

Pipeline Processing at the Isaac Newton Group of Telescopes: Using “Live” Images for Public Outreach

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1. Introduction

The Isaac Newton Group of Telescopes is currently implementing data reduction pipelines for its imaging cameras, both in the optical and in the near-IR. For quality control purposes the quicklook pipeline generates postage stamp and full size images in jpeg format which can easily be accessed through a web interface. For spectroscopic instruments only the raw data is converted into jpeg images.

These images can be used to provide near real time images for public outreach purposes.

2. Data Flow

Data taken at the ING telescopes is processed through the quicklook pipeline (see eg. Greimel et al., ADASS X, in press) if one exists for the instrument used. The quicklook data is fed back to the observer, used for “real time” detection of transient events and for Public Relations (PR) processing.

The public data is combined with image header information, current meteorological and observing conditions, a basic description of the observing program, an all-sky camera live shot, information about the region in the sky where the telescope is currently pointing and webcams. All the information is presented in three web pages, one for every ING telescope, which can be accessed through WWW mirrors.

3. PR Processing

When using “live” images for PR purposes it is important not to violate the one year proprietary period of the data for the observer. The observer is therefore given the choice to disable dissemination of

the live images during all or part of the observing run.

To further ensure that the data published is not usable for scientific work we are currently evaluating several strategies to degrade the resulting images without visibly effecting the image quality. For example, small random distortions make astrometry on the images harder, while digital watermarking, image compression and intensity scaling degrade the photometric quality of the publicly accessible images.

4. Application

The web pages are not yet publicly available.

Web pages accessible to “trusted” clients (planetariums, museums, etc.) will not be reduced in quality. These web pages can be used for interactive displays in showrooms or waiting areas or explained in more detail in shows given by astronomers.

5. Contacts

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ING Public Information web pages:
<http://www.ing.iac.es/PR/>

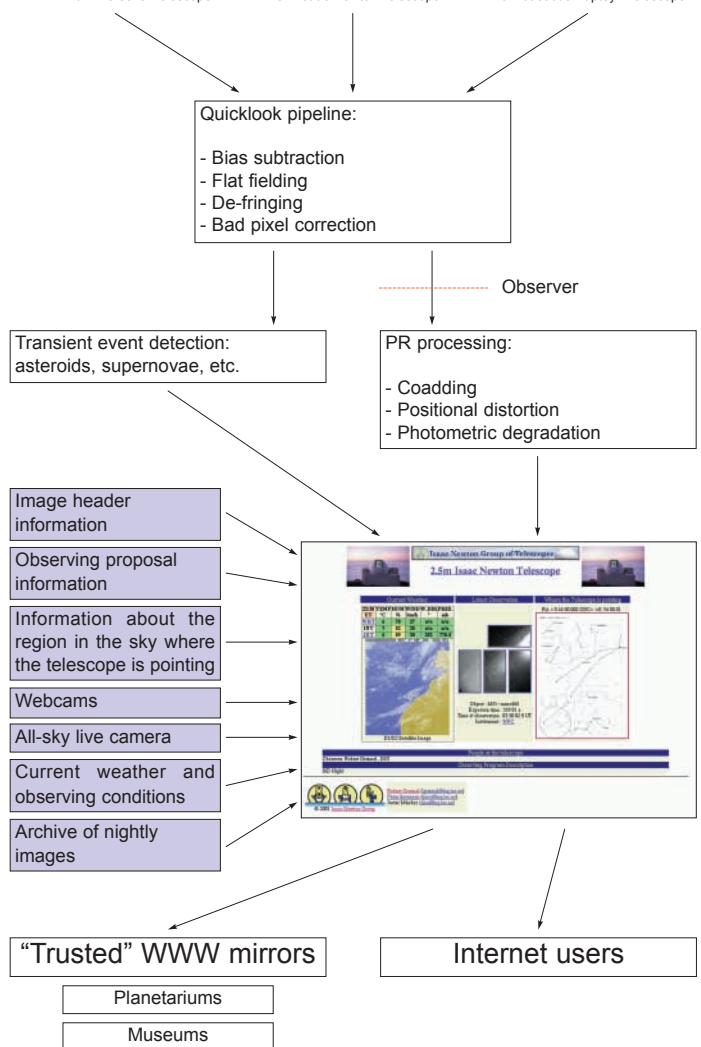
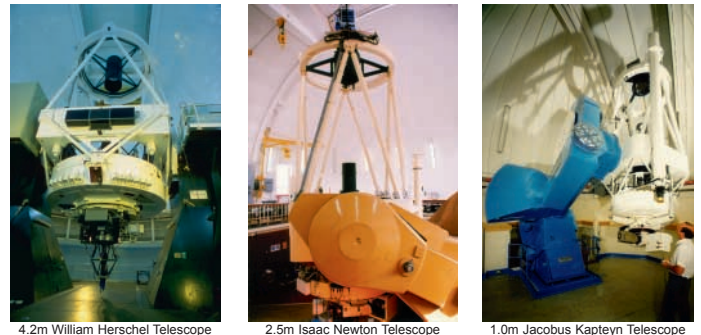


Figure 1. Sample image of M51 galaxy obtained using the Prime Focus Camera on the William Herschel Telescope. Left: B-band image processed using the quicklook pipeline and available on the public web interface as a jpeg file. Right: True-colour composition resulting from B-, V-, and R-band images as processed using the PR pipeline.

