Name and surname*:* *Altan Baykal*

Present Position: Professor of Physics

Research Interests: Accretion Powered X-Ray Pulsars,Neutron Stars, Magnetars, Cataclysmic Binaries, Radio Pulsars

Education:

1991 PhD degree, Astrophysics, Middle East Technical University, Ankara, Turkey
1985 MSc degree, Plasma Physics, Middle East Technical University, Ankara, Turkey
1983 BSc degree, Physics, Middle East Technical University, Ankara, Turkey

Previous Positions:

1985-1993, Research Assistant, Middle East Technical University
1993-1998, Assistant Professor, Middle East Technical University
1998-2001, Associated Professor, Middle East Technical University Full Professor, Middle East Technical University

1988, Visiting Scientist, Max Planck Institut für Astrophysics (1 month)
1992, Visiting Scientist, Univ. Of Wisconsin, Physics Dept. (2 months)
1992, NATO Fellow, Univ. of Washington, Astronomy Dept. (8 months)

1994-1996 NRC, GSFC/NASA, Goddard Space Flight Center

(26 months)
1997, Visiting Scientist, GSFC/NASA, Goddard Space Flight Center (3 months)
1998, Visiting Scientist, GSFC/NASA, Goddard Space Flight Center (2 months)
2001, Visiting Scientist, GSFC/NASA, Goddard Space Flight Center (2 months)
2005, Visiting Scientist, GSFC/NASA, Goddard Space Flight Center (3 months)
2008, Visiting Scientist, Max Planck Institut für Astrophysics (2 months)
2009, Visiting Scientist, Max Planck Institut für Astrophysics (2 months)
2010, Visiting Scientist, Max Planck Institut für Astrophysics (month)
2011, Visiting Scientist, Max Planck Institut für Astrophysics (3 weeks)
2012, Visiting Scientist, GSFC/NASA, Goddard Space Flight Center (2 weeks)
2013, 1997, Visiting Scientist, GSFC/NASA, Goddard Space Flight Center (1 month)
2015, Visiting Scientist, Max Planck Institut für Astrophysics (3 weeks)
2016, Visiting Scientist, Max Planck Institut für Astrophysics (2 weeks)

Awards:

Junior Science Award given by "The Scientific and Technological Research Council of Turkey" on year 2000. (Important award in Turkey)

Best PhD Thesis award from Middle East Technical University, 2011

Administration:

Art and Science Faculty Administrative Board Member 1998-2001
Art and Science Faculty Academic Board Member 2001-2004
Member of National Optical Observatory Commission 2008-2011
Art and Science Faculty Academic Board Member 2015-continues

Open courseware*:*

He introduced Electromagnetic Theory during 2012- 2013 as a open courseware.
(see Middle East Technical University OpenCourseWare Courses (http://ocw.metu.edu.tr/))

Teaching Experience:

1993-1994 Physics 105 General Physics I
Physics 106 General Physics II
Astr 201 Astronomy I
Astr 202 Astronomy II

1995-1996 Physics 105 General Physics I
Physics 106 General Physics II

1997-1998 Physics 105 General Physics I
Physics 106 General Physics II
Physics 202 Modern Physics

1998-1999 Physics 105 General Physics I
Physics 106 General Physics II

2000-2001 Physics 105 General Physics I
Physics 106 General Physics II

2001-2002 Physics 505 Electromagnetic Theory I
Physics 105 General Physics I
Physics 106 General Physics II

2002-2003 Physics 505 Electromagnetic Theory I
Physics 506 Electromagnetic Theory II
Astr 516 High Energy Astrophysics

2004-2005 Physics 505 Electromagnetic Theory I
Physics 506 Electromagnetic Theory II
Astr 516 High Energy Astrophysics

2006-2007 Physics 506 Electromagnetic Theory II
Physics 334 Electromagnetic Theory
Astr 516 High Energy Astrophysics

2007-2008 Physics 506 Electromagnetic Theory II
Physics 334 Electromagnetic Theory
Astr 516 High Energy Astrophysics

2008-2009 Physics 505 Electromagnetic Theory I
Physics 105 General Physics I
Physics 106 General Physics II

2009-2010 Physics 505 Electromagnetic Theory I
Physics 105 General Physics I
Physics 106 General Physics II

2010-2011
Physics 505 Electromagnetic Theory I
Physics 506 Electromagnetic Theory II
Astr 516 High Energy Astrophysics

2011-2012
Physics 505, Electromagnetic Theory I
Physics 506, Electromagnetic Theory II
Physics 300, Quantum Physics 300

2012-2013
Physics 505 Electromagnetic Theory I
Physics 506, Electromagnetic Theory II
Physics 431, Quantum Mechanics

2013-2014
Physics 300, Quantum Physics
Physics 432, Quantum Mechanics

2014-2015
Physics 505, Electromagnetic Theory I
Physics 506, Electromagnetic Theory II
Physics 300, Quantum Physics 300

Description of courses:

Astr 201-202 (text book The Dynamic Universe, Theodore P. Snow, Fourth Edition)
Solar system, sun and planets, astronomical coordinates, Keller's law, properties of light, tools of Astronomy, basic concepts in astronomy, parallax method, brightness classification, color magnitude relations, binary stars, internal structure of stars, evolution of stars, unusual stars, interstellar matter, galaxies, universe.

Astr 516 (text book High Energy Astrophysics, Malcolm. S. Longair, Second Edition, Introduction to High Energy Astrophysics, Stephan Rosswog and Marcus Brüngen)
Special relativity, gas processes, radiation processes, Supernovae, Neutron stars, pulsars, and magnetars, compact binary systems, Gamma-ray bursts, Active Galactic, nuclei, recent high energy astrophysics instruments.

Physics 105-106 (text book Fundamentals of Physics, Halliday and Resnick)
Vectors, kinematics, particle dynamics, work and energy, conservation of energy, System of particles, collision, rotational motion, oscillations. Electric charge, electric field, Gauss's law, electric potential, capacitance, Current and resistance, circuits, magnetic field, Amper's law, Faraday's law of Induction, electromagnetic oscillations, alternating currents, Maxwell's Equations.

Physics 202 (text book Concepts of Modern Physics, Arthur Beiser)
Special theory of relativity, particle properties of waves, wave properties of particles, Atomic structure, elementary quantum mechanics, many electron atoms nuclear structure and radioactivity.

Physics 334 (text book Introduction to Electrodynamics, David J. Griffiths, Third Edition)
Electrostatics, Electric Fields in Matter, Magnetostatics, Magnetic Fields in Matter, Electrodynamics, Maxwell Equations, Conservation Laws, Electromagnetic Waves, potentials and fields, radiation, electrodynamic and relativity.

Physics 505-506 (text book Classical Electrodynamics, David Jackson Third Edition)
Electrostatics, Boundary value problems, multipoles, dielectrics, magnetostatics, Maxwell equations, conservation laws, plane electromagnetic waves and wave Propagation, waveguides, resonant cavities, radiating systems, multipole fields, Scattering and diffraction, special theory of relativity, dynamics of relativistic particles and electromagnetic fields, radiation by moving charges, Bremsstrahlung, Cherenkov radiation.

Physics 300, 431 ,432 (text book Introduction to Quantum Mechanics, David Griffths)
The postulates of quantum mechanics, Hermitian operators, unceratinty relation, Dirac notation, one dimensianal problems, bound and unbound states, particle in a box, Schrodinger equation in three dimension, angular momentum, the radial equation, the hydrogen atom, interaction of electrons with electric and magnetic field, operators, matrices, spin, the addition of angular momenta, time independent perturbation theory, the real hydrogen atom, time dependent perturbation theory. Variational principle WKB approximation, The adiabatic approximation, Scattering

Thesis Supervised*:*

1) BATSE Observation of Accretion Powered Pulsars, Msc Thesis, Cagdas Sitki Inam, (1998)
2) X-ray Observations of Accretion Powered Pulsars Phd Thesis, Cagdas Inam, (2004)
3) Observations of 4U 1907+09, Msc Thesis, Elif Beklen(2004)
4) The Red Noise Power Density Estimation Techniques And Application to the Source SAX J2103.5+4545, Msc Thesis, Arif Emre Erkoca, (2004)
5) RXTE and CHANDRA Observations of Galactic Microquasars GRO J1655-40 and GRO 1915+105, Msc Thesis, Esra Bulbul, (2006
6) X-Ray and Timing Properties of Anomalous X-Ray Pulsar 1E 2259+586, Msc Thesis, Sinem Sasmaz Mus, (2007)
7) Integral and RXTE observations of 4U 1907+09, Msc Thesis (2009), Şeyda Şahiner
8) X-Ray and Optical Observations of High X-Ray Binaries, PhD Thesis, Elif Beklen 2010
9)Viscous Time Scales of High Mass X Ray Binaries, Msc Thesis, Burcin İcdem 2011
10) Timing Properties of Recently Discovered Soft Gamma Repeaters, Msc Thesis, Muhammed Miraç Serim, 2012
11) Pulse Phase Reseolved X-Ray Spectroscopy of Four Accretion Powere Millisecond Pulsars,Msc Thesis, Sıdıka Merve Çolak, 2014
12) Investigation of Quasi Periodic Noise Features in X Persei, Msc Thesis, Zeynep Acuner, 2014
13) X Ray Timimng Properties of Four Anomalous X-Ray Pulsars: 4U 0142+61, 1E 2259+586, 1 RXS J170849.0-400810 and 1E 1841-045, Msc Thesis, Danjela Çerri, 2015
14) X Ray Analysis of High Mass X Ray Binary Pulsars, PhD Thesis, Şeyda Şahiner, 2015

Project Works*:*

1) Pulse TIMING Studies of X-Ray and Radio Pulsars. NATO/Collaborative Research, 1994-1997.

2) Pulsars and Supernovae Remnants, The Scientific and Technological Research Council of Turkey 1994-1998

3) 1001 TÜBİTAK project entitled ''Investigation of Torque and Mass Accretion Rate Correlations and Measurement of Orbital Period Changes if Accretion Powered X Ray Pulsars Using Data Obtained from X Ray Space Observations 2010-1013

4) 1001 TÜBİTAK project entitled' The Investigation of Correlation between Spin-down Rate and Torque Noise Strength of Magnetars', 2015-2018 continues.

I have been several RXTE observations proposals as CoI and PI.

Publications:

Edited Book:

"The Electromagnetic Spectrum of Neutron Stars",
Proceedings of the 6th NATO ASI series held in Marmaris,
Turkey, on 7- 18 June
2004.
Edited by A. Baykal, S. K. Yerli, S. C. Inam, and S. Grebenev. NATO science series II: Mathematics, physics and chemistry, vol. 210.
ISBN-10 1-4020-3859-3
(HB); ISBN-13 978-1-4020-3859-4 (HB); ISBN-10 1-4020-3861-5 (e -book); ISBN-13 978-4020-3861-5 (e-book). Published by Springer, Dordrecht, The Netherlands, 2005.

Refreed Publications *(INTERNATIONAL)*

Journal Papers

1) **Baykal,A.,** *Alpar, A., Kiziloglu, U., A Shot Noise Model for a Two-Component Neutron Star. "Astronomy and Astrophysics ", 252 (1991), p.664 .*

2) **Baykal, A.,** *Boynton, P., Deeter, J.E., Scott, M., The Noise in 35 Day Cycle of Her X-1, "Mon.Not.Roy.Astron.Soc ", 265 , (1993), p.347.*

3) **Baykal, A.,** *Ogelman, H., An Empirical Torque Noise and Spin-up Model For Accretion Powered X-Ray Pulsars. "Astronomy and Astrophysics ", 267 , (1993), p,119 .*

4) **Baykal, A.,** *Anderson, S., Margon, B., A Statistical Study of the 164 Day Clock Noise of the Relativistic Beams in SS 433. "Astronomical Journal ", 106 , (1993), p.2359 .*

5) Alpar, A., **Baykal, A.,** *Expectancy of Large Pulsar Glitches: A Comparison of Models with the Observed Glitch Sample. "Mon.Not.Roy.Astron.Soc ", 269 , (1994), p.849 .*

6) **Baykal, A.,** *Esendemir, A., Kiziloglu, U.,+ 4 Author, X-Ray Variability and 1mHz Oscillatios in TT ARI "Astronomy and Astrophysics ", 299 , (1995), p.421 .*

7) **Baykal, A.,** *Swank, J., Pulse Frequency Changes of 1E 2259+586 and The Binary Interpretation. "Astrophysical Journal", 460 , (1996), p.470.*

8) **Baykal, A.,** *The Torque and X-Ray Flux Changes of OAO 1657-415. "Astronomy and Astrophysics ", 319, (1996), p.515 .*

9) Stark, M., **Baykal, A.,** *Strohmayer, T.E., Swank, J., Pulse Arrival Time Glitches in GRO J1744-28, "Astrophysical Journal ", 470 , (1996), p.109*

10) Zand, in't J.J.M., Strohmayer, T., **Baykal, A.,** *Dipping Activity in the X-Ray Pulsar 4U 1907+09. "Astrophysical Journal ", 479 , (1997), p.471 .*

11) **Baykal, A.,** *Kiziloglu, U., Low Frequency Flickering of TT Ari: Hard and Soft X-Ray Emission Regions. "Astronomy and Space Science ", 246 , (1997), p.29 .*

12) **Baykal, A.,** *Swank, J., Strohmayer, T.E., Stark, M., Spin-Down Rate of 1E 2259+586. "Astronomy and Astrophysics", 336, (1998), p.173.*

13) Zand, in't J.J.M., **Baykal, A.,** *Strohmayer, T.E., Recent X-Ray Measurments of the Accretion Powered Pulsar 4U 1907+09. "Astrophysical Journal", 496, (1998), p.386.*

14) Zand, in't J.J.M., Strohmayer, T.E., **Baykal, A.,** *Spin down and Oscilations in 4U 1907+09: a retrograde disk?. "Nuclear Physics B(Proc. Suppl)", 69, (1999), p.224-227.*

15) Kızıloglu, U., **Baykal, A.,** *Alev, M., Gogus, E., The Spectrum and Dips of RE 0751+14 A Joint Evaluation of the ROSAT and ASCA Archival Data. "ASTROPHYSICS*

AND SPACE SCIENCE", 259, (1999), p.191-203.

16) **Baykal, A.,** *Alpar, A., Boynton, P.E., Deeter, J.E., The Timing Noise of PSR 0823+26, 1706-16, 1749-28, 2021+51 and the Anomalous Braking Indices. "Mon. Not. R. Astron. Soc.", 306, (1999), p.207-212.*

17) **Baykal, A.,** *Stark, M., Swank, J., Discovery of the Orbit of the Transient X-Ray Pulsar SAX J2103.5+4545. "Astrophysical Journal", 544, (2000), p.129-132.*

18) Gurkan, A., **Baykal, A.,** *Alpar, A., Ogelman, H., Tod Strohmayer, Post-Glitch RXTE-PCA observations of the Vela Pulsar. "Astronomy and Astrophysics", 356, (2000), p.1136.*

19) **Baykal, A.,** *Strohmayer, T.E., Swank, J., Alpar, A., Stark, M., Differences Among the Two Anomalous X-Ray Pulsars: Variations in the Spin Down Rate of 1E 1048.1-5937 and An Extended Interval of Quiet Spin Down in 1E 2259+586. "Monthly Notices of the Royal Astronomical Society", 319, (2000), p.205-209.*

20) Inam, C., **Baykal, A.,** *X-Ray flux and pulse frequency changes of three high mass X-ray binary pulsars: Vela X-1, GX 301-2 and OAO 1657-415. "Astronomy and Astrophysics", 353, (2000), p.617-623.*

21) **Baykal, A.,** *Short Term Pulse Frequency Fluctuations of OAO 1657-415 from RXTE Observations. "Monthly Notices of Royal Astronomical Society", 313, (2000), p.637-640.*

22) **Baykal, A.,** *Inam, C., Alpar, A., Zand, I., Strohmayer, T., The Steady Spin Down Rate of 4U 1907+09. "Monthly Notices of Royal Astronomical Society", 327, (2001), p.1269.*

23) **Baykal, A,** *Stark, M, Swank, J.H, X Ray Spectra and Pulse Frequency Changes in SAX J 2103+45."Astrophysical Journal", 569, (2002), p.903.*

24) Burenin R., Sunyaev., et a;., **A.Baykal***, First Hours of the GRB 030329 Optical Afterglow. "Astronomy Letters", 29, (2003), p.6.*

25) Inam, C., **Baykal, A.,** *Swank, J., Stark, M, Discovery of a Soft Spectral Component and Transient 22.7 second QPO of SAX J2103.4545. "Astrophysical Journal", 616, (2004), p.463.*

26) Inam, C., **Baykal, A.,** *Scott, M., Finger, M., Swank, J, X-ray flux related timing and spectral features of 2S 1417-62. "Monthly Notices of Royal Astronomical Society", 349, (2004), p.173.*

27) Kızıloglu, U, Kızıloglu, N, **Baykal A,** *ROTSE Observations of the Young Cluster IC 348. "Astronomıcal Journal", 130, (2005), p.2766.*

28) Inam C, **Baykal A,** *X-ray spectral evolutıon of Her X-1 ın a low state and followıng short hıgh state. "Monthly Notıces of Royal Astronomıcal Socıety", 361, (2005), p.1393.*

29) **Baykal A,** *Kızıloglu U, Kızıloglu N, Balman S, Inam C, X-ray outburst of 4U 0115_634 and ROTSE observatıons of ıts optıcal counterpart V635 Cas. "Astronomy And Astrophysıcs", 439, (2005), p.1131.*

30) Alpar, M.A., **Baykal, A,** *Pulsar braking indices glitches and energy dissipation in neutron stars. "Monthly Notices of Royal Astronomical Society", 372, (2006), p.489.*

31) **Baykal, A,** *Inam C, Beklen E, Evidence of Change in the long term spin down rate of X-ray pulsar 4U 1907+09. "Monthly Notices of Royal Astronomical Society", 369, (2006), p.1760.*

32) **Baykal, A,** *Inam C, Beklen E, Recent Timing Studies on RXTE observations of 4U 1538-52. "Astronomy And Astrophysics", 453, (2006), p.1037.*

33) Kızıloglu, U., Kızıloglu, N., **Baykal, A.,** *Yerli, S.K., Ozbey, M, Optical variabilities in the Be X-ray transient system GRO J2058 42. "Astronomy Astrophysics", 470, (2007), p.1023.*

34) **Baykal A,** *Inam C, Stark M, Heffner C, Erkoca A, Swank J, Timing studies on RXTE observations of SAX J 2103.5+4545. "Monthly Notices of Royal*

Astronomical Society", 374, (2007), p.1108.

35) Kızıloglu, U., **Baykal, A.,** *Kızıloglu N, Optical observations of Be X-ray transient system KS 1947-300. "Astronomische Nachrichten", 328, (2007), p.142.*

36) **Baykal, A.,** *Kiziloglu, U., Kiziloglu, N., Beklen, E., Ozbey, M., Recent RXTE/ASM and ROTSE IIId observations of EXO 2030+375(V2246 Cygni)." Astronomy Astrophysics", 479, (2008), p.301*

37) Inam, C., Sahiner, S., **Baykal, A.,** *Recent Torque Reversal of 4U 1907+09. "Monthly Notices of Royal Astronomıcal Socıety", 395, 1015*

38) Inam, C., Townsend, L.J., McBridge, V.A., **Baykal, A.,** *Coe, M.J., Corbet, R.D.H., "Monthly Notices of Royal Astronomıcal Society", 395. 1662*

39) Kiziloglu, U, Ozbilgen, S., Kiziloglu, N., **Baykal, A.,** *"Optical and X-Ray Outbursts of Be X-Ray Binary Systems", Astronomy Astrophysics, 508, 895*

40) Inam, S.C., **Baykal, A.,** *Beklen, E., "Analysis of RXTE-PCA Observations of SMC X-1" Monthly Notices of Royal Astronomıcal Society, 2010, 403ö 3781*

41) **Baykal, A.,** *Gogus, E., Cagdas, S.I., Belloni, T., "The Orbital Period of Swift J 1626.6-5156", Astrophysical Journal, 711, 1306*

42) İçdem, B., **Baykal, A** *'Viscous Timescale in High Mass X-Ray Binaries', 2011, Astronomy and Astrophysics, 529, 71*

43) İçdem, B., İnam, Ç., **Baykal, A.,** *'Timing and X-Ray Spectral Features of SWIFT J1626.6-5156', MNRAS, 2011, 415,1523*

44) Icdem, B., **Baykal, A.,** *Inam, S.C., RXTE timing analysis of the anomalous X-ray puslar 1E 2259+586. MNRAS., 2012, 419, 3109*

45) *Şahiner, Ş.; Inam, S. Ç.;* **Baykal, A.**
"A comprehensive study of RXTE and INTEGRAL observations of the X-ray pulsar 4U 1907+09", 2012MNRAS.421.2079

46) *Feroci, M.; et al., with 193 author, Experimental Astronomy, Volume 34, Issue 2, pp.415 'The Large Observatory for X-ray Timing (LOFT)', 2012*

47) *Şahiner, Ş.; İnam, S. Ç.; Serim, M. M.;* **Baykal, A**.,*2013MNRAS.434.2772 'RXTE and Swift observations of SWIFT J1729.9-3437'*

48) *Acuner, Z.; İnam, S. Ç.; Şahiner, Ş.; Serim, M. M.;* **Baykal, A**.*; Swank, J. 2014MNRAS.444..457,'Timing studies of X Persei and the discovery of its transient quasi-periodic oscillation feature'*

49) *Şahiner, Ş.; Serim, M. M.;* **Baykal, A**.*; İnam, S. Ç., 2016MNRAS.456..845,2016 'RXTE and Swift Observations of SWIFT J0513.4-6547'*

50) *Serim M. M., Şahiner Ş., Çerri-Serim, D., İnam, S. Ç.,* ***Baykal, A.****, 2017MNRAS.469.2509S, 2017, 'Comprehensive timing and X-ray spectral analysis of GX 1+4'*

Circulars and Bulletins:

1) *Uyaniker, B.,* **Baykal, A.,** *Multiple Periodicity of Delta Delphini. "IBVS", 3676, (1991)*

2) *Eryurt, D., et al., The Light Curve of ER Vulpeculae. "IBVS", 3692, (1991)*

3) *Stark, M.J.,* **Baykal, A.,** *Strohmayer, T., Swank, J., GRO J1744-28, "International Astronomical Circular", (1996), 6324*

4) *Stark, M.J.,* **Baykal, A.,** *Strohmayer, T., Swank, J., GRO J1744-28, "International Astronomical Circular", (1996), 6334*

5) **Baykal,A.,** *Stark,M., Swank,J., SAXJ 2103.5+4545. "International Astronomical Circular", , (2000), 7355*

6) *Kiziloglu, U,* **Baykal, A,** *GRB020813, optical observations. "Gamma Ray Burst Circulars", 1488, (2002)*

7) *Khamitov et al.,, GRB 030329 RTT 150 optical observations. "Gamma Ray Burst Observation Report",(2003), 2299*

8) *Khamitov et al.,, GRB03029, optical observations*

correction to GCN 2208. "Gamma Ray Burst Observational Report", , (2003), 2213

9) Burenin et al., GRB 030329: optical observations. "Gamma Ray Burst Observational Report", , (2003), 2260

10) Burenin et al.,, GRB 030329: optical observations. "Gamma Ray Burst Observational Report", , (2003), 2079

11) Bikmaev et al.,, GRB030329: RTT150 optical observation. "Gamma Ray Burst Observational Report", , (2003), 2220

12) Burenin et al.,, GRB030329:begining of the new fading phase in optical band. "Gamma Ray Burst Observational Report", (2003), 2054

13) Burenin et al.,, GRB 030329: further optical observations. "Gamma Ray Burst Observational Report", , (2003), 2046

14) Burenin et al.,, GRB030329: lightcurve observed during the change of its slope. "Gamma Ray Burst Observational Report", , (2003), 2024

15) Khamitov et al.,, GRB030429: RTT150 optical observations, a possible host galaxy. "Gamma Ray Burst Observational Report", , (2003), 2208

16) Burenin et al.,, GRB030329: optical observations. "Gamma Ray Burst Observational Report", , (2003), 2001

17) Khamitov et al.,, GRB030329:RTT150 optical observations and upper limit for a host. "Gamma Ray Burst Observational Report", , (2003), 2198

18) Balman, S., et al.,
GRB 041006: RTT 150 Optical Observations. "Gamma ray Burst Network Circulars", 2821, (2004), p.1.

19) Kızıloglu, U., et al., GRB050319 RTT150 optıcal observatıons. "GCN", , (2005), p.3139.

20) Kızıloglu, U., Balman, S., **Baykal, A.**, *Gogus, E., Alpar, A., Inam, C., Optıcal outburstof XTE J1118_480. "Astronomıcal Telegram",(2005), p.386.*

21) Kızıloglu, U., **Baykal, A.,** *Kızıloglu, N., The 2004 optıcal outburst of V635 Cas ısıng ROTSE 3d Observatıons. "IBVS Information Bulletin on Variable Stars,", , (2005), 5590*

22) Kızıloglu, U., Kızıloglu, N., **Baykal, A.,** *delta scutı lıke pulsatıon of H254 usıng rotse 3d ccd observatıons. "IBVS Information Bulletin on Variable Stars,", (2005), 5589.*

23) **Baykal A.,** *Kızıloglu U Kızıloglu N, Optıcal observatıons of BQ Cam usıng Rotse 3d observatıons. "IBVS Information Bulletin on Variable Stars,", 5615, (2005), p.5615.*

24) Kiziloglu, U., Kiziloglu, N., **Baykal, A.,** *Yerli, S.K., Ozbey, M., Detection of Increase in the Optical Light of Be/X-Ray Binary System GRO J2058+42 "IBVS Information Bulletin on Variable Stars,", 5821, (2008)*

25) Kiziloglu, U., Kiziloglu, N., **Baykal, A.,** *Yerli, S.K., Ozbey, M., On the optical activity of GRO J2058+42 prior to X-ray outburst."Astronomıcal Telegram"*

26) Kiziloglu, U., Kiziloglu, N., **Baykal, A.,** *Yerli, S.K., Ozbey, M., Long term optical observations of the Be/X-Ray binary system VO332+53, IBVS Information Bulletin on Variable Stars,", 5865, (2008)*

27) **Baykal, A.,** *Gogus, E., Cagdas, S.I., Belloni, T. Orbital odulation and Long Term Spin up Rate of Swift J 1626.6-5156, Atel, 2009, 2250*

28) Balman, Solen; Mendez, Mariano; Diaz Trigo, Maria; Inam, Cagdas; **Baykal, Altan** *A Spectral Analysis of the X-Ray Pulsar 4U 1907+09 obtained at thePeriastron Passage , with the XMM-Newton Observatory, 2010cosp...38.2422B*

29) **Baykal, A***.; Balman, S.; Mirac, M. A Re-analysis of Timing Parameters of SGR 1833-0832, 2010ATel.2763*

30) Kiziloglu, U.; Kiziloglu, N.; **Baykal, A***.; Inam, S. C. Increased optical activity of Be/X binary system SAX 2103.5+4545 suggests a new outburst in X-rays,2010ATel.2925*

31) Serim, M.; **Baykal, A***.; Inam, S. C. SGR 1822-1606: Constant Spin Period, 2011, ATel.3543*

Conference Abstracts and Papers*:*

*1)***Baykal, A,** *Ogelman, H., Torque Noise Models for Accretion Powered X-Ray Binaries " The Lives of Neutron Stars, Proceedings NATO ASI, 1993, Edited by, M.A.Alpar, U.Kiziloglu, J van Paradijs, p. 37*

2) **Baykal, A.,** *Alpar, A., Expectancy of Large Glitches, "Pulsars: problems and progress Astronomical Society of The Pacific Con. Vol 105: 160 th IAU, 1996, p .105*

3) Stark, M., **Baykal, A.,** *Lamb, F.K., The Flux From the Bursting Pulsar and the Resulting Accretion Torque. "American Astronomical Society" 28, (1996), 1425*

4) Stark, M., **Baykal, A.,** *Strohmayer, T.E., Swank, J.H., Pulsar Phase Lag During and Following X-Ray Bursts from the Bursting Pulsar "American Astronomical Society" 29, (1997), p 793*

5) Swank, J., **Baykal, A.,** *Stark, M.,Flux Correlated Changes in the Transient Pulsar SAX J2103+4545, "American Astronomical Society" 33, 2001, p 1446*

6) Stark, M., Saia, M., Swank, J., **Baykal, A.,** *Torque and Luminosity History of the Transient Pulsar SAX J2103+4545, "American Astronomical Society", 35, 2003, p 1292*

7) **Baykal, A.,** *Accretion Powered X-Ray Pulsars, "The Electromagnetic Spectrum of Neutron Stars" NATO/ASI, Edited by A.Baykal, S.K.Yerli,S.C.Inam, and S.Grebenev, p. 263, 2004*

8) **Baykal, A***., Alpar, A., Pulsar Brakig Indices, 26th meeting of the IAU, JD02, 2006*

9) *Stark, Michael J.; Meral, D.;* **Baykal, A.***; Swank, J. H.*
The Torque-luminosity Relation and Possible Glitches in Three X-ray Binary Systems, 2006AAS...20915901S

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