

Document Version

Final published version

Licence

CC BY

Citation (APA)

Ayzenberg, D., Blackburn, L., Brito, R., Britzen, S., Broderick, A. E., Carballo-Rubio, R., Eichhorn, A., Gurvits, L. I., Xue, X., & More Authors (2025). Correction to: Fundamental physics opportunities with future ground-based mm/sub-mm VLBI arrays (*Living Reviews in Relativity*, (2025), 28, 1, (4), 10.1007/s41114-025-00057-0). *Living Reviews in Relativity*, 28(1), Article 7. <https://doi.org/10.1007/s41114-025-00062-3>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

In case the licence states "Dutch Copyright Act (Article 25fa)", this publication was made available Green Open Access via the TU Delft Institutional Repository pursuant to Dutch Copyright Act (Article 25fa, the Taverne amendment). This provision does not affect copyright ownership.
Unless copyright is transferred by contract or statute, it remains with the copyright holder.

Sharing and reuse

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.



Author Correction: Fundamental physics opportunities with the next-generation Event Horizon Telescope

Dimitry Ayzenberg¹ · Lindy Blackburn^{2,3} · Richard Brito⁴ · Silke Britzen⁵ · Avery E. Broderick^{6,7,8} · Raúl Carballo-Rubio^{9,10} · Vitor Cardoso^{4,11} · Andrew Chael¹² · Koushik Chatterjee^{3,13,14,15} · Yifan Chen¹¹ · Pedro V. P. Cunha¹⁶ · Hooman Davoudiasl¹⁷ · Peter B. Denton¹⁷ · Sheperd S. Doeleman^{2,3} · Astrid Eichhorn¹⁸ · Marshall Eubanks¹⁹ · Yun Fang^{20,21} · Arianna Foschi²² · Christian M. Fromm^{23,5,24} · Peter Galison^{3,25,26} · Sushant G. Ghosh^{27,28} · Roman Gold^{29,30,9} · Leonid I. Gurvits^{31,32} · Shahar Hadar^{33,34} · Aaron Held³⁵ · Janice Houston² · Yichao Hu³⁶ · Michael D. Johnson^{2,3} · Prashant Kocherlakota^{2,3} · Priyamvada Natarajan^{3,37,38} · Héctor Olivares¹⁶ · Daniel Palumbo^{2,3} · Dominic W. Pesce^{2,3} · Surjeet Rajendran³⁹ · Rittick Roy⁴⁰ · Saurabh⁵ · Lijing Shao^{41,42} · Shammi Tahura^{43,44,45} · Aditya Tamar⁴⁶ · Paul Tiede^{2,3} · Frédéric H. Vincent⁴⁷ · Luca Visinelli^{48,49} · Zhiren Wang^{6,7,8} · Maciek Wielgus⁵⁰ · Xiao Xue^{51,52} · Kadri Yakut^{53,54} · Huan Yang⁵⁵ · Ziri Younsi³⁶

© The Author(s) 2025

Correction to: Living Reviews in Relativity (2025) 28:4
<https://doi.org/10.1007/s41114-025-00057-0>

After this article was published, the Authors requested to change the title and abstract back to their original submission, since the removal of mention of the ngEHT project from the title and abstract during revisions does not accurately convey nor reflect the fact that this work was initiated and undertaken as part of the ngEHT project. The changes made following suggestions by a reviewer had not been approved by all authors/project director.

Instead of “Fundamental physics opportunities with future ground-based mm/sub-mm VLBI arrays” the title should read “Fundamental physics opportunities with the next-generation Event Horizon Telescope”.

The original article can be found online at <https://doi.org/10.1007/s41114-025-00057-0>.

Extended author information available on the last page of the article

The running title should be changed from “Fundamental physics opportunities with future ground...” to “Fundamental physics opportunities with the ngEHT”.

Also, the current Abstract “The Event Horizon Telescope (EHT) Collaboration recently published the first images of the supermassive black holes in the cores of the Messier 87 and Milky Way galaxies. These observations have provided a new means to study supermassive black holes and probe physical processes occurring in the strong-field regime. We review the prospects of future observations and theoretical studies of supermassive black hole systems. Current ground-based very-long-baseline interferometry (VLBI) arrays like the EHT and proposed future extensions like the next-generation Event Horizon Telescope will greatly enhance the capabilities of black-hole imaging interferometry. These enhancements will open up several previously inaccessible avenues of investigation, thereby providing important new insights into the properties of supermassive black holes and their environments. This review describes the current state of knowledge for five key science cases, summarising the unique challenges and opportunities for fundamental physics investigations that future mm/sub-mm VLBI developments will enable” should be changed to “The Event Horizon Telescope (EHT) Collaboration recently published the first images of the supermassive black holes in the cores of the Messier 87 and Milky Way galaxies. These observations have provided a new means to study supermassive black holes and probe physical processes occurring in the strong-field regime. We review the prospects of future observations and theoretical studies of supermassive black hole systems with the next-generation Event Horizon Telescope (ngEHT) project, which will greatly enhance the capabilities of the existing EHT array. These enhancements will open up several previously inaccessible avenues of investigation, thereby providing important new insights into the properties of supermassive black holes and their environments. This review describes the current state of knowledge for five key science cases, summarising the unique challenges and opportunities for fundamental physics investigations that the ngEHT will enable”.

The Original Article has been corrected.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Authors and Affiliations

Dimitry Ayzenberg¹  · Lindy Blackburn^{2,3}  · Richard Brito⁴  ·
 Silke Britzen⁵  · Avery E. Broderick^{6,7,8}  · Raúl Carballo-Rubio^{9,10}  ·
 Vitor Cardoso^{4,11}  · Andrew Chael¹²  · Koushik Chatterjee^{3,13,14,15}  ·
 Yifan Chen¹¹  · Pedro V. P. Cunha¹⁶  · Hooman Davoudiasl¹⁷  ·
 Peter B. Denton¹⁷  · Sheperd S. Doeleman^{2,3}  · Astrid Eichhorn¹⁸  ·
 Marshall Eubanks¹⁹  · Yun Fang^{20,21}  · Arianna Foschi²²  ·
 Christian M. Fromm^{23,5,24}  · Peter Galison^{3,25,26}  · Sushant G. Ghosh^{27,28}  ·
 Roman Gold^{29,30,9}  · Leonid I. Gurvits^{31,32}  · Shahar Hadar^{33,34}  ·
 Aaron Held³⁵  · Janice Houston²  · Yichao Hu³⁶  · Michael D. Johnson^{2,3}  ·
 Prashant Kocherlakota^{2,3}  · Priyamvada Natarajan^{3,37,38}  ·
 Héctor Olivares¹⁶  · Daniel Palumbo^{2,3}  · Dominic W. Pesce^{2,3}  ·
 Surjeet Rajendran³⁹  · Rittick Roy⁴⁰  · Saurabh⁵  · Lijing Shao^{41,42}  ·
 Shammi Tahura^{43,44,45}  · Aditya Tamar⁴⁶  · Paul Tiede^{2,3}  ·
 Frédéric H. Vincent⁴⁷  · Luca Visinelli^{48,49}  · Zhiren Wang^{6,7,8}  ·
 Maciek Wielgus⁵⁰  · Xiao Xue^{51,52}  · Kadri Yakut^{53,54}  · Huan Yang⁵⁵  ·
 Ziri Younsi³⁶ 

✉ Ziri Younsi
z.younsi@ucl.ac.uk

- ¹ Theoretical Astrophysics, Eberhard-Karls Universität Tübingen, 72076 Tübingen, Germany
- ² Center for Astrophysics | Harvard and Smithsonian, 60 Garden Street, Cambridge, MA 02138, USA
- ³ Black Hole Initiative at Harvard University, 20 Garden Street, Cambridge, MA 02138, USA
- ⁴ CENTRA, Departamento de Física, Instituto Superior Técnico – IST, Universidade de Lisboa – UL, Avenida Rovisco Pais 1, 1049-001 Lisboa, Portugal
- ⁵ Max-Planck-Institut für Radioastronomie, Auf dem Hügel 69, 53121 Bonn, Germany
- ⁶ Perimeter Institute for Theoretical Physics, 31 Caroline Street North, Waterloo, ON N2L 2Y5, Canada
- ⁷ Department of Physics and Astronomy, University of Waterloo, 200 University Avenue West, Waterloo, ON N2L 3G1, Canada
- ⁸ Waterloo Centre for Astrophysics, University of Waterloo, Waterloo, ON N2L 3G1, Canada
- ⁹ CP3-Origins, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark
- ¹⁰ Florida Space Institute, University of Central Florida, 12354 Research Parkway, Partnership 1, Orlando, FL 32826, USA
- ¹¹ Center of Gravity, Niels Bohr Institute, Blegdamsvej 17, 2100 Copenhagen, Denmark
- ¹² Princeton Gravity Initiative, Princeton University, Princeton, NJ 08544, USA
- ¹³ Department of Physics, University of Maryland, College Park, MD 20742, USA
- ¹⁴ Institute for Research in Electronics and Applied Physics, University of Maryland, College Park, MD 20742, USA
- ¹⁵ Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, USA
- ¹⁶ Departamento de Matemática da Universidade de Aveiro and Centre for Research and Development in Mathematics and Applications (CIDMA), Campus de Santiago,

3810-183 Aveiro, Portugal

- 17 High Energy Theory Group, Physics Department, Brookhaven National Laboratory, Upton, NY 11973, USA
- 18 Institute for Theoretical Physics, Heidelberg University, Philosophenweg 16, 69120 Heidelberg, Germany
- 19 Space Initiatives Inc., Princeton, WV, USA
- 20 Institute of Fundamental Physics and Quantum Technology, Ningbo University, Ningbo 315211, China
- 21 Department of Physics, School of Physical Science and Technology, Ningbo University, Ningbo 315211, China
- 22 LIRA, Observatoire de Paris, Université PSL, CNRS, Sorbonne Université, Université de Paris, 5 place Jules Janssen, 92195 Meudon, France
- 23 Institut für Theoretische Physik und Astrophysik, Universität Würzburg, Emil-Fischer-Strasse 31, 97074 Würzburg, Germany
- 24 Institut für Theoretische Physik, Goethe Universität Frankfurt, Max-von-Laue-Str.1, 60438 Frankfurt am Main, Germany
- 25 Department of History of Science, Harvard University, Cambridge, MA 02138, USA
- 26 Department of Physics, Harvard University, Cambridge, MA 02138, USA
- 27 Centre for Theoretical Physics, Jamia Millia Islamia, New Delhi 110025, India
- 28 Astrophysics and Cosmology Research Unit, School of Mathematics, Statistics and Computer Science, University of KwaZulu-Natal, Durban 4000, South Africa
- 29 Institute for Mathematics and Interdisciplinary Center for Scientific Computing, Heidelberg University, Im Neuenheimer Feld 205, 69120 Heidelberg, Germany
- 30 Institut für Theoretische Physik, Universität Heidelberg, Philosophenweg 16, 69120 Heidelberg, Germany
- 31 Joint Institute for VLBI ERIC (JIVE), Oude Hoogeveensedijk 4, 7991 PD Dwingeloo, The Netherlands
- 32 Faculty of Aerospace Engineering, Delft University of Technology, Kluyverweg 1, 2629 HS Delft, The Netherlands
- 33 Department of Mathematics and Physics, University of Haifa at Oranim, 3600600 Kiryat Tivon, Israel
- 34 Haifa Research Center for Theoretical Physics and Astrophysics, University of Haifa, 3498838 Haifa, Israel
- 35 Institut de Physique Théorique Philippe Meyer, Laboratoire de Physique de l'École normale supérieure (ENS), Université PSL, CNRS, Sorbonne Université, Université Paris Cité, 75005 Paris, France
- 36 Mullard Space Science Laboratory, University College London, Holmbury St. Mary, Dorking, Surrey RH5 6NT, UK
- 37 Department of Astronomy, Yale University, 52 Hillhouse Avenue, New Haven, CT 06511, USA
- 38 Department of Physics, Yale University, P.O. Box 208121, New Haven, CT 06520, USA
- 39 Department of Physics and Astronomy, Johns Hopkins University, Baltimore, MD 21218, USA
- 40 Anton Pannekoek Institute for Astronomy, University of Amsterdam, Science Park 904, 1098 XH Amsterdam, The Netherlands
- 41 Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing 100871, China

- ⁴² National Astronomical Observatories, Chinese Academy of Sciences, Beijing 100012, China
- ⁴³ University of Guelph, Guelph, Ontario N1G 2W1, Canada
- ⁴⁴ Perimeter Institute for Theoretical Physics, Waterloo, Ontario N2L 2Y5, Canada
- ⁴⁵ Department of Physics and Astronomy, University of Iowa, Iowa City, IA 52242, USA
- ⁴⁶ National Institute of Technology Karnataka, Surathkal, Karnataka 575025, India
- ⁴⁷ LIRA, Observatoire de Paris, CNRS, Université Pierre et Marie Curie, Université Paris Diderot, 5 place Jules Janssen, 92190 Meudon, France
- ⁴⁸ Dipartimento di Fisica “E.R. Caianiello”, Università degli Studi di Salerno, Via Giovanni Paolo II, 132, 84084 Fisciano, SA, Italy
- ⁴⁹ Istituto Nazionale di Fisica Nucleare (INFN) - Gruppo Collegato di Salerno - Sezione di Napoli, Via Giovanni Paolo II, 132, 84084 Fisciano, SA, Italy
- ⁵⁰ Instituto de Astrofísica de Andalucía-CSIC, Glorieta de la Astronomía s/n, 18008 Granada, Spain
- ⁵¹ Institute of Theoretical Physics, Universität Hamburg, 22761 Hamburg, Germany
- ⁵² Deutsches Elektronen-Synchrotron DESY, Notkestr. 85, 22607 Hamburg, Germany
- ⁵³ Department of Astronomy and Space Sciences, Faculty of Science, University of Ege, 35100 İzmir, Turkey
- ⁵⁴ Ege Gravitational Astrophysics Research Group (eGRAVITY), University of Ege, İzmir 35100, Turkey
- ⁵⁵ Department of Astronomy, Tsinghua University, Beijing 100084, China