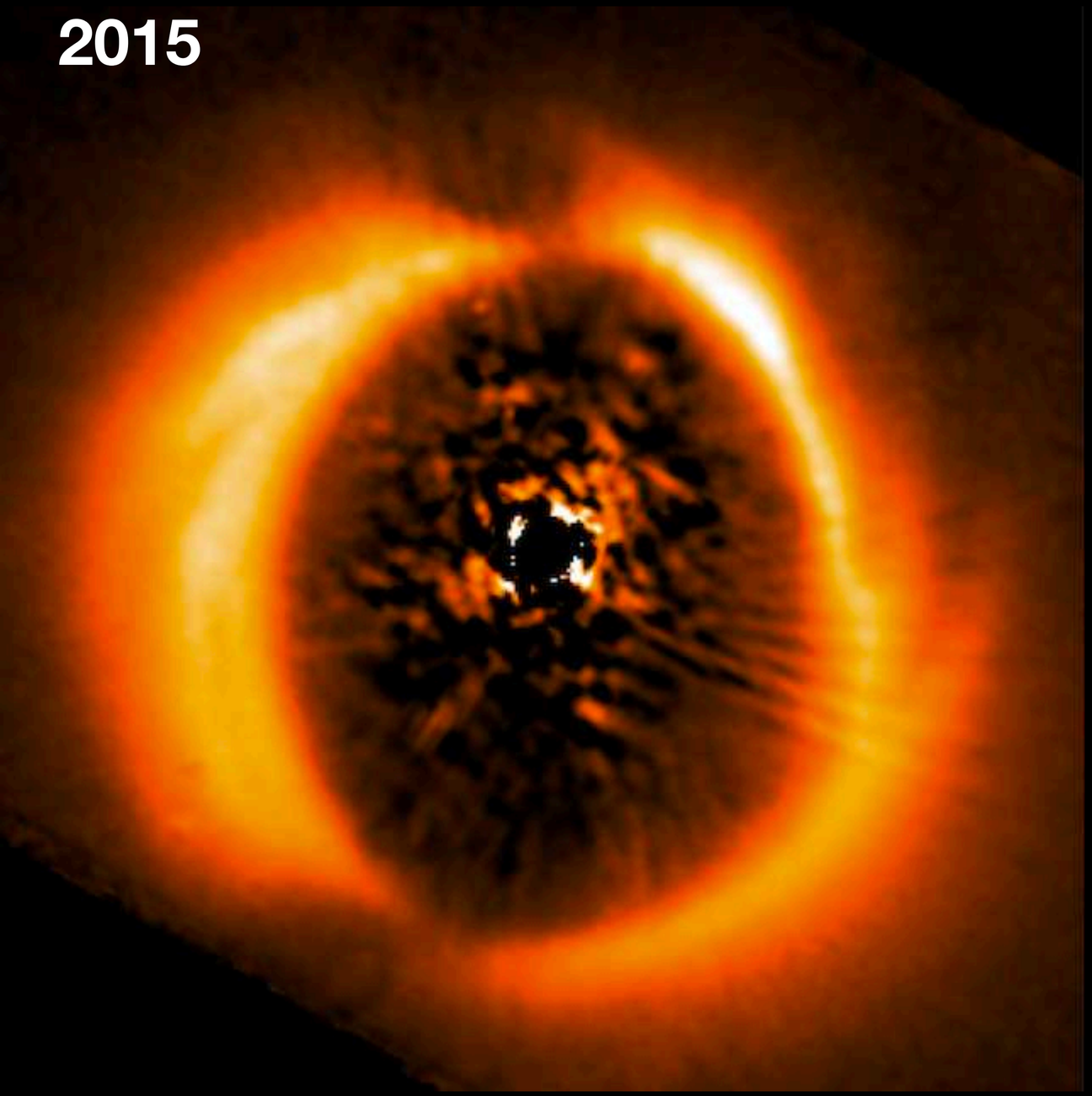
Scientific Paper

ALMA Kids Publication

Gallery

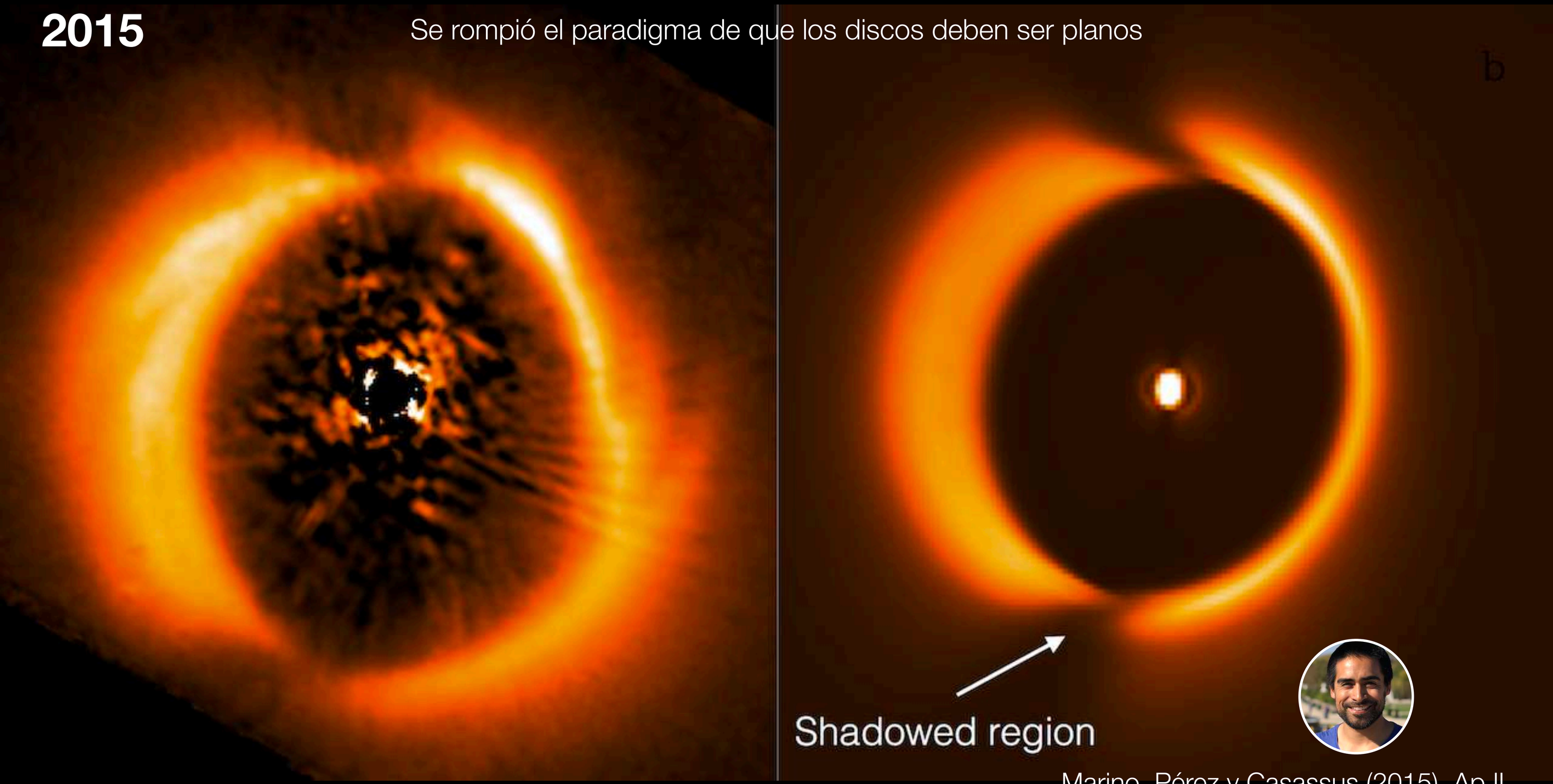


2015

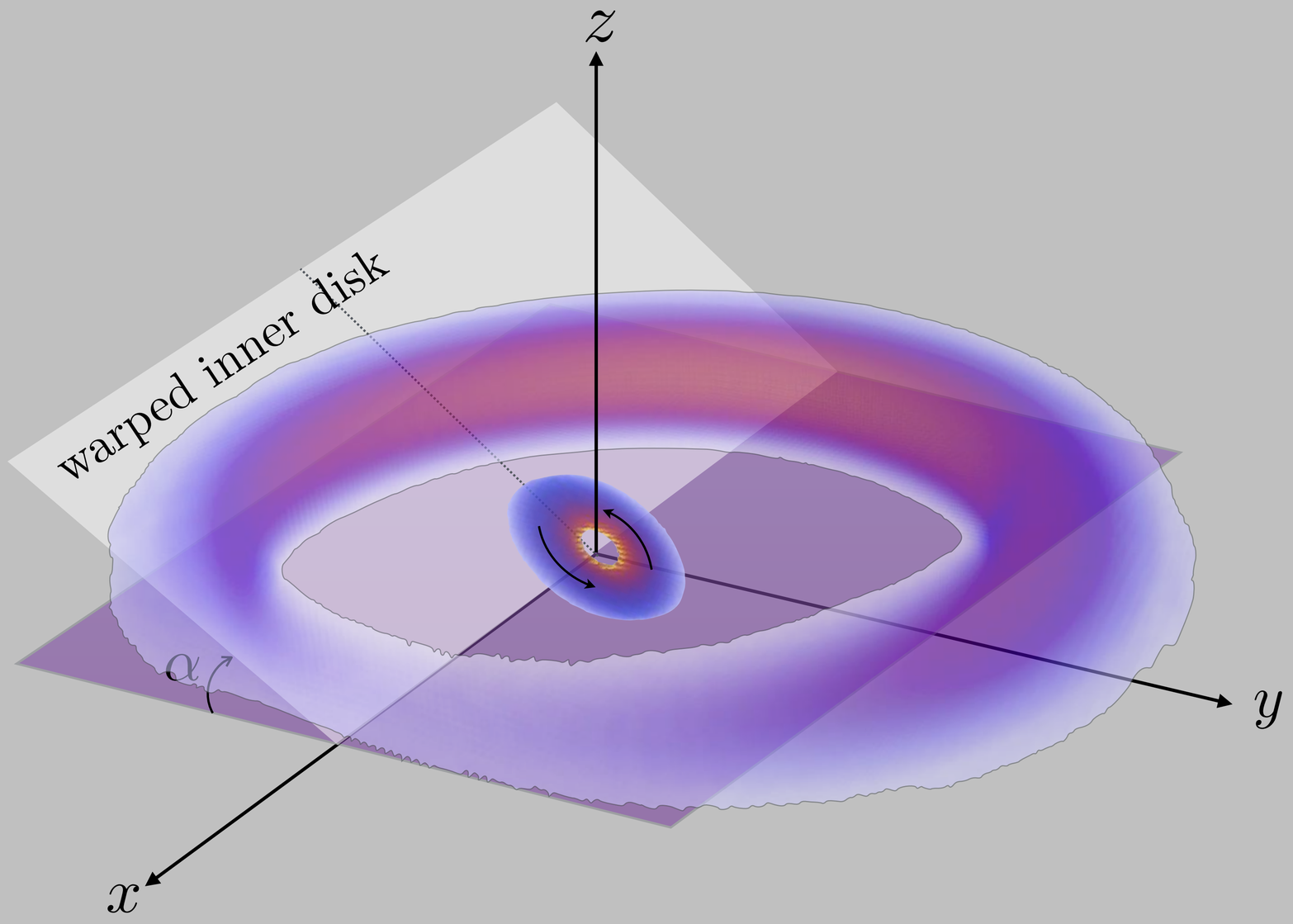


2015

Se rompió el paradigma de que los discos deben ser planos



Marino, Pérez y Casassus (2015), ApJL


z
warped inner disk
α
y
x

The Astrophysical Journal Letters, 798:L44 (4pp), 2015 January 10 doi:10.1088/2041-8205/798/2/L44

SHADOWS CAST BY A WARP IN THE HD 142527 PROTOPLANETARY DISK

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ABSTRACT

Detailed observations of gaps in protoplanetary disks have revealed structures that drive current research on circumstellar disks. One such feature is the two intensity nulls seen along the outer disk of the HD 142527 system, which are particularly well traced in polarized differential imaging. Here we propose that these are shadows cast by the inner disk. The inner and outer disk are thick, in terms of the unit-opacity surface in the *H* band, so that the shape and orientation of the shadows inform on the three-dimensional structure of the system. Radiative transfer predictions on a parametric disk model allow us to conclude that the relative inclination between the inner and outer disks is $70° \pm 5°$. This finding taps the potential of high-contrast imaging of circumstellar disks, and bears consequences on the gas dynamics of gapped disks, as well as on the physical conditions in the shadowed regions.

Key words: planet–disk interactions – protoplanetary disks – stars: individual (HD 142527)

Algunos recursos sobre revistas de astrofísica

- The SAO/NASA Astrophysics Data System (ADS)
- arXiv Astrophysics
- LANL arXiv, all science topics
- *Monthly Notices of the Royal Astronomical Society*
- *Nature Physics*
- Nature Astronomy
- *Science*
- *Astronomy and Astrophysics*
- *Astrophysics Journal*
- *American Journal of Physics*
- *Annalen der Physik*
- Icarus, Journal of Solar System Studies
- Physical Review Letters
- SpringerLink, Physics and Astronomy
- New Scientist
- EurekAlert; Space and Planetary Science
- PhysOrg, Space and Earth