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Abstract: This document presents the Annual Observing Report for 2020, prepared by the LBT Italia team on behalf of the Istituto Nazionale di Astrofisica (INAF). The report offers a detailed and comprehensive overview of the queue observing activities carried out at the Large Binocular Telescope (LBT) during the specified period. In accordance with the astronomical observing cycle, the timeframe considered includes the final phase of the 2019–2020 observing period as well as the initial observing sessions of the subsequent period. The report documents the use of the available focal plane instruments, including MODS1 and MODS2, PEPsi, LUCI1 and LUCI2, LBC Blue and Red. For each observing night, information on the completed scientific programs was recorded, providing key metrics such as effective observing time and the fraction of time lost due to technical issues or unfavorable weather conditions. This analysis is fundamental for assessing the overall efficiency of telescope operations within the INAF community.

INAF queue observing, 2020 Jan 27 - Jan 28

Observers: A. Rossi, S. Paiano
Telescope Operator: S. Allanson
Support Astronomer: D. Thompson
Instrument: LUCI-1 & LUCI-2

Summary

During the afternoon, around 24:00UT the weather is windy. The support astronomer said us that the telescopes need ventilation to stabilize the temperature of the mirrors.

At 0:45UT, we are opening the dome! The weather is a little bit cloudy and the humidity is increasing (~72%).

Night duration (12 degree - twilight) 1:30 - 07:30 UT = **06 h 00m** = 21600 seconds

Observing time: **05h 00min (83.3%)**

Weather time loss: **45min (12.5%)**

technical time loss **15min (4.2%)**

Data Summary

Project_R UN	Objects	Instrume nt	Configuratio n	ExpTim e /Time_t ot	Images	Notes
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Calibrations	Darks	LUCI1-2	5 NDIT x 3.0 DIT , LIR/INT	for different programs
Calibrations	Darks	LUCI1-2	6 NDIT x 5.0 DIT , LIR/INT	for different programs
Calibrations	Darks	LUCI1-2	1 NDIT x 200 DIT , MER/NORM	for different programs
Calibrations	Darks	LUCI1-2	1 NDIT x 300 DIT , MER/NORM	for different programs
Calibrations	Darks	LUCI1-2	2 NDIT x 30.0 DIT , LIR/INT Lamps OFF	for different programs
Calibrations	Darks	LUCI1-2	2 NDIT x 30.0 DIT , LIR/INT Lamps ON (spec flat)	for different programs
Calibrations	Darks	LUCI1-2	1 NDIT x 20.0 DIT , LIR/NORM Argon Arc	for different programs
Calibrations	Darks	LUCI1-2	1 NDIT x 60.0 DIT , LIR/NORM	for different programs
Calibrations	Flat & Arcs	LUCI1-2	LS-K210 2.24 0.25"	Teresa Giannini
Calibrations	Flat & Arcs	LUCI1-2	Mask-Gargiulo oVAN003	Adriana Gargiulo
Calibrations	Flat & Arcs	LUCI1-2	Mask-Gargiulo oVAN001	Adriana Gargiulo
Calibrations	Flat & Arcs	LUCI1-2	LS-zj200 1.17 1.00"	Andrea Rossi

Calibrations	Bias	MODS1-2	Bias8k				for different programs
Calibrations	Bias	MODS1-2	Bias3k				for different programs
Calibrations	Flat & Arcs	LUCI1-2	LS-hk200 1.93 1.00"				Andrea Rossi - taken during the morning
Calibrations	Flats	MODS1-2	Slit 1.2" - Dual grating				for different programs
Calibrations	Arcs	MODS1-2	Slit 1.2" - Dual grating				for different programs
Calibrations	Flats	MODS1-2	Slitless				for different programs
Telluric	HIP10185	LUCI1-2	zj200			luci1.20200128.0078-0080 / luci2.20200128.0068-0071	for Gargiulo
Telluric	HIP20379	LUCI1-2	zj200 1.00"	-		luci1.20200128.00 / luci2.20200128.00	for Andrea Rossi
Rossi	SN2018ibb	LUCI2	zj200 1.00"	3600 sec		luci2.202001280087-0104	completed
Rossi	SN2018ibb	LUCI2	hk200 1.00"	3600 sec		luci2.20200128.0105-0118	completed
Telluric	HD52266	LUCI2	LS-K210 2.24 0.25"	-		luci2.20200128.0123-0126	for Giannini - LUCI1

						is unavaila ble
Giannini	V960-mo n	LUCI2	LS-K210 2.24 0.25"	1800 sec	luci2.20200128.0 131-	complet ed
Telluric	HD5226 6	LUCI2	LS-K210 2.24 0.25"	-	luci2.20200128.0 165-0168	for Giannini - LUCI1 is unavaila ble

INAF queue observing, 2020 Jan 28 - Jan 29

Observers: A. Rossi, S. Paiano

Telescope Operator: S. Allanson

Support Astronomer: D. Thompson

Instrument: MODS1-2

At sunset the sky is clear Perfect night!

Summary

Night duration (12 degree - twilight) 1:30 - 13:30 UT = **12h 00m** = 43200 seconds

Observing time: **11h 15min (93%)**

Weather time loss **20min (2%)** 1200sec

Technical time loss: **35min (5%)** 2100sec

Data Summary

Project _RUN	Objects	Instru ment	Configur ation	ExpTi me /Time _tot	Images	Notes
Calibrati ons		MODS 1-2	5as dual grating			for STD dual
Calibrati ons		MODS 1-2	arcs redgratin g			for Belladi tta
Calibrati ons		MODS 1-2	slitflat 1.2" redgratin g			for Belladi tta
Calibrati ons		MODS 1-2	ugri flat ima			for Rossi, z was

						not completed
STD	GD71	MODS 1-2	dual and red grating		mods1r.0031-0034,mods1b.0019-20 mods2r.0033-36,mods2b.0019-20	for Rossi, z was not completed
Mannucci	J0415	MODS 1-2	dual grating, 0.6"	0.5/0.84	mods1r.0028,39,54 mods1b.0018,21,26 mods2r.0029,41,54 mods2b.0018,21,26	3 pointings
Rossi	Sn2018ib	MODS 1-2	dual grating, 1.2"	1/3h	mods1r.0043-0044,mods1b.0022-23 mods2r.0046-47,mods2b.0022-23	completed
Rossi	Sn2018ib	MODS 1-2	ugri+ugrz imaging	0.2h	mods1r.0045-0046,mods1b.0024-25 mods2r.0024-25,mods2b.0048-50	completed
Wolter	NGC2276 S6/3-c	MODS 1-2	dual grating	2h	mods1r.0056-61,mods1b.0027-32 mods2r.0060-65,mods2b.0027-32	for A.Wolter CHECK
Wolter	NGC2276 S6/3-c	MODS 1-2	g+r imaging	240 sec	mods1r.0062-,mods1b.0033- mods2r.0066-,mods2b.0033-	for A.Wolter CHECK
Paiano	4FGLJ09 55+35	MODS 1-2	dual grating 1.2"	3h	mods1r.0083-89,mods1b.0043-49- mods2r.0087-93,mods2b.0044-50	
Paiano	GD153	MODS 1-2	dual grating 5"		mods1r.0092-94,mods1b.0050-52- mods2r.0097-99,mods2b.0051-53	SDT for Paiano DDT
Paiano	GD153	MODS 1-2	dual grating 1.2"		mods1r.0095-97,mods1b.0053-55-	SDT for

					mods2r.0100-102,mods2b.0054-56	Paiano DDT
Paiano	4FGLJ09 55+35	MODS 1-2	dual grating 1.2"	0.6h	mods1r.0104-105 ,mods1b.0056-0057- mods2r.0108-0109- ,mods2 b.0057-0058	compl eted

INAF queue observing, 2020 Jan 29 - Jan 30

Observers: A. Rossi, S. Paiano & Telescope Operator: S. Allanson & Support Astronomer: D. Thompson & Instrument: MODS1-2

At sunset the sky is partly cloudy but it is clearing up

Summary

Night duration (12 degree - twilight) 1:30 - 13:30 UT = **12h 00m** = 43200 seconds

Observing time: **10h 50min (90%)**

Weather time loss **45min (6%)** sec

Technical time loss: **25min (4%)** sec

Data Summary

Project_ RUN	Object s	Instru ment	Configur ation	ExpTime /Time_tot	Images	Notes
Calibrati ons	slit flats	MODS 1-2	dual, slit 1"			for Wolter
Calibrati ons	flats	MODS 1-2	dual grating, z			imagin g z flats
Calibrati ons	slit flats	MODS 1-2	red, slit 5"			STD Belladitta
standard	G191	MODS 1-2	dual, slit 5",		mods1r.0019-0020,mod s1b.0015-16 mods2r.0019-20,mods2 b.0016-17	STD for Paiano
standard	G191	MODS 1-2	dual, slit 1.2"		mods1r.0021-0022,mod s1b.0017-18 mods2r.0021-22,mods2 b.0018-19	STD for Paiano
Mannucci	J0415+ 16	MODS 1-2	dual, 0.6"		mods1r.0026,36, ,mods1b.0019,22 mods2r.0026,36 ,mods2b.0020,23	compl eted

RossiDD T	SN2018 ibb	MODS 1-2	dual, 1.2"	1h/3h	mods1r.0030-31,mods1 b.0020-21 mods2r.0030-31,mods2 b.0021-22	comple ted
Belladitta	PS0J09 44	MODS 1-2	red, 1.2"	2.8/2.6h	mods1r.0040-0046, mods2r.0040-0045	comple ted
Antoniuci	IRAS06 +10	MODS 1-2	dual, slit 0.8"	0.6/0.3h	mods1r.0053-56,mods1 b.0023-26 mods2r.0052-5,mods2b .0024-27	comple ted
Schmidt	J1149+ 2813	LBC red	r i z	/1.75,0.75 ,0.25		LBCr only

INAF queue observing, 2020 Jan 30 - Jan 31

Observers: A. Rossi, S. Paiano & Telescope Operator: S. Allanson & Support Astronomer: D. Thompson & Instrument: MODS1-2

At sunset the sky is partly cloudy but it is clearing up There is a little bit of moon, so the sky is brighter.

MODS: both ok

LBC:

- Thanks to the great work of LBTO now LBC blue is available again, although is just following the guiding of LBCred.

LUCI:

- LUCI1: not available all week
- LUCI2: not mounted due to AGW upgrade for SOUL

Temperature = -6 Humidity = 30 Wind =

Summary

Night duration (12 degree - twilight) 1:30 - 13:30 UT = **12h 00m** = 43200 seconds

Observing time: **h min (97%)**

Weather time loss **20min (3%)** sec

Technical time loss: **0min (0%)** sec

Data Summary

Project_RUN	Objects	Instrum ent	Configura tion	ExpTi me /Time_ tot	Images	Notes
Antoniucci	V118Ori	MODS1 -2	dual, slit 0.8"	40.6/0. 3h	= mods1b.03- 06	passing clouds completed

						,mods1r.09-12 mods2b.03-06, mods2r.06-09 =	
Antoniucci	AGLL32 2	MODS1 -2	dual, slit 0.8"	40.6/0. 3h	=	mods1b.0007-0010 ,mods1r.0017-0020 mods2b.0007-0010, mods2r.0014-0017 =	passing clouds completed
Antoniucci	2MASS J06	MODS1 -2	dual, slit 0.8"	40.6/0. 3h	=	mods1b.0011-0014 ,mods1r.002528- mods2b.0011-14, mods2r.0021-0024 =	passing clouds completed
Giunta/DDT_BAC KUP_1	fieldG	LBCr,LB Cb	g,r	2h			seeing variable 1.3-2.5
Mannucci	J1045	MODS1 -2	dual, 0.6"				3 times
Mannucci	J1115	MODS1 -2	dual, 0.6"				1 time
Mannucci	J1306	MODS1 -2	dual, 0.6"				3 times
Calibration	flat	MODS1 -2	red slitless				per Belladitta

INAF queue observing, 2020 Jan 31 - Feb 01

Observers: A. Rossi, S. Paiano & Telescope Operator: S. Allanson & Support Astronomer: D. Thompson & Instrument: MODS1-2

At sunset the sky is partly cloudy and windy

MODS: both ok

LBC:

- LBC Red ok; LBC blue is available although is just following the guiding of LBCred.

LUCI:

- LUCI1: not available all week
- LUCI2: not mounted

Temperature = -1 Humidity = 15 Wind guts >15

Summary

Night duration (12 degree - twilight) 1:30 - 13:30 UT = **12h 00m** = 43200 seconds

Observing time: **12h min (100%)**

Weather time loss **min (0%)** sec

Technical time loss: **min (0%)** sec

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Calibration	flat	MODS1-2	dual slitflat 0.6"			per Mannucci
Calibration	flat	MODS1-2	dual slitflat 0.8"			per Antoniucci - to check the quality of the frames
Antoniucci	V1118Ori	MODS1 -2	dual grating 0.8"	20 mins	mods1b.0022-2 5 ,mods1r.0026- 29 - mods2b.0022-2 5, mods2r.0026-2 9	completed
Antoniucci	AGLL192	MODS1 -2	dual grating 0.8"	20 mins	mods1b.0026-2 9 ,mods1r.0033- 36 - mods2b.0026-2 9, mods2r.0034-3 7	completed

Antoniucci	AGLL96	MODS1 -2	dual grating 0.8"	20 mins	mods1b.0030-3 3 ,mods1r.0040- 43 - mods2b.0030-3 3, mods2r.0041-4 4	completed
Antoniucci	AGLL129	MODS1 -2	dual grating 0.8"	20 mins	mods1b.0034-3 7 ,mods1r.0049- 52 - mods2b.0034-3 7, mods2r.0049-5 2	completed
Mannucci	J104524+414 4	MODS1 -2	dual grating 0.6"		mods1b.0038-3 9 43-44 ,mods1r.0056- 57 66-67 - mods2b.0038-3 9 43-44, mods2r.0056-5 7 68-69	completed
STD	GD191	MODS1 -2	dual grating 5"		mods1b.0040-4 2 ,mods1r.0060- 62 - mods2b.0040-4 2, mods2r.0062-6 4	
Antoniucci	FuOri	MODS1 -2	dual grating 0.8"	16 mins	mods1b.0045-4 8, mods1r.0071-7 4 - mods2b.0045-4 8, mods2r.0073-7 6	completed
Mannucci	J111501-1242	MODS1 -2	dual grating 0.6"			completed

Mannucci	J130646+152 2	MODS1 -2	dual grating 0.6"	completed
Mannucci	J151338+573 9	MODS1 -2	dual grating 0.6"	4 times completed

INAF queue observing, 2020 Feb 01 - Feb 02

Observers: A. Rossi, S. Paiano
 Telescope Operator: S. Allanson
 Support Astronomer: B. Rothberg
 Instrument: LUCI2

At sunset the sky is clear

MODS: both ok

LBC:

- LBC Red ok; LBC blue is available although is just following the guiding of LBCred.

LUCI:

- LUCI1: not available all week
- LUCI2: test of AGW at beginning of the night

Temperature = 5 Humidity = 20 Wind guts >5

Summary

Night duration (12 degree - twilight) 1:30 - 13:30 UT = **12h 00m** = 43200 seconds

Observing time: **h min (90.3%)** time given to LBTO for test of AGW: 30 min, all before 12 degree

Weather time loss **min (0%)** sec

Technical time loss: **70min (9.7%)** sec

Data Summary

Project_R UN	Objects	Instrum ent	Configuratio n	ExpTim e /Time_t ot	Images	Notes
Calibration	flat, arcs	LUCI2	zJ200 1.0" lambda=1.17		luci2.20200202.005 1-0046	per Nardini
Calibration	flat arcs	LUCI2	K210 0.25" lambda=2.24		luci2.20200202.004 7-0062	per Giannini
Gargiulo	UDS_34 48 / VAN003	LUCI2	zJ200 mask VAN003	1.3h	luci2.20200201. 0067-78	seeing >1.1 in last 4 exposur es

Telluric	HIP1762 3	LUCI2	zJ200 mask VAN003		luci2.20200201. 0086-89	per Gargiulo
Rossi	SN2018i bb	LUCI2	JHK imaging	0.3h	luci2.20200201. 0099-122	comple ted
Giannini	V900Mo n	LUCI2	K210 0.25" lambda=2.24	0.5/0.5h	luci2.20200201. 0127-156	comple ted
Telluric	HD5226 6	LUCI2	K210 0.25" lambda=2.24		luci2.20200201. 0161-164	per Giannini
Giannini	ZCma	LUCI2	K210 0.25" lambda=2.24	0.5/0.5h	luci2.20200201. 0181-0210	comple ted
Telluric	HD5226 6	LUCI2	K210 0.25" lambda=2.24		luci2.20200201. 0	again
Nardini	SDSSJ0 900	LUCI2	zJ200 1.0"	0.13/0.1 3h	luci2.20200201. 0223-0226	comple ted
Telluric	HIP5284 9	LUCI2	zJ200 1.0"		luci2.20200201.0230-023 3	
Nardini	SDSSJ0 901	LUCI2	zJ200 1.0"	0.33/0.3 3h	luci2.20200201. 02-02	comple ted
Annibali	UGC513 9	LBC	g+r		2/2h	comple ted
Nonino	EGS	LBC	SDT_U+F972 N20	2h/24		primi 2 OB
Schmidt	J1149+2 8	LBC	r+r	500s+5 00s		
CALIBRAT ION	DARK	LUCI2				Gargiulo , Giannini

INAF queue observing, 2020 Feb 02 - Feb 03

Observers: A. Rossi, S. Paiano

Telescope Operator: S. Allanson

Support Astronomer: B. Rothberg

Instrument: LUCI when LBTI has finished

At sunset the sky is mostly clear but windy

MODS: both ok

LBC:

- LBC Red ok; LBC blue is available although is just following the guiding of LBCred.

LUCI:

- LUCI1: not available all week
- LUCI2: ok

Temperature = 0 Humidity = 40 Wind gusts >15

Summary

Night duration (12 degree - twilight) 4:30 - 13:30 UT = **9h 00m**

Observing time: **1h 50min (20%)**

Weather time loss **7h 0min (78%)** sec

Technical time loss: **10min (2%)** sec

Data Summary

Project_R UN	Object s	Instrum ent	Configurati on	ExpTim e /Time_t ot	Images	Notes
DDT Mesa		LBTI				
Telluric	HIP395 40	LUCI2	zJ200 1"		luci2.20200203.0 404-0407	for Nardini
Nardini	J0905	LUCI2	zJ200 1"		luci2.20200203.0 412-0423	complet ed
Telluric	HIP528 49	LUCI2	zJ200 1"		luci2.20200203.0 429-04	for Nardini

-- [FeliceCusano](#) - 23 May 2020

*In order to limit the number of social interactions, slow the rate of transmission, and protect our local and partner communities in response to the COVID-19 pandemic

LBTO has shut down its observatory on top of Mount Graham. The last scheduled observing night was Tuesday night, March 17, 2020.*

INAF queue observing, 2020 Jun 22 - Jun 23

Observer: B. Rothberg

Telescope Operator: D. Gonzales-Huerta

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LUCI2

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel through the indications of LBT Italian observer (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m** Night shared with SOUL commissioning, INAF has **3h 45 min**

Observing time: **2h 39min (70%)**

Weather time loss: **h min (0%)**

technical time loss **1h 6min (30%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Nardini	HIP 61138	LUCI2	G200+zJ		L2 0010-0012	telluric for J1246+26
Nardini	J1246+26	LUCI2	G200+zJ	0.33h/0.33h	L2 0018 - 0025	completed
Nardini	J1246+113	LUCI2	G200+zJ	0.67h/0.67h	L2 0030-0045	completed
Nardini	HIP 71172	LUCI2	G200+zJ		L2 0048-0050	telluric for J1407+6454
Nardini	J1407+6454	LUCI2	G200+zJ	0.30h/0.30h	L2 0057-0064	completed

INAF queue observing, 2020 Jun 23 - Jun 24

Observer: B. Rothberg

Telescope Operator: D. Gonzales-Huerta

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LUCI2

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel through the indications of LBT Italian observer (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset there is smoke on the summit due to the wildfire in Tucson and Phoenix.

The telescope stay closed for all the night due to dust and smoke from the fires

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**

Observing time: **0h 0min (0%)**
 Weather time loss: **7h 30min (100%)**
 technical time loss **h min (0%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Calibration	darks	LUCI2				darks for Nardini
Calibration	darks	LUCI1-2				darks for Massi
Calibration	flat	LUCI1-2	Ks, H2			darks for Massi

INAF queue observing, 2020 Jun 24 - Jun 25

Observer: B. Rothberg
 Telescope Operator: D. Gonzales-Huerta
 Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano
 Instrument: LBC, LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel through the indications of LBT Italian observer (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**

Observing time: **6 h 45 min (90%)**

Weather time loss: **h min (0%)**

technical time loss * h 45min* **(10%)**

Data Summary

Project_R UN	Objects	Instrum ent	Configuration	ExpTime /Time_tot	Imag es	Notes
Calibration	Bias	LBC-B, LBC-R				
Calibration	Sky flat	LBC-B, LBC-R	U_spec, r ; F972N20, z			
Nonino	EGS	LBC-B, LBC-R	U_Spec, F972N20	0.42h+0.42h/12h +12h		mostly seeing out of spec especial

						y for LBC-R
Rossi	GRB20066 23A	LBC-B, LBC-R	r, z	0.5h/0.5h		comple ted
Massi	FS144	LUCI-1, LUCI-2	H2			standard in H2
Massi	G011	LUCI-1, LUCI-2	H2	2h/2h		comple ted
Massi	G011	LUCI-1, LUCI-2	Ks	0.17h/0.17h		comple ted
Casasola	telluric	LUCI-2	G210+H		L2 0043- 0046	H band telluric for Casasol a
Casasola	science field	LUCI-2	G210+H	1.5h/5h	L2 0051 -0077	
calibration	flat & arc	LUCI-2	G210+H		L2 0078- 0093	for Casasol a program

INAF queue observing, 2020 Jun 25 - Jun 26

Observer: B. Rothberg

Telescope Operator: D. Gonzales-Huerta

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LBC, LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observer (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset there are some cirrus and detected smoke from the wild fires around LBT.

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**

Observing time: * 2h* * 50min* (**44%**)

Weather time loss: **3h 20min (66%)**

technical time loss * h min* (%)

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Nardini	HIP 71172	LUCI-2	G200zJ		L2 0021-0 024	telluric for SDSSJ1425
Nardini	J1425	LUCI-2	G200+zJ	0.33h/0.33h	L2 0029-0 037	completed
Nardini	J15320	LUCI-2	G200+zJ	0.25h/0.25h	L2 0043-0 050	completed
Casasola	science field	LUCI-2	imaging H	0.5h/0.5h		imaging field in H band
Casasola	telluric	LUCI-2	G210+H		L2 0069-0 072	
Casasola	science field	LUCI-2	G210+H	1.5h/5h	L2 0077-1 09	last exp in clouds, 1.5h good

INAF queue observing, 2020 Jun 26 - Jun 27

Observer: B. Rothberg

Telescope Operator: D. Gonzales-Huerta

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observer (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset there are some cirrus and detected smoke from the wild fires around LBT.

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**, Night shared with SOUL

commissioning, INAF has **3h 45 min**

Observing time: * 1h* * 20min* **(35%)**

Weather time loss: **h min (%)**

technical time loss * 2 h 15min* **(65%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
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Nardini	HIP 71172	LUCI-2	G200+zJ		L2 0006-0 009	telluric for SDSSJ1426 009
Nardini	J1426	LUCI-2	G200+zJ	0.08h/0.08h	L2 0006-0 009	completed
Nardini	HIP 65599	LUCI-2	G200+zJ		L2 0021-0 024	telluric for SDSSJ1459 024
Nardini	J1459	LUCI-2	G200+zJ	0.33h/0.33h	L2 0029-0 039	completed
Casasola	telluric	LUCI-2	G210+H		L2 0043-0 046	

INAF queue observing, 2020 Jul 07 - Jul 08

Observer: A. Cardwell

Telescope Operator: ??

Astronomers from Italy: Queue

Instrument: LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

This is 0.5 night INAF payback

through former agreement with the LBT Italian observer (F.Cusano) via e-mail.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**, night shared. INAF has **3h 45 min**

Observing time: * 3h* * 35min* **(96%)**

Weather time loss: **0h 0min (0%)**

technical time loss * 0 h 10min* **(4%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Casasola		LUCI2	H-band, MOS	2/5h	0016-0 051	
Telluric		LUCI2	H-band, MOS			for casasola, before and after

INAF queue observing, 2020 Jul 15 - Jul 16

Observer: B. Rothberg
Telescope Operator: D. Gonzales-Huerta
Astronomers from Italy: F. Cusano
Instrument: LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel through the indications of LBT Italian observer (F.Cusano) connected from Italy. At the sunset the sky is totally covered by clouds, thunderstom around the mountain. Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**, Night shared with OSU science, INAF has **3h 45 min**
Observing time: * 0h* * 0min* (**0%**)
Weather time loss: **3h 45min (100%)**
technical time loss * 0 h 0min* (**0%**)

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
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INAF queue observing, 2020 Jul 17 - Jul 18

Observer: B. Rothberg
Telescope Operator: D. Gonzales-Huerta
Astronomers from Italy: F. Cusano
Instrument: LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel through the indications of LBT Italian observer (F.Cusano) connected from Italy. At the sunset there are some cirrus, but the conditions improved during the night, with sky clear up to sun set. Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**, Night shared with LBTB science, INAF has **3h 45 min**
Observing time: * 3h* * 5min* (**82%**)
Weather time loss: **0h 0min (0%)**
technical time loss * 0 h 40min* (**18%**)

Data Summary

Project_RU N	Objects	Instrumen t	Configuratio n	ExpTime /Time_to t	Image s	Notes
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DDT_Cusano	Gaia19dke	PEPSI	2.3" fiber cd1-cd6	3h/3h	completed but some exposures during twilight
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INAF queue observing, 2020 Jul 19 - Jul 20

Observer: B. Rothberg
 Telescope Operator: D. Gonzales-Huerta
 Astronomers from Italy: F. Cusano
 Instrument: LUCI

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observer (F.Cusano) connected from Italy.

At the sunset the sky is totally covered by clouds, thunderstorm around the mountain.

Night duration (12 degree el twilight) 3:30 - 11:00 UT = **7 h 30m**, Night shared with LBTB

science, INAF has **3h 45 min**

Observing time: * 0h* * 0min* **(0%)**

Weather time loss: **3h 45min (100%)**

technical time loss * 0 h 0min* **(0%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
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INAF queue observing, 2020 Sep 06 - Sep 07

Observer: B. Rothberg
 Telescope Operator: J. Williams
 Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano
 Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observers (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset there are some clouds, after twilight the sky cleared out. At 4:35 UT the TO closed the dome for clouds and some lightning he is seeing at distance.

Opening up again at 5:30

Night duration (12 degree el twilight) 2:30 - 12:00 UT = **9 h 30m**

Observing time: **6 h 00 min (63%)**

Weather time loss: **1 h 50 min (19%)**

technical time loss **1 h 40 min (18%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_to_t	Images	Notes
Casasola	HIP87643	LUCI 1,2				telluric for Casasola
Casasola	Hband	LUCI 1,2	G210-H	1h/5h		last 4 exposures in clouds
Rossi	GRB200906A	LUCI 1,2	H, K	0.5h/1h		backup target, some clouds
Antoniucci	V350 Cep	LUCI 1,2	G200-zJspec Hkspec			backup target, some clouds
Cassara	B4	LUCI 1,2	G200-zJspec	2.22h/2h		completed 4 exps more for variable seeing
Tell_Cassara	HIP105693	LUCI 1,2	G200-zJspec			telluric B4
Tell_Gargiulo	HIP10185	LUCI 1	G200-zJspec			telluric VAN001
Gargiulo	VAN001	LUCI 1	G200-zJspec	1h/10h		

Details

detailed log by B. Rothberg at this link

<https://docs.google.com/document/d/1DkSFsJgYIICQgS6-uhc4mXAYflo9kPOlVIduX8c0aAs/edit?usp=sharing>

INAF queue observing, 2020 Sep 07 - Sep 08

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observers (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 2:30 - 12:00 UT = **9 h 30m**

Observing time: **7 h 48 min (89%)**
 Weather time loss: **1 h 10 min (7%)**
 technical time loss **0 h 32 min (3.5 %)**

Data Summary

Project_RUN	Objects	Instrumen t	Configuratio n	ExpTime /Time_to t	Image s	Notes
Casasola	HIP8764 3	LUCI 1,2	G210 H and z			telluric for Casasola
Casasola	Hband	LUCI 1,2	G210-H	1h/5h		completed
Casasola	zband	LUCI 1,2	G210-z	4h/5h		
Casasola	zband	LUCI 1,2	z	0.33h/1h		clouds - high extinction due to the clouds
Antoniucci	v1057cy g	LUCI 1,2	G200-zJspec	0.10h		backup target, some clouds
Antoniucci	AGL129	LUCI 1,2	G200-zJspec	0.0h		backup target, some clouds - done only the Telluric
Antoniucci	v350cep	LUCI 1,2	G200-zJspec			backup target, some clouds
Antoniucci	v350cep	LUCI 1,2	HKspec			backup target, some clouds
Tell_Gargiulo	HIP1018 5	LUCI 1,2	G200-zJspec			telluric VAN001
Gargiulo	UDS-344 1 - VAN001	LUCI 1,2	G200-zJspec	0.40/10h		Seeing=1.2-1.4 " and passing clouds
Tell_Antonuc ci	HIP2434 2	LUCI 1,2	G200-zJspec			telluric V1118Ori
Antoniucci	V1118Ori	LUCI 1,2	G200-zJspec			backup target, high seeing
Antoniucci	V1118Ori	LUCI 1,2	HKspec			backup target, high seeing

Details

detailed log by B. Rothberg at this link

<https://docs.google.com/document/d/1xAKWetyOqDUXIZbwKI9nCXq9terpEPVj/edit>

INAF queue observing, 2020 Sep 08 - Sep 09

Observer: B. Rothberg

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel through the indications of LBT Italian observers (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset the sky is cloudy.

Night duration (12 degree el twilight) 2:30 - 12:00 UT = **9 h 30m**

Observing time: **0 h 0 min (0 %)**

Weather time loss: **9 h 30 min (100%)**

technical time loss **0 h 0 min (0 %)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Calibrations	Darks	LUCI 1,2				for Antoniucci Gargiulo Rossi
Calibrations	flat-arcs	LUCI 1,2				flat-arcs for Antoniucci Gargiulo

Details

detailed log by B. Rothberg at this link

<https://drive.google.com/file/d/1xOXoRUCmMAmtDHkMVZH3JsP0InTToaPi/view?usp=sharing>

INAF queue observing, 2020 Sep 09 - Sep 10

Observer: B. Rothberg

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: F. Cusano, A. Rossi, S. Paiano

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel through the indications of LBT Italian observers (F.Cusano, A. Rossi, S. Paiano) connected from Italy.

At the sunset the sky is cloudy and windy with gusts above the limit of 20 m/s.

Night duration (12 degree el twilight) 2:30 - 12:00 UT = **9 h 30m**

Observing time: **0 h 0 min (0 %)**

Weather time loss: **9 h 30 min (100%)**

technical time loss **0 h 0 min (%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
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Details

detailed log by B. Rothberg at this link:

https://docs.google.com/document/d/1dx53Zarjrwgm1UQIIAO_Y0EUZZ1VhUt6L8DKWNBjMzE/edit?ts=5f59b7ae

INAF queue observing, 2020 Oct 12 - Oct 13

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: F. Cusano, S. Paiano

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observers (F.Cusano, S. Paiano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 1:50 - 12:30 UT = **10 h 40m**

Observing time: * 9 h 20 min (87%)*

Weather time loss: * 0 h 0 min (0 %)*

technical time loss * 1 h 20 min (13%)*

Data Summary

Project_R UN	Objects	Instrume nt	Configurati on	ExpTim e /Time_t ot	Image s	Notes
Polletta	dark	LUCI 1				
Gargiulo	dark	LUCI 1, 2				
Cassara	dark	LUCI 1, 2				

Polletta	PLCK_G67.1+2 2.5	LUCI 1	z - ESM	0 hrs	attempted, but not performed for the ESM-AO issue
Tell_Cassar a	HIP106817	LUCI 1, 2	G200-zJ - MOS		Telluric VIPE4
Cassara	VIPE4	LUCI 1, 2	G200-zJ - MOS	2 hrs	seeing = 0.9" - 0.75" - 1.0" , completed
Tell_Ferugli o	HIP 115428	LUCI 1, 2	G210-H - LS		Telluric - C1 , seeing = 0.9"
Feruglio	S82X_2058 - C1	LUCI 1, 2	G210-H - LS	1 hrs	seeing = 0.9" - 0.8" , completed
Gargiulo	UDS-3441 - VAN001	LUCI 1, 2	G200-zJspe c - MOS	1.5 hrs	seeing ~ 1"-0.9" , completed
Tell_Gargiul o	HIP10185	LUCI 1, 2	G200-zJspe c - MOS		Telluric VAN001
Tell_Gargiul o	HIP10185	LUCI 1, 2	G200-zJspe c - MOS		Telluric VAN003
Gargiulo	UDS_3448 - VAN003	LUCI 1, 2	G200-zJspe c - MOS	4.5 hrs	seeing ~ 0.5"-0.7" , completed
Paiano	TXS0506+056	LUCI 1, 2	J	2,5 h	preferred ESM, but not available. We did SL. seeing ~ 0.7"
Cassara	flats-arcs	LUCI1,2	G200-zJ - MO		for VIPE4
Paiano	flats	LUCI 1,2	J		for TXS
Gargiulo	flat arcs	LUCI 1,2	G200-zJspe c - MOS		for VAN001
Gargiulo	flat arcs	LUCI 1,2	G200-zJspe c - MOS		for VAN003

Feruglio	flat arcs	LUCI1,2	G210-H - LS	for S82X _2058
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Details

detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1_GoCCj5PoCIDf6kxG6v0NUOyXmVO81UC/view?usp=sharing

INAF queue observing, 2020 Oct 13 - Oct 14

Observer: A. Cardwell

Telescope Operator: Josh

Astronomers from Italy: F. Cusano, S. Paiano, A. Rossi

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observers (F.Cusano, S. Paiano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 1:50 - 12:30 UT = **10 h 40m**

Observing time: **10 h 19 min (96.7%)**

Weather time loss: * 0 h 0 min (0 %)*

technical time loss * 0h 21 min (3.3 %)*

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Cassara'	dark	LUCI 1-2				
Paiano	dark	LUCI 1-2				
Feruglio	dark	LUCI 1 -2				
Polletta	PLCK_G67.1 +22.5	LUCI 1	z - ESM	1.5 hrs		seeing = 0.6" - 0.85" - 1.3" - 0.85" good images from 64
Tell_Feruglio	HIP 115428	LUCI 1	G210-H - ESM			Telluric - A6

Feruglio	S82X_1940 - A6	LUCI 1	G210-H - ESM	0.7 hrs	luci1.0103-113	seeing=0.65", PA angle not correct and possible tilt. Probably the target was not in the slit.
Tell_Cassarà	HIP13917	LUCI 1,2	zJ200		luci1.0119-0122, luci2.0030-003	
Cassarà	VIPE1	LUCI 1,2	zJ200	0.8+0.8 hrs	luci1.0127-0140, luci2.0038.0051	We cannot see the science spectra or emission lines. Problem with the mask ?
D'Onofrio	NGC1042	LBC blue+red	g-band, r-band	1.6+1.6 hrs	hr	seeing ~1.", completed
Rossi_BAC KUP	GRB161007A	LBC blue+red	g,r on LBCblue + z LBCred	0.67+0.67 hrs		LBC imaging completed
Schmidt	J0823+3427	LBC blue+red	r-band, i-band	0.55+0.55 hrs		1 OB done
Calibration	Skyflats	LBCblue +red	r+z			note: there are good flats in both PA maybe just for z-band
Polletta	flat	LUCI 1	z-band			for PLCK_G67.1+22.5
Cassarà	flat,arcs	LUCI 1,2	zJ200			for VIPE1

Details

detailed log by A. Cardwell at this link:

https://docs.google.com/document/d/1sis_Y_biPPjm7VkoRA9gsvRfmn7sW_U-jIMI_QEYbXQ/edit?usp=sharing

INAF queue observing, 2020 Oct 14 - Oct 15

Observer: A. Cardwell
 Telescope Operator: Josh
 Astronomers from Italy: F. Cusano, S. Paiano, A. Rossi
 Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel through the indications of LBT Italian observers (A. Rossi, S. Paiano, F. Cusano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 1:50 - 12:30 UT = **10 h 40m**

Observing time: * 09 h 50 min (92 %)*

Weather time loss: * 0 h 0 min (0 %)*

technical time loss * 0 h 50 min (8 %)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Di Criscienzo	dark	LUCI 1-2				for And e Peg
Polletta	PLCK_G67.1+2 2.5	LUCI 1	z - ESM	1.2 hrs		seeing = 0.8" - 1.2"
Tell_Feruglio	HIP 115428	LUCI 1	G210-H - ESM			Telluric - A6
Feruglio	S82X _1940 - A6	LUCI 1	G210-H - ESM	1.3 hrs	luci1.01 03-113	seeing=1 .5" during the first and last exposure s, ~1" in between
Tell_Antonucci	HIP16652	LUCI 1-2	G200-zJspe c			Telluric
Antonucci	AGLL129	LUCI 1-2	G200-zJspe c	1.0 hrs		seeing = 1.2" -1.1" (DIMM), ~ 0.75" (guiders).

Tell_Antonucci	HIP16652	LUCI 1-2	G200-HKsp ec		Telluric
Antoniucci	AGLL129	LUCI 1-2	G200-HKsp ec	0.8 hrs	seeing = 1.2" -1.1" (DIMM), ~ 0.75" (guiders).
Di Crescenzio	AndVII	LUCI 1 -2	Ks	0.6hrs	seeing = 1.45"
Di Crescenzio	AndVII	LUCI 1 -2	J	0.13hrs	seeing = 1.1" - 1.4"
Rossi_BACKU P_2	GRB161007A	MODS 1-2 - LS	dualgrating, slit 1"	3hrs	seeing ~1"

NOTES:

Feruglio run

We tried to put the target in the slit. According to our check, the target should be inside the slit. This time the PA was correct. Unfortunately the seeing is very variable, spanning from 1.1" to 2.0" (but the most of time it is ~1.5"). This causes a loss of flux because the used slit is 0.5". In the frames we cannot see the spectrum of the target, also after the sky subtraction. Around 04.55UT we had an improvement of the seeing and now we can see the spectrum of the target (after the sky subtraction). At 05:50, suddenly the seeing increased >1.5" and then it started again to decrease slowly.

Details

detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1ppoaVixTCpiBXdE0Pp9Bq8KNCgWd_9E/view?usp=sharing

INAF queue observing, 2020 Oct 15 - Oct 16

Observer: A. Cardwell

Telescope Operator: Josh

Astronomers from Italy: F. Cusano, S. Paiano, A. Rossi

Instrument: MODS-BINO and LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel through the indications of LBT Italian observers (A.Rossi, S.Paiano and F. Cusano) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree el twilight) 1:50 - 12:30 UT = **10 h 40m**

Observing time: * 9 h 55 min (93 %)*

Weather time loss: * 0 h 0 min (0 %)*

technical time loss * 0h 45 min (7 %)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Rossi	GRB 200826A	MODS 1-2		1.3 hrs		seeing ~ 0.9"
Tell_Feruglio	HIP 115428	LUCI 1	G210-H - ESM - slit=0.5"			Telluric - A6
Feruglio	S82X_1940 - A6	LUCI 1	G210-H - ESM - slit=0.5"	4hrs		seeing ~0.9"
Tell_Feruglio	HIP 17946	LUCI 1	G210-H - ESM - slit=0.5"			Telluric - A6
Tell_Cassarà	HIP13917 - VIPF1	LUCI 1,2	zJ200			Telluric = VIPF1
Cassarà	VIPF1	LUCI 1,2	zJ200	hrs		seeing = 1.1"
Schmidt	J0823+3427	LBC blue+red	r-band, i-band	hrs		seeing = 1"

Details

Detailed log by A. Cardwell at this link:

<https://drive.google.com/file/d/1RP33wfOepNZHwXp2-iPEHyAgsmXcuxM-/view?usp=sharing>

INAF queue observing, 2020 Nov 07 - Nov 08

Observer: D. Thompson

Telescope Operator: Josh Williams

Astronomers from Italy: F. Cusano

Instrument: PEPSI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observers (F. Cusano) connected from Italy.

At the sunset the sky is completely covered by clouds and it is raining, also very high wind, with gusts up to 45 m/s.

We stay closed all night

Night duration (12 degree el twilight) 1:30 - 12:30 UT = **11 h 00m**

Observing time: * 0 h 0 min (0 %)*

Weather time loss: **11 h 0 min (100 %)**

technical time loss * 0h 0 min (%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Feruglio	dark	LUCI 1-2			LUCI1-0002 0011 , LUCI2-0002 0011	for XN44
Cassara	dark	LUCI 1-2			LUCI1-0012 0021, LUCI2-0012 0021	for mask F1
Massi	dark	LUCI 1-2			LUCI1-0022 0031, LUCI2-0022 0031	for G183.72
Saxena	dark	LUCI 1-2			LUCI1-0032 0041, LUCI2-0032 0041	for mask
Cassara	dark	LUCI 1-2			LUCI1-0042 0046, LUCI2-0042 0046	for mask D1
Casasola	flat & arc	MODS 1-2	red grating			
Rossi_18	flat	MODS 1-2	dual grating			slit 1.2"
Massi	flat	LUCI 1-2	H2, Ks		LUCI1-0047 0066, LUCI2-0047 0066	for G183.72

Cassara	flat & arc	LUCI 1-2	G200 + zjSpec	LUCI1-00 67 0084, LUCI2-00 67 0084	for mask F1
Feruglio	flat & arc	LUCI 1	G210 H	LUCI1- 0085-010 2	for XN44, slit 1"

Details

detailed log by D. Thompson at this link

<https://drive.google.com/file/d/1LRjDDYmlgHrhmr2ipkAOlyCdXHSAjEe/view?usp=sharing>

INAF queue observing, 2020 Nov 08 - Nov 09

Observer: D. Thompson

Telescope Operator: Josh Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: PEPSI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observers (A. Rossi, F. Cusano) connected from Italy.

At the sunset the sky looks clear, but the humidity is high around 90% and also the wind with gusts up to 30 m/s. We stay closed for the moment.

Update at 2:25 UT, humidity 100%, wind gusts 29 m/s. At 7:00 UT it is snowing. End of the night.

Night duration (12 degree el twilight) 1:30 - 12:30 UT = **11 h 00m**

Observing time: * 0 h 0 min (0 %)*

Weather time loss: **11h 0 min (100%)**

technical time loss * 0h 0 min (%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Cassara	dark	LUCI 1-2			LUCI1- , LUCI2-	vipE1
Nardini	dark	LUCI 1-2			LUCI1- , LUCI2-	diff targets
Cassara	dark	LUCI 1-2			LUCI1- , LUCI2-	vipD1

Details

more calls in the detailed log by D. Thompson at this link

https://drive.google.com/file/d/1TXQqhEVuY-DuvY5zqAl9Yd-c8gjfp9_/view?usp=sharing

INAF queue observing, 2020 Nov 09 - Nov 10

Observer: D. Thompson
Telescope Operator: Josh Williams
Astronomers from Italy:A. Rossi, F. Cusano
Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel through the indications of LBT Italian observers (A. Rossi and F. Cusano) connected from Italy. At the sunset the sky is completely covered by clouds, the humidity is at 98% and the outside temperature is -8°C.

Also if the conditions will improve during the night we will not able to open due to ice and snow on the roof. Now LBT is a giant cube of ice. We stay closed for all the night.

Night duration (12 degree el twilight) 1:30 - 12:30 UT = **11 h 00m**

Observing time: * 0 h 0 min (0 %)*

Weather time loss: **11h 0 min (100%)**

technical time loss * 0h 0 min (%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
calibration	flat and arc	MODS 1-2				

Details

calls in the detailed log by D. Thompson at this link

INAF queue observing, 2020 Nov 10 - Nov 11

Observer: D. Thompson
Telescope Operator: David Huerta
Astronomers from Italy:A. Rossi, S. Paiano, F. Cusano
Instrument: PEPSI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel through the indications of LBT Italian observers (A. Rossi, S. Paiano and F. Cusano) connected from Italy.

At the sunset the sky is clear, the conditions are good, we can open the dome and start the night with PEPSI.

Night duration (12 degree el twilight) 1:30 - 12:30 UT = **11 h 00m**

Observing time: **10h 30 min (95.5%)**

Weather time loss: **0h 0 min (0%)**

technical time loss * 0h 30 min (4.5%)*

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Silvotti	PG2349+002	PEPSI-BI NO	fiber 200 C2-CD4	20min		stopped earlier to start the transit in time; S/N~55 in CD4
Sicilia	wasp-76b	PEPSI-BI NO	fiber 200 C1-CD6	7h		started at 2:15 UT; average S/N ~200 on CD6; completed
Sicilia	HIP 9690	PEPSI-BI NO	fiber 200 C1-CD6			standard
Lanzafame	TYC 658-922-1	PEPSI-BI NO	fiber 200 C2-CD4	0.5h		
Lanzafame	Gaia DR2 235161691523331 456	PEPSI-BI NO	fiber 200 C2-CD4	1h		
Lanzafame	BD+52 910	PEPSI-BI NO	fiber 200 C2-CD4	0.5h		

INAF queue observing, 2020 Nov 11 - Nov 12

Observer: D. Thompson

Telescope Operator: Davide Huerta

Astronomers from Italy: A. Rossi, S. Paiano, F. Cusano

Instrument: MODS-BINO, LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personel

through the indications of LBT Italian observers (A. Rossi, S. Paiano and F. Cusano) connected from Italy.

At the sunset the sky is clear, the conditions are good, we can open the dome and start the night with MODS-BINO.

Night duration (12 degree el twilight) 1:30 - 12:30 UT = **11 h 00m**

Observing time: **9 h 30 min (86 %)**

Weather time loss: **h min (0%)**

technical time loss **1h 30min (14 %)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Casasola	Feige 110	MODS1-2	red grating			standard
Casasola	AGN1317	MODS1-2	red grating	1h		completed
Cassarà	vipF1	LUCI1-2	G200 zJ	0.8h		completed
Cassarà	HIP13917	LUCI1-2	G200 zJ	h		telluric for VIPF1
Feruglio	XN_44_6 4	LUCI1-2	G210 H	5h		completed
Feruglio	HIP13917	LUCI1-2	G210 H	h		telluric for Feruglio
Massi	G183.72	LUCI1-2	H2, Ks	2.1h		completed
Massi	FS120	LUCI1-2	H2, Ks	h		standard for Massi
Nardini	J0942	LUCI1-2	G200 zJ	h		completed

Details

detailed log of the night by D. Thompson at this link

<https://drive.google.com/file/d/1ugh6ze6FjH3uIVMSPbDy8mrfMA7H7bMr/view?usp=sharing>

INAF queue observing, 2020 Nov 12 - Nov 13

Observer: D. Thompson

Telescope Operator: Davide Huerta

Astronomers from Italy: A. Rossi, S. Paiano, F. Cusano

Instrument: MODS-BINO, LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observers (A. Rossi, S. Paiano and F. Cusano) connected from Italy.

At the sunset the sky is clear, the conditions are good, we can open the dome and start the night with MODS-BINO.

We closed at 8:45UT for high humidity. We did another try after one hour but the humidity rose again. End of the night

Night duration (12 degree el twilight) 1:30 - 12:30 UT = **11 h 00m**

Observing time: **7h 30min (68%)**

Weather time loss: **3h 30min (32%)**

technical time loss **h min (%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Rossi	Feige 110	MODS1-2	dual grating			standard
Rossi	GRB201015 A	MODS1-2	dual grating	1hx2		
Rossi	GRB200826 A	MODS1-2	imaging	1h		
Rossi	GRB201015 A	MODS1-2	imaging	0.5h		
Desidera	HAP70b	MODS1-2	dual grating	3.7hx2		started at 4:55UT, stopped at 8:40 UT for high humidity

Details

detailed log of the night by D. Thompson at this link

https://drive.google.com/file/d/1DmC6jcy5NDRyYwL4_X4KX7GbTelfoCY0/view?usp=sharing

INAF queue observing, 2020 Dec 22 - Dec 23

Observer: A. Cardwell

Telescope Operator: Davide Huerta

Astronomers from Italy: F. Cusano, A. Rossi

Instrument: PESI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observers (A. Rossi and F. Cusano) connected from Italy.

Wind gust above the limits at the beginning of the night we stay closed at sunset, we opened up at 4:50. Poor to awful seeing all night, and frequent wind gusts over the shutdown limit.

Ultimately we decided to spend the whole night with PEPSI, and did take a few hours of good data.

Night duration (12 degree el twilight) 01:20 - 13:20 UT = **12 h 00m**

Observing time: **4h 0min (34%)**

Weather time loss: **8h 0min (66%)**

technical time loss **h min (%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Clementini	3026, 1107	PEPSI-BIN O				
Lanzafame	2351616	PEPSI-BIN O				

Details

Detailed log of the night by A. Cardwell at this link:

<https://drive.google.com/file/d/1Nx8FY2XmLWK9oqNFcLvw71aqp8llWI8/view?usp=sharing>

INAF queue observing, 2020 Dec 23 - Dec 24

Observer: A. Cardwell

Telescope Operator: Davide Huerta

Astronomers from Italy: F. Cusano, A. Rossi

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observers (A. Rossi and F. Cusano) connected from Italy. Conditions are good to open at the beginning of the night, but internet connection was lost to and from the mountain a 10 mins after 12 degree twilight. It was not recovered during the night. Using the 4G hotspot we talked the OSA through the LUCI observations for the night. Progress was slow, but we did what we could. Average seeing was between 2" and 3" for most of the night, improving to 1" to 1.5" for the last hour or two of the night.

Night duration (12 degree twilight) 01:20 - 13:20 UT = **12 h 00m**

Observing time: **3h min (25%)**

Weather time loss: **0h min (%)**

technical time loss **9h min (75%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Di Criscienzo	Peg	LUCI-BIN O				
Rossi	GRB201216 C	LUCI-BIN O	H-ima			seeing>2, not good
Rossi	GRB201221 D	LUCI-BIN O	J-K ima	0.6h		

Antoniucci	Fu Ori	LUCI-BIN O	completed ? check quality
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Details

Detailed log of the night by A. Cardwell at this link:

https://drive.google.com/file/d/18f_LPHL2kTXSMIn7Q9yPFvSthzHsLYbV/view?usp=sharing

INAF queue observing, 2020 Dec 24 - Dec 25

Observer: A. Cardwell

Telescope Operator: Davide Huerta

Astronomers from Italy: F. Cusano, A. Rossi

Instrument: MODS-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observers (A. Rossi and F. Cusano) connected from Italy.

At the sunset the sky is cloudy. DOME CLOSED. We opened at 7:20 UT

Night duration (12 degree el twilight) 01:20 - 13:20 UT = **12 h 00m**

Observing time: **4h 30min (38%)**

Weather time loss: **7h 30min (62%)**

technical time loss **h min (%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
STD	GD71	MODS1+2	red-grating			std for Moretti
Moretti_DDT	PSOJ0728+3 3	MODS1+2	red-grating 1"slit	1200*12=4 h		completed

Details

Detailed log of the night by A. Cardwell at this link:

https://drive.google.com/file/d/1c3_AzcXASCUmVyzA1q7DkwpM1DQDmxt1/view?usp=sharing

INAF queue observing, 2020 Dec 25 - Dec 26

Observer: A. Cardwell

Telescope Operator: Davide Huerta

Astronomers from Italy: F. Cusano, A. Rossi

Instrument: LUCI-BINO

Summary

Due to the covid-19 pandemic situation these observations have been performed by LBTO personnel

through the indications of LBT Italian observers (A. Rossi and F. Cusano) connected from Italy. At the sunset the sky is clear but humidity is high. We wait for humidity to go down. Night duration (12 degree el twilight) 01:20 - 13:20 UT = **12 h 00m**
 Observing time: **11h min (92%)**
 Weather time loss: **h min (%)**
 technical time loss **1h min (8%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_to_t	Images	Notes
Davanzo_DT	GRB200826A	LUCI1	AO, imaging, Hband	45min/1.6h		BIN3; low image quality
telluric		LUCI1+2	MOS			for Gargiulo
Gargiulo	VAN001	LUCI1+2	MOS	1h+1h		
telluric	HIP39540	LUCI1+2				for Nardini
Nardini_4	J0945	LUCI1+2		1.67h		took a few more since we started at lower airmass than retested completed
Nardini_4	J1014	LUCI1+2		0.2/0.1h		took double time to have all offsets completed
telluric	HIP39540	LUCI1+2				for Nardini
Nardini_4	J0947	LUCI1+2		0.23h		completed
Nardini_4	J1027	LUCI1+2		0.2/0.1h		took double time to have all offsets completed
telluric	HIP52849	LUCI1+2				for Nardini
telluric	HIP43018	LUCI1+2				for Saxena
Saxena_39	COSMOS1	LUCI1+2	MOS	3.5/15h		seeing degraded in last 30min; Remove star#2 to align

Details

Detailed log of the nigh by A. Cardwell at this link:

<https://drive.google.com/file/d/1bDGyuEmTzVlqtNe-HTbTSMqcLEwL-eH0/view?usp=sharing>