



BREAKING THE LIMITS

Super-Eddington accretion onto compact objects

Arbatax (OG), Italy, September 19-23, 2016

Local Organizing Committee

Matteo Bachetti (**chair**), Marta Burgay, Tiziana Coiana, Elise Egron, Noemi Iacolina, Andrea Tarchi, Alessio Trois, Paolo Soletta

Scientific Organizing Committee

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Event organization and logistics:



Monday, September 19th 2016

	8:30-9:30	Registration
1. Accretion and ejection Physics		Chair: Andrew King
	9:30-10:00	Alexander Sadowski: <i>Simulating accretion flows - from the lowest to the highest accretion rates</i>
	10:00-10:15	Matteo Bugli: <i>Non-ideal GRMHD simulations of thick accretion disks around black holes: connecting small and large scales</i>
	10:15-10:30	Bhupendra Mishra: <i>Thermal instability (or not?) in three-dimensional, global, radiative GRMHD simulations of geometrically thin discs</i>
	10:30-11:00	Coffee break
	11:00-11:15	Kohei Inayoshi: <i>Hyper-Eddington accretion flows onto massive black holes</i>
	11:15-11:30	Salvatore Cielo: <i>Bursty AGN jets in compact galaxies, from 3D simulations</i>
	11:30-11:45	Ileyk El Mellah: <i>Numerical simulations of wind accretion onto compact objects : a multi-scale problem</i>
	11:45-12:00	Benny Trakhtenbrot: <i>New Constraints on the Radiative Efficiencies of the Highest-Redshift Quasars</i>
	12:00-12:30	Discussion - Alexander Sadowski
	12:30-15:00	Lunch break
2. Black hole growth and galaxy evolution		Chair: James Reeves
	15:00-15:30	Andrew King: <i>Theory of black hole growth and galaxy evolution</i>
	15:30-16:00	Marcella Brusa: <i>Observations of black hole growth and galaxy evolution</i>
	16:00-16:25	Felix Mirabel: <i>Stellar Black Holes Formed in the Dark</i>
	16:25-16:40	Hannalore Gerling-Dunsmore: <i>Small Seed Black Hole Growth in Various Accretion Regimes</i>
	16:40-17:10	Coffee break
	17:10-17:25	Yuya Sakurai: <i>Hyper-Eddington accretion onto a black hole with super-Eddington luminosity</i>
	17:25-17:40	Alessandro Lupi: <i>Growing massive black holes via super-critical accretion of stellar mass seeds</i>
	17:40-17:55	Stergios Amarantidis: <i>The earliest accreting supermassive black holes : indications from models for future observations</i>
	17:55-18:10	Laura Blecha: <i>Uncovering the Signatures of Obscured AGN in Mergers</i>
	18:10-18:40	Discussion - Laura Blecha

Tuesday, September 20th 2016

3. Active Galactic Nuclei and Quasars

	Chair: Tracey Jane Turner
09:30-10:00	Chris Reynolds - <i>Supercritical accretion in AGN and Quasars</i>
10:00-10:15	Francesco Tombesi: <i>Evidence for a super-Eddington wind in the ultraluminous infrared galaxy IRAS F11119+3257?</i>
10:15-10:30	James Reeves: <i>Broad Soft X-ray Absorption Lines from the Quasar Wind in PDS 456.</i>
10:30-10:45	Valentina Braitto: <i>Revealing the nature of AGN winds; from the fast to the slow components</i>
10:45-11:00	Kouichi Hagino: <i>Ultra-fast disk wind from a high accretion rate black hole 1H 0707-495</i>
11:00-11:30	Coffee break
11:30-11:45	Francesca Panessa: <i>AGN from low to high Eddington ratios: the X-ray and radio perspective</i>
11:45-12:00	Martin Ward: <i>New evidence that some of the gamma-ray detected Narrow Line Seyfert 1s are Super Eddington Sources</i>
12:00-12:15	Manuela Bischetti: <i>Revealing the heaviest, highly-accreting SMBHs at the heart of hyper-luminous quasars</i>
12:15-12:30	Mary Loli Martínez-Aldama: <i>Exploring the spectral properties of highly accreting quasars at high redshift</i>
12:30-15:00	Lunch break
15:00-15:15	Ken Ebisawa: <i>Origin of spectral variations of Seyfert 1 galaxies</i>
15:15-15:30	Misaki Mizumoto: <i>Characteristic X-ray spectral variations in the iron L-band of IRAS 13224-3089, 1H 0707-495 and NGC 4051</i>
15:30-15:45	Tracey Jane Turner: <i>Measuring Light Echos in NGC 4051</i>
15:45-16:00	Emanuele Nardini: <i>Discovery of transient iron fluorescence in the bare Seyfert Ark 120</i>
16:00-16:15	Yoshiyuki Inoue: <i>Discovery of the millimeter excess in a nearby Seyfert nucleus: Toward unveiling the magnetic field in the vicinity of a supermassive black hole</i>
16:15-16:30	Filippos Koliopanos: <i>In search of the missing population of intermediate mass black holes</i>
16:30-17:00	Coffee break
17:00-17:30	Discussion - Andrew King
18:45-23:30	SOCIAL DINNER



Wednesday, September 21st 2016

5. ULX

Chair: Francesco Tombesi

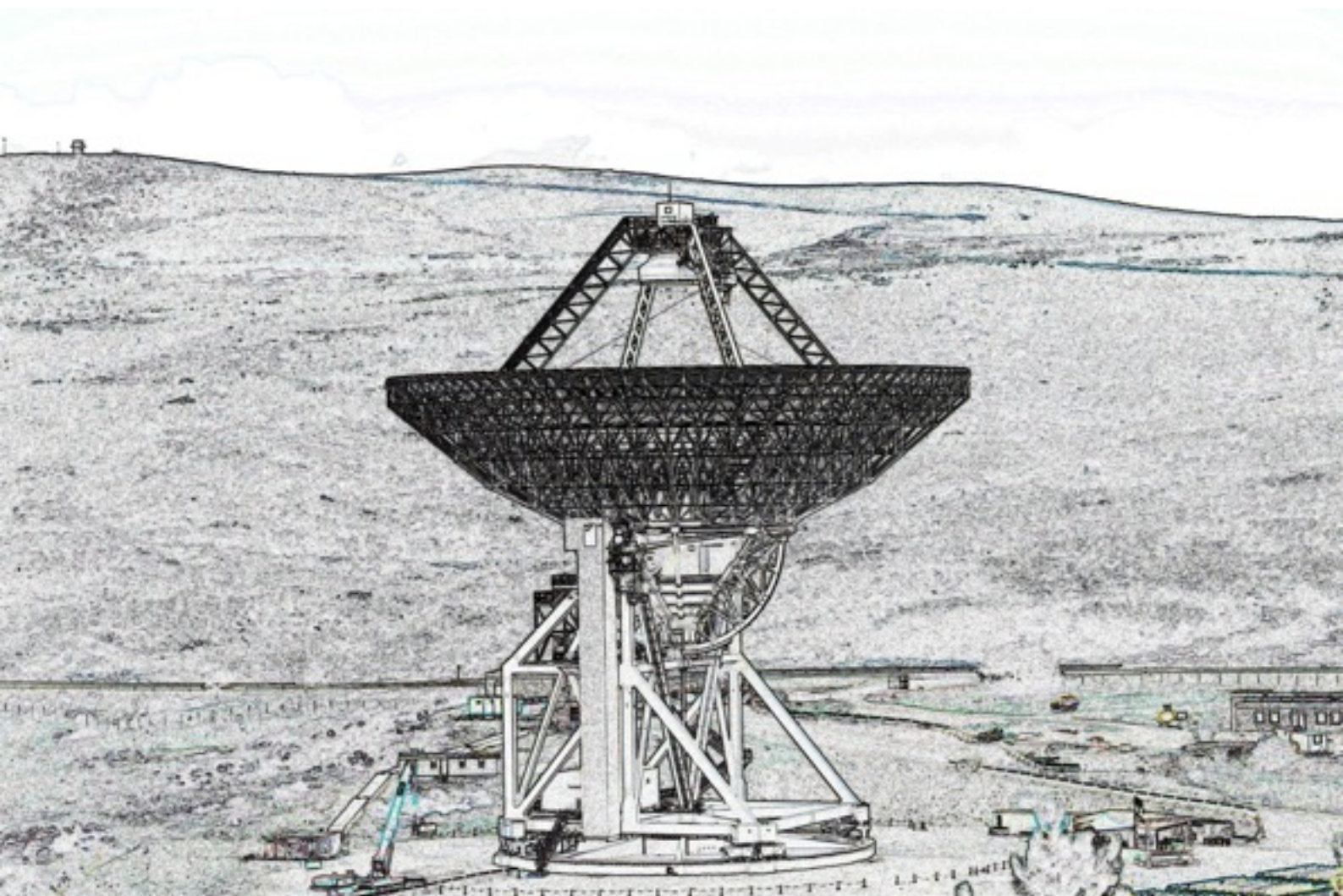
- 9:15-09:45 **Mar Mezcua:** *Multiwavelength observations of ULXs*
- 09:45-10:00 Matteo Bachetti: *M82 X-2: an ultraluminous pulsar*
- 10:00-10:15 Gianluca Israel: *Mining the beat of ULXs*
- 10:15-10:30 Marianne Heida: *NIR spectroscopy of ULXs*
- 10:30-10:45 Kristhell López: *Near Infrared Counterparts of ULXs*
- 10:45-11:00 Hannah Earnshaw: *Soft ULXs at the Eddington Threshold*
- 11:00-11:30 Coffee break

7. New missions

Chair: Matteo Bachetti

- 11:30-12:00 **Didier Barret:** *Athena*
- 12:00-12:30 **Nicolò D'Amico:** *INAF missions and future prospects*
- 12:30-13:00 **Discussion** - Chris Reynolds
- 13:00-14:00 Lunch break

14:00-20:00 **SOCIAL TRIP to the Sardinia Radio Telescope**



Thursday, September 22nd 2016

4. Galactic Super-Eddington sources

	Chair: Marta Burgay
9:30-10:00	Rob Fender: <i>Review talk</i>
10:00-10:15	Katja Pottschmidt: <i>Broad band continuum spectra of accreting pulsars around / above the critical luminosity</i>
10:15-10:30	Rebecca Nealon: <i>QPOs from misaligned accretion discs</i>
10:30-11:00	Coffee break
11:00-11:15	Valery Suleimanov: <i>Super-Eddington accretion luminosity of highly magnetized neutron stars</i>
11:15-11:30	Jamie Court: <i>Exotic Variability in IGR J17091-3624; A Comparison with GRS 1915+105</i>
11:30-12:00	Discussion - Felix Mirabel
12:00-15:00	Lunch break

5. (cont.) Ultraluminous X-ray sources

	Chair: Katja Pottschmidt
15:00-15:30	Ken Ohsuga: <i>Theory of ULXs</i>
15:30-16:00	Matthew Middleton: <i>Observations of ULXs</i>
16:00-16:15	Tim Roberts: <i>At the extremes of super-Eddington accretion</i>
16:15-16:30	Andrew Sutton: <i>Crossing the Eddington limit: investigating accretion disc spectra in ultraluminous X-ray sources and sub-Eddington binaries</i>
16:30-17:00	Coffee break
17:00-17:15	Ciro Pinto: <i>Discovery of powerful winds in ultraluminous X-ray sources</i>
17:15-17:30	Michal Bursa: <i>Effects of geometry and mass accretion rate on thermal spectra of ULX sources</i>
17:30-17:45	Shogo Kobayashi: <i>Comparing ULXs with the other High-Eddington Sources</i>
17:45-18:00	Takumi Ogawa: <i>A unified model for ULXs and ULSS; radiation hydrodynamics simulations of super-Eddington accretion flows</i>
18:00-18:30	Discussion - Tim Roberts

Friday, September 23rd 2016

6. GRBs and TDEs

	Chair: Luigi Piro
9:30-10:00	Stefanie Komossa: <i>Jetted and non-jetted tidal disruption events</i>
10:00-10:30	Andrei Beloborodov: <i>Review of GRBs</i>
10:30-11:00	Coffee break
11:00-11:15	Lixin Jane Dai: <i>Tidal disruption events as a probe of super-Eddington accretion</i>
11:15-11:30	Erin Kara: <i>Relativistic reverberation in a tidal disruption event</i>
11:30-11:45	Ayako Ishii: <i>Coupled Computation of Radiative Transfer with Relativistic Hydrodynamics Relevant to GRB Emission Process</i>
11:45-12:15	Discussion - Luigi Piro
12:15-12:30	Conclusions

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