

## Resume/Curriculum Vitae Roger Leiton Thompson

**Name:** Roger Miguel Leiton Thompson  
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**Nationality:** Chilean citizenship

### Higher Education:

2007-present *Universidad de Concepción, Concepción, Chile.*

**Doctorate Program in Physical Science**, specialization in Astronomy.

1997 - 2004 *Universidad de La Serena, La Serena, Chile*

**Bachelor in Physics**, minor in Astronomy.

Thesis: "*The Magellanic Cloud Emission-line Survey (MCELS) & Supernova Remnants in the MCs*".

Advisors: Dr. R. Chris Smith (CTIO/NOAO); Dr. Rodolfo Barbá (U. de La Serena).

Note: In 1997, it was mandatory for the Physics students of the Dept. of Physics of Universidad de La Serena to spend the first two years studying Pedagogy in Mathematics and Physics. After completing those four semesters, students can switch to the program of Bachelor in Physics or continuing in the Pedagogy program.

### Employment and Research Experience

2006-present *Universidad de Concepción, Concepción, Chile.*

Current Scientific Collaboration with Dr. Zbigniew Kolaczowski with the  
**Photometric Monitoring of Variable stars.**

*Universidad de Concepción, Concepción, Chile.*

Sept 2005 – present  
(current job position)

**Data Analyst** supervised by Dr. Douglas Geisler, working on the observation and data reduction for a Key Project of the **NASA Space Interferometer Mission (SIM)** and other observational projects related with the astronomy group. Observation duties include the use the Swope 40" telescope in Las Campanas Observatory (Chile).

**Manager of the on-campus observatory.** On charge of the maintenance, schedule, student training, public outreach and observational programs using a 30-cm telescope + CCD camera.

Jan-Mar 2005

*National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile*

**Research Assistant** of Dr. Patrice Bouchet, working on the reduction and photometry of **infrared supernova** images with CTIO-4m/ISPI.

May. 2003- Jan 2004

*National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile*

**Research Assistant** of Dr. Andrei Tokovinin, working on incrementing the **9th Catalog of Radial Velocities for Spectrophotometric Binary Systems** for Commission 30 of the International Astronomical Union.

Summer1999 & Summer2000

*National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile*

**Observer** for the **2MASS** project.

1998 – 2006

*National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile*

(current collaboration)

**Research Assistant**, of Dr. R. Chris Smith:

- in the **U. of Michigan/CTIO Magellanic Cloud Emission-line Survey** (observations, reduction, calibration of images and spectra). This project uses the UM/CTIO Curtis/Schmidt telescope to map the LMC and SMC in narrow-band filters (H alpha, [S II], [O III]) to trace the ionized gas of those galaxies.

- Studying the physics of **Supernova Remnants** in the **Magellanic Clouds**

*National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile*

1998            **Research Assistant** of Dr. Rene Mendez, **Photometry of the Open Cluster NGC2516.**

1997 - 2005    *National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile.*

**Observing Assistant and Support** spending more than 300 observing nights in Cerro Tololo Interamerican Observatory:

- **supporting visiting astronomers** as observing assistant,
- **performing service observing programs** (MCELS, High-z SN Search, Parallax Investigation, SINGG , MACHO, Super MACHO, ESSENCE and other)
- **telescope and observing support** for CTIO/NOAO and SMART Consortium
- **operating and observing with CTIO telescopes:** Blanco 4m (R-C spectrograph, MOSAIC Camera), 1.5m (CCD imager, R-C spectrograph, 1.0m (CCD imager), 0.9m (CCD imager), Curtis/Schmidt (CCD imager) and 2MASS (IR camera), 1.3m (ANDICAM).

Summer 1996   *National Optical Astronomical Observatories, Cerro Tololo Interamerican Observatory, La Serena, Chile*

**Research Assistant** of Dr. Mark Phillips as R.E.U. student, **Measuring the Sky Brightness of CTIO.**

## **Teaching Experience**

March 2002 -    *Universidad de La Serena, La Serena, Chile*

July 2002        **Teaching Assistant** for undergraduate course on Modern Physics for Physics students.

Aug. 2001-     *Universidad de La Serena, La Serena, Chile*

Dec.2001        **Teaching Assistant** for undergraduate course on General Physics (Mechanics) for Computing Engineering.

March 2000 -   *Universidad de La Serena, La Serena, Chile*

July 2000        **Teaching Assistant** for undergraduate course on General Mathematics for 1st year science students.

1997-1999      *Universidad de La Serena, La Serena, Chile*

**Organizer and Lecturer** of a Course of Basic Astronomy for non-scientific university students.

## Societies

- 2002 - present **Chilean Section of the International Dark-Sky Association**, co-founder and head.
- 1999 - present **International Dark-Sky Association (IDA)**, Individual Member
- 1998 - present **Chilean Network of Astronomy**, co-founder and Current Member.
- 1997 - 1998 **Amateur Astronomy Group "Centauri"**, Physics Dept. of Universidad de La Serena, co-founder and president.

## Awards and Fellowships

- 2007-2010 **Four-years CONICYT Scholarship (Chilean Government)** for Doctorate studies in the Universidad de Concepción.
- 2002 **Executive Director's Award**, International Dark-Sky Association.
- 1996 **Research Experiences for Undergraduates (REU)** Fellowship to work in CTIO on Sky Brightness measurements.
- 1993 **1<sup>st</sup> National Place (Goldel Medal) of School Students in the VII National Award "Pacific Uses of Nuclear Energy with the original essay titled "Production of Energy by particle-antiparticle annihilation using Magnetic Particles", Chilean Nuclear Commission.**
- 1993 **Regional Physics Olympiad for Schools**, Universidad de La Serena
- 1992 **Regional Physics Olympiad for Schools**, Universidad de La Serena

## Publications (papers and conference contributions)

(including the results from the NASA Astrophysical Data System)

**Supernova Remnants in the Magellanic Clouds: a new catalog.**

**Leiton, R.**, Smith, R.C., Points, S., Aguilera, C., Chu, Y-H., Winkler, F, in preparation.

**Near-Infrared Observations of Core-Collapse Supernovae between 100 and 400 days after outburst.**

Bouchet, P., **Leiton, R.**, Danzinger, I.J., in preparation.

**Identification of Six New Supernova Remnants in the LMC from the Magellanic Cloud Emission Line Survey.**

Smith, R.C., Points, S., Gruendl, R., Chu, Y-H., Winkler, F., **Leiton, R.**, Aguilera, C., in preparation

**Planetary Nebulae in the Large Magellanic Cloud.**

2007, Zenteno, A., Smith, R.C., Rest, A., Points, S., **Leiton, R.**, Aguilera, C. Submitted to the 209<sup>th</sup> AAS Meeting.

**Globular Cluster Observations in Preparation for a SIM Planet Quest Key Project.**

2006, **Leiton, R.**, Geisler, D., Majewski, S., Patterson, R., Gieren, W., Spergel, D., Tremaine, S., Grebel, E., Grillmair, C., Johnston, K., Reid, N. Presented at the Annual Meeting of the Chilean Astronomical Society.

**New Optically Identified SNR Candidates in the Large Magellanic Cloud,**  
2006, *RMxAC*, 26, 182, **Leiton, R.**, Smith, R.C., Points, C., Aguilera, C.

**Follow-up Photometry and Spectroscopy of Space Interferometry Mission Planet Quest Grid Giant Star Candidates,**

2006, *RMxAC*, 26, 180, Geisler, D., Arenas, J., Majewski, S., Zapata, A., **Leiton, R.**, Gieren, W.

**Optical Emission Line Surveys of the Ionized Gas in the Magellanic Clouds,**  
2005, *AAS*, 207, 14501, Smith, R.C., Chu, Y.-H., Winkler, P.F., **Leiton, R.** and the MCELS Team.

**An Emission-Line Survey of the Small Magellanic Cloud: the Full Mosaic,**  
2005, *AAS*, 207, 13203, Winkler, P. F.; Young, A. L.; Braziunas, D.; Condon, R.; Galle, E. C.; Reaser, B. E.; **Leiton, R.**; Smith, R.C.; MCELS Team.

**The Magellanic Emission Line Survey (MCELS),**  
2005, *AAS*, 207, 2507, Smith, R.C.; Points, S.D.; Chu, Y.-H.; Winkler, P.F.; Aguilera, C.; **Leiton, R.**; MCELS Team.

**Dynamics in Galaxy Halos,**

2005, Romanowsky, A., ..., **Leiton, R.**, ..., 2005, 11<sup>th</sup> Latin-American Regional IAU Meeting.

**New Optically Identified of SNR Candidates in the Large Magellanic Cloud,**  
2004, *AAS*, 205, 10106, **Leiton, R.**, Aguilera, C., Smith, R.C., Chu, Y.-H., Winkler, F. and MCELS Collaboration.

**The MCELS Survey: Transition from Data to Science,**

2005, *AAS*, 205, 10108, Smith, R.C., Points, S., Aguilera, C., **Leiton, R.**, Chu, Y.-H., Winkler, F. and MCELS Collaboration, submitted to the 205th AAS Meeting.

**Minor Planet Observations [I02 Cerro Tololo Observatory, La Serena--2MASS],**

2003, *MPC*, 48911, 2, Cutri, R. M., Aguilera, C., Bennet, E., Brehmer, G., Dembicky, J., Guerra, A., **Leiton, R.**, et al.,.

**Minor Planet Observations [G91 Whipple Observatory, Mt. Hopkins--2MASS],**

2003, *MPC*, 48905, 8, Cutri, R. M., Aguilera, C., Bennet, E., Brehmer, G., Dembicky, J., Guerra, A., **Leiton, R.**, et al.,.

**Natural Satellite Observations [I02 Cerro Tololo Observatory, La Serena--2MASS],**

2003, *MPC*, 48615, 3, Aguilera, C., Bennet, E., Brehmer, G., Dembicky, J., Guerra, A., **Leiton, R.**, et al.,.

**Comet Observations [I02 Cerro Tololo Observatory, La Serena--2MASS],**

2003, *MPC*, 48559, 27, Aguilera, C., Bennet, E., Brehmer, G., Dembicky, J., Guerra, A., **Leiton, R.**, et al.,.

**Comet Observations [G91 Whipple Observatory, Mt. Hopkins--2MASS],**

2003, *MPC*, 48559, 23, Aguilera, C., Bennet, E., Brehmer, G., Dembicky, J., Guerra, A., **Leiton, R.**, et al.,.

**Increasing the Chilean Awareness of Dark-Sky Preservation,**

2003, *Astrophysics and Space Library*, 284, 195, **Leiton, R.**, in "Light Pollution: a Global View", E. Schwarz Ed.,.

**Optical and Infrared Photometry of the Unusual Type Ia Supernova 2000cx**,  
2002, *PASP*, 115, 277, Candia, P., Krisciunas, K., Suntzeff, N., Gonzalez, D.,  
Espinoza, J., **Leiton, R.**, et al., .

**CTIO Sky Brightness**,

2002, *AAS*, 201, 7607, Vera, S., Krisciunas, K., Candia, P., **Leiton, R.**, Suntzeff,  
N.

**The UM/CTIO Magellanic Cloud Emission-line Survey**,

2000, *ASP Conference Series*, 221, 83, Smith, R.C., **Leiton, R.**, Pizarro, S., in  
"Star, gas and dust in galaxies: Exploring the links",.

**The planetary nebula from Colombina (PDS519)**,

1999, *Boletim da Sociedade Astronomica Brasileira*, 19, 130, Quast, G., Faundez-  
Abans, M., Torres, C., **Leiton, R.**, Reyes, C.

**PDS309: A post-AGB as a planetary nebula?**,

1998, *Boletim da Sociedade Astronomica Brasileira*, 18, 94, Quast, G.R., Reyes,  
C., Faundez-Abans, M., Torres, C., da Silva, L., Oliveira, **Leiton, R.**,

## Public Outreach and Media

- 2005 MCELS image of the 30 Doradus Complex: **cover of the Mercury Magazine**,  
Nov/Dec 2005, Vol. 34. No.6.
- 2005 Co-author in the **Astronomy Picture of the Day**, 2005 Dec. 12. MCELS image of  
30 Doradus
- 2005-2006 **Manager of the on-campus observatory** of the Universidad de Concepcion  
(Chile). The program has covered about 1000 individuals (students, teachers,  
general public) observing from October 2005 to April 2006.
- 2005 **Invited lecturer** in the "Workshop for teachers", REDLASER Astronomy  
Program for Schools. Talk title: "Comets"
- 2004 Collaboration in the **Astronomy Picture of the Day**, 2004 October 6. MCELS  
image of "N11: a giant ring of emission nebulae".
- 2003 - 2004 **Creator and speaker** of "Viajeros", a radio broadcasting program on astronomy  
and light pollution, Radio Universitaria, La Serena.
- 1997-2000 Co-founder and head of the Chilean Network of Astronomy
- 1997 - present **Lecturer** in different courses of elementary astronomy and astronomy seminars in  
the Dept. of Physics of University of La Serena
- 1997 **Organizer and contributor** in the Annual Meeting of Amateur Astronomy, held  
in Vicuna, Chile

## Light Pollution

- 2005 Author of a picture on light pollution in "Limiting Light Pollution in Ongoing  
Challenge" by Toni Feder, *Physics Today*, June 2005.
- 2004 **Invited lecturer** in the workshop "Astronomy as Educational Tool" with the  
presentation "Light Pollution: a problem of all", Pucon, Chile.

- 2004           **Organizer and contributor** of the "1st Workshop on Light Decontamination", La Serena, 23-24 April.  
**Organizer of the project** "Determining the Light Pollution of Chilean Skies". A collaboration of the IDA Chilean Section, the ASTRO Project and Red de Estudiantes de La Serena (Redlaser).
- 2003
- 2002 - present   **Co-Founder and head** of the Chilean section of the International Dark-Sky Association.
- 2000 - 2001   **Co-Founder and head** of the Light Decontamination Group, a branch of the Chilean Network of Astronomy

### Meetings Attended (\* = oral exposition; \*\* = poster)

- 2007           *Insights in Galaxy Evolution from Stellar Populations in Resolved Galaxies*, Advanced Chilean School of Astrophysics, Concepción, Chile.
- 2006           *Interferometry in the epoch of ALMA and VLTI*. Advanced Chilean School of Astrophysics. Santiago, Chile.
- 2006           *Annual Meeting of the Chilean Astronomical Society*. La Serena, Chile (\*\*)
- 2005           *Globular Clusters: Guide to Galaxies*, Concepcion, Chile.
- 2005           *11<sup>th</sup> Latin-American Regional IAU Meeting*, Pucon, Chile (\*\*)
- 2005           *Latin-American Astronomy Summer School*, Santiago, Chile.
- 2005           Invited lecturer in the "Workshop for teachers", *REDLASER Astronomy Program for Schools*. Talk 's title: "Comets" . La Serena, Chile (\*)
- 2005           *January 2005 Meeting of the American Astronomical Society*, San Diego, Cal., USA. (\*\*)
- 2004           *Astronomy as Educational Tool*, Pucon, Chile (\*)
- 2004           *1st Workshop on Light Decontamination*, La Serena, Chile (\*)
- 2003           *2nd Annual Meeting of the Chilean Astronomical Society*. Santiago, Chile. (\*)
- 2002           *International Conference on Light Pollution*. ESO/CTIO/LCO. La Serena, Chile. (\*)
- 2002           *Galactic Star Formation Across the Stellar Mass Spectrum*. ESO/CTIO/LCO. La Serena, Chile.
- 2000           *Star Formation and Galactic Evolution. 10th IAGUSP Advanced School on Astrophysics*. Rio de Janeiro, Brazil.
- 2000           *Stars, gas and dust: Exploring the links*. ESO/CTIO/LCO. La Serena, Chile. (\*\*)
- 2000           *Annual Meeting of Amateur Astronomy*. Copiapo, Chile. (\*)
- 2000           *IX Latin American Workshop on Plasma Physics*. La Serena, Chile.
- 1999           *Annual Meeting of Amateur Astronomy*. SAVAL. Vina del Mar, Chile. (\*)
- 1998           *Annual Meeting of Amateur Astronomy*. Obs. Mamalluca/Grupo Centauri/ CTIO. Vicuna, Chile. (\*)
- 1997           *SN 1987: Ten years after*. ESO/CTIO/LCO. La Serena, Chile.
- 1997           *Annual Meeting of Amateur Astronomy* . Concepcion, Chile. (\*)
- 1996           *The Galactic Center Workshop*. ESO/CTIO/LCO. La Serena, Chile.

1997

*VIII Regional Meeting of Northern Physics. IV International Meeting of Andean Physics.* Universidad de Tarapaca. Arica, Chile.(\*\*)

### **Computation Knowledge**

Knowledge of the **IRAF** software for imaging and spectra, **DAOPHOT** (basic), **SUPERMONGO** (basic)

**MSCPIPELINE** and **PHOTPIPE**: astronomical software for the reduction of CTIO-4m Mosaic images.

Programming **HTML** (medium level), **Fortran** (basic) and **Perl** (very basic level)

Knowledge of **UNIX**, **Mac OS X** and **Microsoft Windows** operating systems.

Knowledge of **LATEX** word processor.

### **Language**

Mother Language: **Spanish**.

**English**: **TOEFL** score (paper-based): **573**;

**Italian** (1 semester), **German** (1 semester)

### **Hobbies**

Reading in general, focused on science, history and biographies.

History of science and history of music

Books, museums, music, travel, bicycling, camping, photography.