

GP-PU取得単位 (2020/10/02版)

1. 卒業要件

1. 【修士課程】

1. 基幹科目：宇宙創成物理学概論，単位取得
2. 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
3. 研修科目：宇宙創成物理学特別セミナー(GP-PU School)，1回以上参加
4. 国際講義：宇宙創成物理学特別講義(GP-PU Seminar, GP-PU School)，GSP+GASP \geq 10
5. 海外研修，3ヶ月以上推奨
6. 修士論文執筆およびQE1

2. 【博士課程】

1. 国際講義：宇宙創成物理学特殊講義 I (GP-PU Seminar, GP-PU School)，GSP+GASP \geq 10
2. 高度実験：宇宙創成物理学高度実験，GEP \geq 13
3. 海外研修，3ヶ月以上必須
4. 博士論文執筆およびQE2

2. 取得単位

1. 【修士課程】

1. 基幹科目：宇宙創成物理学概論

1. 宇宙創成物理学概論

2. 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. 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. 国際講義：宇宙創成物理学特別講義(GP-PU Seminar, GP-PU School)

1. May 21st, 2019, Shigemi Ohta (KEK), "Hadron structure and transition from lattice QCD", 1GSP
2. June 4th, 2019, Michael Famiano (Western Michigan University and National Astronomical Observatory of Japan), "A Nuclear Physics Explanation of Biomolecular Homochirality: Theory and Experiment", 1GSP
3. July 8th, 2019, Xiaodong Tang (Institute of Modern Physics, Chinese Academy of Sciences), "How to burn carbon and make ^{60}Fe in stars?", 1GSP
4. December 19th, 2019, Jin-Min Yang (Institute of Theoretical Physics Beijing Tohoku University), "Supersymmetry confronted with dark matter and muon $g-2$ ", 1GASP
5. January 16th, 2020, Tokuro Fukui (Yukawa Institute for Theoretical Physics), "Methodology of nuclear theory and recent study toward understanding the universe", 1GASP
6. January 23rd, 2020, Masahito Yamazaki (Kavli IPMU), "Fundamental Forces of Nature and Swampland Conjectures", 1GASP
7. February 10th-11th, 2020, Yusuke Tanimura (Tohoku University), "Introduction to nuclear physics and numerical calculations for nuclear structure", 2GSP

8. February 26th, 2020, Víctor Manuel Sánchez Carrasco (Universidad de Extremadura), "Understanding astronomy and meteorology from historical sources: some works made in Extremadura University", 1GSP
9. February 27th, 2020, Elisa Ferreira (Max Planck Institute for Astrophysics), "Unified Superfluid Dark Sector", 1GSP

5. 海外研修

1. Poster presentation(「ULTIMATE-START III : Atmospheric turbulence profiling for a tomography AO」), Subaru 20th anniversary symposium(Waikoloa, Hawaii, US), November 17th-22rd, 2019
2. Beam splitter installation work, Subaru telescope(Hilo, Hawaii, US), November 24th-27th, 2019

2. 【博士課程】

1. 国際講義：宇宙創成物理学特殊講義 I (GP-PU Seminar, GP-PU School)

1. June 25th, 2020, Haozhao Liang (The University of Tokyo), "Effects of tensor force in nuclear relativistic density functional theory : part 1", 1GASP
2. August 31st-September 3rd, 2020, "School on Modern Physics", 3GSP

2. 高度実験：宇宙創成物理学高度実験

1. September 23rd-29th, 2020, Koji Miwa, N2: "Scintillator hodoscope array read by multi-pixel photon sensor(MPPC)", 4GEP
2. ???, Koji Ishidoshiro, P3: "Superconducting detector", 4GEP

3. 海外研修

3. 研究論文

1. Hajime Ogane, Masayuki Akiyama, Shin Oya, Yoshito Ono, "Atmospheric turbulence profiling with a Shack-Hartmann wavefront sensor", ???

4. 研究発表（国際研究会のみ，発表受理済の予定も含む）

1. Hajime Ogane, "Atmospheric turbulence profiling for Laser Tomography Adaptive Optics", Strangeness Nuclear Physics school 2019, Sendai, Japan, September 2019(Proceedings, 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, Masayuki Akiyama, Shin Oya, Yoshito Ono, "Atmospheric turbulence profiling with a Shack-Hartmann wavefront sensor", SPIE Astronomical Telescopes + Instrumentation, Digital forum, December 2020(Refereed, Poster)