

# CV BENKHALDOUN ZOUHAIR

## 1. Personal data

**Last Name:** Benkhaldoun **First Name:** Zouhair

Date of birth:

Tél. : -

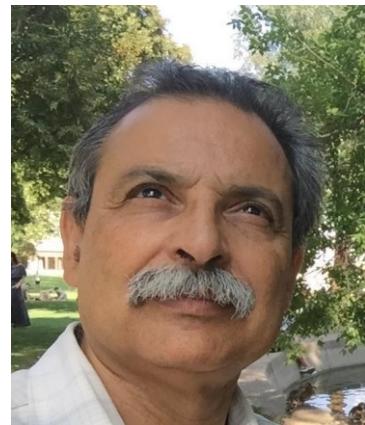
e-mail

Current function (s): Oukaimeden Observatory Director.

Laboratory: High Energy Physics and Astrophysics  
Laboratory. (LPHEA)

Institution: Cadi Ayyad University, Marrakech Morocco.

Field of research: Astrophysics and Space Science.



## 2. Academics:

### **DOCTORATE (Doctorat d'Etat) in Astrophysics**

Cadi Ayyad University of Marrakech/University of Nice Sophia Antipolis in January 1994.

### **PHD IN ENERGETIC**

University of Provence in Marseille in December 1985 with a First Class Honours.

### **Diplome D'Etude Approfondie (Eq. Master) in Energetic**

University of Nice-Sophia Antipolis in June 1983 with honors.

### **Master of physics:** (theoretical physics)

University of Nice-Sophia Antipolis in 1982.

### **Bachelor of physics:**

University of Nice-Sophia Antipolis in 1981.

### **D.E.U.G. A (M.P.):**

University of Nice-Sophia Antipolis in 1980.

### **Baccalaureate in mathematical sciences:**

Obtained at the Lycée My Youssef in Rabat in June 1978

## 3. Résumé des Implications et tâches actuelles:

### **- Enseignement:**

- Niveau Licence: Module Optique Avancée, S6, Option Physique Moderne, encadrement des projets de fin d'études (2 par promotion)
- Niveau Master: Modules Relativité Générale et Cosmologie, Module Traitement d'Image, Module Astrophysique, encadrement des stages de Master (2 à 3 par promotion).

### **- Recherche et rayonnement:**

- Encadrement en cours de **4 doctorats**
- Membre représentant le Maroc à l'échelle de plusieurs organismes internationaux.

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- Responsable de plusieurs contrats de recherche avec des partenaires institutionnels et privés.
- Membre du conseil d'université

### 4. Experience and Responsibilities

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#### With Moroccan Institutions

- Elected member of the Cadi Ayyad University council (Cadi Ayyad) (2021).
- Director of Oukaimeden Observatory, Cadi Ayyad University, (Since 2009 up to now)
- Director of the High Energy Physics and Astrophysics Laboratory. (LPHEA) (1999-2009)
- Director of the UFR High Energy Physics and Astrophysics of the FSSM (2000-2004).
- Head of Master of Astrophysics and High Energy Physics (2000-2006).
- Deputy head of the physics department 1997-1998.
- Elected member of the college and the council of the physics department in 1995-1996-1997
- Elected member of the university council (Cadi Ayyad) (1997-1998).
- Member of the FSSM scientific committee (2003-2006).
- Member of the IT commission of the Semlalia faculty of science 1999-2004.
- Responsible for the computing Lab of the physics department (FSSM) 1999-2002.
- Member of the organizing committee of the seminar "Relation between Research and industry, organized in Mohammedia by the CNR 1988.
- Member of the scientific committee of the 18th International School for Young Astronomers organized by the C.N.C.P.R.S.T. and U.A.I. in Marrakech, September 1990.
- Member of the organizing committee of the 3rd Work-shop of the I.R.I.S. group (Installation of the International Solar Seismology Network), organized by the C.N.C.P.R.S.T. in Marrakech, October 1990.
- Responsible for the organization of the 7th Workshop of the I.R.I.S. group organized by Cadi Ayyad University. in Marrakech, March 1996.
- Responsible for the association between the CNCPRST and the Semlalia Faculty of Sciences of the Cadi Ayyad University in Marrakech in the astrophysical field.

#### With International Institutions

- Elected member of International Astronomical Union division F (2021)
- Member of the International Astronomical Union.
- President and founder member of the Arab Astronomical Society (**ArAS**)
- Founder member of Africa Initiative for Planetary and Space Sciences (**AFIPSS**)
- Member of the African Astronomical Society (**AfAS**)
- Member of International Organization for Science and Training (Canada)
- President of the National Committee for Astronomy in Morocco
- Member of the International Space Weather Initiative
- Member of the American network Global Oscillation Network Group (**GONG**).
- Member of the African group of the United Nations for space sciences.

### 5. PHD supervising:

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#### As a director:

1. Abdelkarim Boskri, «Etude d'un suiveur de franges de nouvelle génération pour l'interférométrie optique à longue base», Université Cadi Ayyad, 3 Decembre **2022**.
2. Loutfi Amal, « Couplages ionosphère-thermosphère à basse latitude lors d'événements solaires extrêmes. Exploitation conjointe d'instruments de l'Observatoire de l'Oukaimeden au Maroc et des satellites Swarm », Université Cadi Ayyad, 8 décembre **2021** (**Cotutelle** Université de

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- Toulouse)
- 3. Moulane Youssef, "Monitoring the activity and composition of comets with TRAPPIST telescopes", Université Cadi Ayyad, 22 mars **2021**, (**Cotutelle** Université de Liège)
  - 4. Khalid Barkaoui, "Détection et caractérisation d'exoplanètes en transit avec le télescope TRAPPIST-Nord", Université Cadi Ayyad, FSSM, 8 Septembre, **2020**. (**Cotutelle** Université de Liège)
  - 5. Mohamed Kaab, « Exploration du Couplage Ionosphérique-Atmosphérique via des instruments d'Optique : Expérience RENOIR », Université Cadi Ayyad, FSSM, Observatoire de l'Oukaimeden, 30 Novembre, **2019**.
  - 6. Meryem Guennoun, « Observation des météores depuis le sol et analyse par un réseau dédié », Université Cadi Ayyad, FSSM, Observatoire de l'Oukaimeden, 26 Juin, **2019**
  - 7. Mamoun Ait My El Arbi, « Observation depuis le sol et analyse des émissions associées aux chutes de météorides sur la lune », Université Cadi Ayyad, FSSM, Observatoire de l'Oukaimeden, Septembre **2016**. (**Cotutelle**, Université de Toulouse)
  - 8. Ahmed Daassou (Doctorat), « Contribution à la mise en place de l'Astrophotométrie de précision à l'OUCA, « Application à la détection des exoplanètes de type Jupiter Chaud et Etudes de l'impact des météorides dans le système Terre-Lune », Université Cadi Ayyad, FSSM, Observatoire de l'Oukaimeden, Juin **2015**.
  - 9. Youssef Hach (Doctorat), « Analyse et Modélisation des Paramètres Astroclimatiques pour l'Evaluation des sites Astronomiques », Université Cadi Ayyad, FSSM, Octobre **2012**.
  - 10. Bounhir Aziza, « Qualification des sites Astronomiques: Nouvelle approche par l'utilisation des mesures satellitaires et des données météorologiques », FSSM, Juin **2009**.
  - 11. Habib Abdelfettah, (Doctorat) « Application de la technique du Scidar aux étoiles simples et Réalisation d'un « Single Star Scidar » », FSSM, 1-03- **2007**
  - 12. Abdelouahed Abahamid, (Doctorat), « Contribution à la modélisation et l'évaluation de la turbulence atmosphérique & Mise en oeuvre et exploitation d'un moniteur de seeing astronomique », FSSM, **2005**.
  - 13. Siher El Arbi (Doctorat d'Etat), "Extraction de l'extinction atmosphérique à partir des données Heliosismologiques et Satellitaires", FSSM, Décembre **2004**.
  - 14. Jabiri Abdelhadi. (Doctorat d'Etat), « L'Oukaimeden Comme site d'Observation Astronomique : Caractérisation climatologique et optique et modélisation de la turbulence atmosphérique », Université Cadi Ayyad, FSSM, Mai **2001**.
  - 15. Siher El Arbi (DES) « Photométrie en Astronomie. Application d'une Camera CCD à l'Etude de la Variabilité d'une Étoile. Réduction des Données enregistrées par un Photomètre Diurne à L'Oukaimeden », Université Cadi Ayyad, FSSM, Octobre **1996**.
  - 16. Jabiri Abdelhadi. (DES), « Études Météorologiques du site de l'Oukaimeden. Climatologie du seeing par modélisation », Université Cadi Ayyad, FSSM, Octobre **1994**

### **As co-supervisor:**

- 1. Jamila Chouqar, "Detectability and Characterization of Exo-atmospheres with JWST", Université Cadi Ayyad, FSSM, Mars **2022**.
- 2. Sabil Mohamed (Doctorat), « Prospection et étude de sites astronomiques au Maroc: Le site d'Aklim dans l'Anti-Atlas. Réalisation d'un nouvel Instrument de mesure du Seeing: Le moniteur Interférentiel du Seeing », Université Cadi Ayyad, FSSM, Octobre **2012**.
- 3. Azagrouze Ossama, « Contribution à l'Apodisation par Interférométrie, Coronographie et Détection des exoplanètes », FSSM Avril **2012**.
- 4. Thami EL HALKOUJ, « Vers l'interférométrie optique d'étoiles extragalactiques », Université Cadi Ayyad, FSSM, Janvier **2008**.

## 6. Scientific production:

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See this link for most of the articles and communications:

[http://adsabs.harvard.edu/cgi-bin/basic\\_connect?qsearch=benkhaldoun,+z&version=1](http://adsabs.harvard.edu/cgi-bin/basic_connect?qsearch=benkhaldoun,+z&version=1)

### *Refereed papers in indexed journal:*

1. Ferrais, Marin; Vernazza, Pierre; Jorda, Laurent; Jehin, Emmanuël; Pozuelos, Francisco J.; Manfroid, Jean; Moulane, Youssef; Barkaoui, Khalid; **Benkhaldoun, Zouhair**, "Photometry of 25 Large Main-belt Asteroids with TRAPPIST-North and -South", *The Minor Planet Bulletin (ISSN 1052-8091). Bulletin of the Minor Planets Section of the Association of Lunar and Planetary Observers*, Vol. 49, No. 4, pp. 307-313 (2022), DOI: 10.1002/1052-8091.10029
2. A Loutfi, F Pitout, A Bounhir, **Z Benkhaldoun**, JJ Makela, S Abamni, K Zyane, A Elfakhiri, "Interhemispheric Asymmetry of the Equatorial Ionization Anomaly (EIA) on the African Sector Over 3 Years (2014–2016): Effects of Thermospheric Meridional Winds", *Journal of Geophysical Research: Space Physics*, Volume 127, Issue 9, article id. e29902, 2022, DOI: 10.1029/2021JA029902
3. Gan, Tianjun; Soubkiou, Abderahmane; Wang, Sharon X.; **Benkhaldoun, Zouhair**; et al, "TESS discovery of a sub-Neptune orbiting a mid-M dwarf TOI-2136", *Monthly Notices of the Royal Astronomical Society*, Volume 514, Issue 3, pp. 4120-4139, 2022, DOI: 10.1093/mnras/stac1448
4. Millet, Tristan; Bencherif, Hassan; Bounhir, Aziza; Bègue, Nelson; Lamy, Kévin; Ranaivombola, Marion; **Benkhaldoun, Zouhair**; Portafaix, Thierry; Duflot, Valentin, "Aerosol Distributions and Transport over Southern Morocco from Ground-Based and Satellite Observations (2004–2020)", *Atmosphere*, vol. 13, issue 6, p. 923, 2022. DOI: 10.3390/atmos13060923
5. Ferrais, M.; Jorda, L.; ..., **Benkhaldoun, Z.**; et al, "M-type (22) Kalliope: A tiny Mercury", *Astronomy & Astrophysics*, Volume 662, id.A71, 18 pp., 2022, DOI: 10.1051/0004-6361/202243200
6. Bencherif, Hassan; Bounhir, Aziza; Bègue, Nelson; Millet, Tristan; **Benkhaldoun, Zouhair**; Lamy, Kévin; Portafaix, Thierry; Gadouali, Fouad, "Aerosol Distributions and Sahara Dust Transport in Southern Morocco, from Ground-Based and Satellite Observations", *Remote Sensing*, vol. 14, issue 10, p. 2454, 2022, DOI: 10.3390/rs14102454
7. Christian, Sam; Vanderburg, Andrew; ..., **Benkhaldoun Zouhair**, et al, "Aerosol Distributions and Sahara Dust Transport in Southern Morocco, from Ground-Based and Satellite Observations", *The Astronomical Journal*, Volume 163, Issue 5, id.207, 26 pp., 2022, DOI: 10.3847/1538-3881/ac517f
8. Jordán, Andrés; Hartman, J. D.; ..., **Benkhaldoun Zouhair**, et al, "HATS-74Ab, HATS-75b, HATS-76b, and HATS-77b: Four Transiting Giant Planets Around K and M Dwarfs", *The Astronomical Journal*, Volume 163, Issue 3, id.125, 25 pp., 2022, DOI: 10.3847/1538-3881/ac4a77
9. Marques Oliveira, J.; Sicardy, B.; ..., et al, "Constraints on the structure and seasonal variations of Triton's atmosphere from the 5 October 2017 stellar occultation and previous observations", 2022, DOI: 10.1051/0004-6361/202141443
10. Dong, Jiayin; Huang, Chelsea X.; ..., **Benkhaldoun Zouhair** et al, "NEID Rossiter-McLaughlin Measurement of TOI-1268b: A Young Warm Saturn Aligned with Its Cool Host Star", *The Astrophysical Journal Letters*, Volume 926, Issue 2, id.L7, 12 pp., 2022, DOI: 10.3847/2041-8213/ac4da0

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11. Giacalone, Steven; Dressing, Courtney D.;...; **Benkhaldoun Zouhair**, et al, “Validation of 13 Hot and Potentially Terrestrial TESS Planets”, *The Astronomical Journal*, Volume 163, Issue 2, id.99, 32 pp., 2022, DOI:10.3847/1538-3881/ac4334
12. Honoré, Messanga Etoundi; Amaechi, Paul Obiakara; Daïka, Augustin; Aziz, Diaby Kassamba Abdel; Kaab, Mohamed; Mbané, César Biouele; **Benkhaldoun, Zouhair**, “Longitudinal Variability of the Vertical Drift Velocity Inferred from Ground-Based Magnetometers and C/NOFS Observations in Africa”, *International Journal of Geosciences*, vol. 13, issue 08, pp. 657-680, 2022, DOI:10.4236/ijg.2022.138035
13. Schanche, N.; Pozuelos, F. J.;...; **Benkhaldoun, Z.** et al, “TOI-2257 b: A highly eccentric long-period sub-Neptune transiting a nearby M dwarf”, *Astronomy & Astrophysics*, Volume 657, id.A45, 18 pp., 2022, DOI:10.1051/0004-6361/202142280
14. Martin, David V.; El-Badry, Kareem; ...; **Benkhaldoun, Zouhair** et al, “TOI-1259Ab - a gas giant planet with 2.7 per cent deep transits and a bound white dwarf companion”, *Monthly Notices of the Royal Astronomical Society*, Volume 507, Issue 3, pp.4132-4148, DOI: 10.1093/mnras/stab2129, 2021
15. Teske, Johanna; Wang, Sharon Xuesong; ....; **Benkhaldoun, Zouhair**; et al, “The Magellan-TESS Survey. I. Survey Description and Midsurvey Results”, *The Astrophysical Journal Supplement Series*, Volume 256, Issue 2, id.33, 57 pp., DOI: 10.3847/1538-4365/ac0f0a, 2021
16. Marciniaik, A.; Ďurech, J.; Alí-Lagoa, V.; ...; **Benkhaldoun, Z.** et al, “Properties of slowly rotating asteroids from the Convex Inversion Thermophysical Model”, *Astronomy & Astrophysics*, Volume 654, id.A87, 32 pp., DOI: 10.1051/0004-6361/202140991, 2021
17. Vernazza, P.; Ferrais, M.; ...; **Benkhaldoun, Z.**; et al, “VLT/SPHERE imaging survey of the largest main-belt asteroids: Final results and synthesis”, *Astronomy & Astrophysics*, Volume 654, id, DOI: 10.1051/0004-6361/202141781, 2021
18. Abdelkarim Boskri, Romain G Petrov, Thami El Halkouj, Massinissa Hadjara, James Leftley, **Zouhair Benkhaldoun**, Pierre Cruzalébes, Aziz Ziad, Marcel Carbillet, Potential and Sky coverage for off-axis fringe tracking in optical long baseline interferometry, *Monthly Notices of the Royal Astronomical Society*, 2021;, stab1505, <https://doi.org/10.1093/mnras/stab1505>.
19. Benni, P.; Burdanov, A. Y.; ...; **Benkhaldoun, Z.**; et al, “Discovery of a young low-mass brown dwarf transiting a fast-rotating F-type star by the Galactic Plane eXoplanet (GPX) survey”, *Monthly Notices of the Royal Astronomical Society*, Volume 505, Issue 4, pp.4956-4967, DOI: 10.1093/mnras/stab1567, 2021
20. Paul O. Amaechi, Elijah O. Oyeyemi, Andrew O. Akala, Mohamed Kaab, Waqar Younas, **Zouhair Benkhaldoun**, Majid Khan, Christine-Amory Mazaudier, “Comparison of ionospheric anomalies over African equatorial/low-latitude region with IRI-2016 model predictions during the maximum phase of solar cycle 24”, *Advances in Space Research*, 2021, ISSN 0273-1177, <https://doi.org/10.1016/j.asr.2021.03.040>.
21. Devogèle, Maxime; Ferrais, Marin; ...; **Benkhaldoun, Zouhair**; et al, “(6478) Gault: Physical characterization of an active main-belt asteroid”, *Monthly Notices of the Royal Astronomical Society*, Volume 505, Issue 1, July 2021, Pages 245–258, <https://doi.org/10.1093/mnras/stab1252>
22. Dong, Jiayin; Huang, Chelsea X.; ...; **Benkhaldoun, Zouhair**; et al, “Warm Jupiters in TESS Full-frame Images: A Catalog and Observed Eccentricity Distribution for Year 1”, *The Astrophysical Journal Supplement Series*, Volume 255, Issue 1, id.6, 25 pp., doi: 10.3847/1538-4365/abf73c
23. Carry, B.; Vernazza, P.; ...; **Benkhaldoun, Z.**; et al, “Evidence for differentiation of the most primitive small bodies”, *Astronomy & Astrophysics*, Volume 650, id.A129, 15 pp., doi: 10.1051/0004-6361/202140342
24. Vokrouhlický, D.; Ďurech, J.; Hanuš, J.; Ferrais, M.; Jehin, E.; **Benkhaldoun, Z.**, “(208) Lacrimosa: A case that missed the Slivan state?”, *Astronomy & Astrophysics*, Volume 649, id.A45, 18 pp., 2021, doi: 10.1051/0004-6361/202140585

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25. Ferrais, Marin; Jehin, Emmanuël; Vernazza, Pierre; Jorda, Laurent; Moulane, Youssef; Pozuelos, Francisco J.; Manfroid, Jean; Barkaoui, Khalid; **Benkhaldoun, Zouhair**, "Lightcurve Based Determination of 10 Hygiea'S Rotational Period With Trappist-North and -South", *The Minor Planet Bulletin (ISSN 1052-8091). Bulletin of the Minor Planets Section of the Association of Lunar and Planetary Observers*, Vol. 48, No. 2, pp. 166-167 (2021)
26. Agol, Eric; Dorn, Caroline; ...; **Benkhaldoun, Zouhair**; et al, "Refining the Transit-timing and Photometric Analysis of TRAPPIST-1: Masses, Radii, Densities, Dynamics, and Ephemerides", *The Planetary Science Journal, Volume 2, Issue 1, id.1, 38 pp.*, 2021
27. Makela, Jonathan J.; Baughman, Matthew; Navarro, Luis A.; Harding, Brian J.; Englert, Christoph. R.; Harlander, John M.; Marr, Kenneth D.; **Benkhaldoun, Zouhair**; Kaab, Mohamed; Immel, Thomas J., "Validation of ICON MIGHTI Thermospheric Wind Observations: 1. Nighttime Red Line Ground Based Fabry Perot Interferometers", *Journal of Geophysical Research: Space Physics, Volume 126, Issue 2, article id. e28726*, 2021.
28. Daylan, Tansu; Pinglè, ...; **Zouhair, Benkhaldoun**; et al, "ESS Discovery of a Super-Earth and Three Sub-Neptunes Hosted by the Bright, Sun-like Star HD 108236", *The Astronomical Journal, Volume 161, Issue 2, id.85, 21 pp.*", 2021.
29. Newton, Elisabeth R.; Mann, Andrew W.; ...; **Benkhaldoun, Zouhair**; et al., "TESS Hunt for Young and Maturing Exoplanets (THYME). IV. Three Small Planets Orbiting a 120 Myr Old Star in the Pisces-Eridanus Stream", *The Astronomical Journal, Volume 161, Issue 2, id.65, 20 pp.*, 2021
30. Sabil, Mohammed; Habib, A.; **Benkhaldoun, Z.**, "Interferential seeing monitor, a seeing monitor for atmospheric turbulence studies: calibration with the differential image motion monitor", *Monthly Notices of the Royal Astronomical Society, Volume 500, Issue 2, pp.1884-1888*, 2021.
31. Dreizler, S.; Crossfield, I. J. M.; ....; **Benkhaldoun, Z.**; et al., "The CARMENES search for exoplanets around M dwarfs. LP 714-47 b (TOI 442.01): populating the Neptune desert", *Astronomy & Astrophysics, Volume 644, id.A127, 22 pp.*, 2020
32. Colas, F.; Zanda, B.; ....; **Benkhaldoun, Z.**; et al., "FRIPON: a worldwide network to track incoming meteoroids", *Astronomy & Astrophysics, Volume 644, id.A53, 23 pp.*, 2020.
33. Devillepoix, H. A. R.; Cupák, M.; ...; H. Chennaoui; **Benkhaldoun, Z.**; Jabiri, A.; Guennoun, M.; Barka, A.; Darhmaoui, H.; et al, "A Global Fireball Observatory", *Planetary and Space Science, Volume 191, article id. 105036.*, 2020.
34. Nowak, G.; Luque, R.; ....; **Benkhaldoun, Z.**; et al, "The CARMENES search for exoplanets around M dwarfs. Two planets on opposite sides of the radius gap transiting the nearby M dwarf LTT 3780", *Astronomy & Astrophysics, Volume 642, id.A173, 21 pp.*, 2020.
35. Demory, B. -O.; Pozuelos, F. J.; ....; **Benkhaldoun, Z.**; et al, "A super-Earth and a sub-Neptune orbiting the bright, quiet M3 dwarf TOI-1266", 2020
36. Yang, B.; Hanuš, J.; Carry, B.; ....; **Benkhaldoun, Z.**; et al, "Binary asteroid (31) Euphrosyne: ice-rich and nearly spherical", *Astronomy & Astrophysics, Volume 641, id.A80, 9 pp.*, 2020.
37. Paul O. Amaechi, Elijah O. Oyeyemi, Andrew O. Akala, Elijah O. Falayi, Mohamed Kaab, **Zouhair Benkhaldoun**, and Christine, Amory Mazaudier, "Quiet Time Ionopheric Irregularities Over the African Equatorial Ionization Anomaly Region". *Radio Science, 55, e2020RS007077. https://doi.org/10.1029/2020RS007077*, 2020.
38. Moulane, Y.; Jehin, E.; Rousselot, P.; Manfroid, J.; Shinnaka, Y.; Pozuelos, F. J.; Hutsemékers, D.; Opitom, C.; Yang, B.; **Benkhaldoun, Z.**, « Photometry and high-resolution spectroscopy of comet 21P/Giacobini-Zinner during its 2018 apparition », *Astronomy & Astrophysics, Volume 640, id.A54, 14 pp.*, 2020
39. Loutfi, A.; Bounhir, A.; Pitout, F.; **Benkhaldoun, Z.**; Makela, J. J., "Thermospheric Neutral Winds Above the Oukaimeden Observatory: Effects of Geomagnetic Activity", *Journal of Geophysical Research: Space Physics, Volume 125, Issue 7, article id. e27383*, 2020.

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40. Chouqar, J.; **Benkhaldoun, Z.**; Jabiri, A.; Lustig-Yaeger, J.; Soubkiou, A.; Szentgyorgyi, A, "Properties of sub-Neptune atmospheres: TOI-270 system", *Monthly Notices of the Royal Astronomical Society*, Volume 495, Issue 1, pp.962-970, 2020.
41. Cooke, Benjamin F.; Pollacco, Don; Almleaky, Y.; Barkaoui, K.; **Benkhaldoun, Z.**; et al, "Two Transiting Hot Jupiters from the WASP Survey: WASP-150b and WASP-176b ", *The Astronomical Journal*, Volume 159, Issue 6, id.255. 2020.
42. Podlewska-Gaca, E.; ...; **Benkhaldoun, Z.**; et al, "Physical parameters of selected Gaia mass asteroids ", *Astronomy & Astrophysics*, Volume 638, id.A11, 23 pp., 2020.
43. Krushinsky, Vadim; Benni, Paul; Burdanov, Artem; Antokhin, Igor; Antokhina, Eleonora; Jehin, Emmanuël; Barkaoui, Khalid; Fitzsimmons, Alan; Gibson, Christopher; Gillon, Michaël; Popov, Alexander; Baştürk, Özgür; **Benkhaldoun, Zouhair**; Marchini, Alessandro; Papini, Riccardo; Salvaggio, Fabio; Brazhko, Varvara, "Discovery of a pre-cataclysmic binary with unusual chromaticity of the eclipsed white dwarf by the GPX survey", *Monthly Notices of the Royal Astronomical Society*, Volume 493, Issue 4, p.5208-5217, 2020.
44. Patra, Kishore C.; Winn, Joshua N.; Holman, Matthew J.; Gillon, Michael; Burdanov, Artem; Jehin, Emmanuel; Delrez, Laetitia; Pozuelos, Francisco J.; Barkaoui, Khalid; **Benkhaldoun, Zouhair**; Narita, Norio; Fukui, Akihiko; Kusakabe, Nobuhiko; Kawauchi, Kiyoie; Terada, Yuka; Bouma, L. G.; Weinberg, Nevin N.; Broome, Madelyn, "The Continuing Search for Evidence of Tidal Orbital Decay of Hot Jupiters", *The Astronomical Journal*, Volume 159, Issue 4, id.150, April 2020.
45. Vernazza, P.; Jorda, L.; ...; **Benkhaldoun, Z.**; et al, "A basin-free spherical shape as an outcome of a giant impact on asteroid Hygiea", *Nature Astronomy*, Volume 4, p. 136-141, 2020.
46. Ferrais, Marin; Jehin, Emmanuël; Moulane, Youssef; Pozuelos, Francisco J.; Barkaoui, Khalid; **Benkhaldoun, Zouhair**, "Trappist-North and -South Combined Lightcurves of Near-Earth Asteroid 3122 Florence", *The Minor Planet Bulletin (ISSN 1052-8091). Bulletin of the Minor Planets Section of the Association of Lunar and Planetary Observers*, Vol. 47, No. 1, pp. 21-22 2020.
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  - 90. Jabiri, Z. **Benkhaldoun** and A. Ziad « GSM Campaign at Oukaimeden: I- Optical characterisation of the site », ASP, Vol. 266, 382-385, 2002
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- 3. El Halkouj, Thami T.; **Benkhaldoun**, Zouhair Z.; Romain, Petrov P.; Lazrek, Mohamed M. »Large Telescopes and Virtual Observatory: Visions for the Future », 25th meeting of the IAU, Joint Discussion, Sydney, Australia, 8-17 July 2003.
- 4. **Benkhaldoun**, Zouhair "High Level Teaching Astronomy in Moroccan University", Effective Teaching and Learning of Astronomy, 25<sup>th</sup> meeting of the IAU, Special Session 4 in Sydney, Australia, 24-25 July, 2003.
- 5. Jabiri, A., **Benkhaldoun**, Z., Vernin, J., Climatologie de la turbulence atmosphérique, 4<sup>ème</sup> Journée Maghrébine sur la Mécanique, Institut de génie mécanique, univ. Djillali Liabes, Sidi Bel Abbès, 25 - 26 Octobre 1998.
- 6. **Benkhaldoun**, Z., "The moroccan Experience in Astrophysical Research: Oukaimeden Site "Seventh UN/ESA Workshop on Basic Space Science, Tegucigalpa M.D.C., Honduras, 16-20 Jun 1997.
- 7. Siher, E., **Benkhaldoun**, Z., Jabiri, A., "Photometric data reduction of Oukaimeden site". IRIS Workshop, Nice, 01-04 April 1996.
- 8. Jabiri,A., **Benkhaldoun**, Z., Vernin, J., Siher, E., «Estimation du seeing astronomique par des modèles de prédition», physique en herbe, Nice, 3-7 juillet 1995.
- 9. **Benkhaldoun**, Z, Jabiri, A., The meteorological data of the Oukaimeden site. IRIS Workshop, Cambridge 13 - 15 december 1993.
- 10. Benkhaldoun, Z., Kadiri, S., Lazrek, M., and Touma, H., "Oukaimeden site study". Workshop IRIS, Marrakesh, Morocco, Ed. CNCPREST, 1991.
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12. **Z. Benkhaldoun, M. Gambino, G. Hatem, J.P. Bros, M. Gaune-Escard**, "Etude thermodynamique des systèmes  $MCl-BiCl_3$  ( $M=Li, Na, K, Rb$ ) : II. Température, enthalpie de fusion et capacité calorifique des composés définis.", AFCAT, Ferrara, Octobre 1986.
13. **Z. Benkhaldoun, G. Hatem, M. Gaune-Escard**, "Etude thermodynamique des systèmes  $MCl-BiCl_3$  ( $M=Li, Na, K, Rb$ ): I. Enthalpie de mélange" AFCAT, Ferrara, Octobre 1986.
14. **Z. Benkhaldoun, G. Hatem, M. Gaune-Escard**, "A thermodynamic associated model for the mixtures  $BiCl_3-MCl$  ( $M= alkali metals$ )", MSDG Meeting, Londres, 16 décembre 1985.
15. **Z. Benkhaldoun, G. Hatem, M. Gaune-Escard**, "Difficultés expérimentales rencontrées dans la détermination des enthalpies de mélange de sels fondus très réactifs. » AFCAT, Montpellier, 20-22 mai 1985.

More than 30 Circular of the Minor Planet Center about NEO detection and comet discoveries.

### 6. Workshops Schools and meetings as Chairperson:

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- Astronomical Site Selection Workshop for the Egyptian Large Optical Telescope (Virtual) 9-10 June 2020
- ArAS International school for Astrophysics (ArAS-SfA 4), Kotamia Egypt 2019
- ArAS International school for Astrophysics (ArAS-SfA 3), Beirut Lebanon 2018
- Arab Winter School for Astrophysics (AWSA2), Ifrane, Morocco, 2017
- First Arab School for Astrophysics FAWSA, Marrakech, Morocco, 2016
- 6 OISA Schools (Oukaimeden International School for Astrophysics). from 2007 to 2015
- International IAU Workshop on Site Testing : « IAU site 2000 », November, 2000, Marrakech.
- Organization of the 7th IRIS Work-shop on the installation of an international network in solar seismology, in March 1995, Marrakech.
- Organization of the 3rd IRIS Work-shop, in October 1990, Marrakech.

### 7. Research Project and contract as PI

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- Agreement with Spaceflux, company (in the SSA field), United Kingdom 2022 (in progress)
- Agreement with Astronomical Astronomique Gérard Thérin, France, 2022 (in progress)
- Agreement with SpaceAble company (in the SSA field), France, 2021 (in progress)
- Agreement with NRIAG, Egypte, 2021 (in progress)
- Agreement with Astronomical Scientific Center Joint Stock Company, the **Russian Federation**, (2020, in progress)
- SVOM collaboration, Partner: CNES, **France** (2020, in progress)
- Hubert Curien / Toubkal with Toulouse University, **France** (2018, in progress)
- Virluos Vliruos Project: Strengthening international scientific, collaboration and teaching at the Oukaimeden Observatory in Morocco, SI-2019-01-95 -, Partners: **Morocco-Senegal, France** and **Belgium** (2018, in progress)
- TRAPIST-Nord, Partener: University of Liège-FRS **Belgium** (2016, in progress)
- OWL-Net project, Partener **Korean** Astronomical Space Institut (2014, in progress)
- KACOOLR project, Partener: King Abdulaziz University, Kingdom of **Saudi Arabia** (2014, in progress)
- RENOIR project, Partener: University of Illinois, **USA** (2013, in progress)
- Volubilis Integrated Action, Partener: University of Toulouse, Observatory of **Paris**, Hassan II University. (2011-2013)
- MOSS project, Partener, **France, Switzerland** (2010, in progress).
- ELT project, Partener: Hassan II Academy of Sciences and Techniques (2008-2009)

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- E-ELT project, Partener: **European Union**, FP6 (2006-2009).
- PICS, Partener: University of Nice, **France**, " Site prospecting for future very large telescopes (ELT) and study of atmospheric seeing. ", (2004-2007).
- PI of a research contract with ESO (**European Southern Observatory**) 2003 -2005
- PARS 66 SDU **CNRST** Program, (2001-2006)
- Integrated Action, partner: University of Nice, **France** (1997-2000)

## 8. Outreach and responsibilities:

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- President** of Moroccan National Committee for Astronomy
- International Astronomical Union, member since 1990**
- International Astronomical Union /National Outreach Coordinator** for Morocco
- Founding Member and president of **Atlas Dark Sky Foundation**
- Founding member and first president of the Association of Amateur Astronomy (**3AM**), president from 1999 to 2012.
- Member of several socio-cultural NGOs.
- More than 60 conferences for schools and a large public audience.
- Organization of 21 Astronomy Festivals (Festivale d'Astronomie de Marrakech).

## 9. Distinctions and expertise:

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### Distinctions :

- Best Reacher in Morocco in the field of "Earth and Planetary Science", awarded by Scopus in 2022.
- Benkhaldoun Astéroïde (133892) Benkhaldoun = 2004 RN8 = 2000 XH46 , « Zouhair Benkhaldoun (b. 1959) is a researcher in Cadi Ayyad University's department of physics in Marrakech. Since 2007 he has been the director of the Oukaimeden Observatory. [Ref: Minor Planet Circ. 78271] » <http://ssd.jpl.nasa.gov/sbdb.cgi?sstr=133892>
- 1st Prize for the best Inter-University Morocco-France cooperation (FES 2008).
- 2nd Prize of the Best Research Structure of the UCA (2009).
- Quoted in the directory of 100 of the "Morocco Business Intelligence, 2010 edition".
- Nominated by the Hassan II Academy of Sciences and Techniques (MOROCCO) for the 2013 prize of the Third World Academy of Sciences (TWAS).

### Expertise and evaluation

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- Scientific expert for FRS (Belgian Scientific Research Fund)
- Expert evaluator for National Center for Scientific and Technical Research (Morocco).
- Expert to the European Union for the Tempus program.
- Member of Recruitment Commissions of Assistant Professors (Morocco).
- CNAE expert for the accreditation of training courses (Morocco).
- Referee of scientific journals.
- Referee of several PHD theses.
- Jury member of several PhD theses.

## 10. Others

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- Teaching: Responsible of several courses in various Bachelor's degree (SMP) and Master (High Energy Physics and Astrophysics)
- Supervision of Master internship (more than 60).

## **CV BENKHALDOUN ZOUHAIR**