

November 2014

ALEXEI MOISEEV CURRICULUM VITAE

PERSONAL INFORMATION

Date of Birth: 13 November 1976

Place of Birth: Moscow, USSR

CONTACT INFORMATION:

Dr. Alexei Moiseev

Affiliation: Special Astrophysical Observatory of the Russian Academy of Sciences

Working address:

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EDUCATION:

Graduated:

1993 - 1999 Lomonosov Moscow State University, Faculty of Physics, Astronomy department,
Experimental astronomy sub-department

Post-graduated:

1999 - 2002 Special Astrophysical Observatory of Russian Academy of Sciences (SAO RAS)

SCIENTIFIC DEGREES:

1999 **M.S.** (astronomer), Lomonosov Moscow State University, thesis on “Kinematics and photometry of the inner regions of spiral galaxies”, supervisor: prof. A.V. Zasov

2002 **Ph.D.** (astrophysics and radio astronomy), Special Astrophysical Observatory of RAS, thesis on “Kinematics and morphology of stars and gas in barred galaxies”, supervisor: prof. V.L. Afanasiev

2012 **Doctor of Sciences** (astrophysics and stellar astronomy), Special Astrophysical Observatory of RAS, thesis on “Galaxies structure and evolution from the observations of their internal kinematics”

EMPLOYMENT HISTORY:

1999 - 2002 Special Astrophysical Observatory of RAS, Ph.D. student

2003 - 2004 Special Astrophysical Observatory of RAS, Researcher

2004 - 2008 Special Astrophysical Observatory of RAS, Senior Researcher

2008 - now Special Astrophysical Observatory of RAS, Leading Researcher

TEACHING:

2003: Padova University (Italy), short course for PhD students “3D spectroscopic technique”

2007: course for SAO RAS Ph.D. students “Low-resolution spectroscopy”

2002-now: lectures in SAO RAS “Spectral study of galaxies”, “Galaxies kinematics”, “Interacting galaxies” for students from Moscow, St. Petersburg, Kazan, Ural, Rostov-on-Don Universities.

Supervisor of students works:

- Bachelor students: I.Yu. Katkov (Moscow State University, 2009), K.I. Smirnova (Ural State University, 2010), D.V. Oparin (Moscow State University, 2012), P.V. Yuanchikov (Moscow State University, 2012)
- Master students: K.I. Smirnova (Ural State University, 2013), D.V. Oparin (Moscow State University, 2013)
- Ph.D thesis: O.V. Egorov (Sternberg Astronomy Institute, 2011)

SCIENTIFIC INTERESTS:

Observational study of galaxies structure, kinematics, dynamics and evolution:

- Spiral and barred galaxies
- Interacting galaxies, polar ring and colliding ring galaxies
- Star formation in dwarf galaxies, superbubbles, galactic winds on other types of feedback processes.
- Circumnuclear regions, AGN

Astronomical observations:

- 3D spectroscopy (integral-field and scanning Fabry-Perot spectroscopy)
- Software development for observational data reduction and analysis
- Optical instruments development (SCORPIO/SCORPIO-2 at the SAO RAS 6-m telescope)

KNOWLEDGE:

Languages: Russian (native), English

Operation systems: Windows, Mac OS X, Linux

Programming languages, packages: IDL, HTML, LaTeX, SQL

2000- 2012: instrumental scientist (in Russian - “responsible astronomer”) for focal reducers SCORPIO at the SAO RAS 6-m telescope.

2013 - now: - instrumental scientist for focal reducers SCORPIO-2 at the SAO RAS 6-m telescope.

AWARDS:

1999 Khokhlov's prize of MSU Physical Faculty (the best students scientific work)

2002 Kopylov's scholarship (the best SAO RAS young scientist)

2007 Alferov's Foundation prize (the best Russian young scientist)

2009 Grant of “Dynasty” foundation for young Russian Ph.D. (2009- 2011 yr)

2014 Grant of “Dynasty” foundation for young Russian D.Sc.

PROFESSIONAL MEMBERSHIPS:

Member of International Astronomical Union (since 2006)

Member of European Astronomical Society (since 2010)

ACCEPTED TELESCOPES TIME PROPOSALS:

Principal investigator and co-investigator of many observational proposals for SAO RAS optical 6-m telescope. The most recent and/or most relevant accepted proposals:

- “Ring galaxies in the SDSS survey” (2010-2012, PI)
- “Metal abundance of polar rings galaxies” (2013-2014, PI)
- “Galaxies with ionization cones” (2009, PI)

- "Emission around local AGN" (2012- 2013, Co-I)
- "Flares and outflows in dwarf galaxies" (2011- 2012, Co-I)
- "Velocity fields of dwarf galaxies" (2009- 2010, Co-I)

IRAM 30-m radio telescope: "Molecular content of polar ring galaxies" (2011-12, Co-I)

WSRT radio telescope: "The Nature of Hoag's Object" (2012, Co-I)

SALT optical telescope: "Ringed early type galaxies: origins of weirdness" (2012-13, Co-I)

FELLOWSHIPS:

2003 Padova University, Italy, 1 month visitor

2005 Instituto de Astrofísica de Canarias, Spain, 2 weeks visitor

2007 European South Observatory, Chile, 1 month ESO fellowship

2013 Bochum University, 2 months DAAD fellowship

CONFERENCES ORGANIZING COMMITTEES:

2006 "Modern methods of astronomical spectroscopy" (All-Russian young astronomers school), N. Arkhyz (SAO RAS), Russia, SOC Chair

2007 "Physics of galaxies" (All-Russian young astronomers school), N. Arkhyz (SAO RAS), Russia, SOC Chair

2009 "Galactic and accretion discs" (All-Russian young astronomers school), N. Arkhyz (SAO RAS), Russia, SOC Chair

2010 All-Russian astronomy conference "VAK- 2010", N. Arkhyz (SAO RAS), Russia, SOC member

2012 "Galaxy surveys using Integral Field Spectroscopy: Achievements and Opportunities", 9th Potsdam Thinkshop, Potsdam (AIP), Germany, SOC member

2013 "Multi-spin galaxies", INAF, Naples, SOC co-Chair

INTERNATIONAL CONFERENCES (oral and invited talks):

1. "Stellar Dynamics: From Classic to Modern", St.Petersburg, Russia, 2000 (invited)
2. "Galaxies: The Third Dimension", Cozumel, Mexico, 2001
3. "Galactic dynamics (JENAM- 2003)", Budapest, Hungary, 2003
4. "5th Serbian Conference on Spectral Line Shapes in Astrophysics", Vrshac, Serbia, 2005
5. "Science Perspectives for 3D Spectroscopy", Munich, Germany, 2005
6. "First Byurakan International Summer School for Young Astronomers Observational Astrophysics", Byurakan, Armenia, 2006 (invited)
7. "VIth Serbian Conference on Spectral Line Shapes in Astrophysics", Sremski Karlovci, Serbia, 2007 (invited)
8. "Dynamics of Galaxies", Pulkovo, Russia, 2007
9. "Tumbling, Twisting, and Winding Galaxies: Pattern Speeds along the Hubble Sequence", Padova, Italy, 2008
10. "7th Serbian Conference on Spectral Line Shapes in Astrophysics", Zrenjanin, Serbia, 2009 (invited)
11. "Nearby Dwarf Galaxies", N. Arkhyz, Russia, 2009
12. "Dynamics and evolution of disc galaxies", Pushchino, Russia, 2010 (invited)
13. "A Universe of Dwarf galaxies: observations, theories, simulations", Leon, France, 2010
14. "European Week of Astronomy and Space Science- 2011", St.Petersburg, Russia, 2011 (invited)
15. "European Week of Astronomy and Space Science- 2012", Rome, Italy, 2012
16. "X-ray sky: from stars and black holes to cosmology", Kazan, Russia, 2012
17. "Galaxy surveys using Integral Field Spectroscopy: Achievements and Opportunities", Potsdam, Germany, 2012

18. "The annual meeting of the Astronomische Gesellschaft", splinter meeting: "Energizing the Interstellar Medium", Tübingen, Germany, 2013
19. "Multi-spin galaxies", Naples, Italy, 2013
20. "Superbubbles, HI holes and Supershells", Freising, Germany, 2014

REFEREE:

International journals: Astronomy and Astrophysics, Astrophysics and Space Science, MNRAS
 Russian journals: Astrophysical Bulletin (member of editorial board), Astronomy Letters, Astronomy Reports

PUBLICATIONS :

132 publications, among which:

- 46 publications in international peer-reviewed journals
- 39 publications in Russian peer-reviewed journals

ResearcherID: H-9391- 2013

The most relevant publications in PEER-REVIEWED JOURNALS:

1. **"The supergiant shell with triggered star formation in Irr galaxy IC 2574: neutral and ionized gas kinematics"** Egorov O. V., Lozinskaya T.A., Moiseev A.V., Smirnov-Pinchukov G.V., 2014, MNRAS, 444, 376
2. **"To be or not to be oblate: the shape of the dark matter halo in the polar ring galaxies"** Khoperskov Sergey, Moiseev Alexei, Khoperskov Alexander, Saburova Anna 2014, MNRAS, 441, 2650
3. **"Stellar kinematics of X-ray bright massive elliptical galaxies"** E.Churazov, A.Moiseev, O.Sil'chenko, I.Zhuravleva, 2014, MNRAS, 441, 2013
4. **"HI in HO: Hoag's Object revisited"** Brosh N., Finkelman I., Oosterloo T., Jozsa G., Moiseev A., 2013, MNRAS, 433, 475
5. **"Molecular content of polar-ring galaxies"** Combes F., Moiseev A., Reshetnikov V., 2013, A&A, 554, 11
6. **"Emission spectrum of ionized gas in the irregular galaxy Holmberg II"** Egorov O.V., Lozinskaya T.A., Moiseev A.V., 2013, MNRAS, 429, 1450
7. **"Inner polar disks and rings: observational properties"** Moiseev A.V., 2012, Astrophysical Bulletin, 67, 147;
8. **"Ionized gas velocity dispersion in nearby dwarf galaxies: looking at supersonic turbulent motions"** Moiseev A.V., Lozinskaya T.A., 2012, MNRAS, 423, 1831
9. **"Kinematics and the origin of the internal structures in HL Tau jet (HH 151)"** Movsessian T. A., Magakian T. Yu., Moiseev A. V., 2012, A&A, 541, A16
10. **"Hoag's Object: Evidence for Cold Accretion onto an Elliptical Galaxy"** Ido Finkelman, Alexei Moiseev, Noah Brosch, Ivan Katkov, 2011, MNRAS, 418, 1834

11. **"A new catalogue of polar-ring galaxies selected from the SDSS."** Moiseev A.V., Smirnova K.I., Smirnova A.A., Reshetnikov V.P., 2011, MNRAS, 418, 244
12. **"Stars and ionized gas in S0 galaxy NGC 7743: an inclined large-scale gaseous disk"** Katkov I. Yu., Moiseev A.V., Sil'chenko O.K., 2011, ApJ, 740, 83
13. **"Seyfert galaxies that are undergoing merging but appear non-interacting"** A.A. Smirnova, A.V. Moiseev, V.L. Afanasiev, 2010, MNRAS, 408, 400
14. **"Malin I: interacting galaxy pair?"** V.P. Reshetnikov, A.V. Moiseev, N.Ya. Sotnikova, 2010, MNRAS, 406L, 90
15. **"Very metal-poor galaxies: ionized gas kinematics in nine objects"** A. V. Moiseev, S. A. Pustilnik, A. Y. Kniazev, 2010, MNRAS, 405, 2453
16. **"Ionized gas outflow in the isolated S0 galaxy NGC 4460"** A.V. Moiseev, I.D. Karachentsev, S.S. Kaisin, 2010, MNRAS, 403, 1849
17. **"On the Nature of the Apparent Ring Galaxy SDSS J075234.33+292049.8"** Brosch N., Kniazev A., Moiseev A., Pustilnik S., 2010, MNRAS, 401, 2067
18. **"3D spectroscopic study of merger Seyfert galaxy Mrk 334: nuclear starburst, superwind and the circumnuclear cavern"** Smirnova A.A., Moiseev A.V., 2010, MNRAS, 401, 307
19. **"Herbig-Haro flows in 3D: the HH83 jet"** Movsessian T.A., Magakian T.Yu., Moiseev A.V., and Smith M.D., 2009, A&A, 508, 773
20. **"Two more disk galaxies with global gas counterrotation"** Sil'chenko O.K., A.V. Moiseev, V.L. Afanasiev, 2009, ApJ, 694, 1550
21. **Two New Large Separation Gravitational Lenses from SDSS** V. Belokurov, N.W. Evans, P.C. Hewett, A. Moiseev, R.G. McMahon, S.F. Sanchez, L.J. King, 2009, MNRAS, 392, 104
22. **"Warped polar ring in the Arp 212 galaxy."** Moiseev A.V., 2008, Astrophysical Bulletin, 63, 201_
23. **"Kinematics of the Nebular Complex MH9/10/11 Associated with HoIX X-1"** Abolmasov P., Moiseev A. , 2008, MexRevA&A, 44, 301;_
24. **"Reduction of the CCD-observations obtained with the Fabry-Perot scanning interferometer. II Additional procedures."** Moiseev A.V., Egorov O.V., 2008, Astrophysical Bulletin, 63, 181;
25. **"The Cosmic Horseshoe: Discovery of an Einstein Ring around a Giant Luminous Red Galaxy"** V. Belokurov, N.W.Evans, A.Moiseev, L.J. King, P.C. Hewett, M. Pettini, L. Wyrzykowski, R.G. McMahon, G. Gilmore, S.F. Sanchez, A. Udalski, S. Koposov, D.B. Zucker, C.J. Walcher, , 2007, ApJ, 671, 9L
26. **"Synchrotron Superbubble in the IC 10 Galaxy: A Hypernova Remnant?"** T.A. Lozinskaya, A.V. Moiseev , 2007, MNRAS, 381, L26

27. **"Propagating star formation in the collisional ring galaxy Arp 10."** Bizyaev D.V., Moiseev, A.V., Vorobyov E.I., 2007, ApJ, 662, 304 _
28. **"Metallicity and age gradients in round elliptical galaxies."** Baes M, Sil'chenko O.K., Moiseev A.V., Manakova E.A., , 2007, A&A, 467, 991 _
29. **"Nature of nuclear rings in unbarred galaxies: NGC 7742 and NGC 7217"** Sil'chenko O.K., Moiseev A.V. , 2006, AJ, 131, 1336_
30. **"The universal focal reducer of the 6-m telescope SCORPIO"** Afanasiev V.L. & Moiseev A.V., , 2005, Astronomy Letters, 31, 194_
31. **"New observations of the pulsar nebula in SNR CTB 80"** Lozinskaya T.A., Komarova V.N., Moiseev A.V., Blinikov S.I. , 2005, Astronomy Letters, 31, 243_
32. **"New observations of the peculiar active galaxy Mrk 315"** S. Ciroi, V.L. Afanasiev, ,A.V. Moiseev, V. Botte, F. Di Mille, S.N. Dodonov, P. Rafanelli, and A.A. Smirnova, 2005, MNRAS, 360, 253_
33. **"Structure and kinematics of candidate double-barred galaxies"** A.V. Moiseev, J.R. Valdes and V.H. Chavushyan , 2004, A&A, 421, 433
34. **"Observations of Stellar Objects at a Shell Boundary in the Star-Forming Complex in the Galaxy IC1613"** T.A. Lozinskaya, V.P. Arkhipova, A.V. Moiseev, V.L. Afanasiev , 2002, Astronomy Reports, 46, 16
35. **"Reduction of the CCD-observations with scanning interferometer Fabry-Perot"** A.V. Moiseev , 2002, Bull SAO, 54, p. 74
36. **"Interstellar medium surrounding the WO star in the galaxy IC 1613: new observations in optical and radio ranges "** T.A. Lozinskaya, A.V. Moiseev, V.L. Afanasiev, E.M. Wilcots, and W.M. Goss , 2001, Astronomy Reports, 45, 417
37. **"The Effect of Projection on the Observed Gas Velocity Fields in Barred Galaxies"** A.V. Moiseev, V.V. Mustsevoi , 2000, Astronomy Letters, 26, 565
38. **"Strong non-circular motions of gas in the spiral galaxy NGC 1084"** A.V. Moiseev , 2000, A&A, 363,843

The most relevant publications in conferences proceedings

1. **"Polar structures in late-type galaxies"** Moiseev A. 2014, Multi-Spin Galaxies, ASP Conference Series, Vol. 486, p. 61,
2. **"The SDSS-based Polar Rings Catalogue: new confirmations"** Moiseev A., Egorov O., Smirnova K. 2014, Multi-Spin Galaxies, ASP Conference Series, Vol. 486, p.71_
3. **"Inner polar gaseous disks: incidence, ages, possible origin"** Sil'chenko O. K., Moiseev A. V.2014, Multi-Spin Galaxies, ASP Conference Series, Vol. 486, p.27, _

4. **"Polar rings dynamics in the triaxial dark matter halo"** Khoperskov S.A., Moiseev A. V., Khoperskov A.V.2013, Memorie della Societa Astronomica Italiana Supplement, v.25, p.51
5. **"SCORPIO at the 6-m telescope: current state and perspectives for spectroscopy of galactic and extragalactic objects"** Afanasiev V., Moiseev A., 2011, Baltic Astronomy, 20, 363 (proceedings of 8th SCSLSA)
6. **"Kinematically detected polar rings/disks in blue compact dwarf galaxies"** A. V. Moiseev2011, EAS Publications Series, Volume 48, 115
7. **"3D spectroscopy of candidate double-barred lenticular galaxies"** A. V. Moiseev2011, Memorie della Societa Astronomica Italiana Supplement, 18, 153
8. **"Inner Polar Disks and Rings: How Do They Form?"** Moiseev Alexei, Sil'Chenko Olga, Katkov Ivan2010, in "Hunting for the dark: the hidden side of galaxy formation", AIP Conference Proceedings, Vol. 1240, p. 251
9. **"3D spectroscopic study of galactic rings: formation and kinematics"** A. V. Moiseev and D.V. Bizyaev 2009, New Astronomy Reviews, v 53., p. 169; proceeding of 7th SCSLSA;
10. **"Internal Kinematics of Galaxies: 3D Spectroscopy on Russian 6m telescope"** Moiseev A.V., in "Science Perspectives for 3D Spectroscopy" (eds. M. Kissler-Patig, M.M. Roth and J.R. Walsh), 2007, ESO Astrophysics symposia, Springer-Verlag Berlin Heidelberg, p. 105;
11. **"Helical structures in Seyfert galaxies "**A.V. Moiseev, V.L. Afanasiev, S.N. Dodonov, V.V. Mustsevoi and S.S. Khrapov in IAU Colloq. 184, "AGN Surveys"
12. **"Kinematics of circumnuclear regions of galaxies: 2D spectroscopy on SAO RAS 6m telescope"** V.L. Afanasiev, S.N. Dodonov and A.V. Moiseev, in "Stellar Dynamics: From Classic to Modern", (Eds L.P. Ossipkov and I.I. Nikiforov), Saint Petersburg: Sobolev Astronomical Institute, 2001., 103