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PROFILES IN ASTRONOMY: ALBERT WHITFORD

by Edmund Dombrowski, Sethanne Howard, and Don Barry

Editor's Note: Albert Whitford is one of the elder deans of Astronomy, a Professor Emeritus at Lick Observatories, and was for many years their Director. He was interviewed in January of 1989 at the American Astronomical Society meeting in Boston, Massachusetts by Society members.

Sethanne: Dr. Whitford, I find it interesting that you never took an astronomy course. How did you become interested in astronomy?

Whitford: I came into astronomy after having started graduate study in physics, you know, atomic spectroscopy, starting in 1932. It was during the Depression and I was offered a job working with an astronomer where I was doing a technical chore that he needed to have done, that physicists were supposed to know more about, measuring very small currents, and the currents introduced me to astronomy. The astronomer was Joel Stebbins; he's deceased now, but for a long time he was Secretary of the Astronomical Society, and President later. One thing led to another: I made a successful device for measuring very small currents from photoelectric cells, with which he was measuring the light from stars and galaxies, and it brought me to Mt. Wilson Observatory helping him, and finally I became an astronomer without ever starting out to study it at all; and I never have, as Sethanne says, I have learned it by teaching it and studying the journals. The subjects I worked on over the years involved for a long time the photoelectric measurement of the brightness of galaxies, and finally photoelectric scanning of spectral distribution and the strength of the various spectral features that one could get that way.

Then came a period of administrative responsibility - I came to Lick Observatory and as head of it had to get the 3-meter (10-foot) telescope, which was supposed to be done, working and instrumented, a long hard struggle, but it works very well, and has the instrumentation I'm glad to report, that in the hands of those who have come after is really excellent and is being kept on the forefront. My interest in galaxies moved me to see what could be done by looking harder at the center of our own. In the bulge of the galaxy there were some windows where one could see through the dust clouds, between rifts in the dust clouds, all the way through to the bulge, and with modern instruments one can analyze these stars and find out how they compare with giant stars near the Sun, and count them.

And that's what has kept me occupied in the post-retirement years. My observatory and University that I serve have been very kind and have given me a chance to keep on doing research with grants and trips to the Southern Hemisphere where this part of the galaxy is up there and not down there! I've had a very rewarding time in post-retirement years and I like to come to an astronomical meeting once in a while. Some people I remember and there are a lot of people whose names I've seen in the journals, and some people I just can't imagine where they came from until I see their names on poster papers.

Ed: What's the status at Lick observatory right now? Any new things being done?

Whitford: It is on a mountain, it's 100 years old, the original telescope still works, though we've got to shore up the dome because an earthquake more or less shook it apart; and it's being done, and it will go on working on a more restrictive program. The 3-meter (10-foot) reflector, when it was built, was next to the 200-inch (500-centimeter) [Mount Palomar reflector telescope], and now it's thirteenth or eighteenth in the world, but it is a first rate telescope. The difficulty is that San Jose has gotten big. It's only 13 miles (21 kilometers) away, so the sky is brighter. The search for a dark sky site finally led to a project to build a very big telescope on Mauna Kea, and in getting the resources to do it, we joined with Caltech as equal partners. A Caltech Alumnus is providing the capital cost and the University of California is providing the design and the guarantee of the operating cost for the first ten years. That's being built now; there are problems still with us in getting the mirror segments produced, but they seem to be in sight of a solution, and I hope I'll live to see it delivering starlight. I've been to Mauna Kea; the success of the California-French-Hawaii telescope proves that it is indubitably a very superior site - wonderful seeing there.

Don: We've had a chance to do some speckle interferometry on that telescope, and you really can tell the qualitative character of the speckles show the seeing is excellent.

Sethanne: Do you think the projections made by NASA that in a few years there will be an enormous need for astronomers is valid?

Whitford: I haven't studied it as much as they have, all I can say is that all the projections that there are too many people in the pipeline haven't seemed to come true; that the interest explosion in the various avenues of investigating the Universe in all spectral bands has somehow attracted or marshaled that kind of support. There's much to be discouraged about in how much interest the National Science Foundation is taking in astronomy. The total picture, I think, still gives no reason to despair. But I wring my hands about the starving national observatories, which have been great institutions.

Ed, Sethanne, and Don: Thank you for your time, Dr. Whitford.

Whitford: You are very welcome.

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