

2022 年度 科学技術英語特論・演習 定期試験

注意：解答用紙は2枚あります。それぞれに学籍番号と氏名を記入してください。

問題1

次の文章は" Scientists Use Technology Tool to Discover New Asteroids "と題した記事で、6つのパラグラフから構成されている。この英文に関する以下の問いに、原文に則して日本語で答えなさい（直訳でなくてよいが、原文の内容を十分に踏まえて書くこと）。なお、それぞれの問いに対して、解答は 40 字以上 80 文字以内とすること。

Scientists have used a new tool to discover more than 100 asteroids that had not been identified before. The method uses a complex computing method called an algorithm to search for asteroids that were not discoverable in the past. They were not discoverable because existing telescopes and image examination tools could not recognize them.

Scientists place a high importance on identifying and tracking near-Earth objects because some of them could present threats to our planet. With this in mind, NASA launched a spacecraft last November that aims to demonstrate a possible defensive method against asteroids that might threaten Earth.

The Asteroid Institute is part of the B612 Foundation. The institute explains on its website that it aims to combine computer science, instrumentation and astronomy to find and track asteroids. The institute calls its discovery tool Asteroid Discovery Analysis and Mapping, or ADAM. The tool is trained to find asteroids based on existing data and to calculate their orbits well enough to be recognized by international astronomy organizations.

The Asteroid Institute worked together with the technology company Google on the project. Google says its cloud-computing system supported the computational power needed for the asteroid discovery system.

Researchers from the University of Washington also cooperated on the project. Joachim Moeyens is one of those researchers. He reported that he searched a 30-day window of images during the discovery operation. The images came from the NOIRLab Source Catalog. The catalog is a collection of nearly 68 billion observations made by telescopes operated by the Arizona-based National Optical Astronomy Observatory between 2012 and 2019.

After making his first set of asteroid discoveries from the images, Moeyens sent his results to the Minor Planet Center. The center was able to recognize and confirm Moeyens' 104 asteroid discoveries. Moeyens and other researchers say the latest identifications are just the beginning. They predict their asteroid search tool will result in thousands of new discoveries in the future.

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track – v. to record the progress or development of something

calculate – v. to discover an amount or number using mathematics

(Science & Technology, Voice of America Learning English 2022年6月5日の放送原稿より抜粋)

- (1) 新しく発見された小惑星は、なぜ以前には発見できなかったと述べているか、説明しなさい。
- (2) 昨年11月に打ち上げられたNASAの宇宙船の目的は何であると述べているか、説明しなさい。
- (3) 小惑星研究所の目的は何であると述べているか、説明しなさい。
- (4) グーグルはどのように小惑星発見プロジェクトを支援したと述べているか、説明しなさい。
- (5) このプロジェクトの現在の成果と今後の予測についてどのように述べているか、説明しなさい。

授業科目名	担当者名	開講曜日	金曜日 2 講時	理工学研究科 電子情報学専攻	氏名	学籍番号	採点
科学技術英語特論・演習	小堀他	実施日	7月29日 2 講時	年		T M	

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問題 2

Answer the following questions in English using more than 50 but less than 100 words for each question.

(1) Describe your research activities.

(2) What kind of practical use is expected when your research is completed ?

(3) How is your research related with the important challenges in this century (global warming, food crisis, population explosion, energy depletion, digital divide, etc.) ? If you cannot answer the question, you may describe one of these challenges.

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