Summary CV

Marcos P. Diaz

1) Education/Training

1986 - BSc - Physics, IF - Universidade de São Paulo - Brazil
1989 - MSc – Astrophysics, Instituto Nacional de Pesquisas Espaciais - Brazil
1993 – PhD – Astronomy, IAG - Universidade de São Paulo – Brazil
2004 – *Livre-Docente* - IAG - Universidade de São Paulo – Brazil

2) Professional History and academic distinctions and prizes

1993: Post doctoral at Universidade de São Paulo - Brazil
1994 : Post doctoral at Universitaet Muenster – Germany
1994-95: Post doctoral at PennState University – USA
1996 -1998: Astronomer at Laboratório Nacional de Astrofísica – LNA/CNPq - Brazil
1996: CNPq Young Scientist Prize
1996: Member (chair) of LNA-TAC
1999 - 2004: Assistent Professor at IAG Universidade de São Paulo – Brazil
2000 - 2001: Brazilian Gemini project scientist
2000 - 2006: Brazilian member at SOAR Science Advisory Committee
2002 - 2004: Secretary-general, Brazilian Astronomical Society
2005 – 2007: Member of SOAR TAC
2004 - : Associate Professor at IAG Universidade de São Paulo – Brazil
2007 - 2009: Brazilian member at SOAR Board of Directors
2011 - 2017: Braziliam member at ESO Science and Technical Committee
2012 - 2014: Treasurer, Brasilian Astronomical Society
2014 - 2016: President, Brazilian Astronomical Society
2018 - : Brazilian member at GEMINI Board of Directors

3) List of most important scientific results

- Identification of nova outbursts in magnetic cataclysmic variables (MCVs).
- Development of a method for Doppler imaging of accretion columns in MCVs.
- Determination of orbital period distribution of Classical Nova progenitor binaries.
- Identification of a new type of high mass transfer binaries – the V Sagittae Stars
- Quantitative modeling of limb darkening in accretion disk atmospheres.
- Tomographic studies of emission line flickering in accretion disks.
- Wind modeling and detailed spectral synthesis of accretion disk UV lines and continuum.
- Detailed 3D photoionization modeling (and IFU observations) of nova shells.
- Constraining of white dwarf mass loss in U Sco, a Supernova-Ia progenitor candidate.
- Spectroscopic identification of transient L3 outflows in novae.
- Identificaton of small structures in nova ejecta - highest spatial resolution imaging of a nova shell

Sample Publications:

1. Diaz, M. P., Steiner, J., "The photometric period of GQ Muscae", ApJ, 339, L41, 1989.

2. Diaz, M. P., Steiner, J., "On the magnetic nature of GQ Muscae", ApJ, 425, 252, 1994.

3. Diaz, M. P., Wade, R. A. and Hubeny, I. "Ultraviolet limb darkening and spectra for accretion disks in Cataclysmic variables", Ap. J., 459, 236, 1996.

4. Diaz, M. P. and Bruch, A. "The Orbital Period Distribution of Novae", A & A, 322, 807, 1997.

5. Steiner, J. E. , Diaz, M. P., " The V Sagittae Stars", PASP, 745, 276, 1998.

6. Diaz, M. "Time-resolved Spectroscopy of V Sagittae", PASP, 755, 76, 1999.

7. Diaz, M., Hubeny, I., "The Eclipsing Cataclysmic Variable V347 Puppis Revisited", ApJ, 523, 786, 2000.

8. Mennickent, R. E.; Cidale, L.; Díaz, M.; Pietrzyński, G.; Gieren, W.; Sabogal, B. "Revealing the nature of double-periodic blue variables in the Magellanic Clouds", MNRAS, 357, 1219, 2005.

9. Diaz, M. P. ¨Doppler tomography of the emission-line flickering in cataclysmic variables¨, ApJ Letters, 553, L177, 2001.

10. Mennickent, R. E., Diaz, M. P. and Tappert, C. "A search fo brown dwarf like secondaries in cataclysmic variables II", MNRAS, 347, 1180, 2004.

11. Ribeiro, Fabíola M. A.; Diaz, Marcos "Emission-Line Flickering from the Secondary Star in Cataclysmic Variables? A Study of V3885 Sagittarii", AJ, 133, 2659, 2007.

12. Diaz, M. P. and Cieslinski, D. "Multiline Doppler Imaging of MR Ser in High State", AJ, 137, 296, 2009.

13. Moraes, Manoel; Diaz, Marcos "HR Del Remnant Anatomy Using Two-Dimensional Spectral Data and Three-Dimensional Photoionization Shell Models", AJ, 138, 1541, 2009.

14. Diaz, M. P.; Williams, R. E.; Luna, G. J.; Moraes, M.; Takeda, L. "The Spectral Evolution and Ejecta of Recurrent Nova U Sco in the 2010 Outburst" , AJ, 140, 1860, 2010.

15. Puebla, Raúl E.; Diaz, Marcos P.; Hillier, D. John; Hubeny, Ivan "A Method for the Study of Accretion Disk Emission in Cataclysmic Variables. I. The Model", ApJ, 736, 17, 2011.

16. Moraes, Manoel; Diaz, Marcos "The RAINY3D Code: The Treatment of Condensation in Nova Remnants during Nebular Phase", PASP, 123, 844, 2011.

17. Mennickent, R. et al. "A cyclic bipolar wind in the interacting binary V393 Scorpii", MNRAS, 427, 624, 2012.

18. Larissa Takeda, Marcos Diaz, "A search and modeling of peculiar narrow transient line components in novae spectra", New Astronomy, 39, 64, 2015.

19. Levenhagen, R., Diaz, M., Coelho, P. and Hubeny, I. "A Grid of Synthetic Spectra for Hot DA White Dwarfs and Its Application in Stellar Population Synthesis", ApJS, 2017

20. Diaz, Marcos P.,   Abraham, Zulema;   Ribeiro, Valério A. R. M.;   Beaklini, Pedro P. B.; Takeda, Larissa "The structure of a recent nova shell as observed by ALMA", MNRAS, 480, L54

4) List of ongoing and recent research grants

- CNPq (1-c level) research grant.
- Member of NARA group (USP)
- Member of INCT-Astrophysics (CNPq)
- Member of FAPESP STELES group
- Member of CUBES science team

5) List of recent/ongoing supervisions

Thayse Pacheco - graduate (CAPES)
Patricia Cruz – Postdoc (PNPD/CAPES)
Paulo Stecchini - Postdoc
Larissa Takeda – Postdoc (FAPESP)
Juliana Hirata - undergraduate (CNPq)
Bruno Gerotti - undergraduate

6) Academic quantitative indicators

Number of papers in refereed journals: 68
Number of conference proceedings and other publications: 53
Number of citations: 1470 (Google Scholar)
H – index: 22 (Google Scholar)

7) Other relevant information

Number of M Sc thesis advised: 4
Number of PhD thesis advised : 4
Number of Postdocs supervised: 7

Organization of Scientific Meetings (chair): 8

Other Academic Activities:

courses:

Stellar Atmospheres (graduate)
Observational Astrophysics (graduate)
Accretion Processes in Binary Stars (graduate)
Fundamental Astronomy (undergraduate)
Observational Astronomy (undergraduate)
Energy Transfer in Astrophysics (undergraduate)