

List of Research Results

A. Publications in Refereed Journals

1. Kentaro Takami, Luciano Rezzolla and Luca Baiotti,
“Spectral properties of the post-merger gravitational-wave signal from binary neutron stars”,
Phys. Rev. D, 91, 064001, 2015.
Selected for Editor’s Suggestion.
2. Kentaro Takami, Luciano Rezzolla and Luca Baiotti,
“Constraining the Equation of State of Neutron Stars from Binary Mergers”,
Phys. Rev. Lett., 113, 091104, 2014.
Selected for Editor’s Suggestion.
3. Chris Messenger, Kentaro Takami, Sarah Gossan, Luciano Rezzolla and B. S. Sathyaprakash,
“Source redshifts from gravitational-wave observations of binary neutron star mergers”,
Phys. Rev. X, 4, 041004, 2014.
4. Luciano Rezzolla and Kentaro Takami,
“Black-hole production from ultrarelativistic collisions”,
Class. Quant. Grav., 30, 012001, 2013.
5. Kentaro Takami, Luciano Rezzolla and Shin’ichirou Yoshida,
“A quasi-radial stability criterion for rotating relativistic stars”,
Mon. Not. R. Astron. Soc., 416, L1-L5, 2011.
6. Kentaro Takami and Yasufumi Kojima,
“Collimation of a spherical collisionless particles stream in Kerr space-time”,
Class. Quant. Grav., 26, 085013, 2009.
7. T. Sakamoto, J. E. Hill, R. Yamazaki, L. Angelini, H. A. Krimm, G. Sato, S. Swindell, K. Takami and J. P. Osborne,
“Evidence of Exponential Decay Emission in the Swift Gamma-ray Bursts”
Astrophys. J., 669, 1115-1129, 2007.
8. Kentaro Takami, Ryo Yamazaki, Takanori Sakamoto and Goro Sato,
“Probing the Structure of Gamma-Ray Burst Jets with the Steep Decay Phase of their Early X-Ray Afterglows”,
Astrophys. J., 663, 1118-1124, 2007.
9. Hitotsugu Doi, Kentaro Takami and Ryo Yamazaki,
“A Unified Model of the Prompt Optical Emission of Gamma-Ray Bursts”,
Astrophys. J. Lett., 659, L95-L97, 2007.
10. Yasufumi Kojima and Kentaro Takami,
“Tidal effects on magnetic gyration of a charged particle in Fermi coordinates”,
Class. Quant. Grav., 23, 609-616, 2006.

B. Proceedings of International Conferences

1. Kentaro Takami, Matthias Hanauske and Luciano Rezzolla,
“Rotational Properties of Hypermassive Neutron Stars from Binary Mergers”,
PROCEEDINGS OF THE TWENTY-FIFTH WORKSHOP ON GENERAL
RELATIVITY AND GRAVITATION in JAPAN, 2015.
2. Kentaro Takami, Matthias Hanauske, Luciano Rezzolla, Filippo Galeazzi, Bruno
Mundim, Luke Bovard and José A. Font,
“Structural Properties of Hypermassive Neutron Stars”,
Proceedings of the Fourteenth Marcel Grossmann Meeting on General Relativ-
ity, 2015.
3. Kentaro Takami, Luciano Rezzolla and Luca Baiotti,
“Constraining the Equation of State of Neutron Stars from Binary Mergers”,
PROCEEDINGS OF THE TWENTY-FOURTH WORKSHOP ON GENERAL
RELATIVITY AND GRAVITATION in JAPAN, 2014.
4. Kentaro Takami, Luciano Rezzolla and Luca Baiotti,
“Constraining the Equation of State of Neutron Stars from Binary Mergers”,
Proceedings of Spanish Relativity Meeting 2014, J. Phys.: Conf. Ser. 600
012056, 2015.
5. Kentaro Takami, Luciano Rezzolla and Luca Baiotti,
“Extracting information on the equation of state from binary neutron stars”,
Proceedings of Karl Schwarzschild Meeting 2013, Springer Press, 2016, ISBN: 9783319200453.
6. Kentaro Takami, Luciano Rezzolla and Shin’ichirou Yoshida,
“A quasi-radial stability criterion for rotating relativistic stars”,
PROCEEDINGS OF THE TWENTY-FIRST WORKSHOP ON GENERAL
RELATIVITY AND GRAVITATION in JAPAN, 2012.
7. Kentaro Takami and Yasufumi Kojima,
“Collimation of Jet in Kerr Space-time?”,
PROCEEDINGS OF THE SEVENTEENTH WORKSHOP ON GENERAL
RELATIVITY AND GRAVITATION in JAPAN, 2008.
8. Kentaro Takami and Ryo Yamazaki,
“Probing the Structure of GRB Jets with Steep Decay Phase of their Early
X-ray Afterglows”,
PROCEEDINGS OF THE SIXTEENTH WORKSHOP ON GENERAL REL-
ATIVITY AND GRAVITATION in JAPAN, 2007.
9. Kentaro Takami and Yasufumi Kojima,
“The verification of tidal effects in the relativistic treatment”,
PROCEEDINGS OF THE FIFTEENTH WORKSHOP ON GENERAL REL-
ATIVITY AND GRAVITATION in JAPAN, 2006.

C. Non-Refereed Publications (e.g., magazines)

1. W. Kastaun, L. Rezzolla, R. Ciolfi, K. Dionysopoulou, I. Hinder, S. Hopper,
D. Siegel and K. Takami,

“Numerical Simulation of Binary Black Hole and Neutron Star Mergers”,
High Performance Computing in Science and Engineering, Leibniz-Rechenzentrum,
2014, ISBN: 9783981667509.

D. Presentations in Conferences

Invited Presentations

1. Kentaro Takami,
“The EOS of neutron stars via gravitational-wave modeling”,
Physics Day of the HIC for FAIR, Frankfurt am Main (Germany), July
21, 2014.
2. Kentaro Takami,
“The EOS of neutron stars via gravitational-wave modeling on Super-
MUC”,
SuperMUC Status and Results Workshop, Garching (Germany), July 8-9,
2014.
3. Kentaro Takami,
“Black-hole production from ultrarelativistic collisions”,
Gravitational Physics Seminars in Cardiff University, Cardiff (UK), Novem-
ber 2, 2012.

Oral Presentations

1. Kentaro Takami, Matthias Hanauske and Luciano Rezzolla,
“Rotational Properties of Hypermassive Neutron Stars from Binary Merg-
ers”,
THE TWENTY-FIFTH WORKSHOP ON GENERAL RELATIVITY AND
GRAVITATION in JAPAN, Kyoto (Japan), December 7-11, 2015.
2. Kentaro Takami, Matthias Hanauske, Luciano Rezzolla, Filippo Galeazzi,
Bruno Mundim, Luke Bovard and José A. Font,
“Structural Properties of Hypermassive Neutron Stars”,
14th Marcel Grossmann Meeting, Rome (Italy), July 12-18, 2015.
3. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
“spectral properties of the post-merger gravitational-wave signal from bi-
nary neutron stars”,
3rd Annual Symposium of the Innovative Area on Multi-messenger Study
of Gravitational Wave Sources, Hiroshima (Japan), February 19-21, 2015.
4. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
“Constraining the Equation of State of Neutron Stars from Binary Merg-
ers”,
Nuclear Equation of State for Compact Stars and Supernovae, Frankfurt
am Main (Germany), December 3-5, 2014.
5. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
“Constraining the Equation of State of Neutron Stars from Binary Merg-
ers”,
THE TWENTY-FOURTH WORKSHOP ON GENERAL RELATIVITY
AND GRAVITATION in JAPAN, Tokyo (Japan), November 10-14, 2014.

6. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
 “Constraining the Equation of State of Neutron Stars from Binary Mergers”,
 4th Joint Meeting of the Nuclear Physics Divisions of the American Physical Society and the Physical Society of Japan, Hawaii (USA), October 7-11, 2014.
7. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
 “Constraining the Equation of State of Neutron Stars from Binary Mergers”,
 Spanish Relativity Meeting - ERE2014, Valencia (Spain), September 1-5, 2014.
8. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
 “Extracting information on the EOS from binary NSs”,
 Karl Schwarzschild Meeting 2013, Frankfurt am Main (Germany), July 22-26, 2013.
9. Kentaro Takami, Luciano Rezzolla,
 “Black-hole production from ultrarelativistic collisions”,
 3rd Iberian Gravitational-Wave Meeting, Valencia (Spain), March 20-22, 2013.
10. Kentaro Takami, Luciano Rezzolla, Shin’ichirou Yoshida,
 “A quasi-radial stability criterion for rotating relativistic stars”,
 THE TWENTY-FIRST WORKSHOP ON GENERAL RELATIVITY AND GRAVITATION in JAPAN, Sendai (Japan), September 26-29, 2011.
11. Kentaro Takami, Luciano Rezzolla, Shin’ichirou Yoshida,
 “A quasi-radial stability criterion for rotating relativistic stars”,
 Parma Workshop on Numerical Relativity and Gravitational Waves, Parma (Italy), September 7-9, 2011.
12. Kentaro Takami, Luciano Rezzolla, Shin’ichirou Yoshida,
 “F-mode Frequency in Fast Rotating Neutron Star using Full GR Simulation”,
 Multimessenger Emissions from Sources of Gravitational Waves,
 Sao Sebastiao (Brazil), November 29 - December 3, 2010.
13. Kentaro Takami, Yasufumi Kojima,
 “Collimation of Jet in Kerr Space-time?”,
 THE SEVENTEENTH WORKSHOP ON GENERAL RELATIVITY AND GRAVITATION in JAPAN, Nagoya (Japan), December 3-7, 2007.
14. Kentaro Takami, Ryo Yamazaki,
 “Probing the Structure of Gamma-Ray Burst Jets with the Steep Decay Phase of their Early X-Ray Afterglows”,
 THE SIXTEENTH WORKSHOP ON GENERAL RELATIVITY AND GRAVITATION in JAPAN, Niigata (Japan), November 27 - December 1, 2006.
15. Kentaro Takami, Yasufumi Kojima,
 “The verification of tidal effects in the relativistic treatment”,
 THE FIFTEENTH WORKSHOP ON GENERAL RELATIVITY AND

GRAVITATION in JAPAN, Tokyo (Japan), November 28 - December 2, 2005.

Poster Presentations

1. Kentaro Takami, Luciano Rezzolla, Luca Baiotti,
“Relation between the initial masses and the fundamental f_2 frequency of gravitational wave emission from hypermassive neutron stars”,
Gravitational waves: Revolution in astronomy and astrophysics, Kyoto (Japan), June 3-7, 2013.

Oral Presentations in Japanese

1. 高見健太郎, 吉田慎一郎,
“高速回転中性子星の準動径固有振動”,
日本天文学会 2010 年春季年会, 広島大学 (広島県東広島市), 2010 年 3 月 24-27 日.
2. 高見健太郎, 吉田慎一郎,
“高速回転中性子星の準動径固有振動”,
日本物理学会 第 65 回年次大会, 岡山大学 (岡山県岡山市), 2010 年 3 月 20-23 日.
3. 高見健太郎, 小畠康史,
“Kerr 時空でジェットをコリメーションすることはできるか?”, 日本天文学会 2008 年春季年会, 国立オリンピック記念青少年総合センター (東京都渋谷区), 2008 年 3 月 24-27 日.
4. 高見健太郎, 山崎了,
“GRB 初期 X 線残光中の Steep Decay 段階を用いた GRB ジェット構造の探査”, 日本天文学会 2007 年春季年会, 東海大学 (神奈川県平塚市), 2007 年 3 月 28-30 日.
5. 高見健太郎, 山崎了,
“GRB 初期 X 線残光中の Steep Decay 段階を用いた GRB ジェット構造の探査”, 日本物理学会 2007 年春季大会, 首都大学東京 (東京都八王子市), 2007 年 3 月 25-28 日.
6. 高見健太郎, 小畠康史,
“Tidal effects on magnetic gyration of a charged particle in Fermi coordinates”, 竹原理論物理学研究会, ホテル大広苑 (広島県竹原市), 2005 年 8 月 29-31 日.