

Janik DS: Optico-Electronics and Holography Laboratory. In Austin FH and Maio DA (eds): Journal of the City Ambassador Program Aerospace Medicine Delegation to the Soviet Union, April 1-18, 1990 (City Ambassador Program, Wash DC, 1991).

At the opening of the afternoon session the chairman announced several papers that would not be presented, after which V. Carmigniani and J. Paries from France presented a paper, titled "Reduced Pilot Vigilance during Long-Haul Flights." The methods described included monitoring EEG (four channels). A few questions have been advanced on the validation of the matters. A. Sanches from Mexico made an exhaustive presentation on the routine methods used in Mexico for "Supervision of Medical Fitness of Flight Personnel." G. Hardicsay and F. Korodi of Hungary presented "A New Methodical Approach to Flight Fitness; Continuous in Flight EEG, ECG, and Infrared Television Recordings." Infrared thermographic methodology did not appear to trigger the audience's interest.

Reporter: Dr. Nuno A. D. Castelo-Branco

Friday, April 6 - Sunday, April 8, 1990

LENINGRAD TO MOSCOW

Optico-Electronics and Holography Laboratory

On Friday at 10:00 a.m., Dr. Ray and I [Dr. Janik] visited the Optico-Electronics and Holography Laboratory at AF-JOFFE Physical Technical Institute of the USSR Academy of Sciences in Leningrad. We viewed several innovative applications of Denisuk laser holography (DLH) as originally developed by Dr. Yuri Denisuk, the current director. One DLH application is a modularized, commercially available, real time DLH interferometer, which has been used on Salyut 6 and Salyut 7

and Mir to support electrophoretic, biological, and human flight experiments.

Preliminary discussions for a collaborative, international research project utilizing this instrument were accomplished and scientific information was exchanged.

We examined a similar test bed currently deployed on Mir for analyzing damage to spacecraft materials exposed to space. We also viewed an experimental test bed for investigating rhodopsin-base optico-electronic computer memory and analysis.

Reporter: Dr. Daniel S. Janik

At the special meeting at the Optico-Electronics and Holography Laboratory at the Physical-Technical Institute, Dr. Janik and I [Dr. Ray] engaged in scientific, philosophic, and technologic discussions. My particular interest in holographic theory relates to the philosophic foundations of holographic theory in terms of its application to the development of a holographic paradigm for human science research wherein complex objective and subjective phenomena in the relationship of parts to whole need to be taken into account and interpreted scientifically and symbolically. I have been using a holographic scientific paradigm for nursing research, wherein different rational purposive, technical, and phenomenologic interpretive spheres of science can be integrated into a synthesized whole.

Conversing with one of the great scholars of holographic theory, philosophy, and technology was a great honor and a privilege for me. Dr. Denisuk gave me his autographed book on the fundamentals of holography, which was published in 1978. I also participated with the

technical staff viewing experiments. I received three holographic icons as gifts, which I will cherish.

Reporter: Dr. Marilyn A. Ray

Leningrad University

On Friday at 10:30 a.m., I [Ms. Mercereau] was met at Leningrad University, escorted on a tour of the facilities and provided with a brief history. The school operated as the University of St. Petersburg from 1836 to 1977. What was once the administration building now houses Human Services, the library, and some small office spaces. Medical courses that used to be taught here have been moved out of Leningrad. Biology, physiology (no anatomy), and psychology are now taught in other buildings on the school site. The buildings are old but appear nice on the outside. The inside appears very dark, dimly lit, in disrepair, and starkly barren.

In sharp contrast, atop the administration building is a small, neat, clean, and newly painted/decorated museum. The ceiling is beautiful, done with soft pastels commemorating the Christian orthodox faith. Pictures represent the apostles and the risen Christ. This area used to be the orthodox church (chapel) of Peter and Paul, which the czar used to attend on occasion; it is now used by the students and faculty.

Pictures and relics of the past on display depict such things as admission of female students, the student style bench/seating, and instruments used and/or developed by prominent graduates or teachers. Several students became well known in the fields of science and literature.

The old physics building, where my uncle attended classes and graduated in 1910, is still present, but the current physics courses are