

Magellan SAC Minutes, September 30, 2004 and October 1, 2004.

recorded by Daniel Fabricant

September 30, 2004

Alan Uomoto led off with the technical manager's report. Alan reported that the Magellan telescopes were operating with high efficiency, but that understaffing is delaying upgrades, finishing some telescope assemblies, and leading to deferred maintenance. He noted that some observers fail to comply with deadlines for supplying observing information to Magellan staff, adding to the burden. Wendy Freedman asked for a contact at each institution who could contact delinquent observers.

Alan noted that open positions for a sixth telescope operator and mechanical assistant had been filled, but that the telescope engineer position was still open.

On key systems, Alan reported that software to control the Baade ADC was stalled at present. The $f/5$ secondary is scheduled to begin polishing in late 2004 and to be finished in late 2005. The rotators on both telescopes have received replacement servo amplifiers. Funded upgrades to the guiders are scheduled to begin later this year. The iodine cell for the MIKE spectrograph is scheduled to be shipped in November. Concern was voiced that proper procedures to approve this work for project staff were not followed. Alan stated that he would regulate such activities in the future to assure compliance with project priorities. Other pending work includes upgrading rotator guiding software and developing a long range computing plan.

Primary mirror actuators fail on a weekly basis. The problem areas are actuator air cylinder leaks and control cards. The air leaks are being steadily sealed and a control card replacement is under design. Another recent major issue was failure of the Clay drive bearing due to insufficient lubrication.

IMACS commissioning occupies a good deal of staff time, and the appropriate division of labor between telescope and instrument teams was discussed. The possibility of more support from the instrument team in the short term was discussed.

Mark Phillips presented the report from Las Campanas. Mark reported that the currently two shifts of three telescope operators are supporting observations. The third telescope operator works on an earlier shift to assist with instrument set-up and operations and during night lunch breaks. Recent on-site activities included mirror washing, collimation of Baade, and optical alignment with IMACS. Las Campanas staff assisted with MIKE fiber commissioning and supported a visit from CfA staff to prepare for $f/5$ commissioning.

Mark reported the instrument usage at Baade and Clay:

Baade		Clay	
IMACS	71%	MIKE	60%
PANIC	29%	MAGIC	16%
		B&C	19%
		LDSS-2	4%

Mark predicted that LDSS-3 would absorb about 23% of the time after it was completed and the B&C spectrograph was retired.

Mark reported the observing statistics:

Open and working	70%
Weather losses	27%
Losses from telescope/instruments/computers	3%

The main non-weather losses are due to primary mirror supports, guider air cylinders and the instrument rotators.

Current software projects include: control of the Baade ADC, rotator guiding, Clay M3 tip-tilt, non-sidereal guide-probe tracking, and control of the moon roof and windscreens.

Miguel Roth described plans for construction in La Serena due to start in June 2005. The object is to separate administrative and astronomical activities. He reported that rooms at LCO are very tight, and that it was important to try to keep the number of observers to two per Magellan telescope. He asked observers to read and follow posted observer instructions, and to help arrange 1 hour telescope operator breaks if a third operator is not present.

Two paramedics are now on the staff, and an ambulance is available. No serious staff or visitor injuries have occurred since the last SAC meeting.

Alan Uomoto discussed staffing needs at LCO. Operations are generally smooth but a good deal of deferred maintenance and upgrades are the result of an overworked staff. It typically takes three FTE to staff each function full time. Alan stated that the highest priorities for new staff are: a second instrument scientist, two additional instrument specialists, another telescope engineer and more networking help.

Alan discussed the large number of planned new instruments and the demands that commissioning places on the LCO staff.

Instrument Priorities. An informal survey of the Magellan user communities at consortium institutions was conducted to assess the importance placed on the availability of various instruments. A weight of 2 was applied to “high priority”, 1 to “medium priority”, and 0 to “low priority”. The weighted averages are summarized in the following table.

Instrument	Priority
IMACS f/2	1.43
LDSS-2	1.29
FourStar IR Imager	1.19
PANIC	1.19
MIKE	1.14
IMACS f/4	1.10
IR echellette	0.95
IMACS GISMO (image slicer)	0.90
Megacam	0.81
f/11 AO Secondary	0.81
IMACS MMTF (tunable filter)	0.76
MMIRS	0.71
MagE	0.62
MIRAC/AO	0.57
IMACS echellette	0.52
MAGIC	0.48
B&C Spectrograph	0.48
MIKE fibers	0.33
MIRAC/natural seeing	0.14

Instrument Reports. Kevin Luhman reported on plans to use CorMASS, a low dispersion IR spectrograph, at Magellan. Rob Simcoe spoke about FIRE, a planned IR echellette instrument. Andy Szentgyorgyi reported on the progress with the f/5 wide field corrector. Brian McLeod spoke about the f/5 instruments, MMIRS and Megacam. Alex Athey gave a brief report on GLAO tests at Magellan.

October 1, 2005

The next SAC meeting was scheduled for April 2005.

Frank Perez reported on cleaning and recoating the primary mirrors. The coating facility produces excellent coatings with 91% reflectivity in the blue/green, but could be converted to a sputtering facility if desired. Currently the primaries are CO₂ cleaned every two weeks.

Scott Burles reported on MagE, an optical echellette spectrograph under development that will operate at R=4500 with a 1" slit. Chris Stubbs spoke about a proposed multi-band optical imager named PISCO. John Mulcahey reported on the development of LDSS-3 (now delivered). Alan Dressler reported on the status of IMACS and plans for advanced operating modes (tunable filter, image slicing, echellette mode, etc.) Alan reported that IMACS in f/2 mode can reach I~23.5 in 4 hours of integration.

The SAC issued an endorsement “the Magellan SAC is enthusiastic about the scientific potential of FIRE and encourage its development”.

Alan Uomoto discussed how the Magellan staff might cope until additional staff are hired by limiting instrument changes and the level of user support. Currently 5 to 10 instrument changes are made each month. Alan suggested limiting the number of visitor instruments to two per semester.

Hsiao-wen Chen spoke about a program to follow up SWIFT GRB afterglows. A message will be sent to Magellan observers encouraging observations.

Currently intervention observing on Baade can be accomplished with about 10 minutes of changeover intervention in each direction.

The group discussed the facility instrument policy, led by **Alan Uomoto**. The council asked the SAC to report on the compliance of current instruments to the policy. The SAC agreed to develop a report on MIKE and IMACS compliance. User instruments do not count towards fulfilling the instrument contribution. The facility instrument qualification process is led by the Magellan Technical manager, and involves a joint report to the SAC, a commissioning plan, and a support agreement.

The SAC approved the following motion:

“The SAC commends the Magellan staff for its efforts to cope with the present deficit of personnel. Some of these changes offer considerable economy with little scientific penalty. However, the SAC believes that others will harm science at Magellan. Therefore, we urge that the Council find the resources over the next two years to implement the full staffing plan (04PM0006) that Alan Uomoto has put forward.”