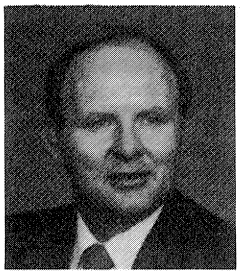
Editorial



Jack D. Gaskill, Editor

Let's Keep Discussion of the Hubble at Cryogenic Temperatures

As all who don't live in caves must certainly know by now, there are difficulties with the Hubble telescope. However, contrary to reports issued by various segments of the media, it is still not clear exactly what the nature, extent, and cause of these difficulties are. At first we were informed that the telescope was myopic, or nearsighted, whereas later reports indicated that the telescope couldn't be focused. Still other reports suggested that the problems were caused by faulty design and/or improper testing. It's unfortunate that conclusion jumping is not an internationally recognized event, because Hubble's problems alone would surely have led to several new world records.

Many of the reported statements have not only been premature, they may also have been extremely harmful to the international astronomy community, other scientific and engineering communities of the world, and to the entire space program of the United States as well. Just what is *not* needed at an unhappy time like this is inaccurate and misleading reporting about a very complex project of an agency that has already come under considerable fire because of difficulties with other of its major programs. I won't pretend that NASA hasn't made some mistakes in the past and may not make others in the future, but now is a time for accurate reporting, careful investigation, and thoughtful deliberation rather than conjecture, wild rhetoric, and witch hunts.

At the risk of again revealing my current displeasure with the Congress of the United States, I note with interest that a number of senators and congressmen have been quick to jump on the speculation bandwagon. Some have pointed out that NASA tends to opt for the large and politically glamorous projects when the small and boring would do. Incredible! What is the probability that Congress would provide any funding at all for a small and boring project? Consider the hapless American football coach who is criticized because his teams lack a flashy offense even though they win most of their games. The alumni and other Monday-morning quarterbacks not only demand a winning team, they want to watch high-scoring games—not boring ones.

I would also suggest that the problem with the Hubble telescope is exactly the kind of diversion that a number of senators and congressmen will find helpful in an election year to shift voter attention away from the savings and loan fiasco and budget deficit problems hanging over their heads. Never mind that each of these latter two problems has a price tag more than a hundred times greater than that of Hubble, and never mind that it is likely that Congress itself will eventually be forced to shoulder some of the blame for whatever ails the telescope—any diversion that works is a diversion worth using.

I urge all who have any interest in astronomy and space exploration to exercise restraint if tempted to join the conclusion-jumping game, and to counsel others to do the same.

Future Special Issue Calls for Papers

June 1991

Optical Fiber Reliability

Guest Editor

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In a relatively short time, fiber optic technology has made rapid strides from a state of sheer laboratory curiosity to a multitude of economically successful commercial systems extending to all major areas of communications, sensors, and signal processing applications.

Ensuring the long-term reliability of optical fibers, cables, splices, and connectors is becoming increasingly critical in future system designs, where maintenance and long system life are imperative even in benign environments. Understanding the degradation mechanisms and thus establishing strategies to predict the useful life of fiber optic components from limited databases are vital steps in expediting acceptance of fiber optic systems for commercial applications. A special issue of *Optical Engineering* on optical fiber reliability will be published in June 1991. Papers in this special issue will include, but not be limited to, the following topics:

- Design and manufacturing techniques
- Materials and coatings
- Mechanical behavior of optical fibers
- Performance degradation and reliability
- Cables
- Splices and connectors
- Splitters, taps, and couplers
- Fiber characterization and measurement

Prospective authors for possible publications in this issue should submit three copies of their complete manuscripts to the Geust Editor for review by December 15, 1990.

July 1991

Visual Communications and Image Processing III

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The increase in communications of visual information over the past several decades has resulted in many new image processing and visual communications systems being put into service. The growth of this field has been rapid in various applications. With the emerging new image processing algorithms, video communication standards, computer technologies, VLSI devices, and fiber optics technologies, this growth will definitely continue and create many more valuable video services for the vast number of customers. Therefore, a third special issue of *Optical Engineering* on visual communications and image processing will be published, in July 1991. Papers in this special issue will include, but not be limited to, the following topics:

- Image communication systems and standards in telecommunications and multimedia environments
- Image compression algorithms for binary, still, and video sequencing
- Advanced television and high-definition TV (HDTV)
- Neural networks for image processing
- Image segmentation and understanding
- Pattern recognition
- Human visual models for image processing
- Image processing for medical applications
- Mathematical imaging

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