



Dr Lucien HEURTIER

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Research

- ▶ **Oct. 2023 - Present:** Postdoctoral Research Associate, **King's College London**, UK
- ▶ **Oct. 2020 - Sept. 2023:** Postdoctoral Research Associate, **Durham University**, UK
- ▶ **Oct. 2017 - Sept. 2020:** Postdoctoral Fellowship, **University of Arizona**, USA
- ▶ **Oct. 2015 - Sept. 2017:** Postdoctoral Fellowship, **Université Libre de Bruxelles**, Belgium

Education

- ▶ **2012 –2015:** **Phd in Theoretical Physics** (Highest Honour), École Polytechnique, Palaiseau
(Supervised by Emilian Dudas)
- ▶ **2010 –2012:** **MSc in Theoretical Physics**, École Normale Supérieure (ENS) de Paris.
- ▶ **2008 –2011:** **MSc in Applied Mathematics** from ENSTA-ParisTech, Paris, France
- ▶ **2009 –2010:** **Bachelor in Fundamental Mathematics** from Université Sorbonne, France

Teaching

- ▶ **Aug. 2024 (10h):** **53rd BUSSTEP Summer School (Tutoring, PhD level)**, Sheffield University
- ▶ **Dec. 2023 (3h):** **Lecture on Primordial Black holes (postgrad. level)**, King's College London
- ▶ **2021 – 2023 (32h):** **Teaching assistant**, MSc *Particles, Strings and Cosmology*, Durham University
- ▶ **July 2022 (30 min):** **Invited Lecture** - YETI 2022: *Phenomenology in the sky*, Durham University
- ▶ **2020 – 2021 (20h):** **Teaching assistant**, Foundations of Physics (Level 1), Durham University
- ▶ **Jan. 2021 (8h):** **Teaching assistant** (online), ENSTA-Paristech (France) in Statistical Physics
- ▶ **2017 – 2019 (8h):** **Substitute professor** of S. Su (undergraduate level, Quant. Mechanics) U. of Arizona
- ▶ **2015 – 2017 (8h):** **Teaching Assistant**, MSc Fundamental Physics (Introduction to QFT) ULB, Brussels
- ▶ **June 2014 (3h):** **Invited lecture** about Cosmic Inflation (SINJE, LPT Orsay, France)
- ▶ **2012 – 2015 (80h):** **Teaching assistant**, Engineer program (Ensta Paristech, Paris) in Quantum Mechanics, Astrophysics, Field Theory, and General Relativity

Supervision

- ▶ June – July 2024: **Supervision of a “Success for Black Students” summer project** (Tumininu Onaduja, King’s College London),
Project on the *Gravitational Waves from Primordial Black Hole Evaporation*
- ▶ June – July 2024: **Supervision of a KURF summer project** (Nathaniel Levy, King’s College London)
Project on *Primordial Black Hole Hot Spots and Memory Burden* (**Publication Exected**)
- ▶ June – July 2024: **Supervision of a KURF summer project** (Elena Liberti, King’s College London)
Project on the *Effect of Primordial Black Hole Evaporation on Dark Matter Freeze Out*
- ▶ May – Aug. 2023: **Supervision of an MSc Student** (Ensta-Paristech, France)
Internship on the *Heat equation around evaporating primordial black holes*.
- ▶ May – Jul. 2022: **Supervision of an MSc Student** (Université Paris Saclay, France)
Internship on the *production of primordial black holes from inflation*, which **led to publication in Jour. of Cosmo. and Astropart. Phys. (JCAP)** in July 2022.
- ▶ Mar. – Jul. 2021: **Supervision of an MSc Student** (BITS Pilani, India)
internship on *quintessential inflation models*
- ▶ Mar. – Jul. 2016: **Supervision of an MSc Student** from École Polytechnique, France. Internship on the *inflaton portal to dark matter*. **Awarded as best research internship of École Polytechnique that year.**

Mentoring

- ▶ 2022 – 2023: **Project supervision of S. Hu and L. Hamaide** (PhD students at KCL)
Led to publication in Phys. Lett. B
- ▶ 2021 – 2023: **Informal co-supervision of R. Heighton** (PhD student of M. Spannowsky, Durham U.)
Led to publication in Phys. Rev. D
- ▶ 2018 – 2020: **Project supervision of F. Huang** (PhD student of K. Dienes, University of Arizona)
Led to publication in Phys. Rev. D
- ▶ 2018 – 2020: **Project supervision of H. Song** (PhD student of S. Su, University of Arizona)
Led to publication in Jour. of High Energy Phys.
- ▶ 2015 – 2017: **Project supervision of A. Moursy** (PhD student of S. Khalil, Zewail City Sci. Technol., Egypt)
Led to two publications in Jour. of High Energy Phys. (JHEP) and Jour. of Cosmo. and Astropart. Phys. (JCAP)

Research Leadership

- ▶ Sep. 2024 - Now: **TPPC Seminar Organizer** at King’s College London
- ▶ Dec. 2024 - Now: **Creator and Organizer** of the **UK-Particle Physics Phenomenology (UK-APP)** conference series (Funded by the Institute of Physics semi-annually, ~ 30 in-person participants)

- ▶ Jun. 2023 - Now: Co-Creator and Member of the Scientific Committee of the **New Horizons for Primordial Black Hole Physics** international workshop series (~ 100 in-person participants)
- ▶ May. 2025: Organizer of the **Gravitational Probes of the Early Universe** workshop, King's College London, supported by the **Global Engagement Partnership fund** (~30 in-person participants)
- ▶ Sep. 2024: Invited as **Discussion Leader** at the **Pitt-PACC workshop 2024** (USA) [Invitation Declined]
- ▶ Jun. 2024: Organizer of the **New Horizons for Primordial Black Hole Physics 2024** (NEHOP) workshop, Edinburgh
- ▶ Oct. 2023: Chairman and discussion session animator at the **Astroparticle Symposium 2023** – Institut Pascal, Orsay, France
- ▶ Nov. 2022: Chairman at the **Astroparticle Symposium 2022** – Institut Pascal, Orsay, France
- ▶ Nov. 2022: Chairman at the **Ogden at 20 conference** – Durham University, UK
- ▶ Apr. 2022: Parallel Session Convener at the **international Planck Conference 2022** – Paris, France
- ▶ May 2021: Co-Organizer and convener of the **international Planck Conference 2021**, Durham University (> 200 online participants)
- ▶ 2018 – 2020: Organizer of the U. of Arizona **High-Energy and Gravitation Journal Club**
- ▶ 2016 – 2017: Organizer of the **Theory Group Journal Club** and Seminar series at ULB, Brussels
- ▶ 2013 – 2015: Creator and organiser of the **Student Seminars Xpresso-theo** of École Polytechnique
- ▶ 2012 – 2013: Administrative organizer of a Physics lecture series at ENSTA-ParisTech, France

Referee for Peer-Reviewed Journals

Reviews requested by:

- ▶ Physical Review Letters (PRL)
- ▶ Physical Review D (PRD)
- ▶ J. of Journal of Cosmology and Astroparticle Physics (JCAP)
- ▶ Physics Letter B
- ▶ Int. J. of Modern Physics A
- ▶ SciPost Physics
- ▶ Nature Scientific Reports

Outreach / Public Engagement

- ▶ Oct. 2024 - now: Mentor in the “**Success for Black Students**” programme (**monthly mentoring**)
- ▶ Spring 2023: Registered as a **STEM Ambassador** in the UK – **North East England STEM Hub (RTC North)**.
- ▶ Mar. 2023: Online event “**I'm a scientist**”, elected **weekly winner** by the students
- ▶ May 2022: Invited presentation for the **Pint of Science 2022**, Leeds, UK
- ▶ Mar. 2022: Animation of the **Post Offer Day**, Durham University, UK
- ▶ Nov. 2021: **Dark Matter Day 2021**, virtual exhibition
- ▶ Sept. 2018: **Invited Tech Talk** on Big Bang Cosmology in front of young entrepreneurs, Tucson, USA

External Funding

- ▶ Jun. 2025: **Funding from the King's College London Global Engagement Fund (£6k)** for the organisation of a **three-day workshop gathering scientists from France and the UK**
- ▶ Apr. 2025: **Funding from the NMES of King's College London (£1.5k)** to supervise a 6-week *King's Undergraduate Research Fellowship* - **Funded upon competitive application.**
- ▶ Feb. 2025: **Funding from the Institute of Physics (£1.4k)** for the organisation of the **UK-APP conference semi-annually.**
- ▶ Apr. 2024: **Funding from the NMES of King's College London (£1.5k)** to supervise a 6-week *King's Undergraduate Research Fellowship* - **Funded upon competitive application.**
- ▶ Dec. 2023: **Sponsorship from the EuCAPT consortium** to organize the workshop NEHOP 2024 **Funded upon competitive application.**
- ▶ Feb. 2019: **CNRS visiting fellowships** (CPHT, France) **Funded upon competitive application**
- ▶ July 2015: **Visiting Grant (~4k€)** - PIER Short Visits 2015, DESY theory group. **Funded upon competitive application**

In The Press

Authored by Me

- ▶ L. Heurtier, [The Higgs particle could have ended the universe by now – here's why we're still here](#), Published in: [The Conversation - UK](#). Aug 2, 2024
- ▶ L. Heurtier, [La partícula de Higgs podría haber acabado ya con el universo: ¿por qué seguimos aquí?](#), Published in: [The Conversation - Espana](#). Aug 5, 2024

Blogosphere

- ▶ Aug. 2024: [Science Alert: Higgs Particles And Tiny Black Holes Could Have Destroyed Our Universe](#)
- ▶ Aug. 2024: [Phys.org: The Higgs particle could have ended the universe by now—here's why we're still here](#)
- ▶ Aug. 2024: [THE PINNACLE GAZETTE: Could The Higgs Boson End The Universe?](#)
- ▶ Aug. 2024: [The Times of India: Higgs particle could have ended the universe: What prevented it, why are we still here](#)
- ▶ May 2023: [Universe Today: Primordial Black Holes May Have “Frozen” the Early Universe](#)
- ▶ Apr. 2023: [Phys.org: Primordial black holes may have 'frozen' the early universe](#)
- ▶ Apr. 2023: [Space.com: Tiny primordial black holes could have created their own Big Bang](#)

Press

- ▶ Nov. 2024: [New Scientist \(Front Page\): The universe could vanish at any moment – why hasn't it?](#)
- ▶ Feb. 2025: [New Scientist: Feature article How Cosmic Stasis May Drastically Rewrite the History of the Universe](#)

On the Radio

- ▶ Aug. 2024: Interview on [Fun Kids Radio: Science Weekly podcast - Battle of the Sciences](#)

Awards / Distinctions

- ▶ **Sep. 2025:** **Golden Reggie Award** (King's College London). Nominated by P. Giannidakis and C. Altomonte - *For his exceptional impact within the Theoretical Particle Physics and Cosmology group, his open and encouraging approach to PhD mentorship and excellent work organising the group's seminar series.*
- ▶ **Jul. 2024:** **King's Doctoral Support Excellence Award** (King's College London) - *Lucien has demonstrated exceptional care to PhDs. His enthusiasm for the personal and professional development of doctoral students is truly appreciable. His proactive engagement includes providing invaluable advice during job searches and teaching all PhDs in the group to build personal websites that enhance their professional profiles. His empathy and availability during challenging times ensure that students feel valued and supported, contributing to a positive and nurturing academic environment*
- ▶ **Mar. 2023:** **Weekly winner** of the *I'm A Scientist* online event
- ▶ **Jan. 2022:** **Two articles** selected as **PRD Editor's Highlight** (*Phys. Rev. D* 105 (2022) 1, 015022 and *Phys. Rev. D* 105 (2022) 1, 015023)
- ▶ **Nov. 2013:** **Best Conference Logo Award** for the GDR – Terascale conference series, France

Conferences and Seminars

- ▶ **Jan. 2026:** **Invited Seminar – University of Freiburg**, Germany
- ▶ **Dec. 2025:** **Invited Seminar – TPP, University of Sussex, Brighton**, England
- ▶ **Nov. 2025:** **Invited Plenary Talk – Astroparticle Symposium**, Institut Pascal, France
- ▶ **Nov. 2025:** **Invited Plenary Talk – London Cosmology Discussion Meeting**, Roy. Astro. Society, England
- ▶ **Sep. 2025:** **Invited Seminar – DAMTP Cambridge**, England
- ▶ **Jul. 2025:** **Invited Plenary Talk – PASCOS conference**, Durham University, England
- ▶ **Mar. 2025:** **Invited Seminar – DESY Theory Group**, Hamburg, Germany
- ▶ **Nov. 2024:** **Invited Seminar – Imperial College**, London, United Kingdom
- ▶ **Aug. 2024:** **Invited Seminar (online) – Newton seminars**, Pisa, Italy
- ▶ **Jul. 2024:** **Invited Seminar – Lancaster University**, United Kingdom
- ▶ **Apr. 2024:** **Invited Seminar (online) – String Field Theory Journal Club**, Online
- ▶ **Apr. 2024:** **Invited Seminar – LPTHE Sorbonne Université**, Paris, France
- ▶ **Oct. 2023:** **Invited Plenary Talk - AstroParticle Symposium 2023**, Orsay France
- ▶ **Oct. 2023:** **Invited Plenary Talk – London Cosmology Discussion Meeting**, Royal Astro. Soc., London, UK
- ▶ **May. 2023:** **Parallel Talk – Planck conference 2023**, Warsaw, Poland
- ▶ **Apr. 2023:** **Invited Seminar - University of Strasbourg**, France
- ▶ **Mar. 2023:** **Invited Seminar - Laphy Annecy**, France
- ▶ **Feb. 2023:** **Invited Seminar - University of Helsinki**, Finland
- ▶ **Jan. 2023:** **Plenary Talk - UK Cosmo**, Sussex University, Brighton, UK
- ▶ **Nov. 2022:** **Invited Plenary Talk - AstroParticle Symposium 2022**, Orsay France
- ▶ **Sept. 2022:** **Invited Seminar** - University of Nottingham, UK
- ▶ **Jul. 2022:** **Parallel Talk - SUSY conference 2022**, Ioannina, Greece
- ▶ **June 2022:** **Invited Seminar** - University of Sussex, Brighton, UK
- ▶ **May 2022:** **Invited Seminar (Online)** - Bologna University, Italy
- ▶ **May 2022:** **Plenary Talk - DMUK conference**, Birmingham, UK
- ▶ **Apr. 2022:** **Parallel Talk - Planck conference 2022**, Paris, France
- ▶ **Nov. 2021:** **Invited Seminar - YITP**, USA

- ▶ Nov. 2021: **Plenary Talk (Online)** - **DMUK conference**, RAL, UK
- ▶ Nov. 2021: **Invited Plenary Talk (Online)** - **AstroParticle Symposium 2021**, Orsay France
- ▶ Aug. 2021: **Parallel Talk (Online)** - **SUSY 2021**, Shanghai, China
- ▶ Jun. 2021: **Plenary Talk (Online)** - **IRN Terascale**
- ▶ May. 2021: **Parallel Talk (Online)** - **PPC 2021**, Oklahoma, USA
- ▶ Mar. 2021: **Invited Seminar**, **LUPM**, Montpellier, France
- ▶ Feb. 2021: **Invited Seminar (Online)**, **UC Irvine**, USA
- ▶ Feb. 2021: **Invited Seminar**, **LAPth**, Annecy, France
- ▶ Oct. 2020: **Invited Plenary Talk (Online)** - **CEPC workshop**, Shanghai, China
- ▶ Apr. 2020: **Parallel Talk - Pheno 2020**, Pittsburgh, USA
- ▶ Feb. 2020: **Invited Seminar**, **Chicago University**, USA
- ▶ Feb. 2020: **Invited Seminar**, **FermiLab**, USA,
- ▶ Jan. 2020: **Invited Seminar**, **KIAS**, Seoul, South Korea
- ▶ Jan. 2020: **Invited Plenary Talk - APCTP Workshop**, Pohang, South Korea
- ▶ Nov. 2019: **Invited Seminar** - **Texas A&M**, College Station, Texas, USA
- ▶ Oct. 2019: **Invited Seminar**, **DESY**, Hamburg, Germany
- ▶ Oct. 2019: **Plenary Talk - IRN Terascale**, ULB, Brussels, Belgium
- ▶ Jun. 2019: **Parallel Talk - Planck conference 2019**, Granada, Spain
- ▶ May 2019: **Parallel Talk - SUSY conference 2019**, Corpus Christi, Texas, USA
- ▶ Apr. 2019: **Invited Seminar** - **ASU**, Phoenix AZ, USA
- ▶ Mar. 2019: **Invited Seminar** - **ULB**, Brussels, Belgium
- ▶ Jan. 2019: **Invited Seminar** - **IBS**, Daejon, South Korea
- ▶ Jan. 2019: **Invited Seminar** - **KIAS**, Seoul, South Korea
- ▶ Jan. 2019: **Invited Plenary Talk - APCTP workshop**, Pohang, South Korea
- ▶ Jun. 2018: **Plenary Talk - IRN Terascale**, Strasbourg, France
- ▶ May 2018: **Parallel Talk - Planck conference 2018**, Bonn University, Germany
- ▶ May 2018: **Parallel Talk - Pheno 2018**, University of Pittsburgh, USA
- ▶ Mar. 2018: **Invited Seminar** - **University of Washington**, St. Louis, USA
- ▶ Oct. 2017: **Invited Seminar** - **University of Arizona**, Tucson, USA
- ▶ Sept. 2017: **Invited Seminar** - **Université de Montpellier**, France
- ▶ Jun. 2017: **Invited Seminar** - **CPHT**, Palaiseau, France
- ▶ May 2017: **Parallel Talk - Planck conference 2017**, Warsaw, Poland
- ▶ Nov. 2016: **Invited Seminar** - **DESY Theory Group**, Hamburg, Germany
- ▶ Jul. 2016: **Invited Plenary Talk - PAI meeting**, Louvain La Neuve, Belgium
- ▶ May 2016: **Parallel Talk - Planck conference 2016**, Valencia, Spain
- ▶ Oct. 2015: **Invited Seminar** - **ULB**, Brussels, October 2015
- ▶ May 2015: **Parallel Talk - Planck conference 2015**, Ioannina, Greece
- ▶ Feb. 2015: **Invited Seminar** - **CPHT École Polytechnique**, France
- ▶ Dec. 2014: **Plenary Talk - GDR Terascale**, Heidelberg, Germany
- ▶ Nov. 2014: **Invited Seminar** - **ATLAS group of IFIN-HH**, Bucarest, Romania
- ▶ Sep. 2014: **Invited Seminar** - **IFAE**, Barcelona, Spain
- ▶ Sep. 2014: **Plenary Talk - Corfu Summer Institute**, Corfu, Greece
- ▶ Jul. 2014: **Parallel Talk - SUSY conference 2014**, Manchester University, UK
- ▶ May 2014: **Parallel Talk - Planck conference 2014**, Paris, France
- ▶ Dec. 2013: **Plenary Talk - JRJC (Student Conference)**, Barbaste, France
- ▶ Nov. 2013: **Plenary Talk - String, Cosmology and Gravity Student Conference**, Max Planck Inst., Germany
- ▶ Nov. 2013: **Plenary Talk - GDR Terascale**, Annecy, France
- ▶ Oct. 2013: **Plenary Talk - II Postgraduate Meeting on Theoretical Physics**, IFT, Madrid, Spain
- ▶ Sept. 2013: **Plenary Talk - Corfu Summer Institute**, Corfu, Greece

- ▶ Sept. 2013: **Invited Seminar - LPTHE Student Seminar**, Paris, France

Scientific Publications

[Note that author names are always listed in alphabetic order]

Preprint Articles

- [1] J. Alexandre, **L. Heurtier**, and Silvia Pla, *Exact Renormalisation Group Evolution of the Inflation Dynamics: Reconciling α -Attractors with ACT*, Nov 2025 [ArXiv:2511.05296] **Submitted to PRL**
- [2] M. Fairbairn, **L. Heurtier**, and Maria-Olalla Olea Romacho, *Is Λ CDM on the run? Reconciling the CMB with the Lyman- α Forest*, Nov 2025 [ArXiv:2511.01612] **Submitted to PRD**
- [3] C. Cheng, P. Giannidakis, **L. Heurtier**, and E. Lim, *Non-linear Dynamics and Primordial Black Hole Formation During Kination*, Jul 2025 [ArXiv:2507.19166]
- [4] C. Altomonte, M. Fairbairn, and **L. Heurtier**, *Primordial Black Holes and Nucleosynthesis*, Jan 2025 [ArXiv:2501.05531] **Submitted to PRD**
- [5] W.-Y. Ai, **L. Heurtier**, and T.-H. Jung, *Primordial Black Holes from an Aborted Phase Transition*, Sep 2024 [ArXiv:2409.02175] **Submitted to PRL**

Peer-Reviewed Journal Articles

- [6] K. R. Dienes, **L. Heurtier**, F. Huang, T. M. P. Tait, and B. Thomas, *Cosmological Stasis from Dynamical Scalars: Tracking Solutions and the Possibility of a Stasis-Induced Inflation*, Jun 2024 [ArXiv: 2406.06830] **Phys.Rev.D** 110 (2024) 12, 123514
- [7] S. Abel, **L. Heurtier**, *Exact Schwinger Proper Time Renormalisation*, Nov 2023 [ArXiv:2311.12102] **J. High Energ. Phys.** 08 (2025) 198
- [8] L. Hamaide, **L. Heurtier**, S.-Q. Hu, and A. Cheek, *Primordial Black Holes Are True Vacuum Nurseries*, Nov 2023 [ArXiv: 2311.01869] **Phys. Lett. B** 138895(2024)
- [9] K. R. Dienes, **L. Heurtier**, F. Huang, T. M. P. Tait, and B. Thomas, *Stasis, Stasis, Triple Stasis*, Sep 2023. **Phys.Rev.D** 109 (2024) 8, 083508 [ArXiv: 2309.10345]
- [10] A. Ghoshal, Y. Gouttenoire, **L. Heurtier**, P. Simakachorn, *Primordial Black Hole Archaeology with Gravitational Waves from Cosmic Strings*, Apr 2023, **J. High Energ. Phys.** 08 (2023) 196 [ArXiv:2304.04793]
- [11] R. Heighton, **L. Heurtier**, M. Spannowsky, *Hunting for Neutral Leptons with Ultra-High-Energy Cosmic Rays*, Mar 2023 **Phys.Rev.D** 108 (2023) 5, 055009 [ArXiv:2303.11352]
- [12] A. Cheeck, **L. Heurtier**, Y. F. Perez-Gonzalez, and J. Turner, *Evaporation of Primordial Black Holes in the Early Universe: Mass and Spin Distributions*, Dec 2022. **Phys.Rev.D** 108 (2023) 1, 015005 [ArXiv:2212.03878]
- [13] K. R. Dienes, **L. Heurtier**, F. Huang, D. Kim, T. M. P. Tait, and B. Thomas, *Primordial Black Holes Place the Universe in Stasis*, Dec 2022 [ArXiv:2212.01369] **Accepted for publication in PRD**
- [14] **L. Heurtier**, A. Moursy, L. Wacquez, *Cosmological Imprints of SUSY Breaking in Models of Sgoldstinoless Non-Oscillatory Inflation*, Jul 2022, **JCAP** 03 (2023) 020 [ArXiv:2207.11502]
- [15] A. Ghoshal, **L. Heurtier**, A. Paul, *Signatures of Non-thermal Dark Matter with Kination and Early Matter Domination: Gravitational Waves versus Laboratory Searches*, Aug 2022, **J. High Energ. Phys.** 2022, 105 (2022) [ArXiv:2208.01670]
- [16] A. Cheeck, **L. Heurtier**, Y. F. Perez-Gonzalez, J. Turner, *Redshift Effects in Particle Production from Kerr Primordial Black Holes*, Jul 2022, **Phys. Rev. D** 106 (2022) 10, 103012 [ArXiv:2207.09462]
- [17] K. R. Dienes, **L. Heurtier**, F. Huang, D. Kim, T.M.P. Tait, B. Thomas, *Stasis in an Expanding Universe: A Recipe for Stable Mixed-Component Cosmological Eras*, Nov 2021, **Phys. Rev. D** 105 (2022) 2, 023530, [arXiv:2111.04753].

- [18] A. Cheek, **L. Heurtier**, Y. F. Perez-Gonzalez, and J. Turner, *Primordial Black Hole Evaporation and Dark Matter Production: I. Solely Hawking radiation*, Jul 2021., **Phys. Rev. D** 105 (2022) 1, 015022, Jan. 2022 **PRD Editors' Suggestion** [arXiv:2107.00013].
- [19] A. Cheek, **L. Heurtier**, Y. F. Perez-Gonzalez, and J. Turner, *Primordial Black Hole Evaporation and Dark Matter Production: II. Interplay with the Freeze-In/Out Mechanism*, Jul 2021, **Phys. Rev. D** 105 (2022) 1, 015023 Jan. 2022 **PRD Editors' Suggestion**, [arXiv:2107.00016].
- [20] **L. Heurtier**, F. Huang, and T.M.P. Tait, *Resurrecting Low-Mass Axion Dark Matter Via a Dynamical QCD Scale*, Apr. 2021, **J. High Energ. Phys.** 12 (2021) 216, [arXiv:2104.13390].
- [21] **L. Heurtier**, H.-L. Li, H. Song, S. Su, W. Su, *Precision Higgs Couplings in Neutral Naturalness Models: an Effective Field Theory Approach*, Jul 2020. **J. High Energ. Phys.** 02 (2021) 234 [arXiv:2007.15021].
- [22] E. Dudas, **L. Heurtier**, K. Olive, M. Pierre, and Y. Mambrini, *A Model of Metastable EeV Dark Matter*, Mar 2020. **Phys. Rev. D** 101 (2020) 11, 115029 [arXiv:2003.02846].
- [23] **L. Heurtier** and H. Partouche, *Spontaneous Freeze Out of Dark Matter From an Early Thermal Phase Transition*, Dec 2019. **Phys. Rev. D** 101 (2020) 4, 043527, DOI:10.1103/PhysRevD.101.043527 [arXiv:1912.02828].
- [24] **L. Heurtier**, D. Kim, J. C. Park and S. Shin, *Explaining the ANITA Anomaly with Inelastic Boosted Dark Matter*, May 30, 2019. **Phys. Rev. D** 100 (2019) no.5, 055004, DOI: 10.1103/Phys-RevD.100.055004 [arXiv:1905.13223];
- [25] **L. Heurtier** and F. Huang, *The Inflaton Portal to a Highly decoupled EeV Dark Matter Particle*, May 13, 2019. **Phys. Rev. D** 100 (2019) no.4, 043507, DOI: 10.1103/PhysRevD.100.043507 [arXiv:1905.05191];
- [26] **L. Heurtier**, Y. Mambrini and M. Pierre, *Dark matter interpretation of the ANITA anomalous events*, Dec 2018. **Phys. Rev. D** 99, no. 9, 095014 (2019) [arXiv:1902.04584].
- [27] T. Coudarchet, **L. Heurtier**, H. Partouche, *Spontaneous dark-matter mass generation along cosmological attractors in string theory*, Dec 2018. **JHEP** 1903, 117 (2019) [arXiv:1812.10134].
- [28] **L. Heurtier**, *The Inflaton Portal to Dark Matter*, July 2017. **JHEP** 1712 (2017) 072 [arXiv:1707.08999].
- [29] R. Argurio, D. Coone, **L. Heurtier**, A. Mariotti, *Sgoldstino-less inflation and low energy SUSY breaking*, July 2016. **JCAP** 1707 (2017) no.07, 047 [arXiv:1705.06788].
- [30] T. E. Gonzalo, **L. Heurtier**, A. Moursy, *Sneutrino driven GUT Inflation in Supergravity*, Sept 2016. **JHEP** 1706 (2017) 109 [arXiv:1609.09396].
- [31] **L. Heurtier**, Y. Zhang, *Supernova Constraints on Massive (Pseudo)Scalar Coupling to Neutrinos*, Sept 2016. **JCAP** 1702 (2017) no.02, 042 [arXiv:1609.05882]
- [32] **L. Heurtier**, D. Teresi, *Dark matter and observable Lepton Flavour Violation*, July 2016. **Phys. Rev. D** 94 (2016) no.12, 125022 [arXiv:1607.01798]
- [33] E. Dudas, **L. Heurtier**, C. Wieck, M. Winkler, *UV Corrections in Sgoldstino-less Inflation*, Jan 2016. **Phys. Lett. B** 759 (2016) 121-125 [arXiv:1601.03397].
- [34] I. Bena, **L. Heurtier**, A. Puhm, *AdS3: the NHEK generation*, Oct, 2015. **JHEP** 1605 (2016) 120 [arXiv:1510.08055].
- [35] O. Ducu, **L. Heurtier**, J. Maurer, *LHC signatures of a Z' mediator between dark matter and the SU(3) sector*, Sept 2015. **J. High Energ. Phys.** 1603 (2016) 006 [arXiv:1509.05615].
- [36] **L. Heurtier**, S. Khalil, A. Moursy, *Single Field Inflation in Supergravity with a U(1) Gauge Symmetry*, May 27, 2015. **JCAP** 1510 (2015) no.10, 045 [arXiv:1505.07366].
- [37] W. Buchmüller, E. Dudas, **L. Heurtier**, A. Westphal, C. Wieck, M. W. Winkler, *Challenges for Large-Field Inflation and Moduli Stabilization*, Jan 23, 2015. **J. High Energ. Phys.** 1504 (2015) 058 [arXiv:1501.05812].
- [38] H. Erbin, **L. Heurtier**, *Supergravity, complex parameters and the Janis-Newman algorithm*, Jan 9, 2015. **Class. Quant. Grav.** 32 (2015) no.16, 165005 [arXiv:1501.02188].
- [39] H. Erbin, **L. Heurtier**, *Five-Dimensional Janis-Newman Algorithm*, Nov 7, 2014. **Class. Quant. Grav.** 32 (2015) no.16, 165004 [arXiv:1411.2030]
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