Name: NOAM SOKER **Date: June 2025**

RESUME

PERSONAL DETAILS

Name:	**Noam Soker**
Place and Date of Birth:	**Israel, 2.9.1958**
Marital Status:	**Married + 3**
Citizenship	**Israel**
Permanent Home Address:	**Shimshit, Israel**
Home Telephone Number:	**04-6012246 (054-5925995)**
Office Address and Phone:	**Department of Physics** **Technion , Haifa 32000, Israel** **Tel.: 04-8293858**
Chair:	**Charles Wolfson Academic Chair**
Electronic Address:	**soker@physics.technion.ac.il**
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ACADEMIC DEGREES

Dates	**Name of Institution and Department**	**Degree**
1975-1977	Department of Mathematics and Physics, Oranim, University of Haifa	Beginning of Bachelor Degree in Physics
1980-1982	Department of Physics, Technion	Finishing Bachelor in Physics B.Sc. awarded: 4th May 1983 – Summa Cum Laude
1982-1986	Department of Physics, Technion	Doctoral studies Ph.D. awarded: 20th April 1986

ACADEMIC APPOINTMENTS

Dates	Name of Institution and Department	Rank
July-August 1984	Astronomical Institute, University of Amsterdam, Amsterdam – Holland	Visiting Researcher
September 1986 - August 1989	Department of Astronomy, University of Virginia, Charlottesville, Virginia, U.S.A.	Post-doctoral
September 1989 - September 1992	Harvard-Smithsonian Center for Astrophysics, Harvard University, Cambridge, MA, U.S.A.	Post-doctoral
October 1992 - May 1994	Oranim - University of Haifa, Science Education Department	Senior Lecturer
May 1994 - December 1998	Oranim - University of Haifa, Science Education Department	Associate Professor
December 1998- September 2003	Oranim - University of Haifa, Science Education Department	Full Professor
October 2003	Department of Physics, Technion	Full Professor

PROFESSIONAL EXPERIENCE

October 1994 – October 1998 Chairman of the Mathematics-Physics Department, Oranim - University of Haifa
May 2005 – September 2009 Head of the undergraduate program at the Physics Dept.
October 2009 – December 2015 Dean of the Faculty of Physics, Technion
August 2016 – September 2021 Head of Physics Program in Guangdong Technion Israel Institute of Technology (GTIIT)
October 2017 – February 2024 Head of the Center for Pre-University Studies, Technion

RESEARCH INTERESTS

- **The death of massive stars:** Core collapse supernovae: Specific contributions: the jittering-jet model for explosion.
- **Type Ia supernovae.** Specific contributions: The core-degenerate model.
- **The death of solar-like stars:** Planetary nebulae, and the destruction of planets. Specific contributions: shaping planetary nebulae by binary and triple stellar systems and the influence of planets on stellar evolution.
- **Intermediate - Luminosity Optical Transients (ILOTs):** Eruptive stars in the gas between Novae and Supernovae. Specific contributions: The crucial role of power by jets in binary systems.
- **Eta Carinae:** The formation of the nebula around one of the most massive binary systems in the galaxy, and the strange behavior of the binary system. Specific contributions: The role of mass transfer and jet-launching in the present behavior of the system and during the Great Eruption of the 19th century.

- **Hot gas in galaxy clusters:** Heating the intra-cluster medium with jets launched from super-massive black holes, and feeding the black hole with cold gas. Specific contributions: the cold feedback mechanism; inflation of fat bubbles.

TEACHING EXPERIENCE

	Title	Year	Type	Level
1)	Current Topics in Astronomy	Academic Year 1988-1989 Astronomy, Univ. of Virginia	Weekly 1 hour	Master + Doctor
2)	Physics 0 (Oranim)	1992-2000 (1 semester)	Weekly 6 h.	B.Sc.
3)	EM, Waves and Optics(Oranim)	1993 (1 semester)	Weekly 4 h.	B.Sc.
4)	Introduction to Astronomy (U. of Haifa)	1993-2000 (1 semester)	Weekly 2 h.	B.A.
5)	Introduction to Statistical Mechanics (Oranim)	1994 (1 semester)	Weekly 2 h.	B.Sc.
6)	Introduction to Quantum Mechanics (Oranim)	1994 (1 semester)	Weekly 4 h.	B.Sc.
7)	Nuclear Reactor and Nuclear Weapon (U. of Haifa)	1995-2000 (1 semester)	Weekly 2 h.	B.A.
8)	Introduction to Nuclear Physics (Oranim)	1995; 97; 99; 2001 (1 semester)	Weekly 4 h.	B.Sc.
9)	Introduction to Physics of 20th Century (U. of Haifa)	1996-2000 (2 semesters)	Weekly 2 h.	B.A.
10)	Special Relativity (Oranim)	1998; 2000 (1 semester)	Weekly 2 h.	B.Sc.
11)	Astrophysics (Oranum)	2000 (1 semester)	Weekly 2 h.	B.Sc.
12)	Physics 1 for biologists (Oranum)	2002 (1 semester)	Weekly 5 h	B. Sc
13)	Physics 1m/1P (Technion)	>10 times during 2003-2024	Weekly 3 h	B. Sc

14)	Physics 2m (Technion)	2004-2007	Weekly 4 h	B. Sc
15)	Stellar Physics 1	Several times 2006-2018	Weekly 3h	PhD+ B.Sc.
16)	Topics in Stellar Evolution	Few times 2007-2023	Weekly 2h	PhD
17)	Astrophysics and Cosmology (Technion)	Several times 2007-2020	Weekly 3 h.	B.Sc.
18)	Black Holes (Technion)	>10 times 2011-2024	Weekly 2 h.	B.Sc.
19)	Nuclear Astrophysics (Technion)	2018, 2021	Weekly 2h	PhD + B.Sc.

PUBLIC PROFESSIONAL ACTIVITIES

Refereeing for Journals:

Refereeing of Papers for the Following Journals:
- Astronomical Journal
- Astrophysical Journal
- Astrophysical Journal Letters
- Nature
- Science
- Publications of the Astronomical Society of the Pacific
- Monthly Notices of the Royal Astronomical Society
- Astronomy & Astrophysics

High School Teaching:

1982-1986 Half Time Teaching: Mathematics, Physics and Chemistry: Grades 7-12: Naaman High School

LONG PROFESSIONAL VISITS ABROAD

Aug 01-Feb 02 Department of Astronomy, University of Virginia, Charlottesville, Virginia, U.S.A. - 6 months Sabbatical.

CONFERENCES

Plenary or invited talks:

	Meeting	Place and date	Title
1)	ESO/CTIO Workshop: Mass Loss on the AGB and Beyond	La Sarena, Chile, January 21-24, 1992	Common Envelopes and Axisymmetrical Mass Loss

2)	Magnetic Effects in Accretion and Cooling Flows (International Workshop)	Technion, Haifa, Israel, June 3-6, 1996	Magnetic Fields and Inflow in Cooling Flows
3)	Galactic and Cluster Cooling Flows (Inter- national Workshop)	Oranim - University of Haifa, Israel, August 5-8, 1996	Magnetic Fields and Inflow in Cooling Flows
4)	Astrophysical Fluids - From Atomic Nuclei to Stars and Galaxies (International Meeting)	Technion, Haifa, Israel, January 12-15, 1998	Interaction of Planets with AGB and RGB Stars
5)	Asymmetrical PNs II	MIT, MA., U.S.A., August 3-6, 1999	The Transition to Axisymmetrical Mass Loss
6)	Post AGB Objects	Torun, Poland, July 5-7, 2000	Planets and Axisymmetrical Mass Loss
7)	Planetary Nebulae	Canbera, Australia November 19-23, 2001	Planetary Nebulae in the Scheme of Binary Evolution
8)	Symbiotic Stars: Probing Stellar Evolution	La Palma, Spain, May 27-31, 2002	Evolution with Mass Transfer
9)	IAU Symposium 219: Stars as Suns: Activity, Evolution and Planets	Australia, July 21-25, 2003	Influence of Planets on Parent Stars: Angular Momentum
10)	IAU Colloquium 194: Compact Binaries in the Galaxy and Beyond	La Paz, Baja California Sur, Mexico, November 17-22, 2003	Energy and Angular Momentum Deposition During Common Envelope Evolution
11)	Planetary Nebulae as Astronomical Tools	Gdansk, Poland, June 28, July 2, 2005	Can we ignore magnetic fields in studies of PN formation, shaping and interaction with the ISM?
12)	The Nature of V838 Mon and its Light Echo	La Palma, Spain, May 16-19, 2006	On the main sequence merger model
13)	Star-disk interaction in young stars	Grenoble, France, May 21-25 2007	The role of thermal pressure in jet launching
14)	Asymmetrical Planetary Nebulae IV	La Palma, Spain June 18-22, 2007	Memeber in a Panel Discussion
15)	The Monster's Fiery Breath: Feedback in Galaxies, Groups, and Clusters	Madison, USA June 1-5, 2009	The moderate cooling flow model
16)	The Fourth Meeting on Hot Subdwarf Stars and Related Objects	Shanghai, China July 20-24, 2009	The Role of Planets in the Formation of EHB Stars
17)	Astrophysical Outflows and Associated Accretion Phenomena	Rio de Janeiro August 6-7, 2009	Are jets rotating at the launching?"
18)	Evolution of galaxies, their central black holes and their large-scale environment	Potsdam September 20-24, 2010	A Moderate Cooling Flow Phase at Galaxy Formation
19)	Planets Around Stellar Remnants	Arecibo, January , 23-27 2012	Transient events from the destruction of planets

20)	Galaxy Clusters as Giant Cosmic Laboratories	Madrid, May, 21-23, 2012	The cold feedback mechanism
21)	The death of stars and the lives of galaxies	Santiago, April 8-12, 2013	The summary talk
22)	Interacting Binaries and Isolated Neutron Stars	Cefalu, Sicily, June 9-14, 2014	The Core-Degenerate Scenario
23)	Mondello Workshop 2016: Frontier research in astrophysics II	Palermo, Italy, May 23-28, 2016	Jet-Feedback Mechanism, from supernovae to clusters of galaxies
24)	Supernova Remnants: An Odyssey in Space after Stellar death	Crete, Greece, Juner 6-10, 2016	The role of jets in exploding supernovae and shaping their remnants
25)	The asymmetrical planetary nebulae (APN) VII.	Hong Kong, December 4-8, 2017	Planets, Planetary Nebulae, and Intermediate Luminosity Optical Transients (ILOTs)
26)	Progenitors of Type Ia Supernovae	Lijiang, China, August 5-9, 2019	SN Ia scenarios in 2019: a rising demand for clean and symmetrical explosions
27)	WorkPlaNS II: Workshop for Planetary Nebula observations	Lorentz Center, Leiden December 16-20, 2019	Shaping of planetary nebulae: Jets and relation to other objects
28)	The Progenitors of Supernovae and their Explosions	Dali, China, August 26-30, 2024	The jittering jets explosion mechanism

A large impact by presenting unique views/models/ideas and leading discussions

1)	The asymmetrical planetary nebulae (APN) series which I initiated in 1994 (8 meetings till 2021).	Oranim 1994; MIT 1999; Seattle 2003; La Palma; 2007; Manchester 2010; Mexico 2013; Hong Kong 2017; **Zoom 2021**	Very active member on the organizing committees; chairing sessions; leading discussions
2)	Supernovae Illuminating the Universe	Garching, Germany, September 12-14, 2012	The Core-Degenerate (CD) scenario for SN Ia; The Jittering-Jets model for core-collapse SNe.
2)	F.O.E. fifty-one ergs	Raleigh, NC, May 13-17, 2013	CD scenario; Jittering-jets model
3)	Stellar Tango at the Rockies 14	Lake Louise, Canada, March 23-28, 2014	Merger during the CE phase; Jets in CEs
4)	Characterizing Planetary Systems across the HR Diagram	Cambridge, UK, July 28-31, 2014	Planets – star interaction; planet-star merger
5)	Supernovae in the local Universe	Coffs Harbour, Australia, August 11-15, 2014	CD scenario; jittering-jets model
6)	The physics of evolved stars; A conference dedicated to the memory of Olivier Chesneau".	Nice, France, June 8-12, 2015	The grazing-envelope evolution (GEE)
7)	The impact of binaries on stellar evolution	Garching, Germany, July 3-7, 2017	Presented a daily summary of the meeting
8)	Shocking Supernovae: surrounding interactions and unusual events	Stockholm, Sweden, May 28-June1, 2018	Presented a daily summary of the meeting and a final summary (uninvited)
10)	Common Envelope Physics and Outcomes (CEPO 2021)	Zoom, August 30 – September 3, 2021	Co-chair of the meeting and chair of a session with discussion.
11)	Supernova remnants and their progenitors	Zoom, August 16-18, 2022 (+ on site in the CfA, Harvard-Smithsonian)	During the entire meeting, I led intensive discussions on the role of jets.

12)	WORKSHOP 3D Supernova (Remnants)	Zoom, September 5-8, 2022 (+ on site University of Valencia, Spain).	I gave a review talk on the role of jets and led discussions on the role of jets.

HONORS

1981	Awards from the Israel Association of Physics
1983	President's List Honor Student Scholarship, Technion
1985	Moshe Ben-Sira Fellowship received as an honor student, Technion
1992-1995	Alon Fellowship
2011	Yanay Prize for Academic Excellence at the Technion
2015-2022	Excellence in teaching (2015,2020,2021,2022,2023) at the Technion
2022	Morton and Beverley Rechler Prize for Excellence in Research at the Technion
2024	Highly Ranked Scholar by *ScholarGPS* – lifetime – in the field of physical sciences and mathematics (top 0.05%)

GRADUATE STUDENTS

Student's Name	Title of Thesis/ Dissertation	Degree	Date
David L. Blank (U. of Virginia)	Seyfert Galaxy Evolution	Master	May 1989
Philip C. Plait (U. of Virginia)	The Electron Density Profile of the Planetary Nebula NGC 6826	Master	May 1990
Essam Zoabi	The Intracluster Medium (supervision with Prof. Oded Regev)	PhD	1998
Muhammad Akashi	X-Ray Emission From Colliding Winds In Planetary Nebulae (supervision with Prof. Ehud Behar)	PhD	October 2008
Assaf Sternberg	Shaping of Planetary Nebulae and Radio Bubbles in Galaxy Clusters	PhD	March 2009
Amit Kashi	The Periastron Passage of the Binary Star Eta Carinae	PhD	September 2011
Carmit Gordon Lahav	Correlations of Black Hole Mass with Host Galaxy Properties	Master	February 2012
Marjan Ilkov	Common envelope WD-core merger as Type Ia supernova progenitors	Master	September 2012
Danny Tsebrenko	Interaction of Stellar Winds with Circumstellar Matter	Master	October 2012
	Interaction of supernova ejecta with asymmetrical circumstellar matter	PhD	October 2015
Michael Refaelovich	Chains of X-ray deficient bubbles as consequence of vortices fragmentation	Master	October 2012
Oded Papish	Expel of gravitationally bound mass by fast jets from compact objects	PhD	September 2015
Liron Mcley	Stellar Instability and Intermediate Luminosity Optical Transients (ILOTs)	Master	November 2014
Shlomi Hillel	Dynamics of Clumps in the Intracluster Medium	PhD	January 2016

Avishai Gilkis	Heating of a Medium by Jets from a Compact Object	Master	October 2012
	Intermittent Accretion Disk Production in Core Collapse Supernovae	PhD	September 2016
Efrat Sabach	Transient Event from a Core-WD Merger	Master	October 2013
	Mass Transfer in Stellar Binary Systems Resulting in Peculiar Objects	PhD	May 2018
Sagiv Shiber	The Role of Energetic Jets in Late Stages of Stellar Evolution	PhD	April 2019
Naveh Levanon	Evolution, merging and explosion of degenerate stars as Type Ia supernovae	PhD	September 2019
Roni Gofman	Energizing Supernovae by a Central Engine	Master	January 2020
Noa Kaplan	Energizing Supernovae and their Light Curves with Jets	Master	April 2020
Aldana Grichener	High Energy Processes in Common Envelope Jets Supernovae	Master	March 2021
	The role of massive binaries in high energy astrophysics	PhD	July 2024
Dmitry Shishkin	The influence of core convection on core collapse supernova properties	Master	March 2022
		PhD	
Tamar Cohen	The final phase of common envelope jet supernova impostors	Master	December 2023
		PhD	
Jessica Braudo		PhD	
Yonah Weiner		Master	
Lotem Unger		Master	
Kobi Shiran			
Ariel Scolnic			

POSTDOCTORAL FELLOW:

Fabio Pizzolato 2004-2007
Adam Frankowski 2008-2010
Ealeal Bear 2009-2011

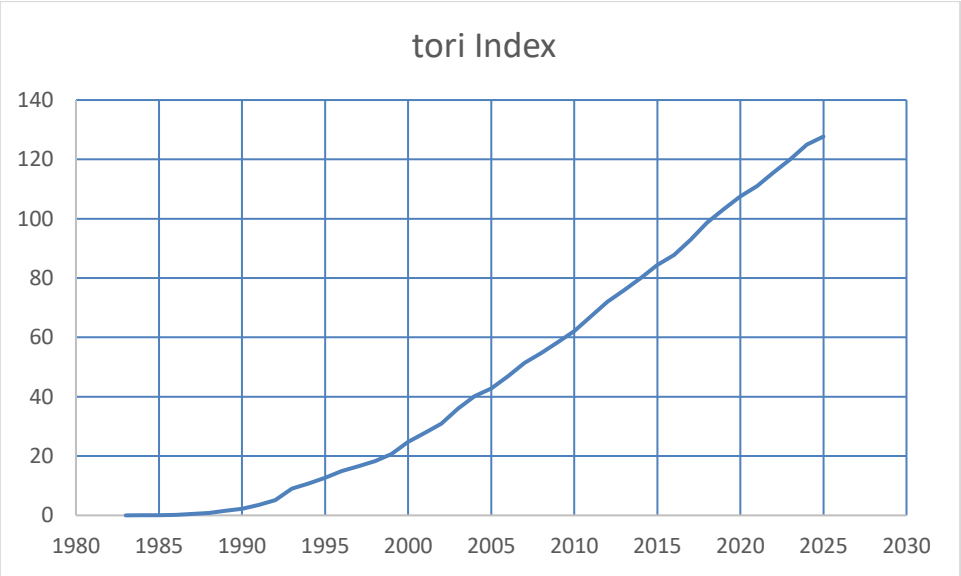
RESEARCH GRANTS

1990	"Wind Interaction in Planetary Nebulae"	Soker, N. and Raymond, J.C.	Grant from NASA $31,937
1990	"UV Spectra of Magnetically Disturbed Accretion Disks"	Raymond, J.C., van Ballegooijen, A., Soker, N., Nauche, C.W. and Miller, G.	Grant from NASA $33,000

1990	"The Eclipsing Intermediate Polar LB 1800	Raymond, J.C., Buckley, D.A., Mauche, C.W., Miller, G. and Soker, N.	Grant from NASA $12,600
1991	"Resonant Excitation of P- and G-Waves in Common envelopes"	Soker, N.	Grant from NASA $29,145
1993	X-ray Filaments in Cluster Cooling Flows	Soker, N. and Regev, O.	Grant: the Technion-Univ. of Haifa Foundation $5,000

1994-1997	X-ray Filaments in Cluster Cooling Flows	Soker, N. and Regev, O.	Grant: Israel Science Foundation, 3 years, $30,000/year
1997-2000	Jets and Axisymmetrical Structures in Planetary Nebulae and Young Stellar Objects	Regev, O. and Soker, N.	Grant: Israel Science Foundation, 3 years, $ 35,000/year
1999-2002	The Role of Binary Companions in Shaping Circumstellar Media	Soker, N. and Rappaport, S.	Grant from the US-Israel BSF $ 22,000/year

2002-2005	Mass ejection in Late Stages of Stellar Evolution	Soker, N.	Grant: Israel Science Foundation; 3 years, $ 30,000/ year
2008-2012	Connecting Shaping of Planetary Nebulae, Eta Carinae, and Cooling Flows	Soker, N.	Grant: Israel Science Foundation; 4 years, $ 30,000/ year
2011-2015	Winds interaction in planetary nebulae and related objects	Soker, N. and Kastner, J. H.	Grant: US-Israel BSF; 4 years, $ 19,000/ year
2016-2020	Shaping planetary nebulae by triple stellar systems	Soker, N.	Grant: Israel Science Foundation; 4 years, $ 40,000/ year
2017-2020	Shaping Planetary nebulae by swallowing a binary system	Soker, N. and Schreier, R. (RAFAEL)	Pazy Fund (Israel Atomic Energy Commission); 4 years, $ 60,000/ year
2020-2024	Post-AGB binary systems with jets and their implications to the shaping of planetary nebulae by jets from binary systems	Soker, N.	Grant: Israel Science Foundation; 4 years, $ 45,000/ year
2021-2024	Shaping planetary nebulae by post-common envelope jets	Soker, N. and Schreier, R. (RAFAEL)	Pazy Fund (Israel Atomic Energy Commission); 4 years, $ 50,000/ year



PUBLICATIONS

Thesis:

"Accretion from an Inhomogeneous Medium", 153 pages, in Hebrew.
https://ui.adsabs.harvard.edu/abs/1986PhDT.....232S/abstract
Supervisor: Prof. Mario Livio.
Submitted to the Senate of the Technion in January 1986.
The work was published in papers 1,2,3,4,5,6,8,9 in the refereed publications below.

Public Review Papers:

Soker, N., "Planetary Nebulae", Scientific American, May, pp. 78-85 (1992).

Edited Books:

1. Harpaz, A. and Soker, N. (Eds.) Asymmetrical Planetary Nebulae. Annals of the Israel Physical Society, Vol. 11, University of Haifa at Oranim Conference, Israel, 306 pages (1995).

2. Soker, N. (Ed.) Galactic and Cluster Cooling Flows. Astronomical Society of the Pacific Conference Series, Vol. 115, Proceedings of a Conference held a the University of Haifa at Oranim, Israel, 5-8 August 1996, 227 pages (1997).

3. Kastner, J.H., Soker, N. and Rappaport, S. (Eds.) Asymmetrical Planetary Nebulae II: From Origins to Microstructures. Astronomical Society of the Pacific Conference Series, Vol. 199, Proceedings of a Conference held at M.I.T., MA., U.S.A., August 3-6, 1999, 463 pages (2000).

4. Reiprich, T., Kempner, J., and Soker, N. (Eds) Riddle of Cooling Flows in Galaxies and Clusters off Galaxies, held in Charlottesville, VA, May 31 – June 4, 2003. Published electronically: http://www.astro.virginia.edu/coolflow/
and on ADS (2004).

5. Meixner, M., Kastner, J.H., Soker, N. and Balick, B. (Eds.) Asymmetrical Planetary Nebulae III. Astronomical Society of the Pacific Conference Series, Vol. 313, in press. Proceedings of a Conference held at Washington State, U.S.A., July 28 – August 1, 2003 (2004).

Papers in refereed journals:

1. Livio, M., and Soker, N. "Star-Planet Systems as Progenitors of Cataclysmic Binaries: Tidal Effects", Astronomy and Astrophysics, **125**, L12-L15 (1983).

2. Livio, M., and Soker, N. "Star-Planet Systems as possible Progenitors of Cataclysmic Binaries", Monthly Notices of the Royal Astronomical Society, **208**, 763-781 (1984).

3. Livio, M., and Soker, N. "On the Masses of the White Dwarfs in Cataclysmic Variables", Monthly Notices of the Royal Astronomical Society, **208**, 783-797 (1984).

4. Soker, N., Harpaz, A., and Livio, M. "The Evolution of a Star-Planet System in the Double Core Phase", Monthly Notices of the Royal Astronomical Society, **210**, 189-195 (1984).

5. Soker, N., and Livio, M. "On Accretion from a Medium Containing a Density Gradient", Monthly Notices of the Royal Astronomical Society, **211**, 927-932 (1984).

6. Livio, M., Soker, N., de Kool, M., and Savonije, G.J. "On Accretion of Angular Momentum from an Inhomogeneous Medium", Monthly Notices of the Royal Astronomical Society, **218**, 593-604 (1986).

7. Livio, M., Soker, N., and Dgani, R. "On the Stream-Disk Interaction in Accreting Compact Objects", Astrophysical Journal, **305**, 267-280 (1986).

8. Soker, N., Livio, M., de Kool, M., and Savonije, G.J. "Accretion of Angular Momentum from an Inhomogeneous Medium II: Isothermal Flow", Monthly Notices of the Royal Astronomical Society, **221**, 445-452 (1986).

9. Livio, M., Soker, N., de Kool, M., and Savonije, G.J. "Accretion of Angular Momentum from an Inhomogeneous Medium III: General Case and Observational Consequences", Monthly Notices of the Royal Astronomical Society, **222**, 235-250 (1986).

10. Soker, N., Regev, O., Livio, M., and Shara, M.M. "Massive Disk Formation Resulting from the Collision of a Main Sequence Star with a White Dwarf in a Globular Cluster Core", Astrophysical Journal, **318**, 760-766 (1987).

11. Soker, N., and Sarazin, C.L. "Cooling Flows and the Stability of Radio Jets", Astrophysical Journal, **327**, 66-81 (1988).

12. Soker, N., O'Dea, C.P., and Sarazin, C.L. "Numerical Simulations of the Bending of Narrow Angle Tail Radio Jets by Ram Pressure or Pressure Gradients", Astrophysical Journal, **327**, 627-638 (1988).

13. Livio, M., and Soker, N. "The Common Envelope Phase in the Evolution of Binary Stars", Astrophysical Journal, **329**, 764-779 (1988).

14. Dgani, R., Livio, M., and Soker, N. "On the Stream-Accretion Disk Interaction: Response to the Increased Mass Transfer Rate", Astrophysical Journal, **336**, 350-359 (1989).

15. Soker, N., and Livio, M. "Interacting Winds and the Shaping of Planetary Nebulae", Astrophysical Journal, **339**, 268-278 (1989).

16. Soker, N. "Early Shaping of Asymmetricl Planetary Nebulae", Astrophysical Journal, **340**, 927-931 (1989).

17. Balbus, S.A., and Soker, N. "Theory of Local Thermal Instability in Spherical Systems", Astrophysical Journal, **341**, 611-639 (1989).

18. Chevalier, R.A., and Soker, N. "Asymmetric Envelope Expansion of Supernova 1987A", Astrophysical Journal, **341**, 867-882 (1989).

19. Soker, N., and Sarazin, C.L. "The Role of Magnetic Fields in Cluster Cooling Flows", Astrophysical Journal, **348**, 73-84 (1990).

20. Soker, N. "On the Formation of Ansae in Planetary Nebulae", Astronomical Journal, **99**, 1869-1882 (1990).

21. Plait, P., and Soker, N. "The Evolution of the Planetary Nebula NGC 6826", Astrophysical Journal, **99**, 1883-1890 (1990).

22. Soker, N. "H-Function Evolution in Collisionless Self-Gravitating Systems", Publications of the Astronomical Society of the Pacific, **102**, 639-645 (1990).

23. Balbus, S.A., and Soker, N. "Resonant Excitation of Internal Gravity Waves in Cluster Cooling Flows", Astrophysical Journal, **357**, 353-366 (1990).

24. Soker, N. "Stability Analysis of the Accretion Line", Astrophysical Journal, **358**, 545-550 (1990).

25. Borkowski, K.J., Sarazin, C.L., and Soker, N. "Interaction of Planetary Nebulae with the Interstellar Medium", Astrophysical Journal, **360**, 173-183 (1990).

26. Abramowics, M.A., Livio, M., Soker, N., and Szuskiewicz, E. "Local Stability of Thick Acrretion Disks. II. Viscous and Radiative Effects", Astronomy and Astrophysics, **239**, 399-403 (1990).

27. Soker, N. "Resonant Interaction in Common Envelopes", Astrophysical Journal, **367**, 593-600 (1991).

28. Soker, N., Bregman, J.N., and Sarazin, C.L. "Stripped Interstellar Gas in Cluster Cooling Flows", Astrophysical Journal, **368**, 341-347 (1991).

29. Whitney, B.A., Soker, N., and Clayton, G.C. "Model for R Coronae Borealis Stars", Astrophysical Journal, **102**, 284-288 (1991).

30. Soker, N. "Nonlinear Instability of the Accretion Line", Astrophysical Journal, **376**, 750-756 (1991).

31. Soker, N., Borkowski, K.J. and Sarazin, C.L. "Interaction of Planetary Nebulae with the Interstellar Medium: Theory", Astronomical Journal, **102**, 1381-1392 (1991).

32. Livio, M., Soker, N., Matsuda, T., and Anzer, U. "On the Flip-Flop Instability of Bondi-Hoyle Accretion Flows", Monthly Notices of the Royal Astronomical Society, **253**, 633-636 (1992).

33. Soker, N. "Excitation of Pressure Modes in Common Envelopes", Astrophysical Journal, **386**, 190-196 (1992).

34. Soker, N. "Jet Formation in the Transition from the AGB to Planetary Nebulae", Astrophysical Journal, **389**, 628-634 (1992).

35. Soker, N. "Excitation of Gravity Waves in Common Envelopes", Astrophysical Journal, **399**, 185-191 (1992).

36. Soker, N., and Harpaz, A. "Can a Single AGB Star Form an Axially Symmetric Planetary Nebula?", Publications of the Astronomical Society of the Pacific, **104**, 923-930 (1992).

37. Soker, N., Zucker, D.B., and Balick, B. "The Density Profile of the Elliptical Planetary Nebula NGC 3242", Astronomical Journal, **104**, 2151-2160 (1992).

38. Vrtilek, S.D., Soker, N., and Raymond, J.C. "Effects of Inclination Angle on the Spectra of X-Ray Binaries", Astrophysical Journal, **404**, 696-705 (1993).

39. Zucker, D.B., and Soker, N. "The Morphology and Interaction with the ISM of the Planetary Nebula IC 4593", Astrophysical Journal, **408**, 579-585 (1993).

40. Soker, N. "Effects of Convection on Pressure Wave Excitation in Common Envelopes", Astrophysical Journal, **417**, 347-350 (1993).

41. Dgani, R. and Soker, N. "Nonlinear Instability of Colliding Winds in a Double Star System", Astronomy and Astrophysics, **282**, 54-60 (1994).

42. Soker, N. "The Expected Morphology of the Solar System Planetary Nebula", Publications of the Astronomical Society of the Pacific, **106**, 59-62 (1994).

43. Soker, N. and Livio, M. "Disks and Jets in Planetary Nebulae", Astrophysical Journal, **421**, 219 (1994).

44. Soker, N. "Heat Conduction Fronts in Planetary Nebulae", Astronomical Journal, **107**, 276-279 (1994).

45. Dgani, R. and Soker, N. "Radiative Shock Overstability of Finite Sized Objects", Astrophysical Journal, **434**, 262-267 (1994).

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