

# Report from the Project Scientist

Norbert Schartel

UG Meeting, 9 June 2021



- ❑ Announcement of Opportunity (AO)ss
  - ❑ AO 20
  - ❑ AO 21 / Preparation
- ❑ Target of Opportunity (TOOs)
- ❑ Publications
- ❑ Workshops & Conferences
- ❑ Mission Extension
- ❑ Candidates for Users' Groupe





- ☐ Increased importance of Target of Opportunity observations
- ☐ Increased importance of (simultaneous) multi-wavelength /multi-messenger observations
- ☐ Importance of very large projects (>2 Ms)



### Submission Statistics for AO20

Nr. of proposals received:	459
Nr. of PI's	373
Nr. of Co-I's per proposal	6
Nr. of PI's+Co-I's (email)	1751
Nr. of PI's+Co-I's (surname)	1509
Nr. of countries participating	41
Nr. of Observations	2341
Nr. of Pointings	3647
Nr. of targets	1673
Nr. of Obs. per Proposal	5.1
Nr. of Pointings per Proposal	7.9
Total Req. Time (ks)	110258
Average Req. Time per proposal (ks)	240.2
Average Req. Time per pointing (ks)	39.7
Average Req. Time per observation (ks)	47.1



### Statistics by PI/Country

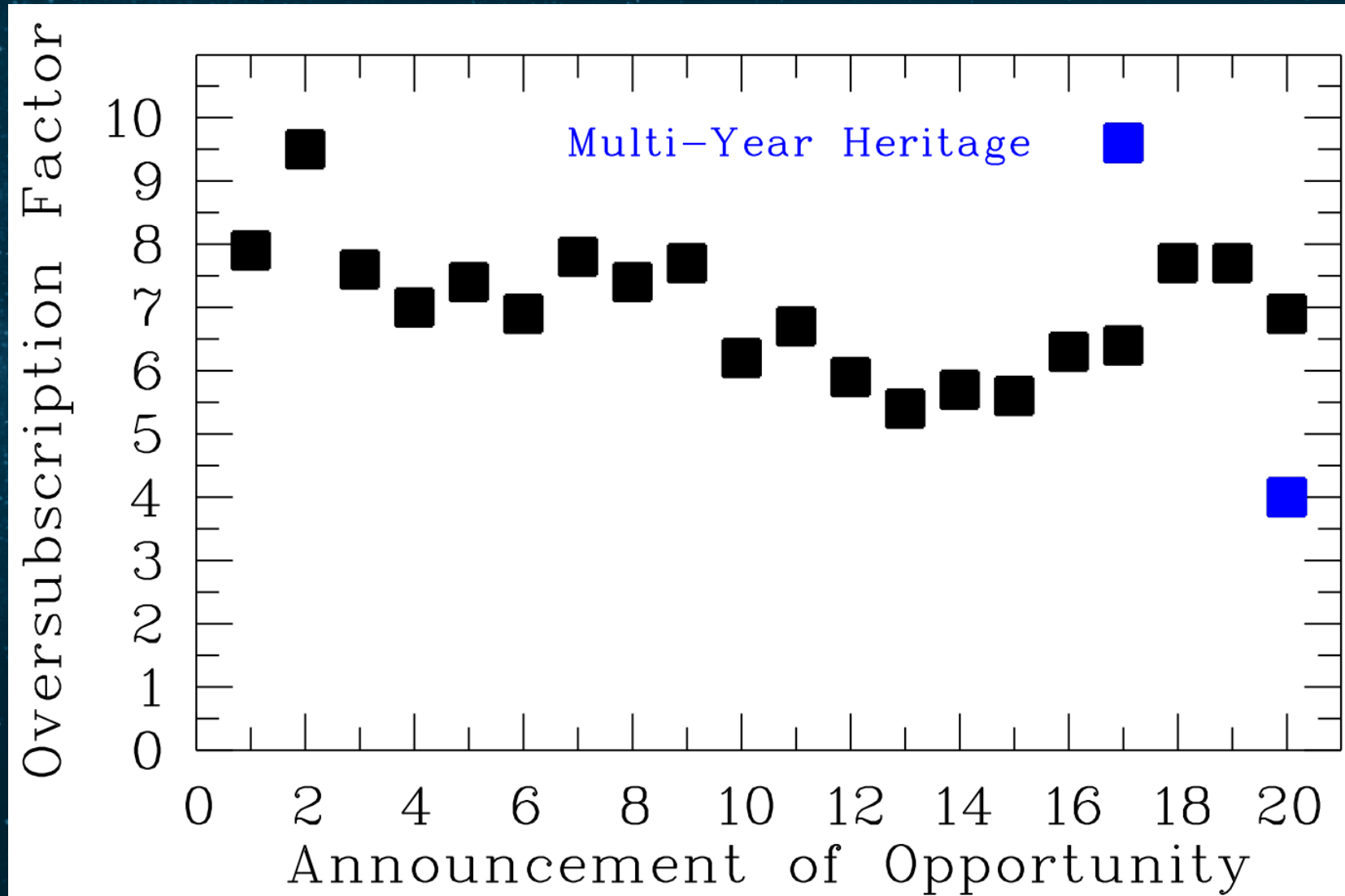
Country	Nr. of proposals	Req. Time (ks)
 UNITED STATES	208	42656
 ITALY	66	22821
 GERMANY	53	12082
 UNITED KINGDOM	29	6712
 ESA	12	4476
 FRANCE	18	4233
 SPAIN	12	3354
 NETHERLANDS	10	2195
 PORTUGAL	1	1714
 CANADA	11	1668
 JAPAN	12	1537
 FINLAND	5	1363
 CHINA	13	1336
 POLAND	3	604

 CHILE	1	515
 CZECH REPUBLIC	3	490
 INDIA	6	474
 TURKEY	4	412
 BELGIUM	3	323
 ISRAEL	1	225
 KOREA	2	218
 RUSSIA	3	175
 MEXICO	1	156
 SWEDEN	1	140
 BULGARIA	1	103
 BRAZIL	1	99
 AUSTRALIA	1	54
 SLOVAKIA Slovak Rep.	1	53
 TAIWAN	1	48
 SWITZERLAND	1	26

## Statistics by Proposal Type

Proposal Type	Nr. of proposals (Large Program)	Total Time (ks) (Large Program)
Guest Observer	355 (42)	65752 (26338)
Multi-Year Heritage	7(7)	27819 (27819)
Target of Opportunity (anticipated)	66 (5)	9931 (2757)
Fulfil	19 (0)	6757 (0)





## Statistics on Joint observations (224 observations in 101 proposals)

	Nr. of Prop.	Nr. of obs	Time/Orbits
<b>Chandra</b>	11	13	752.0
<b>HST</b>	25	54	162.0
<b>VLT</b>	8	15	75.0
<b>Swift</b>	15	32	836.0
<b>NuSTAR</b>	56	134	14725.0
<b>INTEGRAL</b>	0	0	None
<b>MAGIC</b>	0	0	None
<b>HESS</b>	2	2	40.0
<b>NRAO</b>	7	14	81.5



- A) Life-cycle of stars and planets
- B) Isolated and binary compact objects & their evolution
- E) Active Galactic Nuclei, Quasars, BL-Lac Objects and Tidal Disruption Events
- F) Galaxies, Groups of Galaxies, Clusters of Galaxies and Superclusters
- G) Cosmology, Extragalactic Deep Fields and Large Extragalactic Areas



## Categories Distribution

Category	Nr. of Proposals (Large Programs)	Nr. of Observations (Large Programs)	Total Time Req. (ks) (Large Programs)
A	84 (10)	349 (43)	13635 (4650)
B	127 (6)	407 (19)	17816 (2761)
E	139 (21)	611 (256)	37914 (20928)
F	104 (25)	808 (525)	29420 (17307)
G	5 (4)	166 (165)	11474 (11268)
	459 (66)	2341 (1008)	110259 (56914)

Category	Topic	Category	Topic
A	Stars	E	AGN
B	Compact Objects	F	Galaxies and Clusters
		G	Cosmology



088011	20	Wisibono		3	350	LP	0	Solar System
088028	20	Gatuzz	Measuring merging, feedback and sloshing velocities in the Ophiuchus cluster	8	670	LP	0	Clusters of Galaxies
088054	20	Petrucci	Tracking a Black Hole Low-Mass X-ray Binary Wind during Spectral Transition	10	470	LP	0	AGN / Black Hole
088206	20	Schneider	HERA: High-Energy Radiation from Accretion in young stars	10	420	LP	0	Stars
088234	20	Kara	MAPPING GAS FLOWS IN THE AGN MRK 817 WITH XMM-NEWTON AND HST	3	400	LP	0	AGN / Black Hole
088265	20	Bogdan	Stacking the X-ray Line Forest: Detecting the Missing Baryons	5	540	LP	0	Cosmology & Deep Fields
088272	20	Wang	X-raying hyperluminous sub-millimeter galaxies via strong gravitational lenses	6	540	LP	0	Galaxies
088355	20	Israel	Too B or not too B: the quest for the PULX accretion	3	400	LP	0	Neutron Stars
088377	20	Arcodia	A systematic search for X-ray Quasi-Periodic Eruptions in the eROSITA era	4	530	LP	0	AGN / Black Hole
088393	20	Ponti	Is the activity in the Milky Way disc sustaining the Galactic corona?	156	3600	MYHP	0	Galaxies
088499	20	Zappacosta	HYPERluminous quasars at the Epoch of Reionization (HYPERION)	30	2400	MYHP	0	AGN / Black Hole



- ❑ Planned key milestones (public since 20 January, 2021, XMM-Newton Newsletter #239 & SOC webpages):
  - ❑ Announcement: 17 August 2021
  - ❑ Due date for proposals: 8 October 2021
  - ❑ Final approved program: mid December 2021
  - ❑ Second phase submission 10 January – 4 February 2022
  - ❑ Start of observations: 1 May 2022
  
- ❑ 5 Scientific categories / 11 Panel / 56 Scientists
- ❑ OTAC chairperson: Prof. Phil Charles, Southampton/Oxford, United Kingdom
- ❑ OTAC panel Chairpersons are asked not to participate on new Large Programs



# Targets of Opportunity and Director's Discretionary Time I

Rev	Observation Id	Target	RA	Dec	Exp. Time (ksec)	Data Status	ODF Data when available	PPS Data when available	Comments
3815	0872390301	ASASSN-15oi	20:39:09.10	-30:45:21.0	26.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3812	0871191301	SGR 1935+2154	19:34:55.68	+21:53:48.2	85.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3784	0872390101	2MASX J02344872-4419325	02:34:48.72	-44:19:32.5	95.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3777	0871191201	CFHQS J142952+544717	14:29:52.17	+54:47:17.7	23.0	DPS (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3767	0854590301	PKS 1413+135	14:15:58.82	+13:20:23.7	15.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3764	0861600101	NGC 7793 P13	23:57:50.90	-32:37:26.6	69.2	ToO (22-Jul-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. F. Fuerst)
3760	0871191001	ASASSN-16le	23:34:35.57	+54:33:25.4	18.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3759	0871190901	QSO B0136-2505	01:38:43.30	-24:50:32.0	5.5	Sat. Engineering	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Replenishment)
3759	0871190801	QSO B0136-2505	01:38:43.30	-24:50:32.0	5.0	Sat. Engineering	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Replenishment)
3759	0871190701	QSO B0136-2505	01:38:43.30	-24:50:32.0	130.0	Sat. Engineering	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Replenishment)
3758	0871190601	QSO B0136-2505	01:38:43.30	-24:50:32.0	5.4	Sat. Engineering	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Replenishment)
3758	0871190501	QSO B0136-2505	01:38:43.30	-24:50:32.0	5.0	Sat. Engineering	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Replenishment)
3758	0871190401	QSO B0136-2505	01:38:43.30	-24:50:32.0	130.0	Sat. Engineering	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Replenishment)
3756	0871191101	eRASSU J050213.8-674	05:02:13.85	-67:46:20.8	31.9	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3745	0871190301	ZTF19acspeuw	12:38:56.38	+33:09:57.3	34.2	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3741	0871190201	SGR J1935+2154	19:34:55.68	+21:53:48.2	50.7	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3741	0871190101	kug 1141+371	11:44:29.87	+36:53:08.6	19.5	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3740	0854591401	AT2018fyk	22:50:16.09	-44:51:53.5	17.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3730	0854591101	NGC3516	11:06:47.46	+72:34:07.2	24.5	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-

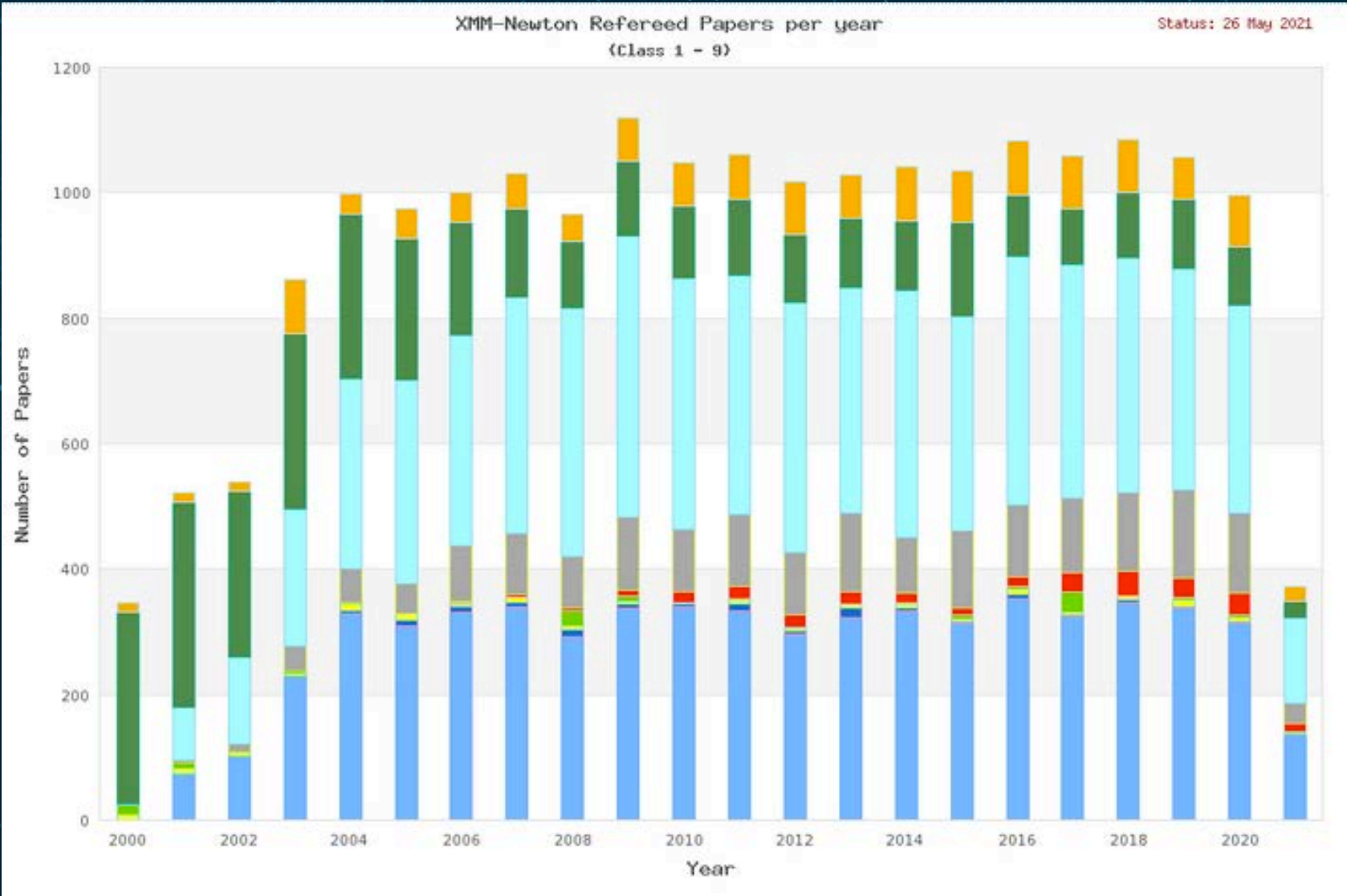


# Targets of Opportunity and Director's Discretionary Time II



Rev	Observation Id	Target	RA	Dec	Exp. Time (ksec)	Data Status	ODF Data when available	PPS Data when available	Proposer/Comments
3938	<a href="#">0872393101</a>	4FGL J2108.0+5155	21:08:04.00	+51:55:39.0	16.9	ToO (TBD)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. R. Walter)
3925	<a href="#">0872392901</a>	AT20200cn	13:53:53.77	+53:59:49.6	67.1	ToO (20-Nov-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. D. Pasham)
3925	<a href="#">0872392601</a>	FRB 20200120E	09:57:56.00	+68:49:32.0	30.0	ToO (20-Nov-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. P. Scholz)
3918	<a href="#">0872392501</a>	FRB 20200120E	09:57:56.00	+68:49:32.0	27.0	ToO (20-Nov-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. P. Scholz)
3911	<a href="#">0872392801</a>	TC0072	17:52:00.12	+65:37:36.1	20.5	ToO (26-Oct-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. J. Somalwar)
3908	<a href="#">0872392401</a>	FRB 20200120E	09:57:56.00	+68:49:32.0	23.0	ToO (20-Nov-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. P. Scholz)
3904	<a href="#">0872392301</a>	ZTF20abfcszi	20:34:52.32	+60:09:14.1	16.0	ToO (07-Oct-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. I. Liodakis)
3904	<a href="#">0872392101</a>	SDSS J081456.10+5325	11:44:40.20	+67:24:36.0	15.0	ToO (07-Oct-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. W.Brandt)
3903	<a href="#">0872392201</a>	ZTF20abfcszi	00:31:13.60	+85:00:32.0	11.0	ToO (07-Oct-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. I. Liodakis)
3891	<a href="#">0872391901</a>	WISEA J041754.02-594942.2	04:17:54.00	-59:49:43.1	55.6	ToO (15-Sep-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. J. Buchner)
3889	<a href="#">0872392001</a>	SWIFT J1749.4-2807	17:49:32.00	-28:08:06.0	57.8	ToO (09-Sep-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. A. Sanna)
3885	<a href="#">0872391701</a>	ZTF20abfcszi	00:31:13.60	+85:00:32.0	12.2	ToO (06-Sep-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. I. Liodakis)
3882	<a href="#">0872391801</a>	SRGEJ170245.3+130104	17:02:45.30	+13:01:02.2	12.0	ToO (25-Ago-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. M. Gilfanov)
3871	<a href="#">0872391601</a>	EC 04570-5206	04:58:15.63	-52:02 02.0	49.0	ToO (02-Aug-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. M. Krumpe)
3869	<a href="#">0872391401</a>	Swift 0540-7554	05:40:01.90	-75:54:19.0	35.0	ToO (30-Jul-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. J. Strader)
3852	<a href="#">0872391301</a>	Mrk 279	13:53:03.44	+69:18:29.4	30.5	ToO (18-Jul-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. J.Miller)
3851	<a href="#">0872390901</a>	Mrk 817	14:36:22.10	+58:47:39.4	137.7	ToO (23-Jun-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. E Kara)
3850	<a href="#">0872390801</a>	MR 2251-178	22:54:05.80	-17:34:55.4	55	ToO (23-Jun-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. J. Mao)
3846	<a href="#">0872391201</a>	SRGA J204318.2+44381	20:43:18.65	+44:38:20.1	25.0	ToO (16-Jun-2021)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. A. Lutovinov)
3833	<a href="#">0872390701</a>	SGR 1935+2154	19:34:55.68	+21:53:48.2	43.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3824	<a href="#">0871191401</a>	GRS 1915+105	19:15:11.55	+10:56:44.8	45.0	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3820	<a href="#">0872390601</a>	SGR 1935+2154	19:34:55.68	+21:53:48.2	36.9	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	-
3817	<a href="#">0872390501</a>	SGR 1830-0645	18:30:41.72	-06:45:16.4	25.5	ToO (Public)	<a href="#">ODF Data</a>	<a href="#">PPS Data</a>	(Dr. A. Borghese)





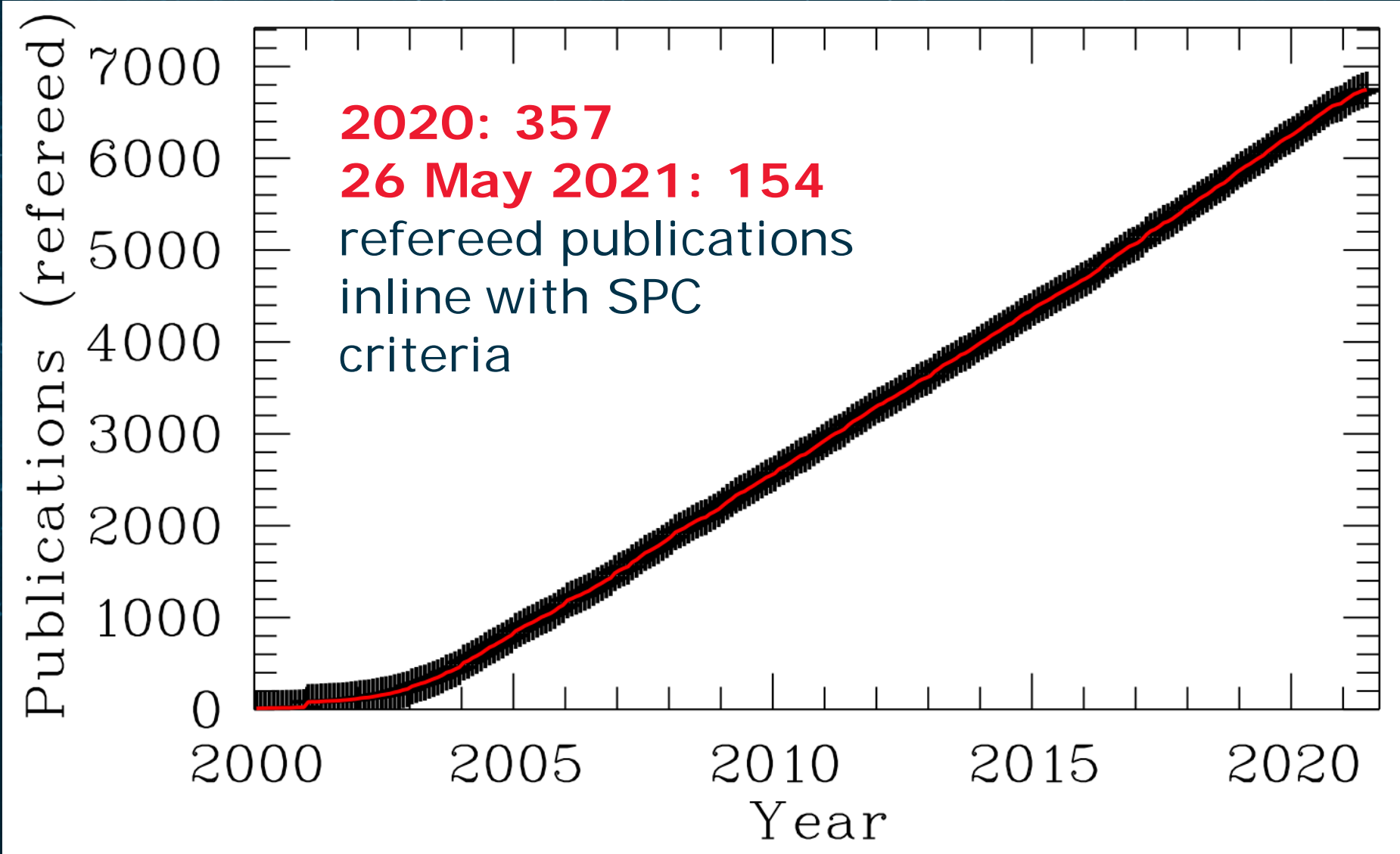
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**XMM & Citation**

Uses Others

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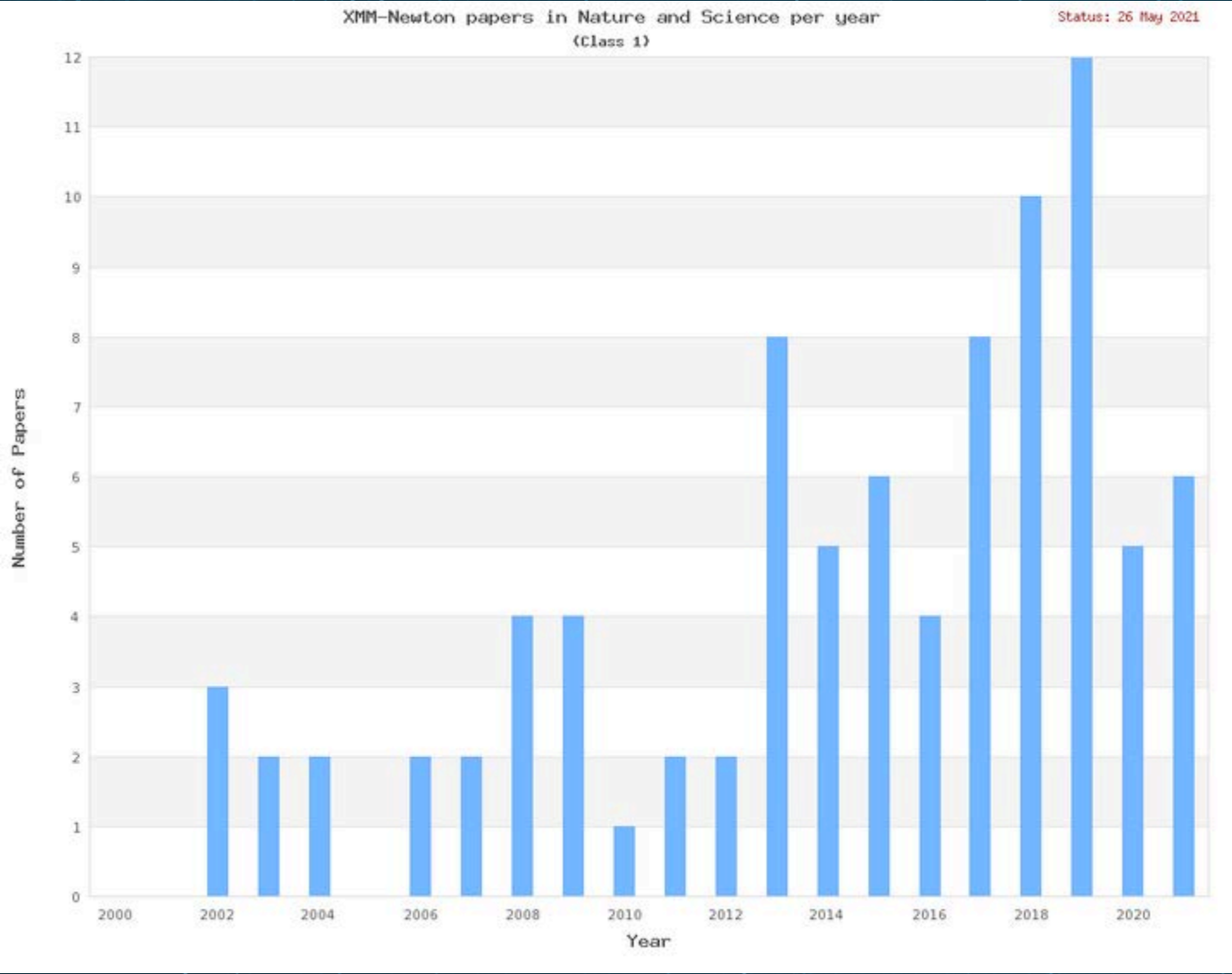
**Uses Products**  
**Describes**  
**Predicts**  
**Catalogue**  
**Uses Data**







# Publications: Nature and Science Papers





**18-Aug-2020**

## **XMM-NEWTON 20TH ANNOUNCEMENT OF OPPORTUNITY (AO-20)**

The XMM-Newton Twentieth Announcement of Opportunity is now open and observing proposals may be submitted.

The deadline is **9 October 2020, 12:00 UT**

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

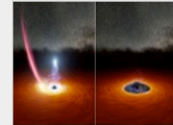


**16-Jul-2020**

## **RUNAWAY STAR MIGHT EXPLAIN BLACK HOLE'S DISAPPEARING ACT**

The telltale sign that the black hole was feeding vanished, perhaps when a star interrupted the feast. The event could lend new insight into these mysterious objects.

Further details on **NASA's** web portal.

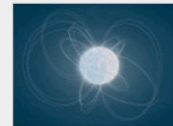


**17-Jun-2020**

## **XMM-NEWTON SPIES YOUNGEST BABY PULSAR EVER DISCOVERED**

An observation campaign led by ESA's XMM-Newton space observatory reveals the youngest pulsar ever seen – the remnant of a once-massive star – that is also a 'magnetar', sporting a magnetic field some 70 quadrillion times stronger than that of Earth.

Further details on ESAS's **Science & Exploration** portal.

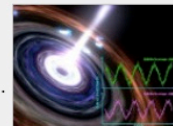


**10-Jun-2020**

## **BLACK HOLE'S HEART STILL BEATING**

The first confirmed heartbeat of a supermassive black hole is still going strong more than ten years after first being observed. X-ray satellite observations spotted the repeated be at after its signal had been blocked by our Sun for a number of years. Our astronomers say this is the most long lived heartbeat ever seen in a black hole...

Further details on **Durham University** web portal.

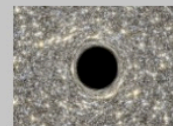


**10-Jun-2020**

## **SCIENTISTS DETECT HEARTBEAT OF SUPER MASSIVE BLACK HOLE 600 MILLION LIGHT YEARS AWAY**

Scientists have confirmed that the heartbeat of a super massive black hole is still going strong after ten years. Astronomers say this is the longest living heartbeat ever seen in a black hole, and that it can help to tell scientists more about its size and the space around it.

Further details on **BBC** web portal .



**27-May-2020**

## **ANDREW FABIAN**

The Norwegian Academy of Science and Letters has decided to award the Kavli Prize in Astrophysics for 2020 to Andrew Fabian "for his groundbreaking research in the field of observational X-ray astronomy, covering a wide range of topics from gas flows in clusters of galaxies to supermassive black holes at the heart of galaxies."

Further details on the **Kavli Prize** portal.



**11-May-2020**

## **A BENT BRIDGE BETWEEN TWO GALAXY CLUSTERS**

A new study, based on data from ESA's XMM-Newton and NASA's Chandra X-ray observatories, sheds new light on a three million light-year long bridge of hot gas linking two galaxy clusters, whose shape is being bent by the mighty activity of a nearby supermassive black hole.

Further details on ESAS's **Science & Exploration** portal.



**10-Dec-2020**

## **21 YEARS OF XMM-NEWTON CELEBRATED WITH A NEW CATALOGUE AND AN AMBITIOUS CITIZEN SCIENCE PROJECT**

On the 21st anniversary of the launch of the European Space Agency's X-ray observatory, XMM-Newton, the XMM-Newton Survey Science Centre (XMM-SSC) are releasing a new catalogue, 4XMM-DR10...

Further details on **IRAP** web portal.

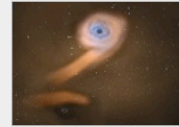


**08-Dec-2020**

## **ASTRONOMERS DISCOVER THE SECOND STELLAR TIDAL DISRUPTION EVENT CAUSED BY SUPERMASSIVE BLACK HOLE BINARY**

Using data from NASA's Swift and ESA's XMM-Newton satellites, a team of Chinese researchers found new evidence for the existence of two close supermassive black holes (SMBH) in the center of a normal galaxy.

Further details on **Chinese Academy of Sciences** web portal.

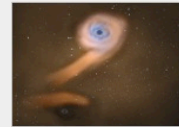


**18-Nov-2020**

## **ODD X-RAY FLARES FROM A SMBH PAIR TEARING STAR**

Using data from NASA's Swift and ESA's XMM-Newton satellites, a team of Chinese researchers...found new evidence for the existence of two close supermassive black holes(SMBH)...They were discovered because they ripped apart a star, producing flaring X-ray emission, and these X-rays were seen by Swift and XMM-Newton.

Further details on **NAOC** web portal.

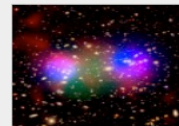


**12-Nov-2020**

## **COSMIC FURNACE SEEN BY XMM-NEWTON**

This burst of colour shows a fascinating discovery: a galaxy cluster acting as a cosmic furnace...XMM-Newton detected the cluster via the international XXL survey, which is exploring two large areas of space outside our galaxy.

Further details on ESAS's **Science & Exploration** portal.

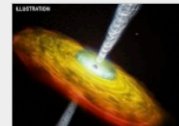


**14-Oct-2020**

## **THE RECIPE FOR POWERFUL QUASAR JETS**

Some supermassive black holes launch powerful beams of material, or jets, away from them, while others do not. Astronomers may now have identified why. Using data from NASA's Chandra X-ray Observatory, ESA's XMM-Newton...

Further details on **Chandra X-Ray Observatory** web portal.



**29-Sep-2020**

## **ASTRONOMERS TAKE A CLOSER LOOK AT THE CENTERS OF GALAXIES**

Study sheds light on how matter around the vicinity of supermassive black holes is distributed.Using ESA's XMM-Newton, NASA's Chandra, and JAXA's Suzaku telescopes, the researchers found three distinct regions where the X-rays get absorbed by matter.

Further details on **UC SanDiego** web portal.

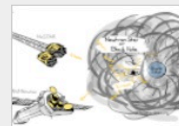


**15-Sep-2020**

## **NUSTAR AND XMM-NEWTON OBSERVE A DUSTY SHROUD SPARKLING IN X-RAYS**

NASA's NuSTAR and ESA's XMM-Newton satellites have observed a young, massive star in close orbit with the compact remnant from a collapsed star, thereby studying how massive stars evolve and interact.

Further details on the **NuSTAR** website.

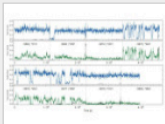




28-Apr-2021

**QUASI-PERIODIC DIPPING DETECTED IN AN ULTRALUMINOUS X-RAY SOURCE**

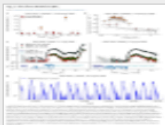
Astronomers have performed a timing analysis of the ultraluminous X-ray source NGC 247 ULX-1 using ESA's XMM-Newton spacecraft. The study detected quasi-periodic dipping in the X-ray light curve of this source...NGC 247 ULX-1 was observed eight times by XMM-Newton over one month. Further details on [Phys.org](#) web portal.



28-Apr-2021

**X-RAY QUASI-PERIODIC ERUPTIONS FROM TWO PREVIOUSLY QUIESCENT GALAXIES**

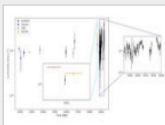
Quasi-periodic eruptions (QPEs) are very-high-amplitude bursts of X-ray radiation recurring every few hours and originating near the central supermassive black holes of galactic nuclei...observations triggered with the XMM-Newton X-ray telescope confirmed the remarkable bursting nature of the source. Further details on [Nature](#) web portal.



05-Apr-2021

**UNUSUAL FLARING ACTIVITY OBSERVED FROM THE ULTRALUMINOUS X-RAY SOURCE NGC 4559 X7**

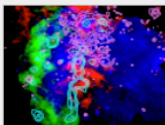
Italian astronomers have performed X-ray observations of an ultraluminous X-ray source (ULX) known as NGC 4559 X7 and found that this source exhibits unusual flaring activity... analyzed all the available X-ray observations of NGC 4559 X7 taken with XMM-Newton. Further details on [Phys.org](#) web portal.



30-Mar-2021

**WHEN CLOUDS COLLIDE**

Our galaxy is surrounded by numerous 'satellite' galaxies, the largest being the Large Magellanic Cloud (LMC)...Researchers have now used ESA's XMM-Newton X-ray observatory to explore the emission streaming from the X-ray spur at multiple wavelengths. Further details on [ESAS's Science & Exploration](#) web portal.



15-Jan-2021

**PHYSICISTS MAY HAVE FOUND DARK MATTER: X-RAYS SURROUNDING "MAGNIFICENT 7" MAY BE TRACES OF THEORIZED PARTICLE**

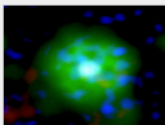
Researchers say they may have found proof of theorized axions, and possibly dark matter, around a group of neutron stars...from two space satellites: the European Space Agency's XMM-Newton and NASA's Chandra X-ray telescopes. Further details on [SciTechDaily](#) web portal.



11-Jan-2021

**COSMIC NEON LIGHTS**

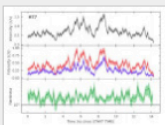
This image shows a new type of star that has never been seen before in X-ray light.A team of astronomers led by Lidia Oskinova...used ESA's XMM-Newton X-ray telescope to study the object that was originally discovered in 2019. Further details on [ESAS's Science & Exploration](#) web portal.



06-Jan-2021

**SUPERGIANT ECLIPSING BINARY IGR J18027-2016 INVESTIGATED IN DETAIL**

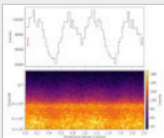
Using data from ESA's XMM-Newton and NASA's Swift spacecraft, astronomers have conducted a detailed temporal and spectral study of an eclipsing supergiant X-ray binary known as IGR J18027-2016. Results of this research provide important insights into the properties of this system. Further details on [Phys.org](#) web portal.



24-May-2021

**OBSERVATIONS SHED MORE LIGHT ON THE PROPERTIES OF PULSAR PSR J0740+6620**

An international team of astronomers has carried out X-ray observations of a massive millisecond pulsar known as PSR J0740+6620...The XMM-Newton (hereafter XMM) telescope observed PSR J0740+6620 as part of a Director's Discretionary Time program... Further details on [Phys.org](#) web portal.



17-May-2021

**SUPERMASSIVE BLACK HOLES DEVOUR GAS JUST LIKE THEIR PETITE COUNTERPARTS**

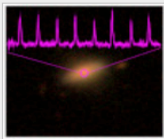
On Sept. 9, 2018, astronomers spotted a flash from a galaxy 860 million light years away. The source was a supermassive black hole about 50 million times the mass of the sun...The team collected data over two years, using X-ray space telescopes XMM-Newton and the Chandra X-Ray Observatory... Further details on [MIT](#) web portal.



29-Apr-2021

**EROSITA WITNESSES THE AWAKENING OF MASSIVE BLACK HOLES**


Using the SRG/eROSITA all-sky survey data, scientists at the Max Planck Institute for Extraterrestrial Physics have found two previously quiescent galaxies that now show quasi-periodic eruptions...which was confirmed by follow-up observations with the XMM-Newton. Further details on [Max Planck Institute](#) web portal.





# Public Outreach III: Twitter



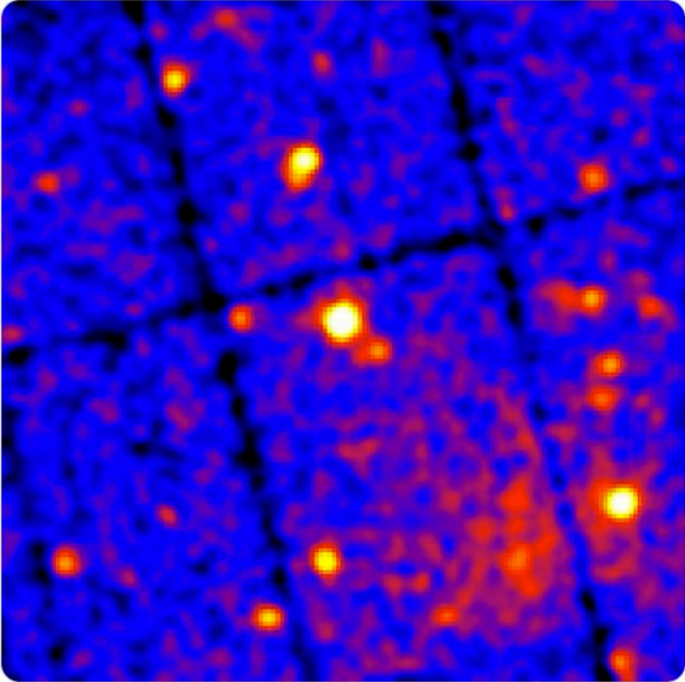


ESA Science  
@esascience


Together with [@eROSITA\\_SRG](#) our [@ESA\\_XMM](#) spotted a quasar that shines extremely bright in X-rays!

Astronomers think that it represents a new type of objects that shine so bright that they can only exist in the very early Universe.

Paper in [#MNRAS](#) [academic.oup.com/mnras/article/...](#)




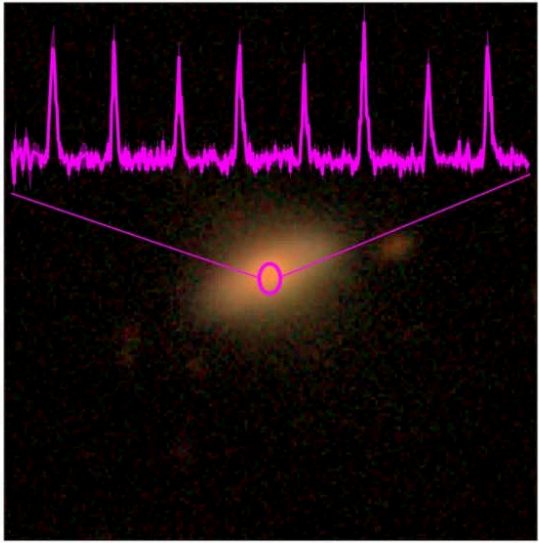
2:44 pm · 19 May 2021 · Twitter Web App



ESA XMM-Newton  
@ESA\_XMM

Exciting science from XMM-Newton: together with [@eROSITA\\_SRG](#) XMM-Newton studied two supermassive black holes showing regular 'quasi-periodic eruptions'. This brings the total number of galaxies showing this behavior to four, but it is still unclear what triggers it.


 credit: MPE



9:47 AM · Apr 29, 2021 · Twitter Web App

View Tweet activity

25 Retweets 1 Quote Tweet 48 Likes







ESA XMM-Newton  
@ESA\_XMM


New XMM-Newton research: Reeves et al. report on the "Variable oxygen emission from the accretion disk of Mrk 110" in *Astronomy & Astrophysics Letter* 649, L3 (2021) 1/4

2:04 PM · May 11, 2021 · Twitter Web App

View Tweet activity

4 Retweets 13 Likes











ESA XMM-Newton @ESA\_XMM · May 11

Replying to @ESA\_XMM

They study the surroundings of the super-massive black hole in the active galaxy Mrk 110 using six XMM-Newton observation taken between 2004-2020. They found a broad He-like Oxygen line (O VII), which can be modelled as originating from a face-on accretion disk.

2/4

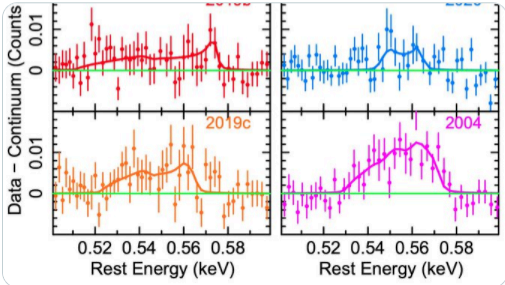




ESA XMM-Newton @ESA\_XMM · May 11

They also find that the size and shape of the O VII line responds to changes in the overall flux, indicating a connection between the line producing region in the accretion disk and the overall accretion rate. The plot shows the line profile in the different observations.

3/4



2 6






## A HIGH-ENERGY VIEW OF EXOPLANETS AND THEIR ENVIRONMENTS

24-28 May 2021

Organised by the European Space Astronomy Centre (ESAC)  
Villafranca del Castillo  
Madrid, Spain

The workshop will be held as a video conference.

- ❑ Chairperson of Scientific Organizing Committee: Prof. Katja Poppenhaeger
- ❑ 353 (Register) Participants
- ➔ **Great Success**
- ❑ Proceedings will be published as issue of Astronomical Notes




**A HIGH-ENERGY VIEW OF EXOPLANETS AND THEIR ENVIRONMENTS**

24-28 May 2021  
Virtual Event  
*XMM-Newton Workshop 2021*

Topics	Scientific Organising Committee	Local Organising Committee
Exoplanet Atmospheres Stellar Magnetic Activity Star-Planet Interactions Extreme Environments of Planets Star and Planet Formation Future Missions	Costanza Argiroffi, U Palermo, IT Mario Guarcello, CA Palermo, IT Yamila Miguel, U Leiden, NL James Owen, IC London, UK Katja Poppenhaeger (chair), AIP, DE Luca Resmi, Caltech, US Jorge Sanja Forcada, CAB, ES Norbert Schartel (co-chair), ESA/ESAC, ES Beate Stelzer, U Tübingen, DE Peter Wheatley, U Warwick, UK Scott Woik, CIA   Harvard, US Aline Vidotto, U Dublin, IE Philippe Zarka, O Paris - CNRS, FR	S. Migliari L. Ballo J. Ebrero F. Fürst R. Saxton I. Valtchanov

<http://xmmworkshop.esa.int>





# Future of Workshops and Conferences?

- ❑ 2022 Workshop
  - ➔ Suggestions of topic & title & Chairperson of scientific organizing committee
- ❑ 2023 The X-ray Universe Conference



- ❑ Mission extension scheme is changed from 2 + 2 years to 3 + 3 years
- ❑ Currently, XMM-Newton:
  - ❑ Approval for 2021 and 2022
  - ❑ Tentative approval for 2023 – 2025
- ❑ Early next year we ask for
  - ❑ Approval for 2023 – 2025
  - ❑ Tentative approval for 2026 – 2028
- ❑ **In autumn** Mission Extended Operations Report and **preparation of science case** (originally foreseen for early 2021)
  - ❑ I will ask for input end of summer





## Astronet: Science Vision and Infrastructure Roadmap for European Astronomy

### Astronet Science Vision & Roadmap webinar registration



Topic Astronet Science Vision & Roadmap webinar

Time Jun 11, 2021 08:00 AM in [Universal Time UTC](#)





- XMM-Newton Users' Group (UG) was founded in 2002
- The UG advises ESA, through the Project Scientist, on all matters relating to the optimisation of the scientific output of the XMM-Newton mission. It also acts as a forum to discuss input from the community of users, and when appropriate advise or recommend action to ESA regarding XMM-Newton operations (e.g. prioritization of calibration priorities, mission extensions)
- The UG consists of 9 voting members
- 1 of them acts as Chairperson
- Members are replaced after ~4 years
- UG is kindly invited to suggest candidates for UG members and for the next UG chairperson
- Please, send your suggestions directly to Norbert Schartel  
<Norbert.Schartel@esa.int>



# XMM-Newton Users' Group Members

- Experienced, known European Scientists, who are actively researching with XMM-Newton
- We aim for variety of research expertise and topics, gender, nationalities ...
- Current UG members are:
  - Stefano Bianchi (IT), Enrico Bozzo (HE), Jimmy Irwin (US), Christine Jones (US), Yäel Nazé (BE), Lidia Oskinova (DE), Gabriel Pratt (FR), Silvia Zane (UK)
- Previous UG members were:
  - Maria Díaz Trigo, Ioannis Georgantopoulos, Nanda Rea, Beate Stelzer, Hans Böhringer, Craig Sarazin, Anne Decourchelle, Christine Done, Manuel Güdel, Mariano Mendez, Frank Haberl, Massimo Cappi, Didier Barret, Gregor Rauw, Miguel Mas-Hesse, Phil Charles, Xavier Barcons, Andrea Comastri, Michiel Van der Klis, Richard Mushotzky, Jacqueline Bergeron, Roberto Pallavicini, Richard Griffiths



# XMM-Newton Users' Group Chairperson



- Experienced, well and widely known, leading European Scientists, who are actively researching with XMM-Newton, e.g. Chair or Head of institute or department
- Current UG Chairperson:
  - Prof. Rudy Wijnands (NL)
- Previous UG Chairpersons were:
  - Prof. Martin J. Ward (UK)
  - Prof. Xavier Barcons (ES)
  - Prof. Monique Arnaud (FR)
  - Prof. Juergen Schmitt (DE)