

(1) Core proposals

Title	致密天体高能辐射性质研究
ABSTRACT	<p>核心提案基于慧眼的宽波段观测优势，以及目前慧眼已经积累的观测数据，在宽能区研究致密天体高能辐射性质，在爆发源和持续亮源等方面预期开展一系列的观测和研究，具体包括：X 射线双星爆发的时变、能谱以及态演化的研究；大质量 X 射线双星爆发有关极冠区的吸积辐射机制、辐射区几何以及回旋吸收研究；热核暴探针研究；Z 和 atoll 源的演化的研究。提案包括常规的定点观测以及 ToO 观测，这些观测一部分作为已有慧眼相关源研究的观测补充，也可能通过 ToO 观测给出新现象的发现。观测的实施将有助于推进不同类型 X 射线双星的辐射机制等方面的研究。</p>
Special requirement	<p>ToO triggering criteria: BH-XRB : the ToO of Cyg X-1 with flux >300 mcrab, ToO of other sources with BAT flux > 50 mCrab; HMXB-PSR: only new sources with Swfit/Bat flux > 50 mcrab; Z and Atoll sources: ToOs of XTE J1701-462, Cir X-1, Cyg X-2, GX 3+1, GX 9+1 with BAT flux > 30, 300, 500, 300, 500 mCrab; X-ray bursts sources: ToOs with flux > 50 mcrab;</p>

Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304014	new source 1	600	A	Yes	
P0304015	new source 2	600	A	Yes	
P0304016	new source 3	600	A	Yes	
P0304017	RX J0209.6-7427	600	A	Yes	
P0304018	GX 304-1	600	A	Yes	
P0304019	Swift J0243.6+6124	600	A	Yes	
P0304020	KS 1947+300	600	A	Yes	
P0304021	4U 1608-52	300	A	Yes	
P0304022	GRO J1655-40	600	B	Yes	
P0304023	XTE J1550-564	600	B	Yes	

P0304024	GX 339-4	600	B	Yes	
P0304025	XTE J1859+226	600	B	Yes	
P0304026	4U 1543-47	600	B	Yes	
P0304027	4U 1630-472	600	B	Yes	
P0304028	V404 Cyg	600	B	Yes	
P0304029	Cep X-4	600	B	Yes	
P0304030	EXO 2030+375	600	B	Yes	
P0304031	1A 0535+26	600	B	Yes	
P0304032	RX J0440.9+4431	600	B	Yes	
P0304033	GRO J2058+42	600	B	Yes	
P0304034	Aql X-1	200	B	Yes	

P0304035	MAXI J1820+070	800	C	Yes	
P0304036	MAXI J1348-630	600	C	Yes	
P0304037	MAXI J1535-571	800	C	Yes	
P0304038	XTE J1650-500	200	C	Yes	
P0304039	EXO 1846-031	200	C	Yes	
P0304040	Swift J1728.9-3613	200	C	Yes	
P0304041	4U 1538-52	200	C	Yes	
P0304042	4U 1626-67	200	C	Yes	
P0304043	IGR J19294+1816	200	C	Yes	
P0304044	XTE J1858+034	200	C	Yes	
P0304045	XTE J1946+274	200	C	Yes	

P0304046	2S 1845-024	200	C	Yes	
P0304047	Swift J0513.4-6547	200	C	Yes	
P0304048	MAXI J1409-619	200	C	Yes	
P0304049	2S 1553-542	200	C	Yes	
P0304050	3A 0114+650	200	C	Yes	
P0304051	4U 1908+075	200	C	Yes	
P0304052	GS 1843+009	200	C	Yes	
P0304053	4U 2206+54	200	C	Yes	
P0304054	SWIFT J1626.6-5156	200	C	Yes	
P0304055	IGR J16393-4643	200	C	Yes	
P0304056	4U 1822-371	200	C	Yes	

P0304057	4U 1907+09	200	C	Yes	
P0304058	GRO J1008-57	200	C	Yes	
P0304059	2S 1417-624	200	C	Yes	
P0304060	GS 0834-430	200	C	Yes	
P0304061	4U 1901+03	200	C	Yes	
P0304062	MXB 0656-072	200	C	Yes	
P0304063	XTE J0658-073	200	C	Yes	
P0304064	XTE J1701-462	200	C	Yes	
P0304066	Cir X-1	200	C	Yes	
P0304067	Cyg X-2	200	C	Yes	
P0304068	GX 3+1	200	C	Yes	

P0304069	H 1743-322	200	C	Yes	
P0301009	SAX J2103.5+4545	1000	A	No	
P0301010	GX 9+1	100	A	No	
P0301011	Cyg X-1	170	B	No	
P0301012	GRS 1915+105	170	B	No	
P0301013	Cyg X-3	170	C	No	
Title	Galactic Plane Scanning Survey with Insight-HXMT				
ABSTRACT	<p>银道面扫描巡天是慧眼-HXMT 的重要任务之一，观测时间将占到总观测时长的三分之一。慧眼-HXMT 在 X 射线波段的大面积和窄视场的设计使其有能力进行河内硬 X 射线变源最深和最高频次的普查。在本提案中，银道面将被划分为 50 个小天区，慧眼-HXMT 将采用最适合的扫描参数，对每一个小天区进行往复扫描，并最终完整的覆盖整个银道面。本提案将对银道面内的已知源进行长期监测，并且发现一批新的 X 射线瞬变源以及新的暴发现象。除此之外，还将获得银道面弥散背景天图。</p>				

Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0301289	SSDS_174537-285610_7	50	A	No	
P0301288	SSDS_182731-112919_7	50	A	No	
P0301287	SSDS_190422+061713_7	50	A	No	
P0301286	SSDS_194354+235325_7	50	A	No	
P0301285	SSDS_203553+403949_7	50	A	No	
P0301284	SSDS_220000+550259_7	50	A	No	
P0301283	SSDS_002548+624332_7	50	A	No	
P0301282	SSDS_030715+581751_7	50	A	No	

P0301281	SSDS_044658+451446_7	50	A	No	
P0301280	SSDS_054537+285610_7	50	A	No	
P0301279	SSDS_062731+112919_7	50	A	No	
P0301278	SSDS_070422-061713_7	50	A	No	
P0301277	SSDS_074354-235325_7	50	A	No	
P0301276	SSDS_083553-403949_7	50	A	No	
P0301275	SSDS_100000-550259_7	50	A	No	
P0301274	SSDS_122548-624332_7	50	A	No	
P0301273	SSDS_150715-581751_7	50	A	No	
P0301272	SSDS_164658-451446_7	50	A	No	
P0301271	SSDS_180745-201724_7	50	A	No	

P0301270	SSDS_171929-371854_7	50	A	No	
P0301269	SSDS_184605-023632_7	50	A	No	
P0301268	SSDS_160428-522512_7	50	A	No	
P0301267	SSDS_192318+150832_7	50	A	No	
P0301266	SSDS_135217-620201_7	50	A	No	
P0301265	SSDS_200727+322632_7	50	A	N	
P0301264	SSDS_110431-600934_7	50	A	No	
P0301263	SSDS_211201+481946_7	50	A	No	
P0301262	SSDS_091201-481946_7	50	A	No	
P0301261	SSDS_230431+600934_7	50	A	No	
P0301260	SSDS_080727-322632_7	50	A	No	

P0301259	SSDS_015217+620201_7	50	A	No	
P0301258	SSDS_072318-150832_7	50	A	No	
P0301257	SSDS_040428+522512_7	50	A	No	
P0301256	SSDS_064605+023632_7	50	A	No	
P0301255	SSDS_051929+371854_7	50	A	No	
P0301254	SSDS_060745+201724_7	50	A	No	
P0301253	SSDS_154339-482436_7	50	A	No	
P0301252	SSDS_162917-560926_7	50	A	No	
P0301251	SSDS_162543-414502_7	50	A	No	
P0301250	SSDS_171053-482751_7	50	A	No	
P0301249	SSDS_165852-341312_7	50	A	No	

P0301248	SSDS_174147-401004_7	50	A	No	
P0301247	SSDS_172550-260812_7	50	A	No	
P0301246	SSDS_180627-313242_7	50	A	No	
P0301245	SSDS_174841-174156_7	50	A	No	
P0301244	SSDS_182728-224451_7	50	A	No	
P0301243	SSDS_180853-090203_7	50	A	No	
P0301242	SSDS_184629-135203_7	50	A	No	
P0301241	SSDS_182735-001346_7	50	A	No	
P0301240	SSDS_190439-045817_7	50	A	No	

(2) Guest proposals

Title	Z 源高频高能 QPO 慧眼卫星观测研究			PI	Prof. Guoqiang Ding
ABSTRACT	<p>本提案申请对中子星低质量 X 射线双星 Z 源进行补充观测，积累更丰富的慧眼卫星 Z 源观测数据，得到完整的慧眼卫星 Z 源观测数据样本，以便主要利用慧眼高能 (HE) 探测器数据搜寻 X 射线双星在 高能区 ($> 30 \text{ keV}$) 的高频 QPOs，即 kHz QPOs，期望在 QPO 研究领域取得突破性进展。</p>				
Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305086	GX 5-1	400	B	No	
P0305087	GX 340+0	400	B	No	
P0305088	GX 349+2	200	A	No	

Title	X2127+119 的硬 X 射线观测			PI	Dr. Xianghua Li
ABSTRACT	<p>X 射线源 X2127+119 由两个低质量吸积 X 射线双星构成，它位于球状星团 M15 (NGC 7078)中，离中心约 2 角分(White & Angelini 2001)。由 15 等变星 AC 211(Auriere et al. 1984)和 M15 X-2 组成。光变曲线的周期 17.1hr (Ilovaisky et al. 1993)。Sidoli et al (2000)发表了 BeppoSAX 的观测结果，指出 X 射线波段的光变曲线周期也大致为 17 小时。M15 目前发现了 8 脉冲星。能谱变化比较复杂，但是也显示出准周期性。M15 在 TeV 波段被 Fermi/LAT 探测到 (Zhang et al. 2016)。Chandra 高空间分辨率的观测结果表明长期来看两个低质量 X 射线双星存在亮度变化。HXMT 具有具有高的时间和能谱分辨率，可以用来研究硬 X 射线波段 X2127+119 的时变和能谱特征。进一步限制双星的物理机制。</p>				
Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305085	X2127+119	40	C	No	

Title	NS-LMXB 4U 1636-53 和 4U 1728-34 中 I 型暴对比观测			PI	Dr. Guobao Zhang
ABSTRACT	<p>低质量中子星 X 射线双星(NS-LMXB) 4U 1636-53 和 4U 1728-34 都是 Atoll 源，在 Color-color Diagram (双色图)上具有非常类似的能谱演化图案。虽然这两颗源在不同的能谱态都观测到了 I 型 X 射线暴，但 I 型暴出现的概率随吸积率的演化关系，以及光球扩展暴出现的能谱态在这两颗源当中正好相反。本提案将基于慧眼-HXMT 对 4U 1636-53 和 4U 1728-34 进行高统计观测，通过研究高能 X 射线在不同能谱态下对 I 型暴的影响，找出 I 型暴在两颗 Atoll 源中产生随能谱不同演化现象的规律，进一步理解影响不同 I 型暴产生的物理机制。</p>				
Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305083	4U 1728-34	300	C	No	
P0305084	4U 1636-53	300	B	No	

Title	HXMT follow-up of radio transients in Galactic Bulge and Plane	PI	Dr. Wenfei Yu
ABSTRACT	<p>Galactic bulge and inner Galactic plane are the sites for plenty black hole and neutron star soft X-ray transients and neutron star LMXBs hosting rapid spinning neutron stars. Most of these systems also emit radio emission probably from jets when active, providing the opportunity to discover them in outbursts initially in the radio band. We propose to perform follow-up X-ray observations of radio transients discovered in radio surveys of the Galactic Bulge and inner Galactic plane, such as the FAST continuum survey of the Galactic bulge and plane, in order to detect black hole X-ray transients, neutron star transients, accretion-powered millisecond pulsars, X-ray pulsars, etc., to identify neutron star systems with X-ray bursts and detect potential state transitions associated with these systems. Insight-HXMT has unique capability in detection of timing features in the X-ray emission of radio transients of the nature of X-ray binaries and pulsars. Specifically, with HXMT data we will be able investigate rapid variability of these targets and search for pulsations in those transients even at very low X-ray flux, with additional possibility to provide independent localization of our targets.</p>		
Special requirement	<p>Coordinate observations: The joint-observation of FAST is required.</p>		

Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304235	Galactic Transient 5	50	A	Yes	
P0304236	Galactic Transient 4	50	A	Yes	
P0304237	Galactic Transient 3	50	A	Yes	
P0304238	Galactic Transient 2	50	A	Yes	
P0304239	Galactic Transient 1	50	A	Yes	
Title	Searching for the electron-positron annihilation feature in a bright blackhole X-ray binary outburst		PI	Dr. Jian Li	
ABSTRACT	<p>Electron-positron annihilation feature has been long expected in blackhole X-ray binaries (BHXRBs). However, a significant detection was never conclusively reached. We propose a 500 ks ToO observation of BHXRb outburst with a flux level of 5 Crab, searching for the electron-positron annihilation feature. With the large effective area and suitable energy coverage, HXMT/HE represents the most appropriate instrument for this aim. The proposed observation will lead to the first confirmed detection of the electron-positron annihilation feature from point</p>				

	sources, providing solid observational results to test theory predictions and explain the electron-positron annihilation radiation in our Galaxy bulge region.				
Special requirement	Too triggering criteria: Flux > 5 crab				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304234	Blackhole X-ray binary outburst	500	A	Yes	
Title	磁星 X 射线爆发与快速射电暴的多波段机会目标 (ToO) 观测		PI	Dr. Lin Lin	
ABSTRACT	2020 年 4 月 28 日, HXMT 捕捉到来自的磁星 SGRJ1935+2154 与快速射电暴成协的非热 X 射线爆发。证实了磁星爆发是快速射电暴的来源之一。而 FAST 没有探测到同一活跃期的 29 个 X 射线爆发的射电信号。说明磁星爆发产生射电辐射的条件非常严。事实证明 HXMT 得益于宽能段和高灵敏度是目前唯一可以区				

	分磁星爆发辐射性质的观测设备。我们希望利用 HXMT 更多地观测磁星爆发活动尤其是联合 FAST 进行多波段联测，从而对磁星和快速射电暴的性质和起源进行更深入的研究。				
Special requirement	<p>Coordinate observations: The joint-observations of FAST is required.</p> <p>Too triggering criteria: XTE J1810–197 and SGR 0501+4516: flux >100 mcrab Others: 3 short bursts detected by detectors with large FOV (e.g., Fermi/GBM) within 24 hours</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304198	PSR J0726–2612	50	A	Yes	
P0304199	PSR J1718–3718	50	A	Yes	
P0304200	PSR J1819–1458	50	A	Yes	
P0304201	PSR J1119–6127	50	A	Yes	

P0304202	PSR J1846-0258	50	A	Yes	
P0304203	1E 161348-5055	50	A	Yes	
P0304204	Swift J1818-1607	50	A	Yes	
P0304205	SGR 2013+34	50	A	Yes	
P0304206	AX J1845.0-0258	50	A	Yes	
P0304207	AX J1818.8-1559	50	A	Yes	
P0304208	SGR 1808-203	50	A	Yes	
P0304209	SGR 1801-23	50	A	Yes	
P0304210	SGR 0755-2933	50	A	Yes	
P0304211	1E 2259+586	50	A	Yes	
P0304212	SGR 1935+2154	50	A	Yes	

P0304213	SGR 1900+14	50	A	Yes	
P0304214	3XMM J185246.6+003317	50	A	Yes	
P0304215	1E 1841-045	50	A	Yes	
P0304216	Swift J1834.9-0846	50	A	Yes	
P0304217	SGR 1833-0832	50	A	Yes	
P0304218	Swift J1822.3-1606	50	A	Yes	
P0304219	XTE J1810-197	50	A	Yes	
P0304220	SGR 1806-20	50	A	Yes	
P0304221	SGR J1745-2900	50	A	Yes	
P0304222	CXOU J171405.7-381031	50	A	Yes	
P0304223	1RXS J170849.0-400910	50	A	Yes	

P0304224	CXOU J164710.2-455216	50	A	Yes	
P0304225	SGR 1627-41	50	A	Yes	
P0304226	PSR J1622-4950	50	A	Yes	
P0304227	1E 1547.0-5408	50	A	Yes	
P0304228	1E 1048.1-5937	50	A	Yes	
P0304229	SGR 0526-66	50	A	Yes	
P0304230	SGR 0501+4516	50	A	Yes	
P0304231	SGR 0418+5729	50	A	Yes	
P0304232	4U 0142+61	50	A	Yes	
P0304233	CXOU J010043.1-721134	50	A	Yes	

Title	PROMPT STUDY OF MAGNETAR OUTBURSTS WITH Insight-HXMT			PI	Dr. Francesco Coti Zelati
ABSTRACT	<p>Magnetars are strongly magnetized neutron stars powered by the instabilities and decay of their huge magnetic field, 10^{14}- 10^{15} G [1,2]. They show X-ray bursts (with luminosities of 10^{40} erg s^{-1}), giant flares ($L_X \sim 10^{46}$ erg s^{-1}) and large outbursts where the steady X-ray luminosity ($L_X \sim 10^{31}$- 10^{35} erg s^{-1}) increases by several orders of magnitude and then decays in months/years. Observations performed during such periods yield the largest amount of information on magnetars emission, allowing to test the theoretical models on a variety of phenomena and source states. We propose here to follow one outburst from a known or new magnetar (one trigger) with Insight-HXMT to gather new physical insights on magnetars surface, field configuration and magnetospheres.</p>				
Special requirement	<p>Too triggering criteria: Detection of three bursts in less than three hours, or increase in the soft X-ray flux by a factor >50 above quiescence.</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304161	New magnetar	100	B	Yes	

P0304162	Swift J1818-1607	100	B	Yes	
P0304163	1E 1613-5055	100	B	Yes	
P0304164	PSR 1847-0130	100	B	Yes	
P0304165	PSR 1814-1744	100	B	Yes	
P0304166	PSR 1734-3333	100	B	Yes	
P0304167	PSR 1819-1458	100	B	Yes	
P0304168	PSR J1718-3718	100	B	Yes	
P0304169	PSR J1846-0258	100	C	Yes	
P0304170	PSR J1119-6127	100	B	Yes	
P0304171	SGR J0755-2933	100	B	Yes	
P0304172	AX J1818.8-1559	100	B	Yes	

P0304173	3XMM J1852+0033	100	B	Yes	
P0304174	PSR 1622-4950	100	B	Yes	
P0304175	SGR 2013+34	100	B	Yes	
P0304176	AX J1844-0256	100	B	Yes	
P0304177	SGR 0526-66	100	B	Yes	
P0304178	CXOU J171405.7-3810	100	B	Yes	
P0304179	CXOU J010043.1-721	100	B	Yes	
P0304180	1RXS J1708-4009	100	B	Yes	
P0304181	4U 0142+614	100	B	Yes	
P0304182	SGR 1900+14	100	B	Yes	
P0304183	1E 1841-045	100	B	Yes	

P0304184	SGR 1935+2154	100	B	Yes	
P0304185	SGR 1745-2900	100	B	Yes	
P0304186	1E 1048.1-5937	100	B	Yes	
P0304187	Swift J1834.9-0846	100	B	Yes	
P0304188	Swift J1822.3-1606	100	B	Yes	
P0304189	SGR 1833-0832	100	B	Yes	
P0304190	SGR 0418+5729	100	B	Yes	
P0304191	1E 1547-5408	100	B	Yes	
P0304192	SGR 0501+4516	100	B	Yes	
P0304193	CXOU J1647-4552	100	B	Yes	
P0304194	SGR 1806-20	100	B	Yes	

P0304195	XTE J1810-197	100	B	Yes	
P0304196	1E 2259+586	100	B	Yes	
P0304197	SGR 1627-41	100	B	Yes	
Title	Optical/Infrared –X-ray Correlations in Low-Mass X-ray Binaries		PI	Dr. Yi-Jung Yang	
ABSTRACT	<p>Several studies have shown that there is a global correlation between X-ray and optical-infrared (OIR)/ultraviolet (UV) emissions in low-mass X-ray binaries (LMXBs). However, the emission processes in these energies are still poorly understood. Detailed studies with (quasi-) simultaneous OIR and X-ray data of LMXBs throughout a whole outburst is lacking. Therefore a monitoring program in both X-ray and OIR is crucial for studying the correlation between the X-ray and optical properties of these systems in detail. We therefore propose a joint monitoring program between HXMT and the 2-m robotic Faulkes Telescopes. The Faulkes Telescope observations are part of an on-going monitoring campaign of >40 low-mass X-ray binaries. Together with HXMT, we expect to track the OIR-X-ray correlation of several LMXBs in detail during the HXMT operation time, with both recurrent outbursts of known targets and new transient sources found or followed by HXMT, especially at higher energies (i.e HE: 30-250 keV, a unique feature of HXMT). In addition, it has been found that the nature of the compact object in the binary system, the mass of the companion and the distance/reddening can be constrained by (quasi-) simultaneous</p>				

	OIR and X-ray luminosities. These can be used soon after discovery to identify the nature of future HXMT discovered sources.				
Special requirement	Coordinate observations: Multi-wavelength observations are required.				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304140	GRO J0422+32	300	A	Yes	
P0304141	New Source	300	A	Yes	
P0304142	MAXI J1348-630	300	A	Yes	
P0304143	MAXI J1820+070	300	A	Yes	
P0304144	XTE J2123-058	300	A	Yes	

P0304145	V404 Cyg	300	A	Yes	
P0304146	GS 2000+25	300	A	Yes	
P0304147	Aql X-1	300	A	Yes	
P0304148	SWIFT J1910.2-0546	300	A	Yes	
P0304149	XTE J1859+226	300	B	Yes	
P0304150	MAXI J1836-194	300	A	Yes	
P0304151	SWIFT J1753.5-0127	300	B	Yes	
P0304152	GX 339-4	300	B	Yes	
P0304153	MAXI J1659-152	300	B	Yes	
P0304154	4U 1608-52	300	A	Yes	
P0304155	4U 1543-47	300	A	Yes	

P0304156	Cen X-4	300	A	Yes	
P0304157	GS 1354-64	300	A	Yes	
P0304158	GRS 1124-68	300	A	Yes	
P0304159	GRS 1009-45	300	A	Yes	
P0304160	1A 0620-00	300	B	Yes	
Title	Monitoring X-ray variability for transitional millisecond pulsar (tMSP) system		PI	Dr. Zhaosheng Li	
ABSTRACT	<p>We propose to monitor transitional millisecond pulsar (tMSP) system PSR J1023+0038 and one additional tMSP candidate 1RXS J154439.4-112820 in their low-mass X-ray binary (LMXB) states using simultaneously high sensitivity observations of FAST and HXMT. Simultaneous searching for radio pulsations and coherent X-ray pulsations from tMSP system PSR J1023+0038 during its LMXB state will determine the physical origin of coherent X-ray pulsations. Furthermore, contemporaneous X-ray and continuum radio observations over a span long time may provide us to conclusively establish any correlated variability between the two bands, which can potentially help us understand the physical mechanism for tMSPs. This will be a multi-wavelength observational campaign, which may further insight into transitional millisecond pulsar system.</p>				

Special requirement	Coordinate observations: The joint-observations of FAST is required.				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304138	1RXS J154439.4-112820	30	A	Yes	
P0304139	PSR J1023+0038	120	A	Yes	
Title	Crab 脉冲星等两颗脉冲星周期跃变和强磁场脉冲星暴发研究		PI	Dr. Mingyu Ge	
ABSTRACT	通过射电和 Atel 信息，监测 Crab 和 J1846-0258 两颗脉冲星的周期跃变，已经可能的星云流量变化，详细研究脉冲星的周期跃变或者星云流量变化之后，脉冲星的计时特征、脉冲轮廓演化和制动指数的演化情况，研究脉冲星磁场变化的可能性。J1846-0258 存在类似磁星的暴发时，与 FAST 联合观测研究宽波段能谱演化和周期的规律以及与射电的变化行为。				

Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305082	Crab	100	A	No	
P0305137	PSR J1846-0258	200	B	Yes	
Title	A NICER Insight into Black Hole X-ray Binary Outbursts in the 0.5–250 keV Band		PI	Dr. Jiachen Jiang	
ABSTRACT	<p>We request a monitoring program of one of six black hole (BH) transients with low Galactic reddening when in outburst, consisting of 20 Insight-HXMT observations each with 20 ks exposure. Our observations will be triggered by the MAXI and Swift-BAT monitoring program and will be taken simultaneously with already approved NICER ToO observations. With our proposed observations, we will be able to study the inner accretion process during an outburst in the 0.5–250 keV band. Particularly, we will measure the inner disk density and compare the densities in different states. Previous tests for the high density disk model focused on sources with moderate Galactic column</p>				

	density.				
Special requirement	<p>Coordinate observations: The joint-observations of NICER is required. The proposal is finished if one of the following observations has been fully executed</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304131	XTE J1817-330	400	A	Yes	
P0304132	MAXI J1659-152	400	A	Yes	
P0304133	XTE J1859+226	400	A	Yes	
P0304134	SWIFT J1753.5-0127	400	A	Yes	
P0304135	XTE J1118+480	400	A	Yes	

P0304136	1A 0620-00	400	A	Yes	
Title	探讨形成回旋吸收线的物理环境		PI	Dr. Bai-Sheng Liu	
ABSTRACT	<p>首先，通过累积回旋吸收线在不同水平的光度下的演化的数据，得到更准确的吸收线能量与光度的函数（列表中的四个源）。其次，分析吸收线的形成受 NS 的磁场分布、吸积和自旋的影响程度（如，4U 0115+63, GX 301-2, GRO J2058+42）。利用慧眼观测获取研究所需要的吸收线的相关数据，分别进行以上两个方面的研究，以探究形成吸收线的物理条件。这样才能更好地理解 NS 的吸积流与磁场的相互作用过程。</p>				
Special requirement	<p>Too triggering criteria: GRO J2058+42: flux >80 mcrab Others: flux >100 mcrab</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304128	V 0332+53	160	B	Yes	

P0304129	GRO J2058+42	200	A	Yes	
P0304130	4U 0115+63	160	B	Yes	
P0305081	GX 301-2	80	C	No	
Title	ToO observations of GX 304-1: follow an outburst to low fluxes		PI	Prof. Ruediger Staubert	
ABSTRACT	<p>The physics of accretion in magnetized neutron stars (NSs) can be effectively probed through investigating the reaction of the polar emitting regions to varying mass accretion rates (luminosities). The behavior of the emitting region at low accretion rates is particularly interesting because the observed radiation in this case originates very close to the NS surface, such that spatial configurations and accretion modes are simple. The study of accreting pulsars, particularly of their cyclotron spectral lines (CRSF), at low luminosity is only possible at hard X-rays for nearby sources. We propose a TOO observation of the only suitable candidate for such a study, GX304-1, with Insight-HXMT by following the decay of an outburst through several (at least five) observations (of 50 ks each) down to low flux levels.</p>				

Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304127	GX 304-1	250	B	Yes	
Title	Observations of Her X-1 in coordination with NuSTAR, INTEGRAL and XMM-Newton: status of the cyclotron line energy and other topics		PI	Prof. Ruediger Staubert	
ABSTRACT	<p>We propose that Insight-HXMT participates in observations of Her X-1 September 2020 coordinated between NuSTAR, INTEGRAL and XMM-Newton. The objective is two-fold: Science and inter-calibration between instruments of the participating satellites. Her X-1 is one of the most fascinating accreting binary pulsars with many interesting observational features – foremost the cyclotron line (CRSF), a prominent absorption feature on a typical binary pulsar continuum spectrum. Both, the CRSF and the continuum parameters do not only show variability of high scientific interest, but they can serve as powerful markers for the inter-calibration of X-ray telescopes.</p>				

Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0303080	Her X-1	200	A	No	
Title	Understanding states and state transitions in black hole X-ray binaries through monitoring of Cygnus X-1		PI	Dr. Victoria Grinberg	
ABSTRACT	<p>Black hole X-ray binaries change between different accretion and emission regimes, the so-called states. While it is clear that states correspond to different accretion geometries - configurations of jets, accretion disk, corona and accretion disk winds - neither the exact morphology of the accretion/ejection flows nor what triggers state transitions is clear. In particular, the origin of the hard emission (corona or jets?) remains a mystery. We propose a monitoring of the prototypical black hole X-ray binary Cygnus X-1 in order to trace the behavior of the different source component through different states, with a particular focus on energy-dependent timing studies and HXMT's unique capabilities to measure variability at high energies and unique broadband energy coverage. Cygnus X-1 is a persistent source that often crosses the so-called jet-line between the hard and soft</p>				

	state where the most dramatic changes in accretion geometry are thought to take place. It is thus best suited for such monitoring.				
Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305079	Cyg X-1	180	A	No	
Title	Unveiling the nature of the compact object 4U 1700-37			PI	Dr. Long Ji
ABSTRACT	4U 1700-37 is a wind fed accreting high mass X-ray binary (HMXB) system, with a mass of the compact object $2.44 \pm 0.27 M_{\odot}$. The nature of the compact object of 4U 1700-37 is still quite unclear. In the literature, both a low-mass black hole and a neutron star were proposed, according to different hints in observations. We propose a 150ks Insight-HMXT observation of 4U 1700-37 during its out-of-eclipse phase. We will investigate the evidence				

	<p>of the presence of intermittent pulsations and cyclotron absorption features. In addition, the source exhibits significant flares at short and long time-scales. We will perform time-resolved spectroscopy at different luminosity and orbital phases, which will be another in-direct evidence to the nature of the compact object (Seifina et al. 2016). In addition, narrow emission lines were reported in 4U 1700-37, which are caused by the reprocessing of primary X-rays with the surrounding matter. The Insight-HXMT allows us studying the accretion environment using the X-ray reprocessing at different orbital phases.</p>				
Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305078	4U 1700-377	150	A	No	
Title	Measuring the Broad Band X-ray Emission of Millisecond X-Ray Pulsars in Outburst		PI	Dr. Zhaosheng Li	

<p style="text-align: center;">ABSTRACT</p>	<p>We propose to perform five 10 ks HXMT target of opportunity (ToO) observations of a transient millisecond X-ray pulsar in outburst. The target can be either one of the nineteen known transient accreting millisecond X-ray pulsars (AMXPs) undergoing a new outburst, or a “newly” discovered object of this class. These observations will allow us to study the broad band spectrum in detail, from hard to soft X-ray energies, as well as the timing properties or eclipsing features of the source during its outburst. The high signal-to-noise spectral information will make it possible to disentangle the contributions of soft black body, reflection (if any), and hard Comptonized spectral components. Moreover, we may detect type-I X-ray bursts, and/or for the first time also burst oscillations at high-energy (if present). The observations will also allow a timing analysis to study the pulse profile, time lags and pulsed spectrum, and will thus provide important constraints on emission mechanisms.</p>				
<p style="text-align: center;">Special requirement</p>	<p style="text-align: center;">The proposal is finished if one of the following observations has been fully executed.</p>				
<p style="text-align: center;">Obs No.</p>	<p style="text-align: center;">Target</p>	<p style="text-align: center;">Exp. Duration</p>	<p style="text-align: center;">Grade</p>	<p style="text-align: center;">ToO?</p>	<p style="text-align: center;">Note</p>
<p style="text-align: center;">P0304107</p>	<p style="text-align: center;">New AXMP</p>	<p style="text-align: center;">50</p>	<p style="text-align: center;">A</p>	<p style="text-align: center;">Yes</p>	
<p style="text-align: center;">P0304108</p>	<p style="text-align: center;">IGR J17498-2921</p>	<p style="text-align: center;">50</p>	<p style="text-align: center;">A</p>	<p style="text-align: center;">Yes</p>	

P0304109	MAXI J0911-655	50	A	Yes	
P0304110	IGR J17591-2342	50	A	Yes	
P0304111	IGR J18245-2452	50	A	Yes	
P0304112	IGR J17062-6143	50	A	Yes	
P0304113	SWIFT J1749.4-2807	50	A	Yes	
P0304114	IGR J17511-3057	50	A	Yes	
P0304116	HETE J1900.1-2455	50	A	Yes	
P0304117	IGR J00291+5934	50	A	Yes	
P0304118	IGR J17379-3747	50	A	Yes	
P0304119	NGC 6440 X-2	50	A	Yes	
P0304120	IGR J16597-3704	50	A	Yes	

P0304121	SAX J1748.9-2021	50	A	Yes	
P0304122	XTE J1814-338	50	A	Yes	
P0304123	XTE J1807-294	50	A	Yes	
P0304124	XTE J0929-314	50	A	Yes	
P0304125	XTE J1751-305	50	A	Yes	
P0304126	SAX J1808.4-3658	50	A	Yes	
P0305115	Swift J1756.9-2508	50	A	Yes	
Title	Constraining the high-energy activity associated with periodic repeater FRB180916.J0158+65		PI	Dr. Cristiano Guidorzi	
ABSTRACT	<p>“Fast Radio Bursts (FRBs) are radio bright, ms-long extragalactic transients of unknown origin that have become the focus of a global multiwavelength community. The combination of short duration and extreme brightness temperature suggests a coherent process from a compact source. Extragalactic magnetars are among the most debated candidates and occasionally undergo pronounced high-energy activity, which can culminate in energetic</p>				

	<p>giant flares with luminosity as high as 10^{47} erg/s. The recent discovery that the nearest FRB source with measured distance, FRB180916.J0158+65 at 150 Mpc, is periodic every 16.35 days, makes it an ideal candidate for multiwavelength campaigns aimed to constrain possible high-energy activity. The recent discovery of Galactic FRB200428, just 40 times less energetic in the radio than the weakest extragalactic FRBs so far detected, in association with a short X-ray burst from active Galactic magnetar SGR1935+2154, provided compelling evidence that magnetars can emit FRBs and that the radio emission can be associated with simultaneous high-energy activity. Yet, given that most of the X-ray bursts emitted by the same magnetar showed no comparable FRBs, the link between FRBs and magnetars raised many open questions that can be tackled only through new multiwavelength observations.”</p>				
<p>Special requirement</p>	<p>Coordinate observations: Multi-wavelength observations are required.</p>				
<p>Obs No.</p>	<p>Target</p>	<p>Exp. Duration</p>	<p>Grade</p>	<p>ToO?</p>	<p>Note</p>
<p>P0303077</p>	<p>FRB180916.J0158+65</p>	<p>86</p>	<p>A</p>	<p>No</p>	

Title	HXMT observations of bright X-ray TeV blazars			PI	Dr. Yu-Ling Chang
ABSTRACT	<p>We here propose insight-HXMT observation of six bright TeV blazars to understand the hadronic process and hybrid leptonic model of blazar jet. The charged pions produced from photon-hadronic process are accompanied by neutral pions that decay into very-high-energy (VHE) gamma rays which might lose energy due to electromagnetic cascades. As the cascaded electrons will radiate at \simMeV, hard X-ray emission play a crucial role in studying the hadronic processes in relativistic jet of blazars and is the critical band to analyze the blazar radiative mechanism. Coordinate observations of VERITAS and insight-HXMT may disclose the relation and connection between TeV and hard X-ray non-thermal emission from blazars. Insight-HXMT can set the most constraining upper limits in the \sim100 keV from these observations and link the critical elements together to explore the emission of blazars.</p>				
Special requirement	<p>Too triggering criteria: Mrk421: flux > 180 mCrab Mrk501: flux > 26 mCrab</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note

P0303075	Mrk 421	45	A	No	
P0303076	Mrk 501	45	C	No	
Title	Luminosity dependence of cyclotron line properties in V 0332+53 with Insight-HXMT.		PI	Dr. Victor Doroshenko	
ABSTRACT	<p>Cyclotron lines are indispensable tool to probe the magnetic field strength, configuration, as well as geometry of the emission region in X-ray pulsars. Of particular interest is dependence of line energy on luminosity, which can be used to constrain accretion regime in the source (i.e. sub- or super-Eddington). The Be-transient pulsar V 0332+53 is a unique source where a transition between the two regimes has been observed during 2015 outburst thereby confirming the onset of an accretion column at high luminosities. The same dataset indicates, however, more complex behavior of the line energy when the rising and declining parts of the outburst are compared. This hysteresis effect had not been observed in previous outbursts, which is puzzling. Here we propose to monitor the source with Insight-HXMT throughout its next giant outburst to better understand evolution of the line energy with luminosity and time through complex analysis of spectral and timing properties of the source.</p>				
Special requirement					

Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304106	V 0332+53	260	A	Yes	
Title	Revealing the origin of the bursts in the “bursting pulsar” GRO J1744-28			PI	Dr. Victor Doroshenko
ABSTRACT	<p>The “bursting pulsar” GRO J1744-28 is a unique transient source which combines properties of an X-ray pulsar and a burster. Most if not all of the bursts in the source are, however, of Type II, i.e. caused by instable accretion rather than thermonuclear burning. However, a thermal component had been also identified in burst spectra of the source. The temperature and size of the corresponding emission region exhibit behavior typical for thermonuclear bursts, and thus it is likely that the observed emission is at least partially powered by thermonuclear burning of accreted material. It is yet unclear, however, whether the thermonuclear bursts trigger enhanced accretion episodes or vice versa. With the proposed Insight-HXMT observations we aim to catch the source during its next outburst in order to study the time evolution of burst spectra and clarify that issue. Besides that, high quality HXMT observations will allow to study several other aspects of accretion physics in GRO J1744-28 such as post-burst oscillations and evolution of X-ray spectra, possible glitches, and evolution of the cyclotron line properties with time and flux both during and between the bursts.</p>				

Special requirement	Too triggering criteria: Flux > 250 mcrab				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304105	GRO J1744-28	140	A	Yes	
Title	Cyg X-1 的时变性质与频率分解谱		PI	Dr.进禄屈	
ABSTRACT	<p>基于慧眼的宽波段观测优势，在 1-250keV 能段（如果利用其他望远镜，可以将能段下推至 0.1 keV），为 Cyg X-1 建立各个源态的时变观测性质模板；利用这些模板并结合谱性质，研究 Cyg X-1 各个能量态各种辐射成分对时变的贡献；利用这些宽能带模板和 LMXB 进行对比研究，划分 LMXB 和 HMXB 各种辐射成分对辐射演化的贡献。</p>				
Special requirement	Too triggering criteria: In HIMS: flux > 450 mcrab; in HSS: flux > 700 mcrab				

Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304104	Cyg X-1	80	A	Yes	
Title	Probing the accretion regimes in transient accreting pulsars			PI	Dr. Pablo Reig
ABSTRACT	<p>We request 150 ks (15×10 ks) Insight-HXMT Target of Opportunity (ToO) observations of one transient accreting pulsar (see source list below). We aim to obtain 15 high signal-to-noise snapshots of these kind of sources at different accretion states as they go through a giant X-ray outburst. Our principal goal is to study the timing and spectral parameters as a function of luminosity. This will allow us to test accretion models and characterize with unprecedented detail the X-ray spectral continuum at the two most important accretion regimes (super-critical and sub-critical). We will also test whether the complex and elusive critical luminosity can be estimated from the observations.</p>				
Special requirement	<p>Too triggering criteria: Flux > 50 mcrab The proposal is finished if one of the following observations has been fully executed.</p>				

Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304096	4U 0115+63	150	A	Yes	
P0304097	V 0332+53	150	A	Yes	
P0304098	RX J0440.9+4431	150	A	Yes	
P0304099	1A 0535+262	150	A	Yes	
P0304100	1A 1118-61	150	A	Yes	
P0304101	KS 1947+300	150	B	Yes	
P0304102	EXO 2030+375	150	B	Yes	
P0304103	Cep X-4	150	A	Yes	
Title	Hunting for cyclotron resonance scattering features in three accreting pulsars		PI	Dr. Lorenzo Ducci	

ABSTRACT	<p>We propose to observe three high-mass X-ray binaries (HMXBs) containing pulsars, EXO 2030+375, KS 1947+300, and OAO 1657-415, to perform spectral and timing analysis with the main aim to search for cyclotron resonance scattering features (CRSFs) in their average and phase-resolved spectra. We will also exploit the broadband capabilities of Insight-HXMT to constrain the physical interpretations of the spectra observed, to study the pulse profile variability and its energy and luminosity dependency, and to search for quasi-periodic oscillations in their power spectra. All these measurements will allow us to gain fundamental information to understand the accretion processes in these binary systems and in the broader context of the overall population of accreting pulsars in HMXBs.</p>				
Special requirement	<p>Too triggering criteria: 10-20 keV Flux > 80 mcrab</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304094	KS 1947+300	200	A	Yes	
P0304095	EXO 2030+375	100	A	Yes	
P0305074	OAO 1657-415	200	B	No	

Title	利用 X 射线和射电高时间分辨观测探究微类星体喷流快速光变特征			PI	Dr.Zhen Yan
ABSTRACT	<p>最近几年，多波段快速光变成为研究微类星体吸积和喷流物理的一个非常重要的手段。微类星体的射电辐射主要来自于喷流，利用射电波段的快速光变以及它们同 X 射线快速光变的相关关系，进而可以研究吸积对于喷流的作用，喷流结构和运动等科学问题。本提案计划利用慧眼卫星协同地面射电望远镜阵列（EVN 或者 VLA）开展针对明亮微类星体的高时间分辨联合观测，获取同时的射电和 X 射线波段的快速光变特征，进而研究喷流和吸积的相互作用以及喷流物理。针对射电观测，我们计划应用一种新数据处理方法探测微类星体射电波段的快速光变信号。上轮观测提案时间内，我们有两次机会触发慧眼卫星观测（2020 年初），由于太阳限制，慧眼卫星不能观测，因此我们在该轮继续申请。</p>				
Special requirement	<p>Coordinate observations: The joint-observations of radio telescope are required.</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0305071	Cyg X-1	10	A	No	

P0305072	Cyg X-3	10	A	No	
P0305073	GRS 1915+105	10	A	No	
Title	Studying Black Hole Transients in Outburst from Radio to Gamma-Rays		PI	Dr. Pierre-olivier Petrucci	
ABSTRACT	<p>We propose to perform a series of 20×10 ks Insight-HXMT observations (spaced by a few days) of a (new or known) microquasar during the initial hard to soft state transition. This monitoring will be performed in a multi-wavelength context through separate (accepted) radio/opt/NIR programs. Our goal is to witness the high-energy evolution of a BH and the connections to radio (jet) and gamma-ray (hard tail, jet?) properties to better understand the accretion/ejection processes occurring in these objects. Thanks to the combination of the unprecedented broadband coverage, high energy (>50 keV) spectral and temporal sensitivity of Insight-HXMT, and together with a multi-wavelength approach, our monitoring will allow us to i) disentangle the different contributions to the broadband continuum emission (accretion disk, reflection component, hot corona, jet), ii) reveal the relationship between the hard X/soft gamma-ray emission and the jet activity and iii) witness the state transition and its relation with major / 'superluminal' ejections iv) follow the evolution of all these components in the different spectral states and v) probe the fast variability properties up to an energy never achieved with RXTE. A similar proposal has been accepted in Cycle 2 but has not been triggered yet and we propose to target the same sources via the current proposal if the triggering has still not been done.</p>				

Special requirement	<p>Coordinate observations: The joint-observations from radio to gamma ray bands are required.</p> <p>Too triggering criteria: 3-10 keV flux > 40 mcrab</p>				
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0304089	unknown	200	A	Yes	
P0304090	XTE J1550-564	200	A	Yes	
P0304091	4U 1630-47	200	A	Yes	
P0304092	GRO J1655-40	200	A	Yes	
P0304093	GX 339-4	200	A	Yes	
Title	Do accreting magnetars exist? The enigmatic case of 4U 2206+54		PI	Dr. Pablo Reig	

<p style="text-align: center;">ABSTRACT</p>	<p>The discovery of very slow pulsations ($P_{\text{spin}} = 5500\text{s}$) solved the long-standing controversy on the nature of the compact object in the high-mass X-ray binary 4U 2206+54 but prompted yet unsolved new questions. According to spin evolutionary models of close binary systems, such slow pulsations require magnetic field strengths of the order of $>\sim 10^{13}$ G, that is, they require the system to harbor a magnetar. However, there have been some claims of a cyclotron resonant scattering feature at 30 keV, implying a magnetic field of $\sim 3 \times 10^{12}$ G. This proposal seeks to estimate independently the magnetic field strength through the neutron star spin evolution and investigate with unprecedented detail the energy spectrum of 4U 2206+54 above 50 keV to search for signatures of a magnetar. A slow pulsation combined with a low X-ray luminosity may indicate an accreting magnetar with low mass accretion rate.</p>				
<p style="text-align: center;">Special requirement</p>					
<p style="text-align: center;">Obs No.</p>	<p style="text-align: center;">Target</p>	<p style="text-align: center;">Exp. Duration</p>	<p style="text-align: center;">Grade</p>	<p style="text-align: center;">ToO?</p>	<p style="text-align: center;">Note</p>
<p style="text-align: center;">P0305070</p>	<p style="text-align: center;">4U 2206+54</p>	<p style="text-align: center;">55</p>	<p style="text-align: center;">C</p>	<p style="text-align: center;">No</p>	

(3) Calibration proposals

Title	慧眼-HXMT 在轨标定			PI	Prof. Xiaobo LI
ABSTRACT	由于部分载荷的工作状态进行了调整，而且性能存在演化，因此慧眼的能量响应、有效面积、准直器响应等还需要持续的进行在轨标定。申请 2020 年度标定观测，具体为：对 Crab 定点观测 9 次，Cas A 定点观测 8 次，Tycho 定点观测 1 次，总观测时间 27 天。对 Crab 扫描观测 12 次，扫描区域半径 7 度，扫描间隔 0.1 度，扫描速度 0.06 度/s，扫描时间为 6 天，其中有效曝光时间为 3 天。				
Special requirement					
Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0302290	Crab	777	A	No	

P0302291	Cas A	1382	A	No	
P0302292	SSDS_054631+220036_7	60	A	No	
Title	The blank sky observations for the background research of insight-HXMT		PI	Dr. Jinyuan Liao	
ABSTRACT	<p>对于空天区的观测，是慧眼-HXMT 最重要的常规观测之一。其数据，将用于慧眼卫星的本底，标定，以及弥散辐射的研究。我们根据国际上其他卫星的观测，找出了 16 个空白天区，其特点是流量，谱形稳定。在本底构建方面，空天区的观测数据可以为高中低能三个载荷提供实测数据，开展本底的相关研究，以构建本底模型。在仪器标定方面，载荷自身的本底谱线，在空天区观测中具有最高的显著性，可用于能量-能道关系的监测和标定。在 高能宇宙弥散背景方面，地球掩蚀前后的空天区观测数据的差异，是由弥散 X 射线导致。因此，空天区的观测对于高能宇宙弥散辐射同样意义重大。</p> <p>申请 2020-2021 观测季（1 年）的空天区观测 130 次，总曝光时间 2.2 Ms。</p>				
Special requirement					

Obs No.	Target	Exp. Duration	Grade	ToO?	Note
P0301308	HXMT-Blanksky-1	65	A	No	
P0301307	HXMT-Blanksky-2	65	A	No	
P0301306	HXMT-Blanksky-3	65	A	No	
P0301305	HXMT-Blanksky-4	65	A	No	
P0301304	HXMT-Blanksky-5	65	A	No	
P0301303	HXMT-Blanksky-6	65	A	No	
P0301302	HXMT-Blanksky-8	65	A	No	
P0301301	HXMT-Blanksky-10	65	A	No	
P0301300	HXMT-Blanksky-11	65	A	No	
P0301299	HXMT-Blanksky-12	65	A	No	

P0301298	HXMT-Blanksky-14	65	A	No	
P0301297	HXMT-Blanksky-15	65	A	No	
P0301296	HXMT-Blanksky-16	65	A	No	
P0301295	HXMT-Blanksky-19	65	A	No	
P0301294	HXMT-Blanksky-20	65	A	No	
P0301293	HXMT-Blanksky-21	65	A	No	