

placed at the bottom of the telescope structure.

The ING invested in 3 industrial vapour cleaners to be used for the “vapour cleaning” process. Before the machines were used on a telescope mirror, extensive tests were done on similar coated mirrors. It was found that it was very difficult to cause any damage to the aluminium coating. Indeed only one test, which involved holding the vapour stream only a couple of centimetres away from the surface and in one position for 20 minutes caused a slight degradation of the coating.

The primary advantage of vapour cleaning starts with wetting the mirror. For this part of the procedure a soapy vapour can be used by pre-mixing water with soap. By wetting the mirror this way, the soapy vapour will start cleaning whilst removing the large dust particles. The vapour is heated

to a temperature of about 35°C. Therefore the temperature shock between the warm vapour and this time the “cold” mirror helps to release the particles from the mirror (reverse of the “CO₂ cleaning” method). Before drying the mirror, the soap can be cleaned away from the surface and the steam can keep the surface wet. Even without touching the mirror surface the “vapour cleaning” will give a better result than the “CO₂ cleaning”. Finally to achieve the same results as the

“water washing” method, sponges and dabbing still need to be applied to the mirror surface after the wetting.

The result of the washing of the INT 2.5m primary was so successful that plans are made to repeat this procedure on the William Herschel Telescope primary (4.2m). This is believed to be the very first time that such a process has been used on a major telescope mirror anywhere. □

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Vapour cleaning (left) and drying (right) INT primary mirror.

Satellites and Tidal Streams, an ING–IAC Joint Conference

On May 26–30, 2003 ING, jointly with the IAC, organized the third major astronomical conference on La Palma, with the title “Satellites and Tidal Streams”. As with previous conferences, generous financial support was provided by the Excmo. Cabildo Insular de La Palma and the Patronato de Turismo. The venue was the pleasant seaside resort of Los Cancajos, a few kilometers south of the main town of Santa Cruz de La Palma.

Current cosmological models predict that galaxies form through the merging of smaller substructures. Satellites and tidal streams might then represent the visible remains of the building blocks of giant galaxies. They therefore provide important information on the merging history and galaxy formation in the Universe. In this conference the observational evidence for substructures, their internal structure and their dynamical evolution and disruption within the tidal field of the host galaxy was discussed and confronted with theoretical cosmological predictions of hierarchical merging and galaxy formation. With some 90 participants, including ‘old hands’ as well as a healthy contingent of young astronomers, the conference underlined the vibrant developments in this field and was a great success!

Satellites and Tidal Streams
ING-IAC Joint Conference

SPEAKERS:
A. Brusa
A. Burkert
A. Dekel
E. Grebel
A. Ivezic
M. Irwin

ORGANIZERS:
A. Baumann
A. Vignoli
D. Vanden-Bell
S. Najewski
M. Mateo
B. Moore
J. Primack
P. Schneider
S. White
R. Zinn

La Palma, Canary Islands, Spain - May 26-30, 2003

I.O.C.: E. Baigra, R.L.R. Corral, J. de Azavedo, T. Kallunki, J. Licandro, D. Martínez-Delgado, J. Muñoz, I. Prada (Chair), A. Zamo
I.O.C.: A. Burkert, M. Irwin, A. Rizzo, I. Rujopakdi, D. Martínez-Delgado (Chair), M. Mateo, I. Prada (Chair), S. Balado, P. Schneider, R. Zinn

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