

Form B-5

Date (日付)

07/09/2013 (Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-
(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): TOLSTOV, Alexey (ID No. P 12072)

- Participating school (学校名): Fukushima High School, Fukushima City

- Date (実施日時): 06/09/2013 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Supernovae and Gamma-Ray Bursts: The Most Powerful Explosions in the Universe

(in Japanese)

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

The supernova explosion is one of the most exciting phenomena in Nature. It is sufficient to say that the luminosity of the supernova exceeds the luminosity of the Sun in billion times for weeks and months. Many supernovae may be the most powerful sources of neutrinos and gravitational waves. The study of supernovae is related to many important issues, such as the evolution of normal stars, the birth of neutron stars and black holes, the formation of heavy elements, cosmic rays, the origin of gamma-ray bursts.

In our galaxy, the Milky Way, each year one star ends up its evolution. The lecture will cover the following topics:

- Why not all of them explode as supernovae
- What are the stars and in what ways they can explode
- How do we observe supernovae and their remnants on ground and space telescopes
- How do we model supernovae and gamma ray bursts
- How the structure of the Universe can be studied using supernovae

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 75 min (分), Q&A time (質疑応答時間) 30 min (分)

◆Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

used projector, blackboard

◆ Interpretation (ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

_____ No _____

◆ Name and title of accompanied person (同行者 職・氏名)

_____ No _____

◆ Other note worthy information (その他特筆すべき事項):

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。):