
First Announcement

Joint CIE – IAU Discussion and Workshop

Kuffner Observatory, Vienna, Austria ★ Friday, August 24, 2018

Objectives of the meeting

- to discuss formal issues of CIE – IAU collaboration
- to discuss technical issues of the problems of obtrusive light

Draft program

09:00 – 12:00- Formal/background discussions.

CIE speakers: D. Gasparovsky, P Blattner, K. Nield

IAU speakers:

- Richard Wainscoat (TBC): ‘IAU Perspective: Technical Issues, Recommended Standards for Observatory Site Protection and Joint Interactions with CIE’
- Andrej Mohar: “About measurements of roads, facades and billboards”
- Andreas Haenel: ‘Star parks in Germany and Central Europe as best practice for sustainable lighting: measurements, political actions, lighting’

13:00 – 16:00 Technical part.

CIE speakers: (max. 3 experts).

IAU speakers:

- Federico de la Paz: ‘New LEDs in Use for Site Protection on the Canary Islands’ (TBC)
- Christopher Kyba: ‘Artificially lit surface of Earth at night increasing in radiance and extent’
- Richard Green: ‘Measurement and Modeling of Artificial Light Contribution to Night Sky Glow’

Structure of formal talks

- past, current and future (planned) activities of CIE in the field of obtrusive light (and similar problems)
- position of IAU in questions regarding obtrusive light, requirements and their justification
- options for involvement of IAU in the work of CIE technical committees
- research needed to support conscious limitation of obtrusive light, to study (in more depth) the principles of light scattering in atmosphere, to enhance understanding of the side effects of outdoor lighting etc.
- possibilities of future standardization in the field
- suggested content for upcoming COPUOS-sponsored technical meeting
- plans for engagement of lighting design associations and lighting developers and manufacturers
- further formalizing of IAU-CIE interactions on current topic.

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Structure of technical talks

- information to refine IAU recommendations for outdoor lighting suitable for protection of astronomical sites
 - full cutoff
 - spectral management – narrow-band with minimum blue light necessary to meet legal or safety requirements for color rendition
 - time and intensity management – aggregate illumination levels by zone, curfews for reducing or extinguishing
- information to refine IAU recommendations for achieving Right to Starlight general goals
 - full cut-off and other light trespass control
 - spectral management to meet minimum requirements for visibility and colour rendition
 - further options for time and intensity management – roadway lighting only for congestion and pedestrian areas, motion-activated illumination
- urban light dome propagation models, including dependence on scattering, atmospheric conditions, satellite data, status and trends
- sky brightness measurements, artificial lighting impact assessment, photometric basis of requirements and new measurements required
- update on directions of research in roadway lighting and visibility/safety requirements, illumination levels, color rendition, energy efficiency of lighting, mesopic vision
- technological improvements and developments for better control of obtrusive light: LED spectral output, fixtures, lenses, projection optics, electronic controls – timing and dimming
- possible for specific forms of intrusive lighting, such as sports lighting and LED signs
- other technical issues

Participants from CIE:

- | | |
|---|---------------------|
| • Y. Ohno, K. Nield, P. Blattner, A. deVisser, D. Gasparovsky | Formal talks |
| • D. Gasparovsky, A. deVisser, R. Gibbons ... | D4, road lighting |
| • P. Schwarcz, T. Novak ... | D4, obtrusive light |
| • A. Smith | D4, sports lighting |
| • P. Blattner, plus others recommended by D2 if needed | D2, measurements |

Total: 10-14 CIE experts - all to be confirmed from discussions between CIE D4 and D2

- de Visser (and some others) by video conferencing.
- R. Dubnicka, T. Novak interested to participate F2F
- Smith, R. Gibbons, P. Schwarcz not yet approached

Other potential experts to be addressed during the annual D4 meeting in Berlin

First Announcement
**Mitigating Light Pollution & Radio Interference
 through Site Protection and Education**
 Kuffner Observatory, Vienna, Austria ★ Sunday, August 26, 2018

Session	Time	Topic	Speaker
	9:00am	Welcome, Agenda, Housekeeping	Connie Walker
Session I	9:15am	Plenary: The Virtuous and the Squanderer in Light Pollution: A Comparison Between Administrative Regions in Europe and USA	Fabio Falchi
	9:45am	Q&A	
Session II	Radio Frequency Interference and Radio Observatory Site Protection		
	10:00am	Update on RFI Protection Efforts	Harvey Liszt
	10:15am	Protecting Radio Quiet at the Murchison Radio-Astronomy Observatory	Sarah Pearce
	10:30am	DISCUSSION with refreshments	
	10:55am	<i>BREAK (5 min)</i>	
Session III	Protection of Individual Sites and Regions		
	11:00am	The Growing Threat of Light Pollution to Ground-Based Observatories	Richard Green
	11:15am	Mitigating Threats of Light Pollution and Radio Frequency Interference in Northern Chile. 2018 Update	Pedro Sanhueza
	11:30am	Protection of Mauna Kea	Richard Wainscoat
	11:45pm	Austrian World Heritage Site and Dark Skies Protected Area	Guenther Wuchterl
	12:00pm	Establishing a Dark Sky Park in Upper Austria	Franz Binder/Thomas Posch
	12:15pm	The Dark-Sky: To Be or Not To Be! Study of Case: La Palma and Tenerife. A Global Solution to a Global Problem	Valentin Grigore/Ioana Stelea
	12:30pm	DISCUSSION	
	12:55pm	<i>BREAK (5 min)</i>	
	1:00pm	LUNCH at the Observatory	
Session IV	Poster Session		
	2pm	Protection of Ali Observatory and Its Surrounding Potential Site	Lyong Liu
		<i>Other Posters to Come</i>	
Session V	The Dark Side of Ecology and Health		
	2:30pm	Light Pollution's impact on Ecology, Health & Society	Annette Krop Benesch
Session VI	Dark Skies Education Programs and Activities Around the World		
	2:45pm	Dark Skies Programs and Activities in South America	Beatriz Garcia
	2:30pm	Dark Skies Programs and Activities in Central America	Fernando Avila Castro
	3:15pm	Dark Skies Programs and Activities in North America	Connie Walker
	3:30pm	Dark Skies Programs and Activities in Asia	Sze-leung Cheung
	3:45pm	Dark Skies Programs and Activities in Africa	Prosperity Simpemba
	4:00pm	Dark Skies Ranges and Open Schools Fighting Light Pollution	Rosa Doran
	4:15pm	Citizens for the Night	Alejandro Sanchez
	4:30pm	<i>BREAK (5 min)</i>	
	4:35pm	A Look Ahead: IAU100's Dark Skies for All Project	Sze-leung Cheung/Connie Walker
	4:40pm	DISCUSSION on these projects and working together for IAU100	
Session VII	Capstone		
	5:15pm	Wrap up	Richard Green
	5:30pm	Social Hour/Movie (most likely Sriram Murali's new movie "Saving the Dark")	
	6:30pm	Adjourn	