

(For JSPS Fellow)

Form B-5

Date (日付)

02/02/2015 (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): Jungmi Kwon (ID No. P14023 )- Participating school (学校名): Chiba Prefectural Chosei Senior High School- Date (実施日時): 29/01/2015 (Date/Month/Year: 日/月/年)- Lecture title (講演題目): (in English) Star Cradle via Infrared(in Japanese) 赤外線で星の誕生を見る

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

Stars are born in the optically thick molecular clouds. Visible lights, which can be detected by our naked eyes, cannot see such a region. However, infrared light allows us to look such a heavily obscured region. Therefore, we use infrared wavelengths to study the formation and evolution of stars and planets. There are still many mysteries of star and planet formation such as why most stars form in groups and what the role of magnetic fields is. My lecture was divided to two parts. The first half part was a general lecture to introduce myself, my country, a basic story of my research content, and most advanced research. In this part, I have mainly explained (i) what a star is, (ii) what infrared is, and (iii) what polarimetry is as the background of my research. I introduced the results of my research obtained from near-infrared polarimetry imaging observations. The lecture was focused on not only the astronomy but also astrobiology. I presented that, (iv) infrared polarimetric observations toward star forming regions can reveal clustered star formation and magnetic field information, and (v) circular polarization is related to the origin of life on Earth and the universality of circular polarization is revealed in star forming regions. The second half part was small experiments: polarimetry and infrared. By making a polarizing telescope, students have had a chance to understand (1) the basic structure of astronomical telescopes and (2) polarization. In addition, by using an infrared camera, students have had a chance to know (3) the differences between visible and infrared lights and (4) infrared light can detect temperatures.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 100 min (分), Q&A time (質疑応答時間) 20 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))

プロジェクター使用による講演と実験(偏光望遠鏡制作および赤外線カメラ実験)

- ◆ 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))

There was no interpretation in Japanese. Students tried to speak and listen in English.

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

- ◆ 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。):