

**Looking for needles in a
sandbox: chasing blazars with
the Rubin Observatory Legacy
Survey of Space and Time**



Report of Contributions

Contribution ID: 1

Type: **not specified**

AGN detection and characterisation through optical variability: the lesson learned from VST surveys

Tuesday, February 18, 2020 5:00 PM (30 minutes)

I will present the studies on variability detection of AGNs based on the VST surveys of the CDFS and COSMOS region, that are compatible in depth to the expectations from LSST. I will discuss the completeness and contamination of variability-selected samples in order to characterise the AGN population and understand the selection biases with respect to optical/infrared/X-ray selection methods.

Primary author: PAOLILLO, Maurizio (Università di Napoli Federico II)

Presenter: PAOLILLO, Maurizio (Università di Napoli Federico II)

Session Classification: Presentazione di progetti scientifici

Contribution ID: 2

Type: **not specified**

High redshift blazars with LSST

Tuesday, February 18, 2020 2:50 PM (30 minutes)

The discovery of high- z blazars ensures the census, free from obscuration effects, of supermassive black holes (SMBHs) hosted by radio-loud active galactic nuclei (AGNs) in the early Universe, and provides strong and critical constraints on the accretion mode, mass and spin of the seed of SMBHs. Blazars are rare sources: only 8 blazars have been discovered to date at $z > 5$, with the most distant being at $z = 6.1$ (Belladitta et al. 2020, A&A letter submitted).

Selecting high- z blazar candidates requires a multi-wavelength approach and the use of large area surveys that cover almost the total of the entire sky at a reasonable depth. In this talk I will show how the combination of the Large Synoptic Survey Telescope data with current (e.g. SUMSS, NVSS, TGSS) and future (e.g. EMU) radio all-sky surveys, will significantly increase the number of high- z blazars (~ 100 at $z > 5$, with 15 – 20 expected at $z > 6$) pushing the limit up to $z \sim 8$. This will allow the most accurate estimate of the space density of radio-loud AGNs population in the early Universe, also well within the re-ionization epoch.

Primary author: Ms BELLADITTA, Silvia (INAF OA-Brera / Università degli Studi dell'Insubri)

Co-authors: Dr CACCIANIGA, Alessandro (INAF OA-Brera); Dr MORETTI, Alberto (INAF - OA Brera)

Presenter: Ms BELLADITTA, Silvia (INAF OA-Brera / Università degli Studi dell'Insubri)

Session Classification: Presentazione di progetti scientifici

Contribution ID: 3

Type: **not specified**

Benvenuto & Presentazione

Tuesday, February 18, 2020 2:00 PM (20 minutes)

Presenter: Dr RAITERI, Claudia M.

Session Classification: Introduzione su LSST e data policy

Contribution ID: 6

Type: **not specified**

Introduzione ad LSST

Tuesday, February 18, 2020 2:20 PM (30 minutes)

Presenter: Dr BALMAVERDE, Barbara

Session Classification: Introduzione su LSST e data policy

Track Classification: Introduzione ad LSST

Contribution ID: 7

Type: **not specified**

AGN

Tuesday, February 18, 2020 3:20 PM (30 minutes)

Presenter: Dr BONGIORNO, Angela

Session Classification: Presentazione di progetti scientifici

Contribution ID: 8

Type: **not specified**

Blazars con LSST

Tuesday, February 18, 2020 4:30 PM (30 minutes)

Presenter: Dr RAITERI, Claudia M.

Session Classification: Presentazione di progetti scientifici

Contribution ID: 9

Type: **not specified**

Benvenuto & Presentazione

Presenter: Dr RAITERI, Claudia M.

Session Classification: Introduzione su LSST e data policy

Contribution ID: **10**

Type: **not specified**

Application of machine learning algorithms to astrophysical problems

Wednesday, February 19, 2020 9:30 AM (30 minutes)

Presenter: Dr TRAMACERE, Andrea

Session Classification: Tecniche avanzate di data analysis (machine learning...)

Contribution ID: 11

Type: **not specified**

Deep learning per applicazioni in spazio

Wednesday, February 19, 2020 10:00 AM (45 minutes)

Presenter: Dr MAGLI, Enrico

Session Classification: Tecniche avanzate di data analysis (machine learning...)

Contribution ID: 12

Type: **not specified**

Machine learning for smart and meaningful data analysis

Wednesday, February 19, 2020 10:45 AM (30 minutes)

Presenter: Dr DRUETTO, Alessandro

Session Classification: Tecniche avanzate di data analysis (machine learning...)

Contribution ID: **13**

Type: **not specified**

SSDC

Wednesday, February 19, 2020 11:55 AM (30 minutes)

Presenter: Dr ANTONELLI, Lucio Angelo

Session Classification: Tecniche avanzate di data analysis (machine learning...)

Contribution ID: 14

Type: **not specified**

AGN con LSST & Gaia

Wednesday, February 19, 2020 12:25 PM (30 minutes)

Presenter: Dr CARNERERO MARTIN, Maria Isabel

Session Classification: Multifrequenza & Sinergie

Contribution ID: 15

Type: **not specified**

MAGIC & CTA

Wednesday, February 19, 2020 2:00 PM (30 minutes)

Presenter: Dr STAMERRA, Antonio

Session Classification: Multifrequenza & Sinergie

Contribution ID: **16**

Type: **not specified**

ASTRI

Wednesday, February 19, 2020 2:30 PM (30 minutes)

Presenter: Dr ANTONELLI, Lucio Angelo

Session Classification: Multifrequenza & Sinergie

Contribution ID: 17

Type: **not specified**

X & FERMI

Wednesday, February 19, 2020 3:00 PM (30 minutes)

Presenter: Dr D'AMMANDO, Filippo

Session Classification: Multifrequenza & Sinergie

Contribution ID: **18**

Type: **not specified**

ALMA Blazars

Wednesday, February 19, 2020 3:30 PM (30 minutes)

Presenter: Dr PAGGI, Alessandro

Session Classification: Multifrequenza & Sinergie

Contribution ID: **19**

Type: **not specified**

TREX

Wednesday, February 19, 2020 4:00 PM (20 minutes)

Presenter: Dr BALMAVERDE, Barbara

Session Classification: Multifrequenza & Sinergie

Contribution ID: **20**

Type: **not specified**

LSST

Wednesday, February 19, 2020 4:30 PM (30 minutes)

Presenter: Dr BIANCO, Federica

Session Classification: Proposte di in-kind

Contribution ID: 21

Type: **not specified**

In kind: Probing high-z AGN and galaxies with LSST

Thursday, February 20, 2020 9:30 AM (30 minutes)

Presenter: Dr BONGIORNO, Angela

Session Classification: Proposte di in-kind

Contribution ID: 22

Type: **not specified**

In kind: Exploiting the VST legacy for LSST variability studies

Thursday, February 20, 2020 10:00 AM (30 minutes)

Presenter: Dr PAOLILLO, Maurizio

Session Classification: Proposte di in-kind

Contribution ID: 23

Type: **not specified**

In kind: Blazar studies with LSST

Thursday, February 20, 2020 10:30 AM (30 minutes)

Presenter: Dr D'AMMANDO, Filippo

Session Classification: Proposte di in-kind