

JUAN FACUNDO ALBACETE COLOMBO

PhD in Astronomy
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Born: August 24, 1971 in Bahia Blanca, Bs.As., Argentina.
Nationality: Argentina / Italian



EXPERIENCE

Optical and High energy Astrophysics

Multi-wavelengths emission at different astrophysics scenarios

📅 Since 1999 to now

- The origin of X-rays in young O-type stars and/or O+OB binary systems
- X-ray emission and variability characteristics of Pre-Main-Sequence (PMS) low-mass stars.
- Diffuse X-ray emission in massive star-forming regions.
- X-ray diffuse emission around evolved massive stars.
- X-ray from extra-galactic sources.
- Gamma-ray emission from low-mass young stars
- X-ray emission in Supernova Remnants.
- Unveiling hard diffuse emission around pulsars and its association as Pulsar Wind Nebulae.
- Cross-correlations in multi-wavelengths of large databases.

MOST RELEVANT PUBS. & PROJECTS

The super massive star cluster Westerlund 1 in X-rays

NEW: International Chandra large project - PI. M. Guarcello

📅 March 2020 - December 2025 📍 Palermo, Italy Viedma, Argentina

- Diffuse emission in super-massive star cluster.
- X-rays from massive stars in Wd1.

X-ray deep view of the Cygnus OB2 stellar association

International Chandra large project - PI. J. Drake

📅 March 2015 - December 2021 📍 Boston, USA & Viedma, Argentina

- The statistical uncertainties on X-ray flux and spectral parameters from Chandra ACIS-I observations of faint sources.
- Diffuse X-ray emission in the Cygnus OB2 association.
- X-ray spectral characterization of the young Cygnus OB2. population.
- Photo-evaporation and close encounters: How the environment around Cygnus OB2 affects the evolution of proto-planetary disks.
- X-ray flaring from the young stars in Cygnus OB2.

X-rays emission from Supernova Remnants

Wide international collaborations

📅 May 2008 - December 2020 📍 Palermo, Italy & Viedma, Argentina

ACADEMIC RECORDS

PUBLICATIONS

<https://orcid.org/0000-0001-8398-0515>

Referred: 51

Proceedings: 23

ASTRONOMY CAREER

📅 Since March 1997 - Present

- 1997-1998: Summer fellow at the CASLEO, San Juan, Argentina.
- 1998-1999: Fellow of National Research Council of Argentina.
- 1999 M.Sc. in Astronomy, University of La Plata (Argentina),
- 2003 PhD in Astronomy, University of La Plata (Argentina). Advisor: Dra. Nidia Morrell.
- 2000-2004: PhD fellowship, Research Council of CIC, Buenos Aires, Argentina.
- 2004-2005: Post-doctoral fellowship, CONICET, Buenos Aires, Argentina.
- 2005-2007 Post-doctoral Marie Curie fellow at the Osservatorio Astronomico di Palermo (Italy). Advisor: Dra. G. Micela.
- 2007-2020 Staff researcher of the CONICET at the Univ. of Rio Negro.

SCIENTIFIC DUTIES

- Referee of the Astronomy & Astrophysics.
- Referee of the Astrophysical Journal.
- CONICET referee for the research career.
- Member of the 2010 Gemini NTAC panel.
- Panel reviewer of Chandra X-ray telescope, Cycle 17 (2015), Boston, USA.
- Panel reviewer of Chandra X-ray telescope, Cycle 21 (2019), Boston, USA.

SKILLS

Spanish (native) English Italian

IDL Fortran CIAO SAS

HEASOFT XSPEC Latex

- Molecular environments of the supernova remnant G359.1-0.5.
- Discovery of thermal X-ray emission in the supernova remnant Kes 41
- An X-ray characterization of the central region of the supernova remnant G332.5-5.6.
- X-ray study of the SNR G344.7-0.1 and its central object.
- At the rescue of forgotten SNRs with XMM-Newton and Chandra.
- A multi-wavelength study of the supernova remnant G296.8-0.3.
- On the origin of the jet-like radio/X-ray morphology of G290.1-0.8.
- Evidence of stellar ejecta in the central region of G272.2-3.2.

X-rays in Young stars and HH objects

International collaborations

📅 May 2008 - 2017 📍 Madrid, Spain & Viedma, Argentina

- X-ray Emission from Stellar Jets by Collision against High-density Molecular Clouds: an Application to HH 248.
- Evidence of Non-thermal X-Ray Emission from HH 80.
- X-ray in Zeta-Ori.
- AE Aurigae: First Detection of Non-thermal X-Ray Emission from a Bow Shock Produced by a Runaway Star.
- Deep XMM-Newton observation of the Chamaleontis cluster.
- HRC-I/Chandra X-ray observations towards Orionis.
- An X-ray survey of low-mass stars in Trumpler 16 with Chandra.

Massive stars in Carina

International collaborations - PI. J.F. Albacete Colombo

📅 May 2000 - 2005 📍 La Plata, Argentina & Palermo, Italy

- Optical spectroscopy of XMEGA targets in the Carina Nebula:
 - I.- CPD-59° 2635: a new double-lined O-type binary
 - II.- The massive double-lined O-type binary HD 93205
 - III.- The multiple system Tr 16-104 (CPD -59° 2603)
 - IV.- CPD-59°2636: a new O-type multiple system
 - V.- FO15: a new O-type double-lined eclipsing binary.
- XMM-Newton X-ray observations of the Carina nebula.

Extra-galactic Astrophysics at high energies

International collaborations

📅 May 2009 - October 2014 📍 Viedma, Argentina & La Serena, Chile

- The Missing Goliath's Slingshot: Massive Black Hole Recoil at M83.
- Black Hole Ejected from the Nucleus of Galaxy NGC 5236.
- The Ying and Yang of the M83 Nucleus.
- The most distant cluster of galaxies ever detected ?

TEACHER POSITIONS

- 1995-1995: Teaching assistant, Physics, Univ. of La Plata.
- 1999-2000: Teaching assistant, Statistics, Univ. of La Plata.
- 1999-2000: Teaching assistant, Physics, Univ. of La Plata.
- 2000-2000: Teacher of the admittance course of computational sciences, Univ. of La Plata.
- 2000-2000: Teacher of the admittance course of physics and mathematics, Univ. of La Plata.
- 2002-2002: Teacher of the admittance course of engineer sciences, Univ. of La Plata.

- 2002-2004: Teaching assistant, Mathematical Analysis, Univ. of La Plata.
- 2010-2011 : Professor, Mathematical Analysis, Univ. of Rio Negro.
- 2015-today : Professor assistant, Mathematics, Algebra and Statistics, Univ. of Rio Negro.