

Perugia, Italy July 2-13, 2007



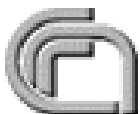
## IAMAS

INTERNATIONAL ASSOCIATION OF METEOROLOGY  
AND ATMOSPHERIC SCIENCES

**ASSOCIATION SYMPOSIA AND WORKSHOPS**

Organized by

Perugia, Italy July 2-13, 2007



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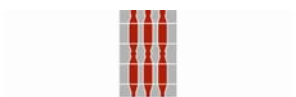
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<b>Steve McNutt</b>	<i>Secretary-General IAVCEI International Association of Volcanology and Chemistry of the Earth's Interior</i>	<i>Usa</i>



**Abbreviations**

<b>IAG</b>	International Association of Geodesy
<b>IAGA</b>	International Association of Geomagnetism and Aeronomy
<b>IAHS</b>	International Association of Hydrological Sciences
<b>IAMAS</b>	International Association of Meteorology and Atmospheric Sciences
<b>IAPSO</b>	International Association for the Physical Sciences of the Oceans
<b>IASPEI</b>	International Association of Seismology and Physics of the Earth's Interior
<b>IAVCEI</b>	International Association of Volcanology and Chemistry of the Earth's Interior
<b>CLiC</b>	Climate and Cryosphere
<b>Ev-K2-CNR</b>	Everest-K2 CNR Committee
<b>GEWEX</b>	Global Energy and Water Experiment
<b>HKH-FRIEND</b>	Hindu Kush-Himalayan Flow Regimes from International Experimental and Network Data
<b>IABO</b>	International Association for Biological Oceanography
<b>IACS</b>	International Association of Cryospheric Sciences
<b>ICACGP</b>	International Commission on Atmospheric Chemistry and Global Pollution
<b>ICASVR</b>	International Commission on Atmosphere-Soil-Vegetation Relations
<b>ICCE</b>	International Commission on Continental Erosion
<b>ICCL</b>	International Commission on Climate
<b>ICCLAS</b>	International Commission on the Coupled Land-Atmosphere System
<b>ICCP</b>	International Commission on Clouds and Precipitation
<b>ICDM</b>	International Commission on Dynamic Meteorology
<b>ICGW</b>	International Commission on Groundwater
<b>ICIMOD</b>	International Center for Integrated Mountain Development
<b>ICMA</b>	International Commission on the Middle Atmosphere
<b>ICRS</b>	International Celestial Reference System
<b>ICSIH</b>	International Commission on Snow and Ice Hydrology
<b>ICSW</b>	International Commission on Surface Water
<b>ICT</b>	International Commission on Trac
<b>ICWQ</b>	International Commission on Water Quality
<b>ICWRS</b>	International Commission on Water Resources Systems
<b>IGAC</b>	International Global Atmospheric Chemistry
<b>IGS</b>	International Glaciological Society
<b>ILP</b>	International Lithosphere Program
<b>INQUA</b>	International Union for Quaternary Research
<b>ION</b>	International Ocean Network

<b>IRC</b>	International Radiation Commission
<b>PUB</b>	Prediction in Ungauged Basins
<b>SCAR</b>	Scientific Committee on Antarctic Research
<b>SEDI</b>	Study of the Earth's Deep Interior
<b>SPARC</b>	Stratospheric Processes and their Role in Climate
<b>UCCS</b>	Union Commission for the Cryospheric Sciences
<b>UNESCO</b>	United Nation Educational, Scientific and Cultural Organization
<b>UNITAR</b>	United Nations Institute for Training and Research
<b>WMO</b>	World Meteorological Organization

### Session code naming

The first letter of the session codes indicates whether the session is a Union, a Joint Interassociation or a single Association sponsored event, the second letter indicates the type of event: Symposium (S) or Workshop (W). For Joint events, the second letter indicates the Lead Association (with the abbreviations listed below) and the third indicates whether a session is a Symposium (S) or a Workshop (W). In some cases (namely IAGA, IAHS) Association session codes have an extra codification referring to a specific Theme or Division.

<b>U</b>	UNION
<b>J</b>	JOINT
<b>G</b>	IAG
<b>A</b>	IAGA
<b>H</b>	IAHS
<b>M</b>	IAMAS
<b>P</b>	IAPSO
<b>S</b>	IASPEI
<b>V</b>	IAVCEI

Some examples:

**US002**

is a **Union Symposium**; **JGW001** is a **Joint IAG Workshop** with IAG as the Lead Association;

**MS003**

is an Association (IAMAS) **Symposium**. **AS III 020** is an Association (IAGA) **Symposium** sponsored by its **III** Division.



**MS002** **Symposium** **(4896 - 4909)****Convener** : Dr. Keith Alverson, Dr. George Kiladis

Global Observing Systems, Past, Present and Future (ICCL)

**MS003** **Symposium** **(4910 - 5053)****Convener** : Dr. George Isaac, Prof. Teruyuki Nakajima

Aerosols, Radiation and Clouds (IRC, ICCP, ICACGP)

**MS004** **Symposium** **(5054 - 5144)****Convener** : Prof. George Kallos**Co-Convener** : Dr. Alcide Di Sarra, Prof. Charlie Zender

Mineral Dust Cycle and its Impact on Clouds and Radiation (ICCP)

**MS005** **Symposium** **(5145 - 5166)****Convener** : Dr. Gabor Vali**Co-Convener** : Dr. Cindy Morris

Biological Ice Nucleators in the Atmosphere at the Crossroads of Physics and Biology (IAMAS/ICCP)

**MS006** **Symposium** **(5167 - 5195)****Convener** : Dr. Paul Field, Dr. Alexei Korolev, Dr. George Isaac

Ice Microphysics: Theory and Measurement (ICCP) merged with MW001

**MS007** **Symposium** **(5196 - 5228)****Convener** : Dr. Eyal Heifetz**Co-Convener** : Dr. Nili Harnik

Theoretical advances in atmospheric dynamics (ICDM)

**MS008****Symposium****(5229 - 5269)****Convener** : Dr. Craig Bishop

Ensembles and Probabilistic Forecasting (ICDM)

**MS009****Symposium****(5270 - 5296)****Convener** : Dr. Istvan Szunyogh

Dynamics and Predictability of Severe Weather Events (ICDM)

**MS010****Symposium****(5297 - 5359)****Convener** : Dr. George Kiladis

Dynamics of Convectively-Coupled Equatorial Waves and the Madden-Julian Oscillation (ICDM)

**MS011****Symposium****(5360 - 5385)****Convener** : Prof. Carlos Mechoso  
**Co-Convener** : Prof. Richard Grotjahn

The Dynamics of Eastern Tropical Oceans and Subtropical Highs (ICDM)

**MS012****Symposium****(5386 - 5396)****Convener** : Dr. Parvatha Suntharalingam, Dr. Dylan Jones

Impacts of Biosphere-Atmosphere Interaction on Atmospheric Composition from Synoptic to Annual and Decadal Timescales

**MS013****Symposium****(5397 - 5433)****Convener** : Dr. Kenneth Gage

Topographic Effects on Weather and Climate (ICDM)

**MS014** **Symposium** **(5434 - 5457)****Convener** : Prof. Meinrat O. Andreae

Interactions of Land Cover and Climate (ICCL)

**MS015** **Symposium** **(5458 - 5518)****Convener** : Dr. Lisa Alexander**Co-Convener** : Dr. Xuebin Zhang

Extreme Weather and Climate Events: Past Occurrences and Future Likelihoods (ICCL)

**MS016** **Symposium** **(5519 - 5588)****Convener** : Dr. Filippo Giorgi

Downscaling to Local and Regional Scales (ICCL)

**MS017** **Symposium** **(5589 - 5613)****Convener** : Dr. Natalia Andronova

Climate Sensitivity and Climate Feedbacks: Progress and Remaining Questions (ICCL)

**MS018** **Symposium** **(5614 - 5639)****Convener** : Prof. Marvin Geller

The Role of the Stratosphere in the Climate System (ICMA, IRC, ICCL)

**MS019** **Symposium** **(5640 - 5729)****Convener** : Prof. Kevin Hamilton

Middle Atmosphere Science (ICMA)



**MS020**

**Symposium**

**(5730 - 5768)**

**Convener** : Prof. Werner Schmutz

Solar Activity and its Influences on the Earth's Weather and Climate (IRC)

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**(M) - IAMAS** - *International Association of Meteorology and Atmospheric Sciences*

**MS002**

**4896 - 4909**

**Symposium**

**Global Observing Systems, Past, Present and Future (ICCL)**

**Convener** : Dr. Keith Alverson, Dr. George Kiladis

This symposium is for submitted contributions addressing the topic of the Union Symposium "U03 on Global Observing Systems, Past, Present and Future". It will concentrate on the societal benefits of Earth observations in the context of the many global programs contributing to the Global Earth Observing System of Systems (GEOSS), including the Global Climate, Terrestrial and Ocean Observing systems (GCOS, GTOS, GOOS) and the Integrated Global Observing Strategy (IGOS) Partnership. Presentations on any aspects of Earth System Observations, but particularly those clearly resulting in societal benefits, are welcome

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MS003

Poster presentation

4989

**Study of cloudiness influence on solar radiation measures in the South of Brazil at the Southern Space observatory**

**Author : Mr. Daniel Vinicius Fiorin**

*Southern Regional Space Research Center National Institute for Space Research - INPE-MCT*

**Co-Author:** Fernando Ramos Martins, Marcelo Pizzuti Pes, Marcus Guedes, Rafael Jonas Righi Batista, Diogo Alessandro Arsego, Ricardo Andr Guarnieri, Enio Bueno Pereira

A suitable evaluation of the solar potential is required for planning and decision making in energy policies, especially in developing countries in order to establish the best use and management of its energy resources. Computational models have estimated solar irradiation values and ground measurements have been used to improve them as well as to keep an accessible and reliable database. With this purpose, the SONDA project have installed, throughout Brazilian territory, several sites to acquired solar irradiation data. One of them is located at the Southern Space Observatory SSO/CRS/INPE MCT, ( 29S; 53W), in So Martinho da Serra, Brazil where solar and aeolic data have been used to assess the renewable energy potential of the Southern region of Brazil. The solar radiation that reach the top of atmosphere suffer absorption and scattering processes caused by aerosols, atmospheric gases and clouds. This paper aim to study the influence of cloudiness on the fraction of solar radiation that reaches the ground. A empiric model was developed correlating solar irradiation values measured by a CM 21 Pyrhanometer (Kipp & Zonen) with opaque and thin cloudiness fractions esteemed by a Total Sky Imager TSI-440 (YES, Inc) during the spring and summer seasons. It was used fifteen minutes averages to minimize effects of cloudy cover variance. The results are important for a better knowledge of the influence that different cloudy thickness can offer on surface solar irradiation and to improve radiative transfer models. Studies investigating the influence of cloudiness, during autumn and winter seasons and in specifics times of the day, on solar radiation should be made in the next step.

