

CURRICULUM VITAE of Milan M. Ćirković

♣ with the complete list of publications ♣

1. Personal data

Name: Milan M. Ćirković

Date of birth: 11. III 1971.

Place of birth: Belgrade, Serbia

Sex: male

Marital status: single

Contact address: Astronomical Observatory Belgrade, Volgina 7, 11000 Belgrade, Serbia

Home phone: +381-11-2419289

Business phone: +381-11-401320, ext. 118

Cell phone: +381-064-2874806

Fax: +381-11-2419553

Primary e-mail address: mcirkovic@aob.aob.bg.ac.yu

Secondary e-mail address: arioch@eunet.yu

WWW address: <http://www.aob.bg.ac.yu/staff/mcirkovic/index.html>

2. Academic degrees

Year	Degree	Institution	Place	Subject
2000	Ph. D.	Dept. of Physics & Astronomy, State University of New York	Stony Brook, USA	Physics
1995	M. Sc.	Dept. of Earth & Space Sciences, State University of New York	Stony Brook, USA	Earth & Space Sciences
1994	B. Sc.	Faculty of Physics, University of Belgrade	Belgrade, Serbia	Theoretical physics

3. Professional background

Period	Position	Institution	Place
09/2003 – present	Assistant Professor	Department of Physics, University of Novi Sad	Novi Sad, Serbia
02/1997 – present	Research Associate	Astronomical Observatory of Belgrade	Belgrade, Serbia
02/1996 – 05/1998	Research Assistant	State University of New York	Stony Brook, USA
08/1994 – 01/1996	Teaching Assistant	State University of New York	Stony Brook, USA

4. Main research interests

- 4.1. **Astrophysical cosmology.** Evolution of the gaseous content of the universe and QSO absorption line systems; baryonic dark matter in general and MACHOs in particular; two-populations models for the Ly α forest absorption systems; history of star formation in galaxies; opacity of galactic disks for the Lyman continuum photons; molecular hydrogen at high redshift; the problem of MACHO formation.
- 4.2. **Astrobiology.** Astronomical aspects of the terrestrial catastrophism; connection of structure and evolution of comets and the H₂ subcomponent of the Galactic disk; influence of astronomical catastrophes on the history of our (and hypothetical other) civilizations; possible impact on SETI studies; suggested periodicity of the major bombardment episodes and mass extinctions; philosophical aspects of astrobiology.
- 4.3. **History and philosophy of physical sciences.** Anthropic principle, its cognitive significance and connection with the values of cosmological parameters; philosophy of quantum mechanics; the influence of ideas of early cosmological models (classical steady-state, conformally invariant cosmology, etc.) on the modern astrophysical and cosmological thought; the problem of the arrow of time; existence of extraterrestrial intelligence and the anthropic reasoning; archaeoastronomy; history of physics and astronomy in Serbia and the Mediterranean.
- 4.4. **Physical eschatology.** Future evolution of the universe; duration of the stelliferous era and the history of future star formation in galaxies; non-conventional modes of star formation; cosmological future of intelligent life; epistemological basis of physical eschatology.
- 4.5. **Foundations of quantum mechanics and quantum information processing.** temporal correlations and the status of time in quantum mechanics; dynamical reduction quantum theories; the many-worlds “interpretation” of quantum mechanics and its cosmological and philosophical significance; quantum cosmology; quantum information and computation; possible role of quantum mechanics in mental states and processes.
- 4.6. **Scientific inspiration in arts and culture.** Cosmological paradigms and interpretation of the objects of art; archaeoastronomy; importance of astronomical and quantum-theoretical ideas and revolutions for the development of the modern democratic, humanistic and anti-totalitarian thought.

5. Theses and dissertations

Note: Here, as well as in the further cases of publications written in a different language, the original title will be quoted and the English translation will be given in brackets.

- 5.1. *Gaseous Galactic Haloes and Ly α Absorption Line Systems*: Ph. D. dissertation, State University of New York at Stony Brook, June 2000. Advisors: Profs. Peter W. Stephens and Philip M. Solomon.
- 5.2. *Stacionarne kosmologije i antropički princip*. [Stationary Cosmologies and the Anthropic Principle]: Alternative Academic Network (AAOM) thesis, Belgrade, January 2000. Advisor: Prof. Petar Grujić. Published in adapted form in reference 6.26.

- 5.3. *Nelokalnost vremena u svetlu Frensonovog eksperimenta* [Temporal Non-locality in Light of the Franson's Experiment]: B. Sc. thesis, Belgrade University, June 1994. Advisors: Profs. Fedor Herbut and Milan Vujičić.

6. Publications in research journals

- 6.1. *Forecast for the Next Eon: Applied Cosmology and the Long-Term Fate of Intelligent Beings*. Milan M. Ćirković (2004): Foundations of Physics, vol. **34**, pp. 239-261.
- 6.2. *Three's a Crowd: On Causes, Entropy, and Physical Eschatology*. Milan M. Ćirković and Vesna Milošević-Zdjelar (2004): Foundations of Science, vol. **9**, pp. 1-24.
- 6.3. *Earths: Rare in Time, Not Space?* Milan M. Ćirković (2004): Journal of the British Interplanetary Society, vol. **57**, pp. 53-59.
- 6.4. *Ancient Origins of a Modern Anthropic Cosmological Argument*. Milan M. Ćirković (2003): Astronomical and Astrophysical Transactions, vol. **22**, pp. 879-886.
- 6.5. *The Thermodynamical Arrow of Time: Reinterpreting the Boltzmann-Schuetz Argument*. Milan M. Ćirković (2003): Foundations of Physics, vol. **33**, pp. 467-490.
- 6.6. *On Determination of the Cosmic Ray Flux Using Molecular Hydrogen Absorption Lines*. Milan M. Ćirković and Ivana Damjanov (2003): Serbian Astronomical Journal, vol. **167**, pp. 17-22.
- 6.7. *On the Importance of SETI for Transhumanism*. Milan M. Ćirković (2003): Journal of Evolution and Technology, vol. **13** (<http://www.jetpress.org/volume13/cirkovic.html>).
- 6.8. **Resource Letter PEs-1: Physical eschatology**. Milan M. Ćirković (2003): American Journal of Physics, vol. **71**, pp. 122-133.
- 6.9. *The Chemical Composition of the Halo and Evolutionary Problems*. Slobodan Ninković and Milan M. Ćirković (2003): Astrophysics and Space Science, vol. **284**, pp. 783-786.
- 6.10. *The Doomsday Argument and the Self-Indication Assumption: Reply to Olum*. Nick Bostrom and Milan M. Ćirković (2003): Philosophical Quarterly, vol. **53**, pp. 83-91.
- 6.11. *Kinematics in the $z = 2.81$ Galaxy and the Evidence for Rotation*. Milan M. Ćirković (2003): Astrophysics and Space Science, vol. **283**, pp. 269-273.
- 6.12. *Extraterrestrial Intelligence and Doomsday: A Critical Assessment of the No-Outsider Requirement*. Milan M. Ćirković and Vesna Milošević-Zdjelar (2003): Serbian Astronomical Journal, vol. **166**, pp. 1-11.
- 6.13. *How Many Universes Are Necessary for an Ice Cream to Melt?* Milan M. Ćirković (2003): Serbian Astronomical Journal, vol. **166**, pp. 55-59.
- 6.14. *On the First Anthropic Argument in Astrobiology*. Milan M. Ćirković (2002): Earth, Moon, and Planets, vol. **91**, pp. 243-254.
- 6.15. *Quantum Information Processing: The Case of Vanishing Interaction Energy*. Miroljub Dugić and Milan M. Ćirković (2002): Physics Letters A, vol. **302**, pp. 291-298.
- 6.16. *A new proposition for redating the Mithraic tauroctony scene*. Edi Bon, Milan M. Ćirković, and Ivana Milosavljević (2002): Astronomische Nachrichten, vol. **323**, pp. 579-580.
- 6.17. *Quantum Parallelism in Quantum Information Processing*. Miroljub Dugić and Milan M. Ćirković (2002): International Journal for Theoretical Physics, vol. **41**, pp. 1641-1649.

- 6.18. *Is the Universe Really That Simple?* Milan M. Ćirković (2002): Foundations of Physics, vol. **32**, pp. 1141-1157.
- 6.19. *Entropy and Eschatology: A Comment on Kutrovátz's Paper 'Heat Death in Ancient and Modern Thermodynamics'*. Milan M. Ćirković (2002): Open Systems and Information Dynamics, vol. **9**, pp. 291-299.
- 6.20. *Cosmological Forecast and Its Practical Significance*. Milan M. Ćirković (2002): Journal of Evolution and Technology (online journal at <http://www.jetpress.org>), vol. **12** (<http://www.jetpress.org/volume12/CosmologicalForecast.htm>).
- 6.21. *Laudatores Temporis Acti, or Why Cosmology is Alive and Well – A Reply to Disney*. Milan M. Ćirković (2002): General Relativity and Gravitation, vol. **34**, pp. 119-130.
- 6.22. *Backward Causation, Isolation and the Pursuit of Justice*. Milan M. Ćirković and Suzana Cvetičanin (2002): Epistemologia, vol. **25**, pp. 145-162.
- 6.23. *Anthropic Fluctuations vs. Weak Anthropic Principle*. Milan M. Ćirković (2002): Foundations of Science, vol. **7**, pp. 453-463.
- 6.24. *On a Possible Physical Metatheory of Consciousness*. Mirosljub Dugić, Milan M. Ćirković, and Dejan Raković (2002): Open Systems and Information Dynamics, vol. **9**, pp. 153-166.
- 6.25. *Computationalism and Anthropocentrism: That Old Double Standard*. Milan M. Ćirković and Ana Vlajković (2002): The Noetic Journal, vol. **3**, pp. 162-168.
- 6.26. *The Anthropic Arrow of Time and Realistic World Models: On Price and Atemporal Universe*. Milan M. Ćirković (2001): Serbian Astronomical Journal, vol. **164**, pp. 41-52.
- 6.27. *Cosmological Constant and the Fate of the DDM Theory*. Milan M. Ćirković and Srdjan Samurović (2001): Astronomy and Astrophysics, vol. **373**, pp. 377-380.
- 6.28. *On the Maximal Quantity of Processed Information in the Physical Eschatological Context*. Milan M. Ćirković and Marina Radujkov (2001), Serbian Astronomical Journal, vol. **163**, pp. 53-56.
- 6.29. *Arsenijević, Dajson, singularnost [Arsenijević, Dyson, Singularity]* Milan M. Ćirković (2000): Theoria, vol. **XLIII**, 1/2, pp. 87-103 (in Serbian).
- 6.30. *On the Small-Scale Clustering of Ly α Forest Clouds*. Milan M. Ćirković and Kenneth M. Lanzetta (2000): Monthly Notices of the Royal Astronomical Society, vol. **315**, pp. 473-478.
- 6.31. *Cosmological Constant and the Final Anthropic Hypothesis*. Milan M. Ćirković and Nick Bostrom (2000): Astrophysics and Space Science, vol. **274**, pp. 675-687.
- 6.32. *Cooling vs. Absorption Radius in Galaxies*. Milan M. Ćirković, Srdjan Samurović and Aleksandra Djorić (2000): Astrophysics and Space Science, vol. **274**, pp. 867-875.
- 6.33. *Note on Singularities and the Arrow of Time*. Milan M. Ćirković (2000): Serbian Astronomical Journal, vol. **162**, pp. 91-95.
- 6.34. *The Anthropic Argument against Infinite Past and the Eddington-Lemaître Universe*. Milan M. Ćirković (2000): Serbian Astronomical Journal, vol. **161**, pp. 33-37.
- 6.35. *Kinematics of a High-Redshift Galaxy: A Case Study*. Milan M. Ćirković (2000): Serbian Astronomical Journal, vol. **161**, pp. 5-8.
- 6.36. *Column Density Distribution of Galactic Ly α Absorption Systems*. Milan M. Ćirković and Srdjan Samurović (2000): Astrophysics and Space Science, vol. **271**, pp. 91-95.
- 6.37. *Stacionarne kosmologije i antropički princip [Stationary Cosmologies and the Anthropic Principle]* Milan M. Ćirković (1999), Theoria, vol. **1-2/1999**, pp. 81-111 (in Serbian).
- 6.38. *Massive Neutrino Decay and the Shape of the Galactic Dark Halo*. Srdjan Samurović and Milan M. Ćirković (1999): Journal of Research in Physics, vol. **28**, pp. 171-180.

- 6.39. *Flattened Galactic Haloes and Baryonic Dark Matter*. Srdjan Samurović, Milan M. Ćirković, and Vesna Milošević-Zdjelar (1999): Monthly Notices of the Royal Astronomical Society, vol. **309**, pp. 63-79.
- 6.40. *Towards a Direct Detection of Warm Gas in Galactic Haloes at Cosmological Distances*. Milan M. Ćirković, Jonathan Bland-Hawthorn, and Srdjan Samurović (1999): Monthly Notices of the Royal Astronomical Society, vol. **306**, pp. L15-L18.
- 6.41. *Damped Ly α System Toward QSO 1854+116 - A New Type Of Absorber?* Milan M. Ćirković (1999): Serbian Astronomical Journal, vol. **160**, pp. 11-14.
- 6.42. *Future of Galaxies and the Fate of Intelligent Beings*. Milan M. Ćirković (1999): Serbian Astronomical Journal, vol. **159**, pp. 79-86.
- 6.43. *On the Stability of Protogalactic Clouds. I. Field Length in the Adiabatic Models*. Milan M. Ćirković (1999): Serbian Astronomical Journal, vol. **159**, pp. 39-44.
- 6.44. *Some Consequences of a Class of Gaseous Galactic Halo Models*. Milan M. Ćirković (1998): Astrophysics and Space Science, vol. **262**, pp. 497-508.
- 6.45. *Intergalactic Pressure and the Maximal Extent of Gaseous Haloes of Field Galaxies*. Milan M. Ćirković and Alexei V. Yurchenko (1998): Astrophysics and Space Science, vol. **262**, pp. 39-52.
- 6.46. *On the Comparison of Metal and Ly α Absorption in Galactic Gaseous Haloes*. Milan M. Ćirković (1998): Serbian Astronomical Journal, vol. **158**, pp. 9-13.
- 6.47. *On the Total Absorption Cross-Section of Galaxies. II. The Case of A Cosmologies and the Covering Factor Variation*. Milan M. Ćirković and S. Samurović (1998): Serbian Astronomical Journal, vol. **158**, pp. 3-7.
- 6.48. *Pressure at the ISM-Halo Interface: a Reheating Frequency Dependence*. Milan M. Ćirković (1998): Serbian Astronomical Journal, vol. **157**, pp. 19-24.
- 6.49. *On the Possible Observations of Intergalactic or Halo Clouds in Optical Emission*. Milan M. Ćirković and Srđan Samurović (1998): Astrophysics and Space Science, vol. **257**, pp. 95-106.
- 6.50. *A Note on the Total Absorption Cross-Section of Galaxies and Ly α Forest Clouds*. M. M. Ćirković, S. Samurović, D. Ilić, and J. Petrović (1997): Bulletin Astronomique de Belgrade, vol. **156**, pp. 37-41.

7. Summaries and abstracts

- 7.1. *Gaseous Galactic Haloes and Ly α Absorption Line Systems*. Milan M. Ćirković (2000): Publications of the Astronomical Society of the Pacific, vol. **112**, p. 1507.
- 7.2. *A New Proposition for Redating of the Mithraic Tauroctony Scene*. Edi Bon, Milan M. Ćirković, and Ivana Milosavljević (2001): in “Abstracts of Contributed Talks and Posters presented at the Joint European and National Meeting JENAM 2001 of the European Astronomical Society and the Astronomische Gesellschaft at Munich, September 10-15, 2001”, ed. Reinhard E. Schielicke (Astronomische Gesellschaft Abstract Series No. 18, 2001), p. 261.
- 7.3. *Gaseous Galactic Haloes and Ly α Absorption Line Systems*. Milan M. Ćirković (2003): Dissertation abstract in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 143-144.

8. Book reviews

- 8.1. *Real Space: The fate of physical presence in the digital age, on and off planet* by Paul Levinson. Milan M. Čirković (2004): Spaceflight, submitted for publication.
- 8.2. *Book Review: Modern Cosmology* by Scott Dodelson. Milan M. Čirković (2004): Foundations of Physics, vol. **34**, pp. 541-544.
- 8.3. *Where is Everybody? Fifty Solutions to the Fermi's Paradox* by Stephen Webb – *Book Review*. Milan M. Čirković (2004): Origin of Life and Evolution of the Biosphere, vol. **34**, in press.
- 8.4. *Anthropic Bias: Observation Selection Effects in Science and Philosophy* by Nick Bostrom – *Book Review*. Milan M. Čirković (2003): Foundations of Science, vol. **8**, pp. 417-423.
- 8.5. *Cosmic Rays at Earth: Researcher's Reference Manual and Data Book*, by Peter K. F. Grieder. Milan M. Čirković (2002): Europhysics News, vol. **33/6**, p. 219.
- 8.6. *Book Review: Anthropic Bias: Observation Selection Effects in Science and Philosophy*. By Nick Bostrom. Milan M. Čirković (2002): Foundations of Physics, vol. **32**, pp. 1797-1801.

9. Papers currently in the publication procedure and in preparation

- 9.1. *Is Many Likelier than Few? A Critical Assessment of the Self-Indicating Assumption*. Milan M. Čirković (2004): Epistemologia, accepted for publication.
- 9.3. *Apparent Speed of Gravity and Backward Causation*. Milan M. Čirković and Miroljub Dugić (2004): Epistemologia, accepted for publication.
- 9.4. *Macroscopic Quantum Effects in Biophysics and Consciousness*. Dejan Raković, Miroljub Dugić, and Milan M. Čirković (2004): Neuroquantology, accepted for publication.
- 9.5. *Geo-Engineering Gone Awry: A New Partial Solution of Fermi's Paradox*. Milan M. Čirković and Richard Cathcart (2004): Journal of the British Interplanetary Society, vol. **57**, in press.
- 9.6. *Should I Pull the Trigger? Quantum Suicide and an Apparent Violation of the Principal Principle*. Milan M. Čirković (2004): Theoria (Sweden), submitted for publication.
- 9.7. *Agencies, Capacities, and Anthropic Self-Selection*. Milan M. Čirković (2004): International Studies in the Philosophy of Science, submitted for publication.
- 9.8. *On the Temporal Aspect of the Drake Equation and SETI*. Milan M. Čirković (2004): Astrobiology, submitted for publication.
- 9.9. *Anthropic Reasoning and the Contemporary Design Argument in Astrophysics*. Mark A. Walker and Milan M. Čirković (2004): International Studies in the Philosophy of Science, submitted for publication.
- 9.10. *A Comment on Tectonics and the Future of Life on Terrestrial Planets*. Milan M. Čirković (2004): Precambrian Research, in press.
- 9.11. *Cosmic Irony: SETI Optimism from Catastrophes?* Milan M. Čirković (2004): Contact in Context, accepted for publication.
- 9.12. *Is the "Star Trek" Concept of Aliens Really Naive? – A Comment on Duric and Field*. Milan M. Čirković (2004): Serbian Astronomical Journal, submitted for publication.
- 9.13. *Physics vs. Semantics: A Puzzling Case of a Missing Quantum Theory*. Milan M. Čirković (2004): European Journal of Physics, submitted for publication.

- 9.14. *Temperature Gradient in the Galactic Interstellar Medium as a Possible Solution to Fermi's Paradox*. Robert J. Bradbury and Milan M. Čirković (2004): in preparation.
- 9.15. *How to Undermine Carter's "Anthropic" Argument in Astrobiology*. Milan M. Čirković and Ivana Dragičević (2004): in preparation.
- 9.16. *Astrobiological Phase Transition*. Milan M. Čirković and Anders Sandberg (2004): Icarus, in preparation.

10. Conference lectures and contributions

- 10.1. *Baryonic dark matter – structure and dynamics*. Milan M. Čirković (2003): invited lecture at the Fifth General Conference of the Balkan Physical Union BPU-5, ed. by S. Jokić, I. Milošević, A. Balaž, and Z. Nikolić (Serbian Physical Society, Belgrade), pp. 135-144.
- 10.2. *Five Roads to the Second Law*. Milan M. Čirković (2003): in Proceedings of the Fifth General Conference of the Balkan Physical Union BPU-5, ed. by S. Jokić, I. Milošević, A. Balaž, and Z. Nikolić (Serbian Physical Society, Belgrade), pp. 1989-1994.
- 10.3. *Future of Galactic Star Formation*. Ivana Damjanov and Milan M. Čirković (2003): in Proceedings of the Fifth General Conference of the Balkan Physical Union BPU-5, ed. by S. Jokić, I. Milošević, A. Balaž, and Z. Nikolić (Serbian Physical Society, Belgrade), pp. 155-162.
- 10.4. *Theories of Everything, Randomness, Predictability*. Milan M. Čirković (2003): in Proceedings of the Fifth General Conference of the Balkan Physical Union BPU-5, ed. by S. Jokić, I. Milošević, A. Balaž, and Z. Nikolić (Serbian Physical Society, Belgrade), pp. 1977-1982.
- 10.5. *Alternative Explanations of the Cosmic Microwave Background – A Historical Perspective*. Milan M. Čirković (2003): poster presented at the Fifth General Conference of the Balkan Physical Union BPU-5, ed. by S. Jokić, I. Milošević, A. Balaž, and Z. Nikolić (Serbian Physical Society, Belgrade), pp 2011-2016.
- 10.6. *Duration of the Stelliferous Era*. Milan M. Čirković (2002): Invited lecture in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 159-165.
- 10.7. *Anthropic-Acausal Approach to the Solution of the Arrow of Time Puzzle*. Milan M. Čirković (2003): contributed paper in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 267-273.
- 10.8. *The Third Way Out of the Anthropic Coincidence Quandary*. Milan M. Čirković (2003): contributed paper in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 263-266.
- 10.9. *Cosmological Constant and the Ly-Alpha Forest Statistics*. Nikola Milutinović, Milan M. Čirković and Katarina Kovač (2002): contributed paper in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 189-192.

- 10.10. *Are Biological and Astrophysical Timescales Truly Uncorrelated?* Ivana Dragičević and Milan M. Čirković (2002): contributed paper in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 307-311
- 10.11. *Debates on the Philosophy of Science Issues in Serbia in the Beginning of the XX Century.* Radomir Đorđević and Milan M. Čirković (2002): contributed paper in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 293-296.
- 10.12. *Predictability vs. Randomness in Cosmology.* Milan M. Čirković (2002): contributed paper in Proceedings of the XIII National Conference of Yugoslav Astronomers October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 185-188.
- 10.13. *QSO Absorbing Clouds and Baryonic Dark Matter.* Milan M. Čirković, Vesna Milošević-Zdjelar and Srdjan Samurović (2002): contributed paper to 21st Symposium on the Physics of Ionized Gases (SPIG 2002), edited by M. K. Radović and M. S. Jovanović (Dept. of Physics, University of Niš, Niš, Yugoslavia), pp. 589-592.
- 10.14. *Ruđer Bošković i počeci "Teorija svega"* [Roger Boscovich and origins of the "Theories of Everything], Milan M. Čirković and Edi Bon (2002): contributed paper to the 2nd conference on Development of Astronomy among Serbs, April 5-7, Belgrade, Serbia, Publ. Astron. Obs. Belgrade, vol. **72**, pp. 177-187.
- 10.15. *Borba za kosmografiju u Srbiji poslednjih decenija XIX veka* [The battle for cosmography in Serbia during the last decades of the XIX century], Veselka Trajkovska, Milan M. Čirković and Slobodan Ninković (2002): contributed paper to the 2nd conference on Development of Astronomy among Serbs, April 5-7, Belgrade, Serbia, Publ. Astron. Obs. Belgrade, vol. **72**, pp. 165-175.
- 10.16. *Many Times Interpretation of the Quantum Measurement Process.* Miroljub Dugić and Milan M. Čirković (2001): contributed paper to the 10th UK Conference on the Foundations of Physics, Queen's University Belfast, Northern Ireland, United Kingdom, 10-14 September 2001.
- 10.17. *Origins of Philosophy of Science in Serbia: The Entropy Dispute.* Radomir Djordjević, Veselka Trajkovska, Slobodan Ninković, and Milan M. Čirković (2001): contributed paper to the XXI International Congress of History of Science, Mexico City, Mexico, 8 - 14 July 2001.
- 10.18. *Makroskopski kvantni efekti u biofizici.* [Macroscopic Quantum Effects in Biophysics] Dejan Raković, Miroljub Dugić, and Milan M. Čirković (2001): contributed paper to the Satellite Symposium on the Quantum Epoch: 100 Years from the Discovery of Quantum, Academy of Sciences of Republic of Srpska, Banja Luka, Bosnia and Herzegovina, May 4, 2001.
- 10.19. *On a Physical Metatheory of Consciousness.* Miroljub Dugić, Dejan Raković, and Milan M. Čirković (2000): contributed paper to "New Science of Consciousness", 3rd International Conference on Cognitive Science, Ljubljana, Slovenia, October 17-19, 2000, Proceedings of the 3rd International Conference on Cognitive Science, Ljubljana, Slovenia, October 17-19, 2000, ed. by Igor Kononenko, Information Society, Ljubljana, 2000, pp. 29-33.
- 10.20. *QSO Absorption Lines, Gaseous Infall, and Star Formation in Spiral Disks.* Milan M. Čirković, Srdjan Samurović, and Vesna Milošević-Zdjelar (2000): contributed paper to the international meeting on "Galaxy Disks and Disk Galaxies", Rome, Italy, June 12-16, 2000. in Galaxy Disks and Disk Galaxies, proceeding of a conference held in

- Rome, Italy, June 12-16, 2000 at the Pontifical Gregorian University and sponsored by the Vatican Observatory. ASP Conference Series, Vol. 230. ed. by J. G. Funes, S. J. and E. M. Corsini (ASP, San Francisco, 2001), pp. 627-628.
- 10.21. *Is There an Arrow of Time after All?* Milan M. Ćirković (2000): contributed paper to the 2nd Serbian-Bulgarian Astronomical Meeting, Zaječar, Yugoslavia, June 23-26, 2000. Published in Publications of the Astronomical Observatory of Belgrade, eds. M. S. Dimitrijević, L. Č. Popović and M. Tsvetkov, vol. **67**, pp. 13-18.
- 10.22. *Quantum Entanglements in "Hybrid" Systems: Nonideal Quantum Measurement Can Increase Fidelity.* Miroljub Dugić and Milan M. Ćirković (2000): contributed paper to the International Conference on Quantum Optics 2000, Raubichi, Belarus, May 28-31, 2000.
- 10.23. *On Archeoastronomical Clues for Emergence of Mithraism.* Edi Bon, Vesna Mijatović and Milan M. Ćirković (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, p. 159.
- 10.24. *QSO Environment and Associated Damped Ly α Galaxies.* Nataša Stanić, Milan M. Ćirković, and Srdjan Samurović (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, pp. 105-110.
- 10.25. *Correlations of Quasars and QSO Absorption Systems.* Luka Č. Popović, Milan M. Ćirković, and Saša Simić (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, pp. 97-100.
- 10.26. *Belgrade-MACHO Project: First Two Years' Results.* Vesna Milošević-Zdjelar, Srdan Samurović, and Milan M. Ćirković (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, pp. 85-91.
- 10.27. *Low Redshift Ly α Forest and the Column Density Distribution Function.* Milan M. Ćirković (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, pp. 45-50.
- 10.28. *Microlensing, flattening, Ω_B and h : from assumptions, via data to tentative conclusions.* Vesna Milošević-Zdjelar, Srdjan Samurović, and Milan M. Ćirković (1999): contributed paper to the conference on "Gravitational Lensing: Recent Progress and Future Goals", eds. T. G. Brainerd and C. S. Kochanek (ASP Conference Series, San Francisco, vol. 237), pp. 265-266.
- 10.29. *Microlensing Results and Removing the Baryonic Degeneracy.* Milan M. Ćirković, Srdjan Samurović, and Vesna Milošević-Zdjelar (1999): contributed paper to the conference on "Gravitational Lensing: Recent Progress and Future Goals", eds. T. G. Brainerd and C. S. Kochanek (ASP Conference Series, San Francisco, vol. 237), pp. 253-254.
- 10.30. *Influence of the Star Formation Thresholds on the Duration of the Stelliferous Era.* Milan M. Ćirković (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, pp. 37-40.
- 10.31. *Rotation of a High-Redshift Galaxy and Molecular Hydrogen.* Milan M. Ćirković (1999): contributed paper to the XII National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **65**, pp. 41-44.
- 10.32. *On the Ionizing Sources in Spiral Galaxies: II. The Center of the Milky Way.* V. Milošević-Zdjelar, S. Samurović, and M. M. Ćirković (1998): contributed paper to the 2nd Yugoslav-Belarusian Symposium on Physics & Diagnostics of Laboratory & Astrophysical Plasmas, Publ. Astron. Obs. Belgrade, vol. **61**, pp. 118-122.

- 10.33. *On the Ionizing Sources in Spiral Galaxies: I. From Central Regions to Thick Disk and Disk-Halo Connection.* S. Samurović, M. M. Čirković, V. Milošević-Zdjelar, and J. Petrović (1998): contributed paper to the 19th SPIG, pp. 635-638.
- 10.34. *Detection of Recombining Galactic Haloes out to $z \sim 1$.* M. M. Čirković, S. Samurović, and J. Bland-Hawthorn (1998): contributed paper to the 19th SPIG, pp. 631-634.
- 10.35. *Ly α Forest and the Total Absorption Cross-Section of Galaxies – an Example of the NTT SUSI Deep Field.* S. Samurović and M. M. Čirković (1999): contributed paper to the International Workshop on Observational Cosmology: The Development of Galaxy Systems, Sesto Pusteria, Italy; ASP Conference Series, Vol. **176** (1999), G. Guiricin, M. Mezzetti and P. Salucci, (eds.), pp. 487-492.
- 10.36. *A Note on the Milky Way as a Barred Galaxy.* S. Samurović, V. Milošević-Zdjelar, M. M. Čirković, and V. Čelebonović (1998): contributed paper to the 4th Yugoslav-Romanian Astronomical Meeting, Publ. Astron. Obs. Belgrade, vol. **60**, pp. 74-82.
- 10.37. *The Intergalactic Pressure and Sizes of the Gaseous Halos of Field Galaxies.* M. M. Čirković (1998): contributed paper to the 4th Yugoslav-Romanian Astronomical Meeting, Publ. Astron. Obs. Belgrade, vol. **60**, pp. 5-15.
- 10.38. *Distorsion of the CMBR Spectrum: A Tentative Explanation.* V. Čelebonović, S. Samurović, and M. M. Čirković (1997): contributed paper to the Second Yugoslav Conference on Spectral Line Shapes, Publ. Astron. Obs. Belgrade, vol. **57**, pp. 105-108.
- 10.39. *Molecular Hydrogen at High Redshift: Rule or Exception?* M. M. Čirković (1996): contributed paper to the XI National Conference of Yugoslav Astronomers, Publ. Astron. Obs. Belgrade, vol. **54**, pp. 25-29.

11. Papers in popular science

- 11.1. *Supernova iz 1006. godine – milenijum zagonetke.* [Supernova of 1006 AD – a Millenium-Long Puzzle] Milan M. Čirković (1995): Vasiona, **XLIII**, 1, pp. 8-10.
- 11.2. *Apsorpcioni sistemi u spektrima kvazara – prozor u prošlost.* [QSO Absorption Line Systems – a Window to the Past] Milan M. Čirković (1996): Vasiona, **XLIV**, 5, pp. 108-111.
- 11.3. *In memoriam – Robert H. Dike.* [In Memoriam – Robert H. Dicke] Milan M. Čirković (1997): Vasiona, **XLV**, 1-2, pp. 31-32.
- 11.4. *Uspon i pad teorije Večnog stanja.* [The Rise and Fall of the Steady-State Theory] Milan M. Čirković (1997): Vasiona, **XLV**, 3, pp. 53-60.
- 11.5. *Kosmički deuterijum.* [Cosmic Deuterium] Milan M. Čirković (1997): Vasiona, **XLV**, 4, pp. 76-81.
- 11.6. *Zagonetka hemijske evolucije kvazara.* [A Puzzle of QSO Chemical Evolution] Milan M. Čirković (1998): Vasiona, **XLVI**, 3, pp. 69-74.
- 11.7. *In memoriam – Lajman Spicer.* [In Memoriam – Lyman Spitzer] Milan M. Čirković (1998): Vasiona, **XLVI**, 3, pp. 79-80.
- 11.8. *Potrošnja gasa u spiralnim galaksijama.* [Gas Consumption in Spiral Galaxies] Milan M. Čirković (1999): Vasiona, **XLVII**, 1, pp. 6-10.
- 11.9. *In memoriam – Dejvid Šram.* [In Memoriam – David N. Schramm] Milan M. Čirković (1999): Vasiona, **XLVII**, 1, p. 15.

- 11.10. *Uspon i pad teorije Večnog stanja II: konformno invarijantna kosmologija*. [The Rise and Fall of the Steady-State Theory II: The Conformally Invariant Cosmology] Milan M. Čirković (1999): Vasiona, **XLVII**, 4, pp. 101-109.
- 11.11. *O čudima i centrima spiralnih galaksija*. [On Miracles and Centers of Spiral Galaxies] Milan M. Čirković (2000): Galaksija, **293**, pp. 38-39.
- 11.12. *Kosmološka konstanta – ključ sudbine univerzuma*. [Cosmological Constant – Key for the Fate of the Universe] Milan M. Čirković (2000): Galaksija, **299**, p. 64.
- 11.13. *In Memoriam – Denis Šama* [In Memoriam – Dennis Sciama] Milan M. Čirković (2000): Vasiona, **XLVIII**, 5, pp. 116-117.
- 11.14. *Međuzvezdana materija od A do B. I deo: faze međuzvezdane materije i molekularni gas*. [The Interstellar Matter from A to B. Part I: Phases of the Interstellar Medium and Molecular Gas] Milan M. Čirković, Vesna Milošević-Zdjelar, and Dejan Ilić (2001): Vasiona, **XLIX**, 1-2, pp. 19-28.
- 11.15. *Uvod u antropičke principe*. [An Introduction to the Anthropic Principles] Milan M. Čirković (2001): Vasiona, **XLIX**, 3, pp. 48-53.
- 11.16. *Bariogeneza: stvaranje našeg sveta*. [Baryogenesis: the making of our world] Milan M. Čirković (2001): Astronomski magazin, Novi Sad (electronic journal at <http://www.astronomija.co.yu>; article published at <http://209.204.204.238/am/teorije/bariogeneza/index.htm>).
- 11.17. *Odlazak večnog buntovnika – Ser Fred Hojl (1915-2001)*. [The Departure of Eternal Rebel – Sir Fred Hoyle (1915-2001)] Milan M. Čirković (2001): Vasiona, **XLIX**, 5, pp. 130-135.
- 11.18. *Crni monolit i potraga za vanzemaljskim civilizacijama*. [Black Monolith and the Search for Extraterrestrial Civilizations] Milan M. Čirković (2002): Astronomski magazin, Novi Sad (electronic journal at <http://www.astronomija.co.yu>; article published at <http://www.astronomija.co.yu/teorije/aliens/monoliti/monoliti.htm>).
- 11.19. *Frimen Dajson – biografija radoznalog čoveka*. [Freeman Dyson – A Biography of a Curious Mind] Milan M. Čirković (2002): Astronomski magazin, Novi Sad (electronic journal at <http://www.astronomija.co.yu>; article published at <http://www.astronomija.co.yu/istorija/biografije/dajson/dajson.htm>).
- 11.20. *Savremena kosmologija i religija*. [Modern Cosmology and Religion] Milan M. Čirković (2002): Sv. Knez Lazar, vol. **40**, no. 4, pp. 103-115.
- 11.21. *Prikaz knjige: Stiven Hoking – Kosmos u orahovoj ljusci*. [Book Review: Stephen Hawking – The Universe in a Nutshell] Milan M. Čirković (2002): Mladi fizičar, vol. **89**, pp. 23-25.
- 11.22. *“Orion”: oživljavanje zaboravljenog projekta?* [“Orion”: Revival of a Forgotten Project?] Milan M. Čirković (2003): Astronomski magazin, Novi Sad (electronic journal at <http://www.astronomija.co.yu>; article published at <http://www.astronomija.co.yu/nautika/orion/orion.htm>).
- 11.23. *O “Space shuttle”-u, geniju i ratu politike sa naukom*. [On Space Shuttle, Genius, and Conflict of Science and Politics] Milan M. Čirković (2003): Astronomski magazin, Novi Sad (electronic journal at <http://www.astronomija.co.yu>; article published at <http://www.astronomija.co.yu/nautika/challenger/challenger.htm>).
- 11.24. *Kralj Henri Drugi, Černobilj, Le Pen i naučni metod*. [King Henry II, Chernobyl, Le Penn and the Scientific Method] Milan M. Čirković (2003): Treći program, in press.
- 11.25. *Senka izumiranja*. [The Shadow of Extinction] Milan M. Čirković (2003): Vreme weekly magazine, vol. **660** (28. VIII 2003), pp. 56-57.

- 11.26. *Frimen Dajson – skica za biografiju radoznalog čoveka*. [Freeman Dyson – a biographical sketch] Milan M. Ćirković (2003): Mladi fizičar, submitted for publication.
- 11.27. *Rašljarenje po Sunčevom sistemu*. [Dowsing in the Solar System] Milan M. Ćirković (2003): *Astronomija*, vol. **1** (September 2003), pp. 30-31.
- 11.28. *Hipernove: rešenje zagonetke gama-bleskova*. [Hypernovae: Solution of the Gamma-Ray Burst Puzzle] Milan M. Ćirković (2003): *Astronomija*, vol. **2** (October 2003), pp. 34-36.
- 11.29. *Prikaz knjige: Karl Segan – Plava tačka u beskraju*. [Book Review: Carl Sagan – Pale Blue Dot] Nikola Božić and Milan M. Ćirković (2003): *Astronomija*, vol. **3**, pp. 46-47.
- 11.30. *Zemlja kao snežna grudva*. [The Snowball Earth] Milan M. Ćirković (2004): *Astronomija*, vol. **5** (February 2004), pp. 36-40.
- 11.31. *Prikaz knjige: Zbornik radova XIII nacionalne konferencije jugoslovenskih astronoma*. [Book Review: Proceedings of XIII National Conference of Yugoslav Astronomers] Milan M. Ćirković (2004): *Astronomija*, vol. **5** (February 2004), p. 18.

12. Membership

- 12.1. American Physical Society
- 12.2. Serbian Astronomical Society (Secretary 1998-2002; President 2002-present)
- 12.3. British Society for the Philosophy of Science
- 12.4. Serbian Society for Science Fiction (co-founder; Secretary 1999-present)
- 12.5. Petnica Science Center astronomy programme
- 12.6. Editorial board of “Astronomija”, monthly journal of popular astronomy, as well as associated “Astronomski magazin” [Astronomical Magazine], weekly e-journal for popularization of astronomy (<http://www.astronomija.co.yu>)
- 12.7. CASE artistic project
- 12.8. Philosophical Society of Serbia
- 12.9. World Transhumanist Association
- 12.10. Society for the History of Science, Belgrade

13. Profession-related skills

- 13.1. **Computer skills:** Routine usage of Fortran 90 (and acquaintance with the Numerical Recipes) and IDL. Detailed knowledge of both DOS/Windows and UNIX/Linux operating systems. Common scientific applications, like Maple, Origin, Mathematica and SuperMongo, as well as non-scientific ones, but important for the general research work, e.g. MS Office, CorelDraw, Adobe Acrobat and Adobe Photoshop. Fair knowledge of HTML and Internet-related software. Acquaintance with software for Web-publishing and design, like Adobe PageMaker and MS FrontPage.
- 13.2. **Teaching experience:** Have been working as a Teaching Assistant at SUNY, Stony Brook (USA) for four semesters, in the following courses: Search for Life in the Universe (AST248, 2 terms), Introduction to Astronomy (AST101, 1 term) and Introduction to Planetary Science (AST105, 1 term). Have been teaching occasionally astronomy at intermediate undergraduate level at the Belgrade Planetarium, and have given more than 100 popular talks and lectures on astronomical topics in the 1996-

- 2003 period. Currently in preparations for teaching a one-semester undergraduate course in cosmology at the Astronomy Group, Faculty of Sciences, University of Novi Sad. Currently supervising several advanced undergraduate research projects in theoretical astrophysics in collaboration with the Petnica Science Center.
- 13.3. **Linguistic skills:** Knowledge of English, Russian (fluent) and French (fair), as well as all of the languages of the former Yugoslavia.
 - 13.4. **Organizational experience:** Have organized three yearly cycles of lectures "Summer Astronomical Meetings" in the Planetarium of National Observatory of Belgrade (1998-2000). As a Secretary and subsequently President of the newly (re)formed Serbian Astronomical Society, contributed to the organizing and coordinating work of local astronomical community. The same applies to activities in the Serbian Society for Science Fiction, the first such organization on a national level in Yugoslavia.
 - 13.5. **Librarian experience:** Have attended a course in librarian techniques organized by the National Library of Serbia in Fall 1996 at the request and expense of National Observatory, Belgrade, and afterwards helped in organization and maintenance of the National Observatory library.
 - 13.6. **Popularization skills:** Apart from popular papers and lectures (§ 10 and 13), have for about 3 years worked on gathering news and writing short notes and reports for "Vasiona", mainly in the field of cosmology. Regular associate of "Astronomski magazin", an e-journal for popular astronomy (available at <http://juam.tripod.com/>). Has helped in publishing written several popular science books in Serbian language (consulting, writing prefaces/forewords, etc.). Works since Spring 2002 as an associate of the Third Channel radio programme of the National Radio Television of Serbia, devoted exclusively to cultural and scientific affairs.
 - 13.7. **Reviewing.** Served as a referee for Theoretical and Applied Mechanics, Foundations of Physics, Serbian Astronomical Journal.

14. Sample talks and lectures

Note: Full list available upon request.

- 14.1. *Interaction of Galactic Subsystems and QSO Absorption Lines*, Astronomical Observatory Belgrade, 18. VI 1997.
- 14.2. *The Cosmological Constant*, Dept. of Mathematics, University of Belgrade, 24. VI 1998.
- 14.3. *The Ionization History of the Universe*, National Observatory, Belgrade 7. VIII 1998.
- 14.4. *MACHOs and Baryonic Dark Matter*, Astronomical Observatory Belgrade, 21. X 1998.
- 14.5. *Structure Formation in the Universe*, Petnica Research Center, 26. II 1999.
- 14.6. *Growth of Complexity and Anthropic Principles*, Petnica Research Center, 18. X 1999.
- 14.7. *Anthropic Principles in Cosmology*, Institute of Physics, University of Kragujevac, 24. II 2000.
- 14.8. *Physical Eschatology*, Astronomical Observatory Belgrade, 19. IV 2000.
- 14.9. *Quantum Mechanics and Cosmology*, Dept. of Mathematics, University of Belgrade, 6. III 2001.

15. Translations

- 15.1. *Poslednja tri minuta* [The Last Three Minutes], by Paul C. W. Davies (Basic Books, New York, 1994), published March 2000 by Polaris Publishing Studio, Belgrade.
- 15.2. *Staljin* [Stalin – translated from Russian, with Danica Čirković], by Edward Radzinsky (Lynn C. Franklin Associates, New York, 1996), independent translator's edition of Danica Čirković, 1997.
- 15.3. *Carev novi um* [Emperor's New Mind], by Sir Roger Penrose (Oxford University Press, Oxford 1989), published December 2003 by Informatica, Belgrade.
- 15.4. *Kvantna elektrodinamika – neobična teorija materije i svetlosti* [QED – A Strange Theory of Light and Matter], by Richard P. Feynman (Princeton University Press, Princeton, 1985), expected to be published by the end of 2004.
- 15.5. *Kosmologija i naučna fantastika* [Cosmology and Science Fiction], by Stanislaw Lem, Polaris, vol. 4, pp. 94-103, Belgrade 2003.

16. Literary works

- 16.1 *Prekognicija, populizam i politička korektnost* [Precognition, Populism and Political Corectness], Milan M. Čirković (2001): Orbis (časopis za književnost, umetnost i kulturu, Kanjiža, izlazi na srpskom i madjarskom jeziku), year VI, issue 1/2001, pp. 15-21.
- 16.2 *Martin Hajdeger i Jagoš Purić – razmišljanja o dva rektora* [Martin Heidegger and Jagoš Purić – Some Thoughts on Two University Presidents], Milan M. Čirković (2002): Republika, br. 284-285, May 1-31. 2002, pp. 41-44.
- 16.3 *Ciklična filozofija istorije u Simonsovoj "Tetralogiji o Hiperionu"* [Cyclic Philosophy of History in Simmons' "Hyperion Tetralogy"], Milan M. Čirković (2003): Polaris, vol. 4, pp. 104-124.
- 16.4 *Essays on Science Fiction*. Milan M. Čirković (2003): a collection of essays currently in the publishing procedure (Polaris, Belgrade).

17. References

Note: Additional references are available upon request.

- 17.1. **Prof. Fred Walter**, Department of Physics and Astronomy, State University of New York at Stony Brook, Stony Brook, NY 11794-3800, USA; e-mail: fwalter@astro.sunysb.edu; fax: (+1-631) 632-8176.
- 17.2. **Prof. Jelena Milogradov-Turin**, Department of Mathematics, University of Belgrade, Studentski trg 16, 11000 Belgrade, Serbia, Yugoslavia; e-mail: jelenam@matf.bg.ac.yu; fax: (+381-11) 630-151.
- 17.3. **Prof. Philip M. Solomon**, Department of Physics and Astronomy, State University of New York at Stony Brook, Stony Brook, NY 11794-3800, USA; e-mail: Philip.Solomon@sunysb.edu; fax: (+1-631) 632-8176.
- 17.4. **Prof. Petar V. Grujić**, Institute of Physics, P. O. Box 57, 11001 Belgrade, Serbia, Yugoslavia; e-mail: grujic@phy.bg.ac.yu; fax: (+381-11) 316-2190.
- 17.5. **Prof. Nick Bostrom**, Department of Philosophy, Yale University, P. O. Box 208306, Yale Station, New Haven, CT 06520-8306, USA; e-mail: nick@nickbostrom.com; fax: (+1-203) 432-1686.

- 17.6. **Prof. Miroljub Dugić**, Department of Physics, Faculty of Science, P.O.Box 60, 34000 Kragujevac, Yugoslavia; e-mail: dugic@knez.uis.kg.ac.yu; fax: (+381-34) 335-040.