

## GP-PU取得単位 (2020/05/25版)

1. 【修士課程】基幹科目：宇宙創成物理学概論
  1. 宇宙創成物理学概論
2. 【修士課程】専門基幹科目：物理学専攻または天文学専攻開講科目6単位以上
  1. 相対論的天体物理学特論Ⅰ
  2. 天体計測学特論Ⅱ
  3. 理論天体物理学特論Ⅰ
  4. 恒星物理学特論Ⅰ
3. 【修士課程】研修科目：宇宙創成物理学特別セミナー(GP-PU School)
  1. September 5th-8th, 2019, Strangeness Nuclear Physics (SNP) school 2019
4. 【修士課程】国際講義：宇宙創成物理学特別講義(GP-PU Seminar, GP-PU School)
  1. February 27th, 2020, Elisa Ferreira (Max Planck Institute for Astrophysics), "Unified Superfluid Dark Sector", GSP1
  2. February 26th, 2020, Víctor Manuel Sánchez Carrasco (Universidad de Extremadura), "Understanding astronomy and meteorology from historical sources: some works made in Extremadura University", GSP1
  3. February 10th-11th, 2020, Yusuke Tanimura (Tohoku University), "Introduction to nuclear physics and numerical calculations for nuclear structure", GSP2
  4. January 23rd, 2020, Masahito Yamazaki (Kavli IPMU), "Fundamental Forces of Nature and Swampland Conjectures", GASP1
  5. January 16th, 2020, Tokuro Fukui (Yukawa Institute for Theoretical Physics), "Methodology of nuclear theory and recent study toward understanding the universe", GASP1
  6. December 19th, 2019, Jin-Min Yang (Institute of Theoretical Physics Beijing Tohoku University), "Supersymmetry confronted with dark matter and muon  $g-2$ ", GASP1
  7. July 08th, 2019, Xiaodong Tang (Institute of Modern Physics, Chinese Academy of Sciences), "How to burn carbon and make  $^{60}\text{Fe}$  in stars?", GSP1
  8. June 04th, 2019, Michael Famiano (Western Michigan University and National Astronomical Observatory of Japan), "A Nuclear Physics Explanation of Biomolecular Homochirality: Theory and Experiment", GSP1
  9. May 21st, 2019, Shigemi Ohta (KEK), "Hadron structure and transition from lattice QCD", GSP1
5. 【博士課程】国際講義：宇宙創成物理学特殊講義Ⅰ(GP-PU Seminar, GP-PU School)
6. 【博士課程】高度実験：宇宙創成物理学高度実験
7. 海外研修
  1. Beam splitter installation work, Subaru telescope(Hilo, Hawaii, US), November 24th-27th, 2019
  2. Poster presentation("ULTIMATE-START III : Atmospheric turbulence profiling for a tomography AO"), Subaru 20th anniversary symposium(Waikoloa, Hawaii, US), November 17th-22rd, 2019
8. 論文
9. 講演 (国際研究会のみ, 発表受理済の予定も含む)

1. Hajime Ogane, Masayuki Akiyama, Shin Oya, Yoshito Ono, ``Atmospheric turbulence profiling with a Shack-Hartmann wavefront sensor'', SPIE Astronomical Telescopes + Instrumentation, San Diego, California, USA, December 2020(Refereed, Poster)
2. Hajime Ogane, Masayuki Akiyama, Shin Oya, Yoshito Ono, ``ULTIMATE-STARTIII: Atmospheric turbulence profiling for a tomography AO'', Subaru 20th anniversary symposium, Waikoloa, Hawaii, USA, November 2019(Proceedings, Poster)
3. Hajime Ogane, ``Atmospheric turbulence profiling for Laser Tomography Adaptive Optics'', Strangeness Nuclear Physics school 2019, Sendai, Japan, September 2019(Proceedings, Poster)