

Form 3

Date (日付)

_____ (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 (参加外国人研究者氏名): Giuseppe Lorusso (ID No. P 10201)

Participating school (参加機関(受入学校名)): Shizuoka kita high school

Date (実施日時): 27/1/2011 (Date/Month/Year:日/月/年) Time: from 1:30pm to 4:00pm

Lecture title (講演題目): (in English) The origin of the chemical elements in the Universe

(in Japanese)

Lecture summary (講演概要):

More than 99% of the observable matter in the universe is composed by Hydrogen and Helium. The remaining 1% was instead synthesized in stars. The lecture focuses on the following:

- a) *A view of the universe (a short video clip was used to illustrate some of the Hubble space telescope views of the universe) and of the chemical composition of the universe.*
- b) *Nuclear physics processes occurring in the stars are responsible for the origin of the chemical elements. In particular we target the following topics:*
 - 1) *why elements heavier than Helium could not be synthesized in the Big Bang.*
 - 2) *Nuclear fusion reactions are responsible for the origin of the elements lighter than Iron.*
 - 3) *Supernovae explosions are responsible for the synthesis of elements heavier than Iron*

The conclusion of the lecture is that the world we live in, occupies a very small place in the Universe that is made mostly by Hydrogen and Helium. Moreover the atoms that makes the world we live in were made in stars. This explain the quote attributed to the famous American astronomer Carl E. Sagan "we are made by Stardust".

Language used (使用言語): English

Lecture format (講演形式): power-point presentation with projector

○Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 40 min (分)

○Lecture style (examples: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、プレ実験など))

projector

○Interpreter (example: assistance by host or colleague, provided Japanese explanation by yourself)

(通訳 (例: 受入研究者によるサポート、外国人研究者本人による日本語説明))

assistance by a Japanese colleague

Name and title of assistant (協力者 職・氏名) (example: host or colleague)

PhD student

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

video clips taken from youtube were important

Impressions and opinions of assistant (協力者から本事業に対する意見・感想等がございましたら、お願いいたします。):