

1.

Title: A photometric study of the recently discovered eclipsing binary V776 Cassiopei

Authors: Djurasevic, G.; Albayrak, B.; Selam, S. O.; Erkapic, S.; Şenavcı, H. V.

Journal: New Astronomy, Volume 9, Issue 6, p. 425-434.

Publication Date: 07/2004

Keywords: Binaries: eclipsing, Binaries: close, Stars: fundamental parameters, Stars: individual: V776 Cas

ADS: [2004NewA...9..425D](https://ui.adsabs.org/2004NewA...9..425D)

Abstract

Photoelectric UBV light curves of the recently discovered eclipsing binary V776 Cas were studied for the first time to derive the physical parameters of the system. The light curves were obtained at the TÜBİTAK National Observatory (TUG) during 8-9 October 2002. Due to the proximity of the visual companion the light curves were contaminated by the third light effect which has a relatively small impact on the system parameters estimation. This effect dominantly changes only the degree of overcontact and orbit inclination. The solutions made by using Djurasevic's inverse-problem method describe the V776 Cas system as a high overcontact configuration ($f_{\text{over}} \sim 41\%$ without, and 55% and 58% with two different values of the third light effect - $L_3=0.091$ and $L_3=0.136$) with a relatively small temperature differences between the components. Because of the large difference in masses of the components ($q=m_c/m_h=0.13$) these solutions suggest a significant mass and energy transfer from the hotter - more massive primary onto the cooler - less massive secondary through the connecting neck of the common envelope. The obtained orbital inclination ($i \sim 53.9$ without, and $i \sim 55$ and $i \sim 56$ with two different values of the third light effect - $L_3=0.091$ and $L_3=0.136$) explains the characteristic shape of the light curves with a relatively small amplitude which is due to partial eclipses of the components in both of the photometric minima.

2.

Title: Optical and X-ray Observations of Thermonuclear Bursts from GS 1826-24 during September-October 2003

Authors: Mescheryakov, A. V.; Khamitov, I. M.; Revnivitsev, M. G.; Burenin, R. A.; Gilfanov, M. R.; Pavlinsky, N. N.; Sunyaev, R. A.; Aslan, Z.; Gogush, E.

Journal: Astronomy Letters, Vol. 30, Issue 11, p.751-758.

Publication Date: 11/2004

Keywords:

ADS: [2004AstL...30..751M](#)

Abstract

The results of optical (the RTT-150 telescope) and X-ray (the RXTE observatory) observations of the burster GS 1826-24 are presented. Emphasis was placed on analyzing the emissions during thermonuclear bursts. The results obtained allowed the size of the accretion disk in GS 1826-24 and the inclination of this binary to be estimated.

3.

Title: Disk Precession and Quasi-Periodic Brightness Oscillations of V603 Aql in 2001-2002

Authors: Suleimanov, V.; Bikmaev, I.; Belyakov, K.; Sakhbullin, N.; Zhukov, G.; Aslan, Z.; Kiziloglu, U.; Khamitov, I.

Journal: Astronomy Letters, vol. 30, p. 615-629.

Publication Date: 09/2004

Keywords:

ADS: [2004AstL...30..615S](#)

Abstract

We present the photometric observations of the old nova V603 Aql with the RTT 150 Russian-Turkish telescope during eleven nights of 2001-2002. We show that the star at this time was in a state with positive superhumps and its photometric period of 0.144-0.145 day was longer than the orbital period. We found night-to-night variations in the mean brightness of the system that are consistent with disk precession periods of 3.3 and 3.0 days in 2001 and 2002, respectively. Analysis of the results and their comparison with the results of other authors using current theoretical models for disk precession lead us to suggest that the change in the disk precession period was caused by a change in the accretion rate in the system. V603 Aql in a state with negative superhumps was found to be brighter than it is in a state with positive superhumps by 0.2-0.3 mag. We

hypothesize that the transition between these states could also be caused by a change in the accretion rate. Quasi-periodic oscillations (QPOs) of the brightness with typical time scales of 9-70 min were detected on each observing night. These time scales were found to change from night to night. The detection of QPOs with a period of about 0.05 of the orbital period and its multiples on certain nights provides evidence for the model of QPO generation through accretion-rate modulation by ionization-front oscillations on the surface of the donor star near the inner Lagrangian point.

4.

Title: First simultaneous X-ray and optical observations of rapid variability of supercritical accretor SS433

Authors: Revnivtsev, M.; Burenin, R.; Fabrika, S.; Postnov, K.; Bikmaev, I.; Pavlinsky, M.; Sunyaev, R.; Khamitov, I.; Aslan, Z.

Journal: Astronomy and Astrophysics, v.424, p.L5-L8

Publication Date: 09/2004

Keywords: accretion, accretion disks, black hole physics, instabilities, stars: binaries:general, X-rays: general, X-rays: stars

ADS: [2004A&A...424L...5R](#)

Abstract

We present results of first simultaneous optical and X-ray observations of peculiar binary system SS433. For the first time, chaotic variability of SS433 in the optical spectral band (R band) on time scales as small as tens of seconds was detected. We find that the X-ray flux of SS433 is delayed with respect to the optical emission by approximately 80 s. Such a delay can be interpreted as the travel time of mass accretion rate perturbations from the jet base to the observed X-ray emitting region. In this model, the length of the supercritical accretion disk funnel in SS433 is 1012 cm.

5.

Title: Period-luminosity relation

Authors: Yeşilyaprak, C.; Aslan, Z.
Journal: Monthly Notices of the Royal Astronomical Society, Volume 355, Issue 2, pp. 601-607.
Publication Date: 12/2004
Keywords: stars: distances, stars: fundamental parameters, stars: late-type, stars: oscillations
ADS: [2004MNRAS.355..601Y](https://ui.adsabs.org/2004MNRAS.355..601Y)

Abstract

We have studied the period-luminosity (P-L) relationships of oxygen-rich semiregular (SR) variables in several wavelength bands using Hipparcos parallaxes with an accuracy of better than 10 per cent. We have shown that there is a clear dependence on period of absolute magnitude in the U,B,V,R,IC,J,H,K,L,M,N, [12], [25], [60] and [100] bands, and that the slope of the linear M- logP relation is a smooth function of wavelength. We point out that this relation can in principle be used to derive absolute bolometric magnitude as a function of period. The behaviour of the second periods of SR variables in the P-L relation in the V and K bands is also discussed.

6.

Title: A photometric study of the neglected contact binary V842 Herculis
Authors: Senavci, H. V.; Elmasli, A.; Selam, S. O.; Albayrak, B.
Journal: Astronomical Society of the Pacific, 2004, p. 186-188
Publication Date: 11/2004
Keywords:
ADS: [2004ASPC..318..186S](https://ui.adsabs.org/2004ASPC..318..186S)

Abstract

Photoelectric B and V light curves of the neglected eclipsing binary V842 Her were studied to determine the physical parameters of the system. The observations of the

binary system were made at the TÜBITAK National Observatory (TUG) during the nights of 3rd and 4th July, 2003. The light curves exhibit the so-called O'Connell effect which the level of the primary maxima being higher than that of the secondary ones in both pass-bands. The new light curves and the radial velocity curves (Rucinski & Lu 1999) were analysed simultaneously using the WD-code. The analysis yields a W-type contact binary that the larger, more massive component being slightly cooler than the smaller, less massive one. The O'Connell effect in the light curves is explained in terms of a dark-spot located on the more massive component.

7.

Title: A photometric study of the recently discovered contact binary ET Leonis

Authors: Tanriverdi, T.; Senavci, H. V.; Selam, S. O.; Albayrak, B.

Journal: Astronomical Society of the Pacific, 2004, p. 189-191

Publication Date: 11/2004

Keywords:

ADS: [2004ASPC..318..189T](https://ui.adsabs.org/2004ASPC..318..189T)

Abstract

New photoelectric B and V band light curves of the contact binary ET Leonis were studied to determine the physical parameters of the system. The observations were obtained at TÜBITAK National Observatory (TUG) on consecutive nights in March 2003. The light curves exhibit the so-called O'Connell effect with the level of the second maxima being higher than that of the first in both bands. The amplitudes of the light curves are very small, indicating a relatively low orbital inclination angle. The new light curves and the radial velocity curve were analysed simultaneously using the last version of the Wilson-Devinney Code (WD-2003). The analysis yields a W-type W UMa system viewed at a very low orbital inclination angle.

8.

Title: A photometric study of the recently discovered eclipsing

Authors: binary V776 Cassiopei
Djurasevic, G.; Albayrak, B.;
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Şenavcı, H. V.

Journal: New Astronomy, Volume 9,
Issue 6, p. 425-434.

Publication Date: 07/2004

Keywords: Binaries: eclipsing, Binaries:
close, Stars: fundamental
parameters, Stars: individual:
V776 Cas

ADS: [2004NewA....9..425D](#)

Abstract

Photoelectric UBV light curves of the recently discovered eclipsing binary V776 Cas were studied for the first time to derive the physical parameters of the system. The light curves were obtained at the TÜBİTAK National Observatory (TUG) during 8-9 October 2002. Due to the proximity of the visual companion the light curves were contaminated by the third light effect which has a relatively small impact on the system parameters estimation. This effect dominantly changes only the degree of overcontact and orbit inclination. The solutions made by using Djurašević's inverse-problem method describe the V776 Cas system as a high overcontact configuration ($f_{\text{over}} \sim 41\%$ without, and 55% and 58% with two different values of the third light effect - $L_3=0.091$ and $L_3=0.136$) with a relatively small temperature differences between the components. Because of the large difference in masses of the components ($q=mc/mh=0.13$) these solutions suggest a significant mass and energy transfer from the hotter - more massive primary onto the cooler - less massive secondary through the connecting neck of the common envelope. The obtained orbital inclination ($i \sim 53.9$ without, and $i \sim 55$ and $i \sim 56$ with two different values of the third light effect - $L_3=0.091$ and $L_3=0.136$) explains the characteristic shape of the light curves with a relatively small amplitude which is due to partial eclipses of the components in both of the photometric minima.

9.

Title: A photometric study of the recently discovered eclipsing binary V776 Cassiopeiae

Authors: Elmasli, A.; Tanriverdi, T.; Albayrak, B.; Selam, S. O.; Djurasevic, G.

Journal: Astronomical Society of the Pacific, 2004, p. 192-194

Publication Date: 11/2004

Keywords: Binaries: eclipsing, Binaries: close, Stars: fundamental parameters, Stars: individual: V776 Cas

ADS: [2004ASP.tem by using the Djurasevic's \(1992a\) inverse-problem method. The light curves which have an amplitude of about 0.15 arcmin were obtained at the TÜBİTAK National Observatory \(TUG\) between 8 and 9 October 2002. The analysis yields an A-](#)

type contact binary as a high overcontact configuration. Due to the proximity of its visual companion the light curves were contaminated by the third-light effect which has a relatively small influence on the estimation of the system parameters.

10.

Title: DEFPOS (Dual Etalon Fabry-Perot Optical Spectrometer)
Authors: Yegingil, I.; Kiziloglu, Ü.; Sahan, M.; Akyilmaz, M.; Aksaker, N.
Journal: The Magnetized Interstellar Medium, Proceedings of the conference, held in Antalya, Turkey, September 8 - 12, 2003, Eds: B. Uyaniker, W. Reich, and R. Wielebinski, Copernicus GmbH, Katlenburg-Lindau., p. 227-231, 2004.
Publication Date: 02/2004
Keywords:
ADS: [2004mim..proc..227Y](#)

Abstract

DEFPOS (Dual Etalon Fabry-Perot Optical Spectrometer) has been designed to investigate HII regions by observing Halfa emission from the interstellar medium (ISM). More detailed investigations of the characteristics including power consumption, temperature, ionization state, kinematics and spatial distribution of this warm ionized gas have been carried out in the University of Wisconsin by detection of the optical line emissions from these faint sources through Fabry-Perot spectrometer. The facility that also provided a velocity resolved Halfa survey of the Galaxy is called WHAM which stands for Wisconsin Halfa Mapper. DEFPOS has been designed to carry out a similar study by detecting the Halfa emission from the selected regions of Galactic ISM observable on the northern sky. It will be used in coude exit of the 1.5-m telescope (RTT150) located at Bakirlitepe near Antalya. Besides interstellar work, DEFPOS will be used to observe the earth atmosphere to examine the state of telluric hydrogen and its variation. This observation will also help to subtract the atmospheric effect from the interstellar observations.

11.

Title: ROTSE-III Station in Turkey
Authors: Özel, M. E.; Kiziloglu, Ü.; Aslan, Z.

Journal: The Magnetized Interstellar Medium, Proceedings of the conference, held in Antalya, Turkey, September 8 - 12, 2003, Eds: B. Uyaniker, W. Reich, and R. Wielebinski, Copernicus GmbH, Katlenburg-Lindau., p. 237-238, 2004.

Publication Date: 02/2004

Keywords:

ADS: [2004mim..proc..237O](#)

Abstract, Not Available

12.

Title: Studying the Stellar Populations of the Galactic Disk in the Local Cylinder

Authors: Bartasiute, S.; Aslan, Z.; Boyle, R. P.; Kharchenko, N.; Ossipkov, L.; Sperauskas, J.

Journal: Bulletin of the American Astronomical Society, Vol. 36, p.1583

Publication Date: 12/2004

Keywords:

ADS: [2004AAS...20514211B](#)

Abstract

We have analyzed the kinematics and metallicity distributions of stellar populations in the local cylinder nearly perpendicular to the Galactic plane by combining seven-color Vilnius photometry for 650 stars in situ with proper-motions measured in Kiev (Ukraine). For half of these stars, radial velocities have also been measured, which allowed us to derive all three components of spatial velocities and Galactic orbits. With this observational material we were able to reach distances of 1-2 kpc from the Galactic plane and to make an investigation of the transition from the old thin disk to the thick disk components of the Galaxy. Radial velocity program was greatly aided through the use of the TUBITAK National Observatory RTT150 telescope and Steward Observatory telescopes on Mt Lemmon, Mt Bigelow and Kitt Peak. Two of us (S.B. and J.S.) thank the Vatican Observatory Research Group for guest investigator privileges.

13.

Title: First day-time seeing observations at the TÜBİTAK National Observatory in Turkey

Authors: Özışık, T.; Ak, T.
Journal: Astronomy and Astrophysics, v.422, p.1129-1133
Publication Date: 08/2004
Keywords: atmospheric effects, turbulence, site testing
ADS: [2004A&A...422.1129O](#)

Abstract

Despite the fact that selecting good solar observatory sites is an important matter, day-time seeing quality of observatory sites in Turkey has not been previously recorded. Therefore, we built a Solar Differential Image Motion Monitor (S-DIMM) for day-time seeing observations at the TÜBİTAK National Observatory (TUG) in Turkey which is being tested as a likely site for a future large aperture solar telescope. In this study, we describe the design of TUG S-DIMM instrument and a reduction procedure for its data. First results obtained at 7 m above ground show that the day-time Fried parameters at the TUG site are comparable with those of some solar observatory sites. The best seeing conditions at the TUG site occur between October and December with a median Fried parameter of 6.95 cm in the first three hours of the day. The median Fried parameter calculated from all observations made during our observation period is 4.48 cm. Our observations also reveal that the best day-time Fried parameters are obtained for wind speeds higher than 3 m/s.

14.

Title: Discovery of CVs ROTSE3 J151453.6+020934.2 and ROTSE3 J221519.8-003257.2
Authors: Rykoff, E. S.; Akerlof, C. W.; Ashley, M. C. B.; Gogus, E.; Guver, T.; Kiziloglu, U.; McKay, T. A.; Ozel, M., Phillips, A.; Quimby, R.; Smith, D. A.; Thorstensen, J. R.; Vestrand, W. T.; Wheeler, J. C.; Wren, J.
Journal: Information Bulletin on Variable Stars, 5559, 1.
Publication Date: 08/2004
Keywords: photometry
ADS: [2004IBVS.5559....1R](#)

Abstract

We report on the discovery of outbursts from previously unknown high galactic latitude CVs ROTSE3 J151453.6+020934.2 and ROTSE3 J221519.8-003257.2. These objects were detected by the ROTSE-IIIa telescope at Siding Spring Observatory, Australia, ROTSE-IIIb at McDonald Observatory, Texas, and ROTSE-IIIc at Bakirlitepe, Turkey. We also report on four-color images of J1514 from the MDM telescope, and five-color images of J2215 from the SDSS public archives.

15.

Title: Dome automation of the RTT150 Russian-Turkish telescope building at TÜBİTAK National Observatory
Authors: Koçak, M.; Keskin, V.; Selam, S. O.
Journal: Astronomische Nachrichten, Vol.325, Issue 6, p.655-655
Publication Date: 10/2004
Keywords:
ADS: [2004AN....325..655K](#)
Abstract, Not Available

16.

Title: Meteorological monitoring system of TÜBİTAK National Observatory
Authors: Koçak, M.; Selam, S. O.; Keskn, V.
Journal: Astronomische Nachrichten, Vol.325, Issue 6, p.652-654
Publication Date: 11/2004
Keywords: instrumentation: miscellaneous
ADS: [2004AN....325..652K](#)

Abstract

A custom meteorological monitoring system was constructed to reliably monitor the meteorological parameters of the site of TÜBİTAK National Observatory (TÜBİTAK: The Scientific and Technical Research Council of Turkey). The site is located on a mountain top known as Bakırlıtepe about 50 km west of the Antalya City at a height of 2547m. The system has software (C-based data acquisition/archiving structure and PHP based WEB monitoring support) and micro-controller based control electronics, fiber based custom designed encoder sensors (for wind speed and direction) and transmission lines using fiberoptic to RS232 transcievers. The constructed system can be used in any robotic telescope project for data monitoring and alert system creation.

Yurt Dışı Bildiriler

1.

Title: Optical and X-ray Observations of Thermonuclear Bursts from GS 1826-24 during September-

October 2003

Authors: Mescheryakov, A. V.; Khamitov, I. M.;
Revnivtsev, M. G.; Burenin, R. A.; Gilfanov, M.
R.; Pavlinsky, N. N.; Sunyaev, R. A.; Aslan, Z.;
Gogush, E.

Journal: Astronomy Letters, Vol. 30, Issue 11, p.751-758

Publication Date: 11/2004

Keywords:

ADS: [2004AstL...30..751M](#)

Abstract

The results of optical (the RTT-150 telescope) and X-ray (the RXTE observatory) observations of the burster GS 1826-24 are presented. Emphasis was placed on analyzing the emissions during thermonuclear bursts. The results obtained allowed the size of the accretion disk in GS 1826-24 and the inclination of this binary to be estimated.

2.

Title: Disk Precession and Quasi-Periodic
Brightness Oscillations of V603 Aql in
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Authors: Suleimanov, V.; Bikmaev, I.;
Belyakov, K.; Sakhbullin, N.; Zhukov,
G.; Aslan, Z.; Kiziloglu, U.; Khamitov,
I.

Journal: Astronomy Letters, vol. 30, p. 615-629
(2004)

Publication Date: 09/2004

Keywords:

ADS: [2004AstL...30..615S](#)

Abstract

We present the photometric observations of the old nova V603 Aql with the RTT 150 Russian-Turkish telescope during eleven nights of 2001-2002. We show that the star at this time was in a state with positive superhumps and its photometric period of 0.144-0.145 day was longer than the orbital period. We found night-to-night variations in the mean brightness of the system that are consistent with disk precession periods of 3.3 and 3.0 days in 2001 and 2002, respectively. Analysis of the results and their comparison with the results of other authors using current theoretical models for disk precession lead us to suggest that the change in the disk precession period was caused by a change in the accretion rate in the system. V603 Aql in a state with negative superhumps was found to be brighter than it is in a state with positive superhumps by 0.2-0.3 mag. We hypothesize that the transition between these states could also be caused by a change in the accretion rate. Quasi-periodic oscillations (QPOs) of the brightness with typical time scales of 9-70 min were detected on each observing night. These time scales were found to change from night to night. The detection of QPOs with a period of about 0.05 of the

orbital period and its multiples on certain nights provides evidence for the model of QPO generation through accretion-rate modulation by ionization-front oscillations on the surface of the donor star near the inner Lagrangian point.

3.

Title: First simultaneous X-ray and optical observations of rapid variability of supercritical accretor SS433

Authors: Revnivtsev, M.; Burenin, R.; Fabrika, S.; Postnov, K.; Bikmaev, I.; Pavlinsky, M.; Sunyaev, R.; Khamitov, I.; Aslan, Z.

Journal: Astronomy and Astrophysics, v.424, p.L5-L8 (2004)

Publication Date: 01/2003

Keywords: accretion, accretion disks, black hole physics, instabilities, stars: binaries:general, X-rays: general, X-rays: stars

ADS: [2004A&A...424L...5R](#)

Abstract

We present results of first simultaneous optical and X-ray observations of peculiar binary system SS433. For the first time, chaotic variability of SS433 in the optical spectral band (R band) on time scales as small as tens of seconds was detected. We find that the X-ray flux of SS433 is delayed with respect to the optical emission by approximately 80 s. Such a delay can be interpreted as the travel time of mass accretion rate perturbations from the jet base to the observed X-ray emitting region. In this model, the length of the supercritical accretion disk funnel in SS433 is $\approx 10^{12}$ cm.

4.

Title: Period-luminosity relation for M-type semiregular variables from Hipparcos parallaxes

Authors: Yeşilyaprak, C.; Aslan, Z.

Journal: Monthly Notices of the

Royal Astronomical Society,
Volume 355, Issue 2, pp.
601-607.

12/2004

Publication Date:

Keywords:

stars: distances, stars:
fundamental parameters,
stars: late-type, stars:
oscillations

ADS:

[2004MNRAS.355..601Y](#)

Abstract

We have studied the period-luminosity (P-L) relationships of oxygen-rich semiregular (SR) variables in several wavelength bands using Hipparcos parallaxes with an accuracy of better than 10 per cent. We have shown that there is a clear dependence on period of absolute magnitude in the U,B,V,R,IC,J,H,K,L,M,N, [12], [25], [60] and [100] bands, and that the slope of the linear $M_I - \log P$ relation is a smooth function of wavelength. We point out that this relation can in principle be used to derive absolute bolometric magnitude as a function of period. The behaviour of the second periods of SR variables in the P-L relation in the V and K bands is also discussed.

5.

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Authors: Senavci, H. V.; Elmasli, A.; Selam, S. O.; Albayrak, B.

Journal: In Spectroscopically and Spatially Resolving the Components of the Close Binary Stars, Proceedings of the Workshop held 20-24 October 2003 in Dubrovnik, Croatia. Edited by R. W. Hilditch, H. Hensberge and K. Pavlovski. ASP Conference Series, Vol. 318. San Francisco: Astronomical Society of the Pacific, 2004, p. 186-188

Publication Date: 11/2004

Keywords:

ADS: [2004ASPC..318..186S](#)

Abstract

Photoelectric B and V light curves of the neglected eclipsing binary V842 Her were studied to determine the physical parameters of the system. The observations of the binary system were made at the TÜBITAK National Observatory (TUG) during the nights of 3rd and 4th July, 2003. The light curves exhibit the so-called O'Connell effect which the level of the primary maxima being higher than that of the secondary ones in both pass-bands. The new light curves and the radial velocity curves (Rucinski & Lu 1999) were analysed simultaneously using the WD-code. The analysis yields a W-type contact binary that the larger, more massive component being slightly cooler than the smaller, less massive one. The O'Connell effect in the light curves is explained in terms of a dark-spot located on the more massive component.

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Publication Date: 11/2004

Keywords:

ADS: [2004ASPC..318..189T](#)

Abstract

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2002. Due to the proximity of the visual companion the light curves were contaminated by the third light effect which has a relatively small impact on the system parameters estimation. This effect dominantly changes only the degree of overcontact and orbit inclination. The solutions made by using Djurašević's inverse-problem method describe the V776 Cas system as a high overcontact configuration (fover~41% without, and 55% and 58% with two different values of the third light effect - $L_3=0.091$ and $L_3=0.136$) with a relatively small temperature differences between the components. Because of the large difference in masses of the components ($q=mc/mh=0.13$) these solutions suggest a significant mass and energy transfer from the hotter - more massive primary onto the cooler - less massive secondary through the connecting neck of the common envelope. The obtained orbital inclination ($i\sim 53.9$ without, and $i\sim 55$ and $i\sim 56$ with two different values of the third light effect - $L_3=0.091$ and $L_3=0.136$) explains the characteristic shape of the light curves with a relatively small amplitude which is due to partial eclipses of the components in both of the photometric minima.

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Publication Date: 11/2004
Keywords:
ADS: [2004ASPC..318..192E](#)

Abstract

Photoelectric U, B, and V light curves of the recently discovered eclipsing binary V776 Cas were analyzed to determine the preliminary physical parameters of the system by using the Djurašević's (1992a) inverse-problem method. The light curves which have an amplitude of about 0.15 arcmin were obtained at the TÜBITAK National Observatory (TUG) between 8 and 9 October 2002. The analysis yields an A-type contact binary as a high overcontact configuration. Due to the proximity of its visual companion the light curves were contaminated by the third-light effect which has a relatively small influence on the estimation of the system parameters.

9.

Title: DEFPOS (Dual Etalon Fabry-Perot Optical Spectrometer)
Authors: Yegingil, I.; Kiziloglu, Ü.; Sahan, M.; Akyilmaz, M.; Aksaker, N.

Journal: The Magnetized Interstellar Medium, Proceedings of the conference, held in Antalya, Turkey, September 8 - 12, 2003, Eds: B. Uyaniker, W. Reich, and R. Wielebinski, Copernicus GmbH, Katlenburg-Lindau., p. 227-231, 2004.

Publication Date: 02/2004

Keywords:

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DEFPOS (Dual Etalon Fabry-Perot Optical Spectrometer) has been designed to investigate HII regions by observing H γ emission from the interstellar medium (ISM). More detailed investigations of the characteristics including power consumption, temperature, ionization state, kinematics and spatial distribution of this warm ionized gas have been carried out in the University of Wisconsin by detection of the optical line emissions from these faint sources through Fabry-Perot spectrometer. The facility that also provided a velocity resolved H survey of the Galaxy is called WHAM which stands for Wisconsin H γ Mapper. DEFPOS has been designed to carry out a similar study by detecting the H γ emission from the selected regions of Galactic ISM observable on the northern sky. It will be used in coudé exit of the 1.5-m telescope (RTT150) located at Bakirlitepe near Antalya. Besides interstellar work, DEFPOS will be used to observe the earth atmosphere to examine the state of telluric hydrogen and its variation. This observation will also help to subtract the atmospheric effect from the interstellar observations.

10.

Title: ROTSE-III Station in Turkey

Authors: Özel, M. E.; Kiziloglu, Ü.; Aslan, Z.

Journal: The Magnetized Interstellar Medium, Proceedings of the conference, held in Antalya, Turkey, September 8 - 12, 2003, Eds: B. Uyaniker, W. Reich, and R. Wielebinski, Copernicus GmbH, Katlenburg-Lindau., p. 237-238, 2004.

Publication Date: 02/2004

Keywords:

ADS: [2004mim..proc..237O](#)

Abstract, Not Available

11.

Title: Studying the Stellar Populations of the Galactic Disk in the Local Cylinder

Authors: Bartasiute, S.; Aslan, Z.; Boyle, R. P.; Kharchenko, N.; Ossipkov, L.;

Journal: Sperauskas, J.
American Astronomical Society Meeting
205, #142.11; Bulletin of the American
Astronomical Society, Vol. 36, p.1583

Publication Date: 12/2004

Keywords:

ADS: [2004AAS...20514211B](#)

Abstract

We have analyzed the kinematics and metallicity distributions of stellar populations in the local cylinder nearly perpendicular to the Galactic plane by combining seven-color Vilnius photometry for 650 stars in situ with proper-motions measured in Kiev (Ukraine). For half of these stars, radial velocities have also been measured, which allowed us to derive all three components of spatial velocities and Galactic orbits. With this observational material we were able to reach distances of 1-2 kpc from the Galactic plane and to make an investigation of the transition from the old thin disk to the thick disk components of the Galaxy. Radial velocity program was greatly aided through the use of the TÜBİTAK National Observatory RTT150 telescope and Steward Observatory telescopes on Mt Lemmon, Mt Bigelow and Kitt Peak. Two of us (S.B. and J.S.) thank the Vatican Observatory Research Group for guest investigator privileges.

12.

Title: First day-time seeing observations at the TÜBİTAK National Observatory in Turkey

Authors: Özisik, T.; Ak, T.

Journal: AstTSE-IIIId at Bakirlitepe, Turkey. We also report on four-color images of J1514 from the MDM telescope, and five-color images of J2215 from the SDSS public archives.

14.

Title: Dome automation of the RTT150 Russian-Turkish telescope building at TÜBİTAK National Observatory

Authors: Koçak, M.; Keskin, V.; Selam, S. O.

Journal: Astronomische Nachrichten, Vol.325, Issue 6, p.655-655

Publication Date: 10/2004

Keywords:

ADS: [2004AN....325..655K](#)

Abstract, Not Available

15.

Title: Meteorological monitoring system of TÜBİTAK National Observatory

Authors: Koçak, M.; Selam, S. O.; Keskin, V.

Journal: Astronomische Nachrichten, Vol.325, Issue 6, p.652-654

Publication Date: 10/2004

Keywords: instrumentation: miscellaneous

ADS: [2004AN....325..652K](#)

Abstract

A custom meteorological monitoring system was constructed to reliably monitor the meteorological parameters of the site of TÜBİTAK National Observatory (TÜBİTAK: The Scientific and Technical Research Council of Turkey). The site is located on a mountain top known as Bakırlıtepe about 50 km west of the Antalya City at a height of 2547m. The system has software (C-based data acquisition/archiving structure and PHP based WEB monitoring support) and micro-controller based control electronics, fiber based custom designed encoder sensors (for wind speed and direction) and transmission lines using fiberoptic to RS232 transceivers. The constructed system can be used in any robotic telescope project for data monitoring and alert system creation.

2004 Yılı Sirküler ve Telgraflar

1.

Title: GRB 040403: optical observations.

Authors: Khamitov, I.; Aslan, Z.; Parmaksizoglu, M.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.; Bikmaev, I.; Sakhbullin, N.

Journal: GRB Coordinates Network, Circular Service, 2562, 1

Publication Date: 00/2004

Keywords:

ADS: [2004GCN..2562....1K](#)

Abstract

Not Available

2.

Title: GRB 040827: RTT150 optical observations.
Authors: Burenin, R.; Pavlinsky, M.; Sunyaev, R.; Khamitov, I.; Aslan, Z.; Bikmaev, I.; Sakhbullin, N.
Journal:
Publication Date: 00/2004
Keywords: Infra-Red, Optical, X-ray, Request for Observations, Binaries, Black Holes, Nova, Transients
ADS: [2004GCN..2679....1B](#)
Abstract
Not Available

3.

Title: GRB 040924: RTT150 optical observations.
Authors: Khamitov, I.; Aslan, Z.; Yesilyaprak, C.; Kiziloglu, U.; Alpar, A.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.; Bikmaev, I.; Sakhbullin, N.
Journal: GRB Coordinates Network, Circular Service, 2740, 1
Publication Date: 00/2004
Keywords:
ADS: [2004GCN..2740....1K](#)
Abstract
Not Available

4.

Title: GRB040924, RTT150 optical observation.
Authors: Khamitov, I.; Aslan, Z.; Yesilyaprak, C.; Kiziloglu, U.; Gogus, E.; Alpar, A.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.; Bikmaev, I.; Sakhbullin, N.

Journal: GRB Coordinates Network, Circular Service, 2749, 1
Publication Date: 00/2004
Keywords:
ADS: [2004GCN..2749....1K](#)
Abstract
Not Available

5.

Title: GRB040924, RTT150 optical observation.
Authors: Khamitov, I.; Aslan, Z.; Yesilyaprak, C.; Kiziloglu, U.; Gogus, E.; Alpar, A.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.; Bikmaev, I.; Sakhbullin, N.
Journal: GRB Coordinates Network, Circular Service, 2752, 1
Publication Date: 00/2004
Keywords:
ADS: [2004GCN..2752....1K](#)
Abstract
Not Available

6.

Title: GRB041006: RTT150 optical observations.
Authors: Balman, S.; Bikmaev, I.; Kiziloglu, U.; Baykal, A.; Gogus, E.; Alpar, M. A.; Ertan, U.; Aslan, Z.; Khamitov, I.; Uluc, K.; Sakhbullin, N.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.
Journal: GRB Coordinates Network, Circular Service, 2821, 1
Publication Date: 00/2004
Keywords:
ADS: [2004GCN..2821....1B](#)
Abstract
Not Available

7.

Title: GRB041006: RTT150 optical observations.
Authors: Bikmaev, I.; Sakhbullin, N.; Alpar, M. A.; Sabanci, U.; Kiziloglu, U.; Balman, S.; Aslan, Z.; Khamitov, I.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.
Journal: GRB Coordinates Network, Circular Service, 2826, 1
Publication Date: 00/2004
Keywords:
ADS: [2004GCN..2826....1B](#)
Abstract
Not Available

8.

Title: Optical observations of V4641Sgr.
Authors: Revnivitsev, M.; Khamitov, I.; Burenin, R.; Pavlinsky, M.; Sunyaev, R.; Aslan, Z.; Bikmaev, I.; Sakhbullin, N.
Journal: The Astronomer's Telegram, #297
Publication Date: 07/2004
Keywords: Optical, Request for Observations, Black Holes
ADS: [2004ATel..297....1R](#)
Abstract

The X-ray binary system V4641 Sgr (=SAX J1819.3-2525) was observed in Rc band with the 1.5-m Russian-Turkish telescope RTT150 at TUBITAK National Observatory (Turkey) during the period 18:57-21:57 UT, July 5, 2004. The Rc magnitude of the source averaged over all observations was $m_{Rc} \sim 13.5$, that is slightly higher than that in its quiescent state at this orbital phase. We obtained a lightcurve with time resolution 13.5 sec.

9.

Title: V4641 Sgr: new optical flaring
Authors: Bikmaev, I.; Khamitv, I.; Aslan, Z.;
Sakhbullin, N.; Burenin, R.;
Pavlinsky, M.; Revnivitsev, M.;
Sunyaev, R.
Journal: The Astronomer's Telegram, #309
Publication Date: 07/2004
Keywords: Optical, Request for Observations,
Black Holes
ADS: [2004ATel..309....1B](#)

Abstract

We have performed photometric time-series observations (Rc-band) of X-ray binary system V4641Sgr with the Russian-Turkish telescope RTT150 at the TUBITAK National Observatory (Turkey) during the period of 18:33-23:32 UT, July 17,2004. Several optical flaring with increasing of brightness amplitude up to 0.6 mag have been detected. Obtained Light curve with the time resolution of 16.8 sec can be seen in <http://db.rsdcrssi.ru/V4641Sgr/2004/lc040717.jpg> Orbital variations of V4641 Sgr in quiescence (Goranskij et al., Astron.Rep., 2003, v.80, N9) with data points obtained on July 17, 2004 can be seen in <http://db.rsdcrssi.ru/V4641Sgr/2004/ph040717.jpg> Given strong optical variability the source obviously in some active state.