Yazan Al Momany

Curriculum Vitae

Personal Information

Surname:	**Al Momany**
Name:	**Yazan**
Place of Birth:	**Al Zarka (Jordan)**
Date of Borth:	**20 August 1970**
Nationality #1:	**Jordanian**
Nationality #2:	**Italian (since 2004)**
Upholding Position:	**Research Astronomer** **at INAF (Istituto Nazionale di Astrofisica):** **Astronomical Observatory of Padova (INAF-OAPD)** **vicolo dell'Osservatorio 5, 35122 Padova**
Resident:	**Borgoricco, prov. of Padova (Italy)**
E-mail:	**yazan.almomany@esteri.it**
Maritial Status:	**Married, with 2 kids**

Education

September 1987 – July 1989 :	**International Baccalaureate Diploma (IB)** **achieved at the United World College of the Adriatic** **Duino, Trieste (Italy)**
September 1989 – July 1996 :	**Laurea in Astronomy (M.A)** **achieved at the University of Bologna (Italy)** **Thesis title:** *Optical Photometry of the Globular Cluster NGC4833* **Supervisors: Prof. F. Fusi Pecci & Prof. G. Battistini**
September 1998 – February 2001 :	**PhD in Astronomy** **achieved at the University of Padova (Italy)** **Thesis title:** *Optical and Near-IR study of four Local Group Dwarf Galaxies* **Supervisors: Prof. S. Ortolani & Prof. E.V. Held**

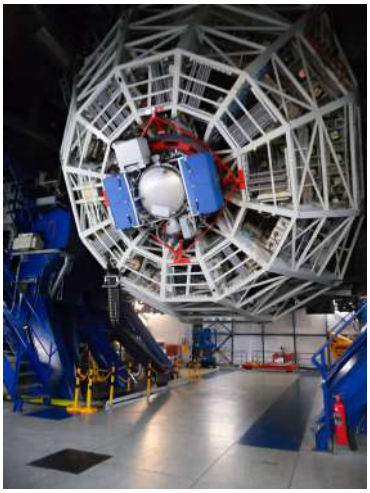
Work Experience

January 2001 – August 2001:	*Visiting Astronomer* **at the European Southern Observatory member of the ESO Imaging Survey (EIS) team, Munich, Germany Supervisor: Prof. L. Da Costa**
June 2001 – December 2005:	*Research Fellow* **at the Astronomy Department, University of Padova Supervisor: Prof. G.P. Piotto. Title of the research project:** *Combining HUBBLE Space Telescope with Ground-based Data of Galactic Globular Clusters*
December 2005 – August 2008:	*Research Astronomer* **at INAF: Astronomical Observatory of Padova**
August 2008 – August 2014:	*On Leave* **from the Astronomical Observatory of Padova serving at the European Southern Observatory, Santiago, Chile as** *Infrared Astronomer*
August 2014 – September 2022:	*Research Astronomer* **at INAF: Astronomical Observatory of Padova**
September 2022 – Present:	**On leave and serving as** *Scientific Attaché* **at the Italian Embassy in United Arab Emirates**

Known Languages

Arabic:	**Mother tongue**
English:	**Excellent (written & spoken)**
Italian:	**Excellent (written & spoken)**
Spanish:	**Fair (written & spoken)**

Esperience in Chile



I had the pleasure to work for 6 years as a *Near-Infrared Astronomer* at the European Southern Observatory in Santiago, Chile. Beside accumulating a valuable observing experience, with many *state of the art* astronomical instruments at the Paranal observatory, I had the unique opportunity to personally follow the upgrade and commissioning project of a particular instrument called **VISIR** (installed on the primary focus of the UT3 telescope as shown in the figure). To date, VISIR remains as the *only* European astronomical instrument operating in the mid-infrared regime (i.e. $8-24\mu$m), specifically designed to studying the hot inter-stellar dust and gas in the universe. I was responsible of the *VISIR Instrument Operating Team*, and had the daily task of ensuring the instrument's calibration and maintenance at the goal of providing the most stable performance of its unique detector, developed at **Raytheon**. The upgrade project resulted in many publications; of which: Kerber et al. (2012: *Water Vapour Monitor at Paranal Observatory)*, Kerber et al. (2014: *VISIR upgrade overview and status)* and Asmus et al. (2016: *Science Verification for the VISIR Upgrade)*. The VISIR experience was a unique opportunity in that it allowed to complement my *purely scientific* perspective (previously limited to reducing and analysing molls of data) with the often-ignored everyday malfunctions and operational difficulties (even in top of the class instruments), learn how to solve such technical problems, and exploit the very best out of an instrument.

Publications

During the 2000-2022 research career, I have published **97** peer-reviewed articles, collecting **6450** citations and an **H-index of 44**. Of these **15** are first-author articles, collecting **820** citations and a personal **H-index of 13**. Lastly, there are an additional non-refereed 94 conference contributions and catalog publications. The full list is available at the following Astrophysics Data System link.
The article I go mostly proud of was published in *Nature Astronomy* (Momany et al. 2020) having the title: ***A Plague of Magnetic Spots among the Hot Stars of Globular Clusters***, which summarises almost 6-years worth of data-analysis and pursue of an original working hypothesis. A full presentation of this article is available at the following YouTube link. This publication had a significant Italian public outreach:

- ANSA: Le Stelle col Morbillo, Skytg24: Stelle con Macchie Luminose & Media INAF: Ecco le Stelle Padua.

& internationally as well:

- NASA (in Arabic), Al-Khaleej-UAE (in Arabic), Der Standard (in German, CNN (in Portoghese), Space, Space NewsFeed, NewsWeek, EurekAlert, U.S. News, & Science Daily.

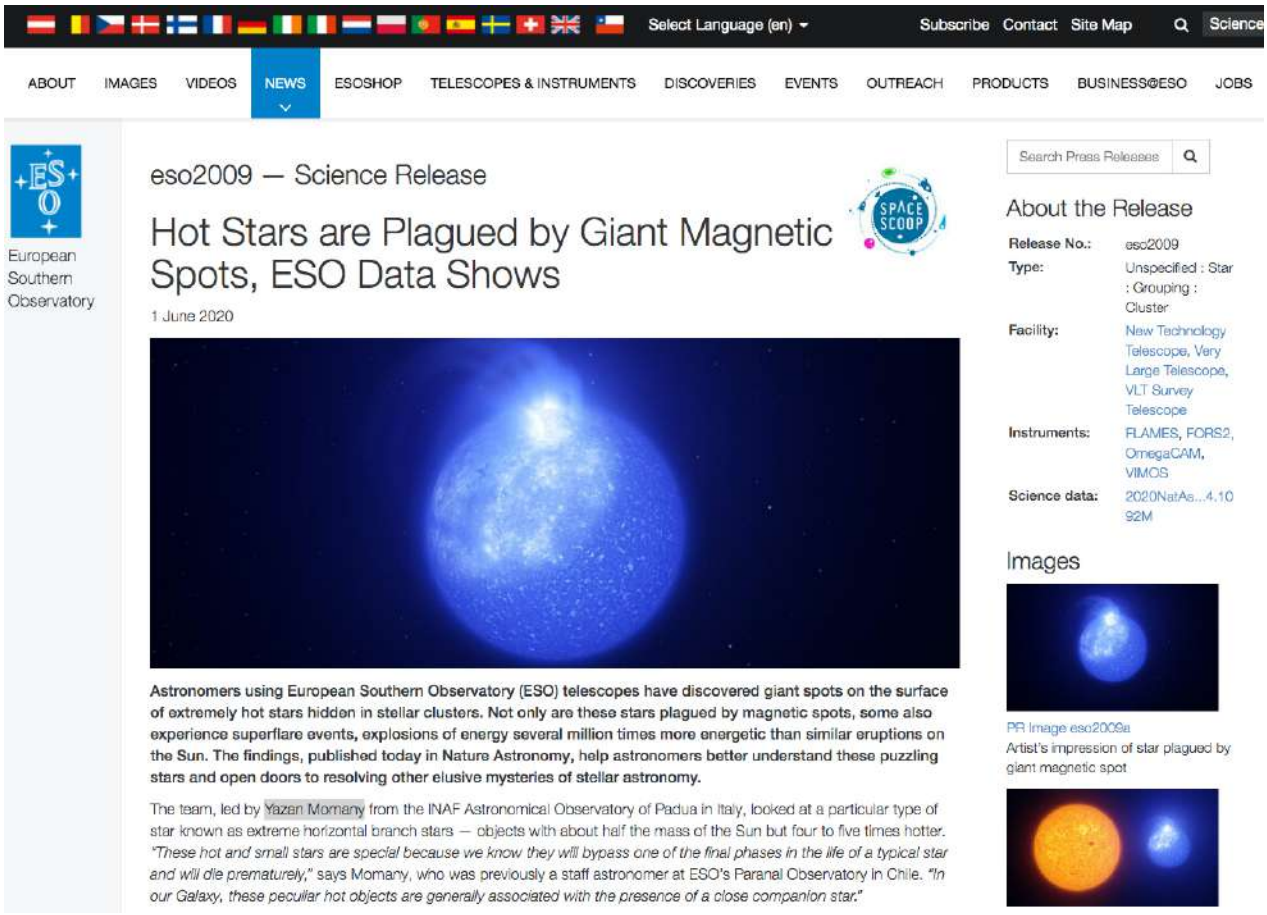


Figure 1: The cover-page of the ESO press-release reporting the results of my paper in *Nature Astronomy* (Momany et al. 2020).

During my research career, I had other important press-releases and/or cover-pages of international Journals. Of these:

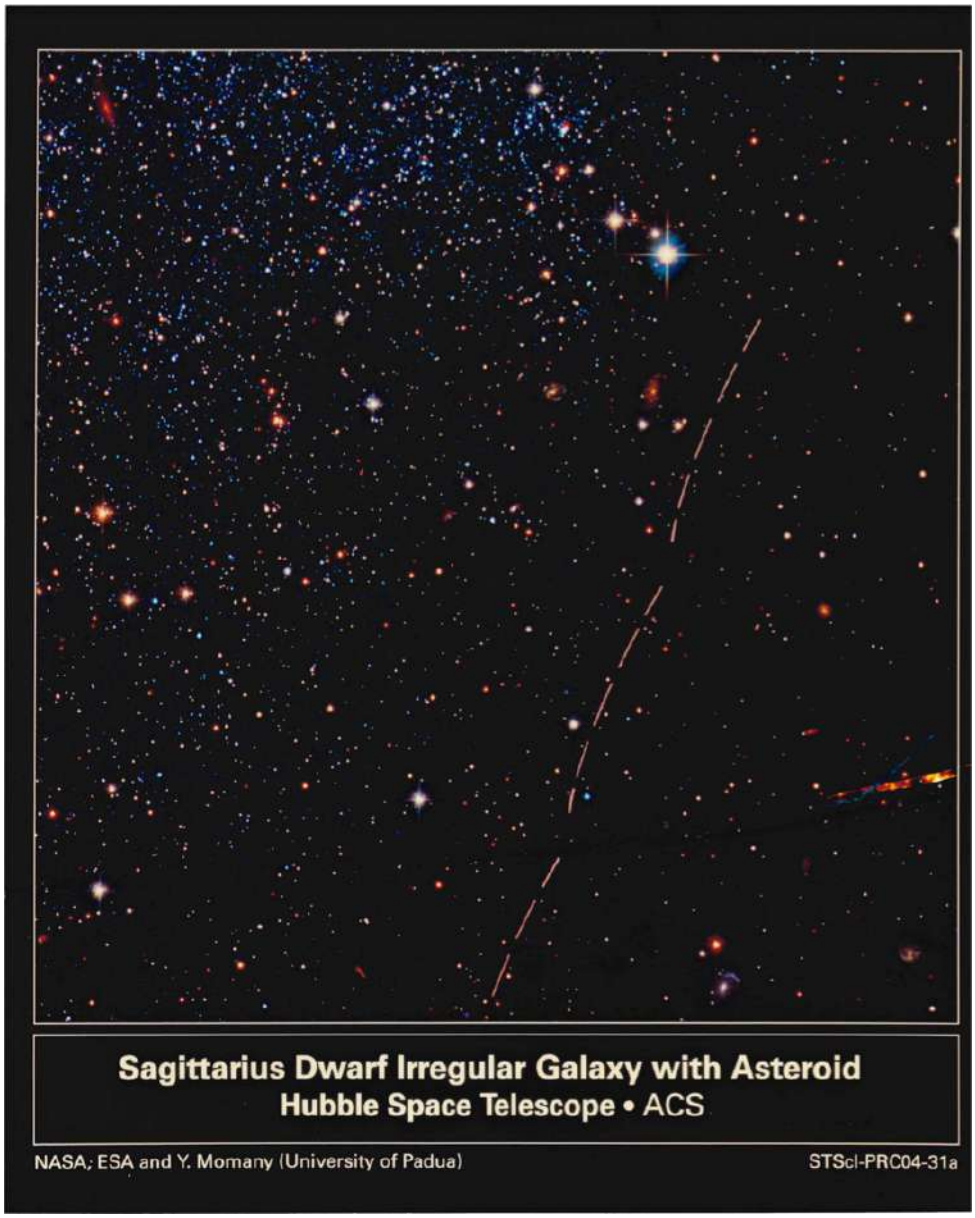


Figure 2: The cover-page of the press-release *NASA e European Space Agency (ESA)* reporting the results of my (Momany et al. 2005) article, entitled: ***HST observations of the old and metal-poor Sagittarius dwarf irregular galaxy***.

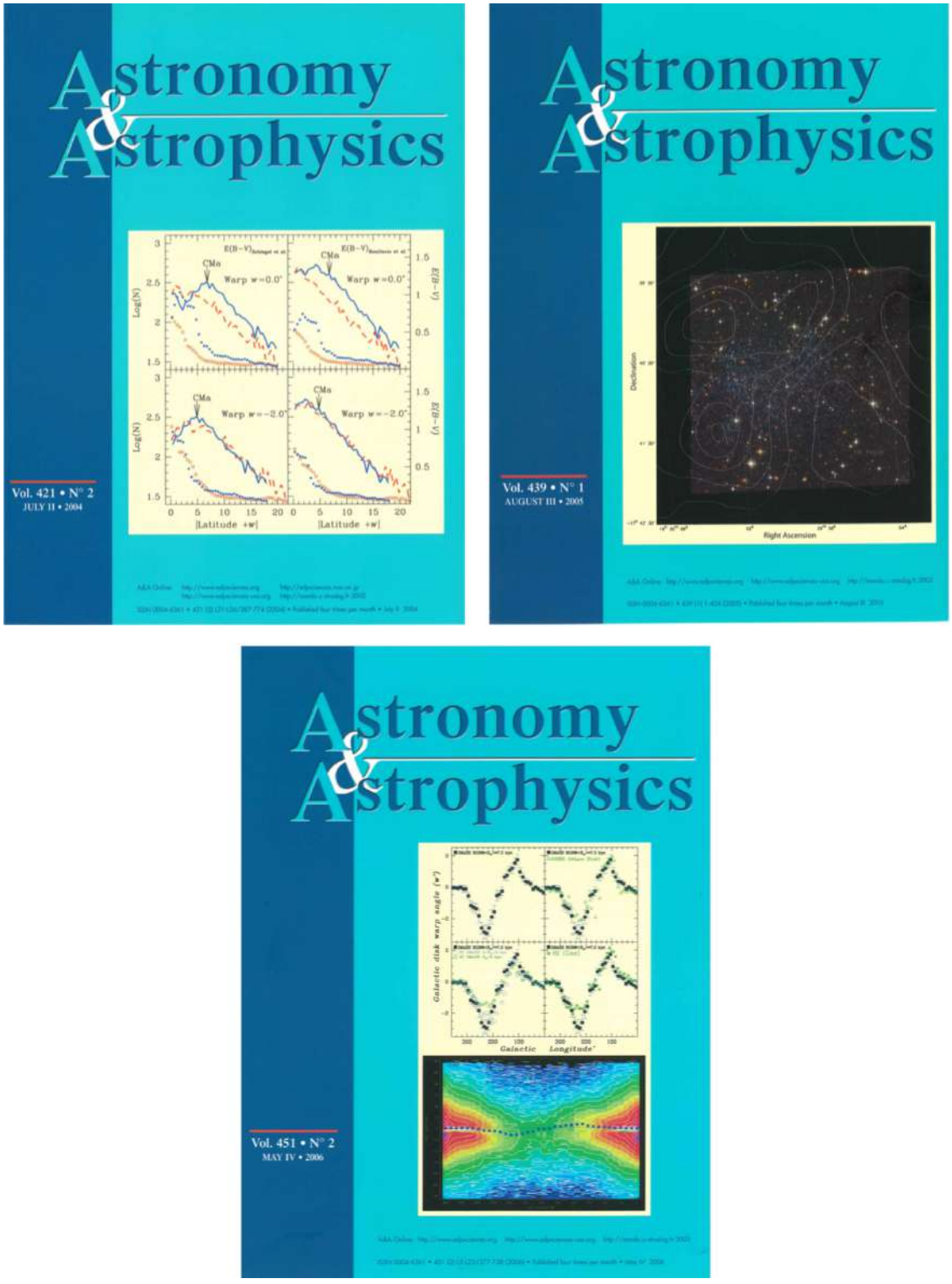
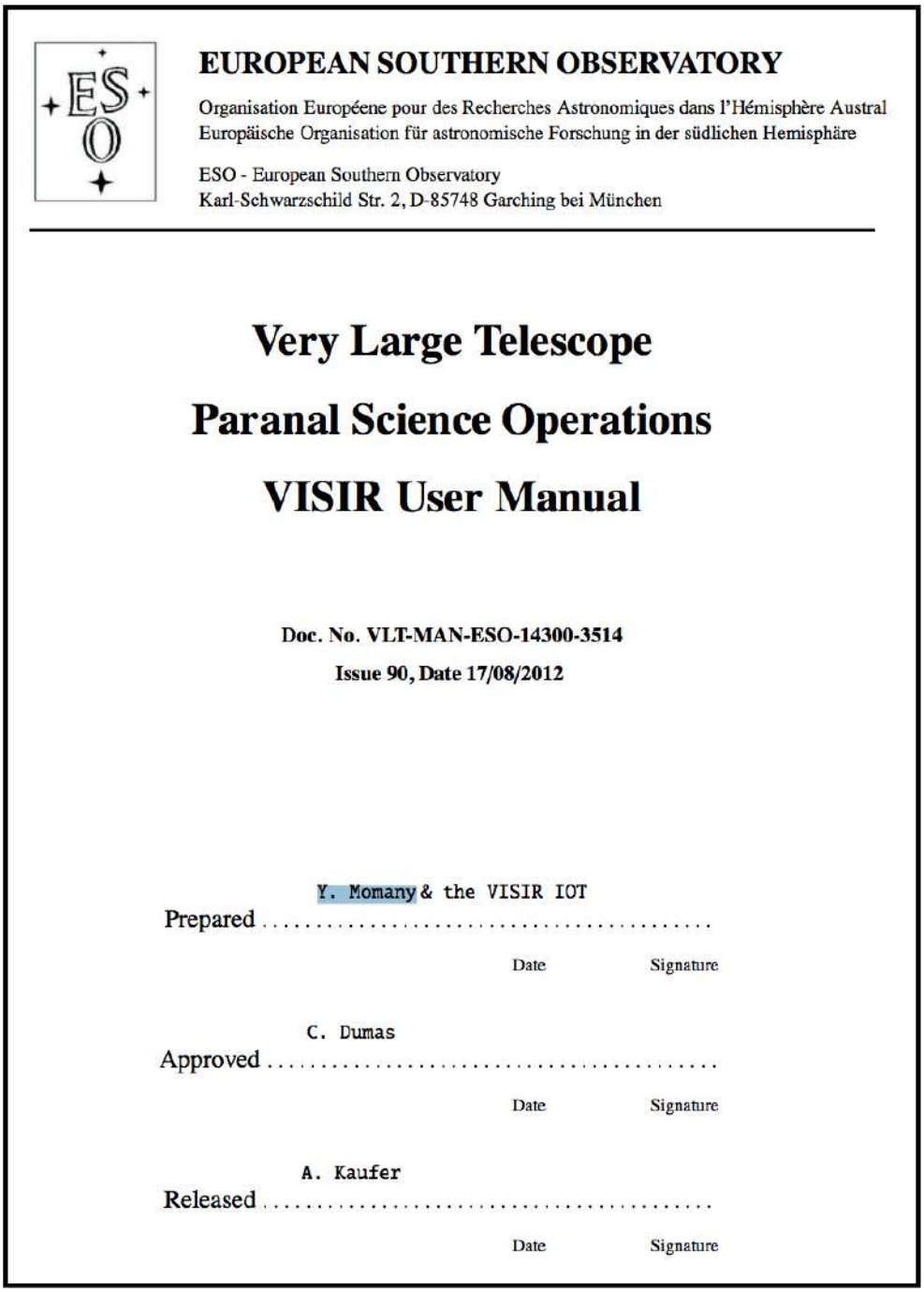


Figure 3: My articles Momany et al. (2004), Momany et al. (2005), e Momany et al. (2006), that earned the cover-pages of the *Astronomy & Astrophysics* in their respective volumes.



EUROPEAN SOUTHERN OBSERVATORY

Organisation Européene pour des Recherches Astronomiques dans l'Hémisphère Austral
Europäische Organisation für astronomische Forschung in der südlichen Hemisphäre

ESO - European Southern Observatory
Karl-Schwarzschild Str. 2, D-85748 Garching bei München

Very Large Telescope

Paranal Science Operations

VISIR User Manual

Doc. No. VLT-MAN-ESO-14300-3514

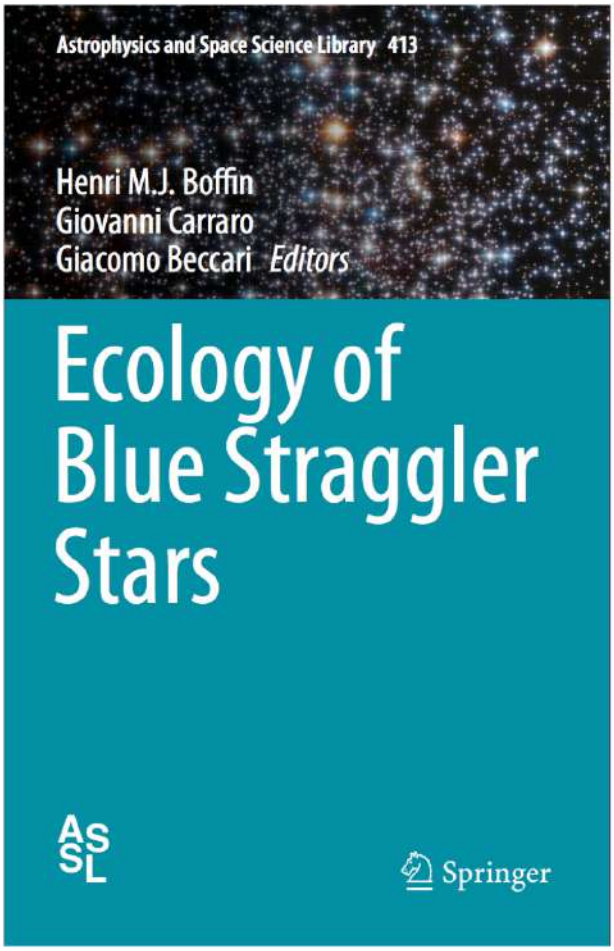
Issue 90, Date 17/08/2012

Y. Momany & the VISIR IOT
Prepared ..... Date Signature

C. Dumas
Approved ..... Date Signature

A. Kaufer
Released ..... Date Signature

Figure 4: The front-page of the VISIR instrument manual.



Chapter 6
The Blue Straggler Population in Dwarf Galaxies

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Figure 5: The cover-page of the **book** on *Blue Stragglers*, published in 2015 (available at Springer Book link) in which I was invited to contribute with a *chapter* on the properties of these peculiar stars in Local Group Dwarf Galaxies.

List of my first-author peer-reviewed published papers:

1. **A plague of magnetic spots among the hot stars of globular clusters**
   Momany Y., *Zaggia, S., Montalto, M. et al. :* 2020, Nature Astronomy, 4, 1092M.

2. **The Blue Straggler Population in Dwarf Galaxies**
   Momany Y. : 2015, Chapter 6, in **Ecology of Blue Straggler Stars**, Astrophysics and Space Science Library, Springer; DOI:10.1007/978-3-662-44434-4_6.

3. **The HI hole and AGB stellar population of the Sagittarius dwarf irregular galaxy. HST proper-motion decontamination**
   Momany Y., *Clemens M., Bedin et al. :* 2014, Astronomy & Astrophysics, 572, A42.

4. **The VLT/VISIR mid-IR view of 47 Tucanae. A further step in solving the puzzle of RGB mass loss**
   Momany Y., *Saviane I., Smette et al. :* 2012, Astronomy & Astrophysics, 537, A2.

5. **Multi-Conjugate Adaptive Optics VLT imaging of the distant old open cluster FSR1415**
   Momany Y., *Ortolani S., Bonatto et al. :* 2008, Monthly Notices of the Royal Astronomical Society, 391, 1650.

6. **The blue plume population in dwarf spheroidal galaxies. Genuine blue stragglers or young stellar population?**
   Momany Y., *Held E.V., Saviane I. et al. :* 2007, Astronomy & Astrophysics, 468, 973.

7. **Outer structure of the Galactic warp and flare: explaining the Canis Major over-density**
   Momany Y., *Zaggia S., Gilmore G. et al. :* 2006, Astronomy & Astrophysics, 451, 515.

8. **HST/ACS observations of the old and metal-poor Sagittarius dwarf irregular galaxy**
   Momany Y., *Held E.V., Saviane I. et al. :* 2005, Astronomy & Astrophysics, 439, 111.

9. **The proper motion of the Magellanic Clouds: The UCAC2-Hipparcos inconsistency**
   Momany Y. & *Zaggia, S.* 2005, Astronomy & Astrophysics, 437, 339.

10. **Probing the Canis Major stellar over-density as due to the Galactic warp**
    Momany Y., *Zaggia S., Bonifacio P. et al. :* 2004, Astronomy & Astrophysics, 421, L29.

11. **The ubiquitous nature of the horizontal branch second U-jump. A link with the Blue Hook scenario?**
    Momany Y., *Bedin L., Cassisi et al. :* 2004, Astronomy & Astrophysics, 420, 605.

12. **Why hot horizontal branch stars can appear redder than red giants**
    Momany Y., *Cassisi S., Piotto G. et al. :* 2003, Astronomy & Astrophysics, 407, 303.

13. **V, J, H and K imaging of the metal rich globular cluster NGC 6528. Reddening, metallicity, and distance based on cleaned colour-magnitude diagrams**
    Momany Y., *Ortolani S., Held E.V. et al. :* 2003, Astronomy & Astrophysics, 402, 607.

14. **A New Feature along the Extended Blue Horizontal Branch of NGC 6752**
    Momany Y., *Piotto G., Recio-Blanco A. et al. :* 2002, Astrophysical Journal, 567, L65.

15. **The Sagittarius dwarf irregular galaxy: Metallicity and stellar populations**
    Momany Y., *Held E.V., Saviane I. et al. :* 2002, Astronomy & Astrophysics, 384, 393.

16. **ESO imaging survey. Pre-FLAMES survey: Observations of selected stellar fields**
    Momany Y., *Vandame B., Zaggia S. et al. :* 2001, Astronomy & Astrophysics, 379, 436.