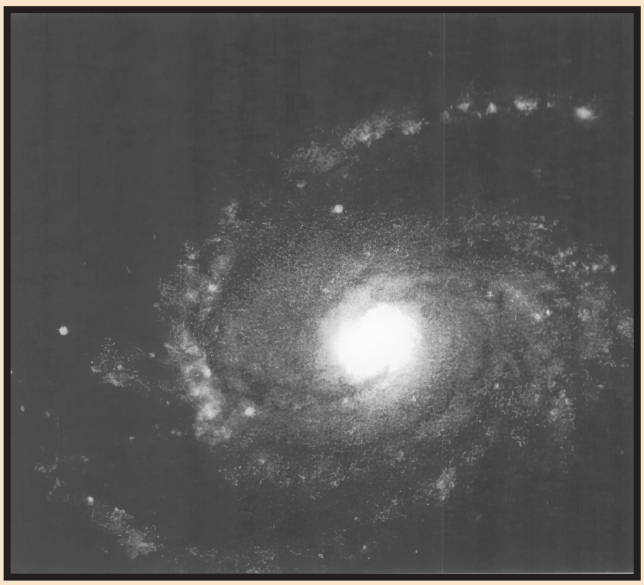
External view of the camera (Fig. 6 from *SMPTE J.*, July 2000, p. 566).



A galaxy image (Fig. 8, from *SMPTE J.*, July 2000, p. 566).

BY MICHAEL DOLAN

25 Years Ago in the Journal

The July 2000 *Journal* published in: "An Ultrahigh-Sensitivity Color HDTV Camera for Shooting Heavenly Bodies" by K. Majima, S. Sunasaki, J. Yamazaki, and T. Ando. "With the International Space Station under construction for use in the 21st century and the inauguration of Subaru, the world's largest astronomical telescope now in operation, interest in space has grown stronger. HDTV has long been considered suitable for application in astrophysical and other space science programs, but the real-time imaging of heavenly bodies requires the use of a highly sensitive high-definition (HD) camera. The essential point in developing ultrahigh-sensitivity cameras for shooting dark objects such as heavenly bodies is overcoming noise: photon noise increases with frequency." For the full article, see: https://tinyurl.com/July-2000

In this column we provide interesting historical briefs from the Journal articles of days past. The purpose of this column is primarily entertainment, but we hope it will also stimulate your thinking and reflection on the Society's history, how far we have come in the industry, and (sometimes) how some things never change.

50 Years Ago in the Journal

The July 1975 *Journal* published in: "Principles of Digital Television Simplified" by E. S. Busby, Jr. "Digital signals are being used at this time to transmit many thousands of still pictures to ground stations from ERTS (the Earth Resources Technology Satellite). In Europe, experiments are being conducted by EBU members on digital television transmission from satellites. Digital time base correction is already a reality, and digital television signal processing equipment and digital videotape recorders cannot be long in coming. With so much worldwide interest in signal digitization and reconstruction, the engineer who wants to stay up to date in the television field must understand the principles of digitization and have some sense of the probable impact of digitization on the television industry. The purpose of this paper is to discuss digitization principles in such a way that electronics and television engineers will gain a clear if not rigorous understanding that will enable them to more thoroughly profit from future digital television papers." For the full article, see: https://tinyurl.com/July-1975

75 Years Ago in the Journal

The July 1950 *Journal* published in: "The Stroboscope as a Light Source for Motion Pictures" by Robert S. Carlson and Harold E. Edgerton: "Motion Picture studio lighting has been a challenging problem for electrical engineers especially since the advent of sound and color photography... First, it is in order to discuss briefly the advantages that are inherent in the stroboscopic system of illumination:

1. The flashes of light occur only while the camera shutter is open, resulting in 100% utilization of the light. A conventional camera with continuous light uses only about 50% of the light. Thus, a doubling of efficiency is possible.
2. The light-producing efficiency of Xenon-filled electronic flashtubes is higher than tungsten lamps.
3. The effective color temperature of Xenon tubes is almost the same as for daylight. Therefore, the same camera and film equipment can be used for outdoor and studio photography." For the full article, see: https://tinyurl.com/July-1950

"THE LOVE AND APPRECIATION OF COLOR IS FIRMLY INGRAINED IN THE HUMAN CONSCIOUSNESS."

100 Years Ago in the Journal

The May 1925 *Transactions* published in: "The Use of Color for the Embellishment of the Motion Picture Program" by L. M. Townsend and Lloyd A. Jones: " '*Coloring is the sunshine of art, that clothes poverty in smiles, and renders the prospect of barrenness itself agreeable, while it heightens the interest and doubles the charm of beauty.*'-*Opie*. The love and appreciation of color is firmly ingrained in the human consciousness. Our oldest written historical records show that color was appreciated and used extensively by the peoples of those early ages. Prehistoric remains dating back centuries before the existence of a written language indicate that the Cro-Magnon men, the first true men (later Paleolithic age, approximately 20,000 R.C.) decorated the walls of the caverns in which they lived with colored paintings... Every visual sensation carries with it its color content, and as stated by Hering, 'Our visual world consists essentially of differently presented colors: and objects as seen, that is visual objects are nothing but colors of different nature and form.' This fact has been recognized by many others, among them Clerk Maxwell who states, 'All vision is color vision, for it is only by observing differences in color that we distinguish form.' " For the full article, see: https://tinyurl.com/Vol-9-21-May-1925

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