CV date	**07/01/2021**

Part A. PERSONAL INFORMATION

First and Family name	**José Manuel Vaquero Martínez**		
Social Security, Passport, ID number	**08858518E**	Age	**47**
Researcher codes	WoS Researcher ID (*)	**B-8017-2010**	
	SCOPUS Author ID (*)	**7103086283**	
	Open Researcher and Contributor ID (ORCID) **	**0000-0002-8754-1509**	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	**Universidad de Extremadura**			
Department	**Departamento de Física (Área Física de la Tierra)**			
Address and Country	**Avda. Santa Teresa de Jornet, 38, 06800 Mérida (Badajoz), Spain**			
Phone number	**676618160**	E-mail	jvaquero@unex.es	
Current position	**Full Professor**		From	**16/10/2019**
Key words	**Reconstruction of solar activity, Reconstruction of Climate**			

A.2. Education

PhD Physics	University of Extremadura	2002
Master of Science	University of Extremadura	2001
Bachelor of Physics	University of Extremadura	1997

A.3. JCR articles, h Index, thesis supervised…

JCR Articles: I have published more than 250 research articles, including 197 articles indexed in JCR.

H-index: According to Google Scholar and WoS, my h-index is 28 and 23, respectively.

Number of doctoral theses supervised in the last 10 years: 6

Citations: According to Google Scholar and WoS, my total number of citations is 3942 and 2447, respectively.

Recognized research six-year periods ("sexenios"): Three research six-year periods (in the periods 1999-2004, 2005-2010 and 2011-2016), which are all possible six-year periods in this case.

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

José M. Vaquero (Badajoz, 1973) is currently Professor of Earth Physics at the University of the Physics Department of the University of Extremadura (UEx). His main lines of research focus on the reconstruction of the Earth's climate and solar activity during the last centuries from historical sources.
After finishing his undergraduate studies in Physics, he began his doctoral thesis on an episode in the history of physics in Spain. After a brief period working in the private company, he began his stage as a university professor in 2001. In the first months of work at the University, he took a radical turn in his initial lines of research, beginning to work on the reconstruction of space and terrestrial climate, new topics in the UEx. He soon achieved results of interest to the international scientific community, such as his series of sunspots observed with the naked eye over the last twenty-two centuries (GRL, 2002).
In 2006 he obtained his first project as principal investigator and a stage of development of his research lines began. In 2009, together with Manuel Vázquez, he published the book

"The Sun Recorded Through History" in Springer, the well-known scientific publisher, highlighting the enormous interest of historical documents to know the solar activity of the last centuries, the main external force not recent weather.
Thanks to the information contained in ancient manuscripts and printed matter, he has achieved some remarkable achievements for the knowledge of various natural phenomena. Two examples can be mentioned. On the one hand, José M. Vaquero's team has managed to establish some characteristics of the Maunder minimum (the period in which hardly any sunspots were seen on the Sun from 1645 to 1715), such as the abrupt transition from normal solar activity to great minimum (Vaquero et al., 2011, Astrophys. J. Lett.) or the presence of the solar cycle during this period (Vaquero et al., 2015, Astron. Astrophys.). On the other hand, nobody thought that a "hurricane" (a tropical system) could reach the Iberian Peninsula until Hurricane Vince 2005 did (already very weakened). Was Hurricane Vince 2005 an exception? José M. Vaquero's team found a clear historical analog of the 2005 Vince that occurred in 1842 (Vaquero et al, 2008, BAMS) and others that need to be confirmed. He has also led a line of research on the climate of the last centuries in the Extremadura region. It is worth highlighting the use of documentation from the old State of Feria that has allowed the establishment of temperature and precipitation indexes since 1750 (Fernández-Fernández, 2014, 2015, 2017).
The works of José M. Vaquero (197 articles in journals indexed in the SCI) have shown to what extent it is important to rescue the ancient observations made by scientists of the past. Some of his works have led the scientific community to promote a general review of the best-known solar activity index (Sunspot Number), in collaboration with several foreign institutions, which is having important implications for solar physics, solar-terrestrial physics and geosciences.

Part C. RELEVANT MERITS

C.1. Publications (selection)

1. A. Hernández, M. Cachão, P. Sousa, R.M. Trigo, J. Luterbacher, J.M. Vaquero, M.C. Freitas (2021) “External forcing mechanisms controlling the North Atlantic coastal upwelling regime during the mid-Holocene” Geology (accepted)
2. R. Arlt, J.M. Vaquero (2020) “Historical sunspot records” Living Reviews in Solar Physics 17, 1.
3. A. Muñoz-Jaramillo, J.M. Vaquero (2019) “Visualization of the challenges and limitations of the long-term sunspot number record” Nature Astronomy (doi: 10.1038/s41550-018-0638-2)
4. J.M. Vaquero, L. Svalgaard, V.M.S. Carrasco, F. Clette, L. Lefevre, M.C. Gallego, R. Arlt, A.J.P. Aparicio, J.-G. Richards, and R. Howe (2016) “A Revised Collection of Sunspot Group Numbers” Solar Physics 291, 3061-3074 (doi: 10.1007/s11207-016-0982-2)
5. F. Clette, L. Svalgaard, J.M. Vaquero and E. W. Cliver (2014) "Revisiting the Sunspot Number. A 400-year perspective on the solar cycle" Space Science Reviews 186, 35-103.
6. J. M. Vaquero, M. C. Gallego. I. G. Usoskin, G. A. Kovaltsov (2011) “Revisited sunspot data: A new scenario for the onset of the Maunder minimum” The Astrophysical Journal 731, L24, doi: 10.1088/2041-8205/731/2 /L24
7. M. C. Gallego, R. M. Trigo, J. M. Vaquero, M. Brunet, J. A. García, J. Sigró, and M. A. Valente (2011) “Trends in frequency indices of daily precipitation over the Iberian Peninsula during the last century” Journal of Geophysical Research 116, D02109, doi:10.1029/2010JD014255.
8. R. M. Trigo, J. M. Vaquero, M. J. Alcoforado, M. Barriendos, J. Taborda, R. García-Herrera and J. Luterbacher (2009) “Iberia in 1816, the year without a summer” International Journal of Climatology 29, 99-115, doi 10.1002 /joc.1693.
9. J. M. Vaquero and M. Vázquez (2009) “The Sun Recorded Through History” Springer, Astrophysics and Space Science Library, Vol. 361, 382 p., 225 illus., 17 in color. ISBN 978-0-387-92790-9.

10. J. M. Vaquero, R. García-Herrera, D. Wheeler, M. Chenoweth and C. Mock (2008) “A historical analogue of 2005 Hurricane Vince” Bulletin of the American Meteorological Society 89, 191-201.

C.2. Research projects and grants (selection)

1. “Avances en la reconstrucción de la actividad solar”. Plan Nacional de I+D+I. (AYA2008-04864/AYA). 2009-2011. IP: José M. Vaquero
2. “Caracterización del clima de la península ibérica durante el periodo 1750-1850 (Salvá-Sinobas)” (Nº de Identificación del expediente: 200800050083542). Acción Estratégica del Ministerio de Medio ambiente y Medio Rural y Marino. 2008-2011. IP: Ricardo García Herrera (coordinado) y José M. Vaquero (Equipo UEx)
3. “Recuperación y análisis de datos para el estudio del Clima Espacial en los últimos siglos” Plan Nacional de I+D+I. (AYA2011-25945). 2012-2014. IP: José M. Vaquero
4. COST Action ES1005 TOSCA - Towards a more complete assessment of the impact of solar variability on the Earth’s climate. Junio 2011 - Mayo 2015. Investigadores principales (Chairs) : T. Dudok de Wit, K. Matthes. Spanish MC members: José M. Vaquero (UEx) y Gabriel Chiodo (UCM)
5. “Grandes Eventos de Máximos y Mínimos de Actividad Solar” Plan Nacional de I+D+I. (AYA2014-57556-P). 2015-2017. Investigador Principal: José M. Vaquero
6. “Caracterización del clima del pasado reciente usando archivos y bibliotecas de Extremadura” Junta de Extremadura - FEDER (IB16127). Jun 2017- Jun 2020. IP: José M.Vaquero.
7. “Recalibration of the Sunspot Number Series” International Teams in Space Science. International Space Science Institute. 2018-2019. IP: F. Clette (Belgium) and M. Owens (UK).

C.3. Contracts

1.-Title of the contract: Creation and maintenance of a network for measuring ultraviolet solar radiation in Extremadura
Funding entity: Ministry of Health and Consumption of the Junta de Extremadura
Duration: 01/01/2007 - 12/31/2007 Responsible Researcher: Antonio Serrano Pérez
Number of researchers: 6 TOTAL PRICE OF THE PROJECT: 36,000 euros

2.- Contract title: Creation and maintenance of a network for measuring ultraviolet solar radiation in Extremadura
Funding entity: Extremadura Health Service of the Junta de Extremadura
Duration: 01/01/2008 - 12/31/2008 Responsible Researcher: Antonio Serrano Pérez
Number of researchers: 6 TOTAL PRICE OF THE PROJECT: 36,000 euros

3.- Contract title: Maintenance and monitoring of the ultraviolet solar radiation measurement network in Extremadura
Funding entity: Extremadura Health Service of the Junta de Extremadura
Duration: 01/01/2009 - 12/31/2009 Responsible Researcher: Antonio Serrano Pérez
Number of researchers: 6 TOTAL PRICE OF THE PROJECT: 36,000 euros

C.4. Patents

- “Device for measuring polar coordinates of sunspots from images of the solar disk” Inventor: José Manuel Vaquero Martínez; Application No.: U201231294; Priority country: Spain; Priority date: 12/04/2012; Holder entity: University of Extremadura.
- "Monocular glasses to observe eclipses" Inventors: V.M.S. Carrasco, F.J. Alonso Romero and J.M. Vaquero; Application No.: 201531413; Priority country: Spain; Priority date: 04/03/2017; Holder entity: University of Extremadura.

C.5. Scientific Awards

- Teaching Excellence Award from the University of Extremadura 2017.
- ADENEX 2008 Award to the AIRE Research Group, of which I have been a member since its constitution.

- IV Prize "Juan Jesús Morales" to young researchers granted by the Faculty of Sciences of the University of Extremadura in 2005.
- Cover of the year 2019 of the journal "Nature Astronomy"

C.6. Evaluator and editor activities

I have been the Guest Editor of a special issue of the journal “Solar Physics” (Volume 291, Issue 9, 2016) devoted to the topic “Sunspot Number Recalibration”. In addition, I have reviewed 95 manuscripts from 45 different journals. I have been an evaluator of three agencies: ANEP (5 projects and 23 CVs), DEVA (31 CVs), and the Secretary of Higher Education, Science, Technology and Innovation of Ecuador (1 project).

C.7. Organization and management of R&D activities

- Convener of the Symposium HISTORICAL GEOPHYSICAL AND ASTRONOMICAL DATA (H-GAD) celebrated in the frame of the 4th International Conference of the European Society for the History of Science (Barcelona, 18-20 November 2010).
- Chair of the Local Organizer Committee of the “VI Reunión Española de Física Solar y Heliosférica” conference, Mérida (Spain), 2017.
- Representative of the UEx in the international Consortium CREDO (Cosmic Ray Extremely Distributed Observatory).
- Member of the AGU 2020 Ambassador Award Committee.

C.8. Invited talks

I was “Invited Speaker” in several scientific meeting, including:

- Symposium Climate Extremes During Recent Millennia and their Impact on Mediterranean Societies, National and Kapodistrian, University of Athens, Academy of Athens, Athens, Greece, 14-16 September 2008.
- XIX Encontro Nacional de Astronomía e Astrofísica, Aveiro, Portugal, 15-17 Julho 2009.
- Seminario de investigação “Applied History”: Climas e Sismos. Universidade de Évora, 8 de Junho de 2010.
- Symposium Space Climate 4, Goa, India, January 16-21, 2011.
- 1st Sunspot Workshop, Sunspot, New Mexico, USA, 19-22 September 2011.
- 54º Reunión de la AAA, IX Reunión anual de la SOCHIAS, San Juan, Argentina, October 3, 2011.
- IAU Symposium 286, Mendoza, Argentina, 3-7 October 2011.
- Historia de la física en España (siglo XX): balance y perspectivas, Barcelona, 1-2 de diciembre 2011.
- 2nd Sunspot Workshop, Royal Observatory of Belgium, Brussels, 21-25 May 2012.
- 3rd Sunspot Workshop, Tucson, Arizona, USA, 22-25 January 2013.
- Symposium Space Climate 5, Under the Midnight Sun, Oulu, Finland, June 15-19, 2013.
- 4th Sunspot Workshop, Locarno, Switzerland, 19-23 May 2014.
- 26th General Assembly of the International Union of Geodesy and Geophysics (IUGG), Prague, Czech Republic, June 22 – July 2, 2015.
- Symposium Space Climate 6, Levi, Finnish Lapland, 4-7 April 2016.
- XII Reunión científica de la Sociedad Española de Astronomía, Bilbao, 18-22 July 2016.
- VIII Simposio Extremeño de Estudios Clásicos, Cáceres, 5-7 october 2017.
- EGU General Assembly, Vienna, 8-13 April 2018.
- XXXth General Assembly of the International Astronomical Union, Vienna, 20-31 August 2018.
- IMDROFLOOD: International Workshop on Hydroclimatic Extremes and Impacts at Catchment to Regional Scales. Lisbon, 18 June 2019.
- “XXXVII Reunión Bienal de la Real Sociedad Española de Física. Zaragoza, 15-19 July 2019.
- 4th Dynamo Thinkshop. Department of Physics of the Università degli Studi di Roma Tor Vergata, Italy. 25 - 26 November, 2019.