



# An INTEGRAL view of the high-energy sky (the first 10 years)

## SCIENTIFIC PROGRAM

of the

### 9th INTEGRAL Workshop and celebration of the 10th anniversary of the launch

15 - 19 October 2012

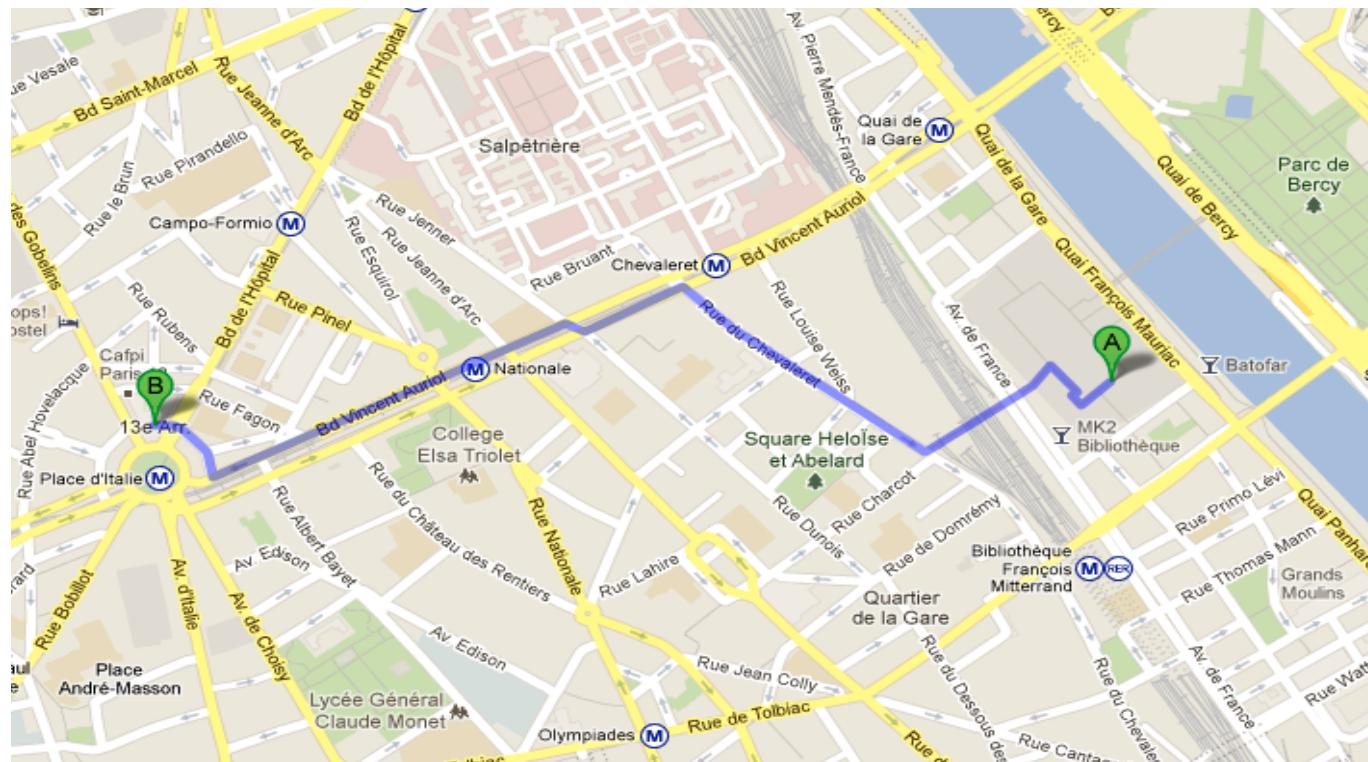
Grand Amphithéâtre and Petit Amphithéâtre of the

Bibliothèque Nationale de France

Quai François-Mauriac, 75706 Paris Cedex 13, France

Metro Bibliothèque

Map of the area, showing the 2 km distance from conference site (A) to conference dinner (B)



## 9<sup>th</sup> INTEGRAL Workshop and celebration of the 10<sup>th</sup> anniversary of the launch

### Schedule of the Workshop

Version of 11.10.2012

Talks including questions	Invited (40 mn)	Solicited (30 mn)	Contributed (20 mn)	Poster show
---------------------------	-----------------	-------------------	---------------------	-------------

	Mon 15, Grand amphi	Mon 15, Petit amphi	Tue 16, Grand amphi	Tue 16, Petit amphi	Wed 17, Grand amphi	Thu 18, Grand amphi	Fri 19, Grand amphi
9h00	8h30 : Registration 9h30 : R. Bonneville 9h35 : R. Bonnet 9h50 : C. Winkler		A. King (AGN)		D. Hartmann (Nucleosynthesis)	E. v.d. Heuvel (Binaries)	J.-L. Atteia (GRBs)
9h40			D. Kazanas		R. Diehl	A. Lutovinov	L. Hanlon
10h00	N. Gehrels		S. Soldi		K. Kretschmer	R. Walter	K. Hurley
10h20	(Gamma-Sky)		A. Malizia		S. Grebenev	A. Cherepashchuk	A. Martin-Carrillo
10h40	coffee		coffee		coffee	coffee	coffee
11h10	M. Weisskopf (Pulsars)		Ph. Laurent (Polariz.)		J. Isern (Nucleosynth.)	A. Strong (Diffuse)	D. Götz (GRBs)
11h40	L. Kuiper		P. Moran		M. Renaud	L. Bouchet	V. Savchenko
12h00	S. Mereghetti		K. Postnov (Binaries)		student competition	G. Skinner	A. Pozanenko
12h20	poster show slot 1		poster show slot 3		poster show slot 5	poster show slot 6	A. Marcowith (Accel)
12h40	lunch		lunch		lunch	lunch	lunch
13h00					free afternoon		
14h00	M. Falanga (LM Bin)	T. Courvoisier (AGN)	L. Sidoli (HM Bin/SFXT)	L. Bassani (AGN)		R. Terrier (Diffuse)	J. Wilms (BH Binaries)
14h30	A. Tarana	V. Beckmann	S. Drave	P.O. Petrucci		K. Koyama	M. Del Santo
14h50	F. Capitanio	F. Panessa	S. Chaty	I. Donnarumma		M. Clavel	K. Koljonen
15h10	D. Klochkov	M. Türler (CXB)	A. Coleiro	A. Tramacere		V. Marandon	A. Hill
15h30	coffee		coffee			coffee	S. Sabatini
16h00	R. Staubert (XRP Bin)	A. Bykov (Acceleration)	L. Stella (Binaries)	M. Revnivtsev (Survey)		F. Fürst (Survey)	W. Hermsen (Concl)
16h30	S. Müller	K. L. Klein	P. Blay	E. Kuulkers		A. Bird	end
16h50	M. Kühnel	P. Bordas	E. Bozzo	L. Natalucci		C. Ferrigno	
17h10	P. Kretschmar	M. Chernyachova	S. Martinez-Núñez	E. Bottacini		S. Sazonov	
17h30	E. Nespoli	O. Bromberg (GRBs)	M. Servillat	A. Bodaghee		J. Rodriguez	
17h50	poster show slot 2.2	poster show slot 2.1	poster show slot 4.2	poster show slot 4.1		poster show slot 7	
18h10	end					end	
18h30	welcome cocktail				conference dinner		



Program of the Workshop - version of 11.10. 2012

## **Monday 15 - morning session in Grand Amphi : *Opening / Pulsars and SNR***

8h30	<b>Registration</b>	
9h30	R. Bonville	Opening Address
9h35	R. Bonnet	Opening Address
9h50	C. Winkler	INTEGRAL – status of the mission after 10 years
10h00	N. Gehrels	Current and Future Gamma Ray Astronomy related to INTEGRAL
10h40	<b>Coffee break</b>	
11h10	M. Weisskopf	Observations of the Crab Nebula with the Chandra X-Ray Observatory
11h40	L. Kuiper	Linking the soft gamma-ray pulsar population with the Fermi LAT pulsar population: completing the high-energy picture
12h00	S. Mereghetti	Flares and outbursts from magnetars observed by INTEGRAL
12h20	<b>Poster show Slot 1</b>	
12h40	<b>End of session</b>	

## **Monday 15 - afternoon parallel session in Grand Amphi : *LM Binaries / XRP***

14h00	M. Falanga	Accreting millisecond X-ray pulsars: 10 years of INTEGRAL observations
14h30	A. Tarana	High energy characteristics of Neutron star low mass X-ray binaries by INTEGRAL
14h50	F. Capitanio	IGR J17091-3624: a GRS 1915-105 like source as seen by INTEGRAL and Swift
15h10	D. Klochkov	Probing the configuration of the emitting structure in accreting pulsars using luminosity-related spectral changes
15h30	<b>Coffee break</b>	
16h00	R. Staubert	Can the study of Her X-1 help in understanding Accreting X-ray Binary Pulsars?
16h30	S. Müller	Boon and bane of studying the multiple cyclotron source 4U 0115+63
16h50	M. Kühnel	GRO J1008 57: a laboratory for accretion physics
17h10	P. Kretschmar	The Be X-ray Binary Outburst Zoo
17h30	E. Nespoli	Spectral states in Be/X-ray pulsars
17h50	<b>Poster show Slot 1</b>	
18h10	<b>End of session</b>	

## **Monday 15 - afternoon parallel session in Petit Amphi : *AGNs / Acceleration***

14h00	T. Courvoisier	Active Galactic Nuclei: present observations and prospects
14h30	V. Beckmann	Gamma-ray emitting radio galaxies at hard X-rays: Seyfert core or jet emission?
14h50	F. Panessa	The X-ray versus Radio correlation in a sample of INTEGRAL AGN
15h10	M. Türler	Cosmic X-ray background spectrum from new INTEGRAL Earth observations
15h30	<b>Coffee break</b>	
16h00	A. Bykov	Energetic particle acceleration by collisionless shocks
16h30	K.L. Klein	Solar energetic particles – combining direct measurements with remote sensing observations
16h50	P. Bordas	Gamma-ray observations of binary systems with H.E.S.S.
17h10	M. Chernyakova	Superorbital modulation of X-ray emission from gamma-ray binary LSI +61 303
17h30	O. Bromberg	Separating wheat and chaff: a proper classification of non-Collapsars GRBs
17h50	<b>Poster show Slot 1</b>	
18h10	<b>End of session</b>	

18h30	<b>Welcome cocktail, Bibliothèque Nationale de France, Paris</b>	
-------	--	--



Program of the Workshop - version of 4.10. 2012

### Tuesday 16 - morning session in Grand Amphi : AGNs / Polarization

9h00	<b>A. King</b>	Supermassive black holes and their effects on their galactic hosts
9h40	<b>D. Kazanas</b>	Towards a unified AGN structure of accretion powered sources
10h00	<b>S. Soldi</b>	AGN variability at hard X-rays
10h20	<b>A. Malizia</b>	The INTEGRAL view of the Extragalactic Sky
10h40	<b>Coffee break</b>	
11h10	<b>Ph. Laurent</b>	INTEGRAL observations of gamma-ray polarized sources: from the Crab pulsar to Cygnus X-1
11h40	<b>P. Moran</b>	INTEGRAL/IBIS and optical observations of the Crab nebula/pulsar polarisation
12h00	<b>K. Postnov</b>	Quasi-spherical accretion in low-luminosity X-ray pulsars: Theory vs observations
12h20	<b>Poster show Slot 1</b>	
12h40	<b>End of session</b>	

### Tuesday 16 - afternoon parallel session in Grand Amphi : SFXT / HM Binaries

14h00	<b>L. Sidoli</b>	Supergiant Fast X-ray Transients: a review
14h30	<b>S. Drave</b>	Investigating the nature of Supergiant Fast X-ray Transients using INTEGRAL and XMM Newton
14h50	<b>S. Chaty</b>	INTEGRAL view of High Mass X-ray Binaries : nature, formation and evolution
15h10	<b>A. Coleiro</b>	Distribution of High Mass X-ray Binaries in the Milky Way
15h30	<b>Coffee break</b>	
16h00	<b>L. Stella</b>	Fundamental Physics with X-Ray Binaries
16h30	<b>P. Blay</b>	The paradigm of atypical HMXRBs: 4U 2206+54
16h50	<b>E. Bozzo</b>	XMM-Newton and Swift observations of XTE J1743-363
17h10	<b>S. Martinez-Núñez</b>	The structure of hot-star winds revealed through XMM-Newton observations of Vela X-1
17h30	<b>M. Servillat</b>	DASCH 100-yr light curves of high mass X-ray binaries
17h50	<b>Poster show Slot 1</b>	
18h10	<b>End of session</b>	

### Tuesday 16 - afternoon parallel session in Petit Amphi : AGNs / Surveys

14h00	<b>L. Bassani</b>	Review on Active-Galactic Nuclei at hard X-ray energies
14h30	<b>P.O. Petrucci</b>	Multiwavelength campaign on Mrk 509: testing realistic comptonization models
14h50	<b>I. Donnarumma</b>	MeV blazars: results and perspectives
15h10	<b>A. Tramacere</b>	A panchromatic view of blazars: constraining acceleration and emission processes in relativistic jets.
15h30	<b>Coffee break</b>	
16h00	<b>M. Revnivtsev</b>	The global view of the Galaxy with INTEGRAL: populations of binaries and extended emission
16h30	<b>E. Kuulkers</b>	The Galactic bulge as a Christmas tree: results from almost 10 years of INTEGRAL monitoring
16h50	<b>L. Natalucci</b>	The INTEGRAL Galactic Plane Scanning
17h10	<b>E. Bottacini</b>	The combined Survey of INTEGRAL/IBIS and Swift/BAT
17h30	<b>A. Bodaghee</b>	Clustering between HMXBs and OB associations in the MilkyWay
17h50	<b>Poster show Slot 1</b>	
18h10	<b>End of session</b>	



## Wednesday 17 - morning session in Grand Amphi : Nucleosynthesis

9h00	<b>D. Hartmann</b>	Gamma-Ray Line Astronomy with INTEGRAL
9h40	<b>R. Diehl</b>	Nucleosynthesis line studies with SPI
10h00	<b>K. Kretschmer</b>	Velocities of 26Al in the inner Galaxy
10h20	<b>S. Grebenev</b>	Study of the Large Magellanic Cloud and Supernova 1987A
10h40	<b>Coffee break</b>	
11h10	<b>J. Isern</b>	Observations of SN2011fe with INTEGRAL
11h40	<b>M. Renaud</b>	INTEGRAL/IBIS-ISGRI observations of young supernova remnants : Survey in hard X-rays and 44Ti gamma-ray lines
12h00	<b>Student competition</b>	
12h20	<b>Poster show Slot 2</b>	
12h40	<b>End of session, free afternoon</b>	
18h30	<b>Conference dinner, Mairie du 13ème Arrondissement, 1 place d'Italie, Paris</b>	

## Thursday 18 - morning session in Grand Amphi : Binaries / Diffuse

9h00	<b>E. van den Heuvel</b>	INTEGRAL's contributions to the understanding of the evolution of X-ray Binaries
9h40	<b>A. Lutovinov</b>	Population of high mass binaries in the Milky Way. INTEGRAL legacy Survey
10h00	<b>R. Walter</b>	Constraining neutron star masses from hydrodynamic simulations of obscured HMXB
10h20	<b>A. Cherepashchuk</b>	Peculiarities in the orbital and precessional variability of SS433 from INTEGRAL observations
10h40	<b>Coffee break</b>	
11h10	<b>A. Strong</b>	Non-thermal emission from cosmic rays in the interstellar medium from MHz to TeV
11h40	<b>L. Bouchet</b>	Measures of the components of the Galactic diffuse emission with INTEGRAL/SPI
12h00	<b>G. Skinner</b>	The 511 keV sky seen by INTEGRAL/SPI, CGRO-OSSE and GRS/SMM combined
12h20	<b>Poster show Slot 2</b>	
12h40	<b>End of session</b>	

## Thursday 18 - afternoon session in Grand Amphi : Diffuse / Survey

14h00	<b>R. Terrier</b>	The Galactic Centre after Integral observations
14h30	<b>K. Koyama</b>	Structure and Dynamics of the Galactic X-rays
14h50	<b>M. Clavel</b>	Recent observations of X-ray emission from Molecular Clouds at Galactic Center related to SgrA* past activity
15h10	<b>V. Marandon</b>	Recent news from H.E.S.S. galactic plane
15h30	<b>Coffee break</b>	
16h00	<b>F. Fürst</b>	The Nuclear Spectroscopic Telescope Array Science Program
16h30	<b>A. Bird</b>	The Timing Characteristics of the INTEGRAL populations
16h50	<b>C. Ferrigno</b>	Discovery and follow-up of new INTEGRAL transients
17h10	<b>S. Sazonov</b>	Hard X-ray properties of ultraluminous X-ray sources
17h30	<b>J. Rodriguez</b>	Follow-up observations of INTEGRAL sources: an X-ray focus on IGR sources
17h50	<b>Poster show Slot 2</b>	
18h10	<b>End of session</b>	



Program of the Workshop - version of 4.10. 2012

### **Friday 19 - morning session in Grand Amphi : GRBs / BH Binaries**

9h00	J.-L. Atteia	Gamma-Ray Bursts, witnessing the birth of stellar mass black holes
9h40	L. Hanlon	GRB120711A : an exceptional Integral GRB
10h00	K. Hurley	A Decade of Bursts with the SPI-ACS
10h20	A. Martin-Carrillo	The prompt and early afterglow emission of GRBs observed by INTEGRAL
10h40		<b>Coffee break</b>
11h10	D. Götz	INTEGRAL Results on Gamma-Ray Bursts
11h40	V. Savchenko	Timing properties of gamma-ray bursts detected by SPI-ACS detector onboard of INTEGRAL
12h00	A. Pozanenko	Model of the extended emission of short gamma-ray bursts
12h20	A. Marcowith	Stochastic acceleration in accreting black holes
12h40		<b>End of session</b>

### **Friday 19 - afternoon session in Grand Amphi : BH Binaries / Conclusions**

14h00	J. Wilms	Black hole X-ray Binaries
14h30	M. Del Santo	Constraining the magnetic field in the X-ray corona of Cyg X-1 with INTEGRAL
14h50	K. Koljonen	The multiwavelength spectral and timing properties of a major radio flare episode in Cygnus X-3
15h10	A. Hill	4 years of Fermi-LAT observations of gamma-ray binaries: from microquasars to gamma-ray novae
15h30	S. Sabatini	Gamma-ray monitoring of Galactic Microquasar
16h00	W. Hermsen	Highlights of the Workshop
16h30		<b>End of conference</b>

#### **Color coding:**

	<i>Invited Talk (40 mn, including questions)</i>
	<i>Solicited Talk (30 mn, including questions)</i>
	<i>Contributed Talk (20 mn, including questions)</i>
	<i>Opening / Poster show / Cocktail / Dinner / Conclusions</i>



Program of the Workshop - version of 11.10. 2012

**List of all accepted posters (Author alphabetically / Title / ID / Poster Slot S1 = Mon-Tue, S2 = Wed-Fri)**

Alexander	Understanding a Nearby Massive-Star Region: Scorpius-Centaurus	038	S2
Alfonso	High energy emission of variable objects in the OMC-VAR Catalogue	029	S2
Bassani	Chasing extreme blazars with INTEGRAL	041	S1
Beckmann	The AGN phenomenon: open issues	011	S1
Belanger	On the Temporal Characteristics of Persistent Integral Sources	126	S1
Blay	An INTEGRAL spectral and timing history of 1A 1118-615	053	S2
Blay	X Per pulse period evolution	054	S1
Bodaghee	Results from the first year of the INTEGRAL Spiral Arms Monitoring Program	119	S1
Bodaghee	XMM-Newton observations of five INTEGRAL sources located towards the Scutum Arm	105	S2
Bodaghee	Chandra provides new X-ray positions for IGR J16393-4643 and IGR J17091-3624	104	S2
Bosnjak	The spectral catalog of GRBs observed with INTEGRAL: IBIS/SPI joint spectral analysis	117	S2
Bouchet	INTEGRAL/SPI data segmentation to retrieve sources intensity variations	098	S2
Bourbagamma	Gamma-Ray Astronomy 100 keV – 100 MeV: the next step	153	S1
Bozzo	LOFT (the Large Observatory for X-ray Timing)	100	S1
Caballero	INTEGRAL IBIS/ISGRI energy calibration in OSA 10	075	S1
Castro	XMM and INTEGRAL Simultaneous Observations of 1E 1740.7-2942	051	S1
Castro	The MIRAX mission: description and first background simulations	050	S1
Chaty	Herschel observations of INTEGRAL supergiant High Mass X-ray Binaries	110	S2
Chelovekov	Search and analysis of type I X-ray bursts based on the IBIS/ISGRI and JEM-X data: status	027	S1
Chenevez	What can NuSTAR do for thermonuclear X-ray bursts?	012	S2
Chenevez	JEM-X Improvement in OSA10	172	S1
Chernyakova	Variability of the GeV sky	093	S2
Coleiro	Identification of new X-ray binaries detected by INTEGRAL through near infrared photometry and spectroscopy	018	S2
Cusumano	The 4th Palermo Swift-BAT catalogue: 7 years of Survey of the hard X-ray sky	036	S1
de Jong	M87 in hard X-rays	044	S1
Egron	Testing reflection features in 4U 1705-44 with XMM-Newton, BeppoSAX and RXTE in the hard and soft state	167	S2
Eikmann	Monte Carlo simulations of X-ray absorption in the interstellar medium	168	S1
Esposito	The high-energy spectrum of 3C 273	125	S1
Evangelista	The Wide Field Monitor onboard the Large Observatory For x-ray Timing (LOFT)	134	S1
Fürst	GX 304 1 and NuSTAR's plans on transient X-ray binaries	108	S2
Goldoni	First results of X-shooter observations of IGR sources	065	S2
Goossens	Searching For the Orbital Period of IGR J184500435	070	S1
Grinberg	Cygnus X-1: shedding light on the spectral variability of black holes	092	S1
Gros	The IBIS/ISGRI Source Location Accuracy	132	S2
Hanlon	Study of Silicon Photomultipliers for the Readout of Scintillator Crystals in the GRIPS Mission	094	S2
Hertel	Suzaku observations of the multiple cyclotron source 4U 0115+63	111	S2
Hübner	Here comes the Sun - Reliable forecasting of the effects of solar flares on INTEGRAL?	076	S2

... *continued*

Program of the Workshop - version of 11.10. 2012

**List of all accepted posters (Author alphabetically / Title / ID / Poster Slot S1 = Mon-Tue, S2 = Wed-Fri)**

Kazanas	Is the Prompt GRB Liso-Lag Correlation the Same as the Afterglow LX-Tbrk One ?	137	S2
Kreykenbohm	The eROSITA Near Realtime Analysis	069	S2
Krivonos	Diffuse gamma-ray emission from the Milky Way: 10 years of INTEGRAL observations	026	S2
Krивонос	INTEGRAL/IBIS nine-year Galactic hard X-ray survey	171	S2
Landi	Swift/XRT observations of newly discovered INTEGRAL sources	080	S1
Landi	Hard X-ray properties of cataclysmic variables	079	S2
La Parola	A Search for heavily obscured AGN in the 2nd Palermo BAT Survey	037	S2
Li	INTEGRAL view of gamma-ray binaries	030	S1
Maiolino	A Hard X-ray Study of Sco X-1 Using INTEGRAL	169	S2
Malzac	Spectra and fast multi-wavelength variability of compact jets powered by internal shocks	139	S1
Marandon	Recent news from H.E.S.S. galactic plane	140	S1
Mereghetti	Ten years of IBAS	059	S2
Minaev	Investigation of the spectral lag - energy relation of GRBs registered by INTEGRAL	166	S2
Molina	The INTEGRAL/IBIS Complete Sample of Type 1 AGN	040	S1
Muleri	The X-ray Imaging Polarimetry Explorer mission	128	S2
Müller	A0535+26 during the 2010 outburst observed with INTEGRAL and RXTE	123	S2
Paizis	Giant On-Line INTEGRAL Archive (GOLIA) @INAF-IASF Milano	013	S2
Parisi	Identification of newly-discovered sources belonging to the 4th IBIS catalog and to the 54 months Palermo Swift/BAT catalog	015	S1
Pavan	Soft X-ray follow-up of five hard X-ray emitters	106	S1
Pizzichini	Search for properties of Gamma-Ray Bursts at high redshift	091	S2
Rodes	On the physical meaning of the 2.1 keV absorption feature in 4U 1538 52	024	S2
Rodríguez-Gasén	Using SPI/INTEGRAL to study the Sun	021	S1
Sahiner	Comprehensive study on RXTE & INTEGRAL observation for the X-ray Pulsar 4U 1907+09	001	S1
Schmid	LOFT Simulation Toolkit	084	S1
Schwarm	Monte-Carlo Modeling of Cyclotron Resonant Scattering Features	066	S1
Servillat	Herschel views on ultra-luminous X-ray sources	102	S1
Sguera	INTEGRAL study of the candidate SFXT IGR J18462-0223	067	S2
Sidoli	The Supergiant Fast X-ray Transient with the shortest orbital period: Suzaku observes one orbit in IGR J16479-4514	033	S1
Soldi	In-flight calibration of the INTEGRAL/IBIS mask	043	S1
Tramacere	Gamma-ray DBScan: a DBScan-based clustering algorithm applied to the detection of gamma-ray sources: application to the Fermi-LAT data	056	S1
Tsygankov	INTEGRAL/SPI view of the diffuse gamma-ray emission from the Milky Way	023	S2
von Kienlin	The Fermi GBM Gamma-Ray Burst Catalog: Year Three & Four	157	S2
von Kienlin	eROSITA on-board Spectrum-RG	156	S2
Walter	INTEGRAL and others Angels in the HEAVENS	116	S2
Walter	A Tidal Disruption Event detected by INTEGRAL	120	S2
YuPeng	Outburst and Bursts of IGR J17473-2721	127	S1
Zhang	INTEGRAL/SPI and Fermi/GBM Observation of the 2012 March 7th Solar Flares	016	S1
Ziólkowski	Determination of the masses of the components of the HDE 226868/Cyg X-1 binary system	135	S1
Zoglauer	Validating the Bayesian event reconstruction and selection approach with measurements of the Crab pulsar and nebula with NCT and COMPTEL	049	S1