

Author: Andrea Rossi¹, Felice Cusano¹, Ester Marini², Simona Paiano²

Affiliation:

1. INAF- Istituto Nazionale di Astrofisica - Osservatorio di Astrofisica e Scienza dello Spazio Bologna, via Gobetti 93/3 40129 Bologna - ITALY
2. INAF, Osservatorio Astronomico di Roma, Via Frascati 33, 00077 Monte Porzio Catone, Italy
3. INAF, Osservatorio astronomico di Palermo, Piazza del Parlamento, 1, 90134 Palermo, Italy

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Abstract: This document presents the Annual Observing Report for 2021, 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 2020–2021 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, 2021 Jan 07 - Jan 08

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: F. Cusano, A. Rossi

Instrument: PEPSI-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. We start with PEPSI-BINO, opening up at sunset.

Night duration (12 degree el twilight) 01:30 - 13:30 UT = **12 h 00m**

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

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

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

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTi me /Time _tot	Images	Notes
Calibratio n	dark	LUCI-BINO				for Gargi ulo, Massi
Clementin i_ddt	Gaia DR2 1982512	PEPSI-BIN O		0.5h		
Silvotti	PG2349 +002	PEPSI-BIN O		1h		
Clementin i_ddt	Gaia DR2 3026325	PEPSI-BIN O		0.3h		S/N 90
Clementin i_ddt	Gaia DR2 1107980	PEPSI-BIN O		0.3h		S/N 160
Lanzafam e	proteus	PEPSI-BIN O		4.5h		3rd spectr a (1h) has almos t no flux due to clouds
Clementin i_ddt	Gaia DR2 3026325	PEPSI-BIN O		0.75h		~2-3m ag of extinct ion at startr, but last

30min
are
good
S/N
180

Clementin i_ddt	Gaia DR2 1107980	PEPSI-BIN O		0.3h		S/N 289
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Spiniello Feige34 MODS1+M MODS2blue+MO for
ODS2 DS1dual Spinel
lo

Spiniello	M49A	MODS1+M ODS2	MODS2blue+MO DS1dual	2.25/2. 5h	mods1b.0005- 0013,mods1r. 0010-0018 , mods2b.0011- 0019	2.2hr more in the blue for free. ~1 mag of extinct ion in the last hour, seein g <0.7"
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CALS arc,flats MODS1+M MODS2blue+MO see
ODS2 DS1dual log for
details

Details

Detailed log of the night by B. Rothberg at this link:
<https://drive.google.com/file/d/1LYcbS2RVfxFbLA0kw9-gE9iyEAICrhCm/view?usp=sharing>

INAF queue observing, 2021 Jan 08 - Jan 09

Observer: B. Rothberg

Telescope Operator: J. Williams

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 has some cirrus. We start with LUCI-BINO, opening up at sunset.

Clouds and thin cirrus all the night.

Night duration (12 degree el twilight) 01:30 - 13:30 UT = **12 h 00m**

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

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Telluric	HIP16652	LUCI-BINO	zJ,HK200			clouds
Antoniucci	AGLL322	LUCI-BINO	zJ,HK200			clouds
Telluric	HIP16652	LUCI-BINO	zJ,HK200			clouds
Antoniucci	AGLL96	LUCI-BINO	zJ,HK200			
Antoniucci	V1118Ori	LUCI-BINO	zJ,HK200			
Antoniucci	V2775Ori	LUCI-BINO	zJ,HK200			
Saxena	mask_cosmo s	LUCI-BINO	zJ	3h		

| Nardini | J1111+24 | LUCI-BINO | zJ | 0.93h | | double exp time for seeing 1.4-2 **completed** | |
Nardini | J1111+24 | LUCI-BINO | zJ | 0.93h | | double exp time for seeing 1.4-2 | -- [AndreaRossi](#) -
09 Jan 2021

Details

Detailed log of the night by B. Rothberg at this link:

https://drive.google.com/file/d/1_7xbpk12Fhft2iC_8u6QHLg4d86l0kBD/view?usp=sharing

INAF queue observing, 2021 Jan 09 - Jan 10

Observer: B. Rothberg

Telescope Operator: J. Williams

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 personel

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

At the sunset the sky is clear. Wind slightly below the limit. We start with PEPSI, opening up at sunset.

Night duration (12 degree el twilight) 01:30 - 13:30 UT = **12 h 00m**

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

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

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

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
CALS	DARKS	LUCI				Nardini, Cassarà , Saxena
CALS	arcs,Flats	LUCI				Nardini
Silvotti		PEPSI				
Rossi_18	GRB201221D	LBCblue+red	g,r+i,z			seeing>1.5" probably useless
STD	Feige_34	MODS1+2	MODS1dual+MODS2 blue			useless, we could not do MODS science
Nonino	COSMOS	LBCblue+red	Uspec+F972N	1+1h		OB1,2 check quality, sometimes DIMM

						jumped >1"
Annibali	R41	LBCblue+red	g,r	0.3+0.3		UGC9128 _1: last 2 images have lost preset
CALS	Skyflats	LBCblue+red				g,r,U,F for Annibali and Nonino

Details

Detailed log of the night by B. Rothberg at this link: https://drive.google.com/file/d/1XYH3QKCdFikTbjfudYOmh_CdvJw9h3Kx/view?usp=sharing

INAF queue observing, 2021 Jan 10 - Jan 11

Observer: B. Rothberg

Telescope Operator: J. Williams

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. Wind slightly below the limit. We start with LUCI, opening up at sunset.

Night duration (12 degree el twilight) 01:30 - 13:30 UT = **12 h 00m**

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

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
CALS	DARKS	LUCI				Davanzo AO

Telluric	HIP1391 7	LUCI-BINO	MOS zJspec			
Cassarà	VIPD1	LUCI-BINO	MOS zJspec			cannot align because of extinction
Telluric	HIP1665 2	LUCI-BINO	zJ+HKspec, 0.75"slit			for Antonucci
Antonucci	AGLL322	LUCI-BINO	zJ+HKspec, 0.75"slit			a double star? we put brighter star on slit on luci2, middle on luci1
Telluric	HIP1665 2	LUCI-BINO	zJ+HKspec, 0.75"slit			for Antonucci
Antonucci	AGLL191	LUCI-BINO	zJ+HKspec, 0.75"slit			
Telluric	HIP4301 8	LUCI-BINO	zJ			for Saxena
Saxena	cosmos	LUCI-BINO	zJ	3h		
Nonino	Cosmos	LBC-Bino	Uspec, F972U	1h+1h		good
Annibali	R21	LBC-Bino	g-sloan, r-sloan	0.33h+0.33 h		1ob good _1, ob_2 maybe not so good for thin cirrus

Details

Detailed log of the night by B. Rothberg at this link:
https://drive.google.com/file/d/19iwTzAllhQI5wvq0_MSQ1Wzfl7YpXjnM/view?usp=sharing

INAF queue observing, 2021 Jan 11 - Jan 12

Observer: B. Rothberg

Telescope Operator: J. Williams

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 personel

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

At the sunset the sky is clear. Wind slightly below the limit. We start with LUCI, opening up at sunset.

The night is characterized by variable bad seeing from 1 to 3"

Night duration (12 degree el twilight) 01:30 - 13:30 UT = **12 h 00m**

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

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Telluric	HIP1391 7	LUCI-BINO	zJspec MOS			for Cassarà
Cassarà	VIPD1	LUCI-BINO	zJspec MOS	2h/2h		
STD	FS121	LUCI-BINO	H2,Ks			
Massi	G236.28	LUCI-BINO	IMA_H2,Ks			completed
Di Criscienzo	Sext	LUCI-BINO	IMA-Ks, J	4.5+1.23		with dimm seeing from 1.5 to 3"
Telluric	HIP5562 7	LUCI-BINO	zJspec			for Nardini
Nardini	J1143	LUCI-BINO	zJspec	0.6h/0.6h		completed

-- [AndreaRossi](#) - 12 Jan 2021

Detailed log of the nigh by B. Rothberg at this link:

<https://drive.google.com/file/d/1SnmRhkPnxzCOtnEREv7Qb6dPbyV6qsKZ/view?usp=sharing>

INAF queue observing, 2021 Jan 16 - Jan 17

Observer: A. Cardwell

Telescope Operator: David Gonzalez HuertaDavid G. H.

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 clear. Wind slightly below the limit. We start with LUCI, opening up at sunset.

The night is characterized by variable bad seeing from 1 to 3"

Night duration (12 degree el twilight) 01:30 - 13:30 UT = **12 h 00m**

Observing time: **9h min (75%)**

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

technical time loss **3h 00min (25%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Di Criscienzo	AND	LUCI-BINO	K J imaging	0.6h+0.13h		seeing ~1.5" passing cirrus
Rossi_18	GRB 201216C	LUCI-BINO	H imaging	1h		DIMM ~1.5"
Antoniucci	Gaia18cjb	LUCI-BINO	J imaging	0.01h		completed
Telluric		LUCI-BINO	zJ,HK 200, 0.75"slit			the first HK are saturated we change exptime to 2.51

Antoniucci	Gaia18cjb	LUCI-BIN O	zJ,HK 0.75"slit	200,	1h zJ + 0.46h HK		completed
Palazzi	AT2021any	LUCI-BIN O	J-H imaging		0.25h+0.25 h		
Telluric	HIP 55627	LUCI-BIN O					
Saxena	COSMOS1	LUCI-BIN O	MOS		1h+1h		alignment ?
Di Criscienzo	SEXB	LUCI-BIN O	imaging				
Telluric	HIP 55627	LUCI-BIN O	zJspec,1"slit				
Nardini	SDSSJ114 8	LUCI-BIN O	zJspec,1"slit		0.26hx2		completed
Nardini	SDSSJ115 9	LUCI-BIN O	zJspec,1"slit		0.33hx2		completed
Telluric	HIP 61138	LUCI-BIN O	zJspec,1"slit				

-- [AndreaRossi](#) - 17 Jan 2021

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

<https://drive.google.com/file/d/1vgBWXVlHg9tSa-pMcgLNEOIHLQPQ5axd9/view?usp=sharing>

INAF queue observing, 2021 Jan 17 - Jan 18

Observer: A. Cardwell , Ilya Ilyin

Telescope Operator: David Gonzalez [HuertaDavid](#) G. H.

Astronomers from Italy: A. Rossi

Instrument: PEPSI

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.

The night is shared with AZ, we take the first half

At the sunset the sky is clear. Wind slightly below the limit. We start with PEPSI, opening up at sunset.

Night duration (12 degree el twilight) 01:20 - 07:20 UT = **6 h 00m**

Observing time: **5h 50min (97%)**

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

technical time loss **0h 10min (3%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Clementini	ID 198xxx	PEPSI		15m		
Silvotti	PG2349+002	PEPSI		1h 10m		
Clementini	ID 198xxx	PEPSI		15m		
Clementini	ID 302xxx	PEPSI		20m		
Clementini	ID 110xxx	PEPSI		20m		
Lanzafame	Proteus	PEPSI		1h20m		the first isolated 10 min can be added, they are good
Clementini	ID 302xxx	PEPSI		20m		
Clementini	ID 110xxx	PEPSI		20m		
Clementini	ID 302xxx	PEPSI		20m		

-- [AndreaRossi](#) - 18 Jan 2021 Detailed log by A. Cardwell at this link:

<https://drive.google.com/file/d/1dRO-ceEv73-L-i8OlVFRttXCCpUkOJY2/view?usp=sharing>

INAF queue observing, 2021 Jan 28 - Jan 29

Observer: A. Cardwell

Telescope Operator: J. 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. Wind gusts above the limit, we stay closed.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

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

Weather time loss: **11h 35min (100%)**

technical time loss **h 00min (%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Darks	cal	LUCI-BINO				Gargiulo, Saxena, DiCriscienzo, D'avanzo, Antoniucci
Flats	cal	LUCI-BINO				Gargiulo, Saxena, DiCriscienzo, D'avanzo,

Antoniucci, Nardini,
Polletta(only MOS)

Detailed log of the night by A. Cardwell at this link:
<https://drive.google.com/file/d/1CvZwLq75GyAi6NNyFwH4J91wD-8Sa4G/view?usp=sharing>

INAF queue observing, 2021 Jan 29 - Jan 30

Observer: A. Cardwell

Telescope Operator: J. 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. Wind gusts above the limit, humidity is rising. We stay closed.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

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

Weather time loss: **11h 35min (100%)**

technical time loss **h 00min (%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Darks	cal	LUCI-BINO				Nardini, Polletta, Tortora
Flats	cal	LUCI-BINO				Tortora

03:09 The OSA has called the night due to snow and ice.

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

https://drive.google.com/file/d/17f5kadRVgsUJ1noobeV_JnN0LKxD1DLF/view?usp=sharing

INAF queue observing, 2021 Jan 30 - Jan 31

Observer: B. Rothberg

Telescope Operator: J. 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 personnel

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

At the sunset the sky is clear.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

Observing time: **9h 45min (84%)**

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

technical time loss **1h 50min (16%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Davanzo	GRB 200826A	LUCI1	AO, H band	1.2h		airmass higher than requested, check FWHM and flux
Telluric	HIP 24266	LUCI BINO	JHK 210spec 0.75"slit			for Fiorellino
Fiorellino	3093	LUCI BINO	JHK 210spec 0.75"slit	0.39h		completed
Tortora	J08	LUCI1	AO, Ks	0.9/1h		last 3 exp not done for problems with background, seeing very good
Annibali	DDO68	LUCI1	AO, H, J			the H ob missing the second sky, but science is good

Nardini	J1220	LUCI1-2	G200,zJ				
Nardini	HIP6113 8	LUCI1-2	G200,zJ				telluric

Detailed log of the night by B. Rothberg at this link:

<https://drive.google.com/file/d/1Gp1li12ux8OqbHEvPjHCVs-xNUZMeINs/view?usp=sharing>

-- FeliceCusano - 01 Feb 2021

INAF queue observing, 2021 Jan 31 - Feb 01

Observer: B. Rothberg

Telescope Operator: J. 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 personnel

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

At the sunset the sky is covered by clouds. We stay closed

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

Observing time: **8h35min (75%)**

Weather time loss: **2h 45min (23%)**

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
dark	cal	LUCI1-LUC I2				for Fiorellino and Annibali
telluric		LUCI1-LUC I2	210,JHK, 0.75"			for Fiorellino
Fiorellino	3096	LUCI1-LUC I2	210,JHK, 0.75"	0.78h		completed
telluric	HIP49512	LUCI1-LUC I2	MOS-zJ200			for Saxena
Saxena	COSMOS	LUCI1-LUC I2	MOS-zJ200	4.5h		~0.5 mag of extinction, consider good just 3hrs?
telluric	HIP61138	LUCI1-LUC I2	zJ200, 1"slit			for Nardini

Nardini	J1225	LUCI1-LUC I2	zJ200, 1"slit	1.2h	Double? centered on brighter one. Double time 'cause of 1mag ext.
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Nardini	J1459	LUCI1-LUC I2	zJ200, 1"slit			just 2 eoffsets before thick clouds arrive
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telluric	hip71172	LUCI1-LUC I2	zJ200, 1"slit			for Nardini, with clouds
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Detailed log of the night by B. Rothberg at this link:
https://drive.google.com/file/d/1NJ_xxErGAULPUKWQ70IngkDUnzEPvj7A/view?usp=sharing

-- FeliceCusano - 02 Feb 2021

INAF queue observing, 2021 Feb 01 - Feb 02

Observer: B. Rothberg

Telescope Operator: J. 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 personnel

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

At the sunset the sky is covered by clouds. We could open only for few minutes but new clouds prevented us to obtain useful data.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

Observing time: **0h 15min (2%)**

Weather time loss: **11h 20min (98%)**

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes

Detailed log of the night by B. Rothberg at this link:
<https://drive.google.com/file/d/137a7KKNZPrx88AjoPDzfANgN35xqlkni/view?usp=sharing>

-- [FeliceCusano](#) - 05 Feb 2021

INAF queue observing, 2021 Feb 04 - Feb 05

Observer: B. Rothberg

Telescope Operator: D. Gonzalez-Huerta

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 and F. Cusano) connected from Italy.

At the sunset the sky is clear, weather conditions look good. We could open only at sunset, we start with PEPSI.

From the beginning of the night the seeing was between 2-4", at 5:30 the seeing starts to improve at level of 1-1.4".

We switch to LBC.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

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

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_to t	Images	Notes
Clementini	GaiaDr2 -3026	PEPSI	300			seeing 2-4"
Clementini	GaiaDr2 -1107	PEPSI	300			seeing 2-4"
Nonino	COSMOS	LBCb+LB Cr	U+F972N20			OB#5, useless seeing>>1. 5"

Rossi_18	GRB210104 A	LBCb+LB Cr	r+z	20+20min	
Rossi_18	GRB200524 A	LBCb+LB Cr	r+z	20+20min	there are other 20+20min but are useless seeing>2"
Rossi_18	GRB210112A	LBCb+LB Cr	r+z	20+20min	
Nonino	COSMOS	LBCb+LB Cr	U+F972N20	0.5+0.5 hours	OB#5 again, DIMM <1"
Nonino	EGS	LBCb+LB Cr	U+F972N20	1.5+1.5 hours	OB#4, 5, 6 , 7 has high counts, to be repeated!
CALIB	skyflats	LBCb+LB Cr	U+F972N20		NOTE: PA=0 U+F has a bright star in one image, and 1 halo of reflecxion in other! see log

CALIB

skyflats

LBCb+LB

r+z

Cr

Detailed log of the night by B. Rothberg at this link:

https://drive.google.com/file/d/1DYM4PNW_UJ0rw4ucurTZYW-Cu2PfuV0D/view?usp=sharing

INAF queue observing, 2021 Feb 05 - Feb 06

Observer: B. Rothberg

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LUCI-BINO

AO support: G. Taylor

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 clear, but wind guts above the limit. Wind decreased and we open at 6:30 UT.

Seeing between 1.5" and 4", we stay with BINO-LUCI for backup program.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

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

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Antoniucci_8	V960_mon	LUCI1-2	G200 zjSpec -HKspec			seeing 2"-4"
DiCriscienzo	Sext	LUCI1-2	ima Ks, J			F5_bino, seeing 1.5"-3"
Saxena	COSMOS	LUCI1-2	G200 zjSpec			seeing 1"-2"

Detailed log of the night by B. Rothberg at this link:

<https://drive.google.com/file/d/1zG7ay1FwG72VWztVvxt5vo6CO087vA8/view?usp=sharing>

-- [Andrea Rossi](#) - 07 Feb 2021

INAF queue observing, 2021 Feb 06 - Feb 07

Observer: B. Rothberg

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LUCI1

AO support: G. Taylor

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, we start with LUCI1-AO then we switched to LBC. Clear-sky night although after the first hour we had bad seeing probably because of the wind.

Night duration (12 degree el twilight) 01:45 - 13:20 UT = **11 h 35m**

Observing time: **11h 30min (100%)**

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Davanzo	GRB 200826 A	LUCI1 AO	H band	0.3h		only 20min within constraints completed
Schmidt	J0823	LBCb+LB Cr	r+z	0.5h+0.5h		OB2: 2 times for high seeing, OB 3, OB4 half to be repeated
Nonino	COSMO S	LBCb+LB Cr	Uspec+z	1h+1h		OB 5,6, 7 bad seeing

Rossi	GRB 210204 A	LBCb+LB Cr	g+i,r+z	40m+40 m		
Nonino	COSMO S	LBCb+LB Cr	Uspec+z	0.5h+0.5 h		OB 7 good seeing
Rossi	GRB 160821 A	LBCb+LB Cr	r+z	20m+20 m		
Annibaldi	R41-NG C4605	LBCb+LB Cr	Uspec+z	1h+1h		completed
Nonino	EGS	LBCb+LB Cr	Uspec+z	1h+1h		OB 4, OB 5 done again with better seeing, next time start with 7

Detailed log of the night by B. Rothberg at this link:
<https://drive.google.com/file/d/1gVr543a2tsV77z0lnqjpUpSzrEE18SCa/view?usp=sharing>

INAF queue observing, 2021 Mar 10 - Mar 11

Observer: J. Power

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LBC

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 clear, we start with LBC.

Night duration (12 degree el twilight) 02:20 - 12:40 UT = **10 h 20m**

Observing time: **8h 25min (80%)**

Weather time loss: **1h 45min (18%)**

technical time loss **0h 10min (2%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calibration	darks					for Annibali AO, Saracco, Antoniucci: 120s,50s,3 0s 300s (good for Polletta too)
Nonino	COSMOS	LBCb+LBCr		0.5h+0.5h		OB8 bad seeing
Rossi	GRB 210306A	LBCb+LB Cr	r+z	0.3h+0.3h		
Schmidt	J0823+3427	LBCb+LB Cr	r+z	0.25h+0.2 5h		OB4 seeing ~1.1"
Rossi	GRB 190530A	LBCb+LB Cr	r+z	0.3h+0.3h		
Nonino	EGS	LBCb+LBCr		0.5h+0.5h		OB 7 bad seeing
Vito	J164121+3755 20	LBCb+LB Cr	r+z	10m		seeing ~1.5"
telluric	AOV 55182	LUCI bino	HKspec			for Polletta
Polletta	PLCK_G124	LUCI bino	MOS HKspec	1.33h+1.3 3h		seeing >1.5"
Calibration	arc+flats	LUCI bino	MOS HKspec,200			for Polletta

Calibration	arc+flats	LUCI bino	zJ-HKspec,200			for Antoniucci
Calibration	flats	LUCI bino	J ima N375			for Antoniucci
Calibration	flats	LUCI1	J,H ima N30			for Annibali

Detailed log of the night by J. Power at this link:
<https://drive.google.com/file/d/15K0a2DDskyMnLHCKQeEZpdcFfYtstcTK/view?usp=sharing>
 -- [AndreaRossi](#) - 12 Mar 2021

INAF queue observing, 2021 Mar 11 - Mar 12

Observer: J. Power

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LUCI1

AO Support: Greg Taylor

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 and windy, we stay closed. We switch to MODS for bad weather backup programs

Night duration (12 degree el twilight) 02:20 - 12:40 UT = **10 h 20m**

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

Weather time loss: **10h 20min (100%)**

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_to_t	Images	Notes
Calibration	darks	LUCI BINO				Antoniucci, Poletta, Annibali
Calibration	darks	LUCI BINO				Saxena, Rossi, Nardini

Calibration	slitflats	MODS1+MOD S	dualgrating,LS 0.8", 1", 1.2"			Antoniucci , Rossi_18
Calibration	arc+flat s	MODS1+MOD S	dualgrating,LS 5"			std
Calibration	slitflats	MODS1+MOD S	dualgrating,MO S			Spiniello
Calibration	BIAS	MODS1+MOD S				
Calibration	arcs, slitless	MODS1+MOD S	dualgrating			Antoniucci , Rossi_18
Calibration	arc+flat s	LUCI BINO	zJspec LS_1.	1.17		Nardini
Calibration	arc+flat s	LUCI BINO	zJspec MOS	1.17		Saxena
Calibration	flats	LUCI BINO	Ks ima			Rossi_18
Calibration	flats	LUCI BINO	J luci1,H luci2 ima			Rossi_18

Detailed log of the night by J. Power at this link:
https://drive.google.com/file/d/12cEdDO_Bpk5AdY_QnqaLHnRlwyh4u3Hd/view?usp=sharing
 -- AndreaRossi - 13 Mar 2021

INAF queue observing, 2021 Mar 12 - Mar 13

Observer: O. Kuhn

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LUCI1

AO Support: Greg Taylor

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 poor with some clouds and high humidity, we stay closed.

Night duration (12 degree el twilight) 02:20 - 12:40 UT = **10 h 20m**

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

Weather time loss: **10h 20min (100%)**

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
						see log

detailed log by O. Khun at this link:

https://docs.google.com/document/d/1qcJfSinzaea3JturlXJl4vyjz8on84X3o_srl6ggvR8/edit?usp=sharing

INAF queue observing, 2021 Mar 29 - Mar 30

Observer: B. Rothberg

Telescope Operator: S. Allanson

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LUCI1

AO Support: J. Power

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 windy and cloudy. Around midnight it got clear but still windy. We opened at 08:50 UT.

Night duration (12 degree el twilight) 02:30 - 12:15 UT = **9 h 45m**

Observing time: **3h 5min (32%)**

Weather time loss: **6h 20min (65%)**

technical time loss **0h 20min (3%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calibrations	Darks	LUCI1+LUCI2				for Annibali AO
Telluric	AOV 55182	LUCI1+LUCI2				for Polletta
Polletta	PLCK_G124.1+68.8	LUCI1+LUCI2	MOS,HK200	0.83h+0.83h		
Rossi	GRB 180402A	LUCI1+LUCI2				seeing ~2" to be checked

Detailed log by B. Rothberg at this link:

https://drive.google.com/file/d/1pc7fjNiz3y1HoGK5gY0E3sLji_cYpQwy/view?usp=sharing

INAF queue observing, 2021 Mar 30 - Mar 31

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LUCI1

AO Support: J. Carlos

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 clear.

Night duration (12 degree el twilight) 02:30 - 12:15 UT = **9 h 45m**

Observing time: **8h 35min (88%)**

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

technical time loss **1h 10min (12%)**

Data Summary

Project_R UN	Objects	Instrument	Configurati on	ExpTime /Time_tot	Image s	Notes
Calibrations	Darks	LUCI1+LU CI2				Polletta , Tortora
Annibaldi	DDO68	LUCI1-AO	J, H	2h(J),		J complete d, H check single images

Polletta	PLCK_G124.1+6 8.8	LUCI1+ES M	IMA-J, IMA-J_low	0.26h(IMA G-J), 0.9h(IMA- J_low)		IMA-J and J_low complet ed
Vito	J1641	LUCI1+LU CI2	G200+zjSpe c	0.58h+0.5 8h		
Vito	Telluric	LUCI1+LU CI2	G200+zjSpe c			

Detailed log by B. Rothberg at this link:
<https://drive.google.com/file/d/16babZO85xnS5Bt-MRLgo9coxxSS0OJZO/view?usp=sharing>

INAF queue observing, 2021 Mar 31 - Apr 01

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LBC

AO Support: J. Carlos

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 clear.

Night duration (12 degree el twilight) 02:30 - 12:15 UT = **9 h 45m**

Observing time: **8h 35min (88%)**

Weather time loss: **0h 20min (3%)**

technical time loss **0h 50min (9%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calibrations	Darks	LUCI1+LUCI2				Polletta , Tortora
Calibrations	skyflats	LBC	g+r PA0,180			all PA ok
Calibrations	skyflats	LBC	r+z 180			some PA180 are ok
Annibali	R19	LBC	g+r	0.33h+0.33h		1st OB: seeing 1.2" to be repeated
telluric	HIP43018	LUCI1+LUCI2	zJ200			for Saxena
Saxena	COSMOS1	LUCI1+LUCI2	MOS, zJ200	1.5h+1.5h		I will say complete d

Annibali	DDO68C	LUCI1+AO	H	1.5h	Hband compted , seeing good
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Polletta	Telluric	LUCI1+LUCI 2	G200+HKspe c			
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Polletta	P G124.1+68. 8	LUCI1+LUCI 2	G200+Hkspe c	2h+2h
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Calibrations	arc+flats	LUCI1+LUCI 2				Saxena
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Detailed log by B. Rothberg at this link:
https://drive.google.com/file/d/18gd9ldzqHEEORR3L1KV_-ZIG5CkOtlcz/view?usp=sharing

INAF queue observing, 2021 Apr 01 - Apr 02

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LBC

AO Support: J. Carlos

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 was covered by some clouds. We observed all night, we switched to LUCI at 06:40 UT. The last 1.5 hour clouds come in and interrupted our observations.

Night duration (12 degree el twilight) 02:30 - 12:15 UT = **9 h 45m**

Observing time: **8h 5min (83%)**

Weather time loss: **1h 30min (15%)**

technical time loss **0h 10min (2%)**

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
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Calibrations

Nonino	COSMOS	LBC-BINO	Uspec-F972	3h+3h		OB 8,9,10,11,12,13
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Nardini	SDSSJ1111-15	LUCI1+LUCI2	zj200	0.4h+0.4h		completed? first exp on LUCI2 has wrong cent. wav.
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telluric	HIP54815	LUCI1+LUCI2	zj200			for Nardini
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Nardini	SDSSJ1201	LUCI1+LUCI2	zj200	0.13h+0.13h		completed?
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telluric	AOV 55182	LUCI1+LU CI2	MOS,HK200			for Polletta
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Polletta G124 LUCI1+LU
CI2 MOS,HK200 1h+1h **completed?**
last 2
exposures with
passing
clouds, please
check

Rossi	GRB21021 0A	LUCI1+LU CI2	Ks,Ks ima	0.3h		seeing>1.5 and clouds, check
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Calibrations arc+flats

Nardini

Detailed log by B. Rothberg at this link:
<https://drive.google.com/file/d/1vM4Nb0sQ814jENIdtr2k80y6TsTGz1Nn/view?usp=sharing>

INAF queue observing, 2021 Apr 02 - Apr 03

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LBC

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 clear.

Night duration (12 degree el twilight) 02:30 - 12:15 UT = **9 h 45m**

Observing time: **8h 55min (92%)**

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

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

Data Summary

Project_R UN	Objects	Instrument	Configurati on	ExpTim e /Time_t ot	Imag es	Notes
Calibration s		MODS				Antoniucci, Spiniello (missing arcs), Vito (missing slitless and 5")
Calibration s	skyflats	LBC-BINO	Uspec+F97 2			for Nonino
Nonino	COSMOS	LBC-BINO	Uspec+F97 2			aborted afte 2 exp
D'Onofrio	NGC3486	LBC-BINO	g+r	1.5h+1. 5h		completed? check seeing in the last 5 exsposures
Rossi	GRB21040 2A	LBC-BINO	r+z	0.3h+0. 3h		

Standard	Feige 34	MODS1+MO DS2	dual grating			std for Spiniello
Spiniello	M49B	MODS1+MO DS2	dual grating	3.5h		completed
Spiniello	M49A	MODS1+MO DS2	dual grating	1h		completed
Standard	H44	MODS1+MO DS2	red grating			
Vito	J1641	MODS1+MO DS2	red grating	2.16h		completed

Detailed log by B. Rothberg at this link:
<https://drive.google.com/file/d/1i1nvTj6UhpQA29-ypfvkUgLbcht6E5aQ/view?usp=sharing>

INAF queue observing, 2021 Apr 03 - Apr 04

Observer: B. Rothberg

Telescope Operator: J. Williams

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LBC

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 clear.

Night duration (12 degree el twilight) 02:30 - 12:15 UT = **9 h 45m**

Observing time: **9h 45min (100%)**

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes

Calibrations

Nonino	COSMO S	LBC-BINO	Uspec+F972	3h+3h		14,15,16,17, 18 done in very good conditions, #19 last images with airmass ~1.4
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Nonino	EGS	LBC-BINO	Uspec+F972	2h+2h		8,9,10, done in good conditions, #11 is good but last frames skybg went up for moon
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Detailed log by B. Rothberg at this link:

INAF queue observing, 2021 May 02 - May 03

Observer: A. Cardwell

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: A. Rossi, F. Cusano

Instrument: LBC

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 clear, but wind guts are above the limit.

Night duration (12 degree el twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **1h 25min (18%)**

Weather time loss: **6h 0min (75%)**

technical time loss **h 35min (7%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Palazzi_20	short GRB 210323 A	LUCI BINO	H ima	0.5h+0.5h		seeing 1.5"-2"
Massi	G023.01	LUCI BINO	Ks ima	0.08h+0.08 h		seeing 1."-1.5"
Massi	FS144	LUCI BINO	Ks ima	0.02h+0.02 h		do not consider first 10 images on LUCI2, not well collimated

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1_EXPoShYu8T9-bl0bEGYxfIU-XPic-Ir/view?usp=sharing

INAF queue observing, 2021 May 03 - May 04

Observer: A. Cardwell

Telescope Operator: D. Gonzalez-Huerta

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

Instrument: LBC

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 and A. Rossi) connected from Italy.

At the sunset the sky is clear, but Seeing is poor (~ 1.6").

Night duration (12 degree el twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **8h 0min (95%)**

Weather time loss: **h 10min (2%)**

technical time loss **h 15min (3%)**

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_to t	Images	Notes
CALIB	sky flats	LBC-BIN O				F9770N20, g', and r' PA=0
Rossi	GRB2103 12B	LBC-BIN O	g+i	0.3h+0.3 h		seeing>1.5" , FWHM lbc b=1.6", lbc r=1.25"
Rossi	GRB2103 12B	LBC-BIN O	r+z	0.3h+0.3 h		seeing~1.3" , FWHM lbc b=1.3", lbc r=1.2"
Nonino	EGS	LBC-BIN O	Uspec+F97 2	2.5h+2.5 h		#14,15,16,17,18 seeing=~1.0", FWHM lbc b=1.1-1.2", lbc r<1", during #14 Uspec~1.5"
Telluric	HIP71172	LUCI-BI NO	zJ200,1"slit			
Vito	J1641	LUCI-BI NO	zJ200,1"slit	1h+1h		DIMM<=1arcsec completed
Massi	G023.01	LUCI-BI NO	Ks, imaging	0.08h+0. 08h		this is better than yesterday
Massi	FS144	LUCI-BI NO	Ks, imaging	0.02h+0. 02h		this is better than yesterday

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1g5Br2pYmsiv2FtX-A-ZWc4D_4oyXSaoL/view?usp=sharing

INAF queue observing, 2021 May 04 - May 05

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: F. Cusano, A. Rossi

Instrument: LBC

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 and A. Rossi) connected from Italy.

At the sunset the sky is clear

Night duration (12 degree el twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **8h 25min (100%)**

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

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

Data Summary

Project_R UN	Objects	Instrume nt	Configuration	ExpTim e /Time_t ot	Image s	Notes
CALIB	sky flats	LBC-BIN O				Uspec, F9770N20 , PA=180 and PA=0
CALIB	sky flats	LBC-BIN O				g,r
Palazzi_DD T-13	SLSN2020a bjc	LBC-BIN O	Us,g + riz	0.2h+0. 2h		LBC completed
Nonino	COSMOS	LBC-BIN O	Uspec, F9770N20	1h+1h		#20, 21
Nonino	EGS	LBC-BIN O	Uspec, F9770N20	2.5h+2. 5h		#19,20,21,22,2 3
Ripepi	V412Ser	PEPSI BINO				

Ripepi J294.1271 PEPSI
BINO

Ripepi V471 Vul PEPSI
BINO

Detailed log by A. Cardwell at this link:
https://drive.google.com/file/d/1g5Br2pYmsiv2FtX-A-ZWc4D_4oyXSaoL/view?usp=sharing

INAF queue observing, 2021 May 05 - May 06

Observer: A. Cardwell

Telescope Operator: S. Allanson

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

Instrument: LBC

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 and A. Rossi (S.Paiano)) connected from Italy.

At the sunset the sky is clear with seeing~0.9" from DIMM

Night duration (12 degree - twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **8h 20min (99%)**

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

technical time loss **0h 5min (1%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
CALIB	sky flats	LBC-BIN O				Uspec, F9770N20, PA=0
CALIB	sky flats	LBC-BIN O				r, i, PA=180+0
Nonino	COSMO S	LBC-BIN O	Uspec+F972	1.0h+1.0h		#22 #23 - seeing=~0.9" from DIMM, FWHM(#22) lbc=0.9",lbc=0.7 5", FWHM(#23)

						lbc=0.8",lbc=0.65",
Nonino	EGS	LBC-BIN O	Uspec+F972	0.5h+0.5h		#24 seeing= \sim 1.0", FWHM lbc=0.9",lbc=0.8"
Annibali	R41	LBC	g+r	0.33h+0.3 3h		seeing \sim 1.1" , FWHM lbc=1",lbc=1"
Annibali	R33	LBC	g+r	1.0h+1.0h		#1,2,3-seeing \sim 1" , FWHM lbc=0.9",lbc=0.75"
Ripepi	V364 Sge					
Ripepi	OGLE- GD-CE P-1227					
Ripepi	V459 Sct					
Ripepi	CL Vul					

Detailed log by A. Cardwell at this link:

<https://drive.google.com/file/d/1sTJzBJMuhUc1TlyfuGjmUP1XyVO87ZWX/view?usp=sharing>

--++++ INAF queue observing, 2021 May 06 - May 07

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano (S.Paiano) and Andrea Rossi,

Instrument: MODS

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) and A. Rossi) connected from Italy.

At the sunset the sky is a little bit cloudy with seeing \sim 1.1" from DIMM

Night duration (12 degree - twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **4h 15min (51%)**

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

technical time loss **4h 10min (49%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Palazzi_DDT	SN2020abj	MODS+BIN	dualgrating,L	h		seeing=1.1"
	c	O	S 1.2"			
Ripepi	V412 Ser	PEPSI				
Ripepi	J294.1271	PEPSI				
Ripepi	V771 Vul	PEPSI				

Detailed log by A. Cardwell at this link:
<https://drive.google.com/file/d/1isWFhSqA-5b1sGIUzcmWz3uDuvXHEFBV/view?usp=sharing>

INAF queue observing, 2021 May 07 - May 08

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano (S.Paiano) and Andrea Rossi

Instrument: LBC

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) and A. Rossi) connected from Italy.

At the sunset the sky is a clear but windy, although below the limits

Night duration (12 degree - twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **8h 25min (100%)**

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Nonino	COSMOS	LBC BINO	Uspec+F	1h+1h		#1, 24

Annibaldi	R21	LBC BINO	g+r	0.3+0.3h		2nd not good. 3rd interrupted for seeing
D'Onofrio	NGC5907	LBC BINO	g+r	0.5+0.5h		OB#1
Palazzi	XRT21042 3	LBC BINO	r+z	0.3+0.3h		
Ripepi	V412Ser	PEPSI				
Ripepi	V471Vul	PEPSI				
Ripepi	J181215	PEPSI				thin
Ripepi	V459 Sct	PEPSI				thin
Ripepi	OGLE-GD- CEP-1227	PEPSI				thick

Detailed log by A. Cardwell at this link:
<https://drive.google.com/file/d/1YURxKV9nysmw1NZ5Y-s18a4KvRyd3AdZ/view?usp=sharing>

INAF queue observing, 2021 May 08 - May 09

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano (S.Paiano) and Andrea Rossi

Instrument: LBC

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) and A. Rossi) connected from Italy.

At the sunset the sky is a clear but windy, although below the limits

Night duration (12 degree - twilight) 03:05 - 11:30 UT = **8 h 25m**

Observing time: **8h 15min (98%)**

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

technical time loss **0h 10min (2%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
CALIBRATIONS	skyflats	LBC BINO	Uspec+F			
Annibali	R19	LBC BINO	g+r	0.66+0.66 h		OB 1,2
Nonino	COSMOS	LBC BINO	Uspec+F	0.5+0.5h		OB #2, maybe 2 are good in Uspec
Annibali	R21	LBC BINO	g+r	0.66+0.66 h		OB 2+3; fwhm ~0.9"
Annibali	R32	LBC BINO	g+r	0.66+0.66 h		OB 1+2; fwhm ~0.8"
Lanzafame	2MASS J1704514 0	PEPSI				
Ripepi	OGLE-GD -CEP-122 7	PEPSI				

Detailed log by A. Cardwell at this link:
https://drive.google.com/file/d/1bB08rsVm5h4hwP_Qg6T5cq1KBdgCoUFa/view?usp=sharing

INAF queue observing, 2021 May 09 - May 10

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano (S.Paiano) and Andrea Rossi

Instrument: LBC

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) and A. Rossi) connected from Italy.

At the sunset the sky is a clear but windy, although below the limits

Night duration (12 degree - twilight) 03:05 - 11:30 UT = **8 h 25m**

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

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

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_to_t	Images	Notes
Rossi_18	GRB 210306A	LBC BINO	r+z	0.4h+0.4 h		seeing ~1.5"
Nonino	EGS	LBC BINO	Uspec+F972	1h+1h		OB#1,2 completed
Annibali	R32	LBC BINO	g+r	0.33+0.3 3h		OB#3 completed
D'Onofrio		LBC BINO	g+r	0.5h+0.5 h		OB #2,3 completed
STD	BD33	MODS BINO	red+dual			belladitta +paiano
PAIANO BCK	4FGLJ18 08	MODS BINO	dual,1.2"slit	1.2h+1.2 h		seeing 1.3"-1.5"
PAIANO BCK	4FGLJ18 08	MODS BINO	imaging	0.1h+0.1 h		seeing 1.3"-1.5"

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1qDAFZJakceR-O09hdKdl_ASb8pmbR--D/view?usp=sharing

INAF queue observing, 2021 May 10 - May 11

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano (S.Paiano) and Andrea Rossi

Instrument: LBC

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) and A. Rossi) connected from Italy.

At the sunset the sky has some cirrus, then it improved during the first hour of observations

Night duration (12 degree - twilight) 03:05 - 11:25 UT = **8 h 20m**

Observing time: **7h 0min (84%)**

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

technical time loss **1h 20min (16%)**

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Annibali	R19	LBC BINO	g+r	0.33+0.33h		OB: 3 completed
Mignoli DDT		LBC BINO	g+z			
Mignoli DDT		LBC BINO	Usp+i			stop after 6 exposures
Annibali	R41bis	LBC BINO	g+r	0.99h+0.99h		OB1+2, took some more for variable fwhm completed
Palazzi	ZTF21aayo kph	LBC BINO	r+z	0.33h+0.33h		
Belladitta	PSOJ1503	MODS BINO	redgrating	1.32h+1.32h/1.6h +16h		seeing <1.2" only last exposure aborted, seeing >>1.5"
STD	BD33	MODS BINO	redgrating			bright sky, check please

Detailed log by A. Cardwell at this link:
<https://drive.google.com/file/d/1Tmib2PhnC1OoSH8MNUqELFaSEbwGG8rQ/view?usp=sharing>

INAF queue observing, 2021 Jun 03 - Jun 04

Observer: D. Thompson

Telescope Operator: J. Williams

Astronomers from Italy: Felice Cusano, Simona Paiano and Andrea Rossi

Instrument: LUCI

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 and S. Paiano) connected from Italy.

At the sunset 50% of the sky is covered by clouds, the TO opens, but we wait for sky to clear.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

Observing time: **2 h 15 min (%)**

Weather time loss: **4 h 30 min (%)**

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Calibrations	flats	LUCI-Bino	JHKs			Palazzi DDT13

Calibrations	flats	LUCI-Bino	Ks+H2		Massi
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Palazzi	SN2020abjc	LUCI-Bino	Ks-J	15 min	just few images in clouds
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Massi	G023.01	LUCI-Bino	Ks	10 min	FWHM =
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Massi	G023.01	LUCI-Bino	H2	1 h 40 min	FWHM = <0.72"
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Detailed log by D. Thompson at this link: https://docs.google.com/document/d/16OGPOZWCVZYwbylti_IWx8c-7r0-clJZ6GJgj3Ai_g/edit?usp=sharing

INAF queue observing, 2021 June 4 - June 5

Observer: D. Thompson

Telescope Operator: J. Williams

Astronomers from Italy: Felice Cusano, Simona Paiano and Andrea Rossi

Instrument: LUCI

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 and S. Paiano) connected from Italy.

At the sunset 80% of the sky is covered by clouds, we stay closed. The sky cleared up and we opened at 7 UT.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

Observing time: * h min (%)*

Weather time loss: * h min (%)*

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calibrations	darks	LUCI BINO				for Massi, Palazzi DDT13
Calibrations	flats+arcs	LUCI BINO	zJ200 LS 1"			for Palazzi DDT13
Calibrations	flats+arcs	LUCI BINO	zJ200 LS 1"			for Epifani
Calibrations	flats+arcs	LUCI BINO	zJ200 MOS			for Cassarà C4
Calibrations	flats+arcs	MODS BINO	M49B MOS dual			for Spiniello
Calibrations	flats+arcs	MODS BINO	dualgrating LS 1.2"			for Belladitta

Epifani	2015KZ12 0	LUCI BINO	zjspec-HKsp ec	2h+2h/2h+ 2h	start integra at 8:30, variable clouds from 9:20, completed
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Epifani	HIP11133 4	LUCI BINO	zjSpec-HKsp ec		solar analog sp.Ty G5V
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Epifani	HIP705	LUCI BINO	zjSpec-HKsp ec		solar analog sp.Ty G2V
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Detailed log by D. Thompson at this link:
<https://docs.google.com/document/d/169tgIzvi91G8puZetWU0p5kzpgdLZW6ZzeuVsm5uspA/edit>

INAF queue observing, 2021 June 5 - June 6

Observer: D. Thompson

Telescope Operator: J. Williams

Astronomers from Italy: Felice Cusano, Simona Paiano and Andrea Rossi

Instrument: LUCI

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 and S. Paiano) connected from Italy.

At the sunset the sky is covered by clear, wind at the limit, but we can open.

After 20 minutes from the opening we close for high fraction of 25 micron particles detected in the air. There is a big wild fire 24 mph from the telescope.

We open again at 3:47 UT. Very bad seeing at the beginning of the night

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

Observing time: * 4h 50min (72%)*

Weather time loss: * 1h 30min (22%)*

technical time loss: **0 h 25 min (6%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calibrations	darks	LUCI BINO				for Epifani and Cassara' C4
Rossi_18	GRB210312 B	LUCI BINO	Ks+J,H			dimm seeing ~2"
Palazzi_strategic	GRB210410 A	LUCI BINO	Ks+H			dimm seeing ~2-3"
Massi	G049	LUCI BINO	H2+Ks			completed
STD	FS144	LUCI BINO	H2+Ks			for Massi

At the sunset the sky is clear

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

Observing time: * 6h 45min (93%)*

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

technical time loss: **h 30 min (7%)**

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calibrations	darks	LUCI BINO				for Antoniucci
Palazzi_DDT_13	SN2020abjc	LUCI BINO	zJ200, 1" slit	0.7h+0.7h		cut before last 2 exposur e
Rossi_18	GRB210402A	LBC	r+z	0.3+0.3h		DIMM ~1.5"
Palazzi_strategic	grb210410A	LBC	g+i	0.3+0.3h		DIMM 1"-1.5"
Palazzi_strategic	grb210410A	LBC	g+r	0.1h		cut to change target

Nonino_17	EGS	LBC	Uspec+F972N 20	1h+1h+15m in		OB #3,4 DIMM ~1", #5 stopped due to high seeing
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Palazzi_strate
gic

grb210410
A

LBC

g+r

0.3+0.3h

Davanzo	grb200826 A	LBC				U+i, U+R, 2ndU+i but bad (high sky-coun ts)
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Calibrations

flat+arcs

LUCI
BINO

zJ200 1"slit

for
Palazzi
DDT13

Detailed log by D. Thompson at this link:
<https://docs.google.com/document/d/1to0LuayR8xGyNDLmHmXPXzUaNLNVDrQ6FoJjOfRI-7g/edit>

INAF queue observing, 2021 June 7 - June 8

Observer: D. Thompson

Telescope Operator: J. Williams

Astronomers from Italy: Simona Paiano , Andrea Rossi and Felice Cusano

Instrument: MODS

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 and S. Paiano) connected from Italy.

At the sunset the sky is cloudy but we can open.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

Observing time: * 6h 45min (100%)*

Weather time loss: * h min (%)*

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

Data Summary

Project_R UN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Calibrations	Bias	MODS				
Belladitta	PSOJ1503	MODS	red-grating	0.25+0.25h		DIMM=0.95
STD	BD33	MODS	red-grating			for Belladitta

STD GD153 MODS dual-grating for Paiano, Palazzi

Paiano 4FGLJ1528 MODS dual-grating 1.2" slit 1.5+1.5h DIMM 0.6-1", took 900s more for passing clouds

Palazzi shortGRB2103 23A MODS dual-grating 1.2" slit 1h+1h

Davanzo **GRB200826A** LBC r+z,r+i 0.66h+0.66h DIMM ~1.5"

Calibrations flats LBC g+R,r+i i=180 took yesterday

Calibrations flat,arcs MODS for Paiano Palazzi, Belladitta - see June5, too

Detailed log by D. Thompson at this link:
<https://docs.google.com/document/d/1uEfEzWzuesJWRw9iwN9REazVHaPkwLWykyRYjwQLUB4/edit?usp=sharing>

INAF queue observing, 2021 June 19 - June 20

Observer: O. Kuhn

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano

Instrument: PEPSI

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 and S. Paiano) connected from Italy.

At the sunset the sky is clear, but there is smoke detected from the particle monitor and from the TO. The smoke and hush are from the PINNACLE fire, 20 km NW from the telescope. We stay closed.

Update at 8:20 UT, the smoke and hush detection are in the good range for observations, but the sky is covered by clouds we stay closed.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

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

Weather time loss: * 6h 45min (100%)*

technical time loss: * h min (%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes

Detailed log by O. Kuhn at this link:

INAF queue observing, 2021 June 20 - June 21

Observer: O. Kuhn, I. Ilyn

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano, Andrea Rossi

Instrument: PEPSI

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 and S. Paiano) connected from Italy.

At the sunset the sky is clear and there is no smoke or hush deteced, we can open.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

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

Weather time loss: * h min (%)*

technical time loss: * h min (%)*

Data Summary

Project_R UN	Objects	Instrume nt	Configurati on	ExpTim e	Image s	Notes

					/Time_tot	
Lanzafame (Proteus)	Gaia 4552214435212459 264	DR2	PEPSI	CD3-5	2h/2h	
Lanzafame (Proteus)	Gaia 4552214435212459 264	DR2	PEPSI	CD2-4	2/2h	seeing~2"
Lanzafame (Proteus)	Gaia 4552214435212459 264	DR2	PEPSI	CD1-6	2/2h	seeing~0.5-1"
Ripepi	OGLE-GD-CEP-122 7		PEPSI	CD3-5	1/1h	seeing~1-1.5"
Ripepi	CL Vul		PEPSI	CD3-5	0.3/0.3h	seeing~1-1.5"

Detailed log by O. Kuhn at this link:
https://docs.google.com/document/d/1O-fwPFekWaFEo0-zjmHLoWe3zFvdcpEgxKtYka38_Xo/edit?usp=sharing

INAF queue observing, 2021 June 21 - June 22

Observer: O. Kuhn, I. Ilyn

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano, Andrea Rossi

Instrument: PEPSI

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 and S. Paiano) connected from Italy.

At the sunset the sky is clear but there is smoke/hush deteced, we stay closed.

We open at 05:00 the situtation of smoke/hush improved.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

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

Weather time loss: * 0h 40min (10%)*

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Lanzafame (Proteus)	Gaia 12243061674657209 60	DR3 PEPSI	CD3-5	1.5h/1.5h		seeing 0.5"
Lanzafame (Proteus)	Gaia 12243061674657209 60	DR3 PEPSI	CD2-4	1.5h/1.5h		seeing 0.5-1"

Lanzafame (Proteus)	Gaia 12243061674657209 60	DR3	PEPSI	CD1-6	1.5h/1.5 h	see in g 0.5-1"
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Ripepi	CL Vul	PEPSI	CD3-5	1.5h/1.5 h	see in g 0.5-1. 5"
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Lanzafame (Proteus)	Gaia 218381835...	DR3	PEPSI	CD3-5	0.8h/1.5 h	see in g 0.5-1. 5"
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Detailed log by O. Kuhn at this link:
<https://drive.google.com/file/d/1YgPljv73KAGVTSC4fa8YR-x67v95mN6L/view?usp=sharing>

INAF queue observing, 2021 June 22 - June 23

Observer: J. Power, I. Ilyn

Telescope Operator: J. Williams

Astronomers from Italy: Andrea Rossi, Simona Paiano

Instrument: PEPSI

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 and S. Paiano) connected from Italy.

At the sunset the sky is covered by clouds, we staty closed.

The conditions improve and we open at 06:30, but after half an hour the sky is again covered by clouds and we close.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

Observing time: **h 20min (5%)**

Weather time loss: * 6h 25min (95%)*

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes
Lanzafame (Proteus)	Gaia DR3 218381835...	PEPSI	CD3-5	0.18/1.5h		clouds

Detailed log by J. Power at this link:
https://docs.google.com/document/d/1_BYy_zHgi5-1Z4X8FXEIfNliae453psp7bwMqfjr4M/edit?usp=sharing

INAF queue observing, 2021 June 23 - June 24

Observer: J. Power, I. Ilyn

Telescope Operator: J. Williams

Astronomers from Italy: Andrea Rossi, Simona Paiano, Felice Cusano

Instrument: LUCI, PEPSI

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 and S. Paiano) connected from Italy.

At the sunset the sky is covered by clouds, we stay closed.

Night duration (12 degree - twilight) 04:25 - 11:10 UT = **6 h 45m**

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

Weather time loss: * 6h 45min (100%)*

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

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime /Time_tot	Images	Notes

Detailed log by J. Power at this link:

INAF queue observing, 2021 September 16 - September 17

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Felice Cusano, Andrea Rossi

Instrument: MODS/LBC

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 and E. Marini) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: **8h 40min (90%)**

Weather time loss: * 0h 20min (3%)*

technical time loss: * 0h 40min (7%)*

Data Summary

Project_ RUN	Objects	Instrument	Configura tion	ExpTim e /Time_t ot	Images	Notes
Calibratio n	arc	MODS1+2	dual grating		mods1/2.b/r.2021091 7.0003-0005	
Calibratio n	slit flat	MODS1+2	dual grating		mods1/2.b/r.2021091 7.0006-0011	slit 1.2"
Calibratio n	bino bias	LBC				
Standard	BD+33- 2642	MODS1+2	dual grating		mods1/2b.0012-001 5 ; mods1/2r.0015-0018	
Paiano	4FGLJ2 207	MODS1+2	dual grating	1.25/1.2 5h	mods1/2b.0016-001 9 ; mods1/2r.0022-0025	
Paiano	4FGLJ2 331	MODS1+2	dual grating	1.5/1.5h	mods1/2b.0020-002 2 ; mods1/2r.0029-0031	
Paiano	4FGLJ2 317	MODS1+2	dual grating	1.25/1.2 5h	mods1/2b.0023-025 ; mods1/2r.0035-0037	
Standard	Feige11 0	MODS1+2	dual grating		mods1/2b.0026-002 8 ; mods1/2r.0040-0042	
Paiano	4FGLJ0 026	MODS1+2	dual grating	1.25/1.2 5h	mods1/2b.0029-003 1 ; mods1/2r.0046-0048	check: high backgrou nd? low blazar state?

Standard	Feige110	MODS1+2	red grating		mods1/2r.0051-0053	for Saracco. Saracco aborted problems w faint guide-star
Paiano	4FGLJ006	MODS1+2	dual grating	2.0/1.5h	mods1/2b.0032-0035 ; mods1/2r.0057-0060	take 1 exp more because of clouds
Calibration	slit flat	MODS1+2	dual grating		mods1/2b.0029-0031 ; mods1/2r.0046-0048	slit 5"
Giunta	KN+AO fields	LBCblue+L BCred	g+i	0.36+0.36h		clear, seeing ~0.8"
Rossi	GRB 210905 A	LBCblue+L BCred	r+z	0.16h+0.16h		
Giunta	2021PB 2	LBCred	i+z	0.08h		LBC blue camera not available
Calibration	skyflats	LBCred	i-sloan, z-sloan			0+180deg

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1eNQDiFc_04tEwFcyOB5FsZFDtc2Vj0cN/view?usp=sharing

INAF queue observing, 2021 September 17 - September 18

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Felice Cusano, Simona Paiano

Instrument: PEPSI

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 and E. Marini) connected from Italy.

At the sunset the sky is cloudy, we stay closed. Conditions are better we open the dome at 4 UT, we start with PEPSI.

4:30 we keep observing between clouds.

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: 7 h 18 min (77%)*

Weather time loss: 2 h 13 min (23%)*

Technical time loss: 0 h 9 min (0%)*

Data Summary

Project_R UN	Objects	Instrum ent	Configurati on	ExpTi me /Time_t ot	Imag es	Notes
Calibration		MODS1 +2				
Bellazzini_ 6	Gaia DR2 175494277028410 368	PEPSI	D300/CD3/ CD6			stopped for clouds after two minutes
Clementini _23	TYC 3970-844-1	PEPSI	D300/CD2/ CD4			clouds
Clementini _23	Gaia DR2 198251206867514 8032	PEPSI	D300/CD2/ CD4			lost guide star, repeated two times. Seeing is excellent ~0.6".
Bellazzini_ 6	Gaia DR2 283109913135088 3840	PEPSI	D300/CD3/ CD3			seeing very good ~0.5"
Bellazzini_ 6	Gaia DR2 263838858734337 3568	PEPSI	D300/CD3/ CD6			

Bellazzini_6	Gaia 277065238010386 9568	DR2	PEPSI	D300/CD3/ CD6			
Bellazzini_6	Gaia 264267523528694 1952	DR2	PEPSI	D300/CD3/ CD6			seeing ~0.6", some clouds, stopped after t~4mins
Ripepi_24	ASASSN-VJ02163 5.96+651035.5		PEPSI	D300/CD3/ CD5			
Bellazzini_6	Gaia 188651842867883 52	DR2	PEPSI	D300/CD3/ CD6			sky is mostly clear
Bellazzini_6	Gaia 516923276984688 1920	DR2	PEPSI	D300/CD3/ CD6			
Bellazzini_6	Gaia 326883065328637 6704	DR2	PEPSI	D300/CD3/ CD6			
Bellazzini_6	Gaia 319279688160626 3424	DR2	PEPSI	D300/CD3/ CD6			
Ripepi_24	NSVS4269811		PEPSI	D300/CD3/ CD5			
Ripepi_24	UCAC4_660-0363 51		PEPSI	D300/CD3/ CD5			
Ripepi_24	2MASS J05580941+28023 35		PEPSI	D300/CD3/ CD5			sky is mostly clear, seeing=0.89"- 0.67"
Ripepi_24	UCAC4 593-018905		PEPSI	D300/CD3/ CD5			sky very good, seeing~0.6"
Clementini_23	Gaia 980773034927503 104	DR2	PEPSI	D300/CD2/ CD4			clear sky, seeing=0.7" (stable)

Detailed log by A. Cardwell at this link:
<https://drive.google.com/file/d/1GjdDKfHWoUCEg5ZsSo53ttTrbGI7WIW-/view?usp=sharing>

INAF queue observing, 2021 September 18 - September 19

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Andrea Rossi, Simona Paiano

Instrument: PEPSI

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 and E. Marini) connected from Italy.

At the sunset the sky is cloudy Weather is with clouds and thunders, plus high humidity. We open at 4:15 UT

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: 2 h 35 min (27%)*

Weather time loss: 6 h 30 min (67%)*

Technical time loss: 0 h 35 min (6%)*

Data Summary

Project_ RUN	Objects	Instru ment	Configura tion	ExpTi me /Time _tot	Images	Notes
CALIB	BIAS	MODS1 +2	dual		mods1b.0004- 0022,mods1r.0 004-0022 -- mods2b.0004- 0022, mods2r.0004-0 022	
Rainer_2 5	Kepler-5	PEPSI1 +2	D300/CD1 /CD4			
Rainer_2 5	Kepler-5	PEPSI1 +2	D300/CD2 /CD5			

Rainer_2 5	Kepler-5	PEPSI1 +2	D300/CD3 /CD6			seeing=1.65 "-1.3" - humidity~88 % - SNR~76-12 0
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Clementi ni_23	TYC 3970-844-1	PEPSI1 +2	D300/CD2 /CD4			seeing~1" - humidity=93 % - SNR~148-2 18
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Clementi ni_23	Gaia 1982512068675 148032	DR2	PEPSI1 +2	D300/CD2 /CD4		seeing~0.9" (improving during the obs) - humidity=94 .7% - SNR~137-2 25
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Bellazzini _6	Gaia 2659693686716 034176	DR2	PEPSI1 +2	D300/CD3 /CD6		seeing~0.8" - humidity= 94.4% (increasing)- SNR~112-1 56 , stopped after 18mins of the 25mins
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CALIB-Pi concelli_ 11	DARK	LUCI1			luci1.20210919 .0001-0010	
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CALIB-R ossi_18	DARK	LUCI1			luci1.20210919 .0011-0025	
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CALIB-Gi annini_12	DARK	LUCI1			luci1.20210919 .0026-0045	
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CALIB-La	DARK	LUCI1	luci1.20210919
Barbera_			.0046-0053
17			

Starting a full bias sequence on MODS. mods[1|2][b|r].20210919.0004-0022.

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1xYQvZNABZ-fKAio3EfsGTdtl_3TXw9sg/view?usp=sharing

INAF queue observing, 2021 September 19 - September 20

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Simona Paiano , Felice Cusano

Instrument: PEPSI

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 and E. Marini) connected from Italy. At the sunset the sky is cloudy and with fog. The humidity is high (~99%) and with a increasing trend, we cannot open.

We open at 5:20 humidity at 85%.

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: 8 h 50 min (71%)*

Weather time loss: 2 h 50 min (29%)*

Technical time loss: h min (*)

Data Summary

Project _RUN	Objects	Instru ment	Configuration	ExpTi me /Time _tot	Images	Notes
CALIB-I zso_20	DARK	LUCI1	dark_18NDIT+24 NDITx2p51		luci1.202109 20.0002-0011	
CALIB	BIAS	MODS 1+2	dual		mods1b.0003 -0022,mods1 r.0003-0022 -- mods2b.0003 -0022,	

						mods2r.0003-0022	
CALIB	BIAS		LBC				
CALIB-I zzo_20	DARK		LUCI1	dark_24x2p51		luci1.202109 20.0012-001 6	
CALIB	cals binning	for 1x1	MODS 1+2	dual grating		mods1b.0023 -00,mods1r.0 023-00 -- mods2b.0023 -00, mods2r.0023- 00	
CALIB-P iconcelli _11	ARC-FLAT		LUCI1	zJ200_lambda1p1 7		luci1.202109 20.0017-003 4	
CALIB-L aBarber a_17	ARC-FLAT		LUCI1	G210_H_slit0p5		luci1.202109 20.0035-005 2	
CALIB- Giannini _12	ARC-FLAT		LUCI1	zJ_G200		luci1.202109 53.0035-007 0	
CALIB- Giannini _12	ARC-FLAT		LUCI1	HK_G200		luci1.202109 53.0071-008 8	
CALIB- Giannini _12	FLAT0ima		LUCI1	J		20210953.00 89-0098	
CALIB- Giannini _12	FLAT0ima		LUCI1	H		20210953.00 99-0108	
CALIB- Giannini _12	FLAT0ima		LUCI1	Ks		20210953.01 09-0118	

Bellazzi ni_6	G429655884339 3685632	PEPSI 1+2	D300/CD3/CD6			seeing~ 1.5" - humidity =83% - SNR~10 6-188
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Bellazzi ni_6	G429997440753 8484096	PEPSI 1+2	D300/CD3/CD6			seeing~ 1.4" - humidity =82% - SNR~14 5-220
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Clement ini_23	G198251206867 5148032	PEPSI 1+2	D300/CD2/CD4			
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Clement ini_23	TYC-3970-844-1	PEPSI 1+2	D300/CD2/CD4			
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Bellazzi ni_6	G174956874493 7863168	PEPSI 1+2	D300/CD3/CD6			
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Bellazzi ni_6	G265969368671 6034176	PEPSI 1+2	D300/CD3/CD6			seeing~ 1.7"
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Bellazzi ni_6	G360368200179 06336	PEPSI 1+2	D300/CD3/CD6			seeing~ 2.1"
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Bellazzi ni_6	G244881202943 3640704	PEPSI 1+2	D300/CD3/CD6			seeing~ 2"
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Bellazzi ni_6	G385118623534 199808	PEPSI 1+2	D300/CD3/CD6			seeing~ 1"
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Bellazzi ni_6	G314799593600 582656	PEPSI 1+2	D300/CD3/CD6			seeing~ 1"
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Bellazzi ni_6	G306253094013 406464	PEPSI 1+2	D300/CD3/CD6			seeing~ 1"
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Bellazzi ni_6	G296549899602 832768	PEPSI 1+2	D300/CD3/CD6			seeing~ 1"
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Bellazzi ni_6	G488257280987 718912	PEPSI 1+2	D300/CD3/CD6			seeing~ 1"
Bellazzi ni_6	G250349105191 9554304	PEPSI 1+2	D300/CD3/CD6			seeing~ 1"
Ripepi_ 24	NSVS4269811	PEPSI 1+2	D300/CD3/CD5			
Ripepi_ 24	UCAC 593-018905	PEPSI 1+2	D300/CD3/CD5			
Ripepi_ 24	2massJ05580941 +2802335	PEPSI 1+2	D300/CD3/CD5			
Clement ini_23	G980773034927 503104	PEPSI 1+2	D300/CD2/CD4			

Detailed log by A. Cardwell at this link:

<https://drive.google.com/file/d/1-BTzWoogmnM5i4uRr2EEYvyrfE00VoF/view?usp=sharing>

INAF queue observing, 2021 September 20 - September 21

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Simona Paiano , Felice Cusano

Instrument: PEPSI, LUCI

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 and E. Marini) connected from Italy.

At the sunset the sky is clear, with humidity~50%

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: 9 h 40 min (97%)*

Weather time loss: 0 h min (%)*

Technical time loss: h 20 min (3%)*

Data Summary

Project_R	Objects	Instrum ent	Configuration	ExpTi me /Time_ tot	Images	Notes
UN						

Bellazzini_	G16253101871024	PEPSI1	D300/CD3/CD			seeing~"0
6	98048	+2	6			.8, S/N~130 CD6

Bellazzini_	G12982766024984	PEPSI1	D300/CD3/CD			seeing~"0
6	67072	+2	6			.7 S/N~130 CD6

Bellazzini_	G45694810970958	PEPSI1	D300/CD3/CD			seeing~"0
6	20032	+2	6			.7 S/N~128

Bellazzini_	G45001862278850	PEPSI1	D300/CD3/CD			seeing~"0
6	57024	+2	6			.7

Bellazzini_	G44792263107583	PEPSI1	D300/CD3/CD			seeing~"0
6	14496	+2	6			.9 S/N~117

Bellazzini_	G17625253212407	PEPSI1	D300/CD3/CD			seeing~"0
6	83232	+2	6			.8

Clementini	TYC 3970-844-1	PEPSI1	D300/CD2/CD			S/N~230
_23		+2	4			

Clementini	G19825120686751	PEPSI1	D300/CD2/CD			
_23	48032	+2	4			

Crestani_	HD331986	PEPSI1	D300/CD123/			seeing
DDT		+2	CD46			~0.7-0.9", average S/N~70 CD1, S/N~200 CD4, S/N~100 CD2, S/N~150 CD3, S/N~230 CD6

Ripepi_24	ASASSN-VJ02163 5.96+651035.5	PEPSI1 +2	D300/CD3/CD 5			seeing ~1.1", S/N~90-1 90
LaBarbera	Telluric - HIP 1383	LUCI1	1.65/G210-H		luci1.00 10-0013	seeing~0. 8"
LaBarbera	M31_1 + sky	LUCI1	1.65/G210-H		luci1.00 18-0043	seeing~ 0.8"- 0.9" -
LaBarbera	M31_2 + sky	LUCI1	1.65/G210-H		luci1.00 44-0069	seeing~ 1.1" - 1.0" - 0.9"
LaBarbera	M31_3 + sky	LUCI1	1.65/G210-H		luci1.00 70-0087	seeing~ 1.0" - 1.3"
LaBarbera	Telluric - HIP 1383	LUCI1	1.65/G210-H		luci1.00 91-0094	seeing~0. 95"
LaBarbera	Std star - HD27254	LUCI1	1.65/G210-H		luci1.00 98-00	

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1XSBNWbtDih2ssOEVtiFsSa_pcw0Mt8J8/view?usp=sharing

INAF queue observing, 2021 September 21 - September 22

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Andrea Rossi , Felice Cusano

Instrument: LUCI1

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 and E. Marini) connected from Italy.

At the sunset the sky is clear

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: 9 h 40 min (%)*

Weather time loss: 0 h min (%)*

Technical time loss: 0 h min ()*

Data Summary

Project_ RUN	Objects	Instru ment	Configuration	ExpTi me /Time _tot	Image s	Notes
telluric	HIP8702 7	LUCI1	G200zJ,1.17,slit1"		luci1.0 018-00 21	
Piconcell i	J170100	LUCI1	G200zJ,1.17,slit1"	0.5/0. 5 hr	luci1.0 026-00 33	DIMM<1",clear completed
Giannini	Gaia17b pi	LUCI1	ima, JHK	0.1/0. 1h	luci1.0 034-00 48; 0080-0 094	DIMM<1", clear completed
telluric	HD1770 85	LUCI1	G200zJ +HK,1.17+1.95,sli0.7 5"		luci1.0 052-00 59	
Giannini	Gaia17b pi	LUCI1	G200zJ +HK,1.17+1.95,sli0.7 5"	0.5/0. 5hr	luci1.0 064-00 79	DIMM<1",clear completed
Giannini	Gaia20e ae	LUCI1	ima, JHK	0.1/0. 1h	luci1.0 095-01 24	DIMM~1.2", clear completed
telluric	HD1894 11	LUCI1	G200zJ +HK,1.17+1.95,sli0.7 5"		luci1.0 128-01 35	
Giannini	Gaia20e ae	LUCI1	G200zJ +HK,1.17+1.95,sli0.7 5"	0.5/0. 4h	luci1.0 141-15 6	DIMM 1.3",clear completed
telluric	HD1310 0	LUCI1	G200zJ +HK,1.17+1.95,sli0.7 5"		luci1.0 160-01 67	

Giannini	Gaia18e ap	LUCI1	ima, JHK	0.1/0. 1h	luci1.0 168-01 97	DIMM~1.0-1.6", clear completed
Giannini	Gaia18e ap	LUCI1	G200zJ +HK,1.17+1.95,sl0.7 5"	0.7/0. 5hr	luci1.0 203-02 21	DIMM 1.3",clear completed, last 10 minutes seeing ~2.5", taking 0.19h more in HK
lizzo	SN2021 vju	LUCI1	ima, J-H		luci1.0 222-02 6	dimmm ~1.1-2.1"
telluric	HIP1391 7	LUCI1	G200zJ		luci1.0 253-25 6	for Piconcelli
Piconcelli	J0209	LUCI1	G200zJ	0.75/0 .5h	luci1.0 263-02 74	dimmm~1.2", from 10:23 seeing blow up to 3", after ~12 minutes down to 1.2", we do 4exp more
Rossi	GRB200 826A	LUCI1	ima J	0.5/1h	luci1.0	fwhm~1.1" on images, after 11:45 seeing jumped to 1.5-2, target to be repeated
lizzo	SN2021 yal	LUCI1	ima, J-H			

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1QhbjRHihEj0SFH83072WF4LYMrKDkW_V/view?usp=sharing

Other note

INAF queue observing, 2021 September 22 - September 23

Observer: A. Cardwell

Telescope Operator: S. Allanson

Astronomers from Italy: Andrea Rossi , Simona Paiano

Instrument: MODS

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 and E. Marini) connected from Italy.

At the sunset the sky is partially cloudy with more clouds coming from the south.

Night duration (12 degree - twilight) 02:30 - 12:10 UT = **9 h 40m**

Observing time: 0 h min (0%)*

Weather time loss: 9 h 40 min (%)*

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

Data Summary

Project_RUN	Objec ts	Instrume nt	Configurati on	ExpTim e /Time_t ot	Images	Notes
Calib	DARK	LUCI1			luci1.202109XX.00 XX-00XX	Test from the Bologn a control room
Calib_Saracco _24	BIAS (8kx3k)	MODS1+ 2	dual		mods1b.00XX-00X X,mods1r.00XX-00 XX -- mods2b.00XX-00X X, mods2r.00XX-00X X	Test from the Bologn a control room
Calibration	bino bias	LBC				Test from the Bologn a control room

Calib	flat, arc	LUCI1	G200 zJspec			Rossi_ 18
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Detailed log by A. Cardwell at this link:

<https://drive.google.com/file/d/1wt69ouMhRvPkWtIWf7d3KfBPv6LmyXi2/view?usp=sharing>

Other note

During the night the cloudiness was increasing and at 05.30UT the sky was completely covered.
At 06:40UT sky still completely covered by clouds.

INAF queue observing, 2021 October 10 - October 11

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Andrea Rossi , Felice Cusano

Instrument: LBC

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 and E. Marini) connected from Italy.

At the sunset the sky is clear.

Night duration (12 degree - twilight) 01:45 - 12:30 UT = **10 h 45m**

Observing time: 0 h 0 min (89%)*

Weather time loss: h min (0%)*

Technical time loss: 1h 10min (11%)*

Data Summary

Project_R UN	Objects	Instrum ent	Configurati on	ExpTime /Time_tot	Imag es	Notes
Giunta	AO_L	LBCs	g+i	0.18h+0.1 8h		twice DIMM 1"
Giunta	AO_K	LBCs	g+i	0.18h+0.1 8h		twice
Giunta	KN_G	LBCs	g+i	0.18h+0.1 8h		twice

Giunta	KN_H	LBCs	g+i	0.18h+0.18h		twice; note the astigmatism
Belladitta	J0309	LBCs	r, i+z	3+3h/4+4h		lbc.20211011.05562 3.fits not good, 3xr+i, 3xr+z
Giunta	AO_M	LBCs	g+i	0.09h+0.09h		
Giunta	AO_N	LBCs	g+i	0.09h+0.09h		
Giunta	KN_E	LBCs	g+i	0.09h+0.09h		
Giunta	KN_F	LBCs	g+i	0.09h+0.09h		
Giunta	twilight_fields	LBC	r+r	0.1+0.1h		4 fields for 3 times

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Detailed log by A. Cardwell at this link:

<https://drive.google.com/file/d/1kZEN-8Ra1kRyqG5HphBIGTwDFtavGrd8/view?usp=sharing>

INAF queue observing, 2021 October 11 - October 12

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Simona Paiano, Andrea Rossi

Instrument: PEPSI, LUCI

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 and E. Marini) connected from Italy.

At the sunset the sky seems clear, but the wind is over shutdown limit. For this reason, we remain closed. High wind also at the 12 deg twilight.

Night duration (12 degree - twilight) 01:45 - 12:30 UT = **10 h 45m**

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

Weather time loss: 10h 45 min (100%)*

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

Data Summary

Project _RUN	Obj ects	Instru ment	Configuration	ExpTi me /Time _tot	Images	Notes		
CALIB	Dark -bin o	LUCI1- 2			luci[1,2].202110 12.0001-0020	Giannini _12		
CALIB	Dark -bin o	LUCI1- 2			luci[1,2].202110 12.0021-0025	Rossi_1 8		
CALIB	Dark -mo no	LUCI1			luci1.0026-040 0	LaBarber a_17		
CALIB	Dark -mo no	LUCI1	18NDIT+24N DITx2p51		luci1.0026-040 0	probably not necessar y Izzo_20		
CALIB	Dark -bin o	LUCI1- 2	18NDIT+24N DITx2p51		luci1.0051-006 0, luci2.0026-003 5.	Izzo_20		
CALIB	Dark -mo no	LUCI1	24x2p51		luci1.0061-006 5	probably not necessar y Izzo_20		
CALIB	flats and arcs	LUCI1- 2	zJ_G200		luci1.0089-010 6, luci2.0059-007 6	Giannini		
CALIB	flats	LUCI1- 2	ima J,H,K		luci1.0107-013 6,	Giannini		

					luci2.0077-010 6		
CALIB	flats and arcs	LUCI1- 2	G210 H,0.5"		luci1.0137-015 4	La Barbera	
CALIB	flats	LUCI1- 2	ima J		luci1.0155-016 4, luci2.0107-0116	Rossi	
CALIB	flats	LUCI1- 2	ima J+H		luci1.0170-018 4, luci2.0122-013 6	Izzo	
CALIB	Bias	MODS 1-2			mods[1,2][b,r].2 0211012.0003- 0022	bias for all	
CALIB	arcs	MODS 1-2	dualgrating		mods[1,2]r.002 3-0025, mods[1,2]b.002 3-0025	Paiano , Mannucci i, Giannini, Severgnini	
CALIB	slitfl at	MODS 1-2	dualgrating 0.6"		mods[1,2]r.002 6-0031, mods[1,2]b.002 6-0031	Mannucci i	
CALIB	slitfl at	MODS 1-2	dualgrating 0.8"		mods[1,2]r.003 2-0037, mods[1,2]b.003 2-0037	Giannini, Severgnini	
CALIB	slitfl at	MODS 1-2	dualgrating 1.2"		mods[1,2]r.004 4-0049, mods[1,2]b.004 4-0049	Paiano	
CALIB	slitfl at	MODS 1-2	dualgrating 5"		mods[1,2]r.005 6-0058,	STD	

					mods[1,2]b.005 6-0061			
CALIB	slitle ss	MODS 1-2	dualgrating		mods[1,2]r.005 9-0063, mods[1,2]b.006 2-0071	Paiano , Mannucci, Giannini, Severgnini		
CALIB	flat	MODS 1-2	dual ima r,i		mods[1,2]r.006 4-0073			
CALIB	arcs +flat	MODS 1-2	MOS 560500	ID	mods[1,2]r.007 9-0087	Saracco		
CALIB	arcs +flat	MODS 1-2	MOS 565554	ID	mods[1,2]r.008 8-0096	Saracco		
CALIB	slitflat	MODS 1-2	redgrating 5"		mods[1,2]r.009 7-00100	Saracco		
CALIB	slitle ss	MODS 1-2	redgrating		mods1r.0105-0 0109, mods2r.0103-0 0107	Saracco		
CALIB	flat	MODS 1-2	red ima r,i		mods[1,2]r.010 8-0119	Paiano		
CALIB	arcs +flat	MODS 1-2	mos_503108		mods[1 2]b.0082	2]r.0 120- 0128	Bia zzo	
CALIB	arcs +flat	MODS 1-2	mos_503312		mods[1 2]b.0091	2]r.0 129- 0137	Bia zzo	

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1wjXF3hWUYiyhaF_gqIMo2EckWNBLItX/view?usp=sharing

INAF queue observing, 2021 October 12 - October 13

Observer: A. Cardwell

Telescope Operator: J. Williams

Astronomers from Italy: Simona Paiano, Felice Cusano

Instrument: PEPSI, LBC

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 and E. Marini) connected from Italy.

At the sunset the sky seems clear, but humidity is 99.9%, temperature is -6 C, and wind is still high. There is ice on the building from last night, so we cannot open.

Night duration (12 degree - twilight) 01:45 - 12:30 UT = **10 h 45m**

Observing time: 0 h min (0%)*

Weather time loss: 10 h 45min (100%)*

Technical time loss: h min (%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_to t	Images	Notes
CALIB	arcs+flat	MODS1-2	mos_572754		Mods[1,2]b.0003-0011, Mods[1,2]r.0003-0011	Biazzo
CALIB	arcs+flat	MODS1-2	mos_582936		Mods[1,2]b.0012-0020, Mods[1,2]r.0012-0020	Biazzo
CALIB	arcs+flat	MODS1-2	mos_592556		Mods[1,2]b.0021-0029, Mods[1,2]r.0021-0029	Biazzo
CALIB	arcs+flat	MODS1-2	mos_5924958		Mods[1,2]b.0030-0038, Mods[1,2]r.0030-0038	Biazzo
CALIB	arcs+flat	MODS1-2	dual_slitlessflat		Mods[1,2]b.0039-004?	Biazzo

Mods[1,2]r.0039
-004?

Detailed log by A. Cardwell at this link:

https://drive.google.com/file/d/1nX6_lx_t8fu5bb3NpBFdACjqoxrPkILz/view?usp=sharing

INAF queue observing, 2021 October 13 - October 14

Observer: D. Thompson

Telescope Operator: S. Allanson

Astronomers from Italy: Simona Paiano, Felice Cusano

Instrument: PEPSI, LBC

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 and E. Marini) connected from Italy.

At the sunset the sky is clear and conditions are good. We open. MODS1 is unavailable for all the night for a technical failure We close at 1:58UT for high particle counts detected (smoke).

Night duration (12 degree - twilight) 01:45 - 12:30 UT = **10 h 45m**

Observing time: 9 h 45 min (%)*

Weather time loss: 1 h min (%)*

Technical time loss: h min (%)*

Data Summary

Project _RUN	Objects	Instru ment	Configu ration	ExpTi me /Time_ tot	Ima ges	Notes
Ripepi	UCAC4 592-100381	PEPSI 1-2	D300/C D3-5			21 minutes, S/N(red)~197
Ripepi	NSVS 8394284	PEPSI 1-2	D300/C D3-5			S/N(red)~190
Ripepi	Gaia2246124001 521354368	PEPSI 1-2	D300/C D3-5			S/N(red)~190

Clemeni tini	TYC 3970-844-1	PEPSI 1-2	D300/C D2-4			S/N(red)~150
Clemeni tini	Gaia1982512068 675148032	PEPSI 1-2	D300/C D2-4			S/N(red)~160
Ripepi	ASASSN-V J021635.96+651 035.5	PEPSI 1-2	D300/C D3-5			S/N(red)~220
Rainer	HAT-P-19	PEPSI 1-2	D300/C D1-4			S/N(red)~180
Rainer	HAT-P-19	PEPSI 1-2	D300/C D2-5			S/N(red)~220
Rainer	HAT-P-19	PEPSI 1-2	D300/C D3-6			S/N(red)~290
Rainer	HAT-P-28	PEPSI 1-2	D300/C D1-4			S/N(red)~250(?)
Rainer	HAT-P-28	PEPSI 1-2	D300/C D2-5			S/N(red)~113
Rainer	HAT-P-28	PEPSI 1-2	D300/C D3-6			S/N(red)~150
Giunta	AO_L	LBCs	g+i	0.18h+ 0.18h		seeing : B=1.27" fwhm, R=0.99"
Giunta	AO_K	LBCs	g+i	0.18h+ 0.18h		seeing : B=1.25" fwhm, R=0.99"
Giunta	KN_G	LBCs	g+i	0.18h+ 0.18h		seeing : B=1.06" fwhm, R=0.83"
Giunta	KN_H	LBCs	g+i	0.18h+ 0.18h		seeing : B ~ 1.0" fwhm, R=?"
Belladitt a	J0309	LBCs	r+i,			seeing : B=1.10" fwhm, R=1.06"

Belladitt a	J0309	LBCs	r+z			seeing : B=1.08" fwhm, R~0.99" , from lbc.2021014.094405/lbc.2 0211014.094401 seeing increased up to 1.4" , lbc.095535 seeing~1.2" (seeing unstable during the second part of the observation)
Giunta	KN_E	LBCs	g+i	0.09h+		seeing : B=1.5" fwhm, R=1.3"
Giunta	KN_F	LBCs	g+i	0.09h+		seeing : B=1.7" fwhm, R=1.7"
Giunta	AO_M	LBCs	g+i	0.09h+		seeing : B~2.0" fwhm, R=1,7"
Giunta	AO_N	LBCs	g+i	0.09h+		seeing : B=1.7" fwhm, R=1.7"
Giunta	twilight_fields	LBC	r+r	0.1+0.		F1, F2, F3, F4, F5 1h

Detailed log by D. Thompson at this link:
https://drive.google.com/file/d/1VDOPmL3cmsL1-bAR2POHGJC9Hxd_sbhL/view?usp=sharing

INAF queue observing, 2021 October 14 - October 15

Observer: D. Thompson

Telescope Operator: S. Allanson

Astronomers from Italy: Andrea Rossi, Felice Cusano

Instrument: PEPSI, LUCI

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 and E. Marini) connected from Italy.

At the sunset the sky is clear and conditions are good, we open the dome.

Night duration (12 degree - twilight) 01:45 - 12:30 UT = **10 h 45m**

Observing time: 10h 30min (98%)*

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

Technical time loss: 0h 15min (2%)*

Data Summary

Project_ RUN	Objects	Instru ment	Configur ation	ExpTi me /Time _tot	Images	Notes
Ripepi	Gaia224612400152 1354368	PEPSI1 -2	D300/CD 3-5			S/N(red) ~270
Ripepi	NSVS 8394284	PEPSI1 -2	D300/CD 3-5			S/N(red) ~250
Ripepi	UCAC4 592-100381	PEPSI1 -2	D300/CD 3-5			S/N(red) ~220
Clementi ni	TYC 3970-844-1	PEPSI1 -2	D300/CD 2-4			S/N(red) ~170
Clementi ni	Gaia198251206867 5148032	PEPSI1 -2	D300/CD 2-4			S/N(red) ~164
Ripepi	ASASSN-V J021635.96+65103 5.5	PEPSI1 -2	D300/CD 3-5			S/N(red) ~200
Rainer	Kepler-1517	PEPSI1 -2	D300/CD 1-4			S/N(red) ~167
Rainer	Kepler-1517	PEPSI1 -2	D300/CD 2-5			S/N(red) ~209
Rainer	Kepler-1517	PEPSI1 -2	D300/CD 3-6			S/N(red) ~193
Rainer	Kepler-5	PEPSI1 -2	D300/CD 1-4			S/N(red) ~114
Rainer	Kepler-5	PEPSI1 -2	D300/CD 2-5			S/N(red) ~138

Rainer	Kepler-5	PEPSI1 -2	D300/CD 3-6			S/N(red) ~150
Rainer	Kepler-5	PEPSI1 -2	D300/CD 3-6			S/N(red) ~150
Ripepi	UCAC4 660-036351	PEPSI1 -2	D300/CD 3-5			S/N(red) ~243
La Barbera	Feige110	LUCI1	G210 0.5"	H	luci1.20211015 .0005-0008	
Telluric	HIP 1383	LUCI1	G210 0.5"	H	luci1.20211015 .0012-0017	
La Barbera	HD 27524	LUCI1	G210 0.5"	H	luci1.20211015 .0022-0029	
Telluric	HD 22859	LUCI1+ 2	G200 zJ+HK		luci1.0033-40,l uci2.0005-001 2	for Giannini
Giannini	Gaia21bkw	LUCI1+ 2	G200 zJ+HK	0.5+0. 5h	luci1.0045-005 2,luci2.0018-00 24	DIMM variable ~1.2-2",c lear
Giannini	Gaia21bkw	LUCI1+ 2	JHK ima	0.1h	luci1.0053-006 7,luci2.0025-00 39	DIMM ~1.5"
Giannini	Gaia21arv	LUCI1+ 2	JHK ima	0.1h	luci1.0068-008 2,luci2.0040-00 54	DIMM ~1"
Giannini	Gaia18cjb	LUCI1+ 2	JHK ima	0.1h	luci1.0083-009 7,luci2.0055-00 69	DIMM ~1"
Giannini	Gaia18cjb	LUCI1+ 2	G200 zj+HK	0.5+0. 5h	luci1.0092-010 9,luci2.0074-00 81	DIMM ~1.1"

Telluric	HD 38088	LUCI1+ 2	G200 zJ+HK		luci1.0113-012 0,luci2.0085-00 92	for Giannini
Giannini	Gaia21arv	LUCI1+ 2	G200 zj+HK	0.5+0. 5h	luci1.0125-013 2,luci2.0097-01 04	DIMM 1-1.5"
Telluric	HD 52461	LUCI1+ 2	G200 zJ+HK		luci1.0136-014 3,luci2.0108-01 15	for Giannini
Giannini	Gaia19fct	LUCI1+ 2	G200 zj+HK	0.5+0. 5h	luci1.0149-015 6,luci2.0120-01 27	DIMM ~1"
Giannini	Gaia19fct	LUCI1+ 2	K ima	--		saturates in K; we stop

Detailed log by D. Thompson at this link:

<https://docs.google.com/document/d/1ZxKT-XbuHjj831U3HA7wEEQUgSaE7h15h12PTa1ulhc/edit?usp=sharing>

INAF queue observing, 2021 October 15 - October 16

Observer: D. Thompson

Telescope Operator: S. Allanson

Astronomers from Italy: Andrea Rossi, Simona Paiano

Instrument: LUCI, MODS

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 and E. Marini) connected from Italy.

At the sunset the sky is clear and conditions are good, we open the dome.

Night duration (12 degree - twilight) 01:45 - 12:30 UT = **10 h 45m**

Observing time: 10h 15min (95%)*

Weather time loss: h 6 min (1%)*

Technical time loss: h 24 min (4%)*

Data Summary

Project_ RUN	Objects	Instru ment	Configur ation	ExpTime /Time_to t	Images	Notes
Izzo	SN2021ymj	LUCI1+ 2	J H ima	0.05+0.1 h	luci1.20211016.000 1-0014,luci2.20211 016.0001-0014	DIMM~ 1"
Giannini	gaia20c wd	LUCI1+ 2	J+H+Ks ima	0.1+0.1+ 0.1h	luci1.0015-0029,luc i2.0015-0029	DIMM1. 5"
Giannini	gaia20c wd	LUCI1+ 2	zJ+HK G200 0.75"	0.5+0.5h	luci1.0034-0041,luc i2.0034-0041	DIMM1. 5-2"
Telluric	HD189411	LUCI1+ 2	zJ+HK G200 0.75"		luci1.0045-0052,luc i2.0045-0052	for Giannin i
Giannini	gaia18dvy	LUCI1+ 2	zJ+HK G200 0.75"	0.5+0.5h	luci1.0057-0064,luc i2.0057-0064	DIMM1. 5-2"
Giannini	gaia18dvy	LUCI1+ 2	J+H+Ks ima	0.1+0.1+ 0.1h	luci1.0065-0079,luc i2.0065-0079	DIMM ~2-3"
Izzo	SN2021zfw	LUCI1+ 2	J H ima	0.05+0.1 h	luci1.0080-0097,luc i2.0080-0097	1.5-2"
Giannini	gaia21bkw	LUCI1+ 2	J+H+Ks ima	0.1+0.1+ 0.1h	luci1.0098-0112,luci 2.0098-0112	DIMM ~2-3"
Giannini	gaia21bkw	LUCI1+ 2	zJ+HK G200 0.75"	0.5+0.5h	luci1.0117-00124,lu ci2.0117-0124	DIMM ~ 5" (GS~2. 5")
Telluric	HD22859	LUCI1+ 2	zJ+HK G200 0.75"		luci1.0128-0135,luc i2.0128-0135	for Giannin i
Telluric	BD+493793	LUCI1+ 2	zJ+HK G200 0.75"		luci1.0139-0146,luc i2.0139-0146	for Giannin i

Giannini	Gaia19bpg	LUCI1+ 2	zJ+HK G200 0.75"	0.19+0.4 2h	luci1.0152-0163,luci2.0152-0163	Saturated emission line in the spectrum. We adjusted the script but this does not help. See log for details. DIMM ~ 2.5-3"
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Paiano	4FGLJ0055.7 +4507	MODS1 +2	dual grating	1.3+1.3h	mods1/2b.0002-009 ; mods1/2r.0005-0012	started with seeing= 1.7 and improved during the observation down to 1.2". Taken two exposures of 10mins more
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Standard	G191-B2	MODS1 +2	dual grating		mods1/2b.0010-0012 ;	for Paiano
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					mods1/2r.0015-001 7	
Paiano	4FGLJ0302.5 +3354	MODS1 +2	dual grating	0.75+0.7 5h	mods1/2b.0013-00 15 mods1/2r.0021-002 3	Seeing ; ~ 0.8-1" (GS)
Rossi	GRB210919A	MODS1 +2	dual grating	0.5+0.5h	mods1/2b.0016-00 17 mods1/2r.0027-002 8	Seeing ; ~ 0.9" (GS)
Standard	GD71	MODS1 +2	dual grating	0.15+0.1 5h	mods1/2b.0018-00 20 mods1/2r.0031-003 3	for ; Rossi

Detailed log by D. Thompson at this link:
<https://drive.google.com/file/d/1wzM3aE1deAiVf6hzWnQMR0ElfoRYLO3j/view?usp=sharing>

INAF queue observing, 2021 November 02 - November 03

Observer: O. Kuhn

Telescope Operator: S. Allanson

Astronomers from Italy: Simona Paiano, Ester Marini, Andrea Rossi

Instrument: PEPSI, MODS

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 and E. Marini) connected from Italy.

At the sunset the sky is cloudy. We open. The sky is clear with good conditions starting from 3 UT

Night duration (12 degree - twilight) 01:20 - 12:45 UT = **11 h 25m**

Observing time: 11 h 15 min (98%)*

Weather time loss: 0 h 10 min (2%)*

Technical time loss: 0 h 00 min (0%)*

Data Summary

Project _RUN	Objects	Instru ment	Configu ration	ExpT ime	Images	Notes
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				/Time_tot		
CALIB	slitlessflat	MODS 1-2	dualgrating		mods[1,2]r.0003-000 7 -mods[1,2]b.0003-00 12	Biazzo
CALIB	arcs	MODS 1-2	dualgrating		mods[1,2]r.0008-001 0 -mods[1,2]b.0013-00 15	Paiano
Cusano	Gaia21efs	PEPSI 1-2	D300/C D2-5			S/N(blue) ~60, S/N(red) ~250, seeing~0.5"
Ripepi	UCAC4 592-100381	PEPSI 1-2	D300/C D3-5			S/N(blue) ~70, S/N(red) ~220
Ripepi	NSVS 8394284	PEPSI 1-2	D300/C D3-5			S/N(blue) ~70, S/N(red) ~220
Ripepi	NSVS 1246854	PEPSI 1-2	D300/C D3-5			S/N(blue) ~170, S/N(red) ~260
Clementini	TYC 3970-844-1	PEPSI 1-2	D300/C D2-4			S/N(blue) ~90, S/N(red) ~190
Clementini	GaiaDR2 1982512068675148 032	PEPSI 1-2	D300/C D2-4			S/N(blue) ~70, S/N(red) ~110

Rainer	HAT-P-38	PEPSI	D300/C			S/N(blue)
		1-2	D1-4			~40,
						S/N(red)
						~210,
						seeing
						~0.6-0.7"

Rainer	HAT-P-38	PEPSI	D300/C			S/N(blue)
		1-2	D2-5			~105,
						S/N(red)
						~260

Rainer	HAT-P-38	PEPSI	D300/C			S/N(blue)
		1-2	D3-6			~XXX,
						S/N(red)
						~245

Rainer	K2-77	PEPSI	D300/C			S/N(blue)
		1-2	D1-4			~35,
						S/N(red)
						~220,
						seeing~0
						.6-0.7"

Rainer	K2-77	PEPSI	D300/C			S/N(blue)
		1-2	D2-5			~80,
						S/N(red)
						~275

Rainer	K2-77	PEPSI	D300/C			S/N(blue)
		1-2	D3-6			~150,
						S/N(red)
						~250,
						seeing~0
						.8"

Ripepi	NSVS 4269811	PEPSI	D300/C			S/N(blue)
		1-2	D3-5			~62,
						S/N(red)
						~197

Ripepi	UCAC4 660-036351	PEPSI	D300/C			S/N(blue)
		1-2	D3-5			~115,

							S/N(red) ~234
Ripepi	UCAC4 593-018905	PEPSI 1-2	D300/C D3-5				S/N(blue) ~219, S/N(red) ~388
Clemeni tini	Gaia 9807730349275031 04	DR2 1-2	PEPSI D300/C D2-4				S/N(blue) ~80, S/N(red) ~197
Bellazzi ni	Gaia 9845321621028245 76	DR2 1-2	PEPSI CD3-6				S/N(blue) ~96, S/N(red) ~160
Bellazzi ni	Gaia 3106245765814683 264	DR2 1-2	PEPSI CD3-6				S/N(blue) ~98 S/N(red) ~146
Bellazzi ni	Gaia 6707781310443717 12	DR2 1-2	PEPSI CD3-6				S/N(blue) ~84, S/N(red) ~134
Biazzo	Sh2-284 F3	MODS 1+2	MOS dual ID59071 8	0.5+ 0.5h	mods1r.0015-17,mo ds1b.0019-21,mods2 r.0014-16,mods2b.0 020-22		persisten ce in 1st spectra
Biazzo	Sh2-284 F3	MODS 1+2	MOS dual g,r	0.02 h	mods1r.0018-24,mo ds1b.0022-28,mods2 r.0017-23,mods2b.0 023-29		DIMM ~0.8"
Biazzo	Sh2-284 F4	MODS 1+2	MOS dual ID59092 5	0.5+ 0.5h	mods1r.0029-31,mo ds1b.0029-31,mods2 r.0028-30,mods2b.0 030-32		a bit of persisten ce in 1st spectra

Biazzo	Sh2-284 F4	MODS 1+2	MOS dual g,r	0.02 h	mods1r.0032-38,mo ds1b.0032-38,mods2 r.0031-37,mods2b.0 033-39	DIMM ~0.8"
STD	GD71	MODS 1+2	dualgrati ng		mods1r.0041-43,mo ds1b.0039.41,mods2 r.0040-42,mods2b.0 040-42	for Biazzo
CALIB	BIAS				mods1r.0044-52,mo ds1b.0042-50; mods2r.0043-51, mods2b.0043-51	
CALIB	twilight flats	MODS 1+2	g+r		mods1r.0049-54,mo ds1b.0047-51; mods2r.0048-53,mo ds2b.0048-53	best for imaging
CALIB	arcs,flat	MODS 1-2	MOS dualgrati ng ID 590718		mods1r.0059-67,mo ds1b.0057-65; mods2r.0058-66,mo ds2b.0058-66	Biazzo F3 repeated some, see log
CALIB	arcs,flat	MODS 1-2	MOS dualgrati ng ID 590925		mods1r.0068-94,mo ds1b.0066-80; mods2r.0067-75,mo ds2b.0067-75	Biazzo F4 repeated some, see log
CALIB	slitflat	MODS 1-2	dualgrati ng 5arcsec		mods1r.0095-97,mo ds1b.0082-87; mods2r.0076-78,mo ds2b.0076-81	
CALIB	BIAS	MODS 1+2	3kx3k		mods1r.0098-102,m ods1b.0088-92; mods2r.0079-83,mo ds2b.0082-86	imaging

Detailed log by Olga Kuhn at this link:

https://drive.google.com/file/d/1iPmoWIY1dCRWMhpauH0KPfzebA_ssiE5/view?usp=sharing

INAF queue observing, 2021 November 04 - November 05

Observer: O. Kuhn

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano, Simona Paiano, Ester Marini

Instrument: MODS

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 and E. Marini) connected from Italy.

At the sunset the sky is clear, starting observations at twilight.

Night duration (12 degree - twilight) 01:20 - 12:45 UT = **11 h 25m**

Observing time: h min (100%)*

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

Technical time loss: 0 h 00 min (0%)*

Data Summary

Project_ RUN	Objects	Instrum ent	Configura tion	ExpTi me /Time_t ot	Images	Notes
Standard	Feige 110	MODS1 -2	dualgrating		mods1-2.202 11105[b4-6/r7 -9]	
Paiano	4FGLJ22 25	MODS1 -2	imaging r,i	0.2h/0. 2h	mods1-2.202 11105[r]	seeing 0.6"
Paiano	4FGLJ22 25	MODS1 -2	dualgrating	2/2h	mods1-2.202 11105[b/r]	completed seeing~0.7"
Giannini	gaia18dvy	MODS1 -2	dualgrating	0.5/0.5 h	mods1-2.202 11105[b/r]	completed
Giannini	gaia18dvy	MODS1 -2	imaging	0.03/0. 03h	mods1-2.202 11105[b/r]	completed
Standard	Feige 110	MODS1 -2	redgrating		mods1-2.202 11105[b4-6/r7 -9]	for Saracco

Saracco	RCS0221 -03	MODS1 -2	MOS redgrating ID560500	8h/8h	mods1r-2r.20 211105[0037- 0052,0038-00 53]	m1 completed
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Biazzo	Sh2-284 F06	MODS1 +2	MOS dual ID591758	1.3/1.3 h	mods1b.0018 -21, mods1r.0056- 0059 ; mods2b.0018 -0021, mods2r.0057- 0060	DIMM ~0.7", a bit of persistence, we took one more exposure of 600s
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Biazzo	Sh2-284 F06	MODS1 +2	MOS dual g,r	0.07/0. 07h	mods1b.0022 -0025, mods1r.0060- 0063 ; mods2b.0022 -0025, mods2r.0061- 0064	FWHM on guider ~ 0.6"
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Rossi	GRB2110 23A	MODS1 +2	imaging g,r	0.13/0. 13h	mods1b.0026 -0027, mods1r.0064- 65 ; mods2b.0026 -0027, mods2r.0065- 0066	seeing~0.7-1"
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Rossi	GRB2110 23A	MODS1 +2	dualgrating	2/2h	mods1b.0028 -0031, mods1r.0071- 0074 ; mods2b.0028 -0031, mods2r.0072- 0075	seeing~0.7" WFS
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Rossi	GRB2110 23B	MODS1 +2	imaging g+r	0.3/0.3 h	mods1b.0032 -0034, mods1r.0075- 0077 ; mods2b.0032 -0034, mods2r.0076- 0078	seeing~0.6" WFS, same trail on all 4 images from the first position, we took a third exposure of 180s
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Detailed log by Olga Kuhn at this link:

https://drive.google.com/file/d/1iz5IS_77T616Fef7a-HqGfeCmJGSgntU/view?usp=sharing

INAF queue observing, 2021 November 05 - November 06

Observer: O. Kuhn

Telescope Operator: S. Allanson

Astronomers from Italy: Felice Cusano, Simona Paiano, Ester Marini

Instrument: MODS

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 and E. Marini) connected from Italy.

At the sunset the sky is clear, starting observations at twilight.

Night duration (12 degree - twilight) 01:20 - 12:45 UT = **11 h 25m**

Observing time: 10h 25min (91%)*

Weather time loss: 1h 0min (9%)*

Technical time loss: h min (0%)*

Data Summary

Project_R UN	Objects	Instrume nt	Configurati on	ExpTime /Time_to t	Images	Notes
Standard	Feige 110	MODS1- 2	dualgrating		mods1/2b.000 3-0005 ; mods1r.0020- 0022 ; mods2r.0021- 0023]	for Giannini

Standard	Feige 110	MODS1-2	redgrating		mods1r.0023-0025 ; mods2r.0024-0026	for Saracco
Giannini	Gaia20c wd	MODS1-2	dualgrating	0.5/0.5h	mods1/2b.0006-0007, mods1/2r.0030-0031	seeing ~0.7" on guider
Giannini	Gaia20c wd	MODS1-2	imaging	0.02h	mods1/2b.00XX-XX, mods1r.0035-0037 ; mods2r.00XX-00XX	saturates with 60s exposure. Reduced to 10s
Giannini	Gaia17b pi	MODS1-2	dualgrating	0.5/0.5h	mods1/2b.0014-15, mods1r.0044-0045 ; mods2r.0041-0042	seeing ~0.7" on guider
Giannini	Gaia17b pi	MODS1-2	imaging	0.1/0.1h(b); 0.12/0.1h(r)	mods1/2b.0016-18, mods1r.0035-0037 ; mods2r.0043-0045	Repeat exposures at z and i with 20s
Giannini	Gaia19b pg	MODS1-2	dualgrating	0.3/0.3h	mods1/2b.0019-0020, mods1r.0062-0063 ; mods2r.0059-0060	seeing ~0.7-0.8" on guider
Giannini	Gaia19b pg	MODS1-2	imaging	0.02h	mods1/2b.0021-0023, mods1r.0064-0066 ;	Script edited with exptime 10s

						mods2r.0061-0063	
Saracco	RCS0221-03	MODS1-2	MOS redgrating IDID565554		8.5/8h	mods1r.[0054-0058,0071-0082] ; mods2r.[0051-0055,0068-0079]	some exp are affected by clouds (see below) so we took one more exp
Biazzo	Sh2-284 F09	MODS1+ 2	MOS dual ID593011		2/2h	mods1b.0024-26, mods1r.0086-0088 ; mods2b.0024-0026, mods2r.0084-0086	seeing~0.8-0.6"
Biazzo	Sh2-284 F09	MODS1+ 2	MOS g,r	dual	0.07/0.07 h	mods1/2b.0027-0030 ; mods1r.0089-0092 , mods2r.0087-0090	seeing~0.5"
Rossi	GRB21091 9A	MODS1+ 2	dualgrating		0.5h	mods1b.0031, mods1r.0096 ; mods2b.0031, mods2r.0094	seeing~1" , PI asked to do only one exp of 900s
Rossi	GRB21102 3B	MODS1+ 2	dualgrating		1.3/1.5h	mods1/2b.0032-0034, mods1/2r.0101-0103	seeing~1.2" on guider, stopped 5mins before due to

sky
bright.

Detailed log by Olga Kuhn at this link:

<https://drive.google.com/file/d/1F8Pg0BaBVemxSECKuXK0bSrgQFGvJ12Z/view?usp=sharing>

Other notes

Exp Times for Giannini's imaging are related to non-saturated images.

Saracco's observations are affected by passing clouds. In particolare the exposures:

mods1r.0073 ; mods2r.0069-0070 ; mods1r.0076 ; mods2r.0073 (drop in the flux in the middle of the exposure for the latter two)

INAF queue observing, 2021 November 06 - November 07

Observer: O. Kuhn

Telescope Operator: S. Allanson

Astronomers from Italy: Andrea Rossi, Felice Cusano

Instrument: MODS, LBC

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 and E. Marini) connected from Italy.

At the sunset the sky is clear, starting observations at twilight.

Night duration (12 degree - twilight) 01:20 - 12:45 UT = **11 h 25m**

Observing time: h min (%)*

Weather time loss: h 0min (%)*

Technical time loss: h min (%)*

Data Summary

Project_ RUN	Objects	Instrum ent	Configura tion	ExpTime /Time_to t	Images	Notes
Giannini	Gaia20eae	MODS1 -2	dualgratin g LS 1.2"	0.5h	mods1/2r.0016- 17, mods1/2b.0001- 02	DIMM< 1"
Giannini	Gaia20eae	MODS1 -2	dualgratin g ugriz	0.1h	mods1/2r.0018- 20,	DIMM< 1"

					mods1/2b.0003-05	
Standard	Feige 110	MODS1 -2	dualgratin g LS 5"		mods1/2r.0024-26, mods1/2b.0006-08	
Mannucci	J011100.64+001 807.1	MODS1 -2	dualgratin g LS 0.6"		mods1r.0031-32 ,mods2r.0030-31, mods1/2b.0009-10	DIMM~ 1" 1st visit
Mannucci	J012534.99+38 5046.9	MODS1 -2	dualgratin g LS 0.6"		mods1r.0037-38 ,mods2r.0035-36, mods12b.0011-12	DIMM~ 1"
Mannucci	J011302.70-100 615.9	MODS1 -2	dualgratin g LS 0.6"		mods1r.0043-44 ,mods2r.0040-41, mods12b.0013-14	DIMM~ 1" 1st visit
Mannucci	J011100.64+001 807.1	MODS1 -2	dualgratin g LS 0.6"		mods1r.0049-50 ,mods2r.0045-46, mods12b.0015-16	DIMM< 1" 2nd visit
Mannucci	J011302.70-100 615.9	MODS1 -2	dualgratin g LS 0.6"		mods1r.0055-56 ,mods2r.0050-51, mods12b.0017-18	DIMM~ 0.8" 2nd visit
Mannucci	J011100.64+001 807.1	MODS1 -2	dualgratin g LS 0.6"		mods1r.0061-62 ,mods2r.0056-57, mods12b.0019-20	3rd visit

Mannucci	J011302.70-100 615.9	MODS1 -2	dualgrating LS 0.6"		mods1r.0066-67 ,mods2r.0061-6 2, mods12b.0021- 22	DIMM~ 0.8" 3rd visit
Mannucci	J011100.64+001 807.1	MODS1 -2	dualgrating LS 0.6"		mods1r.0071-72 ,mods2r.0066-6 7, mods12b.00-22- 23	4th visit
Mannucci	J011302.70-100 615.9	MODS1 -2	dualgrating LS 0.6"		mods1r.00,mod s2r.00, mods12b.00	DIMM~ 1.2" 4th visit
Mannucci	J011100.64+001 807.1	MODS1 -2	dualgrating LS 0.6"			5th visit
Mannucci	J011302.70-100 615.9	MODS1 -2	dualgrating LS 0.6"			5th visit
Belladitta	J0309	LBC-Bin o	r,i+z	1.5h,1h+ 0.5h		fwhm 0.7", very good seeing, high sky counts in z
Palazzi	SLSN2020abjc	LBC-Bin o	U,r,i,z	0.6h		still some high backgro und
Rossi	GRB221024	LBC-Bin o	r,z	0.67h		
Giunta	2014FO47	LBC-Bin o	g,r,i,z	0.12h		

Giunta	ztf	LBC-Bin o	g,r,i,z	0.03h			
Calibratio n	sky flat	LBC-Bin o					
Calibratio n	flat	MODS- Bino				for 0.6" slit	

Detailed log by Olga Kuhn at this link:

<https://drive.google.com/file/d/1E0vRbS09sFpMu4EZkydEC0MzaTSWWgij/view?usp=sharing>

INAF queue observing, 2021 December 20 - December 21

Observer: O. Kuhn

Telescope Operator: S. Allanson

Astronomers from Italy: Andrea Rossi, Felice Cusano, Simona Paiano and E. Marini

Instrument: MODS

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 and E. Marini) connected from Italy.

We can not use LUCI1 for all the observing run due to a problem with the rotator. LUCI1-AO observations are not possible.

At the sunset the sky is clear, starting observations at twilight. Increasing clouds during the night, stop observations for couds at 4:35.

Opening again at 06:11, then variable clouds all the night.

Night duration (12 degree - twilight) 01:15 - 13:20 UT = **12 h 05m**

Observing time: 8h 9min (67.5%)*

Weather time loss: 3h 56min (32.5%)*

Technical time loss: h min (%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Calib	arc+flats	MODS1+2	dualgrat			BIAZZO masks
Calib	arcs	MODS1+2	dualgrat			
Calib	slitless	MODS1+2	dualgrat			slitless flats
Calib	sliflats	MODS1+2	dualgrat			5",0.6".0.8"
STD	Feige110	MODS1+2	dualgrating			
Mannucci	J034319	MODS1+2	dualgrating slit 0.6"			4 times, we did not have the time to take 5th due to weather time loss

Mannucci	J012534	MODS1+2	dualgrating slit 0.6"			4 times
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Biazzo	ssh-284 F08	MODS1+2	MOS ID582936	dual b 1.3h/1.3h ; r 1.7h/1.7h	mods1-2b.0 020-0022,00 27; mods1r.005 8-0061,0067 ; mods2r.005 7-0060,0066	Seeing ~0.8-1". See additional comment below **
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Biazzo	ssh-284 F08	MODS1+2	MOS dual g,r	0.07h/0.07 h	mods1-2b.0 023-0026; mods1r.006 2-0065, mods2r.006 1-0064	Seeing ~ 1"
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Biazzo	ssh-284 F05	MODS1+2	MOS ID594959	dual 1.3h/1.3h	mods1-2b.0 028-0031; mods1r.007 1-0074; mods2r.007 0-0073	Seeing ~ 0.6-0.8"; we have ~ 2 mag of extinction (mostly on 1st exp) and clouds, we decided to take a 4th exp of 600s
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Biazzo	ssh-284 F05	MODS1+2	MOS dual g,r	0.07h/0.07 h	mods1-2b.0 032-0035; mods1r.007 5-0078, mods2r.007 4-0077	Seeing ~ 0.8-0.9"
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Additional comments:

** We decided to take a 4th exposure of 600s due to clouds and scattered moonlight, but we accidentally took the 4th spec exposure on the red side only. We resend the acq script and we proceeded to take a single set of exposures, blue & red.

Detailed log by Olga Kuhn at this link:
https://drive.google.com/file/d/14nrLFCgCyieBLBCIGP-bMuW-_3hncHbH/view?usp=sharing

Detailed log for MODS calibration by Olga Kuhn at this link:
https://drive.google.com/file/d/1SoyZ2vLLTniPEJIS9BwD9A6k8mb8S_PB/view?usp=sharing

INAF queue observing, 2021 December 21 - December 22

Observer: O. Kuhn

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: Andrea Rossi, Felice Cusano, E. Marini and Simona Paiano

Instrument: PEPSI

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 and E. Marini) connected from Italy.

At the sunset the sky is completely covered by clouds, we stay closed.

At ~8:00 the sky starts to clear out, we open and keep observing with PEPSI for the rest of the night.

Night duration (12 degree - twilight) 01:15 - 13:20 UT = **12 h 05m**

Observing time: 4h 55min (40%)*

Weather time loss: 7h 06min (57%)*

Technical time loss: 0h 22min (3%)*

Data Summary

Project_RUN	Objects	Instrument	Configuration	ExpTime/Time_tot	Images	Notes
Bellazzini	Gaia 8340560587414144 00	DR2	PEPSI1-2	D300/CD3-6		S/N-red ~130,-blue~70
Bellazzini	Gaia 3846427888295815 552	DR2	PEPSI1-2	D300/CD3-6		S/N-red ~220,-blue~190. increased the exposure to 10 mins because of the clouds

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~360,-bl ue~240, 10mins exp (clouds)
	7819315110026964						
	48						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~190,-bl ue~110
	3857833427353671						
	808						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~170,-bl ue~100
	4032595650923124						
	864						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~200,-bl ue~125
	7703968738187234						
	56						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~220,-bl ue~140
	3917538905901096						
	192						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~160,-bl ue~80
	4007474181050310						
	016						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~290,-bl ue~190
	3946087931475890						
	560						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~210,-bl ue~130
	1456142282990484						
	608						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~110,-bl ue~60
	4003355955952701						
	696						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~110,-bl ue~70, the star was off fiber on sx side for a while, but the spectru m does not look bad
	3960271214861103						
	616						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~150,-bl ue~80
	3735399547720979						
	456						

Bellazzini	Gaia	DR2	PEPSI1-2	D300/CD3-6			S/N-red ~180,-bl ue~130, 15mins exposur e
	1461607268096999						
	680						

Bellazzini Gaia DR2 PEPSI1-2 D300/CD3-6 S/N-red
1538656541845737 ~180,-bl
856 ue~110 ,
20mins
of exp.
Star
was off
fiber
again on
the sx
side, but
S/N is
good

Bellazzini Gaia DR2 PEPSI1-2 D300/CD3-6 S/N-red
3643857920443831 ~180,-bl
168 ue~130,
15mins
of exp

Bellazzini Gaia DR2 PEPSI1-2 D300/CD3-6 S/N-red
1475828798168058 ~142,-bl
624 ue~90,
15mins
of exp,
exposur
e
stopped
at
1.5min
left
because
the star
jumped
off the
fiber

Detailed log by Olga Kuhn at this link:
https://drive.google.com/file/d/1sPptz_1OpgDc3ScaRpo3MuhRBcfdTqc5/view?usp=sharing

INAF queue observing, 2021 December 22 - December 23

Observer: O. Kuhn

Telescope Operator: D. Gonzalez-Huerta

Astronomers from Italy: Simona Paiano, E. Marini, Andrea Rossi and Felice Cusano

Instrument: PEPSI

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 and E. Marini) connected from Italy.

At the sunset the sky is very cloudy, but fast variable.

At 00:44 we are opening and keep observing with PEPSI for the rest of the night.

Night duration (12 degree - twilight) 01:15 - 13:20 UT = **12 h 05m**

Night duration for INAF (12 degree - handover) 01:15 - 07:12 UT = **05 h 57m**

Observing time: 2 h 2 min (34.2%)*

Weather time loss: 3 h 55 min (65.8%)*

Technical time loss: h min (%)*

Data Summary

Project_R UN	Objects	Instrume nt	Configurati on	ExpTim e /Time_t ot	Image s	Notes

Rainer	HAT-P-65	PEPSI1-2	D300/CD1-4			S/N-red~ 130,-blue ~30, high sky backgrou nd
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Rainer	HAT-P-65	PEPSI1-2	D300/CD2-5			S/N-red~ 154,-blue ~53
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Rainer	HAT-P-65	PEPSI1-2	D300/CD3-6			S/N-red~ 140,-blue ~80
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Clementini	Gaia	DR2	PEPSI1-2	D300/CD2-4		S/N-red~ 90,-blue~
	1982512068675148 032					

Clementini	TYC 3970-844-1	PEPSI1-2	D300/CD2-4			S/N-red~ 68,-blue~ , difficulty in pointing, much cloud
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Detailed log by Olga Kuhn at this link:

<https://drive.google.com/file/d/1XRdION1UyiNbjSGSuqjrTb7LISEZoSMI/view?usp=sharing>