

## ESO Director General Visits the Vatican City

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On 30 and 31 October 2009 the ESO Director General, Tim de Zeeuw, was invited to visit the Vatican City, as part of an international group of renowned astronomers, on the occasion of the International Year of Astronomy 2009.

The visit included a tour of the Tower of Winds at the Vatican — the first location of the Vatican Observatory, built between 1578 and 1580 at the time of the Gregorian reform of the calendar — a visit to the Vatican Secret Archives, the Sistine Chapel and the astronomy exhibit *AStrum* 2009 at the Vatican Museum. On display in this exhibition of astronomy and instruments are 130 items, including Galileo Galilei's original handwritten notes detailing his observations of the Moon, and his publication *Siderius Nuncius* from 1610.

The highlight of the day was a private audience with Pope Benedict XVI who addressed the group. In his speech, the Pope said: "This celebration, which marks the four hundredth anniversary of Galileo Galilei's first observations of the heavens with a telescope, invites us to consider the immense progress of scientific knowledge in the modern age and, in a particular way, to turn our gaze anew



Credit: Photo Service L'Osservatore Romano

The ESO Director General Tim de Zeeuw meeting Pope Benedict XVI during a visit to the Vatican City. Between the Director General and the Pope are Fr. José Gabriel Funes, director of the Vatican Observatory (right), and Cardinal Giovanni Lajolo, president of the Governorate of the Vatican City State.

to the heavens in a spirit of wonder, contemplation and commitment to the pursuit of truth, wherever it is to be found."

The Pope also expressed his "gratitude not only for the careful studies, which have clarified the precise historical context of Galileo's condemnation, but also for the efforts of all those committed to ongoing dialogue and reflection on the complementarity of faith and reason in the service of an integral understanding of Man and his place in the Universe".

The Pope also said: "The International Year of Astronomy is meant, not least to recapture, for people throughout our world, the extraordinary wonder and amazement which characterised the great age of discovery in the sixteenth century." He continued: "Who can

deny that responsibility for the future of humanity, and indeed respect for nature and the world around us, and demand — today as much as ever — the careful observation, critical judgement, patience and discipline which are essential to the modern scientific method? At the same time, the great scientists of the age of discovery remind us also that true knowledge is always directed to wisdom, and, rather than restricting the eyes of the mind, it invites us to lift up our gaze to the higher realm of the spirit."

This visit was organised by the Governorate of the Vatican City State and the Vatican Observatory as part of their celebrations of the International Year of Astronomy 2009 by the Holy See.

Announcement of the ESO Workshop

### Central Massive Objects: The Stellar Nuclei–Black Hole Connection

22–25 June 2010, Garching, Germany

The centres of massive galaxies are special in many ways, not the least because all of them are believed to host supermassive black holes. Since the discovery of key relations linking the mass of the central dark object with the large-scale properties of the dynamically hot galactic component, it has become clear that the growth of the central black hole is

intimately connected to the evolution of its host galaxy. However, for lower-mass galaxies, the situation is much less clear. These galaxies, spanning a large range of Hubble types, typically host nuclear clusters of a few  $10^6$ – $10^7$  solar masses. The presence of black holes and their relation to these nuclear clusters remains largely unknown.

Recent studies have shown that nuclear cluster masses are coupled to the mass of their host galaxy, following a relation similar to that for supermassive black holes, suggesting that both types of central massive objects (CMOs) are closely related. Although nuclear clusters are more than the low-mass analogues of supermassive black holes, all CMOs very