

## **Pia Astone papers , for the year 2024 and 2025**

Scopus EXPORT DATE: 30 December 2025

LVK indicates the LIGO, Virgo, KAGRA collaboration

For the others (few author list papers ) if number of names is high for simplicity and in some cases only the first and my name are indicated

1-F. Attadio, ...,P. Astone et al.,

Neural network method to search for long transient gravitational waves

(2024), 110 (10), art. no. 103047

DOI: 10.1103/PhysRevD.110.103047

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85210946771&doi=10.1103%2fPhysRevD.110.103047&partnerID=40&md5=14493abfc5a2e5898d1f9bd0993a27d4)

[85210946771&doi=10.1103%2fPhysRevD.110.103047&partnerID=40&md5=14493abfc5a2e5898d1f9bd0993a27d4](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85210946771&doi=10.1103%2fPhysRevD.110.103047&partnerID=40&md5=14493abfc5a2e5898d1f9bd0993a27d4)

2-LVK collaboration,

Search for Eccentric Black Hole Coalescences during the Third Observing Run of LIGO and Virgo

(2024), 973 (2), art. no. ad65ce

DOI: 10.3847/1538-4357/ad65ce

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85210770411&doi=10.3847%2f1538-4357%2fad65ce&partnerID=40&md5=f7c040c8ba81d8877ccc7f0fa21242ec)

[85210770411&doi=10.3847%2f1538-4357%2fad65ce&partnerID=40&md5=f7c040c8ba81d8877ccc7f0fa21242ec](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85210770411&doi=10.3847%2f1538-4357%2fad65ce&partnerID=40&md5=f7c040c8ba81d8877ccc7f0fa21242ec)

3-LVK collaboration,

The first joint observation by KAGRA with GEO 600

(2024), 444, art. no. 1579

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85212260149&partnerID=40&md5=334445bbc23d9bdb50fae22c45aaf4cc)

[85212260149&partnerID=40&md5=334445bbc23d9bdb50fae22c45aaf4cc](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85212260149&partnerID=40&md5=334445bbc23d9bdb50fae22c45aaf4cc)

4-A. Bile,..P. Astone et al,

Gravitational music: a mathematical-musical model for the popularization of gravitational waves

Physics education (2024), 59 (6), art. no. 065007

DOI: 10.1088/1361-6552/ad7347

[https://www.scopus.com/inward/record.uri?eid=2-s2.0-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85204107623&doi=10.1088%2f1361-6552%2fad7347&partnerID=40&md5=8af75ad6ad558236bc8f687b8e016fee)

[85204107623&doi=10.1088%2f1361-6552%2fad7347&partnerID=40&md5=8af75ad6ad558236bc8f687b8e016fee](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85204107623&doi=10.1088%2f1361-6552%2fad7347&partnerID=40&md5=8af75ad6ad558236bc8f687b8e016fee)

5-LVK collaboration,

GWTC-2.1: Deep extended catalog of compact binary coalescences observed by LIGO and Virgo during the first half of the third observing run

(2024), 109 (2), art. no. 022001

DOI: 10.1103/PhysRevD.109.022001  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182772442&doi=10.1103%2fPhysRevD.109.022001&partnerID=40&md5=ba7321facd3bda4fe3df94b4fbce1d96>

6-LVK collaboration,  
Search for Gravitational-lensing Signatures in the Full Third Observing Run of the LIGO-Virgo Network  
(2024), 970 (2), art. no. 191  
DOI: 10.3847/1538-4357/ad3e83  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85201160074&doi=10.3847%2f1538-4357%2fad3e83&partnerID=40&md5=df22a42be0b0f5f7a96cbd8ab630bb6f>

7-LVK collaboration,  
Observation of Gravitational Waves from the Coalescence of a 2.5–4.5Me Compact Object and a Neutron Star  
(2024), 970 (2), art. no. L34  
DOI: 10.3847/2041-8213/ad5beb  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85200493304&doi=10.3847%2f2041-8213%2fad5beb&partnerID=40&md5=00c02f3c1e0f988af9214505afe1061b>

8-A. Miller,...P. Astone et al,  
Method to search for inspiraling planetary-mass ultracompact binaries using the generalized frequency-Hough transform in LIGO O3a data  
(2024), 110 (8), art. no. 082004  
DOI: 10.1103/PhysRevD.110.082004  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85206681089&doi=10.1103%2fPhysRevD.110.082004&partnerID=40&md5=df6c633c7e64da608a190d1a1ee3c60e>

9-LVK collaboration,  
A Joint Fermi-GBM and Swift-BAT Analysis of Gravitational-wave Candidates from the Third Gravitational-wave Observing Run  
(2024), 964 (2), art. no. 149  
DOI: 10.3847/1538-4357/ad1eed  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85189472922&doi=10.3847%2f1538-4357%2fad1eed&partnerID=40&md5=13483a62b45b1edf1307cdf46adcc549>

10-LVK collaboration,  
Ultralight vector dark matter search using data from the KAGRA O3GK run  
(2024), 110 (4), art. no. 042001  
DOI: 10.1103/PhysRevD.110.042001

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85203240430&doi=10.1103%2fPhysRevD.110.042001&partnerID=40&md5=40dd006d07aa7a6643b12a5734b555c7>

11-A. Miller,...P. Astone et al,  
Gravitational Wave Constraints on Planetary-Mass Primordial Black Holes Using LIGO O3a Data  
(2024), 133 (11), art. no. 111401  
DOI: 10.1103/PhysRevLett.133.111401  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85203879233&doi=10.1103%2fPhysRevLett.133.111401&partnerID=40&md5=5d820c74d6a820073a96bb2152212338>

12-LVK collaboration,  
Search for Gravitational-wave Transients Associated with Magnetar Bursts in Advanced LIGO and Advanced Virgo Data from the Third Observing Run  
(2024), 966 (1), art. no. 137  
DOI: 10.3847/1538-4357/ad27d3  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85193617115&doi=10.3847%2f1538-4357%2fad27d3&partnerID=40&md5=4ebd5e880e1ef1ede8df8de3d8733504>

Salvadore, C., Rosa, I.L., Leaci, P., Amicucci, F., Astone, P., D'Antonio, S., D'Onofrio, L., Palomba, C., Pierini, L., Tehrani, F.S.  
Harnessing the potential of PyStoch: Detecting continuous gravitational waves from interesting supernova remnant targets  
(2025) Physical Review D, 112 (8), art. no. 083051  
DOI: 10.1103/xydb-k4vw  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105020638528&doi=10.1103%2Fxydb-k4vw&partnerID=40&md5=aa6e851f886a37e453d5aeb8b5b09d64>

13-LVK collaboration  
GW250114: Testing Hawking's Area Law and the Kerr Nature of Black Holes  
(2025) Physical Review Letters, 135 (11), art. no. 111403  
DOI: 10.1103/kw5g-d732  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105017415722&doi=10.1103%2Fkw5g-d732&partnerID=40&md5=87787998f67694cdfed3390cd85acc4d>

14-Amicucci, F., Leaci, P., Astone, P., D'Antonio, S., Dal Prà, S., Di Giovanni, M., D'Onofrio, L., Muciaccia, F., Palomba, C., Pierini, L., Singhal, A.  
A directed continuous-wave search from Scorpius X-1 with the five-vector resampling technique  
(2025) Classical and Quantum Gravity, 42 (14), art. no. 145008  
DOI: 10.1088/1361-6382/adeed7

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105011211063&doi=10.1088%2F1361-6382%2Fadecd7&partnerID=40&md5=49d2d63569506bf0445ebb83e06fba66>

#### 15-Virgo collaboration

Optical characterization of the Advanced Virgo gravitational wave detector for the O4 observing run

(2025) Applied Optics, 64 (17), pp. 4710 - 4726

DOI: 10.1364/AO.555312

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105008384078&doi=10.1364%2FAO.555312&partnerID=40&md5=775720d2b28d4b8f87c5d522900b8505>

#### 16-LVK collaboration

Search for Gravitational Waves Emitted from SN2023ixf

(2025) Astrophysical Journal, 985 (2), art. no. 183

DOI: 10.3847/1538-4357/adc681

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105006750730&doi=10.3847%2F1538-4357%2Fadc681&partnerID=40&md5=1292c64c173f9fd4c406cd3a87090b86>

#### 17-LVK collaboration

Search for Continuous Gravitational Waves from Known Pulsars in the First Part of the Fourth LIGO-Virgo-KAGRA Observing Run

(2025) Astrophysical Journal, 983 (2), art. no. 99

DOI: 10.3847/1538-4357/adb3a0

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105003560912&doi=10.3847%2F1538-4357%2Fadb3a0&partnerID=40&md5=4a4ea454a0293a5cdaaf01a19864c577>

#### 18-LVK collaboration

Search for continuous gravitational wave signals from luminous dark photon superradiance clouds with LVK O3 observations

(2025) Physical Review D, 111 (8), art. no. 084032

DOI: 10.1103/PhysRevD.111.084032

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-105002696923&doi=10.1103%2FPhysRevD.111.084032&partnerID=40&md5=2718318490d4c9325471a2a47a936a84>

19-Di Giovanni, M., Leaci, P., Astone, P., Dal Prà, S., D'Antonio, S., D'Onofrio, L., Frasca, S., Muciaccia, F., Palomba, C., Pierini, L., Tehrani, F.S.

Doppler correlation-driven vetoes for the frequency Hough analysis in continuous gravitational-wave searches

(2025) Physical Review D, 111 (6), art. no. 062001

DOI: 10.1103/PhysRevD.111.062001

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-86000164520&doi=10.1103%2FPhysRevD.111.062001&partnerID=40&md5=7d65187d2870f89760ceb71ca62a7678>

20-LVK, Swift collaborations

Swift-BAT GUANO Follow-up of Gravitational-wave Triggers in the Third LIGO–Virgo–KAGRA Observing Run

(2025) *Astrophysical Journal*, 980 (2), art. no. 207

DOI: 10.3847/1538-4357/ad9749

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[85219630308&doi=10.3847%2F1538-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85219630308&doi=10.3847%2F1538-4357%2Fad9749&partnerID=40&md5=324807211d33b57008eaa61485d5f4ec)

[4357%2Fad9749&partnerID=40&md5=324807211d33b57008eaa61485d5f4ec](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85219630308&doi=10.3847%2F1538-4357%2Fad9749&partnerID=40&md5=324807211d33b57008eaa61485d5f4ec)

21-D'Onofrio, L., Astone, P., Dal Prà, S., D'Antonio, S., Di Giovanni, M., De Rosa, R., Leaci, P., Mastrogiovanni, S., Mirasola, L., Muciaccia, F., Palomba, C., Pierini, L.

Two sides of the same coin: the F -statistic and the 5-vector method

(2025) *Classical and Quantum Gravity*, 42 (1), art. no. 015005

DOI: 10.1088/1361-6382/ad94c5

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[85215243566&doi=10.1088%2F1361-](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85215243566&doi=10.1088%2F1361-6382%2Fad94c5&partnerID=40&md5=574cf4d59c5d79585802b720b43ee765)

[6382%2Fad94c5&partnerID=40&md5=574cf4d59c5d79585802b720b43ee765](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85215243566&doi=10.1088%2F1361-6382%2Fad94c5&partnerID=40&md5=574cf4d59c5d79585802b720b43ee765)