Checking the Literature

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Reasons

• Don’t reinvent the wheel
• Acknowledge those that came before
• Learn what is known about an object
• Look for new ideas
• Learn how to write
• Get your paper published!
Referee

• Will check references for accuracy
• Will use references for learning about a subject
• Expects good references; otherwise, suspects your research
Two approaches

• Looking for basic information about an object (simbad, vizier, vsx, maillists)
• Looking for research done on an object (simbad, ADS, journals, maillists)
Basic searching - Simbad

- Best starting point for individual objects
- Not perfect - many GSC stars, for example, not catalogued. More up to date info often located elsewhere
- [http://simbad.u-strasbg.fr/Simbad](http://simbad.u-strasbg.fr/Simbad)
- Mirror at [http://simbad.harvard.edu/Simbad](http://simbad.harvard.edu/Simbad)
- Also check [http://www.aavso.org/vsx/](http://www.aavso.org/vsx/)
**SIMBAD: Query by identifier, coordinates or reference code**

**First announcement:** Simbad 4 is arriving.

1. **Enter an identifier, coordinates or a reference code:**

   Examples:
   - Sirius, M 31, 12 30 45 +10 20, 1996A&A...315..33K
   - How to write an identifier can be found in the dictionary of nomenclature.
   - UAI format can also be used (Ex: uai 1230+08 Object-type)

   a. **For identifiers**
      you can choose to query:
      - only this object

   b. **For coordinate and around object queries,** define a radius:
      - 10 arc min

   c. **For coordinate queries,** define the input system:
      - epoch:
      - equinox:

   [SUBMIT] [CLEAR]

2. **Optional output options:**

   a. **Lists should contain**
      - all objects.

   b. **# of measurements**
      - from 1983 to 2006

   c. **Display coordinates**
      - Coordinate system:
      - Equinox:
      - Epoch:

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Object query: simbad search W Vir

Your identifier (W Vir) is translated to: V* W V1R

Available data: Basic data, Identifiers, Plot & image tools, Bibliography, Measurements, External archives

Basic data: HD 116802 -- Variable Star of W Vir type

FK5 2000.0 coordinates 13 26 01.99 -03 22 43.4 [13.91 7.71 101]
FK4 1950.0 coordinates 13 23 26.87 -03 07 09.0 [83.64 43.69 97]
Galactic coordinates 319.57 -58.57
Proper motion (mas/yr) [error ellipse] -3.58 1.78 [1.65 86.86 97] A 1997A&A...323L..49P
B magn, V magn, Peculiarities 10.33 9.69
Spectral type F0Ib...
Radial velocity (v/Km/s) or Redshift (z) -66.5 [2] B 1995NGCM..C....0W

Identifiers (15):

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Plots and image tools:

Query and Plot around radius 10 arc min.

Aladin Previewer

Aladin Java Applet

References: 91 from 1983 to 2006

display references from 1983 to 2006

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display All measurements

External archives:

- Catalogue information from VizieR:
  - V* W V1R
  - HD 116802
  - GSC 40962-00950
  - HIP 65331
  - PM 108502
  - TYC 3562-550-1

Done
Click on a reference to retrieve the related data or select some references and press the Fetch references button.

- 2005A&A...442..595R  The evolutionary status of the bright high-latitude supergiant HD 190390. REIJNERS M., CUTPERS J.
- 2005MNRAS.357.233R  High-resolution spectroscopy of the high galactic latitude RV Tauri star CE Virgini. RAO N.K., REDDY B.E.
- 2005MNRAS.362.331M  Dynamical phasing of Type II Cepheids. MCSAVENY J.A., POLLARD K.R., COTTRELL P.L.
- 2004A&A...420..423F  The structure of radiative shock waves. V. Hydrogen emission lines. FADEYEV Y.A., GILLET D.
- 2004AJ..128.2988S  The spectra of type II cepheids. III. The H(α) line and helium emission in long-period stars. SCHMIDT E.G., JOHNSTON D., LEE K.M., LAGAN S., NEWMAN P.P., SNEDDEN S.A.
- 2004IBVS.5489....1G  Six new southern cepheids. GREAVES J., WILS P., VAN CAUTEREN P.
- 2002PASP..114.1689W  The cepheids of population II and related stars. (Invited review). WALLERSTEIN G.
- 2001AJ..122.2017S  Polarimetry of 167 cool variable stars: data. SERKOWSKI K., SHAWL S.J.
- 2001BaA&A..30..589A  Stars with the largest Hipparcos photometric amplitudes. ADEMAN S.J.
- 2000A&A...353..593A  Nonlinear model pulsations for long-period Cepheids. I. Galactic Cepheids. AIKAWA T., ANTONELLO E.
- 2000AJ...120.2865B  Kinematics of metal-poor stars in the Galaxy. II. Proper motions for a large nonkinematically selected sample. BEERS T.C., CHIBA M., YOSSIDI Y., PLATAS I., HANSON R.B., FUCHS B., ROSSI S.
- 2000A&A...358..79W  The first 50 years at Palomar, 1949-1999 another view : instruments, spectroscopy and spectrophotometry and the infrared. WALLERSTEIN G., OKE J.B.
- 2000JAVSO..29..14P  Period changes in population II cepheids: TX Del and W Vir. PERCY I.B., HÖSSLY
Astrophysics Data System

- [http://adsabs.harvard.edu](http://adsabs.harvard.edu)
- [http://adsabs.harvard.edu/abstract_service.html](http://adsabs.harvard.edu/abstract_service.html)
- Contains both recent and historical literature
- Recent literature often has restrictions
- Overcome restrictions via preprint, or direct author query
The NASA Astrophysics Data System

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Exact name matching  Require author for selection

OK / AND / simple logic

Publication Date between

(Object name/position search)

Require object for selection

(Combine with:  OR  AND)

Enter Title Words

(Combine with:  OR  AND  simple logic

Enter Abstract Words/Keywords

(Combine with:  OR  AND  simple logic

Boolean logic)

Return 100 items starting with number 1

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A bibliographic entry
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- General Relativity and Quantum Cosmology (gr-qc new, recent, abs, find)
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- High Energy Physics - Lattice (hep-lat new, recent, abs, find)
- High Energy Physics - Phenomenology (hep-ph new, recent, abs, find)
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- Nuclear Experiment (nucl-ex new, recent, abs, find)
- Nuclear Theory (nucl-th new, recent, abs, find)
- Physics (physics new, recent, abs, find)
- Quantum Physics (quant-ph new, recent, abs, find)

Mathematics

- Mathematics (math new, recent, abs, find)
- Nonlinear Sciences (nlin new, recent, abs, find)
- Computer Science

Quantitative Biology
Astrophysics

astro-ph new abstracts, Thu, 27 Apr 06 00:00:08 GMT
0604527 -- 0604550 received

astro-ph/0604527 [abs, ps, pdf, other]
Title: Constraints on the Nature of Jets from kpc Scale X-ray Data
Authors: D. E. Harris (SAO), H. Krawczynski (Washington University in St. Louis)
Comments: 5 pages; 3 figures; latex. This paper is based on a poster contribution to the meeting. "Triggering Relativistic Jets", held in Cozumel, MX at the end of March 2005 and will be published via a CD distributed with a special issue of Revista Mexicana de Astronomia y Astrofisica, Serie de Conferencias, eds. W.H. Lee & E. Ramirez-Ruiz, 2006

Motivated by the large number of jets detected by the Chandra X-ray Observatory, and by the inverse Compton X-ray emission model (IC/CMB) for relativistic jets, we revisit two basic questions: If the medium that carries the jet's energy consists of hot electrons, can we use the physical length of the jet to constrain the maximum electron energy? and Why do jets have knots? Based on the two non-thermal emission processes for X-rays from jets, we consider constraints on the jet medium and other properties from these two simple questions. We argue that hot pairs cannot be the dominant constituent of the medium responsible for the jet's momentum flux and that some mechanisms for producing fluctuating brightness along jets (rather than a monotonic decreasing intensity) are precluded by observed jet morphologies.

astro-ph/0604528 [abs, ps, pdf, other]
Title: Minimal Noncanonical Cosmologies
Authors: Gabriela Barenboim, Joseph D. Lykken
Comments: 20 pages, 5 figures, 3 tables

We demonstrate how much it is possible to deviate from the standard cosmological paradigm of inflation-assisted LambdaCDM, keeping within current observational constraints, and without adding to or modifying any theoretical assumptions. We show that within a minimal framework there are many new possibilities, some of them wildly different from the standard picture. We present three illustrative examples of new models, described phenomenologically by a noncanonical scalar field coupled to radiation and matter. These models have interesting implications for inflation, quintessence, reheating, electroweak baryogenesis, and the relic densities of WIMPs and other exotics.

astro-ph/0604529 [abs, ps, pdf, other]
Title: Galactic Warps Induced By Cosmic Infall
Authors: Juntao Shen (UT Austin, Rutgers), J. A. Sellwood (Rutgers)
Comments: Accepted for the publication of MNRAS; 15 pages, including 1 color and 18 blackwhite figures. A movie and the high resolution version are available at this http URL

Recent ideas for the origin and persistence of the warps commonly observed in disc galaxies have focused on cosmic infall. We present N-body simulations of an idealized form of cosmic infall onto a disc galaxy and obtain a warp that closely resemble those observed. The inner disc sits remarkably rigidly, indicating strong cohesion due to self-gravity. The line of nodes of the warp inside $R_L/2.65 \sim 4.5 \, (dL/\delta L)$ is straight, while that beyond $R_L/2.65 \sim 4.5 \, (dL/\delta L)$ generally forms a loosely-wound, leading spiral in agreement with Briggs's rules. We focus on the mechanism of the warp and show that the leading spiral arises from the torques from the misaligned inner disc and its associated inner olate halo. The fact that the line of nodes of most warps forms a leading spiral imply that the disc mass is significant in the centre. If the line of nodes can be traced to very large radii in future observations, it may reveal information on the mass distribution of the outer halo. The warp is not strongly damped by the halo because the precession rate of the inner disc is slow and the inner halo generally remains aligned with the inner disc. Thus even after the imposed quadrupolar perturbation is removed, the warp persists for a few Gyr, by which time another infall event can be expected.

astro-ph/0604530 [abs, ps, pdf, other]
Title: Evidence for TP-AGB stars in high redshift galaxies, and their effect on deriving stellar population parameters
Authors: C. Mannott, E. Daddi, A. Renzini, A. Cimatti, M. Dickinson, C. Papovich, A. Pasquali, N. Pirzkal
Comments: 14 pages, 10 figures, 3 tables, submitted to the Astrophysical Journal

We explore the effects of stellar population models on estimation star formation histories, ages and masses of high redshift galaxies. The
VizieR

- http://vizier.u-strasbg.fr/viz-bin/VizieR
- http://vizier.cfa.harvard.edu/vizier/
- Best source for published data
This Kohonen Self-Organizing Map is based on a neural network analysis of the keywords associated to the catalogues (see Pointz et al., 1998A&A...330..183P; and Lesteven et al., 1999A&A...345..355L).

Each dot marks a map area; colour denotes the density or the clustering tendency of the documents; deep blue areas have the lowest density. Just click any area on the map to get the corresponding list of catalogues found in that area.

Other Installations of VizieR
Some other installation of VizieR could be closer to you, and answer faster:
- CDS, France
- Tokyo, Japan
- IUCAA, India
- CADC, Canada
- Cambridge, UK
- UKIRT-Hawaii, USA
- INASAN, Russia
- Beijing Obs., China

http://www.ukirt.jach.hawaii.edu/vizier/
Specific catalogs

- Downes CV catalog
- Google works wonders
McMaster Cepheid Photometry and Radial Velocity Data Archive

This site contains tables of published photometric data for galactic and extragalactic Cepheid variables. These data are provided with the assistance and permission of the authors. All data files are ASCII. Additional files will be added as time allows. Full descriptions of the original data may be found in the cited papers.

For mean properties, positions, reddenings and cross-references, we highly recommend that you consult the DDO Galactic Cepheid Database. These two sites are complementary.

Click here to try out the MACHO Project Interactive Cepheid P-L Page.

Click here for information on known Milky Way, LMC, and SMC beat (double-mode) Cepheids.

Galactic Cepheids

- Classical Cepheids (Type I)
- BL Her, W Vir Cepheids (Type II)

Extragalactic Cepheids

- LMC
- SMC
- GR 8
- NGC 300

- HST Key Project Archives
  - M81
  - M101
  - M100

Database Statistics

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• ASAS
• NSVS
• OGLE/MACHO
• SDSS
• TASS
• AAVSO database!
Variable-star journals

- IBVS
- JAAVSO
- Peremennye Zvezdy
  http://www.astronet.ru/db/varstars/
Other resources

• O-C gateway
• Web pages of individual researchers
• Maillists (cvnet, baavss, vsnet, etc.)
• google
Summary

• You *must* do literature searching before writing a paper
• It is easy in the Internet Era
• You will learn from the past
• You will become a better researcher