



PRESS RELEASE

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1969-2009: *Astronomy & Astrophysics* celebrates its 40th year

This week, the international research journal *Astronomy & Astrophysics* publishes a special issue to mark its 40th anniversary. This special issue reprints 40 influential articles published in the past 40 years, together with commentaries that highlight their context and impact in astrophysics.

Astronomy & Astrophysics celebrates its 40th anniversary in 2009, which is coincidentally also the international year of astronomy. This week, *A&A* comes out with a special issue that reprints 40 influential articles published in the past 40 years. Each of the selected articles is published together with a commentary highlighting the context of its publication and the advances it has continued bringing to astrophysics.

A&A was created in 1969 as the merging of several European national journals in the general spirit that had led to the foundation of the European Union, followed by several scientific European institutes in the 1960's. The first European astronomical institution, now a leading actor in the global field, the European Southern Observatory (ESO) was founded in 1964. In the wake of ESO's birth, discussions started among European astronomers about creating an international journal to publish the results of their research. At that time, they were frustrated by how little impact their work had outside their own countries, where several national journals were devoted to publishing national research in each country's own language. In contrast, their American colleagues already had at their disposal two journals, *the Astrophysical Journal (ApJ)* and *the Astronomical Journal (AJ)*, for communicating their research to the entire US community. Dutch astronomer Stuart Pottasch and Frenchman Jean-Louis Steinberg were the leading advocates for establishing the new journal. *A&A* was closely associated to the young ESO that brought (and still provides) administrative support and owns its copyright.

Being created as the merging of national journals has meant that *A&A* has a unique organization among research publications. It is handled by astronomers of the countries that sponsor the journal's operations and form the *A&A* consortium. In 1969, the original consortium included six European countries (France, Germany, Belgium, Denmark, Sweden, and the Netherlands), so that as Europe expanded, so also the number of sponsoring countries. Forty years later, the *A&A* consortium is no longer restricted to Europe, because Brazil, Chile, and Argentina have become members and joined the *A&A* Board of Directors, making a total of 23 sponsoring countries. In forty years, *A&A* has grown to become the second-largest astronomy journal in terms of volume (with 18,000 published pages per year). It presents the work of researchers from 60 countries from Albania to Venezuela, with Germany and France the largest contributors.

This 40th anniversary of the journal has been a major interest of the Board of Directors and the editorial team who together wanted to honor *A&A* authors whose work has strongly influenced astrophysics. It was then decided to reprint 40 articles and to ask worldwide specialists to comment on them, explaining their context and impact in the field. As one can imagine, selecting the 40 "best" articles was not an easy task. The *A&A* Editors finally chose to stay with an objective criterion and to reprint those articles that are cited the most in the

scientific literature. Of course, any criterion of that kind has drawbacks. This one disadvantages the papers published in the past few years because they have not yet had time to be read and cited often. All of the selected articles were published before 2001, with the only notable exception being the article on the SuperNova Legacy Survey published in 2006 (see [earlier A&A press release](#)).

One striking feature of this selection is its diversity. Papers range from insightful theoretical studies of astrophysical processes (structure and properties of accretion disks, tidal effects in binary stars, studies of highly energetic processes, atomic data computations) to large-scale observational studies (Galactic structure, surveys of nearby binary stars and distant supernovae, radio surveys). Many of the selected articles deal with the European space telescopes (Hipparcos, ROSAT, XMM-Newton, etc.) and their results. The selection also illustrates a major change in the way astronomers work by showing a clear tendency toward large groups of co-authors over the past few decades. There are only six single-authored papers among the 20 published from 1970 to 1983, but none afterwards, while works authored by large international collaborations first appear in 1996.

What is missing in this selection of articles is solar physics, probably because the solar physics community is not very large. But it is likely that, if the selection criteria are similar, the 50th anniversary issue will include high-impact articles on solar granulation among other topics. The 40th anniversary issue contains no article on extrasolar planets, because this is a recent field of research. But the precursor paper (by [Duquennoy and Mayor](#)) that paved the way for the first exoplanet's discovery is among the 40 selected papers, and it is likely that the 50th anniversary issue will include some of the outstanding articles we are currently publishing on planet discovery and formation.



Figure 1. Left: The first issue of A&A in January 1969. Right: An issue of A&A published in 2009

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[Access to the special issue](#)

Contacts:

Dr. Claude Bertout, A&A Chief Editor

Dr. Jennifer Martin, Press officer

Astronomy & Astrophysics
 61, avenue de l'Observatoire, 75014 Paris, France
 Email: [aanda.paris \(at\) obspm.fr](mailto:aanda.paris@obspm.fr) - Phone: +33 (0)1 43 29 05 41

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