4th HELLENIC ASTRONOMICAL CONFERENCE

organized by the

Hellenic Astronomical Society (HEL.A.S.)

under the aegis of the
University of the Aegean
(Dept. of Mathematics, Dept. of Geography, Dept. of Mediterranean Studies)

16-18 September 1999, Samos, GREECE

Scientific Organizing Committee
J.H. Seiradakis (Thessaloniki, Chairman), G. Antonakopoulos (Patras),
E. Kontizas (Athens), N. Kylafis (Crete), E. Livaniou (Athens), X. Moussas (Athens),
P. Niarchos (Athens), J. Seimenis (Aegean), V. Tritakis (Athens), V. Tsikoudi (Ioannina),
H. Varvoglis (Thessaloniki)

Local Organizing Committee
J. Seimenis (Chairman), I. Liritzis, X. Moussas, P. Niarchos, N. Soulakellis

4th Hellenic Astronomical Conference
16-18 September 1999, Samos, Greece

CALENDAR OF EVENTS

Thursday, 16.09.1999

8.00- 9.30	Registration of participants
9.30-10.00	Opening of the Conference
10.00-10.45	**Invited talk**
10.45-11.15	*Coffee Break*
11.15-13.30	Session "THE GALAXY AND OTHER GALAXIES"
17.00-17.45	**Invited talk**
17.45-19.30	Session **"**COSMOLOGY AND RELATIVITY"
20.30	*Reception*

Friday, 17.09.1999

9.00- 9.45	**Invited talk**
9.45-10.45	Session "HIGH ENERGY ASTROPHYSICS"
10.45-11.15	*Coffee Break. Conference Photograph*
11.15-13.30	Session "STELLAR ASTROPHYSICS"
15.00-16.30	*Visit to the archaeological sites of* ***Pythagoreion*** *and* ***Efpalinion***
17.00-18.30	Session "DYNAMICAL ASTRONOMY AND CELESTIAL MECHANICS"

Special Event

18.30-19.00	**Invited talk**
19.00-19.30	Lecture by Zeiss
20.30	*Banquet*

Saturday, 18.09.1999

9.00- 9.45 **Invited talk**

9.45-10.45 Session "SOLAR, PLANETARY AND SPACE PHYSICS"

10.45-11.15 *Coffee Break*

Parallel Sessions

11.15-12.30 Session "SOLAR, PLANETARY AND SPACE PHYSICS"

11.15-12.15 Session "INFRASTRUCTURE OF ASTRONOMY IN GREECE" and "HISTORY OF ASTRONOMY"

12.15-13.00 **Award of Ph.D. Prize**

13.00-13.15 Closing of the Conference

13.30-14.30 **General Assembly of HEL.A.S.**

SCIENTIFIC PROGRAMME

Sessions:

---Dynamical Astronomy and Celestial Mechanics (Convenors: **G. Antonakopoulos, H. Varvoglis**)
---Solar, Planetary and Space Physics (Convenors: **X. Moussas, L. Vlahos**)
---Stellar Astrophysics (Convenors: **E. Livaniou, P.G. Niarchos**)
---Our Galaxy and other galaxies (Convenors: **E. Kontizas, N. Voglis**)
---High Energy Astrophysics (Convenors: **A. Mastichiadis, J. Ventura**)
---Cosmology and Gravitation (Convenors: **K. Kokkotas, N. Spyrou**)
---Infrastructure of Astronomy in Greece (Convenors: **I. Papamastorakis, D. Sinachopoulos**)
---History of Astronomy (Convenors **M. Papathanasiou, E. Theodossiou**)

Thursday, 16.09.1999

8.00- 9.30 Registration of participants

9.30-10.00 Opening of the Conference

10.00-10.45 **Prantzos N.:** Galaxy Evolution**:** From the Milky Way to the Distant Universe (Invited Lecture)

10.45-11.15 *Coffee Break*

11.15-13.30 Session "THE GALAXY AND OTHER GALAXIES"

- **Harsoula M., Voglis N.,** Cosmological Collapses and Counterrotating Galaxies
- **Gouliermis D., Kontizas M., Korakitis R., Morgan D.H., Kontizas E., Dapergolas A.,** OB Stellar Associations in the Large Magellanic Cloud. Identification method
- **Xanthopoulos E.,** HST Observations of the Seyfert 2 Galaxy MRK 1388. The Exception to the Rule
- **Polatidis A.G.,** Compact Symmetric Objects: the Youngest Radio Galaxies
- **Xanthopoulos E., Thomasson P., Muxlow T.W.B., Tzanavaris P.,** MERLIN Observations of Stephan's Quintet. A New Mechanism for Star Formation Excess in Distant Clusters

17.00-17.45 **Dvorak R.:** Chaotic Evolution of our Planetary System (Invited Lecture)

17.45-19.30 Session **"**COSMOLOGY AND RELATIVITY"

- **Clampedakis C.,** Late-Time Dynamics of Rotating Black Holes
- **Dimitropoulos A.,** On the Monopole and Dipole Contributions to the Cosmic Microwave Background Radiation
- **Stergioulas N., Font Roda J.-A., Kokkotas K.D.,** General-Relativistic Hydrodynamical Simulations of Rotating and Pulsating Neutron Stars
- **Xanthopoulos E., Brown I.W.A., Wilkinson P.N., Jackson N.J.J., Karidis A., Porcas R.W., Patnaik A.R., Gabuzda D.,** Everything you wanted to know about the JVAS/CLASS Gravitational Lens System B1030+074 and were afraid to ask
- **Xanthopoulos E., Browne I.W.A., Biggs A.D., Norbury M.,** VLA 8.4 GHz Monitoring Observations of the CLASS Gravitational Lens B1933+503
- **Xanthopoulos E., Kapteyn D.-T., Snellen I., Browne I.W.A., Lackson N.J.J., Mack K.-H.,** The CERES Astronomical Database
- **Kleidis K. and Spyrou N.K.,** On the Nature of Nuclear Galactic Masses

- **Chronopoulos A. and Apostolatos T.,** More Economical Search Templates for the Detection of Gravitational Waves from Inspiralling Binaries

20.30-24.00 *Reception*

Friday, 17.09.1999

9.00- 9.45 **Kafatos M.:** Accreting Galactic Compact Sources (Invited Lecture)

9.45-10.45 Session "HIGH ENERGY ASTROPHYSICS"

- **Manolakou K.,** Stochastic Acceleration of Particles through Oblique MHD Waves in Extragalactic Jets
- **Kakouris A., Ioannou P.J.,** On the Origin of Turbulence in Near-Keplerian Hydrodynamic Accretion Discs
- **Solomos N.,** Exploring Strategies for Revealing Quantum Phenomena in Astrophysics

10.45-11.15 *Coffee Break*

11.15-13.30 Session "STELLAR ASTROPHYSICS"

- **Karastergiou A., Seiradakis J.H,** Power Spectra Analysis on High Frequency Pulsar Data
- **Kitsionas S., Whitworth A.P.,** Forming Stars by Numbers: New Detailed Numerical Simulations
- **Bitzaraki O., van den Heuvell E.P.J., Rovithis-Livaniou E.,** Magnetic and Orbital Evolution of Accreting Neutron Stars
- **Zhilyaev B.E., Romanyuk Ya.O., Svyatogorov O.A., Verlyuk I.A., Khalack V.R., Alexseev I.Yu. Chalenko V.E., Shakhovskoy D.N., Contadakis M.E., Avgoloupis S.J., Seiradakis J.H., Konstantiniva-Antova R.K., Antov A.P.,** Detection of Fast Small-Scale Variability of the Flare Star EV Lacertae Using the Synchronous Network of the Telescopes
- **Hric L., Galis K., Petrik K., Friedjung M.,** Peculiar Behaviour of AG Draconis
- **Hric L., Galis K., Niarchos P.G., Petrik K.,** T Coronae Borealis – Flickering Activity Study
- **Niarchos P.G., Manimanis V.N.,** UBV Photometric Study of the Near-Contact system RU Ursae Minoris
- **Danezis E., Nikolaidis D., Grammenos Th., Theodosiou E., Stathopoulou M., Kosionidis A.,** Satellite Spectral Components and Moving Shells in the Atmospheres of Early Type Stars

15.00-16.30 *Visit to the archaeological sites of **Pythagoreion** and **Efpalinion***

17.00-18.30 Session "DYNAMICAL ASTRONOMY AND CELESTIAL MECHANICS"

- **Voglis N., Efthymiopoulos Ch., Contopoulos G.,** The Distribution Function and the Third Integral in Gravitational Systems
- **Hadjidemetriou J.D., Grigorelis F.I.,** A Symplectic Mapping Model for the Study of the 2/1 Resonant Asteroid Motion
- **Skokos Ch., Dokoumetzidis A.,** Regions of Effective Stability in the Restricted Problem of Three Bodies
- **Skokos Ch., Patsis P., Contopoulos G.,Voglis N.,** Dynamical Spectra in Systems with Three Degrees of Freedom
- **Tsiganis, K., Anastasiadis A., Varvoglis H.,** Transport in the Outer Asteroid Belt: Fokker-Planck Approach vs. Numerical Integrations
- **Kalvouridis T., Tsogas V.,** Equilibrium States of a Small Triaxial Body in a Planar Ring Configuration of N Bodies
- **Vozikis Ch., Varvoglis H.,** Power Spectrum of Orbits' Divergence as a Stochasticity Indicator

Special Event

18.30-19.00 **Spyrou N.:** Aristarchos of Samos

19.00-19.30 Lecture by Zeiss

20.30 *Banquet*

Saturday, 18.09.1999

9.00- 9.45 **Hultqvist B.:** Some Major Achievements of Magnetospheric Research (Invited Lecture)

9.45-10.45 Session "SOLAR, PLANETARY AND SPACE PHYSICS"

- **Polygiannakis J.M., Alevizos A., Moussas X.D.,** Fluid-like Quantities for Describing Monoenergetic Particle Populations
- **Polygiannakis J.M., Moussas X.D.,** Intermittency in the Solar Wind
- **Moussas X.D., Sergis N.,** On the Interaction of Mars with the Solar Wind
- **Kostopoulos T., Alevizos A., Kakouris A., Polygiannakis J.M., Moussas X.D.,** The Structure of the Heliosphere as Observed by Ulysses at the period 1992-1996

10.45-11.15 *Coffee Break*

Parallel Sessions

11.15-12.30 Session "SOLAR, PLANETARY AND SPACE PHYSICS

- **Belehaki A., Tsagouri I.,** Determination of Plasmoid Characteristics During Moderate Substorm Events: IMP8 and Geotail Observations
- **Tsagouri I., Belehaki A., Mavromichalaki H.,** Effects of Intense Magnetic Storms on the Middle Latitude Ionosphere
- **Liritzis I., Preka-Papadema P., Petropoulos V., Kurt V., Adrianopoulos C.,** Statistical Analysis of Solar X-Ray Flares Recorded by Venera 13-14 and SMM Space Probes
- **Isliker H., Anastasiadis A., Vlahos L.,** A Solar Flare Model in between MHD and Cellular Automation
- **Matsoukis S.K., Chapman S., Rowlands G.,** Particle Precipitation due to Electron Whistler Waveparticle Interactions in the Earth magnetosphere: A Self-Consistent Approach
- **Petkaki P., Dougherty M.,** Ion Cyclotron Wave Signatures in Ulysses Magnetic Field Data during Jupiter's Flyby

11.15-12.30 Session "INFRASTRUCTURE OF ASTRONOMY IN GREECE" and "HISTORY OF ASTRONOMY"

- **Niarchos P.G., Laskarides P.G.,** The new 0.4 m Telescope of the University of Athens
- **Θεοδοσίου Ε., Δανέζης Ε., Γραμμένος Θ., Σταθοπούλου Μ.,** Από τους Πυθαγόρειους στον Κέπλερ: Η διαπάλη του Γεωκεντρικού με το Ηλιοκεντρικό Σύστημα
- **Δανέζης Ε., Θεοδοσίου Ε., Σταθοπούλου Μ., Γραμμένος Θ.,** Κοσμολογικές προτάσεις του Δημόκριτου και Σύγχρονη Φυσική
- **Πινότσης Α**., Οι προ του Ιππάρχου Ρόδιοι Αστρονόμοι
- **Metaxa M.,** New trends in Astronomy Teaching

12.30-13.00 **Georganopoulos M.,** Blazars: Τα πλέον ακραία Εργαστήρια στο Σύμπαν

13.00-13.15 Closing of the Conference

13.30-14.30 **General Assembly of HEL.A.S.**

LIST OF THE POSTER REPORTS

DYNAMICAL ASTRONOMY AND CELESTIAL MECHANICS

- **Tsiganis K., Varvoglis H., Hadjidemetriou J.D.,** Stable Chaos in the 12:7 Mean Motion Resonance and its Relation to the Stickiness Effect
- **Tsiganis K., Dvorak R., Pilat-Lohinger E.,** Thersites: A "Jumping" Trojan?
- **Caranicolas N.D., Vozikis Ch.,** Order and Chaos in Hamiltonian Systems

SOLAR, PLANETARY AND SPACE PHYSICS

- **Mavromichalaki H., Vassilaki A., Tsagouri I.,** Preferred Bartels Rotation Days of the High-Speed Solar-Wind Streams in 1985-1996
- **Mavromichalaki H., Preka-Papadema P., Petropoulos B., Lyritzis J., Kurt V.,** Possible Influence of Solar Flares with Hard X-Ray Emission on Cosmic-Ray Modulation
- **Zhilyaev B.E., Romanyuk Ya. O., Svyatogorov O.A., Verlyuk I.A., Khalack V.R., Sergeev A.V., Chalenko V.E.,** Observations of Short-Period Brightness Oscillations of Jupiter, Saturn and their Satellites
- **Petropoulos V., Liritzis I., Preka-Papadema P., Maragopoulou A., Banos C.,** Periodical Variations of the Coefficient of the Atmospheric Activity (R) in the Jovian Equatorial Zones computed by different Methods of Analysis (FFT, PSA, and MESA)

STELLAR ASTROPHYSICS

- **Mitrou C.K., Antonopoulou E.,** Empirical Calculation of the Total Radiative Losses from the Outer Atmospheres of RS CVn Binaries
- **Manimanis V.N., Niarchos P.G.,** UBV Photometry of Eclipsing Binary DM Delphini
- **Galis R., Hric L., Niarchos P.G.,** Photometric Behaviour of KW Per and UV Leo
- **Niarchos P.G., Poretti E., Aslanidis D.,** A Spotted Model of the W UMa system CK Aquarii
- **Livaniou E., Suran M.D., Sergis N., Fragoulopoulou E., Rovithis P., Dumitrescu F.,** Light Curves Analysis of W UMa type Binaries from Hipparchos Data
- **Suran M.D., Livaniou E., Fragoulopoulou E.,** On the Evolutionary Status of DO Cas and EG Cep
- **Rovithis P., Livaniou E., Djurasevic G.,** The Eclipsing Binary RZ Com

THE GALAXY AND OTHER GALAXIES

- **Polatidis A.G., Aalto S., Conway J.E.,** HI Absption and OH Emission in IC694: the Kinematics of the Atomic and Molecular Gas
- **Gaga Th., Harsoula M., Voglis N.,** Cosmological Initial Conditions and Velocity Curves of Elliptical Galaxies