#### **Challenges for the Future**

11th European Symposium for the Protection of the Night Sky



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Association

#### Challenges

- Raising Awareness
- Promote Essential Research
- Legislation
- Monitor Progress
- Dark Sky Standards
- Dark Sky Preservation

Earth at Night
More information available at:
http://antwrp.gsfc.nasa.gov/apod/ap001127.html

## Raising Awareness

- Astronomy Community
- Environmental Movement
- Energy Conservation Groups
- Governments
- General Public

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#### Promote Essential Research

- Public Safety
- Roadway Lighting Design
- Lighting Alternatives
- Impact of Blue Spectrum Light
- Circadian Disruption
- LAN/Human Health

Earth at Night More information available at: http://antwrp.gafc.nasa.gov/apod/ap001127.html

#### Legislation

- Lighting Ordinances
  - MLO (North America)
- National Laws
  - Night Sky Protection
  - Energy Conservation
  - Environmental

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#### **Monitor Progress**

- Night Sky Brightness Monitor
  - 3 Years in Development
  - Extremely Accurate
  - First 25 installed in 2011
- NSBM Phase Two
  - Mass Deployment
  - **Enhanced Website** 
    - Include SQM & Other Devices

Develop Data Interchange Standards

- Model-Lighting Ordinance
  - Develop International Equivalents
  - Develop Modules (Signs, Sports, Etc)

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- IDA Approved
  - Fixture Seal of Approval
    - Enhanced Website
    - Search Feature
    - Energy Efficiency
    - Spectral Power Density

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- IDA Approved
  - Installation Seal of Approval
    - Two Separate Programs
      - Recreation Fields
      - Area Lighting
    - Minimize Offsite Impact
    - Maximize Energy Efficiency

Astronomy Picture of the Day 2000 November 27 http://antwrn.esfc.nasa.eov/apod/astronix.html

- Minimize Glare
  - New Night Meter

Earth at Night More information available at: http://antwrp.gsfc.nasa.gov/apod/ap001127.htm

Installation Seal of Approval

- New Night Meter
- 3 Light Meters in 1
- Develop Glare Metric Recreation Fields
- Pilot Program in 2011
  - 50 Fields

Astronomy Picture of the Day 2000 November 27 http://antwrp.gsfc.nasa.gov/apod/astropix.html

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#### Dark Sky Preservation

- International Dark Sky Places (IDSP)
  - 15 Locations Certified To Date
  - European Parks Expanding Rapidly
  - New Development Fund Program

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# Thank You Questions?



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