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Editors' Introduction

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Celebrating the 51st Anniversary of Remote Sensing: Overcoming Limitations, Establishing Relationships, Reviewing Systems, Refining Models & Clarifying Terminology

As Satellite Remote Sensing arguably and quietly celebrates this year its 51st anniversary (1959-2010), starting the count from the earliest available archive of Corona, Lanyard & Argon data (1959-1972), launched under the auspices of President Dwight David Eisenhower, it seems appropriate to commemorate the significant progress that has been made. These events were, of course, in reaction to the Soviet Union's launch of *Sputnik 1* on October 4, 1957. The term "arguably" was injected because Corona was actually originally approved in February 1958 and, more to the point, the data were not declassified for release to the civilian scientific community until President William Jefferson Clinton made that determination by Executive Order 12951 entitled "Release of Imagery Acquired by Space-Based National Intelligence Reconnaissance Systems," on February 22, 1995. As a result of that particular satellite data, there is at least a potential distributed archive of fifty years of time series data from a succession of multiple earth observing sensors, at varying spatial, temporal, and spectral resolutions, launched by an expanding array of nations, multilateral agencies, and private corporations.

As the subtitle suggests, volume 2, no. 2 of the *Journal of Terrestrial Observation* (JTO), published by the Purdue University Press in collaboration with Berkeley ePress, attempts to address several coming-of-age issues within the field. Johannsen, in his Foreword, advocates the abolition of the traditional term "ground truthing" in favor of a more accurate characterization, "surface reference," based upon his own half century experience with agricultural in situ monitoring. Powell et al. compensate for the delimiting factors associated with the use of moderate resolution satellite data for invasive species mapping. Quansah et al. review early warning systems for a broad array of biogenic and anthropogenic events. Jensen et al. examine the relationship between land cover in urban areas and surface kinetic temperature. Continuing with the urban focus, Elaksher and Bethel offer a methodology for refining Digital Elevation Models (DEMs) in urban environments.

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