

## OBITUARY

HAROLD L. JOHNSON (1921-1980)

Harold L. Johnson, full-professor at the *Instituto de Astronomía*, University of Mexico, died unexpectedly of a heart attack in Mexico City on April 2, 1980. Johnson was born in Denver, Colorado, U.S.A. on April 17, 1921. He earned his Ph.D. from the University of California at Berkeley in 1948 in the record time of a year and a half. He worked at Yerkes, McDonald and Lowell Observatories and at the Universities of Texas, Arizona and Mexico. He made extremely valuable scientific contributions, through nearly 150 publications. Moreover, he always enjoyed helping other people.

Dr. Johnson liked to do only *solid* work. This is reflected in his papers. He designed and constructed the instruments needed in his work, if necessary. He started his astronomical career by studying the international photometric systems in existence in the decade of the 40's. As a result, the *UBV*-system was born; it is known today as *Johnson's System*. He successfully applied it to classify stars, to define a zero age main sequence and to define intrinsic colors of stars, and also to investigate the reddening law in all sky directions. This work led Johnson to extend the *UBV*-system to *UBVRI* and later to the *UBVRIJHKLMNOPQ*-system to cover the spectral range from the ultraviolet to the infrared. He also defined an intermediate-band photometric system, the 13-color, to learn more about the universe. He calibrated it in absolute basis. Although most of his work was related to stars, he also made important contributions in the fields of planets, galaxies and quasars.

He was also involved, during the last ten years, in the design, development, construction and reduction techniques of a Michelson-Fourier spectrometer to obtain

high quality infrared spectra. As a first result, he published an *Atlas of Stellar Spectra*, a very important contribution.

I had the pleasure of meeting Harold at Yerkes Observatory in 1953, while I was a graduate student there. I took from him a Summer course on photoelectric photometry, a subject I have enjoyed very much ever since. I visited him twice at Lowell Observatory and the University of Texas (Austin) to ask for his advice.

Our association became closer when he started to collaborate with Tonantzintla and Tacubaya Observatories in 1964. He helped to search for a new site for the *Observatorio Astronómico Nacional*. He provided the first set of photographs taken with artificial satellites, which helped choose San Pedro Mártir, B.C., the current main astronomical site in Mexico. His assistance in the development of this observatory has been invaluable.

He invited me to collaborate with him in his multicolor photometric systems at the Lunar and Planetary Laboratory in those years. He also loaned me a photometer to be used in Tonantzintla and Cerro Tololo.

Many Mexicans have profited from Harold's advice, help and generosity, especially the *Instituto de Astronomía*. It will be very difficult to find someone else who has done so much for a Mexican observatory. The University of Mexico recognized this fact by granting him the *Doctor Honoris Causa* degree in 1979.

The world has lost a milestone of modern astronomy; Mexico has lost a good friend.

April 14, 1980.

Eugenio E. Mendoza V.