

Instrument Reports

Mark Phillips & David Osip

Las Campanas Observatory
Observatories of the Carnegie Institution
of Washington

SAC: April 21-22, 2004
Tucson, AZ

B&C Spectrograph

Limited use...

No problems reported.

Relatively easy changeover with MIKE at Clay
NASW

Soon to be only instrument on old CCD control
system ... time to retire?

LDSS-2

To become LDSS-3... However, still need proper Facility Instrument Commissioning Report & Support Agreement.

Intermittent Problems:

- Aperture wheel failure to settle into position. (balance issue)

- Filter wheel failure to settle into position. (balance issue)

- Shutter failures.

- Failures with coordinated offsets.

- Elongated images (variable across field).

These problems all remain **unsolved** as they are usually 'fixed' for a night by a variety of hardware and software resets as well as inspection and re-connection of cables. Most problems are not then repeatable during further daytime tests or scheduled engineering periods.

MagIC

Facility Instrument Commissioning Report: TBD
Support Agreement: Draft version near final

Has seen reduced full night use, but increased partial night use.

Problems:

- Shutter timing - 3.5 second delay.

- LOIS dropped frame(s) or crashes (infrequent - rare)

- LOIS abort problems and inability to abort script.

- Quad amp mode crosstalk.

- Low level herringbone pattern noise still present.

- Binning does not work properly.

Upgrade Plan: (scheduled 29 May - 04 June)

New LOIS system should be even more robust and should treat the abort problems. Single amplifier mode?...Binning?

MIKE

Facility Instrument Commissioning Report: TBD

Support Agreement: TBD

Operated exclusively at Clay. (certainly a benefit for site staff)

Problems:

- Exposure time resets during exposure.

- CCD temperature check failure and lost frames.

NOTE: since upgrade to single fiber communication system and corresponding DSP upgrades, exposure problems and lost frames are virtually non-existent (we have one recorded case in several thousand frames).

MIKE Blue CCD failure - Traced to bad capacitor on pre-amplifier board in the dewar - fixed.

MIKE

Requests:

Encoder on slit positioning for MIKE!

List of grating angles and max/min orders achieved.

Remote operation to switch lamps.

Upgrade Plans:

Single Fiber communications - done.

New MIKE Blue CCD...

New dichroic...

PANIC

Facility Instrument Commissioning Report: TBD

Support Agreement: TBD

Problems:

Intermittent noise in one quadrant ... went on for about a month without repeating for daytime tests ... traced to bad ADC board which was then replaced.

Filter wheel detent failures ... seems to be restricted to a problem at startup of the system or after power cycle ... working solution is to adjust the filter into a detent (via a series of commanded offsets or by manual adjustment) and command to another position.

Documented instrument zero points appear overly optimistic.

Instrument Data Analysis

Observers have noted the need (desire) for reduction software ...
where is the responsibility?

-most commonly requested for MIKE and IMACS

Quote from observing report: *“As of right now, we really do not know how we can begin to consider reducing the spectral data”*

What tools need to be available on site?

How are these tools to be supported?

What does the SAC see as the role of observatory staff or instrument teams?

General Observer Requests

Better Chairs in control rooms (this is a real health issue)

Music (mp3) server, and/or working CD player

Better explanation of rotator offset angles and modes.

Observer Workstations:

- Optical Mice

- Cross mounted drives

- Larger Hard Drives

- Less memory intensive applications running by default

- 24 bit display

- fewer crashes

- IDL, SuperMongo, PIRAF

Not necessarily observer workstation:

- DVD/CD burning capability

- Hot swappable portable hard drives

