## Science Team and Tasks

Dr. D. P. Steele (Senior Research Scientist and Adjunct Professor of Physics and Engineering Physics, University of Saskatchewan) is the Principal Investigator of the NITEOWL Team. His areas of specialization and expertise are upper atmospheric physics and optical imaging of atmospheric emissions to derive atmospheric state parameters.

Dr. H. S. Caplan (Professor and Head of Physics and Engineering Physics, University of Saskatchewan) has extensive experience in science administration and project management.

Dr. A. V. Koustov (Assistant Professor of Physics and Engineering Physics, University of Saskatchewan) has expertise in geophysical application of ground-based and satellite measurements to study the structure of the Earth's atmosphere and ionosphere.

Dr. A. I. Smolyakov (Assistant Professor of Physics and Engineering Physics, University of Saskatchewan) has extensive theoretical expertise in the analysis of random processes in plasma environments including neutral turbulence and dynamics of non-linear processes in fluid-like media.

Dr. R. J. Bolton (Professor of Electrical Engineering and Associate Member in Computer Science, University of Saskatchewan) has expertise in VLSI circuit design, pattern recognition techniques, compression circuit design and computer systems and electrical systems integration. He also has experience in the analysis of attitude video cameras and on-board CCD data.

Dr. H. C. Wood (Professor and Head of Electrical Engineering Physics and Associate Member in Agricultural and Bioresource Engineering, University of Saskatchewan) has extensive expertise in the development of instrumentation for optical atmospheric studies.

Dr. J. D. Bugg (Associate Professor of Mechanical Engineering, University of Saskatchewan) has expertise in thermal fluid dynamics of practical systems.

Dr. A. T. Dolovich (Associate Professor of Mechanical Engineering, University of Saskatchewan) has expertise in development of tomographic methods for remote sensing and non-destructive testing.

Dr. C. E. Soteros (Associate Professor of Mathematics and Statistics, University of Saskatchewan) has extensive expertise in large scale computation.

Dr. R. Srinivasan (Associate Professor of Mathematics and Statistics, University of Saskatchewan; consultant with AT&T Bell Labs) has extensive expertise in noise modeling, data compression techniques, and inversion algorithms.

Mr. E. ** Ivanov (Senior Research Engineer, SCI-TEC Instruments Inc., Saskatoon) has expertise in optical system design and construction, and balloon-borne optical measurements of stratospheric ozone.

Dr. J. E. Johnston (Senior Research Scientist, SCI-TEC Instruments Inc., Saskatoon) has expertise in both ground-based and space-borne spectroscopy and interferometry applied to chemical composition measurements of the troposphere, stratosphere, and mesosphere.

Mr. D. J. Sniezek (Vice President of Research, Development, and Engineering, SCI-TEC Instruments Inc., Saskatoon) has extensive experience in project management and the development and engineering of optical equipment for atmospheric ozone monitoring.

## Science Team Responsibilities

| Team Member | Responsibility | Level of Effort |
|---|---|---|
| D. P. Steele | Project co-ordination, mission planning and data analysis | 160 hr/month |
| H. S. Caplan | Project management | 5 hr/month |
| A. V. Koustov | Instrument calibration and data storage | 20 hr/month |
| A. I. Smolyakov | Mission simulation | 20 hr/month |
| R. J. Bolton | Electrical design | 25 hr/month |
| H. C. Wood | Design consultation | 5 hr/month |
| J. D. Bugg | Mechanical and thermal design | 15 hr/month |
| A. T. Dolovich | Development of tomographic analysis technique | 15 hr/month |
| C. E. Soteros | Inverse problem | 15 hr/month |
| R. Srinivasan | Image reconstruction | 15 hr/month |
| E. ** Ivanov | Optical instrument fabrication and testing | 15 hr/month |
| J. E. Johnston | Optical instrument specification and design | 30 hr/month |
| D. J. Sniezek | Management of instrument development | 5 hr/month |

## Context

**ODIN**
**MOPITT**
**Stellar Brewer**
**GOMOS**
**TOMS**
**SCIAMACHY**
**SBUV, HALOE, CLAES (UARS satellite)**