

# P.A. PATSIS PUBLICATIONS

## Books:

- **2009:** G. Contopoulos, **P.A. Patsis** (eds): “Chaos in Astronomy”, Athens, September 2007. Astrophysics and Space Science Proceedings Library, Springer-Verlag Berlin, Heidelberg
- **2003:** C.M. Boily, **P.Patsis**, S. Portegies – Zwart, R. Spurzem, C. Theis (eds): JENAM 2002. “Galactic & Stellar Dynamics”, Porto Portugal, September 3-6 2002, EDP Sciences
- **1999:** **P.A. Patsis**, H-W. Rix (eds): Proceedings of the Conference “Galactic Disks 99”, Heidelberg 4-6 October 1999, MPA (Notes collection)

## Publications in refereed journals:

1. Tsigaridi L., **Patsis P. A.**, **2015**, MNRAS in press [Slowly rotating bars-Morphologies introduced by bistability in barred-spiral galactic potentials](#)
2. **Patsis P.A.**, Katsanikas M., 2014, MNRAS 445, 3546 [The phase space of boxy-peanut and X-shaped bulges in galaxies - II. The relation between face-on and edge-on boxiness](#)
3. **Patsis P.A.**, Katsanikas M., 2014, MNRAS 445, 3525 [The phase space of boxy-peanut and X-shaped bulges in galaxies - I. Properties of non-periodic orbits](#)
4. Faber N. T., Flitti F., Boily C. M., Collet C., **Patsis, P. A.**, Portegies Zwart, S., 2013, New A 25, 74 [Classifying two-dimensional orbits using pattern recognition](#)
5. Tsigaridi L., **Patsis P. A.**, 2013, MNRAS 434, 2922 [The backbones of stellar structures in barred-spiral models - the concerted action of various dynamical mechanisms on galactic discs](#)
6. Zachilas, L., Katsanikas, M., **Patsis, P.A.**, 2012, Int. Journ. Bif., Ch., 23, 1330023 [The structure of phase space close to fixed points in a 4D symplectic map](#)
7. Katsanikas, M., **Patsis, P. A.**, Contopoulos, G., 2012, Int. Journ. Bif. Ch., 23, 1330005

[Instabilities and stickiness in a 3D rotating galactic potential](#)

8. **Patsis, P.A.**, 2012, Int. Journ. Bif. Ch. 22, .no 9, 1230029-1-14  
[Structures out of Chaos in Barred-spiral Galaxies](#)
9. **Patsis, P.A.**, 2012, Astron. Astrop. Trans., 27, issue 2, 293  
[Dynamical Mechanisms supporting Barred-Spiral Structure](#)
10. Katsanikas, M., **Patsis, P. A.**, Pinotsis, A.D., 2011, Int. Journ. Bif. Ch., 21, 2331  
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11. Katsanikas, M., **Patsis, P. A.**, Contopoulos, G., 2011, Int. Journ. Bif. Ch., 21, 2321  
[The Structure and Evolution of Confined Tori Near a Hamiltonian Hopf Bifurcation](#)
12. Chatzopoulos, S., **Patsis, P. A.**, Boily, C. M., 2011, MNRAS, 416, 479  
[A taxonomic algorithm for bar-building orbits](#)
13. Katsanikas, M., **Patsis, P. A.**, 2011, Int. Journ. Bif. Ch., 21, 467  
[The structure of invariant tori in a 3D galactic potential](#)
14. **Patsis, P. A.**, Kalapotharakos, C., Grosbøl, P., 2010, MNRAS, 409L, 94,  
[Gas response in chaotic bars](#)
15. **Patsis, P. A.**; Kalapotharakos, C.; Grosbøl, P., 2010, MNRAS, 408, 22  
[NGC 1300 dynamics – III. Orbital Analysis](#)
16. Kalapotharakos, C.; **Patsis, P. A.**; Grosbøl, P., 2010, MNRAS, 408, 9,  
[NGC 1300 dynamics – II. The response models](#)
17. Kalapotharakos, C.; **Patsis, P. A.**; Grosbøl, P., 2010, MNRAS, 403, 83,  
[NGC 1300 dynamics - I. The gravitational potential as a tool for detailed stellar dynamics](#)
18. **Patsis, P. A.**, Kaufmann, D.E., Gottesmann, S.T., Boonyasait, V., 2009, MNRAS 349, 142, [Stellar and gas dynamics of late-type barred spiral galaxies: NGC 3359, a test case](#)
19. **Patsis, P.A.**, 2008, Astronomische Nachrichten 329, 930,  
[Ordered and Chaotic Spiral Arms](#)

20. **Patsis, P.A.**, 2008, Nonlin. Phen. Compl. Sys. 11, 265,  
[Does Chaotic Motion Support Spiral Structure in Disk Galaxies?](#)
21. Contopoulos, G., **Patsis, P. A.** 2006, MNRAS 369, 1039,  
[Outer dynamics and escapes in barred galaxies](#)
22. **Patsis, P. A.** 2006, Monthly Notices of the Royal Astronomical Society 369L, 56 [The stellar dynamics of spiral arms in barred spiral galaxies](#)
23. **Patsis, P. A.** & Xilouris, E. M. 2006, Monthly Notices of the Royal Astronomical Society 336, 1121, [Boxy/peanut ‘bulges’: comparing the structure of galaxies with the underlying families of periodic orbits](#)
24. **Patsis, P. A.** 2005, Astronomische Nachrichten 326, 601, [Order and chaos in the edge-on profiles of disk galaxies](#)
25. Boonyasait V., **Patsis P.A.** and Gottesman S T 2005, Ann. N.Y. Acad. Sci. 1045: 203-224, [The Two Pattern Speeds of NGC 3359.](#)
26. Skokos, Ch., Parsopoulos, K. E., **Patsis, P. A.**, & Vrahatis, M. N. 2005, Monthly Notices of the Royal Astronomical Society 359, 251 [Particle swarm optimization: an efficient method for tracing periodic orbits in three-dimensional galactic potentials](#)
27. Kaufmann, David E. & **Patsis, Panos A.** 2005, Astrophysical Journal 624, 693  
[Propeller Orbits in Barred Galaxy Models](#)
28. **Patsis, P. A.** 2005, Monthly Notices of the Royal Astronomical Society 358, 305 [On the relation between orbital structure and observed bar morphology](#)
29. Grosbøl, P., **Patsis, P. A.**, & Pompei, E. 2004, Astronomy and Astrophysics 423, 849,  
[Spiral galaxies observed in the near-infrared K band. I. Data analysis and structural parameters](#)
30. **Patsis, P. A.**, Skokos, Ch., & Athanassoula, E. 2003, Monthly Notices of the Royal Astronomical Society 346, 1031 [On the 3D dynamics and morphology of inner rings](#)
31. **Patsis, P. A.**, Skokos, Ch., & Athanassoula, E. 2003, Monthly Notices of the Royal Astronomical Society 342, 69 [Orbital dynamics of three-dimensional bars - IV. Boxy isophotes in face-on views](#)
32. **Patsis, P. A.**, Skokos, Ch., & Athanassoula, E. 2002, Monthly Notices of the Royal Astronomical Society 337, 578 [Orbital dynamics of three-dimensional bars - III. Boxy/peanut edge-on profiles](#)

33. **Patsis, P. A.**, Athanassoula, E., Grosbøl, P., & Skokos, Ch. 2002, Monthly Notices of the Royal Astronomical Society 335, 1049 [Edge-on boxy profiles in non-barred disc galaxies](#)
34. Skokos, Ch., **Patsis, P. A.**, & Athanassoula, E. 2002, Monthly Notices of the Royal Astronomical Society 333, 861 [Orbital dynamics of three-dimensional bars - II. Investigation of the parameter space](#)
35. Skokos, Ch., **Patsis, P. A.**, & Athanassoula, E. 2002, Monthly Notices of the Royal Astronomical Society 333, 847 [Orbital dynamics of three-dimensional bars - I. The backbone of three-dimensional bars. A fiducial case](#)
36. **Patsis, P. A.**, Héraudeau, Ph., & Grosbøl, P. 2001, Astronomy and Astrophysics 370, 875 [Spiral arms in near-infrared bands. Broad- and narrow-band NIR photometry](#)
37. **Patsis, P. A.** & Athanassoula, E. 2000, Astronomy and Astrophysics 358, 45 [SPH simulations of gas flow in barred galaxies. Effect of hydrodynamical and numerical parameters](#)
38. **Patsis, P. A.** & Kaufmann, D. E. 1999, Astronomy and Astrophysics 352, 469 [Resonances and the morphology of spirals in N-body simulations](#)
39. Grosbøl, Preben J., Block, David L., & **Patsis, Panos A.** 1999, Astrophysics and Space Science 269, 423 [Dust Lanes in Spiral Galaxies](#)
40. Grosbol, P. J. & **Patsis, P. A.** 1998, Astronomy and Astrophysics 336, 469 [Stellar disks of optically flocculent and grand design spirals. Decoupling of stellar and gaseous disks](#)
41. **Patsis, P. A.**, Efthymiopoulos, C., Contopoulos, G., & Voglis, N. 1997, Astronomy and Astrophysics 326, 493 [Dynamical spectra of barred galaxies.](#)
42. **Patsis, P. A.**, Athanassoula, E., & Quillen, A. C. 1997, Astrophysical Journal 483, 731, [Orbits in the Bar of NGC 4314](#)
43. **Patsis, P. A.**, Grosbol, P., & Hiotelis, N. 1997, Astronomy and Astrophysics 323, 762 [Interarm features in gaseous models of spiral galaxies.](#)
44. **Patsis, P. A.** & Grosbol, P. 1996, Astronomy and Astrophysics 315, 371 [Thick spirals: dynamics and orbital behavior.](#)

45. **Patsis, P. A.** & Zachilas, L. 1994, International Journal of Bifurcation and Chaos 4, 1399 [Using Color and Rotation for Visualizing Four-Dimensional Poincare Cross-Sections](#)
46. **Patsis, P. A.**, Hiotelis, N., Contopoulos, G., & Grosbol, P. 1994, Astronomy and Astrophysics 286, 46 [Hydrodynamic simulations of open normal spiral galaxies: OLR, corotation and 4/1 models](#)
47. **Patsis, P. A.** & Hiotelis, N. 1994, LNP 430, 261: Ergodic Concepts in Stellar Dynamics [SPH Simulations of the Gas Flow in Normal Spiral Galaxies](#)
48. Hiotelis, N. & **Patsis, P. A.** 1993, Astrophysics and Space Science 206, 21 [Inversions for axisymmetric galactic disks](#)
49. **Patsis, P. A.**, Contopoulos, G., & Grosbol, P. 1991, Astronomy and Astrophysics 243, 373 [Self-consistent spiral galactic models](#)
50. **Patsis, P. A.** & Zachilas, L. 1990, Astronomy and Astrophysics 227, 37 [Complex instability of simple periodic orbits in a realistic two-component galactic potential](#)

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(refereed papers are indicated)**

1. Grosbol P., **Patsis, P. A.**, **Dottori H.**, 2014, [Formation of Massive Clusters in Grand-Design Spiral Galaxies](#) In Massive Young Star Clusters Near and Far: From the Milky Way to Reionization. 2013 Guillermo Haro Conference, Eds. Y. D. Mayya, D. Rosa González and E. Terlevich. INAOE & AMC, June 2014. ISBN: 978-607-8379-01-9, pp.113-116
2. Grosbol P., **Patsis, P. A.**, 2014 [Amplitudes of Spiral Perturbations](#) In Structure and Dynamics of Disk Galaxies. Proceedings of the Conference held 12-16 August, 2013 at the Winthrop Rockefeller Institute, Petit Jean Mountain, Arkansas, USA. Edited by M.S. Seigar and P. Treuthardt. ASP Conference Series, Vol. 480, 2014, p.117
3. **Patsis P.A.**, 2013, [The dynamical backbones of observed structures in barred-spiral models](#) In The 11th Hellenic Astronomical Conference, held 8-12 September, 2013 in Athens, Greece. Online at <http://www.helas.gr/conf/2013/>, p. 26 Hellenic National Space Weather Research Network

4. **Patsis P.A.**, 2012, [Mechanisms based on chaotic flows that support structures in barred-spiral systems](#). In “Assembling the Puzzle of the Milky Way, Le Grand-Bornand, France, Edited by C. Reylé; A. Robin; M. Schultheis; EPJ Web of Conferences, Volume 19, id.07003”.
5. **Patsis P.A.**, 2012, [Modeling the morphology of disk galaxies by means of orbital theory](#), in the 10th Hellenic Astronomical Conference Proceedings. International conference held at Ioannina, Greece, 5-8 September 2011. Edited by Iossif Papadakis and Anastasios Anastasiadis
6. **P.A. Patsis**, C. Kalapotharakos 2012, [Ordered and Chaotic spirals in disk galaxies](#), Mem. S.A. It., 18, 83, in “Tumbling Twisting and Winding Galaxies”, E.M. Corsini and V. Debattista (eds.) (**text of invited talk, refereed publication**)
7. Tsigaridi, L., **Patsis, P. A.**, 2010, [Response Models of Barred-Spiral Galaxies](#), in the “Proceedings of the 9th International Conference of the Hellenic Astronomical Society”. Conference held 20-24 September 2009 in Athens, Greece. Edited by Kanaris Tsinganos, Despina Hatzidimitriou, and Titos Matsakos. San Francisco: Astronomical Society of the Pacific, ASPC 424., pp 382-383
8. Katsanikas, M.; **Patsis, P. A.**, 2010, [The Orbital Behavior at the Neighborhood of Stable Periodic Orbits in a 3D Galactic Potential](#), in the “Proceedings of the 9th International Conference of the Hellenic Astronomical Society”. Conference held 20-24 September 2009 in Athens, Greece. Edited by Kanaris Tsinganos, Despina Hatzidimitriou, and Titos Matsakos. San Francisco: Astronomical Society of the Pacific, ASPC 424, pp 380-381
9. Akras, S.; Xilouris, E.; **Patsis, P.**; Boumis, P., 2010, [Modeling the Bar Component in Dusty Spiral Galaxies](#), in the “Proceedings of the 9th International Conference of the Hellenic Astronomical Society”. Conference held 20-24 September 2009 in Athens, Greece. Edited by Kanaris Tsinganos, Despina Hatzidimitriou, and Titos Matsakos. San Francisco: Astronomical Society of the Pacific, ASPC 424, pp 261-262
10. Patsis P.A., 2009, [The flow through the arms of normal and barred-spiral galaxies](#). in “Chaos in Astronomy”, G.Contopoulos, P.A. Patsis (eds), Springer Verlag, Berlin Heidelberg, pp 33-44 (**text of invited talk, refereed publication**)
11. Katsanikas M., Patsis P.A., Zachilas L., 2009, [The structure of the phase space in galactic potentials of three degrees of freedom](#), in “Chaos in Astronomy”, G.Contopoulos, P.A. Patsis (eds), Springer Verlag, Berlin Heidelberg, pp 235-239 (**refereed publication**)

12. Kaufmann D.E., Patsis P.A., 2009, [Regular and Chaotic orbits in narrow 2D bar models](#), in “Chaos in Astronomy”, G.Contopoulos, P.A. Patsis (eds), Springer Verlag, Berlin Heidelberg, pp 241-244 (**refereed publication**)
13. Zachilas L., Patsis P.A., Mavromatis C., [The Society for Space and Astronomy at Volos](#), Greece in Communicating Astronomy with the Public 2007: Proceedings from the IAU/National Observatory of Athens/ESA/ESO Conference, Athens, Greece, 8-11 October 2007, Christensen L. L., Zoulias M. & Robson, I. (eds.), Published by Eugenides Foundation.
14. Akras S., Xilouris E.M., **Patsis P.A.**, Boumis P., Basilakos S., 2007, [Bar diagnostics in Spiral Galaxies](#), in 8<sup>th</sup> Hellenic Astronomical Society, Thasos 2007
15. Contopoulos G., **Patsis P.A.**, 2007, [The dynamics of the outer parts of rotating galaxies](#), in “The rotation of celestial bodies” A. Lemaitre (Ed.), Presses universitaires de Namur, pp 75-82 (**text of invited talk, refereed publication**)
16. **Patsis P.A.**, Xilouris E.M., 2006, [Boxy Edge-on Profiles](#), in “Island Universes. Structure and Evolution of Disk Galaxies”, R. de Jong (Eds.), 211
17. Contopoulos G., **Patsis P.A.**, 2006, [Galactic Vortices](#), in “Astrophysical Disks Collective and Stochastic Phenomena” Astrophysics and Space Science Library, Vol. 337, pp 131-144, Fridman, Alexei M.; Marov, Mikhail Ya.; Kovalenko, Il'ya G. (Eds.) (**text of invited talk, refereed publication**)
18. **Patsis P.A.**, 2006, [Order, Chaos and the Structure of Disk Galaxies](#), 18<sup>th</sup> Summer School – Conference “Nonlinear Science and Complexity”, Volos 18-30 July 2005
19. **Patsis P.A.**, [Structure and Dynamics of Galactic Disks](#), in “Physical Sciences in 2005”, 4<sup>th</sup> Scientific Symposium of the Greek Physicists Union, pg. 37-45 (**text of invited talk**, in Greek)
20. Grosbol, P., **Patsis, P. A.**, & Pompei, E. 2004, VizieR Online Data Catalog, [Spiral galaxies observed in the K band \(Grosbol, 2004\)](#)
21. **Patsis, P. A.**, Skokos, C., & Athanassoula, E. 2004, IAU Symposium, [Formation of inner rings in 3D potentials of barred galaxies](#) International Astronomical Union Symposium no. 220, held 21 - 25 July, 2003 in Sydney, Australia. Eds: S. D. Ryder, D. J. Pisano, M. A. Walker, and K. C. Freeman. San Francisco: Astronomical Society of the Pacific., p.275
22. **Patsis, P. A.**, Skokos, C., & Athanassoula, E., 2004, IAU Symposium, [Boxy isophotes in face-on views of barred galaxies](#) [Formation of inner rings in 3D potentials of barred galaxies](#) International Astronomical Union Symposium no.

- 220, held 21 - 25 July, 2003 in Sydney, Australia. Eds: S. D. Ryder, D. J. Pisano, M. A. Walker, and K. C. Freeman. San Francisco: Astronomical Society of the Pacific., p.273
23. **Patsis, P. A.**; Skokos, Ch.; Athanassoula, E., [Face-On Views Of 3D Barred Galaxies](#), Hellenic Astronomical Society: Proceedings of the Sixth Astronomical Conference, held at Penteli, Athens, 15-17 September, 2003. Edited by Paul Laskarides. Published by the Editing Office of the University of Athens, Athens, Greece, 2004, p.299
  24. **Patsis, P. A.**; Skokos, Ch.; Athanassoula, E. 2004, [On the Nature of Inner Rings in Barred Galaxies](#), Hellenic Astronomical Society: Proceedings of the Sixth Astronomical Conference, held at Penteli, Athens, 15-17 September, 2003. Edited by Paul Laskarides. Published by the Editing Office of the University of Athens, Athens, p. 291 (**text of invited talk**)
  25. Skokos, Ch.; Parsopoulos, K. E., **Patsis, P. A.**; Vrahatis, M. N., 2004, [Tracing Periodic Orbits In 3d Galactic Potentials Using The Particle Swarm Optimization Method](#) Hellenic Astronomical Society: Proceedings of the Sixth Astronomical Conference, held at Penteli, Athens, 15-17 September, 2003. Edited by Paul Laskarides. Published by the Editing Office of the University of Athens, Athens, Greece, p.298
  26. **Patsis, P. A.**; Skokos, Ch.; Athanassoula, E., 2004 , [Face-On Views Of 3D Barred Galaxies](#) Hellenic Astronomical Society: Proceedings of the Sixth Astronomical Conference, held at Penteli, Athens, 15-17 September, 2003. Edited by Paul Laskarides. Published by the Editing Office of the University of Athens, Athens, Greece, 2004, p.299
  27. **Patsis, P. A.**, Skokos, Ch., & Athanassoula, E. 2003, IAU Symposium, [Peanuts in barred analytic potentials](#) Astrophysical Supercomputing using Particle Simulations, IAU Symposium #208, held 10-13 July 2001 in Tokyo, Japan. Edited by Junichiro Makino and Piet Hut, San Francisco: Astronomical Society of the Pacific, 2003., p.437
  28. Athanassoula E., **Patsis P.A.**, 2003, *Courrier des Astronomes Francais*, review of the book ``Order and Chaos in Dynamical Astronomy''
  29. Grosbøl, P., Pompei, E., & **Patsis, P. A.** 2002, ASP Conf. Ser. 275, pp305-310, Disks of Galaxies: Kinematics, Dynamics and Perturbations, edited by E. Athanassoula, A. Bosma, and R. Mujica. [Spiral Structure Observed in Near-Infrared](#) (**text from invited talk**)



30. **Patsis, P. A.** 2002, ASP Conf. Ser. 275, pp161-168,: Disks of Galaxies: Kinematics, Dynamics and Perturbations Edited by E. Athanassoula, A. Bosma, and R. Mujica. [Orbital Morphology of 3D Bars \(text from invited talk\)](#)
31. Grosbøl, P. J. & **Patsis, P. A.** 2001, Stellar Dynamics: from Classic to Modern Proceedings of the International Conference held in Saint Petersburg, August 21-27, 2000, in honour of the 100th birthday of Professor K.F. Ogorodnikov (1900-1985). Edited by L.P. Ossipkov and I.I. Nikiforov. Saint Petersburg: Sobolev Astronomical Institute, 2001., p.84, [Resonances and Spiral Arms in Stellar Disks \(text from invited talk\)](#)
32. **Patsis, P. A.**, Guivarch, B., & Grosbøl, P. 2001, [Line-of-Sight Velocity Profiles at the End of Weak Bars](#) ,ASP Conf. Ser. 230: Galaxy Disks and Disk Galaxies 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. Edited by Jos. G. Funes, S. J. and Enrico Maria Corsini. San Francisco: Astronomical Society of the Pacific. 2001, pp. 243-244
33. Grosbøl, P. & **Patsis, P. A.** 2001, ASP Conf. Ser. 230: Galaxy Disks and Disk Galaxies [Spiral Arms in Stellar Disks](#) , ASP Conf. Ser. 230: Galaxy Disks and Disk Galaxies 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. Edited by Jos. G. Funes, S. J. and Enrico Maria Corsini. San Francisco: Astronomical Society of the Pacific. ISBN: 1-58381-063-3, 2001, pp. 149-150
34. **Patsis, P. A** Skokos, Ch.; Athanassoula, E., 2001, [The backbone of 3D bars](#), 5th Hellenic Astronomical Conference, September in Crete, Greece. <http://www.astro.auth.gr/elaset/helasmtg/2001/proceedings.htm>, p.102.1
35. **Patsis, P. A.** [Vertical structure in models of spiral and barred galaxies](#) 5th Hellenic Astronomical Conference, September, 2001 in Crete, Greece. <http://www.astro.auth.gr/elaset/helasmtg/2001/proceedings.htm>, p.101.1
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37. **P.A. Patsis**, 1999, [The importance of Special Purpose Computers in Astrophysics](#), in Astronomy 2000+, Greek Prospects for the 21<sup>st</sup> Century, Greek National Committee for Astronomy, Kontizas E., Korakitis R., Ventura J. (eds), 185
38. Grosbøl, Preben J. & **Patsis, Panos A.** 1999, ASP Conf. Ser. 182: Galaxy Dynamics - A Rutgers Symposium [The Three-Armed Galaxy NGC 7137](#) Galaxy Dynamics, proceedings of a conference held at Rutgers University, 8-12 Aug 1998. ASP Conference Series vol. 182 (San Francisco: ASP), edited by David R. Merritt, Monica Valluri, and J. A. Sellwood
39. **Patsis, P. A.** & Kaufmann, D. 1999, ASSL Vol. 240: Numerical Astrophysics [Signature of Density Wave Resonances in N-body Simulations of Spiral Galaxies](#), Numerical Astrophysics : Proceedings of the International Conference on Numerical Astrophysics 1998 (NAP98), Tokyo, Japan, March 10-13, 1998. Edited by Shoken M. Miyama, Kohji Tomisaka, and Tomoyuki Hanawa. Boston, Mass. : Kluwer Academic, 1999. (Astrophysics and space science library ; v. 240), p.65
40. **Patsis, P. A.** & Grosbol, P. 1998, Dynamics of Galaxies and Galactic Nuclei, An International Workshop of the SFB 328 "Evolution of Galaxies" held at the ITA November 03 - 05, 1997, Editors: Wolfgang J. Duschl and Christian Einsel, p. 109. [Stellar and gaseous models of spiral galaxies \(text of invited talk\)](#)
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