

Curriculum Vitae

STEPHEN CHI-YUNG NG

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Research Interests

- High energy processes in astrophysics.
- Multi-wavelength studies of neutron stars, pulsar wind nebulae and supernova remnants.
- Three-dimensional modeling of astrophysical objects.

Working Experience

2019–Present Associate Professor, Department of Physics, The University of Hong Kong
2013–2018 Assistant Professor, Department of Physics, The University of Hong Kong
2010–2012 Tomlinson Postdoctoral Fellow, Centre for Research in Astrophysics of Quebec (CRAQ) Postdoctoral Fellow, McGill University
2007–2009 Postdoctoral Fellow, The University of Sydney

Education

2001–2006 Ph. D. in Physics, Stanford University
1999–2001 M. Phil. in Physics, The University of Hong Kong
1996–1999 B. Sc. (1st class honors) in Maths/Physics, The University of Hong Kong

Awards

2013–2014 Early Career Award, Research Grant Council of Hong Kong
2010–2012 Richard H. Tomlinson Postdoctoral Fellowship, McGill University
2010–2012 Centre for Research in Astrophysics of Quebec (CRAQ) Postdoctoral Fellowship
1999–2001 Postgraduate Studentship, The University of Hong Kong
1998–1999 Vice-Chancellor’s Outstanding Graduates (Intensified Learning Opportunity Programme), The University of Hong Kong
1998–1999 William Faid Memorial Prize in Physics
1997–1998 Lam Fang Kwong Prize in Physics
1997–1999 Li Po Kwai Scholarships (2 awards)
1997–1999 Dean’s Honors List (3 awards)
1996–1997 Alan John Ellis Prizes in Mathematics

Teaching

Grant Awarded:

“Developing Experiential Learning in Astronomy,” Teaching Development Grants, 2014, HKU

Student Awards:

Roger Jie Luo, *Outstanding Presentation Award and Finalist in Research Colloquium for Science Undergraduate Students*, 2013–14, HKU

Bengy Tsz Tsun Wong, *Outstanding Presentation Award and Finalist in Research Colloquium of Summer Research Fellowship in Faculty of Science*, 2013–14, HKU

Pericles Philippopoulos, *Finalist in Undergraduate Research Poster Competition in the Department of Physics*, 2012–13, McGill

Chen He, *First place in Undergraduate Research Poster Competition in the Department of Physics; First Place in Undergraduate Research Conference of the Science Faculty (Physical Science Category)*, 2011–12, McGill

Research Supervision:

Postdoc: Frankie Yi-Jung Yang (2021–23), Ruolan Jin (2019–21), Chin-Ping Hu (2015–18)

Ph. D.: Yifan Sun (UPF; 2023–Present), Shumeng Zhang (HKPF; 2022–Present), Zhihong Shi (2021–Present), Yihan Liu (2018–22), Ryan Wai-Yan Leung (2014–18)

M. Phil.: Paul Lai (2019–21), Sandy Yuk Ying Chan (2017–19), Wenchao Wang (2016–18), Run Wen (2015–17), Darren Yik Lun Mong (2015–17), Jackie Yik Ki Ma (2013–15)

Course Instructor:

PHYS8656 Topics in Astrophysics, HKU, 2022–Present

PHYS4656 Advanced Astrophysics, HKU, 2021–Present

PHYS3660 Astronomy Laboratory, HKU, 2020–Present

PHYS4650 Stellar Physics, HKU, 2013–19

PHYS3151 Machine Learning in Physics, HKU, 2019–20

PHYS3651 The Physical Universe, HKU, 2013–18

Refereed Publications

91. Shi, Z. & **C.-Y. Ng** 2024, “*Pulsar Population Synthesis with Magnetorotational Evolution: Constraining the Decay of the Magnetic Field*,” *ApJ*, 972, 78
90. Zhou, P. et al. (102 authors including Yang, Y.-J. and **Ng, C.-Y.**) 2023, “*Magnetic Structures and Turbulence in SN 1006 Revealed with Imaging X-Ray Polarimetry*,” *ApJ*, 957, 55
89. Liu, K., et al. (15 authors including Liu, Y. H. and **Ng, C.-Y.**) 2023, “*A Spatially Resolved X-Ray Polarization Map of the Vela Pulsar Wind Nebula*,” *ApJ*, 959, 2
88. Liu, Y. H., **C.-Y. Ng**, & Dodson, R. 2023, “*Radio Study of the Pulsar Wind Nebula Powered by PSR B1706–44*,” *ApJ*, 945, 82
87. Jin, R., **C.-Y. Ng**, Roberts, M. S. E., & Li, K.-L. 2023, “*High-Resolution Radio Study of the Dragonfly Pulsar Wind Nebula Powered by PSR J2021+3651*,” *ApJ*, 942, 100
86. de Vries, M. Romani, R. W. Kargaltsev, O. Pavlov, G. Posselt, B. Slane, P. Bucciantini, N. **Ng, C.-Y.**, & Klingler, N. 2022, “*A Quarter Century of Guitar Nebula/Filament Evolution*,” *ApJ*, 939, 70
85. Klingler, N., Kargaltsev, O., Pavlov, G. G., **Ng, C.-Y.**, Gong, Z., & Hare, J. 2022, “*‘The Goose’ Pulsar Wind Nebula of PSR J1016–5857: The Birth of a Plerion*,” *ApJ*, 932, 89
84. Lai, P. C. W., **C.-Y. Ng**, & Bucciantini, N. 2022, “*Magnetic Field Structure and Faraday Rotation of the Plerionic Supernova Remnant G21.5–0.9*,” *ApJ*, 930, 1
83. Hu, C.-P., Ishizaki, W., **Ng, C.-Y.**, Tanaka, S. J., & Mong, Y.-L. 2022, “*A Comprehensive Study of the Spectral Variation and the Brightness Profile of Young Pulsar Wind Nebulae*,” *ApJ*, 927, 87
82. Acciari, V. A., et al. (201 authors including **Ng, C.-Y.**) 2021, “*Search for Very High-Energy Emission from the millisecond pulsar PSR J0218+4232*,” *ApJ*, 922, 251
81. Chu, C.-Y., **Ng, C.-Y.**, Kong, A. K. H., & Chang, H.-K. 2021, “*High Frequency Radio Observations of Two Magnetars, 1E 1547.0–5408 and PSR J1622–4950*,” *MNRAS*, 503, 1214
80. de Vries, M., Romani, R. W., Kargaltsev, O., Pavlov, G., Posselt, B., Slane, P., Bucciantini, N., **Ng, C.-Y.**, & Klingler, N. 2021, “*PSR J1709–4429’s Proper Motion and its Relationship to SNR G343.1–2.3*,” *ApJ*, 908, 50

Students and postdocs under my supervision are underlined.

79. Law, C. Y., Li, H.-B., Cao, Z. & **Ng, C.-Y.** 2020, “*The Links between Magnetic Fields and Filamentary Clouds III: Field Regulated Mass Cumulative Functions*,” MNRAS, 498, 850
78. Ho, W. C. G., et al. (10 authors including **Ng, C.-Y.**) 2020, “*Proper Motion, Spectra, and Timing of PSR J1813–1749 Using Chandra and NICER*,” MNRAS, 498, 4396
77. Chan, M. H., Lee, C. M., **Ng, C.-Y.**, & Leung, C. S. 2020, “*Constraining Annihilating Dark Matter Mass by the Radio Continuum Spectral Data of a High-Redshift Galaxy Cluster*,” ApJ, 900, 126
76. Cigan, P., et al. (26 authors including **Ng, C.-Y.**) 2019, “*High Angular Resolution ALMA Images of Dust and Molecules in the SN 1987A Ejecta*,” ApJ, 886, 51
75. **Ng, C.-Y.**, Ho, W. C. G., Gotthelf, E. V., Halpern, J. P., Coe, M. J., Stappers, B. W., Lyne, A. G., Wood, K. S., & Kerr, M. 2019, “*X-ray and Radio Variabilities of PSR J2032+4127 near Periastron*,” ApJ, 880, 147
74. Hu, C.-P. & **Ng, C.-Y.** 2019, “*On the Connection between Radiative Outbursts and Timing Irregularities in Magnetars*,” Astronomische Nachrichten, 340, 340
73. Hu, C.-P., **Ng, C.-Y.**, & Ho, W. C. G. 2019, “*A Systematic Study of Soft X-Ray Pulse Profiles of Magnetars in Quiescence*,” MNRAS, 485, 4274
72. Coe, M. J., Okazaki, A. T., Steele, I. A., **Ng, C.-Y.**, Ho, Wynn C. G., Lyne, A. G., Stappers, B., Johnson, T. J. Ray, Paul S., & Kerr, M. 2019, “*The Semicentennial Binary System PSR J2032+4127 at Periastron: X-Ray Photometry, Optical Spectroscopy and SPH Modelling*,” MNRAS, 485, 1864
71. Cendes, Y., Gaensler, B. M., **Ng, C.-Y.**, Staveley-Smith, L., Zanardo, G., & Tzioumis, A. K. 2018, “*Recent Radio Observations of the Supernova 1987A Remnant at 9 GHz*,” ApJ, 867, 65
70. Lin, L. C.C., Wang, H.-H., Li, K.-L., Takata, J., Hu, C.-P., **Ng, C.-Y.**, Hui, C. Y., Kong, A. K. H., Tam, P.-H. T., & Yeung, P. K. H. 2018, “*Investigation of the High-Energy Emission from the Magnetar-like Pulsar PSR J1119–6127 after the Outburst*,” ApJ, 866, 6
69. Alp, D., et al. (35 authors including **Ng, C.-Y.**) 2018, “*The 30-Year Search for the Compact Object in SN 1987A*,” ApJ, 864, 174
68. Hu, C.-P., Kong, A. K. H., **Ng, C.-Y.**, & Li, K. L. 2018, “*NGC 7793 P9: An Ultraluminous X-Ray Source Evolved from a Canonical Black Hole X-Ray Binary*,” ApJ, 864, 64
67. Zanardo, G., Staveley-Smith, L., Gaensler, B. M., Indebetouw, R., **Ng, C.-Y.**, Matsuura, M., & Tzioumis, A. K. 2018, “*Detection of Linear Polarization in the Radio Remnant of Supernova 1987A*,” ApJL, 861, L9
66. Klingler, N., Kargaltsev, O., Pavlov, G. G., **Ng, C.-Y.**, Beniamini, P. & Volkov, I. 2018, “*The Mouse Pulsar Wind Nebula*,” ApJ, 861, 5
65. Yan, Z., Shen, Z.-Q., Manchester, R. N., **Ng, C.-Y.**, P. Weltevrede, P., Wang H., Wu, X.-J., Yuan, J.-P., Wu, Y.-J., Zhao, R.-B., Liu, Q.-H., Zhao, R.-S., Liu, J. 2018, “*Simultaneous 13 cm/3 cm Single-Pulse Observations of PSR B0329+54*,” ApJ, 856, 55
64. Mong, Y.-L. & **Ng, C.-Y.** 2018, “*X-Ray Observations of Magnetar SGR 0501+4516 from Outburst to Quiescence*,” ApJ, 852, 86
63. Auchettl, K., **Ng, C.-Y.**, Wong, B. T. T., Slane, P. O., & Lopez, L. 2017, “*An XMM-Newton Study of the Mixed-Morphology Supernova Remnant G346.6–0.2*,” ApJ, 847, 121
62. Matsuura, M., et al. (29 authors including **Ng, C.-Y.**) 2017, “*ALMA Spectral Survey of Supernova 1987A — Molecular Inventory, Chemistry, Dynamics and Explosive Nucleosynthesis*,” MNRAS, 469, 3347
61. Hu, C.-P., Chou, Y., **Ng, C.-Y.**, Lin, L. C.-C., & Yen, D. C.-C. 2017, “*Evolution of Spin, Orbital, and Superorbital Modulation of 4U 0114+650*,” ApJ, 844, 16

60. **Ng, C.-Y.**, Bandiera, R., Hunstead, R. W., & Johnston, S. 2017, “*Discovery of a Synchrotron Bubble Associated with PSR J1015–5719*,” ApJ, 842, 100
59. Abellán, F. J., et al. (24 authors including **Ng, C.-Y.**) 2017, “*Very Deep inside the SN 1987A Core Ejecta: Detailed Molecular Structures Seen in 3D*,” ApJL, 842, L24
58. Zhao, H.-H., Weng, S.-S., & **Ng, C.-Y.** 2017, “*The X-Ray Decay of the Ultraluminous Supernova SN 1978K in NGC 1313*,” MNRAS, 468, 1551
57. Hu, C.-P., **Ng, C.-Y.**, Takata, J., Shannon, R. M., & Johnston, S. 2017, “*Chandra Phase-Resolved Spectroscopy of the High-Magnetic-Field Pulsar B1509–58*,” ApJ, 838, 156
56. Hu, C.-P., Li, K. L., Kong, A. K. H., **Ng, C.-Y.**, & Lin, L. C.-C. 2017, “*Swift Detection of A 65-Day X-Ray Period from the Ultraluminous Pulsar NGC 7793 P13*,” ApJL, 835, L9
55. Ho, W. C. G., **Ng, C.-Y.**, Lyne, A. G., Stappers, B. W., Coe, M. J., Halpern, J. P., Johnson, T. J., & Steele, I. A. 2017, “*Multiwavelength Monitoring and X-Ray Brightening of Be X-Ray Binary PSR J2032+4127/MT91 213 on Its Approach to Periastron*,” MNRAS, 464, 1211
54. Posselt, B., Pavlov, G. G., Slane, P. O., Romani, R. W., Bucciantini, N., Bykov, A. M., Kargaltsev, O., Weisskopf, M. C., & **Ng, C.-Y.** 2017, “*Geminga’s Puzzling Pulsar Wind Nebula*,” ApJ, 835, 66
53. Klingler, N., Rangelov, B., Kargaltsev, O., Pavlov, G. G., Romani, R. W., Posselt, B., Slane, P. O., Temim, T., **Ng, C.-Y.**, Bucciantini, N., Bykov, A., Swartz, D. A., & Buehler, R. 2016, “*Deep Chandra Observations of the Pulsar Wind Nebula Created by PSR B0355+54*,” ApJ, 833, 253
52. Klingler, N., Kargaltsev, O., Rangelov, B., Pavlov, G. G., Posselt, B., & **Ng, C.-Y.** 2016, “*Chandra Observations of Outflows from PSR J1509–5850*,” ApJ, 828, 70
51. Ma, Y. K., **Ng, C.-Y.**, Bucciantini, N., Slane, P. O., Gaensler, B. M., & Temim T. 2016, “*Radio Polarization Observations of the Snail: A Crushed Pulsar Wind Nebula in G327.1–1.1 with a Highly Ordered Magnetic Field*,” ApJ, 820, 100
50. Luo, J., **Ng, C.-Y.**, Ho, W. C. G., Bogdanov, S., Kaspi, V. M., & He, C. 2015, “*Hunting for Central Compact Objects among Radio Pulsars*,” ApJ, 808, 130
49. Auchettl, K., Slane, P., Romani, R. W., Posselt, B., Pavlov, G. G., Kargaltsev, O., **Ng, C.-Y.**, Temim, T., Weisskopf, M. C., Bykov, A., & Swartz, D. A. 2015, “*X-Ray Analysis of the Proper Motion and Pulsar Wind Nebula for PSR J1741–2054*,” ApJ, 802, 68
48. Archibald R., Kaspi, V., **Ng, C.-Y.**, Scholz, P., Beardmore, A. P., Gehrels, N., & Kennea, J. 2015, “*Repeated, Delayed Torque Instabilities Following X-Ray Flux Enhancements in the Magnetar 1E 1048.1–5937*,” ApJ, 800, 33
47. Zandaro G., Staveley-Smith, L., Indebetouw, R., Gaensler, B. M., Baes, M., Barlow, M. J., Chevalier, R. A., Fransson, C., Kamenetzky, J. R., Lakićević, M., Lundqvist, Marcaide, J., Martí-Vidal, I., Matsuura, M., Meixner, M., **Ng, C.-Y.**, Park, S., Sonneborn, G., Spyromilio, J., & van Loon, J. Th. 2014, “*Spectral and Morphological Analysis of the Remnant of Supernova 1987A with ALMA and ATCA*,” ApJ, 796, 82
46. Potter, T. M., Staveley-Smith, L., Reville, B., **Ng, C.-Y.**, Bicknell, G. V., Sutherland, R. S., & Wagner, A. Y. 2014, “*Multi-Dimensional Simulations of the Expanding Supernova Remnant of SN 1987A*,” ApJ, 794, 174
45. Halpern J. P., Tomsick, J. A., Gotthelf, E. V., Camilo, F., **Ng, C.-Y.**, Bodaghee, A., Rodriguez, J., Chaty, S., & Rahoui, F. 2014, “*Discovery of X-Ray Pulsations from the INTEGRAL Source IGR J11014–6103*,” ApJL, 795, L27
44. Bogdanov, S., **Ng, C.-Y.**, & Kaspi, V. M. 2014, “*Constraining the Evolutionary Fate of Central Compact Objects: ‘Old’ Radio Pulsars in Supernova Remnants*,” ApJL, 792, L36
43. Wang, Z., **Ng, C.-Y.**, Wang, X., Li, A. & Kaplan, D. L. 2014, “*Searching for Debris Disks around Seven Radio Pulsars*,” ApJ, 793, 89

42. Xing, Y., Wang, Z., & **Ng, C.-Y.** 2014, “Fermi Variability Study of the Candidate Pulsar Binary 2FGL J0523.3–2530,” *ApJ*, 795, 88
41. **Ng, C.-Y.**, Takata, J., Leung, G. C. K., Cheng, K. S., & Philippopoulos, P. 2014, “High-Energy Emission of the First Millisecond Pulsar,” *ApJ*, 787, 167
40. Scholz, P., Archibald, R. F., Kaspi, V. M., **Ng, C.-Y.**, Beardmore, A. P., Gehrels, N., & Kennea, J. A. 2014, “On the X-Ray Variability of Magnetar 1RXS J170849.0–400910,” *ApJ*, 783, 99
39. Indebetouw, R., et al. (26 authors including **Ng, C.-Y.**) 2014, “Dust Production and Particle Acceleration in Supernova 1987A Revealed with ALMA,” *ApJL*, 782, L2
38. **Ng, C.-Y.**, Zanardo, G., Potter, T. M., Staveley-Smith, L., Gaensler, B. M., Manchester, R. N., & Tzioumis, A. K. 2013, “Evolution of the Radio Remnant of Supernova 1987A: Morphological Changes from Day 7000,” *ApJ*, 777, 131
37. Archibald, R. F., Kaspi, V. M., **Ng, C.-Y.**, Gourgouliatos, K. N., Tsang, D., Scholz, P., Beardmore, A. P., Gehrels, N., & Kennea, J. A. 2013, “An Anti-Glitch in a Magnetar,” *Nature*, 497, 591
36. He, C., **Ng, C.-Y.**, & Kaspi, V. M. 2013, “The Correlation between Dispersion Measure and X-Ray Column Density from Radio Pulsars,” *ApJ*, 768, 64
35. Zanardo, G., Staveley-Smith, L., **Ng, C.-Y.**, Gaensler, B. M., Potter, T. M., Manchester, R. N., & Tzioumis, A. K. 2013, “High-Resolution Radio Observations of the Remnant of SN 1987A at High Frequencies,” *ApJ*, 767, 98
34. Scholz, P., **Ng, C.-Y.**, Livingstone, M. A., Kaspi, V. M., Cumming, A., & Archibald, R. F. 2012, “Post-Outburst X-Ray Flux and Timing Evolution of Swift J1822.3–1606,” *ApJ*, 761, 66
33. **Ng, C.-Y.**, Kaspi, V. M., Ho, W. C. G., Weltevrede, P., Bogdanov, S., Shannon, R., & Gonzalez, M. E. 2012, “Deep X-Ray Observations of the Young High-Magnetic-Field Radio Pulsar J1119–6127 and Supernova Remnant G292.2–0.5,” *ApJ*, 761, 65
32. Van Etten, A., Romani, R. W. & **Ng, C.-Y.** 2012, “A Chandra Proper Motion for PSR J1809–2332,” *ApJ*, 755, 151
31. Lakićević, M., Zanardo, G., van Loon, J. Th., Staveley-Smith, L., Potter, T., **Ng, C.-Y.**, & Gaensler, B. M. 2012, “The Remnant of Supernova 1987A Resolved at 3 mm Wavelength,” *A&A*, 541, 2
30. **Ng, C.-Y.**, Bucciantini, N., Gaensler, B. M., Camilo, F., Chatterjee, S., & Bouchard, A. 2012, “An Extreme Pulsar Tail Protruding from the Frying Pan Supernova Remnant,” *ApJ*, 746, 105
29. Livingstone, M. A., Scholz, P., Kaspi, V. M., **Ng, C.-Y.**, & Gavriil, F. P. 2011, “The Spin-Down of Swift J1822.3–1606: A New Galactic Magnetar,” *ApJL*, 743, L38
28. Olausen, S. A., Kaspi, V. M., **Ng, C.-Y.**, Zhu, W. W., Dib, R., Gavriil, F. P., & Woods, P. M. 2011, “On the Extended Emission of the Anomalous X-Ray Pulsar 1E 1547.0–5408,” *ApJ*, 742, 4
27. Zhu, W. W., Kaspi, V. M., McLaughlin, M. A., Pavlov, G. G., **Ng, C.-Y.**, Manchester, R. N., Gaensler, B. M., & Woods, P. M. 2011, “Chandra Observations of the High-Magnetic-Field Radio Pulsar J1718–3718,” *ApJ*, 734, 44
26. Lovchinsky, I., Slane, P. O., Gaensler, B. M., Hughes, J. P., **Ng, C.-Y.**, Lazendic-Galloway, J., Gelfand, J. D., & Brogan, C. L. 2011, “A Chandra Observation of Supernova Remnant G350.1–0.3 and Its Central Compact Object,” *ApJ*, 731, 70
25. Livingstone, M. A., **Ng, C.-Y.**, Kaspi, V. M., Gavriil, F. P., & Gotthelf, E. V. 2011, “Post-Outburst Observations of the Magnetically Active Pulsar J1846–0258: a New Braking Index, Increased Timing Noise, and Radiative Recovery,” *ApJ*, 730, 66

24. **Ng, C.-Y.**, Kaspi, V. M., Dib, R., Olausen, S. A., Scholz, P., Güver, T., Özel, F., Gavriil, F. P., & Woods, P. M. 2011, “*Chandra and RXTE Observations of 1E 1547.0–5408: Comparing the 2008 and 2009 Outbursts*,” *ApJ*, 729, 131
23. **Ng, C.-Y.**, Potter, T. M., Staveley-Smith, L., Tingay, S., Gaensler, B. M., Phillips, C., Tzioumis, A. K., & Zanardo, G. 2011, “*First VLBI Detection of the Radio Remnant of Supernova 1987A: Evidence for Small-Scale Features*,” *ApJL*, 728, L15
22. Harvey-Smith, L., Gaensler, B. M., Kothes, R., Townsend, R., Heald, G. H., **Ng, C.-Y.**, & Green, A. J. 2010, “*Faraday Rotation of the Supernova Remnant G296.5+10.0: Evidence for a Magnetized Progenitor Wind*,” *ApJ*, 712, 1157
21. **Ng, C.-Y.**, Gaensler, B. M., Chatterjee, S., & Johnston, S. 2010, “*Radio Polarization Observations of G319.9–0.7: A Bow-Shock Nebula with an Azimuthal Magnetic Field Powered by Pulsar J1509–5850*,” *ApJ*, 712, 596
20. Zanardo, G., Staveley-Smith, L., Ball, L., Gaensler, B. M., Kesteven, M. J., Manchester, R. N., **Ng, C.-Y.**, Tzioumis, A. K., & Potter, T. M. 2010, “*Multifrequency Radio Measurements of Supernova 1987A Over 22 Years*,” *ApJ*, 710, 1515
19. **Ng, C.-Y.**, Gaensler, B. M., Murray, S. S., Slane, P. O., Park, S., Staveley-Smith, L., Manchester, R. N., & Burrows, D. N. 2009, “*High-Resolution X-Ray Imaging of Supernova Remnant 1987A*,” *ApJL*, 706, L100
18. Potter, T. M., Staveley-Smith, L., **Ng, C.-Y.**, Ball, L., Gaensler, B. M., Kesteven, M. J., Manchester, R. N., Tzioumis, A. K., & Zanardo, G. 2009, “*High Resolution 36 GHz Imaging of the Supernova Remnant of SN 1987A*,” *ApJ*, 705, 261
17. Camilo, F., **Ng, C.-Y.**, Gaensler, B. M., Ransom, S. M., Chatterjee, S., Reynolds, J., & Sarkissian, J. 2009, “*Out of the Frying Pan: a Young Pulsar with a Long Radio Trail Emerging from SNR G315.9–0.0*,” *ApJL*, 703, L55
16. **Ng, C.-Y.**, Slane, P. O., Gaensler, B. M., & Hughes, J. P. 2008, “*Deep Chandra Observation of the Pulsar Wind Nebula Powered by Pulsar PSR J1846–0258 in the Supernova Remnant Kes 75*,” *ApJ*, 686, 508
15. **Ng, C.-Y.**, Gaensler, B. M., Staveley-Smith, L., Manchester, R. N., Kesteven, M. J., Ball, L., & Tzioumis, A. K. 2008, “*Fourier Modeling of the Radio Torus Surrounding SN 1987A*,” *ApJ*, 684, 481
14. Gaensler, B. M., Tanna, A., Slane, P. O., Brogan, C. L., Gelfand, J. D., McClure-Griffiths, N. M., Camilo, F., **Ng, C.-Y.**, & Miller, J. M. 2008, “*The (Re-)Discovery of G350.1–0.3: a Young, Luminous Supernova Remnant and Its Neutron Star*,” *ApJL*, 680, L37
13. Van Etten, A., Romani, R. W., & **Ng, C.-Y.** 2008, “*Rings and Jets around PSR J2021+3651: the ‘Dragonfly Nebula’*,” *ApJ*, 680, 1417
12. **Ng, C.-Y.**, & Romani, R. W. 2008, “*Fitting Pulsar Wind Tori. II. Error Analysis and Applications*,” *ApJ*, 673, 411
11. **Ng, C.-Y.**, & Romani, R. W. 2007, “*Birth Kick Distributions and the Spin-Kick Correlation of Young Pulsars*,” *ApJ*, 660, 1357
10. **Ng, C.-Y.**, Romani, R. W., Briskin, W. F., Chatterjee, S., & Kramer, M. 2007, “*The Origin and Motion of PSR J0538+2817 in S147*,” *ApJ*, 654, 487
9. **Ng, C.-Y.**, & Romani, R. W. 2006, “*Proper Motion of the Crab Pulsar Revisited*,” *ApJ*, 644, 445
8. Romani, R. W., **Ng, C.-Y.**, Dodson, R., & Briskin, W. 2005, “*The Complex Wind Torus and Jets of PSR B1706–44*,” *ApJ*, 631, 480
7. **Ng, C.-Y.**, Roberts, M. S. E., & Romani, R. W. 2005, “*Two Pulsar Wind Nebulae: Chandra/XMM-Newton Imaging of GeV J1417–6100*,” *ApJ*, 627, 904

6. Roberts, M. S. E., Brogan, C. L., Gaensler, B. M., Hessels, J., W. T., **Ng, C.-Y.**, & Romani, R. W. 2005, "*Pulsar Wind Nebulae in EGRET Error Boxes*," Ap&SS, 297, 93
5. Hessels, J. W. T., Roberts, M. S. E., Ransom, S. M., Kaspi, V. M., Romani, R. W., **Ng, C.-Y.**, Freire, P. C. C., & Gaensler, B. M. 2004, "*Observations of PSR J2021+3651 and Its X-Ray Pulsar Wind Nebula G75.2+0.1*," ApJ, 612, 389
4. **Ng, C.-Y.**, & Romani, R. W. 2004, "*Fitting Pulsar Wind Tori*," ApJ, 601, 479
3. Romani, R. W., & **Ng, C.-Y.** 2003, "*The Pulsar Wind Nebula Torus of PSR J0538+2817 and the Origin of Pulsar Velocities*," ApJL, 585, L41
2. **Ng, C.-Y.**, Cheng, K. S., & Chu, M. C. 2003, "*Cooling Properties of Cloudy Bag Strange Stars*," Astropart. Phys., 19, 171
1. Tang, W. H., **Ng, C.-Y.**, Yau, C. Y., & Gao, J. 2000, "*Thickness Dependence of Superconductivity for $YBa_2Cu_3O_y$ Ultra-Thin Films*," Supercond. Sci. Technol., 13, 580

Awarded Telescope Proposals

Expanded Very Large Array (EVLA):

- A Multiwavelength View of Long Pulsar Tails* (PI, 2025A, 5.5 hr)
- New Radio Observation of the Pulsar Wind Nebula in G76.9+1.0* (PI: Y. Liu, 2025A, 3 hr)
- VLA Observations of Several 1LHAASO Sources* (PI: Y. Liu, 2025A, 3 hr)
- Radio Observation of the Pulsar Wind Nebula in G76.9+1.0* (PI: Y. Liu, 2023B, 3 hr)
- High-Resolution Radio Observation of Pulsar Wind Nebula CTB 87* (PI: Y. Liu, 2022B, 1.5 hr)
- Probing the Youngest Pulsar Wind Nebula in the Galaxy* (PI: R. Jin, 2022A, 1.5 hr)
- Understanding the Peculiar Dragonfly Nebula* (PI: R. Jin, 2021A, 1.5 hr)
- High Resolution Radio Study of the Boomerang Pulsar Wind Nebula* (PI: C. W. Lai, 2021A, 1.5 hr)
- High Resolution Radio Study of Pulsar Wind Tori* (PI, 2017B, 10 hr)
- Monitoring the Interacting Gamma-Ray Binary PSR J2032+4127 near Periastron* (PI, 2017B, 5.5 hr)
- Deep Radio Searches for Bow-Shock Pulsar Wind Nebulae* (PI, 2015B, 2.4 hr)
- Detecting Particle Outflows from an Active Magnetar* (PI, Target of Opportunity, 2012 Aug, 5 hr)

Australia Telescope Compact Array (ATCA):

- Revealing Wind Bubbles in Long Pulsar Tails* (PI, 2024 Oct, 52 hr)
- Mapping of Vela X Cocoon Region* (PI: Y. Liu, 2024 Oct, 39 hr)
- High Resolution 16 cm Observation of PWN G11.2–0.3* (PI: Y. Liu, 2024 Oct, 13 hr)
- An Unusual Spectral Turnover of a Pulsar Wind Nebula: Shutoff of Particle Acceleration at Low Energies?* (PI, 2023 Apr, 36 hr)
- High Resolution Radio Observation of PWN G11.2–0.3* (PI: Y. Liu, 2022 Oct, 24 hr)
- High-Resolution Radio Survey of Pulsar Wind Tori* (PI, 2017 Oct, 52 hr)
- Mapping the Magnetic Field Structure of a Fast-Moving Pulsar Wind Nebula System* (PI, 2015 Oct, 26 hr)
- J1549: the First Infrared Pulsar Wind Bow Shock?* (PI, 2013 Oct, 24 hr)
- Enigmatic Torque Variation in a Magnetar* (PI, Target of Opportunity, 2012 Feb, 5 hr)
- Anatomy of the "Cosmic Hand"* (PI, 2011 Oct, 36 hr)
- The Remarkable Wind Bubble Associated with PSR J1015–5719* (PI, 2009 Jul, 26 hr)
- Resolving the Most Extreme Pulsar Trail* (PI, 2009 Apr, 26 hr)
- Mapping the Magnetic Field Structure and Morphology of Pulsar Bow Shocks and Wind Nebulae* (PI, 2008 Oct, 130 hr)
- Radio Monitoring of SNR 1987A* (Co-I, continuous project since 2008 Oct, over 500 hr)

Students and postdocs under my supervision are underlined.

Radio Imaging of Globular Clusters (Co-I, 2008 Aug, 26 hr)

Mapping the Structure and Magnetic Field of a Pulsar Wind Nebula (Co-I, 2007 Oct, 26 hr)

Atacama Large Millimeter Array (ALMA):

Magnetar Emission at Submillimetre: Bridging the Gap between Radio and Infrared Detections (PI, cycle 4, 5 hr)

SN1987A: an Evolving Treasure Trove of Physics (Co-I, cycle 5, 15 hr)

Resolving HCO⁺ in the Ejecta of Supernova 1987A: Effect of Mixing (Co-I, cycle 5, 10 hr)

High Angular-Resolution Image of Supernova 1987A — Mixing and Formation of HCO⁺ (Co-I, cycle 4, 15 hr)

Polarization of SNR 1987A: Probing the Shock Structure and the Compact Remnant (Co-I, cycle 4, 6 hr)

SN1987A: High Resolution Shock, Dust, Molecular, and Nuclear Physics (Co-I, cycle 3, 15 hr)

Resolving the Collision of Supernova Remnant N49 with a Molecular Cloud (Co-I, cycle 3, 8.6 hr)

Resolving SN1987A: a detailed look at a unique laboratory of shock, dust, molecular, and nuclear physics (Co-I, cycle 2, 12 hr)

SN1987A: A Unique Laboratory of Shock, Molecular and Dust Physics (Co-I, cycle 1, 12 hr)

SN87A: A Unique Laboratory for Shock and Dust Physics (Co-I, cycle 0, 6 hr)

Nuclear Spectroscopic Telescope Array (NuSTAR):

Hard X-Ray Emission of Class II Millisecond Pulsars (PI, cycle 1, 73 ks)

Observing PSR J2032+4127, a Be/Gamma-ray Binary, at Periastron (Co-I, XMM cycle 16, 120 ks) *The Rare Case of SNR G346.6-0.2: the Non-Thermal Mixed-Morphology SNR* (Co-I, XMM cycle 15, 60 ks)

Chandra X-Ray Observatory:

Where is the Dragonfly going? Measuring the Proper Motion of the PSR J2021+3651 (PI: R. Jin cycle 24, 85 ks)

Enigmatic X-Ray Emission from a High-Magnetic-Field Pulsar (PI, cycle 14, 60 ks)

Magnetars in Quiescence: a Key to Test the “Grand Unification” of Neutron Stars (PI, cycle 14, 30 ks)

Hunting for Anti-Magnetars with Chandra (PI, cycle 13, 26 ks)

Hunting for Anti-Magnetars with Chandra (PI, cycle 12, 25 ks)

Phase-resolved Imaging of Compact Structures in a Pulsar Bow Shock (PI, cycle 9, 60 ks)

Co-I of 10+ projects, including X-ray Visionary Projects, over 1 Ms

XMM-Newton Satellite:

X-raying the Mini Mouse (PI, cycle 24, 160 ks)

Detecting an Extreme Pulsar Tail in X-rays (PI, cycle 12, 120 ks)

Identifying the X-ray Counterpart of the TeV source HESS J1848–018 (PI, cycle 12, 48 ks)

Identifying Synchrotron-dominated Supernova Remnants (PI, cycle 11, 36 ks)

Detecting an Extreme Pulsar Tail in X-rays (PI, cycle 11, 126 ks)

Identifying the X-ray Counterpart of the HESS Source J1848–018 (PI, cycle 11, 54 ks)

Identifying Synchrotron-dominated Supernova Remnants (PI, cycle 9, 30 ks)

Observing PSR J2032+4127, a Be/Gamma-ray Binary, at Periastron (Co-I, cycle 16, 100 ks)

The Rare Case of SNR G346.6-0.2: the Non-Thermal Mixed-Morphology SNR (Co-I, cycle 15, 100 ks)

Confirming the First Infrared Bow Shock Driven by A Pulsar (Co-I, cycle 13, 88 ks)

Measuring the Spin Period of a High-Velocity Pulsar (Co-I, cycle 13, 37 ks)

Revisiting the Pulsar Injection Problem (Co-I, cycle 11, 54 ks)

Revisiting the Pulsar Injection Problem (Co-I, cycle 10, 18 ks)

Swift Satellite:

Detecting the X-Ray Counterpart of a Fast-Spinning Pulsar in G315.9–0.0 (PI, Target of Opportunity, 10 ks)

X-ray Monitoring of the Magnetar Swift J1822.3–1606 (Co-I, Target of Opportunity, 10 ks)
Hubble Space Telescope:

A Brief Revisit of the Crab (Co-I, cycle 16, 2 orbits)

Australian Long Baseline Array:

VLBI astrometry of PSR J1549–4848: Test of Its Association with an Infrared Bow Shock
(Co-I, 2013 Oct, 18 hr)

High Resolution Observations of SNR 1987A (Co-I, 2009 Apr–, over 50 hr)

Supernova 1987A: Resolving the Sub-structure of the Expanding Remnant with VLBI (Co-I,
2008 Apr, 15 hr)

Parkes Observatory:

PSR J1437–5959 and Its Bow-Shock Nebula (Co-I, 2009 Apr)

Effelsberg Telescope:

High-frequency observation of PSR J2032+4127 through Periastron Passage (Co-I, 2016 Oct,
105 hr)

Awarded Grant Proposals

“Unveiling the Magnetic Field Structure of Powerful Accelerators in the Galaxy,” 2024, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.9M)

“Unveiling the Nature of PeVatron,” 2023, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.6M)

“Hong Kong’s Window on the Universe: Building a Pioneering Submillimetre Astronomical Camera,” 2021, Collaborative Research Fund, Research Grant Council of Hong Kong (Co-PI, HKD 3.1M)

“Understanding the Birth Distribution and Evolution of Normal Pulsars,” 2021, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.9M)

“A New View of Particle Accelerators in our Galaxy Revealed by X-ray Polarimetry,” 2019, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.8M)

“Systematic Radio Study of Nebulae Powered by Young Pulsars,” 2018, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.5M)

“Particle Acceleration and Transport in Pulsar Wind Nebulae,” 2016, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.5M)

“Magnetic Field Effects on Pulsars,” 2015, General Research Fund, Research Grant Council of Hong Kong (PI, HKD 0.5M)

“Developing Experiential Learning in Astronomy,” 2014, Teaching Development Grants, HKU (PI, HKD 0.23M)

“Mapping the Magnetic Fields of Pulsar Wind Nebulae,” 2013, Early Career Scheme, Research Grant Council of Hong Kong (PI, HKD 1M)

Press Releases and Media Coverage

Press release HKU Astrophysicists Collaborates with NASA’s IXPE Telescope Untangles Theories Surrounding Historic Supernova Remnant, Oct 29, 2023

Interview by the South China Morning Post, Nov 24, 2022

Interview by Radio Television Hong Kong, Nov 4, 2017

“Heart of an Exploded Star Observed in 3-D,” 2017, in NRAO News

“A Tale of Two Pulsars’ Tails: Plumes Offer Geometry Lessons to Astronomers,” 2017, in Penn State News

Interview by the South China Morning Post, Sep 24, 2016

Interview by Radio Television Hong Kong, May 14, 2016

“The Highly Ordered Magnetic Field Structure of the Snail Nebula,” Apr 21, 2016, ATNF Daily Astronomy Picture

“Gravitational Waves — A New Window to The Universe,” 2016, Knowledge Magazine, 3, 22

Interviews by Oriental Daily News and the Sun Newspapers, Dec 24, 2014
"Astronomers Dissect the Aftermath of a Supernova," 2015, International Centre for Radio Astronomy Research
 Interview by Hong Kong ATV, Sep 8, 2014
 Interview by Wen Wei Po Newspaper, Mar 31, 2014
"ALMA Spots Supernova Dust Factory," 2014, in ESO Press Release eso1401
"Super-dense Star is First Ever Found Suddenly Slowing Its Spin," 2013, in Penn State Science
"G292.2-0.5: A Young Supernova Remnant Harboring A High Magnetic Field Radio Pulsar," 2012, in XMM-Newton Image Gallery
"Remnant of an Explosion With a Powerful Kick?" 2012, in Chandra Photo Album
"Astrophile: Frying Pan Forms Map of Dead Star's Past," 2011, in New Scientist
"New Neutron Star Discovered in the Frying Pan," 2009, in ABC Science and Sydney Central Courier
"Forgotten Source Sheds Light on Missing Supernovae," 2008, ESA / XMM-Newton

Invited Talks

"Recent Observational results of Pulsar Wind Nebulae," 2024 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area, Macau, Aug 2024
"Simulating Pulsar Population in the Milky Way Galaxy," Conference for the 35th Anniversary of the Theoretical Astronomy Group of the Hong Kong Astronomical Society, Hong Kong, Apr 2024
"Pulsars," Gewuzhili Jiangtan Physics Forum no. 8, School of Physical Science and Technology, Southwest Jiaotong University, Chengdu, China, Mar 2022
"The Neutron Star Zoo," HEP-Cosmo-Astro seminar, Department of Theoretical Physics, Horia Hulubei National Institute of Physics and Nuclear Engineering, Romanian, Feb 2022
"Neutron stars: Strongest Magnets in the Universe," colloquium, Department of Physics, The Chinese University of Hong Kong, Hong Kong, Oct 2021
"The Neutron Star Zoo," colloquium, Department of Astronomy, Kyoto University, Kyoto, Japan, Jan 2020
"Neutron Stars: Strongest Magnets in the Universe," conference for the 30th Anniversary of the Theoretical Astronomy Group of the Hong Kong Astronomical Society, Hong Kong, Nov 2019
"Physics and Observations of Pulsar Wind Nebulae," 14th Rencontres du Vietnam on Very High Energy Phenomena in the Universe, Quy Nhon, Vietnam, Aug 2018
"Magnetars: the Strongest Magnets in the Universe," 2018 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area, Macau, China, Jul 2018
"Nobel Prize in Physics 2017: the Detection of Gravitational Waves," Technological and Higher Education Institute (THEi) of Hong Kong, Mar 2018
"The Neutron Star Zoo," colloquium, National Astronomical Observatories, Chinese Academy of Sciences, Beijing, China, Dec 2017
"The Physics and Observations of Pulsar Wind Nebulae," seminar, School of Physics, Huazhong University of Science and Technology, Wuhan, China, Jun 2017
"The Physics and Observations of Pulsar Wind Nebulae," Annual Meeting of the Physical Society of Hong Kong, Hong Kong, Jun 2017
"Magnetar and High Magnetic Field Pulsar Connection," Magnetars: Current Status and Opportunities for near Future Workshop, Beijing Normal University, Beijing, China, Jun 2016
"Multiwavelength Observations of Pulsar Wind Nebulae," seminar, Department of Astronomy, Beijing Normal University, Beijing, China, May 2016
"Radio Observations of Pulsar Wind Nebulae," the Physical Processes of Compact Objects at

- Various Scales Workshop, Sun Yat-Sen University, Guangzhou, China, Mar 2016
- “*The Neutron Star Zoo*,” seminar, Faculty of Science, New York University Abu Dhabi, Abu Dhabi, UAE, Dec 2015
- “*Supernovae: Cosmic Fireworks*,” conference for the 25th Anniversary of the Theoretical Astronomy Group of the Hong Kong Astronomical Society, Hong Kong, Jan 2015
- “*The Neutron Star Zoo*,” Seminar, Department of Physics, The Chinese University of Hong Kong, Hong Kong, Nov 2014
- “*Radio Hard X-ray Correlations for Pulsar Wind Nebulae*,” 39th COSPAR Scientific Assembly Event E1.1, Radio Meets Hard X-Rays: Two Skies in Comparison, Mysore, India, Jul 2012
- “*Supernova 1987A in Radio*,” Explosive Ideas about Massive Stars – from Observations to Modeling Workshop, Stockholm, Sweden, Aug 2011
- “*High Magnetic Field Neutron Stars: from Rotation-Powered Pulsars to Magnetars*,” Astrophysics Seminar, Université de Montréal, Canada, Nov 2010
- “Neutron Star Environment: from Supernova Remnants to Pulsar Wind Nebulae,” Gamma-Ray Sky from Fermi: Neutron Stars and their Environment Workshop, the University of Hong Kong, Hong Kong, Jun 2010

Conference Proceedings and Non-Refereed Publications

14. Coe, M. J., Steele, I. A., Ho, W. C. G., Stappers, B., Lyne, A. G., Halpern, J. P., Ray, P. S., Johnson, T. L., **Ng, C.-Y.**, & Kerr, M. 2017, “*PSR J2032+4127/MT91 213 on Approach to Periastron: X-Ray & Optical Monitoring*,” The Astronomer’s Telegram, 10920
13. Matsuura, M., Indebetouw, R., Woosley, S., Bujarrabal, V., Abellán, F. J., McCray, R., Kamenetzky, J., Fransson, C., Barlow, M. J., Gomez, H. L., Cigan, P., de Looze, I., Spyromilio, J., Staveley-Smith, L., Zanardo, G., Roche, P., Larsson, J., Viti, S., van Loon, J. Th., Wheeler, J. C., Baes, M., Chevalier, R., Lundqvist, P., Marcaide, J. M., Dwek, E., Meixner, M., **Ng, C.-Y.**, Sonneborn, G., & Yates, J. 2017, “*ALMA observations of Molecules in Supernova 1987A*,” Proc. of the IAU, 331, 294
12. Zanardo, G., Staveley-Smith, L., **Ng, C.-Y.**, Indebetouw, R., Matsuura, M., Gaensler, B. M., Tzioumis, A. K. 2017, “*The Radio Remnant of Supernova 1987A – A Broader View*,” Proc. of the IAU, 331, 274
11. Hu, C.-P., & **Ng, C.-Y.**, & Chou, Y. 2016, “*Evolution of Spin and Superorbital Modulation in 4U 0114+650*,” JASS, 33, 173
10. Gelfand, J. D., Breton, R. P., **Ng, C.-Y.**, Hessels, J. W. T., Stappers, B., Roberts, M. S. E., & Possenti A. 2015, “*Pulsar Wind Nebulae in the SKA Era*,” Proc. of Advancing Astrophysics with the Square Kilometre Array, 46
9. Zanardo, G., Staveley-Smith, L., **Ng, C.-Y.**, Gaensler, B. M., Potter, T. M., Manchester, R. N., Tzioumis, A. K. 2014, “*The Radio Remnant of Supernova 1987A at High Frequencies and High Resolution*,” Proc. of the IAU, 296, 23
8. Staveley-Smith, L., Potter, T. M., Zanardo, G., Gaensler, B. M., & **Ng, C.-Y.** 2014, “*Radio Observations of Supernova 1987A*,” Proc. of the IAU, 296, 15
7. Scholz, P., **Ng, C.-Y.**, Livingstone, M. A., Kaspi, V. M., Cumming, A., & Archibald, R. 2013, “*The New Magnetar Swift J1822.3–1606*,” Proc. of the IAU, 291, 486
6. **Ng, C.-Y.**, & Kaspi, V. M. 2011, “*High Magnetic Field Rotation-Powered Pulsars*,” AIP Conf. Proc., 1379, 60
5. Zhu, W. W., Kaspi, V. M., McLaughlin, M. A., Pavlov, G. G., **Ng, C.-Y.**, Manchester, R. N., Gaensler, B. M., & Woods, P. M. 2011, “*Chandra Observations of the High-Magnetic-Field Radio Pulsar J1718–3718*,” AIP Conf. Proc., 1379, 70

4. Livingstone, M. A., **Ng, C.-Y.**, Kaspi, V. M., Gavriil, F. P., & Gotthelf, E. V. 2011, “*Post-Outburst Timing of the Magnetically Active Pulsar J1846–0258*,” AIP Conf. Proc., 1357, 189
3. Olausen, S. A., Kaspi, V. M., **Ng, C.-Y.**, Dib, R., Zhu, W. W., Gavriil, F. P., & Woods, P. M. 2011, “*On the Extended Emission of the Magnetar 1E 1547.0–5408*,” AIP Conf. Proc., 1357, 193
2. Harvey-Smith, L., Gaensler, B. M., **Ng, C.-Y.**, & Green, A. J. 2009, “*Spectropolarimetry of Supernova Remnant G296.5+10.0*,” Proc. of the IAU, 259, 141
1. **Ng, C.-Y.**, et al. 2009, “*High Resolution X-Ray Imaging of the Mouse*,” Chandra Newsletter, 16, 11

Theses

“*Pulsar Wind Tori and the Spin-Kick Connection*,” 2007, Ph. D Thesis, Stanford University
 “*Theories of Strange Stars*,” 2001, M. Phil. Thesis, The University of Hong Kong

Conference Presentations

44. Klingler, N., Kargaltsev, O., Pavlov, G. G., **Ng, C.-Y.**, & Gong, Z., 2022, “*‘The Goose’ Pulsar Wind Nebula of PSR J1016–5857: The Birth of a Plerion*,” 19th HEAD Meeting of the American Astronomical Society, 110.15
43. **Ng, C.-Y.**, Ho, W. C. G., Gotthelf, E. V., Halpern, J. P., Coe, M. J., Stappers, B. W., Lyne, A. G., Wood, K. S., & Kerr, M. 2020, “*Variabilities ovelength Observations of the Gamma-Ray Binary PSR J2032+4127 near Periastron*,” 235th Meeting of the American Astronomical Society, 302.02
42. Liu, Y. & **Ng, C.-Y.** 2020, “*Radio Observation of Pulsar Wind Nebula powered by PSR B1706–44*,” 235th Meeting of the American Astronomical Society, 218.06
41. **Ng, C.-Y.** 2017, “*The Remarkable Synchrotron Nebula Associated with PSR J1015–5719*,” 16th HEAD Meeting of the American Astronomical Society, 109.25
40. **Ng, C.-Y.** 2016, “*Discovery of a Radio Bubble Trailing PSR J1015–5719*,” Supernova Remnants: An Odyssey in Space after Stellar Death, Chania, Crete, Greece
39. Leung, W.-Y. & **Ng, C.-Y.** 2016, “*High Resolution Radio Imaging Study of the Pulsar Wind Nebula MSH 15–52*,” Supernova Remnants: An Odyssey in Space after Stellar Death, Chania, Crete, Greece
38. **Ng, C.-Y.**, Ma, Y. K., Bucciantini, N., Slane, P. O., Gaensler, B. M., & Temim, T. 2016, “*Constraining the Turbulence Scale and Mixing of a Crushed Pulsar Wind Nebula*,” 15th HEAD Meeting of the American Astronomical Society, 118.01
37. Hu, C.-P., & **Ng, C.-Y.** 2016, “*Chandra Phase-Resolved Spectroscopy of the High-Magnetic-Field Pulsar B1509–58*,” 15th HEAD Meeting of the American Astronomical Society, 114.10
36. Auchettl, K. A., Wong, B. T. T., **Ng, C.-Y.**, & Slane, P. O. 2016, “*G346.6–0.2: A Rare Mixed-Morphology Supernova Remnant with Non-Thermal X-Ray Emission*,” 15th HEAD Meeting of the American Astronomical Society, 306.02
35. **Ng, C.-Y.** 2015 “*Mapping the Magnetic Field Structure of Elongated Pulsar Wind Nebulae*,” High-Energy Phenomena in Relativistic Outflows V, La Plata, Argentina
34. Ma, Y. K., **Ng, C.-Y.**, Bucciantini, N., Gaensler, B. M., Slane, P. O., & Temim, T. 2015 “*A Highly Ordered Magnetic Field in a Crushed Pulsar Wind Nebula in G327.1–1.1*,” 225th Meeting of the American Astronomical Society, 445.06

students and postdoc under my supervision are underlined.

33. **Ng, C.-Y.**, Takata, J., Leung, G. C. K., Cheng, K. S., & Philippopoulos, P. 2014, “*High-Energy Emission of PSR B1937+21*,” International Conference on the Physics of Neutron Stars, Saint-Petersburg, Russia
32. Halpern, J. P., Tomsick, J., Gotthelf, E. V., Camilo, F., **Ng, C.-Y.**, Bodaghee, A., Rodriguez, J., Chaty, S., & Rahoui, F. 2014 “*Discovery of X-Ray Pulsations from the INTEGRAL Source IGR J11014–6103*,” 14th HEAD Meeting of the American Astronomical Society, 114.07
31. **Ng, C.-Y.**, Zanzardo, G., Potter, T. M., Staveley-Smith, L., Gaensler, B. M., Manchester, R. N., & Tzioumis, A. K. 2014, “*Evolution of the Remnant of Supernova 1987A in Radio*,” COSPAR Scientific Assembly Event E1.16, SN Remnants and PWN through the Electromagnetic Spectrum, Moscow, Russia
30. **Ng, C.-Y.**, Kaspi, V. M., Ho, W. C. G., Weltevred, P., Bogdanov, S., Shannon, R., & Gonzalez, M. E. 2013, “*Deep X-Ray Observations of the High-Magnetic-Field Radio Pulsar J1119–6127*,” The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, Madrid, Spain
29. **Ng, C.-Y.**, He, C., & Kaspi, V. M. 2013, “*The Correlation between Dispersion Measure and X-Ray Column Density from Radio Pulsars*,” 13th HEAD Meeting of the American Astronomical Society, 126.12
28. Scholz, P., Kaspi, V. M., **Ng, C.-Y.**, & Archibald, R. F. 2013, “*On the X-Ray Variability of Magnetar 1RXS J170849.0–400910*,” 13th HEAD Meeting of the American Astronomical Society, 126.10
27. Archibald, R. F., Kaspi, V. M. **Ng, C.-Y.**, Gourgouliatos, N. K., Tsang, D., Scholz, P., Beardmore, A. P., Gehrels, N., & Kennea, J. A. “*Anti-Glitch in the Magnetar 1E 2259+586*,” 13th HEAD Meeting of the American Astronomical Society, 103.09
26. **Ng, C.-Y.** 2012, “*Mapping the Magnetic Field Structure of Pulsar Wind Nebulae*,” The Cosmic Kaleidoscope: Pulsars and their Nebulae, Supernova Remnants and More, Kurger Park, South Africa
25. **Ng, C.-Y.**, Kaspi, V. K., Cumming, A., Livingstone, M. A., Scholz, P., & Archibald, R. F. 2012, “*Spin and Flux Evolution of the New Magnetar Swift J1822.3–1606*” COSPAR Scientific Assembly Event E1.12, Magnetars: the Extremes of Nature, Mysore, India
24. **Ng, C.-Y.**, He, C., Kaspi, V. M., & Bogdanov, S. 2011, “*Hunting for Central Compact Objects with Chandra*,” 12th HEAD Meeting of the American Astronomical Society, 20.11
23. **Ng, C.-Y.**, Bucciantini, N., Gaensler, B. M., Camilo, F., & Chatterjee, S. 2011, “*Radio Polarization Measurements of the Longest Pulsar Trail G315.9–0.0*,” International Conference on the Physics of Neutron Stars, Saint-Petersburg, Russia
22. **Ng, C.-Y.**, Potter, T. M., Staveley-Smith, L., Tingay, S., Gaensler, B. M., Murray, S. S., Phillips, C., Tzioumis, A. K., & Zanzardo, G. 2011, “*Supernova Remnant 1987A at High Resolution*,” 217th Meeting of the American Astronomical Society, BAAS, 43, 256.27
21. Lovchinsky, I., Slane, P. O., Gaensler, B. M., Hughes, J. P., **Ng, C.-Y.** Lazendic, J. S., Gelfand, J. D., & Brogan, C. 2011, “*The Young, Galactic Supernova Remnant G350.1–0.3 and Its Neutron Star: A Study with Chandra*,” 217th Meeting of the American Astronomical Society, BAAS, 43, 256.14
20. **Ng, C.-Y.**, Kaspi, V. M., Dib, R., Olausen, S. A., Scholz, P., Güver, T., Özel, F., Gavriil, F. P., & Woods, P. M. 2010, “*An X-Ray View of the Magnetar 1E 1547.0–5408 with Chandra and RXTE: Comparing the 2008 and 2009 Outbursts*,” Radio Pulsars: an Astrophysical Key to Unlock the Secrets of the Universe Conference, Sardinia, Italy
19. Livingstone, M. A., **Ng, C.-Y.**, Kaspi, V. M., Gavriil, F. P., & Gotthelf, E. V. 2010, “*Post-Outburst Timing of the Magnetically Active Pulsar J1846–0258*,” Radio Pulsars: an Astrophysical Key to Unlock the Secrets of the Universe Conference, Sardinia, Italy

18. Olausen, S. A., Kaspi, V. M., **Ng, C.-Y.**, Dib, R., Zhu, W. W., Gavriil, F. P., & Woods, P. M. 2010, “*On the Extended Emission of the Magnetar 1E 1547.0–5408*” Radio Pulsars: an Astrophysical Key to Unlock the Secrets of the Universe Conference, Sardinia, Italy
17. **Ng, C.-Y.**, & Kaspi, V. M. 2010, “*High Magnetic Field Rotation-Powered Pulsars*,” Astrophysics of Neutron Stars 2010 – a conference in honor of M. Ali Alpar, Cesme, Turkey
16. Zhu, W. W., Kaspi, V. M., McLaughlin, M. A., Pavlov, G. G., **Ng, C.-Y.**, Manchester, R. N., Gaensler, B. M., & Woods, P. M. 2010, “*Chandra Observations of the High-Magnetic-Field Radio Pulsar J1718–3718*,” Astrophysics of Neutron Stars 2010 – a conference in honor of M. Ali Alpar, Cesme, Turkey
15. **Ng, C.-Y.**, Gaensler, B. M., Chatterjee, S., & Johnston, S. 2010, “*The Remarkable Bow-Shock Nebula G319.9–0.7: Evidence for a Helical Magnetic Field*,” 11th HEAD Meeting of the American Astronomical Society, BAAS, 42, 2
14. **Ng, C.-Y.**, Camilo, F., Chatterjee, S., Gaensler, B. M., Yusef-Zadeh, F., Hales, C. A., Johnston, S., Manchester, R. N., Kuiper, L., & van der Swaluw, E. 2009, “*A Tale of Two Long Tails: the Bow Shock Nebulae Associated with Pulsars J1747–2958 and J1509–5850*,” 212nd American Astronomical Society Meeting, BAAS, 41, 307
13. Romani, R. W., & **Ng, C.-Y.** 2009, “*Crab Pulsar Astrometry and Spin-Velocity Alignment*,” 212nd American Astronomical Society Meeting, BAAS, 41, 307
12. Harvey-Smith, L., Gaensler, B. M., **Ng, C.-Y.**, & Green, A. J. 2008, “*Spectropolarimetry of Supernova Remnant G296.5+10.0*,” IAU Symposium 259, Cosmic Magnetic Fields: From Planets, to Stars and Galaxies
11. Park, S., Burrows, D. N., Racusin, J. L., Zhekov, S. A., McCray, R., Gaensler, B. M., **Ng, C.-Y.**, & Staveley-Smith, L. 2008, “*Chandra Monitoring of X-Ray Evolution of SNR 1987A*,” The X-ray Universe 2008, Granada, Spain
10. **Ng, C.-Y.**, Slane, P. O., Gaensler, B. M., & Hughes, J. P. 2008, “*Deep Chandra Observation of the Pulsar Wind Nebula in Kes 75*,” 10th HEAD Meeting of the American Astronomical Society, BAAS, 40, 80
9. **Ng, C.-Y.**, Gaensler, B. M., Staveley-Smith, L., Manchester, R. N., Kesteven, M. J., Ball, L., & Tzioumis, A. K. 2008, “*Modeling the Radio Morphology of Supernova 1987A*,” 211st American Astronomical Society Meeting, BAAS, 39, 914
8. Van Etten, A., Romani, R. W., & **Ng, C.-Y.** 2007, “*Rings and Jets around PSR J2021+3651: The ‘Dragonfly Nebula’*,” 211st American Astronomical Society Meeting, BAAS, 39, 918
7. **Ng, C.-Y.**, Gaensler, B. M., Staveley-Smith, L., Manchester, R. N., Kesteven, M. J., Ball, L., & Tzioumis, A. K. 2007, “*Modeling the Radio Morphology of Supernova 1987A*,” The International Conference on Astrophysics of Compact Objects, Huangshan, China
6. **Ng, C.-Y.**, & Romani, R. W. 2006, “*Probing Pulsar Kicks with Velocity and Spin Vectors*,” 9th HEAD Meeting of the American Astronomical Society, BAAS, 38 332
5. Briskin, W. F., Romani, R. W., & **Ng, C.-Y.** 2005, “*X-Ray Spins and Radio Speeds: Probing Pulsar Birth Kinematics with CXO and the VLBA*,” in X-Ray and Radio Connections, ed. L. O. Sjouwerman & K. K. Dyer (Santa Fe: NRAO), 5.4
4. **Ng, C.-Y.**, & Romani, R. W. 2004, “*Pulsar Wind Tori and the Spin-Kick Connection*,” 8th HEAD Meeting of the American Astronomical Society, BAAS, 36, 919
3. **Ng, C.-Y.**, Cheng, K. S., & Chu, M. C. 2003, “*Properties of Cloudy Bag Strange Stars*,” Stellar Astrophysics — a tribute to Helmut A. Abt, 6th Pacific Rim Conference, Xi’an, China, ASSL, 198, 83
2. **Ng, C.-Y.**, & Romani, R. 2002, “*Pulsar Tori and the Spin-Kick Story*,” 201st American Astronomical Society Meeting, BAAS, 34, 1298
1. **Ng, C.-Y.**, Cheng, K. S., & Pei, S. Y. 2001, “*The Cloudy Bag Model of Strange Stars*,” April Meeting of the American Physical Society, BAPS, 46, 2

Professional Activities

Member, Science Organizing Committee, the Second Cross-Strait Workshop on Radio Astronomy, 2024, Shanghai, China

Reviewer, Time Allocation Committee, the Five-hundred-meter Aperture Spherical radio Telescope (FAST) (2023)

Reviewer, Time Allocation Committee, the Giant Metrewave Radio Telescope (GMRT) (2023)

Member, Science Working Group 3.3 for the *Athena X-ray Observatory*

Team Member, the Commensal Radio Astronomy FasT Survey (CRAFTS) for the Five-hundred-meter Aperture Spherical radio Telescope (FAST)

Member, Topical Working Group for the *Imaging X-ray Polarimetry Explorer*

Associate (Tier 2) Member, International SKA Science Working Group on Pulsars

Member, Core Science Working Group, the Hard X-Ray Modulation Telescope (*Insight*) of China

Campus Coordinator, the Physical Society of Hong Kong (2018–2020)

Member, Advisory Committee of the FAST/Future Pulsar Symposium

Reviewer, Atacama Large Millimeter Array (cycle 7)

Reviewer, *Chandra X-Ray Observatory* Time Allocation Committee (cycles 11 & 17)

Referee for major journals in astrophysics since 2008, including the Astrophysical Journal, the Astrophysical Journal Letters, Astronomy & Astrophysics, Monthly Notices of the Royal Astronomical Society, Nature Astronomy, Physics Research International, Reports on Progress in Physics, Publications of the Astronomical Society of Japan, Journal of the Korean Astronomical Society, Research in Astronomy and Astrophysics, and Journal of Physics G: Nuclear and Particle Physics.

Reviewer for various astrophysics textbooks for Cambridge University Press and Taylor & Francis

Member, Scientific Organising Committee of the 12th in the Pacific Rim Conference Series on Stellar Astrophysics, 2023, Seoul, Korea

Chair, Scientific and Local Organising Committee of the Extreme Universe Workshop, 2016, HKU, Hong Kong

Member, Organising Committee of the 2nd, 3rd, 4th, and 8th Fermi Asian Network Workshop, 2011, 2012, 2013, 2019

Outreach Activities

24. adjudicator, Science Docent Challenge, Hong Kong Space Museum, Apr 2025
23. Juror, Hong Kong Young Physicists' Tournament, Feb 2025
 - Invited Speaker, A “Not-So-Standard” Milestone of the Radio Astronomy in Hong Kong: Session 3: The Contributions of Local Astronomy Organisations to Radio Astronomy Research, Hong Kong Space Museum, Nov 2022
22. Invited Speaker, Science talks at secondary schools: Singapore International School (Nov 2021), STFA Leung Kau Kui College (Jun 2022)
21. Academic Consultant, the Hong Kong Astronomical Society, 2019–Present
20. Member, Assessment Panel for the S. T. Yau High School Science Award (Asia) organised by the Hong Kong Academy of Sciences, 2019–2020
19. External Module Examiner, Technological and Higher Education Institute of Hong Kong, 2018–2021
18. Invited Speaker, “Nobel Prize in Physics 2017: The Detection of Gravitational Waves,” Astronomy Summer Class 2018, Astronomy Club, The University of Hong Kong, Jul 2018
17. Invited Speaker, “Extreme Stars: Neutron Stars and Pulsars,” Physics Club of Hong Kong, Mar 2018

16. Public Talk, “Gravity at the Limits,” Faculty of Science, HKU, Mar 2018
15. Lecturer, Junior Science Institute, Faculty of Science, HKU, Sep 2017 and Mar 2018
14. Mentor, Young Scientist Training Programme, Hong Kong New Generation Cultural Association, 2017–2018
13. Honorary Advisor, Hong Kong Primary Mathematics Challenge, 2014–2017
12. Advisor, Physics Society, Department of Physics, HKU, 2016–Present
11. Supervisor and Adjudicator, the 47th–51st Joint School Science Exhibition, 2014–2018
10. Guest Speaker, IMC Sunday School, the Boys and Girls Clubs Association of Hong Kong, 2014 and 2016
9. Team Member, “Provision of Service of Answering Questions Posted on the Forum of the Web Course in Astronomy by Students,” tendered by the Gifted Education Section, Curriculum Development Institute, HKSAR Education Bureau, Jun–Sep 2015
8. Invited Speaker, “High Energy Astrophysics,” the International Year of Light 2015 Public Lecture Series, Hong Kong Space Museum, Jul 2015
7. Invited Speaker, “Black Holes,” Astronomy Summer Class 2015, Astronomy Club, The University of Hong Kong, Jul 2015
6. Judge, Astronomy Competition, Astronomy Club, The University of Hong Kong, Aug 2014
5. Invited Speaker, “New Discoveries and New Ideas in Astronomy,” Astronomy Weeks 2014, Astronomy Club, The University of Hong Kong, Mar 2014
4. Honorary Advisor, the Kowloon West Joint Primary Schools Mathematics Competition, Mar 2014
3. Guest Lecturer, “Supernova Explosions,” the Hong Kong Academy for Gifted Education Introductory Modern Astronomy Programme Lecture, The University of Hong Kong, Aug 2013
2. Invited Speaker, “Comets: Visitors from Space,” Astronomy Weeks 2013, Astronomy Club, The University of Hong Kong, Apr 2013
1. Guest Speaker, “Cosmic Fireworks: Supernova Explosions and Their Aftermaths,” Public Astro Nights, McGill University Astrophysics and Cosmology Group, Dec 2012