Must be typed

(For JSPS Fellow)

Form B-5

Date（日付）
05/12/2013 （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）: Edgard G. B. H. PIERRE （ID No. PE12013）

- Participating school（学校名）: Iwata Minami High School

- Date （実施日時）: 04/12/2013 （Date/Month/Year: 日/月/年）

- Lecture title（講演題目）: （in English）Explaining the Universe with neutrons

（in Japanese） -

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

See second page

- Language used（使用言語）: English

- Lecture format（講演形式）:
  - ◆Lecture time（講演時間） 45 min（分）, Q&A time（質疑応答時間） 45 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））
    odp slides shown with a projector
  - ◆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））
    Assistance by accompanied person
  - ◆Name and title of accompanied person（同行者 職・氏名）
    Dr. Ryohei MATSUMIYA (Osaka University)
  - ◆Other note worthy information（その他特筆すべき事項）:
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- 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。）: -

Lecture summary:

The lecture has been separated into 5 parts:

1. A short and very informal introduction about my personal work experience from France to Japan and a short CV. The aim of this part was to start speaking English smoothly before more technical parts.
2. A description of the job of physicist, what they are doing, and what physics is. The aim of this part was to show to the students that physics is diversified, in term of approach (theory, experiment) or in term of scale of study (cosmology, material physics, nuclear physics). I also wanted to show the importance of women in science.
3. How to compare the sizes of the Universe up to the one of the neutron via a scaling study, starting from the biggest (the Universe) to the smallest (the neutron), passing through easily understandable examples. The aim of this part was to show how big cosmological items are, and how small subatomic particles are. This was useful I think, regarding the title of the lecture, which deals with the biggest and the smallest.
4. A part related to the neutron itself: what is a neutron, how we can extract it from the nucleus, and then how to slow it down in order to study it. At this moment, the notion of UltraCold Neutron (UCN) was introduced. The aim of this part was to give to the students some basics in order to understand the next part. Indeed, the UCN are the “tools” used in my research project.
5. The last part was related to the experiments physicists can do with UCN, focusing on the electric dipole moment. The aspect of the origin of the Universe (matter anti-matter asymmetry) has been discussed. Then, my research project has been presented (aim, manpower, time line, personal contributions). This last part shown to the students what a research project is, focusing on aim and (international) collaboration for the success of the experiment.

Impressions and opinions from accompanied person:

サイエンスダイアログは若い学生に対して最先端の研究を知る機会を与えるものであり、とても興味深い試みであると思います。
　今回、私はピエール博士のプレゼンテーションを翻訳する事はせず、質疑応答の際の博士の回答を日本語に翻訳したのみでした。英語は科学において基本的なツールです。講義を英語で行うのは良い事だと思います。
　しかしながら、高校生にとっては専門用語が難しい物であったと感じました。学生が予習できるように、発表のスライドと原稿を前もって提供させるようにしてはどうかと思います。