

COMMISSION 50: PROTECTION OF EXISTING AND POTENTIAL OBSERVATORY SITES

(PROTECTION DES SITES D'OBSERVATOIRES EXISTANTS ET POTENTIELS)

PRESIDENT: Woodruff T. Sullivan (USA)

VICE-PRESIDENT: R. Jim Cohen (UK)

ORGANIZING COMMITTEE: D. Crawford, B. Hidayat, S. Isobe S.-Y. Jiang, D. Malin, D. McNally, T. Spoelstra

1. Report from the IAU General Assembly, Manchester, August 2000

Commission 50 deals with the environmental issues affecting astronomers' ability to observe the Universe. These issues fall primarily under the categories of light pollution, radio interference, and space debris. Over recent years space debris issues have become of major concern to the various space agencies and to commercial interests in space, so that less attention is now needed by us.

Radio interference issues, especially from satellites, remain a serious global problem and for solutions and strategy the Commission works closely with Division X (Radio Astronomy) and IUCAF, the Inter-Union Committee for the Allocation of Frequencies. At the recent World Radio Conference WRC-2000, IUCAF and its allies made significant gains in securing allocations to radio astronomy in the millimeter-wavelength regions. IUCAF has also resurrected its Working Group on "Astrophysically Important Spectral Lines" (Chair: M. Ohishi (Japan)), which is vital for setting priorities on which specific radio frequencies require protection.

At Manchester a session (joint with Div. X) on "Standards and Databases for Radio Interference to Observatories", organized by J.R. Fisher (USA) and W. van Driel (France), discussed the practical issues of how radio astronomers need to do the hard work of quantitatively monitoring the humanmade interference at their observatories. Only by being armed with such data can we make credible, persuasive cases to the allocation authorities.

Light pollution battles have traditionally been fought on the local scale of cities and regions, but a new trend is regulations and studies on national and even international scales. The most recent manifestation of this was the Commission 50-sponsored IAU Symposium 196, "Preserving the Astronomical Sky", held in Vienna in 1999 in conjunction with a decadal meeting of the UN Committee for the Peaceful Uses of Outer Space. The proceedings of this meeting will shortly be published. It was groundbreaking in its "political" component in which statements of policy were sent to the UN Committee by the Symposium as a whole, which were then adopted and (we hope) should eventually see their way into revised UN Treaties. The IAU Secretariat (in the person of Johannes Andersen) has been particularly energetic and effective in working on these issues at the international level.

The primary organizational change within Commission 50 was the creation of a new Working Group entitled "Controlling Light Pollution", with M. Smith (Chile) as initial Chair. This Working Group is already very active and sponsored two sessions at the General Assembly. In addition, it is taking the lead in proposing an IAU Colloquium on "Protection

of Observing Sites in Chile” in early 2002 in Chile.

Highlights of General Assembly sessions were:

1. the new world atlas of sky brightness produced by P. Cinzano (Italy), which is a powerful model of worldwide light pollution based on satellite images and a light propagation model;
2. the studies of S. Isobe (Japan) in which he quantifies the watts lost in upward lighting from cities and converts that number into dollars/yen/pounds/marks;
3. the pre-university educational work of M. Metaxa (Greece), who is now establishing international links for her school activities;
4. engineering and design advice on good outdoor lighting from N. Pollard (UK) and D. Schreuder (Netherlands);
5. the excellent cooperation between civic and industrial parties and the astronomical observatories of Chile, spearheaded by M. Smith (Chile); and
6. the continued leadership and growth (now at 6000 members) of the International Dark-Sky Association under the baton of D. Crawford (USA) - see www.darksky.org for their panoply of activities (and then join!).

A press release at the time of the General Assembly, “Astronomers sound wake-up call on light and radio pollution of the skies”, led to many articles in the press.

New officers are: President, R.J. Cohen (UK) and Vice-President, M. Smith (Chile)

W.T. Sullivan
President of the Commission