

Report from the Project Scientist

XMM-Newton Users' Group Meeting XIX

17 May 2018

ESAC, Madrid, Spain

Norbert Schartel

- AOs
 - AO 17
 - Workshop (XMM-Newton: The next Decade) outcome
 - AO 18 Preparation & Changes
- TOOs
- Publications
- Public Outreach
- Workshops & Conferences

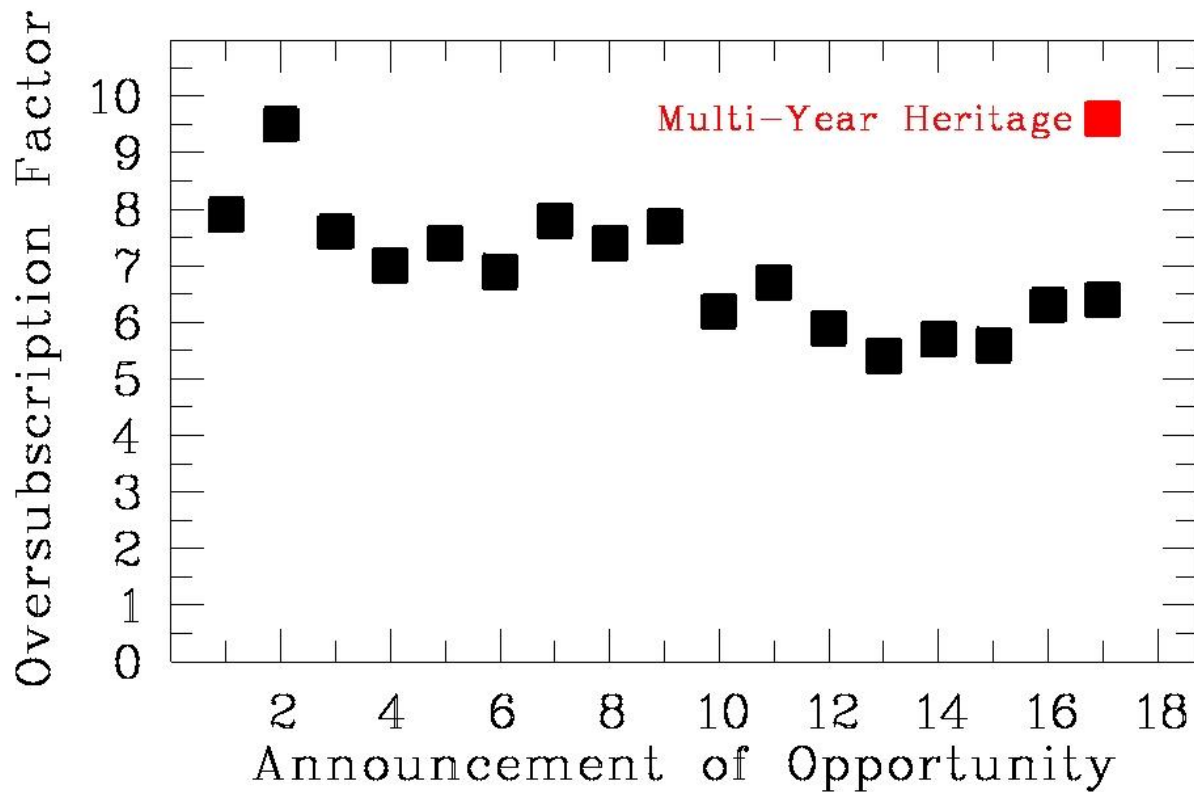
Submission Statistics for AO17

Nr. of proposals received:	441
Nr. of PI's	334
Nr. of Co-I's per proposal	5
Nr. of PI's+Co-I's (email)	1584
Nr. of PI's+Co-I's (surname)	1350
Nr. of countries participating	40
Nr. of Observations	2620
Nr. of Pointings	4386
Nr. of targets	2090
Nr. of Obs. per Proposal	5.9
Nr. of Pointings per Proposal	9.9
Total Req. Time (ks)	134865
Average Req. Time per proposal (ks)	305.8
Average Req. Time per pointing (ks)	40.0
Average Req. Time per observation (ks)	51.5

AO 17 II Statistics by Country

Country	Nr. of proposals	Req. Time (ks)
 UNITED STATES	166	43349
 GERMANY	70	26870
 ITALY	50	16990
 UNITED KINGDOM	32	13226
 FRANCE	14	8326
 ESA	15	6182
 OTHER	1	5973
 BELGIUM	11	2543
 NETHERLANDS	12	1355
 MEXICO	4	1235
 JAPAN	12	1210
 SPAIN	10	940
 INDIA	5	731
 TURKEY	4	638
 ESTONIA	1	612
 HUNGARY	2	560
 ISRAEL	2	507

 SWITZERLAND	2	476
 CHILE	3	471
 CHINA	6	451
 SWEDEN	2	417
 POLAND	2	400
 IRELAND	2	334
 CZECH REPUBLIC	2	331
 TAIWAN	3	288
 KOREA	2	126
 BULGARIA	1	103
 GREECE	1	64
 CANADA	1	63
 RUSSIA	2	61
 FINLAND	1	33



Statistics by Proposal Type

Proposal Type	Nr. of proposals (Large Program)	Total Time (ks) (Large Program)
Guest Observer	361 (49)	65796 (29212)
Multi-Year Heritage	16 (16)	57660 (57660)
Target of Opportunity (anticipated)	51 (3)	7101 (1441)
Fulfill	13 (0)	4308 (0)

Statistics on Joint observations (240 observations in 84 proposals)

	Nr. of Prop.	Nr. of obs	Time/Orbits
Chandra	8	14	692.0
HST	23	36	130.0
VLT	4	11	34.0
Swift	10	38	638.0
NuSTAR	44	149	14435.0
INTEGRAL	0	0	None

Categories Distribution

Category	Nr. of Proposals (Large Programs)	Nr. of Observations (Large Programs)	Total Time Req. (ks) (Large Programs)
A	69 (13)	336 (175)	14776 (9786)
B	93 (6)	363 (51)	17868 (6880)
C	61 (4)	217 (23)	14302 (7454)
E	121 (20)	562 (254)	33086 (19825)
F	90 (19)	938 (630)	34135 (23922)
G	7 (6)	204 (200)	20698 (20446)
	441 (68)	2620 (1333)	134865 (88313)

Category	Science	Category	Science
A	Stars	E	AGN
B	Binaries	F	Galaxies & Clusters
C	SN & Pulsars	G	Cosmology

AO 17 VII / Large and Very Large Programmes



082038	17	Brandt	Completing and Ensuring Major Impact from the XMM-SERVS Survey	78	3400	MYH	0	AGN / Black Hole
082180	17	Zhuravleva	Understanding Long-lived, Ubiquitous AGN Feedback in Early-type Galaxies	3	386	LP	0	Galaxies
082187	17	O'Sullivan	The Complete Local-Volume Groups Sample	17	469	LP	0	Galaxies
082274	17	Kowalski	A Unified Understanding of Flare Heating	4	466	LP	0	Stars
082358	17	Sanders	Mapping merger, sloshing and AGN-produced bulk motions in the Centaurus cluster	12	900	LP	0	Clusters of Galaxies
082408	17	Jin	Deepest Joint XMM-Newton and NuSTAR Observations of a super-Eddington NLS1	3	396	LP	0	AGN / Black Hole
082432	17	Walton	Determining the Nature of the Extreme Off-States in ULX Pulsars with NGC5907 ULX	6	378	LP	0	Neutron Stars
082445	17	Israel	Taking the beat of the UNSeEN (The Ultraluminous NS population of ULXs)	8	729	LP	0	Neutron Stars
082450	17	Arnaud-Etteri	Witnessing the culmination of structure formation in the Universe	84	3000	MYH	0	Clusters of Galaxies
082461	17	McHardy	X-ray-UV-optical reverberation of low accretion rate and low mass AGN NGC4395	4	452	LP	0	AGN / Black Hole

Outcome of Workshop: Structural Points I

1. Increased importance of Target of Opportunity observations
2. Increased importance of (simultaneous) multi-wavelength /multi-messenger observations
3. Importance if very large project (>2 Ms)



Outcome of Workshop: Structural Points II

- Increased importance of (simultaneous) multi-wavelength /multi-messenger observations

- Radio
- Alma
- JWST
- CTA
- ESO 30m
- SKA



Outcome of Workshop: Structural Points III

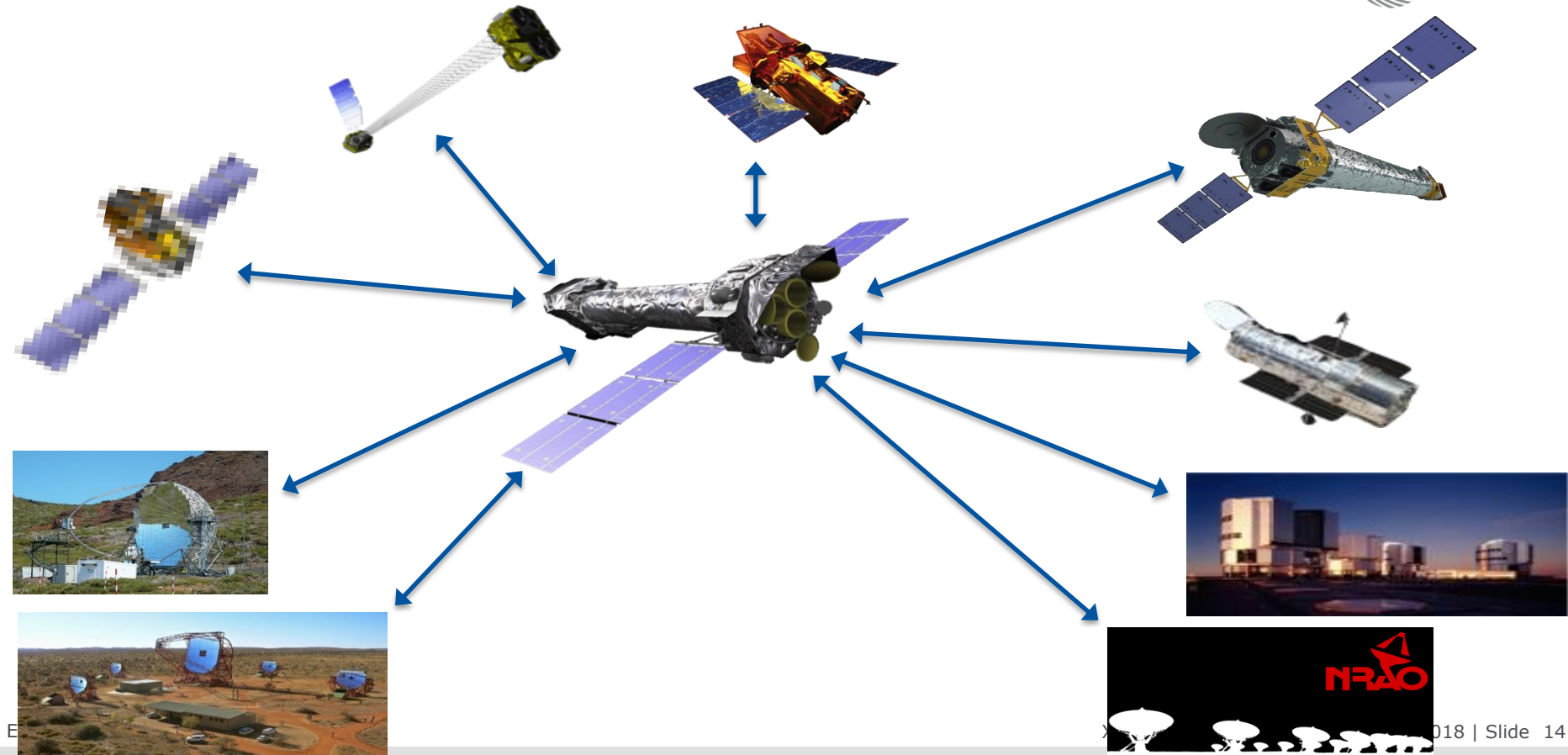
- ❑ Increased importance of (simultaneous) multi-wavelength /multi-messenger observations
- ❑ Radio (**European Very Long Baseline Interferometry Network failed in 2014**)
- ❑ Alma (**no joint programs**)
- ❑ JWST
- ❑ CTA
- ❑ ESO 30m
- ❑ SKA



Outcome of Workshop: Structural Points IV

- ❑ Increased importance of (simultaneous) multi-wavelength /multi-messenger observations
 - ❑ Chandra (**+LP 300ks -> 1Ms**)
 - ❑ Radio (**NRAO**)
 - ❑ Alma (**no joint programs**)
 - ❑ JWST (from 2 JWST AO ← HST heritage)
 - ❑ CTA (← **Magic & HESS**)
 - ❑ ESO 30m (← ESO VLT(I) heritage, Athena preparation)
 - ❑ SKA (← **NRAO**, MeerKat?)





AO 18 Preparation



- Planned key milestones (public since 9 January 2017, XMM-Newton Newsletter#205 & SOC web-pages):
 - Announcement: 21 August 2018
 - Due date for proposals: 5 October 2018 (12:00 UT)
 - Final approved programme: mid December 2018
 - Second phase submission: 8 January – 1 February 2019
 - Start of observations: 1 May 2019
- 6 Scientific categories / 13 Panels in total / 66 scientists
- OTAC chairperson: Prof. Peter Schneider, University Bonn, Germany
- OTAC panel chairpersons are asked not to participate on new LP

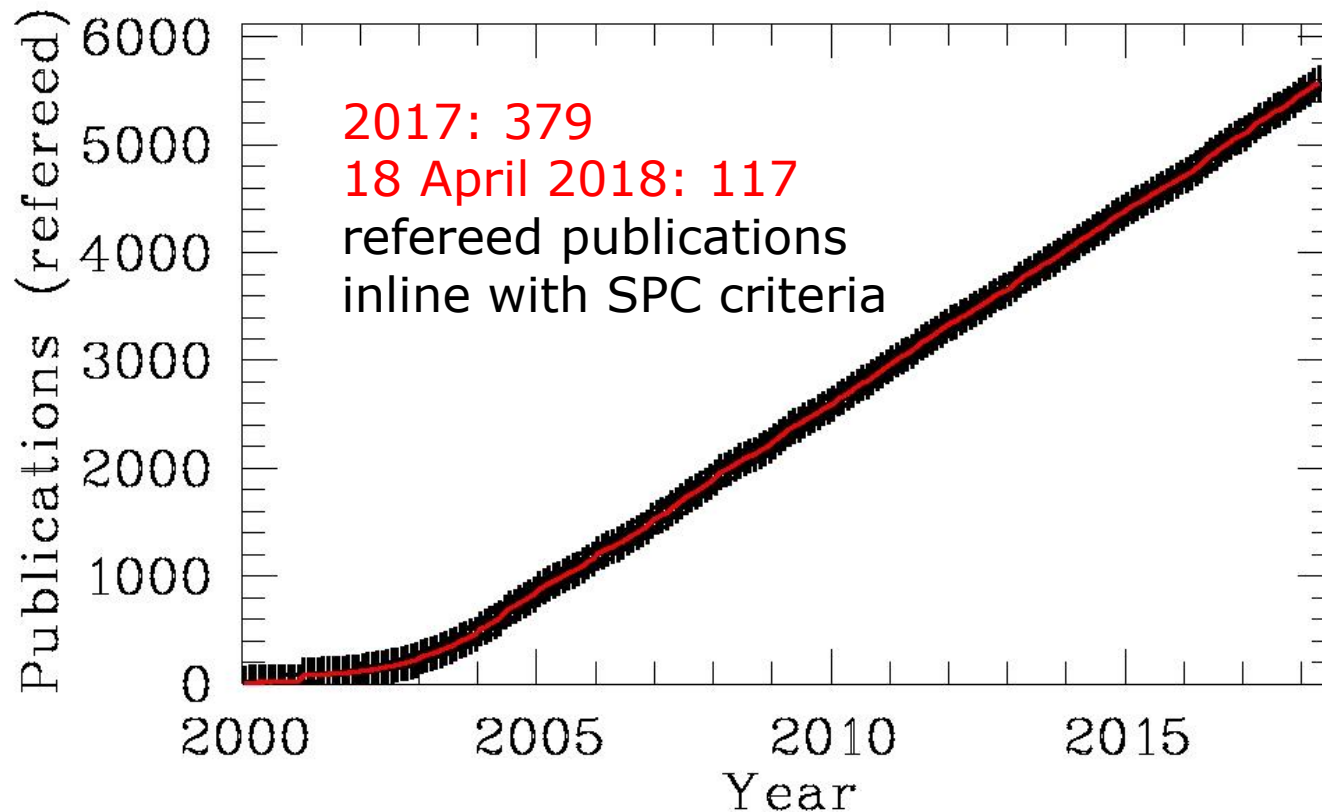
AO 18 Preparation: Changes



- Multi-Year Heritage Program (MYHP) offered in AO17.
 - ➔ We should aim to offer a MYHP in AO20
- TOO / Comment: Gravitational Wave Events (2019+) will be freely distributed (no MoU)
- Changes:
 - Large Programs: up to 4 Prime Investigators (AO18 or AO19)
 - TOOs: Trigger likelihood
 - New Joint programs:
 - Magic (150 ks)
 - HESS (150, ks)
 - NRAO/VLA (150ks, TBC)
 - **Large Programs: NO constrain on the requested time**

Rev	Observation Id	Target	RA	Dec	Exp. Time (ksec)	Data Status	ODF Data when available	PPS Data when available	Comments
3366	0830190601	SWIFT J0746.3-1608	07:46:17.13	-16:11:27.8	18.0	ToO (TBD)	ODF Data	PPS Data	(Dr. F. Bernardini)
3362	0830190501	OJ 287	08:54:48.87	+20:06:30.6	25.5	ToO (23-Oct-2018)	ODF Data	PPS Data	(Dr. S. Komossa)
3357	0830190401	SWIFT J1756.9-2508	17:56:57.30	-25:06:28.0	66.0	ToO (12-Oct-2018)	ODF Data	PPS Data	(Dr. A. Sanna)
3353	0830190301	IGRJ17379-3747	17:37:58.81	-37:46:19.2	48.1	ToO (05-Oct-2018)	ODF Data	PPS Data	(Dr. A. Sanna)
3352	0811213501	PSR J1946+2052	19:46:14.13	+20:52:24.6	21.8	DPS (01-Aug-2018)	ODF Data	PPS Data	(Dr. K. Stovall)
3346	0830190201	MAXI J1820+070	18:20:21.93	+07:11:07.3	95.3	ToO (21-Sep-2018)	ODF Data	PPS Data	(Dr. S. Motta)
3345	0830190101	MAXI J1813-095	18:13:34.00	-09:31:59.2	26.7	ToO (21-Sep-2018)	ODF Data	PPS Data	(Dr. P. Gandhi)
3334	0811213301	Fermi J1544-0649	15:44:19.72	-06:49:13.8	59.5	ToO (26-Aug-2018)	ODF Data	PPS Data	(Dr. F. Ursini)
3332	0811213001	C2016 R2 PANSTARRS	03:58:54.50	+27:37:28.7	44.4	ToO (23-Aug-2018)	ODF Data	PPS Data	(Dr. K. Dennerl)
3329	0811212901	Swift J0243.6+6124	02:43:40.30	+61:26:02.8	20.0	ToO (16-Aug-2018)	ODF Data	PPS Data	(Dr. F. Koliopoulos)
3326	0811212801	Swift J0243.6+6124	02:43:36.00	+61:24:00.0	20.0	ToO (16-Aug-2018)	ODF Data	PPS Data	(Dr. F. Koliopoulos)
3321	0811212701	GW170817	13:09:48.10	-23:22:52.9	111.5	ToO (31-Jul-2018)	ODF Data	PPS Data	(Dr. L. Piro, Dr. P. D'Avanzo)
3307	0811210101	GW170817	13:09:48.10	-23:22:52.9	44.2	ToO (31-Jul-2018)	ODF Data	PPS Data	(Dr. P. D'Avanzo)
3293	0795712601	NGC 5907 ULX-2	15:16:01.10	+56:17:51.5	60.9	ToO (12-Jun-2018)	ODF Data	PPS Data	(Dr. A. Belfiore)
3292	0795712401	A/2017 U1	23:17:26.76	+07:04:46.4	26.2	DPS (Public)	ODF Data	PPS Data	-
3282	0795712301	Kelt-9 b	20:31:26.35	+39:56:19.8	65.0	DPS (15-May-2018)	ODF Data	PPS Data	(Dr. K. Poppenhaeger)

Rev	Observation Id	Target	RA	Dec	Exp. Time (ksec)	Data Status	ODF Data when available	PPS Data when available	Comments
3266	0795712201	SAX J1748.9-2021	17:48:52.16	-20:21:32.4	61.3	ToO (16-Apr-2018)	ODF Data	PPS Data	(Dr. F. Pintore)
3261	0794581301	IGR J06074+2205	06:07:26.61	+22:05:47.8	41.8	ToO (05-Apr-2018)	ODF Data	PPS Data	(Dr. P. Reig)
3254	0795712101	MAXI J1535-571	15:35:19.73	-57:13:47.6	18.3	ToO (26-Mar-2018)	ODF Data	PPS Data	(Dr. P. Casella)
3254	0795712001	MAXI J1535-571	15:35:19.73	-57:13:47.6	30.1	ToO (26-Mar-2018)	ODF Data	PPS Data	(Dr. P. Casella)
3253	0795711901	MAXI J1535-571	15:35:19.73	-57:13:47.6	16.0	ToO (26-Mar-2018)	ODF Data	PPS Data	(Dr. P. Casella)
3250	0795711801	MAXI J1535-571	15:35:19.73	-57:13:48.1	30.0	ToO (Public)	ODF Data	PPS Data	-
3246	0795711701	IGR J17329-2731	17:32:50.60	-27:30:02.3	40.0	ToO (Public)	ODF Data	PPS Data	-
3240	0795711501	LSI +61 303	02:40:31.20	+61:13:48.0	26.0	DPS (Public)	ODF Data	PPS Data	-
3233	0795711301	SDSS J1612+11	16:12:51.77	+11:06:21.6	15.9	DPS (Public)	ODF Data	PPS Data	-
3232	0795711401	SDSS J1440+11	14:40:05.82	+11:55:08.8	17.1	ToO (Public)	ODF Data	PPS Data	-
3207	0795710101	1RXH J082623.6-505741	08:26:23.80	-50:57:43.5	49.2	ToO (Public)	ODF Data	PPS Data	-
3201	0794581201	SN 2017eaw	20:34:44.24	+60:11:35.9	50.0	ToO (Public)	ODF Data	PPS Data	-
3197	0794580901	PSR J1023+0038	10:23:47.69	+00:38:40.8	22.0	DPS (Public)	ODF Data	PPS Data	-
3197	0794580801	PSR J1023+0038	10:23:47.69	+00:38:40.8	22.0	DPS (Public)	ODF Data	PPS Data	-

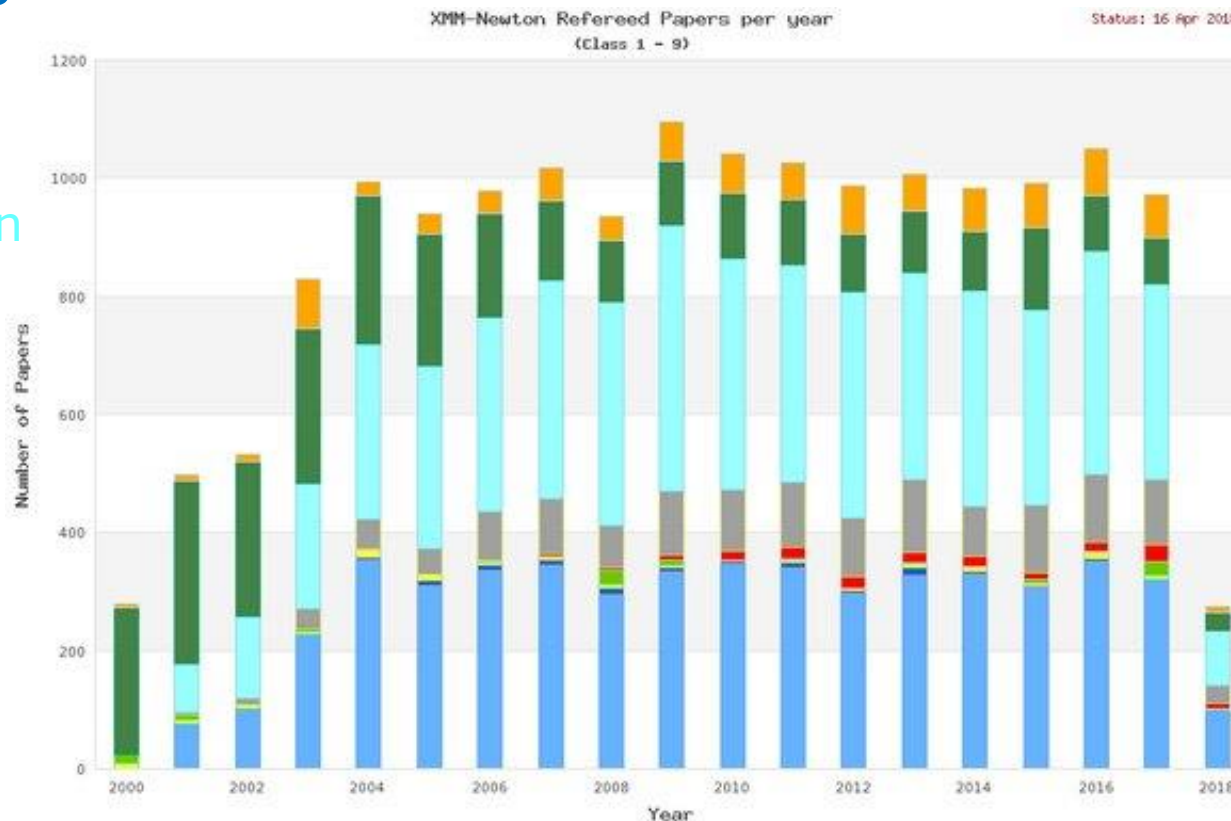


Publications

XMM in Name
Mentions XMM
XMM & Citation
Uses Others

--- AWG ---

Uses Products
Describes
Predicts
Catalogue
Uses Data



CRESCENT NEBULA

Further details on **ESA's Space in Images** web portal

SURPRISINGLY ERRATIC X-RAY AURORAS DISCOVERED AT JUPITER

Further details on **ESA's Science & Technology** web portal.

X-RAYS REVEAL TEMPERAMENT OF POSSIBLE PLANET-HOSTING STARS

Further details on **Astronomy Now** web pages.

X-RAY EYES ON A WOLF-RAYET NEBULA

Further details on the **AAS Nova** portal.

XMM-NEWTON 17TH ANNOUNCEMENT OF OPPORTUNITY (AO-17)

The screenshot shows the UIC website with the following visible text:

- University of Illinois at Chicago
- About UIC
- UIC Home
- UIC News
- UIC Events
- UIC History
- UIC Mission
- UIC Values
- UIC Strategic Plan
- UIC Board of Trustees
- UIC Faculty
- UIC Staff
- UIC Students
- UIC Alumni
- UIC Foundation
- UIC Development
- UIC Research
- UIC International
- UIC Diversity
- UIC Accessibility
- UIC Privacy Policy
- UIC Terms of Use
- UIC Contact Us

The deadline is **6 October 2017, 12:00 UT**

Further details here on our **XMM-Newton** SOC website.

A LARGE FRACTION OF RAPIDLY-GROWING SUPERMASSIVE BLACK HOLES EVADE CENSUS

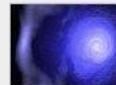
Further details on **ING's** web pages.

Astronomers using ESA's XMM-Newton space observatory have probed the gas-filled haloes around galaxies in a quest to find 'missing' matter thought to reside there, but have come up empty-handed - so where is it?

Further details on **ESA's Space Science** portal.



A gigantic and resilient "cold front" hurtling through the Perseus galaxy cluster has been studied using data from NASA's Chandra X-ray Observatory - for regions close to the center of the cluster - along with data from ESA's XMM-Newton and the now-defunct German Roentgen (ROSAT) satellite for regions farther out. Further details on **Phys.org** pages.



The Crab Nebula is a supernova remnant some 6500 light-years from Earth in the constellation of Taurus. The image shown here is in ultraviolet light taken by ESA's XMM-Newton telescope, which has been surveying the sky since 2000.

Further details on **ESA's Space in Images** portal



In 2014, ESA's XMM-Newton spotted X-rays emanating from the massive star Rho Ophiuchi A and, last year, found these to ebb and flow periodically in the form of intense flares - both unexpected results. Further details on **ESA's Science & Technology** pages.



ESA's XMM-Newton has spotted surprising changes in the powerful streams of gas from two massive stars, suggesting that colliding stellar winds don't behave as expected.

Further details on **ESA's Space Science** web portal.



Workshop 2016



esa

2026

2016

2000

→ XMM-NEWTON - THE NEXT DECADE

9-11 May 2016
ESAC, Villafranca del Castillo, Madrid, Spain
XMM-Newton Science Workshop 2016

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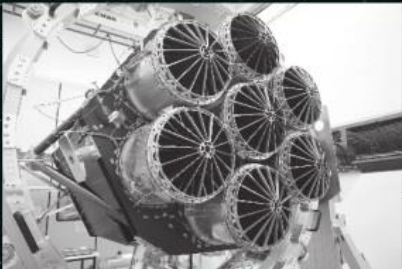
European Space Agency



Astronomical Notes
Astronomische Nachrichten

Founded by H. C. Schumacher in 1821

02-03
2017



Volume 338 · 2017 · Number 2-3 · March

www.an-journal.org

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K. G. Strassmeier (Potsdam/Editor-in-Chief),
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XMM-Newton: The Next Decade
Edited by: Norbert Scharrel

ISSN 1521-3994 Astron. Nachr., AN
Berlin 338, 2-3 (March), 129-359 (2017)



The X-Ray Universe 2017

Rome, Italy, 6 - 9 June 2017

- Chairperson: Didier Barret
- 334 participants

Great Success!



→ THE X-RAY UNIVERSE 2017

6-9 June 2017
Centro Congressi Frentani, Rome, Italy

 **xmm-newton**

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Workshop 2018

Time-Domain Astronomy: A High Energy View

13 - 15 June 2018

- **Chairperson: Joern Wilms**
- **63 requests for contributed talks**
- **22 requests for poster**



Topics

- Statistics, Methodology, and Tools
- Variable Multiwavelength Emitters and Multiwavelength Facilities
- Timing from Accretion and Ejection Phenomena
- Triggers of Variability, Magnetism, Shocks, Companions
- Explosive Astrophysics/Fast Astrophysics

→ **TIME-DOMAIN ASTRONOMY: A HIGH ENERGY VIEW**

13-15 June 2018
ESAC, Villanueva de la Cañada, Madrid, Spain
XMM-Newton Science Workshop 2018

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**EWASS 2018**[Welcome & News](#)[About EWASS](#)[Organisers](#)[Dates](#)[Venue](#)[Interactive map](#)[General Information](#)

Welcome to EWASS 2018 !

**European Week of Astronomy and
Space Science
3 - 6 April 2018**

**Arena & Convention Centre (ACC),
Liverpool, United Kingdom**



It is very important to have Symposia and Special Sessions for X-ray astronomy

**The PS kindly asks for suggestions
for the scientific topic (before 1 June
2018).**



Dedicated Discussion

|

- mission extension
- self-nomination of UG candidates
- mid-cycle proposals
- anniversary