

ANTONIO HALES

Astrophysicist, researcher and data analyst with strong background in commissioning state-of-the-art scientific hardware/software.

Raise awareness. Inspire others. Pass on a better world.

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Santiago, Chile 📍

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WORK EXPERIENCE

Science Operations Astronomer Atacama Large Millimeter Array (ALMA) ↗

01/2008 - Present *Santiago, Chile*
ALMA Observatory/National Radio Astronomy Observatory (US)

Achievements/Tasks

- ALMA Commissioning Scientist (2008-2011): Design, implementation, and execution of scientific verification of ALMA System Requirements.
- Acceptance Manager for the scientific verification of 210 high-frequency heterodyne receivers. Designed and conducted tests to verify technical specifications.
- Deputy Manager for ALMA Calibration: developed and executed the ALMA Calibration Plan.
- Software Development Manager for ALMA Dashboard: interactive planning and coordination tool that reflects the observatory status and of all its equipment used intensively in daily scientific and engineering operations.
- Assisted NASA's New Horizons spacecraft to reach Pluto by performing high-accuracy ALMA astrometric observations.
- Promoter for public engagement and more astronomy literate society: outreach talks, media, faculties, and underrepresented communities.

Contact: Lars-Ake Nyman - lnyman@eso.org

ALMA Postdoctoral Researcher National Radio Astronomy Observatory

10/2006 - 09/2008 *Charlottesville, Virginia*

Achievements/Tasks

- Developed methodologies to test and improve the so-called ALMA Line Length Correction System in the early stages of development.
- Tested and verified early prototypes of the ALMA Control Software.
- Tested Antenna servo and drive systems. Performed holographic measurements of antenna surface.

Contact: Al Wootten - awootten@nrao.edu

EDUCATION

PhD in Astrophysics University College London

09/2003 - 07/2007 *London, United Kingdom*

BSc in Astronomy Universidad de Chile

03/1998 - 12/2002 *Santiago, Chile*

SKILLS

Data analysis

Programming

Python

C++

Telescope Control

Telescope Calibration

Collaborative

Leadership

Problem-solving

Multidisciplinary Teamwork

Interpersonal

Communication

Analytical

Critical-thinking

Heterodyne Receivers

Radio Interferometry

JIRA

multi-variable modelling

Curiosity

OFFICE OF DIVERSITY AND INCLUSION

Associated Universities Incorporated (01/2015 - Present)

Manager of the Research Experience for Undergraduate program for underrepresented chilean student populations in astronomy.

HONOR AWARDS

AVONI Prize for Inovation (12/2017)

Ministry of Culture, Government of Chile

- Lead Scientist for creation of a soundbank that invites electronic music producers and scientists to create music with the signals coming from space. The project has reached an audience of thousands.

LANGUAGES

English



Spanish



French



Portuguese



SUPPORTED CAUSES

Diversity and Inclusion in STEM

SOS Children's

One Coin For Life

INTERESTS

Life in the Universe

Tibetan Meditation

Tai Chi

Chi Kunk

Music

Reading

Nature

Dreams