Fabio Del Sordo

Curriculum Vitæ

Employment

October 2020 - current

Postdoctoral fellow
INAF Astrophysical Observatory of Catania - PLATO Mission

July 2017 - September 2020

Postdoctoral fellow in Astrophysics
University of Crete and FORTH

September 2014 - June 2017

Postdoctoral fellow in Astrophysics
Yale University and NORDITA,
Nordic Institute for Theoretical Physics

September 2013 – Aug 2014

Postdoctoral researcher
Commissariat á l'Énergie Atomique et aux énergies alternatives (CEA), Saclay

Education

2013 **Doctor of Philosophy**
Astrophysics, *Stockholm University, Sweden*

2008 **Master of Science**
Astrophysics, *Pisa University, Italy*

2002 **Bachelor of Science**
Physics, *Pisa University, Italy*

Interests

Astrophysical magnetic fields, dynamos, MHD instabilities, Exoplanetary search and characterization, Stellar activity, Time domain astrophysics, noise characterization and modeling.

Organization of conferences

2017 **Chair of NORDITA Program**
Phase Transitions in Astrophysics

Service

Referee for Astronomy and Astrophysics, Geosciences, Universe, Atmosphere, Galaxies

Languages

Italian, Native; **English**, Fluent; **Spanish**, Fluent

Grants and Awards

2020 ⋆ **Cover** of Sciences Advances, Vol. 6, Issue 3
⋆ **HPC-Europa3, EUR 4,000**
13 weeks visit at Scuola Normale Superiore, Pisa
⋆ **HPC-Europa3, EUR 4,000**
13 weeks visit at INAF OACt, Catania

2019 ⋆ **HPC-Europa3, EUR 2,600**
8 weeks visit at INAF OATo, Torino
⋆ **HPC-Europa3, EUR 2,200**
6 weeks visit at ESO, Garching

2018 ⋆ **HPC-Europa3, EUR 3,800**
12 weeks visit at INAF OACt, Catania

2016 ⋆ **NORDITA program, EUR 50,000**

2015 ⋆ **IAU OAD Grant, EUR 10,000**
for the *GalileoMobile Constellation outreach Project*.

2013 ⋆ **Galileo Ambassador** for teacher training with the *Galileo Teacher Training Program*

2013-17 ⋆ **Swedish Research Council, SEK 3,150,000**
International Postdoc Fellowship.

2013-14 ⋆ **Postdoctoral fellowship**, CEA-Saclay, Paris

2012 ⋆ **HPC-Europa2, EUR 5,000**
16 weeks visit at INAF OACt, Catania.

2010-11 ⋆ **IAU Grants, EUR 2,600**, *Symposia No. 286, 271, 274*

2009 ⋆ **Fundraised EUR 60,000**, GalileoMobile project

2009-13 ⋆ **PhD fellowship**, 4 years, NORDITA

Successful proposals

• Dynamos with galactic winds in high-redshift galaxies
HPC-Europa3, 1.5M CPU hours, **PI** (2020)
• The ALMA view of the Proxima c planet candidate
ALMA, DDT Proposal A.00025.S, **Co-I** (2020)
• Growth and stability of magnetic fields in Ap/Bp stars
HPC-Europa3, 600K CPU hours, **PI** (2020)
• Red Dots #4: all terrestrial planets around near red dwarfs
HARPS@La Silla, 90 hours observation, **Co-I** (2020)
• Multifractal analysis of exoplanetary data
HPC-Europa3, 500K CPU hours, **PI** (2019)
• A study of solar-like stars with short magnetic cycles
HPC-Europa3, 100K CPU hours, **PI** (2019)
• Search for the optical counterpart of Proxima c
SPHERE@VLT, DDT Proposal 103.200D, **Co-I** (2019)
• Magnetic fields in Red Giant stars
HPC-Europa3, 1M CPU hours, **PI** (2018)
• Magnetic helicity in intergalactic bubbles
HPC-Europa3, 350K CPU hours, **Co-I** (2018)
• Investigating stellar activity
CHIRON, spectrograph, 150 hours, **PI** (2016)
• Understanding the Tayler instability
HPC-Europa2, 500K CPU hours, **PI** (2012)

Invited scientific talks

2020 ◇ Seminar, INAF OAS Bologna
Stabilizing effect of helical magnetic fields on intergalactic cavities
◇ Seminar, CfA, Harvard
The discovery of the multiplanetary system of Proxima Centauri
◇ Talk, INAF Turin Astrophysical Observatory
Stellar magnetic fields: stability and dynamos

2019 ◇ Talk, Breakthrough Discuss 2019, Berkeley
Things behind the Sun: Proxima Strikes again
◇ Talk, NORDITA program Solar Helicities
Instability of magnetic fields in radiative zones
◇ Seminar, ESO Garching
Proxima Centauri and the search for exoplanets

2016 ◇ Colloquium, John Hopkins APL
Exoplanets revealed by Multifractal Analysis
◇ Colloquium, Federal University of Mina Gerais
Exoplanets: signals hidden in starlight
◇ Colloquium, University of Iceland
Helical and turbulent motion in interstellar dynamos
◇ Talk, Astrostatistics Series Yale University
A multifractal approach to the analysis of time series

2015 ◇ Colloquium, IATE Còrdoba
Detecciòn de exoplanetas y ruido estelar
◇ Colloquium, Wesleyan University
Dynamos and magnetic fields from galaxies to the Sun
◇ Talk, Woods Hole Oceanographic Institution
Helicity and turbulence in interstellar dynamos
◇ Colloquium, American Museum Natural History
Magnetic helicity and turbulence in the ISM

2014 ◇ Colloquium, Universidad Sergio Arboleda, Bogotá
Macondos escondidos en el cielo: planetas extrasolares
◇ Colloquium, Dundee University
Helical and turbulent aspects of the interstellar medium
◇ Talk, CEA Saclay
Helicity and turbulence of the Interstellar Medium
◇ Talk, CEA Saclay
PencilCode: a multi-user open-source MHD code

2013 ◇ Colloquium, Chalmers observatory
Irrotational flows, helicity, vorticity in galactic dynamos

2011 ◇ Talk, INAF OACt Catania
Vorticity and conservation of magnetic helicity

Contributed talks

- Helicity 2020 - program on Helicities in Astrophysics (2020, scheduled) *Magnetic helicity can stabilize intergalactic cavities*
- HPC - Europa 3 user group meeting (2020, scheduled) *Numerical simulations of stellar dynamos and study of toroidal field stability*
- IAU Symposium 328, Living Around Active Stars (2016) *"Finding time scales in noisy data: Exoplanets and Geomagnetisms"*
- Wesleyan University Exoplanet meeting (2016) *"Noise, fractals, and exoplanets"*
- IAU XXIX General Assembly (2015) *"Multifractal analysis for detection of exoplanets"*
- IAU Symposium 286: Comparative Magnetic Minima (2011) *"Tayler Instability and Stellar Magnetic Fields"*
- RädlerFest: Alpha Effect and Beyond, Stockholm (2011) *"Vorticity production from potentially forced flows"*
- NORDITA Program: Dynamo, Dynamical Systems and Topology, Stockholm (2011) *"The generation of vorticity through irrotational forcing"*
- IAU Symposium 274: Advances in Plasma Astrophysics (2010) *"Turbulent diffusion and galactic magnetism"*
- School on Astrophysical Turbulence and Dynamos (2009) *The alpha effect with imposed and dynamo-generated magnetic fields*
- Astrophysical Magnetohydrodynamics (2009) *"The alpha effect with imposed and dynamo-generated magnetic fields"*

Schools and other conferences attended

- HPC - Europa 3 user group meeting (Barcelona, 2020, moved to online conference)
- Sagan Workshop (Online conference, 2020), *Poster*: "Proxima c: a perspective for its confirmation with radial velocities"
- Exoplanet III (Online conference, 2020), *Poster*: "Proxima c: a perspective for its confirmation with radial velocities"
- Breakthrough discuss (Berkeley, 2019)
- NORDITA program "Solar Helicities in Theory and Observations" (Stockholm, 2019)
- NORDITA program "Quantum Anomalies and Chiral Magnetic Phenomena" (Stockholm, 2018)
- Paris-Saclay University Scientific Program "From prestellar cores to solar nebulae" (Paris, 2018)
- NORDITA program "Phase transitions in astrophysics" (Stockholm, 2017, *main organizer*)
- IAU Symposium 328, Living Around Active Stars, (Maresias, 2016),
- Aspen Center of Physics Program, "Approaching the Stellar Astrophysical Limits of Exoplanet Detection" (Aspen, 2016)
- Kavli Summer Program "Exoplanetary atmospheres" (Santa Cruz, 2016)
- Wesleyan University Exoplanet meeting (Middletown, 2016)
- IAU XXIX General Assembly (Honolulu, 2015)
- Extreme Precision Radial Velocity meeting (Yale University, 2015), *Poster*: "Multifractal structures in radial velocity data"
- Geophysical Fluid Dynamics school (Woods Hole, 2015)
- Conference: Sunspot formation (Stockholm, 2015)
- KITP Program, The impact of feedback on star and galaxy formation (Santa Barbara, 2014)
- 12th European Workshop on Astrobiology - EANA2012 (Stockholm, 2012)
- Workshop: LOFAR Magnetism (Goteborg, 2012)
- IAU Symposium 286: Comparative Magnetic Minima (Mendoza, 2011),
- NORDITA Program: Dynamo, Dynamical Systems and Topology, (Stockholm, 2011)
- School on Data Assimilation (Stockholm, 2011)
- RädlerFest: Alpha Effect and Beyond (Stockholm, 2011)
- IAU Symposium 274: Advances in Plasma Astrophysics (Giardini-Naxos, 2010)
- 6th Pencil Code User Meeting (New York, 2010)
- IAU Symposium 271: Astrophysical Dynamics(Nice, 2010), *Poster*: "Supernovae-driven turbulent transport"
- Magnetic fields on scales from kilometers to kiloparsecs: properties and origin (Krakow, 2010), *Poster*: "Galactic Dynamo"
- NORDITA Winter School 2010 on Dynamos: Above, Below, and In the Laboratory (Stockholm, 2010)
- NORDITA Program: Solar and Stellar Dynamos and Cycles (Stockholm, 2009)
- 5th Pencil Code User Meeting (Heidelberg, 2009)
- Workshop: Climate Change - Man Made?, Stockholm (2009)
- 2009 SRS meeting, IRF Uppsala (2009)
- School on Astrophysical Turbulence and Dynamos, Trieste (2009)
- Astrophysical Magnetohydrodynamics, (Kiljavanranta, 2009):
- 39th Saas-Fee Advanced Course - Magnetic Fields of Stars: From the Sun to Compact Objects (Les Diablerets, 2009)
- Space Climate Symposium (Saariselkä, 2009)
- Space Climate School (Saariselkä, 2009)

Teaching and supervising

- Since 2009 I've been teaching in several schools for the GalileoMobile program. I've been teaching in elementary, middle and high schools in Bolivia, Chile, Perù, Colombia, Argentina, Haiti, Uganda, Cyprus using activities created by myself and the GalileoMobile team, as well as giving lectures on general concepts of astronomy.
- Yale University, 2015-16: I Co-supervised a student for her senior undergraduate thesis: "*Detection and Characterization of Planetary Systems from the NASA Kepler-2 Mission Database*", awarded 2016 Beckwith Prize.
- Yale University, 2016-17: I Co-supervised a student for her second-year undergrad project: "*The effect of blackbody spectrum on radial velocity detection of exoplanets*"

Outreach initiatives

Outreach and science education has been a central aspect of my career since my undergraduate studies in Pisa, where I started volunteering at "Ludoteca scientifica" in 2006. After my master in 2008 I started being very engaged with outreach, science education and teacher training, field in which I have now 12 years of experience. More specifically I am:

- **Co-founder** of the independent traveling science education initiative **GalileoMobile**, 2008 – current, Special Project of the International Year of Astronomy 2009. Website: www.galileo-mobile.com. GalileoMobile is an independent science education program that brings astronomy closer to young people around the world, and mainly across regions that have little or no access to outreach programs. It operates via hands-on activities and interactive talks in schools to teach basic concepts of astronomy. Since its beginning in 2008, GalileoMobile has reached 1,500 teachers and over 17,000 students in elementary, middle and high schools, donating more than 150 telescopes and organizing public events for more than 3,500 people in 16 countries.
- **Coordinator** of GalileoMobile: 2012 - 2014.
- **Coordinator** of the **Constellation Project**, 2015, Cosmic Light Project of the IYL 2015. This project involved 20 schools in South America and 50 collaborators. We prepared a handbook of activities to be performed in the schools in collaboration with the local teachers. Website: http://www.constellationproject.org
- **Galileo ambassador of the Galileo Teacher Training Program** for performing teacher training in several countries.
- **Member of "Columba - Hypatia Astronomy for Peace"** an international initiative bringing astronomy to schools of the Greek-Cypriot and Turkish-Cypriot communities of Cyprus. This project operate in a complicated area, the island of Cyprus, which is parted in two. We run astronomy activities in the buffer zone, controlled by UN, to bring together schools from the two communities. (January 2017 - present). https://www.columbahypatia-project.org/
- **Member of "Amanar"** an international initiative that brought astronomy to refugees in the Saharawi camps between Morocco and Algeria. (July 2019 - present). https://www.galileomobile.org/amanar
- **Co-producer** of four documentaries on outreach with Galileomobile, all freely available online:
  - **Under the same sky** (2011) https://vimeo.com/86717420
  - **Nepal** (2013) https://vimeo.com/71403575
  - **In the Land of Beauty** (2014) https://vimeo.com/113110857
  - **Año Luz** (2015) https://vimeo.com/121350155
- **Collaborator** of one photobook and two documentaries on outreach with Galileomobile, all freely available online:
  - **Khagol Rath** (2014) http://www.galileo-mobile.org/galileomobile-expeditions/galileomobile-india2012/galileomobile-photo-india2012
  - **Camino de Las Estrellas** (2017) https://www.youtube.com/watch?v=uBpFE-Y8mVk&feature=youtu.be
  - **The Columba Project: Astronomy for Peace** (2018) https://www.youtube.com/watch?v=wWhBZcYlAcc
- **Public planetarium shows**, star parties and telescope shows:
  - Leitner Observatory, Yale University, (2015-2016); Observatory of Stockholm Astronomical Department (2010); Observatory "Leopoldo del Re", San Pietro Avellana (Italy, 2007).
  - Various outreach activities: Albanova open House and Fysik i Kungsträdgården, Stockholm (2009-2012)
  - I also held two personal picture exhibitions: "GalileoMobile: Under the same sky" (Gallerí Aguelí, Stockholm, 2012); "Nepal, colora un sorriso" (Morelia, Campobasso, 2013)

Invited outreach talks

2019	TedX "Choose, don't chase"	*"Immaginare, ricercare, e condividere la scienza"*
	Liceo Scientifico, Bojano	*"Pianeti extrasolari: quanti mondi possibili nella Via Lattea? "*
2016	Liceo Pertini, Campobasso	*"GalileoMobile: condividere l'astronomia in tutto il mondo"*
2014	Planetarium of Bogotà	*"Buscando Macondos escondidos en el cielo: planetas extrasolares"*

All Refereed Publications

19. Ntormousi, E., Tassis, K., **Del Sordo, F.**, Fragkoudi, F., Pakmor, R.
A large-scale dynamo amplifies the magnetic field of a Milky-Way-like galaxy
A&A, 641, A165, 2020
18. Gratton, R., Zurlo, A., Le Coroller, H., Damasso, M., **Del Sordo, F.**, et al.,
Searching for the near infrared counterpart of Proxima c using SPHERE at VLT
A&A, 638, 120, 2020
17. Candelaresi, S., & **Del Sordo, F.**
Stabilizing effect of magnetic helicity on cavities in the intergalactic medium
ApJ, 896, 86C, 2020
16. Damasso, M. & **Del Sordo, F.** (Equally contributing)
Expectations for the confirmation of Proxima c from a long-term radial velocity follow-up
Mon. Not. R. Astron. Soc., 494, 1387, 2020
15. Damasso, M., **Del Sordo, F.**, Anglada-Escudé, G., Giacobbe, P., Sozzetti, A. Morbidelli, A., Pojmanski, G., Barbato, D., Butler, R. P., Jones, H. R. A., Hambsch, F.-J., Jenkins, J. S., López-González, M. J., Morales, N., Peña Rojas, P. A., Rodríguez-López, C., Rodríguez, E., Amado, P. J., Anglada, G., Feng, F., Gómez, J. F.
A low-mass planet candidate orbiting Proxima Centauri at a distance of 1.5 AU
Science Advances, Vol. 6, no. 3, eaax7467, 2020, Press releases on *National Geographic, Scientific American*, ecc..
14. Guerrero, G., **Del Sordo, F.**, Bonanno, A., & Smolarkiewicz, P. K.
Global simulations of Tayler instability in stellar interiors: The stabilizing effect of gravity
Mon. Not. R. Astron. Soc., 490, 4281, 2019
13. Bonanno, A., Corsaro, E., **Del Sordo, F.**, Pallé, P. L. , Stello, D. & Hon, M.
Acoustic oscillations and dynamo action on EK Eri
A&A, 628, A106, 2019
12. Bracco, A., Candelaresi, S., **Del Sordo, F.**, & Brandenburg, A.
Is there a left-handed magnetic field in the solar neighborhood? Exploring helical magnetic fields in the interstellar medium through dust polarization power spectra
A&A, 621, A97, 2019
11. Bonanno, A., & **Del Sordo, F.**
An analytic mean-field α^2-dynamo with a force-free corona
A&A, 605A, 33B, 2017
10. Damasso, M., & **Del Sordo, F.**
Proxima Centauri Reloaded: Unravelling stellar noise in radial velocities
A&A, 599, A126, 2017
9. Agarwal, S., **Del Sordo, F.**, & Wettlaufer, J.S.
Exoplanetary detection by multifractal spectral analysis
AJ, 153 12A, 2017, Press releases on *Yale News, Yale Daily News*, and *Yale Scientific*
8. **Del Sordo, F.**, Guerrero, G., & Brandenburg, A.
Turbulent dynamo with advective magnetic helicity flux
Mon. Not. R. Astron. Soc., 429, 1686, 2013
7. Bonanno, A., Brandenburg A., **Del Sordo, F.**, & Mitra, D.
Breakdown of chiral symmetry during saturation of the Tayler instability
Phys. Rev. E, 86, 016313, 2012
6. Dosopoulou, F., **Del Sordo, F.**, Tsagas, C. G., & Brandenburg A.
Vorticity production and survival in viscous and magnetized cosmologies
Phys. Rev. D,85, 063514, 2012
5. Rädler, K.-H., Brandenburg, A., **Del Sordo, F.**, & Rheinhardt, M.
Mean-field diffusivities in passive scalar and magnetic transport in irrotational flows
Phys. Rev. E, E 84, 4, 2011
4. **Del Sordo, F.** & Brandenburg A.
Vorticity production through rotation, shear, and baroclinicity
A&A, 528, A145, 2011
3. Brandenburg, A., Chatterjee, **Del Sordo, F.**, Hubbard, A., Käpylä, P. J., & Rheinhardt, M.
Turbulent transport in hydromagnetic flows
Phys. Scr. T142, 014028, 2010

2. **Del Sordo, F.**, Candelaresi S., & Brandenburg A.
Magnetic-field decay of three interlocked flux rings with zero linking number
Phys. Rev. E, 81:036401, 2010
1. Hubbard, A., **Del Sordo, F.**, Käpylä, P. J., & Brandenburg, A.
The α effect with imposed and dynamo-generated magnetic fields
Mon. Not. R. Astron. Soc., 398, 1891, 2009

Conference Proceedings and non-peer-reviewed articles

12. Robinson, Tyler, et al. (including **Del Sordo F.**)
Characterizing Exoplanet Habitability
Astro2020 Science White Paper, 2019
11. Fragkoudi, F., Seidel, M., GalileoMobile (including **Del Sordo F.**), and AHDR
Columba-Hypatia: Astronomy for Peace
arXiv:1808.03521v2, In *Proc. of the Communicating Astronomy with the Public, March 2018, Fukuoka, Japan*
10. Seidel, M., Benitez, S., **Del Sordo F.**, Rivero, J, and GalileoMobile
GalileoMobile - 10 years of "Under the same Sky",
In *Proc. of the Communicating Astronomy with the Public, March 2018, Fukuoka, Japan*
9. Brandenburg, A., Bonanno, A., **Del Sordo F.**, & Mitra, D.
Spatial competition of opposite chiralities: similarities between biochemical and magnetohydrodynamic processes,
In *12th European Workshop on Astrobiology*, Book of Abstracts, pp. 73-74
8. **Del Sordo F.**, Bonanno, A., Brandenburg, A., & Mitra, D.
Spontaneous chiral symmetry breaking in the Tayler instability, In *Comparative Magnetic Minima: Characterizing quiet times in the Sun and stars,* ed. C. H. Mandrini & D. F. Webb, Proc. IAU Symp., Vol. 286, pp. 65-69, 2012
7. **Del Sordo F.** & Brandenburg A.
How can vorticity be produced in irrotationally forced flows?, In *Advances in Plasma Astrophysics,* ed. A. Bonanno, E. de Gouveia dal Pino & A. Kosovichev, Proc. IAU Symp., Vol. 274, pp. 373-375, 2011
6. Candelaresi S., **Del Sordo F.**, and Brandenburg A.
Decay of trefoil and other magnetic knots,
In *Advances in Plasma Astrophysics of IAU Symposium*, 274:461-463, 2011
5. Cantiello, M., Braithwaite, J., Brandenburg, A., **Del Sordo F.**, Käpylä, P., & Langer, N.
Turbulence and magnetic spots at the surface of hot massive stars,
In *Physics of Sun and Star Spots,*
ed. D. P. Choudhary & K. G. Strassmeier, Proc. IAU Symp., Vol. 273, pp. 200-203, 2011
4. Cantiello, M., Braithwaite, J., Brandenburg, A., **Del Sordo F.**, Käpylä, P., & Langer, N.
3D MHD simulations of subsurface convection in OB stars, In *Active OB stars: structure, evolution, mass loss and critical limits,* ed. C. Neiner, G. Wade, G. Meynet, & G. Peters, Proc. IAU Symp., Vol. 272, pp. 32-37, 2011
3. **Del Sordo F.** & Brandenburg A.
Vorticity from irrotationally forced flow, In *Astrophysical Dynamics: from Stars to Galaxies,* ed. N. Brummell, A. S. Brun, M. S. Miesch, & Y. Ponty, Proc. IAU Symp., Vol. 271, pp. 375-376, 2011
2. Candelaresi S., **Del Sordo F.**, and Brandenburg A.
Influence of magnetic helicity in MHD
In *Advances in Plasma Astrophysics of IAU Symposium*, 271:369-370, 2011
1. Brandenburg, A. and **Del Sordo F.**
Turbulent diffusion and galactic magnetism
In *Magnetic Fields in Diffuse Media*, Vol. 15, CUP, pp. 432-433, 2010

Outreach publications

12. "*AMANAR: astronomía, cooperación y sensibilización con el Sáhara*", with the AMANAR team
for "Astronomía", Spanish magazine, 2020
11. "*Stephen Hawking: il cosmo in testa*", (Stephen Hawking, The Cosmos on his mind), with Alessia Scordia
for "Curcio Young, biografie illustrate", 2019
10. "*Sette domande sul sistema planetario TRAPPIST-1*", (Seven questions on the planetary system TRAPPIST-1)
On "Quaderni di scienze e scienziati Molisani", 2017
9. "*Un nuovo metodo per identificare pianeti extrasolari*", (A new method to find exoplanets)
On "Quaderni di scienze e scienziati Molisani", 2016

8. "*La ricerca di pianeti attorno ad altri Soli*", (The search for planets around other suns)
   On "Quaderni di scienze e scienziati Molisani", 2016
7. "*The Space Explorer's guide*", an handbook of astronomical hands-on activities for all schools, freely available in English, Spanish, and Portuguese on http://www.constellationproject.org/resources/
6. "*An Arctic journey: chasing the solar eclipse*", on Authorea blog (https://www.authorea.com/users/105/articles/21820-an-arctic_show_article), 2015.
5. "*Rottura spontanea di simmetria in magnetoidrodinamica e biologia*", (Spontaneous symmetry breaking in MHD and biology)
   On "Quaderni di scienze e scienziati Molisani", 2014
4. "*Campi magnetici, dinamo turbolente ed elicità magnetica*", (Magnetic fields, turbulent dynamos and magnetic helicity)
   On "Quaderni di scienze e scienziati Molisani", 2013
3. "*GalileoMobile, un viaggio tra culture uniti sotto lo stesso cielo*" (GalileoMobile, a travel across cultures under the same sky)
   On "Quaderni di scienze e scienziati Molisani", 2012
2. "*Un'introduzione al problema dei campi magnetici astrofisici*" (An introduction to the problem of magnetic fields in astrophysics)
   On "Quaderni di scienze e scienziati Molisani", 2011
1. "*Under bergens himmel*" (Under the same sky)
   on the Swedish magazine "Populär Astronomi", 2010