

2. Visiting Lecturers Program (VLP)

The VLP is designed to lead to a significant improvement in the astronomical capabilities of the host country. Primarily, lecturers offer a series of courses. The VLP in Peru has operated for three years, the VLP in Paraguay has just started, and a VLP in Nigeria has been postponed for technical reasons. J. Sahade identified the lecturers for Peru and Paraguay; it was considered essential that lectures be in Spanish. The IAU supports travel costs; living expenses are provided locally. A contract between the IAU and the host institution seeks to assure the continued support of astronomy in the host country, including the employment of astronomers trained during the VLP.

THE VISITING LECTURERS PROGRAM AT SAN MARCOS UNIVERSITY

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Professors and students of San Marcos University (USM) have found that the Visiting Lecturers Program (VLP) of the IAU has helped to improve the study of astronomy in Peru. The Peruvian people and I are profoundly grateful.

The VLP and the International Schools for Young Astronomers (ISYA) advised us, pointing our perspectives and capacity for work in the correct direction. I feel that both the VLP and the ISYA are noble expressions of the universal message of scientific collaboration, and are the voices of the highest altruism of the astronomers who participate in them.

With reference to the VLP, the state of astronomy education can be described in three parts:

1. Before VLP

In Peru, there were a few introductory courses, and there was a little research in celestial mechanics in the 1950's. There was and still is a solar observatory, but one that does not carry out research. There was some popularization of astronomy, but in spite of it, the local population was not familiar with astronomy. Under these circumstances, our most overwhelming task was to identify new methods and strategies. So we studied the local conditions and characteristics, and chose the most appropriate institution to begin teaching astronomy. Later, we would progress to the rest of the country.

ISYA involvement provided communication with top-level astronomers. In 1982, we formed a group: *Seminario de Astronomía y Astrofísica* (SAA) which

consolidated a group of young students. Conferences, courses and contacts with all people and institutions related in some way with astronomy were worked out.

2. VLP is Running

The first IAU-USM contract for a VLP was signed in January 1984, and the courses were begun in August. The university encouraged science (astronomy) education based on academic tradition (it is the oldest university in the Americas) and the development of our country.

There were 8 courses: *General Astrophysics* (Jorge Sahade), *Galactic Structure* (J.C. Cersosimo), *Astronomical Optics and Techniques in Astronomy* (Horacio Dottori), *Stellar Spectroscopy* (Roberto Mendez), *Stellar Atmospheres* (Jean Zorec), *Extragalactic Astronomy* (Luis Sersic), *Solar Physics* (Josip Kleczek) and *Internal Structure and Stellar Evolution* (Stella Malaroda). All these courses gave credit, and were options in our physics curriculum. The visiting lecturers kindly accepted an extra task: to be advisors of our students for their thesis work for the Licenciature degree. The visiting lecturers and we worked in perfect understanding and collaboration, discussing different aspects and problems.

Many people wanted to show the link of such a basic science as astronomy with technology and production.

A crucial problem was, and still is, that the VLP courses were theoretical only, because we do not have any telescope. Problems and experiments in class are not sufficient.

In February 1988, the IAU-USM contract was renewed for 3 more years, with 6 visiting lecturers on special topics: spectroscopy, photometry, solar physics, and celestial mechanics. The goal will be to improve research.

To date, 18 students have shown a definite interest in astronomy: 4 got Licenciature degrees and are working in astrophysics and celestial mechanics; 5 physics students will finish their pre-graduate studies and will travel to do their Licenciature theses on astronomical topics.

SAA is very active: it permanently organizes seminars, courses, and conferences for university and high school students, teachers, and the general public. It has "Astronomical Friday." In August 1986, SAA organized the first international astronomical seminar in the Facultad de Ciencias Fisicas, USM, with J.L. Sersic (Argentina), J. Kleczek (Czechoslovakia), P. Pittluga (U.S.A.) and M.L. Aguilar (Peru). This year, it will begin popularization of astronomy in different cities of Peru. SAA has 53 active members.

3. Present and Perspectives

What is needed?

- a) To consolidate and enhance professional astronomy at USM and in Peru.
- b) To avoid academic spread because of a lack of funds.
- c) To have efficient international co-operation, and a bigger budget.

- d) To co-ordinate the use of isolated instruments existing in various institutions.
- e) To improve astronomy education through: education of high school teachers, development of high school curricula, conferences, seminars, radio and TV programs *etc.*

Finally, the proposed relocation of one of the Vatican Observatory telescopes in Peru will be a happy opportunity to form a Peruvian astronomical center.

THE SUMMER SCHOOLS OF THE VATICAN OBSERVATORY

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Starting on the 10th of June, 1986, the staid and quiet halls and courtyard and corridors, including the giant circular staircase designed by Bernini for the little donkeys that carried Popes to their quarters in the summer palace, echoed to the swift patter of lightfooted students and the buzz of their conversations as 17 young men and 8 young women met at the first Vatican Observatory Summer School in Astronomy and Astrophysics at Castel Gandolfo.

These 25 scholars had been chosen from a list of 135 candidates at university and graduate school campuses all over this planet. More than 30 candidates were rejected for "excellence"; they were judged to be too far advanced for admission to the classes on *Galaxies and Dark Matter* and to those on *Spectral Classification* and on *Instrumentation for Photometry and Image Processing*. The classes were aimed at students just beginning or planning immediate entrance into graduate level classes; the School was not planned for "new Ph.D.s," for "post-docs," or for those already well into thesis work. Criteria for admission included academic grades, recommendations of university professors, plus personal statements from the candidates on reasons why they felt they wanted to attend the sessions of the school. Applications were studied by faculty and staff members and results were announced in January, giving students some four months to arrange their travel and home commitments so they could be free to respond to the school bells on June 10.

It was decided early on to assign a majority of places to young scholars from the developing nations on our planet. Fourteen came from homes and schools there, while eleven voyaged to Castel Gandolfo from industrialized nations. Neither race nor creed nor sex were discriminants.

Three students each came from India, Argentina, Italy and the United States; and two each from Greece, New Zealand, Brazil, and Argentina. China, Austria, Korea, Bangladesh, Yugoslavia, Holland, Belgium, Poland, and Nigeria had one representative each. English was the required language for admission to the school.