The Magellanic Clouds Newsletter
An electronic exchange on Magellanic Clouds research

Edited by Bryan C. Dunne
Co-Editors Eva K. Grebel and You-Hua Chu
mcnews@astro.uiuc.edu

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Contents

6 Abstracts of Refereed Papers 2
5 Abstract of a Non-Refereed Paper 6
4 Meeting Announcements 8
1 Job Posting 11
Recent astro-ph Listings 12

Letter From The Editor

Dear Colleagues,

The Magellanic Clouds Working Group is pleased to bring you issue 72 of the Magellanic Clouds Newsletter. In this issue, we present 11 submitted abstracts, 4 announcements for upcoming conferences, a job posting at Lowell Observatory, and a collection of recent astro-ph listings of potential interest to Magellanic Clouds researchers. As always, this month’s issue is available from the MC News Website in a variety of formats (PDF, HTML, PostScript, and TeX).

Best Regards,
Bryan Dunne
Editor, MC News
Abstracts of Refereed Papers

A Neutral Hydrogen Survey of the Large Magellanic Cloud:
Aperture Synthesis and Multibeam Data Combined

Surgeon Kim (1), Lister Staveley-Smith (2), Michael A. Dopita (3), Robert J. Sault (2),
Kenneth C. Freeman (3), Youngung Lee (4), and You-Hua Chu (5)

(1) Five College Radio Astronomy Observatory, USA
(2) Australia Telescope National Facility, Australia
(3) Mount Stromlo & Siding Spring Observatories, Australia
(4) Korea Astronomy Observatory, Korea
(5) University of Illinois at Urbana-Champaign, USA

Recent H I surveys of the Large Magellanic Cloud (LMC) with the Australia Telescope Compact
Array and the Parkes multibeam receiver have focused, respectively, on the small-scale (< 20') structure
of the interstellar medium (ISM) and the large-scale (> 1') structure of the galaxy. Using a
Fourier-plane technique, we have merged both data sets, providing an accurate set of images of the
LMC sensitive to structure on scales of 15 pc upward. The spatial dynamic range (2.8 orders of magni-
tude), velocity resolution (1.619 km s⁻¹), brightness temperature sensitivity (2.4 K), and column
density sensitivity (7.2 x 10¹⁸ cm⁻² per 1.649 km s⁻¹ channel) allow for studies of phenomena ranging
from the galaxy-wide interaction of the LMC with its close neighbors to the small-scale injection of
energy from supernovae and stellar associations into the ISM of the LMC. This paper presents the
merged data and size spectrum of H I clouds, which is similar to the typical size spectrum of the holes
and shells in the H I distribution. The H I clouds in the LMC have been identified by defining a cloud
to be an object composed of all pixels in right ascension, declination, and velocity that are simply
connected and that lie above the threshold brightness temperature.

Comments: ApJS October 10 issue
e-mail: skim@fcrao1.astro.umass.edu

High speed outflows driven by the 30 Doradus starburst

M.P. Redman(1), Z.A. Al-Mostafa(2,3), J. Meaburn(3), M. Bryce(3)

(1) Department of Physics and Astronomy, University College London, UK
(2) Jodrell Bank Observatory, University of Manchester, UK
(3) King Abdulaziz City for Science and Technology, Astronomy and Geophysics Research Institute, Saudi Arabia

Echelle spectroscopy has been carried out towards a sample region of the halo of the giant H II
region 30 Doradus in the Large Magellanic Cloud. This new kinematical data is the amongst the
most sensitive yet obtained for this nebula and reveals a wealth of faint, complex high speed features.
These are interpreted in terms of localised shells due to individual stellar winds and supernova explo-
sions, and collections of discrete knots of emission that still retain the velocity pattern of the giant
shells from which they fragmented. The high speed velocity features may trace the base of the superwind that emanates from the 30 Doradus starburst, distributed around the super star cluster R136.

Comments: Accepted by MNRAS
e-mail: mpr@star.ucl.ac.uk

The Discovery of a Twelfth Wolf-Rayet Star in the Small Magellanic Cloud

Philip Massey(1), K.A.G. Olsen(2), J. Wm. Parker(3)

(1) Lowell Observatory, AZ, USA
(2) Cerro Tololo Inter-American Observatory, NOAO, Chile
(3) Department of Space Studies, Southwest Research Institute, CO, USA

We report the discovery of a relatively faint \((V = 15.5)\) early-type WN star in the SMC. The line strength and width of He II \(\lambda 4686\) emission is similar to that of the other SMC WNs, and the presence of N V \(\lambda 4603, 19\) emission (coupled with the lack of N III) suggests this star is of spectral type WN3-4.5, and thus is similar in type to the other SMC WRs. Also like the other SMC WN stars, an early-type absorption spectrum is weakly present. The absolute magnitude is comparable to that of other (single) Galactic early-type WNs. The star is located in the Hodge 53 OB association, which is also the home of two other SMC WNs. This star, which we designate SMC-WR12, was actually detected at a high significance level in an earlier interference-filter survey, but the wrong star was observed as part of a spectroscopic followup, and this case of mistaken identity resulted in its Wolf-Rayet nature not being recognized until now.

Comments: Accepted by PASP (scheduled for November 2003 issue)
e-mail: Phil.Massey@lowell.edu

The Evolution of Massive Stars. I. Red Supergiants in the Magellanic Clouds

Philip Massey (1), K.A.G. Olsen (2)

(1) Lowell Observatory, AZ, USA
(2) Cerro Tololo Inter-American Observatory, NOAO, Chile

We investigate the red supergiant (RSG) content of the SMC and LMC using multi-object spectroscopy on a sample of red stars previously identified by \(BVR\) CCD photometry. We obtained high accuracy \((<1 \text{ km s}^{-1})\) radial velocities for 118 red stars seen towards the SMC and 167 red stars seen towards the LMC, confirming most of these (89% and 95%, respectively) as red supergiants (RSGs). Spectral types were also determined for most of these RSGs. We find that the distribution of spectral types is skewed towards earlier type at lower metallicities: the average (median) spectral type is K5-7 I

3
in the SMC, M1 I in the LMC, and M2 I in the Milky Way. Our examination of the Kurucz Atlas 9 model atmospheres suggests that the effect that metallicity has on the appearance on the TiO lines is probably sufficient to account for this effect, and we argue that RSGs in the Magellanic Clouds are 100°C (LMC) and 300°C (SMC) cooler than Galactic stars of the same spectral types. The colors of the Kurucz models are not consistent with this interpretation for the SMC, although other models (e.g., Bessel et al.) show good agreement. A finer grid of higher-resolution synthetic spectra appropriate to cool supergiants is needed to better determine the effective temperature scale. We compare the distribution of RSGs in the H-R diagram to that of various stellar evolutionary models; we find that none of the models produce RSGs as cool and luminous as what is actually observed. This result is much larger than any uncertainty in the effective temperature scale. We note that were we to simply adopt the uncorrected Galactic effective scale for RSGs and apply this to our sample, then the SMC's RSGs would be under luminous compared to the LMC's, contrary to what we expect from stellar evolution considerations. In all of our H-R diagrams, however, there is an elegant sequence of decreasing effective temperatures with increasing luminosities; explaining this will be an important test of future stellar evolutionary models. Finally, we compute the blue-to-red supergiant ratio in the SMC and LMC, finding that the values are indistinguishable (~ 15) for the two Clouds. We emphasize that “observed” B/R values must be carefully determined if a comparison to that predicted by stellar models is to be meaningful. The non-rotation Geneva models overestimate the number of blue-to-red supergiants for the SMC, but underestimate it for the LMC; however, given the inability to produce high luminosity RSGs in the models that match what is observed in the H-R diagram, such a disagreement is not surprising.

Comments: Scheduled for the December Astronomical Journal
e-mail: Phil.Massey@lowell.edu

The stellar environment of SMC N81

M. Heydari-Malayeri(1), F. Meynadier(1), V. Charmandaris(2,1), L. Deharveng(3), Th. Le Bertre(1), M.R. Rosa(4), D. Schaerer(5,6)

(1) LERMA, Observatoire de Paris, France
(2) Cornell University, Astronomy Department, NY, USA
(3) Observatoire de Marseille, France
(4) Space Telescope European Coordinating Facility, European Southern Observatory, Germany
(5) Observatoire de Genève, Switzerland
(6) Laboratoire d’Astrophysique, Observatoire Midi-Pyrénées, France

We present near infrared JHK imaging of the Small Magellanic Cloud compact H II region N81 using the ISAAC camera at the ESO Very Large Telescope (Antu). Our analysis of the stellar environment of this young massive star region reveals the presence of three new stellar populations in the surrounding field which are mainly composed of low mass stars. The main population is best fitted by evolutionary models for ~2 solar masses, stars with an age of 1 Gyr. We argue that these populations are not physically associated with the HII region N81. Instead they are the result of a number of low mass star forming events through the depth of the SMC south of its Shapley’s wing. The populations can rather easily be probed due to the low interstellar extinction in that direction.
Variable stars in the Magellanic Clouds: Results from OGLE and SIRIUS

Yoshifusa Ita(1), Toshihiko Tanabe(1), Noriyuki Matsunaga(1), Yasushi Nakajima(2), Chie Nagashima(2), Takahiro Nagayama(2), Daisuke Kato(2), Mikio Kurita(2), Tetsuya Nagata(2), Shuji Sato(2), Motohide Tamura(3), Hidehiko Nakaya(4) and Yoshikazu Nakada(1.5)

(1)Institute of Astronomy, The University of Tokyo, Japan
(2)Department of Astrophysics, Nagoya University, Japan
(3)National Astronomical Observatory of Japan, Japan
(4)Subaru Telescope, National Astronomical Observatory of Japan, HI, USA
(5)Kiso Observatory, The University of Tokyo, Japan

We have performed a cross-identification between OGLE-II data and single-epoch SIRIUS near-infrared (NIR) JHK survey data in the Large and Small Magellanic Clouds (LMC and SMC, respectively). After eliminating obvious spurious variables, variables with too few good data and variables that seem to have periods longer than the available baseline of the OGLE-II data, we determined the pulsation periods for 9,681 and 2,927 variables in the LMC and SMC, respectively. Based on these homogeneous data, we studied the pulsation properties and metallicity effects on period-K magnitude (PK) relations by comparing the variable stars in the Large and Small Magellanic Clouds. The sample analyzed here is much larger than the previous studies, and we found the following new features in the PK diagram: (1) variable red giants in the SMC form parallel sequences on the PK plane, just like those found by Wood (2000) in the LMC; (2) both of the sequences A and B of Wood (2000) have discontinuities, and they occur at the K-band luminosity of the TRGB; (3) the sequence B of Wood (2000) separates into three independent sequences B+- and C; (4) comparison between the theoretical pulsation models Wood et al. (1996) and observational data suggests that the variable red giants on sequences C and newly discovered C’ are pulsating in the fundamental and first overtone mode, respectively; (5) the theory can not explain the pulsation mode of sequences A+- and B+-, and they are unlikely to be the sequences for the first and second overt one pulsators, as was previously suggested; (6) the zero points of PK relations of Cepheids in the metal deficient SMC are fainter than those of LMC ones by 0.1 mag but those of SMC Miras are brighter than those of LMC ones by 0.13 mag (adopting the distance modulus offset between the LMC and SMC to be 0.49 mag and assuming the slopes of the PK relations are the same in the two galaxies), which are probably due to metallicity effects.

Comments: Accepted for publication in MNRAS
e-mail: yita@ioa.s.u-tokyo.ac.jp
Abstracts of Non-Refereed Papers

The Iron Abundance and Density Structure of the Inner Ring around SN 1987A

S. Mattila (1), P. Lundqvist (1), P. Meikle (2), R. Statthakis (3), R. Cannon (3)

(1) Stockholm Observatory, (2) Imperial College, (3) Anglo-Australian Observatory

We present a spectroscopic study of the inner circumstellar ring around SN 1987A. The aim is to determine the elemental abundances and density structure, with particular emphasis on the abundance of iron. We acquired and analysed optical spectra at the Anglo-Australian Telescope (AAT) between 1400 and 4300 days post-explosion. We also assembled from the literature all available optical/near-IR line fluxes of the inner ring. The observed line light curves were then compared with a photoionisation model for the inner ring. This indicates an iron abundance of (0.20±0.08) x solar which is lower than that generally seen in the Large Magellanic Cloud (LMC).

Comments: To appear in proceedings "Supernovae (10 Years of SN1993J)" (IAU Colloquium 192), eds J.M. Marcaide and K.W. Weiler
e-mail: seppo@astro.su.se

Massive Young Clusters in the Local Group

Jess Maz-Apellniz

Space Telescope Science Institute, Baltimore, USA ESA Space Telescope Division

We analyze the properties of the Massive Young Clusters in the Local Group, concentrating on the youngest segment of this population and, more specifically, on the two best studied cases: 30 Doradus and NGC 604. 30 Doradus is a Super Star Cluster and will likely evolve to become a Globular Cluster in the future. NGC 604, on the other hand, is a Scaled OB Association that will be torn apart by the tidal effects of its host galaxy, M33. Given their extreme youth, both clusters are surrounded by a Giant H II Region produced by the high ionizing fluxes from O and WR stars. The two Giant H II Regions are found out to be rather thin structures located in the surface of Giant Molecular Clouds and their geometry turns out to be not too different from that of classical H II regions such as the Orion or Eagle nebulae.

Comments: To appear in "The Local Group as an Astrophysical Laboratory", May 2002 STSci Symposium
WWW: http://www.stsci.edu/~jmaiz
e-mail: jmaiz@stsci.edu
Massive Stars in the Local Group: Star Formation and Stellar Evolution

Philip Massey (1)

(1) Lowell Observatory, AZ, USA

The galaxies of the Local Group that are currently forming stars can serve as our laboratories for understanding star formation and the evolution of massive stars. In this talk I will summarize what I think we've learned about these topics over the past few decades of research, and briefly mention what I think needs to happen next.

Comments: To appear in The Local Group as an Astrophysical Laboratory, 2003 STScI May Symposium, ed. Livio et al.
e-mail: Phil.Massey@lowell.edu

AGB stars in the Magellanic Clouds and in other members of the Local Group

Maria-Rosa L. Cioni

European Southern Observatory, Garching bei München, Germany

Results obtained in the Magellanic Clouds using the latest near-IR DENIS survey are briefly revised. This sets the base to a similar study of AGB stars in other galaxies in the Local Group and in particular in NGC6822.

Comments: to be published in IAU Coll. 193 by ASP, Ed. Don Kurtz and Karen Pollard
WWW: http://www.eso.org/~mcioni/research.html
e-mail: mcioni@eso.org

Period-K magnitude relations of variable stars in the LMC

Yoshifusa Ita, Toshihiko Tanabe, Noriyuki Matsunaga, Yoshikazu Nakada(1) and IRSF/SIRIUS team(2)

(1) Institute of Astronomy, School of Science, The University of Tokyo, Japan
(2) Department of Astrophysics, Nagoya University, Japan

We cross-correlated the OGLE-II database with the SIRIUS JHK survey data in the Large Magellanic Cloud. After eliminating obvious spurious variables, we determined the pulsation periods for 9,681 stars by applying the Phase Dispersion Minimization technique to the OGLE-II data. Based on these data, we studied the period-K magnitude relations of variable stars in the LMC and found a new sequence. Comparison between the theoretical pulsation model (Wood & Sebo 1996) and observational data suggests that the variable stars on the new sequence are Mira variables pulsating in the
first overtone mode.

Comments: To be published in the proceedings of the IAU Colloquium 193, "Variable stars in the Local Group", D.W. Kurtz & Karen Pollard, eds.  
e-mail: yita@ioa.s.u-tokyo.ac.jp

Meeting Announcements

X-Ray and Radio Connections
February 3–6, 2004
Santa Fe, NM, USA

"Almost by definition, high energy sources are non-thermal and emit throughout the electromagnetic and other spectra and spectrally chauvinist interpretations of their behavior are incomplete"

- Blandford, 2003

Currently, the observers of high-energy phenomena are split between several communities that independently investigate objects in their own waveband. This meeting will provide an opportunity to review underlying physical models, compare x-ray and radio observations, start new collaborations and develop a list of areas where new observations and theoretical development could significantly advance our understanding in the next few years.

The meeting will include reviews, contributed talks, and posters on the major scientific topics listed below. The organizers hope to emphasize both invited and contributed talks from younger members of the community. Anyone interested in participating is encouraged to pre-register at the meeting website.

Scientific Topics
- Massive star cluster outflows
- Colliding stellar winds
- Supernova remnants
- Pulsar wind nebulae
- Dissipation of jets and lobes
- Cluster mergers

Deadlines
- 1 December 2003 - Meeting & Hotel Registration
- 10 December 2003 - Abstracts Due
- 5 January 2004 - Late Registration

For more information, contact the meeting organizers at:  
E-mail: xraydio@aoc.nrao.edu
WWW: http://www.aoc.nrao.edu/events/xraydio
The Nature and Evolution of Disks Around Hot Stars
July 7–9, 2004
Johnson City, Tennessee, USA

A workshop on disks around hot stars is being planned for 2004 July 7–9, to be hosted by East Tennessee State University in Johnson City, Tennessee (www.etsu.edu), with meetings to be held at the Carnegie Hotel (www.CarnegieHotel.com).

Scientific Information

Disks are an important, sometimes even dominant, feature of many astrophysical sources, including massive hot stars. Studies of these disks are often constrained by narrow categories of objects, while the key physical principles for understanding the disks in different systems can be quite similar. This workshop is intended to focus discussion on the major outstanding questions surrounding the structure, formation, and evolution of disks around hot stars, and to foster communication between different areas of disk research. With a balanced menu of observational and theoretical presentations, review talks will highlight recent results and key physical principles relating to these topics. In keeping with the workshop theme, substantial time will be allocated for discussion, both in a moderated large group setting and in the casual formation of smaller circles of participants. The intended outcome of this event is the synthesis of the latest observational data and theoretical tools to stimulate fresh approaches for this interesting and growing topic of relevance for massive stars.

Meeting Format

We have developed a novel format for the meeting. For each day there will be four invited talks in the morning, with a discussion session in the early afternoon. A ”Focus” session will be held later in the afternoon, for which attendance will be optional.

Our goal is twofold: first, to provide review talks to summarize the current understanding of hot star disks and set the stage for discussion (the three sessions being ”The Properties of Hot Star Disks”, ”The Star-Disk Connection”, and ”Magnetic Fields in Massive Stars”). A lunch break will provide a period of time for informal discussion, after which participants will gather for a moderated discussion led by a panel. The Focus sessions are more narrowly defined and are intended to be somewhat tutorial in nature, on the topics of Diagnostic Methods (headed by David Cohen and Margaret Hanson), Modeling Tools (headed by Ken Gayley and John Porter), and Optical/IR Interferometry (headed by Doug Gies and Philippe Stee).

The workshop format is thus built around a relatively small number of review talks, with plenty of time for interaction, in hopes of achieving a kind of ”summer school” flavor. We would like participants to come away with a deeper understanding of the key issues and with new ideas for attacking the outstanding questions surrounding hot star disks. We hope to stimulate new collaborations and working partnerships for further progress in this area.

For questions or more information, contact
E-mail: hotstars@mail.etsu.edu
Astrophysics in the Far Ultraviolet
Five Years of Discovery with FUSE
August 2-6, 2004
Victoria, British Columbia, Canada

The Far Ultraviolet Spectroscopic Explorer continues to be a spectacularly successful Origins Mission, flown under the auspices of NASA, CNES (France) and the Canadian Space Agency. Operating in the 900-1200 wavelength region, FUSE observations have resulted in a wealth of new insights into astronomical systems ranging from planets to the expanses of the intergalactic medium.

We are pleased to announce a conference to review the discoveries made with FUSE, to highlight the role of far-ultraviolet data in multi-wavelength astronomical studies, and to identify compelling scientific goals for future UV space missions. The conference will be hosted jointly by the Herzberg Institute of Astrophysics and the University of Victoria.

The meeting sessions will cover the broad range of astronomical topics that have been addressed with FUSE observations. We intend the meeting to be a place where FUSE users can present their results to a wide audience and where astronomers in fields other than UV spectroscopy can add perspective. We invite you to participate and help make the conference a success.

Scientific Themes
- Cosmology
- Extragalactic Physics
- Stellar Astrophysics
- The Multiphase ISM
- Planetary Science
- The FUV Region in Context

For more information, contact the meeting organizers at:
E-mail: fuse_conference@pha.jhu.edu
WWW: http://fuse-conference.pha.jhu.edu/

Astrophysics and Cosmology After Gamow - Theory and Observations
Gamow Memorial International Conference Dedicated to 100th Anniversary of George Gamow
August 8-14, 2004
Odessa, Ukraine

Scientific Topics
- Cosmology and Gravitation
- Stars and Interstellar Medium
- Neutron Stars and Black Holes: Observations and Accretion Theory
- High Energy Astrophysics
- Large-Scale Structure of the Universe
- Gravitational Lenses in the Universe

For more information, contact the meeting organizers at:
E-mail: gmic-100@mail.ru or toropina@mx.iki.ru
WWW: http://www.iki.rssi.ru/gmic100/english/gmic.htm
Job Postings

Postdoctoral Research Associate Position at Lowell Observatory

Applications are invited for a postdoctoral position to work with Dr. Sally Oey at Lowell Observatory. The successful candidate will collaborate on research topics including galactic chemical evolution with respect to stellar populations and/or gas-phase element abundances. There will also be broad opportunity in the area of galactic and cosmic evolution with relation to feedback mechanisms from massive stars, namely: chemical evolution, radiative feedback (HII regions and diffuse, warm ionized medium), mechanical feedback, and/or global star formation processes and history. There will be opportunity to pursue independent research projects, and access to the Lowell Observatory telescope facilities.

The position is available for three years, with a flexible start date to begin during 2004. Applicants should have a Ph.D. and experience in related areas of theoretical and/or observational astronomy. To apply, please submit a curriculum vitae, statement of research interests, and contact information for three references to the address below. Applicants must also submit a Lowell Observatory application form (http://www.lowell.edu/hr/jobs.html). The form is also available from Human Resources, Lowell Observatory at the address below.

**Application deadline:** November 30th, 2003

Send application materials to Dr. Sally Oey:

**Address:**
Lowell Observatory
1400 W. Mars Hill Rd.
Flagstaff, AZ 86001-4499
USA

**Phone:** +1-928-774-3358
**FAX:** +1-928-774-6296
**E-mail:** Sally.Oey@Lowell.edu
**WWW:** http://www.lowell.edu/hr/jobs.html

Lowell Observatory is an equal opportunity employer and prohibits discrimination in all its programs and activities on the basis of race, color, national origin, religion, age, disability, political beliefs, sexual orientation, and marital and family status. Lowell Observatory provides reasonable accommodations to applicants with disabilities. The campus is at an elevation of 7000ft/2100m.
Recent astro-ph Listings

astro-ph/0310153:
Title: Another single hydrogen-rich Wolf-Rayet star in the SMC?
Authors: G. Foellmi
Comments: 4 pages, 2 figures, submitted to A&A

astro-ph/0310129:
Title: The Luminosity Function of PNe with different morphology
Authors: L. Magrini (1), R. L. M. Corradi (2), P. Leisy (2,3), A. Scatarzi (1), L. Morbidelli (4), M. Perinotto (1) ((1) Dipartimento di Astronomia e Scienza dello Spazio, Firenze, Italy, (2) Isaac Newton Group of Telescopes, La Palma, Spain (3) Instituto de Astrofisica de Canarias, Tenerife, Spain (4) INAF, Firenze, Italy)

astro-ph/0310083:
Title: Variable Stars in the Magellanic Clouds: Results from OGLE and SIRIUS
Authors: Yoshihisa Ita, Toshihiko Tanabe, Noriyuki Matsumaga, Yasushi Nakajima, Chie Nagashima, Takehiro Nagayama, Daisuke Kato, Mikio Kurita, Tetsuya Nagata, Shuji Sato, Motohide Tamura, Hidehiko Nakaya, Yoshikazu Nakada
Comments: 9 pages, 10 figures, accepted for publication in MNRAS. High resolution version is available at: this http URL .pdf

astro-ph/0309778:
Title: AGB star in the Magellanic Clouds & in other members of the Local Group
Authors: Maria-Rosa L. Cioni
Comments: 4 pages, 2 figures, to be published in IAU Coll. 193 by ASP, Ed. Don Kurtz and Karen Pollard

astro-ph/0309726:
Title: HMXB, ULX and star formation
Authors: N. Gilfanov, H.-J. Grimm, R. Sunyaev

astro-ph/0309523:
Title: The X-ray emission of the Crab-like pulsar PSR J0537-6910
Authors: T. Mineo, G. Cusumano, E. Massaro

astro-ph/0309473:
Title: Infrared emission towards 11 years after outburst: Properties of the circumstellar dust
Authors: Jg. Fischera, R. J. Tuffs, H. J. Voelk

astro-ph/0309431:
Title: Timing and spectral studies of LMC X-4 in high and low states with Beppo-SAX: Detection of pulsations in the soft spectral component
Authors: S. Naik (1,2), B. Paul (1) ((1) Tata Institute of Fundamental Research, Mumbai, India. (2) Department of Physics, University College Cork, Cork, Ireland)
Comments: 13 pages, 10 figures, Accepted for publication in The Astrophysical Journal
astro-ph/0309416:
Title: A Geometric Determination of the Distance to SN 1987A and the LMC
Authors: Nino Panagia (ESA/STScI)
Comments: 8 pages, 3 figures (requires the file svmult.cls to be compiled). To appear in the Proceedings of IAU Colloquium 192 ‘‘Supernovae (10 years of SN1993J)’’, Valencia, Spain, eds. J.M. Marcaide and K.W. Weiler (Springer Verlag)

astro-ph/0309351:
Title: Kinematic Evidence for an Old Stellar Halo in the Large Magellanic Cloud
Authors: Dante Minniti (1), Jura Borissova (1), Marina Rejkuba (2), David R. Alves (3), Ken H. Cook (4), Kenneth C. Freeman (5) (1) PUC, Chile; (2) ESO, Germany; (3) Columbia Astrophysics Laboratory; (4) Lawrence Livermore National Laboratory; (5) Mt Stromlo Observatory
Comments: 8 pages, 2 figures; to be published in Science on Sept. 12, 2003

astro-ph/0309297:
Title: Erupting Dwarf Novae in the Large Magellanic Cloud
Authors: Michael M. Shara, Sasha Hinkley, David R. Zurek (American Museum of Natural History)
Comments: Accepted for publication in AJ, 28 pages, 9 figures total, Figures 1 and 8 are supplied separately in jpeg format

astro-ph/0309272:
Title: The Evolution of Massive Stars. I. Red Supergiants in the Magellanic Clouds
Authors: Philip Massey, K.A.G. Olsen
Comments: Version with eps figures embedded can be obtained from this ftp URL Accepted by the Astronomical Journal

astro-ph/0309271:
Title: 0103-72.6: A New Oxygen-Rich Supernova Remnant in the Small Magellanic Cloud
Authors: Sangwook Park (Penn State), John P. Hughes (Rutgers), David N. Burrows (Penn State), Patrick O. Slane ( CfA), John A. Nousek, Gordon P. Garmire (Penn State)
Comments: 6 pages (ApJ emulator format), including 5 figures and 2 tables. For high quality Figs.1,2, & 3, contact park@astro.psu.edu. Submitted to ApJ Letters

astro-ph/0309244:
Title: On the formation of the Magellanic Stream
Authors: C. Mastropietro (1), B. Moore (1), L. Mayer (1), J. Stadel (1), J. Wadsley (2) (1) University of Zurich, (2) McMaster University
Comments: 4 pages, 2 figures, to be published in the proceedings of the "Satellite and Tidal Streams", La Palma 26-30 May 2003, Spain, eds. F. Prada, D. Martinez-Delgado, T. Mahoney

astro-ph/0309235:
Title: The extra-galactic Cepheid distance scale from LMC and Galactic period-luminosity relations
Authors: S. M. Kanbur (U Massachusetts), C. Ngeow (U Massachusetts), S. Nikolaev (Institute for Geophysics and Planetary Physics), N. R. Tanvir (University of Hertfordshire), M. A. Hendry (University of Glasgow)
Comments: 21 pages, 14 tables, 9 figures, A&A accepted
astro-ph/0309126:
Title: The stellar environment of SMC N81
Authors: M. Heydari-Malayeri (1), F. Meynadier (1), V. Charmandaris (2,1), L. Deharveng (3), Th. Le Bertre (1), M.R. Rosa (4), D. Schauer (5) ((1) LERMA-Observatoire de Paris, (2) Cornell University, Astronomy Department, (3)Observatoire de Marseille, (4) Space Telescope European Coordinating Facility, ESO, (5) Observatoire de Genève)
Comments: 11 pages, 5 figures, accepted for publication in A&A

astro-ph/0309051:
Title: Statistical Interpretation of LMC Microlensing Candidates
Authors: Sohrab Rahvar
Comments: 13 pages, 4 figures

astro-ph/0309030:
Title: Synoptic study of the SMC SNRs using XMM-Newton
Authors: K.J. van der Heyden, J.A.M. Bleeker, J.S. Kaastra
Comments: submitted to A&A

astro-ph/0308533:
Title: The Iron Abundance and Density Structure of the Inner Ring around SN 1987A
Authors: S. Mattila (1), P. Lundqvist (1), P. Meikle (2), R. Statzhkis (3), R. Cannon (3) ((1) Stockholm Observatory, (2) Imperial College, (3) Anglo-Australian Observatory)
Comments: To appear in "Supernovae (10 Years of SN1987A)" (IAU Colloquium 192), eds J.M. Marcaide and K.W. Weiler

astro-ph/0308529:
Title: The distance to the LMC cluster NGC 1866; clues from the cluster Cepheid population
Authors: M.A.T. Groenewegen, M. Salaris
Comments: accepted for A&A

astro-ph/0308482:
Title: FUSE Spectra of the Black Hole Binary LMC X-3
Authors: J.B.Hutchings, K.Winter, D.Crampton (HIA, NRC of Canada), A.P.Cowley, P.Schmidtke (Arizona State Univ)
Comments: 12 pages including 1 table, 4 diagrams To appear in AJ

astro-ph/0308378:
Title: Mid-infrared photometry of carbon stars and perspectives for surveys in the Magellanic Clouds from Dome-C
Authors: Stefano Cipriani (1,2), Maurizio Busso (1,3) ((1) Physics Dept. & Astronomical Obs., University of Perugia, (2) INFN, Perugia Section, (3) INAF Torino Astronomical Obs., Italy)

astro-ph/0308256:
Title: Hubble Space Telescope observations of three very young star clusters in the Small Magellanic Cloud
Authors: Letizia Stanghellini (STScI/ESA), Eva Villaver (STScI), Richard A. Shaw (NOAO), Max Mutchler (STScI)
astro-ph/0308237:
Title: The Discovery of a Twelfth Wolf-Rayet Star in the Small Magellanic Cloud
Authors: Philip Massey, K. A. G. Olsen, J. Wm. Parker
Comments: Accepted by PASP (November 2003 issue)

astro-ph/0308213:
Title: High speed outflows driven by the 30 Doradus starburst
Authors: M.P. Redman, Z.A. Al-Mostafa, J. Meaburn, M. Bryce
Comments: 8 pages, 8 figures, accepted for publication in MNRAS

astro-ph/0308125:
Title: Characteristics and classification of A-type supergiants in the Small Magellanic Cloud
Authors: C. J. Evans (ING), I. D. Howarth (UCL)
Comments: 14 pages, 14 figures, accepted for publication in MNRAS

astro-ph/0308019:
Title: The MACHO Project Large Magellanic Cloud variable star inventory. II.
Frequency analysis of the fundamental mode RR Lyrae stars