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Press Release

For Immediate Release

## HKU engages the community and students in light pollution awareness via field trip and competitions

Light pollution is a severe and growing environmental problem in a crowded metropolis such as Hong Kong. Apart from conducting light pollution research, HKU Department of Physics also actively engages in raising public awareness of light pollution. Supported by the HKU Knowledge Exchange Fund, scientists in HKU spread the impacts of light pollution on the natural and built environment by encouraging students and teachers to go outside the classroom to measure and analyze the light pollution conditions in their local communities. HKU recently organized the “Public Education Campaign to Conduct Research and Visualize Impacts of Light Pollution” jointly with the Hong Kong Space Museum, the Ho Koon Nature Education cum Astronomical Centre (Sponsored by Sik Sik Yuen), and the Office of Astronomy Outreach, International Astronomical Union to further spread the message of light pollution alleviation to the general public. Activities of the project include the “Light Pollution Field Trip”, “Light Pollution Research Competition 2015-16”, and the “Light Pollution Video Competition 2015-16.” The Field Trip was held in end-November last year, while both competitions had just concluded.

### “Light Pollution Research Competition 2015-16”

The “Light Pollution Research Competition 2015-16” aims at promoting secondary school students to investigate the problem of light pollution by through conducting research projects. Entries from 14 teams were received, representing work by 60 students from 12 schools. Findings of their projects are presented in the form of written reports. The best 6 teams were selected for an oral presentation session held on April 23 at HKU to compete for the champion, first runner up, second runner up, and honorary mention places. The award presentation ceremony was held on the same day.

### Results of “Light Pollution Research Competition 2015-16”:

Champion - Marymount Secondary School (topic: Light pollution and Ecosystem)

First runner up - Sheng Kung Hui Tang Shiu Kin Secondary School

(topic: Festival Lights: Celebration or Pollution?)

Second runner up - Buddhist Sin Tak College (topic: Light Pollution in Hong Kong)

Honorary mention (in alphabetical order):

- Hoi Ping Chamber of Commerce Secondary School

(topic: Effect of light pollution on animals and plants)

- Shun Tak Fraternal Association Yung Yau College (topic: Study on Light Pollution in Hong Kong)

- Singapore International School (Hong Kong)

(topic: Light Pollution in Hong Kong: How does it affect our sleep quality?)

One of the judges, Dr Rebecca Lee, MH, Founder of the Polar Museum Foundation Limited, said: “Hong Kong has very serious light pollution, with blindingly bright lighting and advertising signs everywhere. Not only are these light damaging to our night eyesight, they also represent a huge waste of energy in our city.” Professor Leung Wing Mo, Adjunct Professor of The Department of Land Surveying and Geo-Informatics of The Hong Kong Polytechnic University remarked: “I hope the Research Competition can stimulate the participating students to become researchers to tackle the global climate change and light pollution problems using science and technology in the future.” Mr Robert Leung, Curator of the Hong Kong Space Museum commented on the competing entries: “I am truly pleased to see not only a wider range of fields explored by students in the Research Competition this year, including the environment, ecology, animals, plants, and human health, but also an improvement in the quality of the research work presented.” The three students

from the champion team of the Marymount Secondary School conducted a detailed study on the effects of excessive amount of different light sources on the growth of plants.

### **“Light Pollution Video Competition 2015-16”**

The “Light Pollution Video Competition 2015-16” aimed at inciting creativity of the general public on light pollution awareness through production of a three-minute video. The organizers in particular encourage entries from young people about this emerging environmental problem. The champion work from Crystal Leung Yu Hang, a 16-year-old teenager, was selected among 12 entries submitted. She also won the Youth Prize for participants below age 17. The first runner up work submitted by a group of primary students from St Bonaventure Catholic Primary School focused on the importance of light pollution reduction through a story of a young firefly looking for his mother. Professor Vivian Taam Wong, JP, Chairperson of the Friends of the Earth (HK) said: “The winning entries are educational, entertaining, and extremely successful in bringing out the message of light pollution reduction.” Mr Kwok Chi Tai, Principal of the Ho Koon Nature Education cum Astronomical Centre (Sponsored by Sik Sik Yuen) said: “The Video Competition provides an effective means for everyone to reflect on the impacts of light pollution on the natural environment. This is important for promoting the fight to reduce light pollution in the society.”

### **Results of “Light Pollution Video Competition 2015-16”:**

Champion & Youth Prize - Crystal Leung Yu Hang

(entry: To Cast a Bright Light <https://youtu.be/oCGmrZ74Hg4>)

First runner up - St. Bonaventure Catholic Primary School

(entry: The Missing Fireflies <https://youtu.be/l6eWA1IefX8>)

Second runner up - Salesian English School

(entry: My Hong Kong • Light Pollution <https://youtu.be/AsKVOzdChyo>)

Honorary mention (in alphabetical order):

- Cheng Tze Hin (entry: When Movies meet Light Pollution)

- Singapore International School (entry: Not just harming the environment, but also our future)

The Project Coordinator of the event, Dr Jason Pun of the HKU Department of Physics, remarked, “As the two competitions came to a successful conclusion, HKU would continue to actively engage the community in light pollution awareness by educating people the adverse effects of light pollution to the natural environment and our daily lives, and to lead the discussions on how to reduce light pollution in Hong Kong.” The outstanding research projects and the winning videos from the two competitions will be on display at the Hong Kong Space Museum foyer in a free special exhibition between 2016 June 8 – 27 to further spread the message of night sky preservation in Hong Kong.

### **Members of the judge panel (in alphabetical order):**

Mr Kwok Chi Tai (Principal, Ho Koon Nature Education cum Astronomical Centre (Sponsored by Sik Sik Yuen))

Dr Rebecca Lee, MH (Founder, Polar Museum Foundation Limited)

Professor Leung Wing Mo (Adjunct Professor, The Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University)

Mr Robert Leung (Curator, Hong Kong Space Museum)

Dr Jason Pun (Project Coordinator, Light Pollution Research and Video Competitions 2015-16, Department of Physics, The University of Hong Kong)

Professor Vivian Taam Wong, JP (Chairperson, Friends of the Earth (HK))

HKU Department of Physics has been conducting light pollution research since 2003. Leading by Dr Jason Pun, his team analyzed the sky brightness data from the Hong Kong Night Sky Brightness Monitoring Network and found the Hong Kong urban night sky to be 100 to 1,000 times brighter than the international dark sky standard between 8:30 – 11:00pm, making it one of the most light-polluted cities in the world. His team recently extended the monitoring techniques outside Hong Kong by establishing the Globe at Night - Sky Brightness Monitoring Network. This global network currently has 16 stations operating in 8 countries or regions in Asia, Europe, and Africa. Light pollution not only rids us of the starry night sky, it also indicates a waste of electric energy and damages the natural and our living environment.

Details of “Public Education Campaign to Conduct Research and Visualize Impacts of Light Pollution” can be found from <http://nightsky.physics.hku.hk/KE/201516>. Photos can be obtained by internet via <http://www.scifac.hku.hk/news/media?page=1>. For press enquiry, please contact Ms Cindy Chan, Senior Communication Manager of Faculty of Science, at 3917 5286 / 6703 0212 or by email at [cindycst@hku.hk](mailto:cindycst@hku.hk), or Dr Jason Pun, the project leader of “Public Education Campaign to Conduct Research and Visualize Impacts of Light Pollution,” by email at [jcspun@hku.hk](mailto:jcspun@hku.hk).

This project was supported by the HKU Knowledge Exchange Fund.

June 7, 2016

End

### **Students’ sharing:**

#### **Members of the “Light Pollution Project Competition 2015-16” champion team:**

Clare Cheng, Lilian Ng, Emily Liu (Form 5, Marymount Secondary School)

“This research experience has sown the seeds of interest in environmental issues, such as light pollution, in our hearts. Must the ‘Pearl of the Orient’ literally shine at the expense of the people, the ecosystem and the beautiful night sky? What makes a city truly shine is the vitality of the people and the nature in it. Therefore, we urge the government to speed up the passing of legislation to regulate the situation and alleviate light pollution. As for us citizens, we should be aware of the problem of light pollution and take action to tackle it.”

#### **Words from the champion of the “Light Pollution Video Competition 2015-16”:**

Crystal Leung Yu Hang (Form 5): “I decided to participate in the light pollution video competition because I feel that more people need to know about this issue. After researching more about light pollution, I was shocked by the overwhelming statistics which highlights the seriousness of light pollution, especially in Hong Kong. I learnt about how small changes in our daily lives can make a big difference in the long run. I hope that through my video, people will be more informed about light pollution and take action to make Hong Kong more sustainable.”

## Figures and captions:

### “Light Pollution Field Trip”



Figure 1: Firefly viewing in Tai Po Kau Nature Reserve



Figure 2: Stargazing in Astropark at Sai Kung

### “Light Pollution Research Competition 2015-16”



Figure 3: Champion - Marymount Secondary School (topic: Light pollution and Ecosystem) (from left to right: Dr Jason Pun, Mr Robert Leung, Prof Vivian Taam Wong, Lilian Ng, Clare Cheng, Emily Liu, Miss Jane Chung, Miss Vicky Lee, Principal Kwok Chi Tai)



Figure 4: First runner up - Sheng Kung Hui Tang Shiu Kin Secondary School (topic: Festival Lights: Celebration or Pollution?) (from left to right: Dr Jason Pun, Mr Robert Leung, Chau Tsz Wai, Law Kam Hin, Chung Cheuk Nam, Wu Kam To, Edward Lee Tsz Hin, Miss Chau Yuk Lin, Principal Kwok Chi Tai)



Figure 5: Second runner up - Buddhist Sin Tak College (topic: Light Pollution in Hong Kong) (from left to right: Mr Robert Leung, Chan Xiao Jun, Wong Pui Ho, Li Yee Mei, Maggie Tsai Ching Man)

## “Light Pollution Video Competition 2015-16”



Figure 6: Champion & Youth Prize - Crystal Leung Yu Hang (entry: To Cast a Bright Light) (from left to right: Prof Vivian Taam Wong, Crystal Leung Yu Hang)



Figure 7: First runner up - St. Bonaventure Catholic Primary School (entry: The Missing Fireflies) (from left to right: Prof Vivian Taam Wong, Ng Wing Tung, Chu Yin Shan, Chau Ka Yiu, Miss Edvanna Wong)



Figure 8: Second runner up - Salesian English School (entry: My Hong Kong · Light Pollution) (from left to right: Prof Vivian Taam Wong, Paul Chan Lok He, Jonathan Wai Yin Long)

## “Light Pollution Research Competition 2015-16” & “Light Pollution Video Competition 2015-16”



Figure 9: Group photo