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

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Event organization and logistics:

Monday, September 19th 2016

8:30-9:30	Registration
9:30-9:45	Welcome

1. Accretion and ejection Physics

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

Tuesday, September 20th 2016

3. Active Galactic Nuclei and Quasars

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

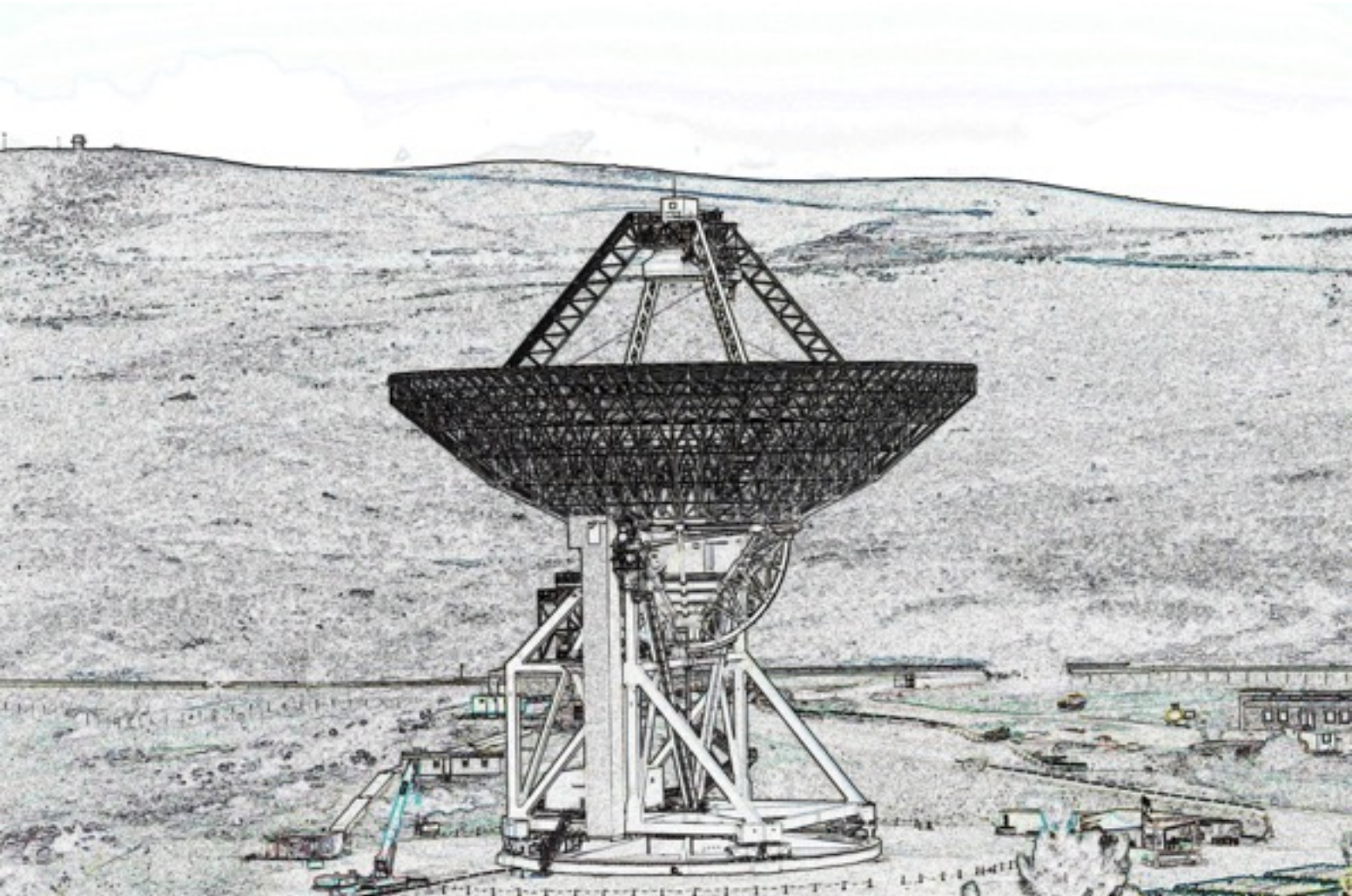
Wednesday, September 21st 2016

5. ULX

	Chair: Francesco Tombesi
9:30-10:00	**Mar Mezcua**: *Multiwavelength observations of ULXs*
10:00-10:15	Matteo Bachetti: *M82 X-2: an ultraluminous pulsar*
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**: *Review talk*
10:00-10:15	Katja Pottschmidt: *Broad band continuum spectra of accreting pulsars around / above the critical luminosity*
10:15-10:30	Rebecca Nealon: *QPOs from misaligned accretion discs*
10:30-11:00	Coffee break
11:00-11:15	Valery Suleimanov: *Super-Eddington accretion luminosity of highly magnetized neutron stars*
11:15-11:30	Jamie Court: *Exotic Variability in IGR J17091-3624; A Comparison with GRS 1915+105*
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**: *Theory of ULXs*
15:30-16:00	**Matthew Middleton**: *Observations of ULXs*
16:00-16:15	Tim Roberts: *At the extremes of super-Eddington accretion*
16:15-16:30	Andrew Sutton: *Crossing the Eddington limit: investigating accretion disc spectra in ultraluminous X-ray sources and sub-Eddington binaries*
16:30-17:00	Coffee break
17:00-17:15	Ciro Pinto: *Discovery of powerful winds in ultraluminous X-ray sources*
17:15-17:30	Michal Bursa: *Effects of geometry and mass accretion rate on thermal spectra of ULX sources*
17:30-17:45	Shogo Kobayashi: *Comparing ULXs with the other High-Eddington Sources*
17:45-18:00	Takumi Ogawa: *A unified model for ULXs and ULSs; radiation hydrodynamics simulations of super-Eddington accretion flows*
18:00-18:30	**Discussion** - Tim Roberts

Friday, September 23rd 2016

6. GRBs and TDEs

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

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