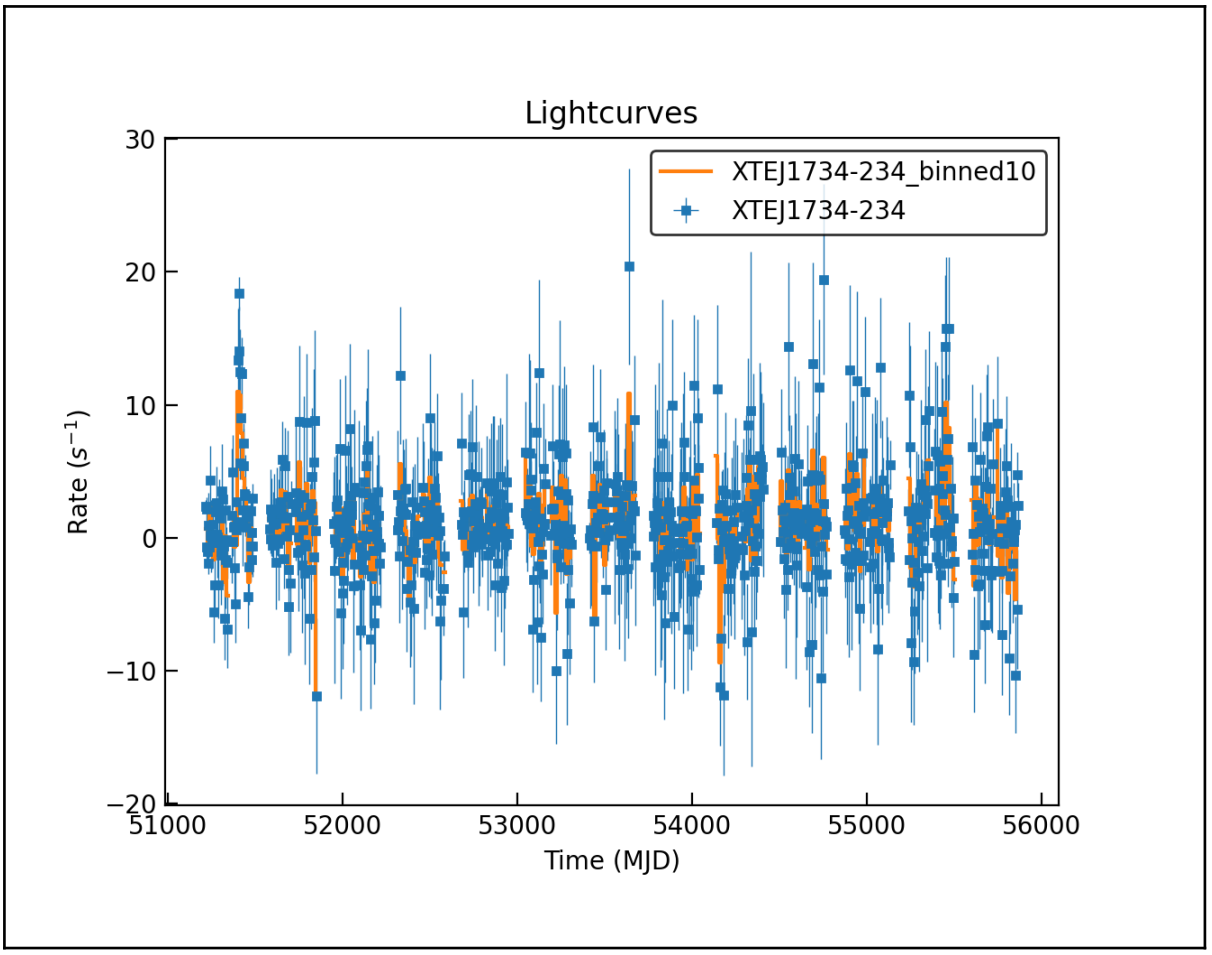
#Source	Telescope	Type	**Outburst peak (MJD)**	**Gauss std**	**Exponent tau**
XTEJ1734-234	RXTE	?			
			51403	3.39	19.57
IGRJ17375-3022	RXTE	SFXT			
			52465	1.21	
			54751	1.35	2.76
			55043	1.56	2.13
IGRJ17597-2201	RXTE and Swift	NS			
			Quasi persistant		
SAXJ1753.5-2349	RXTE	NS			
			51392	2.93	4.11
			54753	3.36	5.96
			55281	8.94	12.12
WGAJ1715.3-2635	RXTE	?			
			52509	21.33	31.36
			51554	6.57	13.08
			51672	56.95	83.91
XTEJ1637-498	RXTE	LMXB			
			53214	5.86	6.71
			53817	6.25	5.15
			54710	5.87	7.83
			55310	1.77	
			55658	4.00	5.67
XTEJ1719-291	RXTE	NS			
			54546	3.41	4.66
XTEJ1719-356	RXTE and Swift (XMMSL1 J171900.4-353217)	?			
			geen		
XTEJ1728-295	RXTE and Swift	LMXB			
			52946	59.43	9.52
			55462	25.47	37.26
			58487	68.56	30.58
XTEJ1737-376	RXTE	NS			
			53053	2.27	
			54716	3.36	6.48
XTEJ1744-230	RXTE	?			
			Quasi persistant		

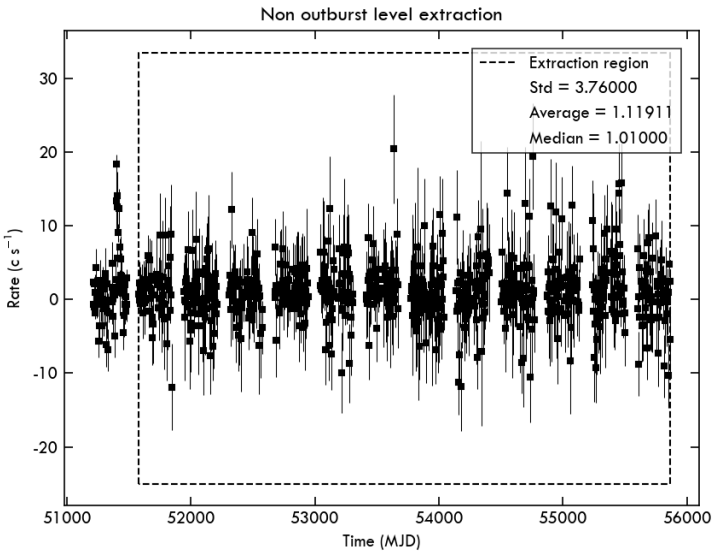
XTEJ1817-155	RXTE	?			
			54350	12.30	11.06
IGRJ17177-3656	Swift	BH			
			unclear		11.26
IGRJ17451-3022	Swift	?			
			57013	55.35	
IGRJ17494-3030	Swift	?			
			56009	4.13	4.31
SAXJ1828.5-1037	Swift	?			
			unclear		3.90
SwiftJ1357.2-0933	Swift	BH			
			55545	50.12	31.49
			57757	75.79	36.93
XMMJ174457-2850.3	SwiftGC	NS			
			54636	5.83	2.71
			55100	3.31	1.68
			55407	1.77	2.56
			56153	2.80	2.57
			57660	2.40	1.50
SwiftJ174553.7-290347	SwiftGC	NS			
			53897	2.70	4.51
SwiftJ174540.7-290015	SwiftGC	?			
			57447	46.08	42.39
SwiftJ174540.2-290037	SwiftGC	?			
			57450	15.76	17.21
			57555	8.05	8.46
SwiftJ174535.5-285921	SwiftGC	?			
			55748	2.62	4.19
			57580	3.15	3.60
GRS1741-2853	SwiftGC	?			
			54177	8.94	3.80
			55116	6.89	5.21
			55447	13.26	
			56520	5.55	2.28
			56542	3.06	1.47
			57485	5.77	3.26
			57505	1.64	1.20
			58048	4.10	7.79

XTEJ1734-234

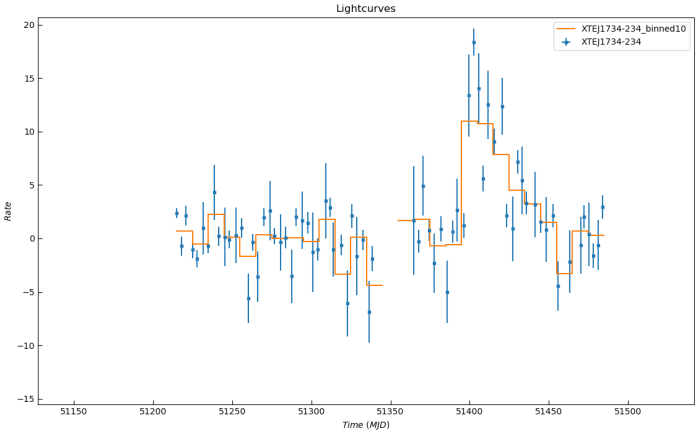
RXTE PCA



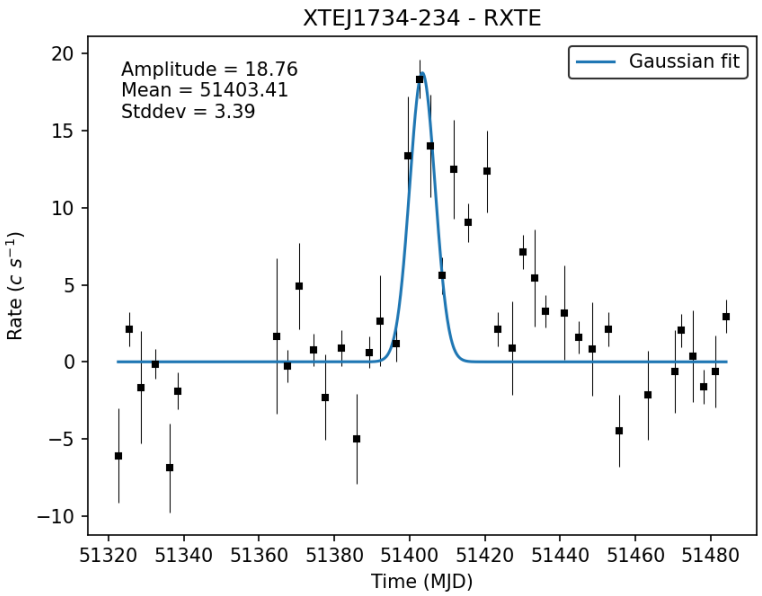
Background level



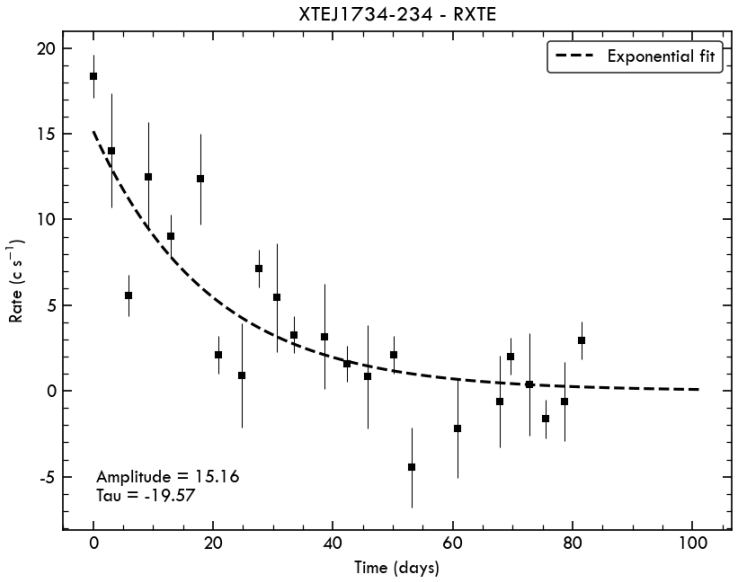
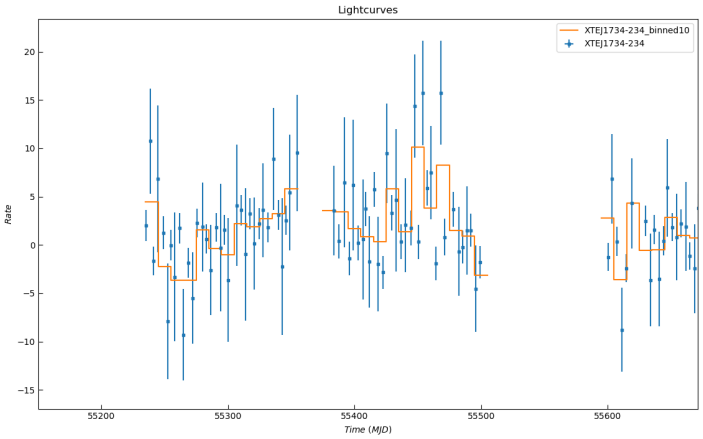
Outbursts (1/2)



Opmerkingen
51350 - 51500

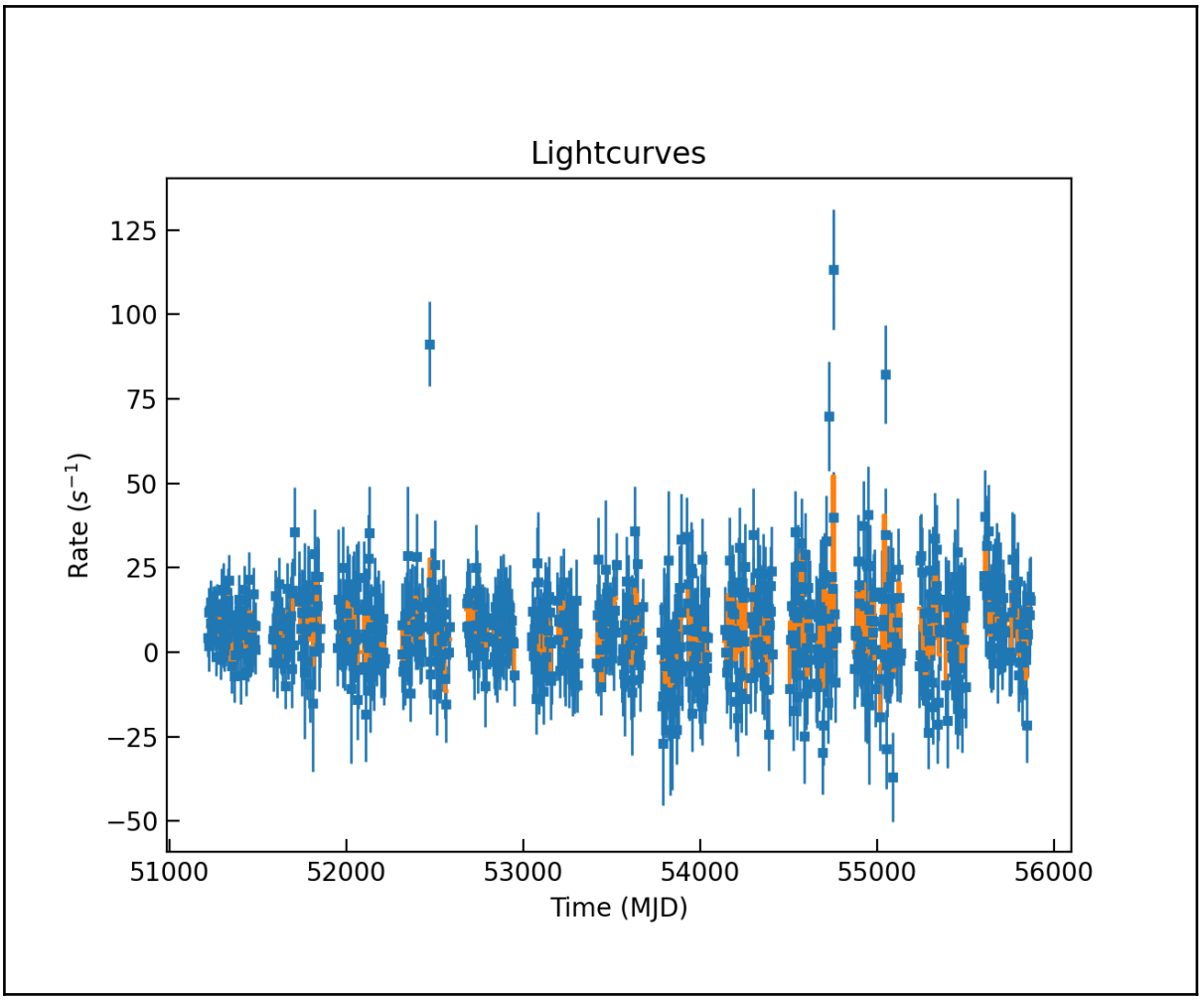


Opmerkingen
Geen mooie fit. De uitbarsting lijkt geen symmetische vorm te hebben en langzaam uit te doven, met oscilaties.

	**Opmerkingen** Moeilijk te fitten door de sterke variabiliteit. Wel gebruikt voor een schatting van de decay time.
	**Opmerkingen** 55300 - 55500 Mogelijk een uitbarsting.

IGRJ17375-3022

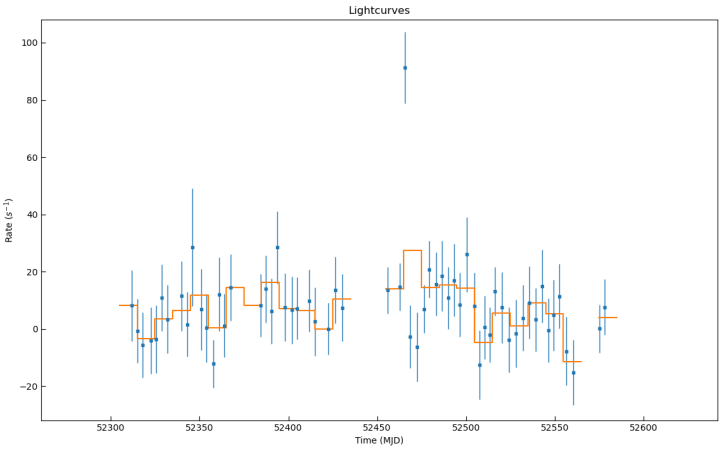
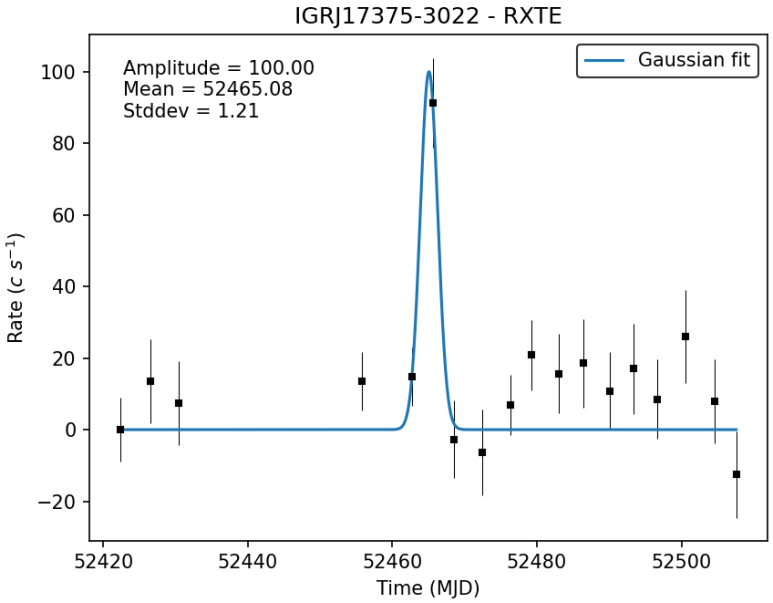
RXTE PCA - Simbad

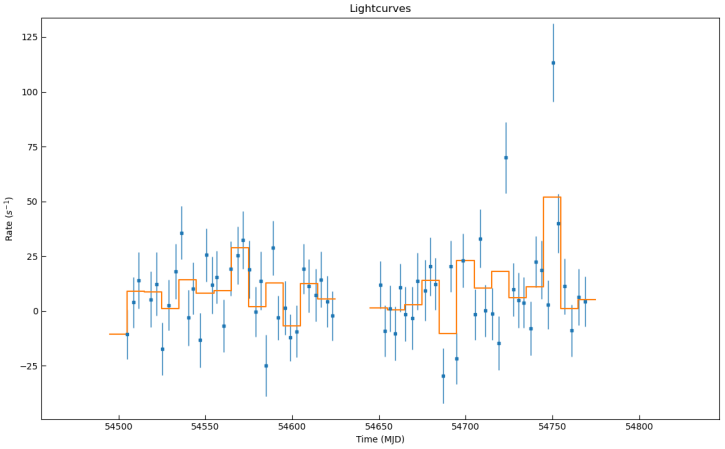


Literature

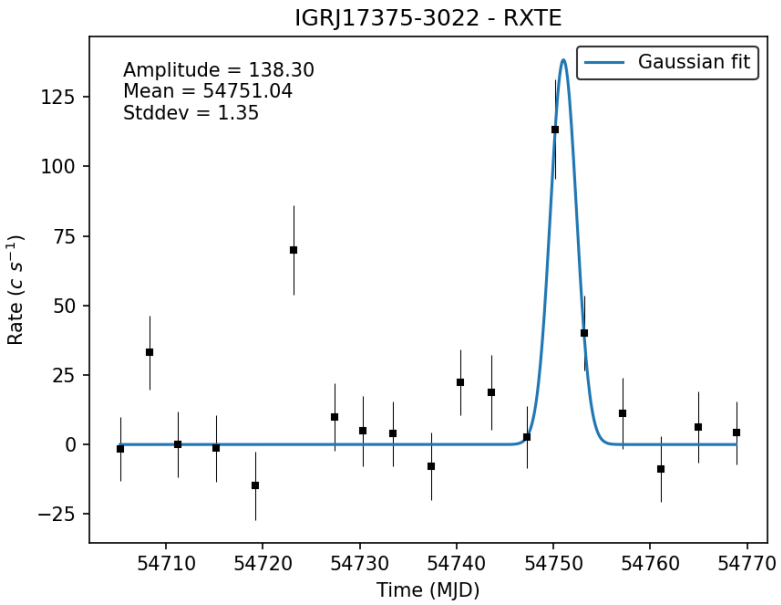
IGR J17375–3022 is a hard X-ray transient whose detected bright outburst had a duration constrained by INTEGRAL observations in the range 1–3 d, i.e. similar to a few firm SFXTs (e.g. AX J1949.8+2534, Sguera et al. 2017; IGR J17354–3255, Sguera et al. 2011). Furthermore the low duty cycle, high dynamic range and spectral shape of the source, all are very typical of SFXTs as well. link

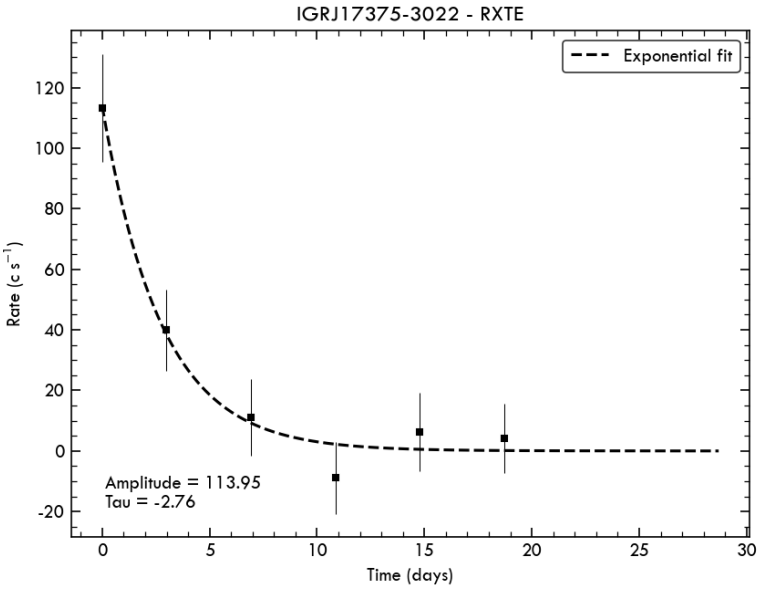
Outbursts (3)

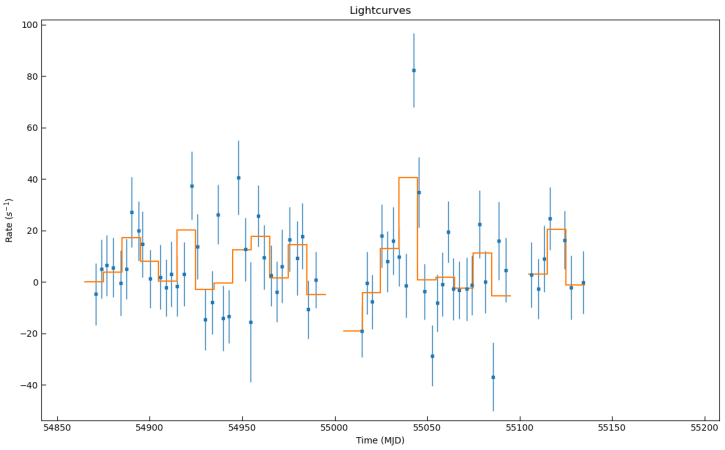
	**Opmerkingen** 52450 - 52500 Moeilijk te zeggen, kan een systematische error zijn, maar soms gebeurt het dat een uitbarsting maar 1 a 2 dagen is.
	**Opmerkingen** Heb de amplitude gefixed omdat die anders boven de 250 uitkomt wat me heel onrealistisch lijkt. Niet geschikt voor exponent fit



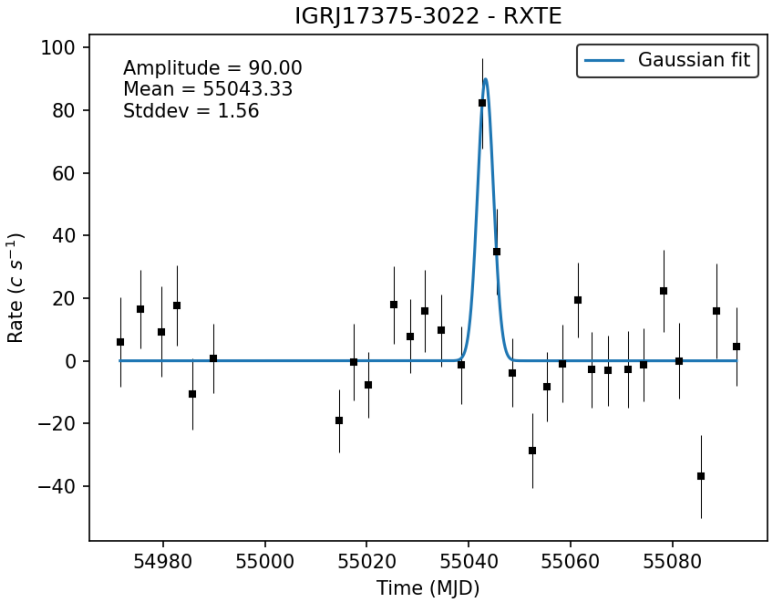
Opmerkingen
54650 - 54800



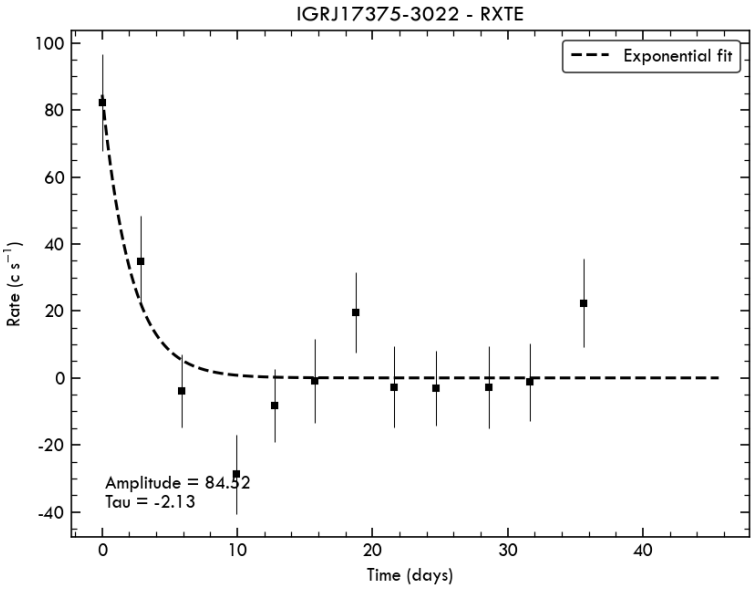




Opmerkingen
55000 - 55100

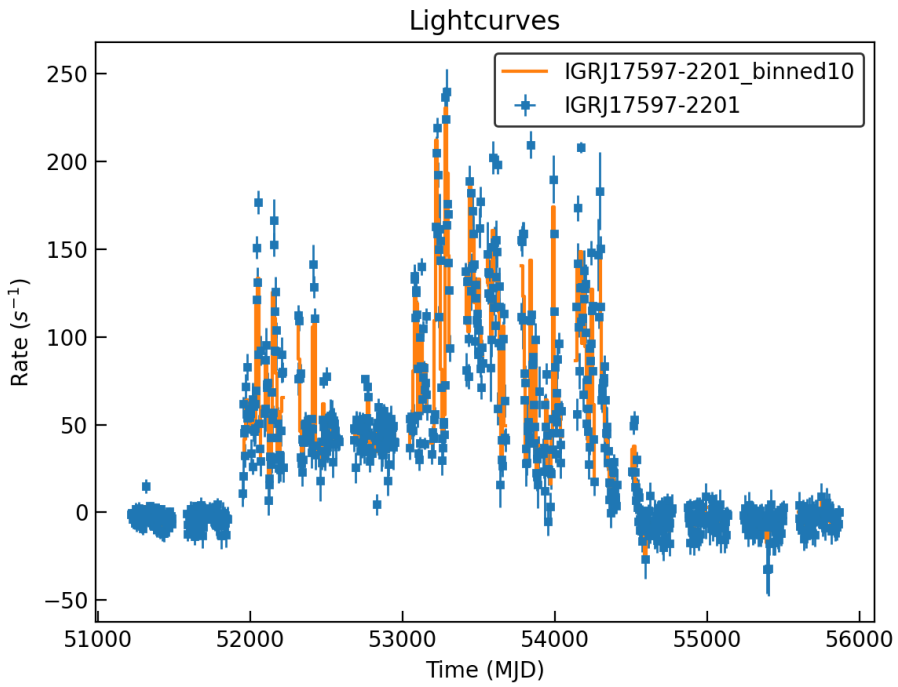


Opmerkingen
Amplitude gefixed anders fit hij op een amplitude van 200.

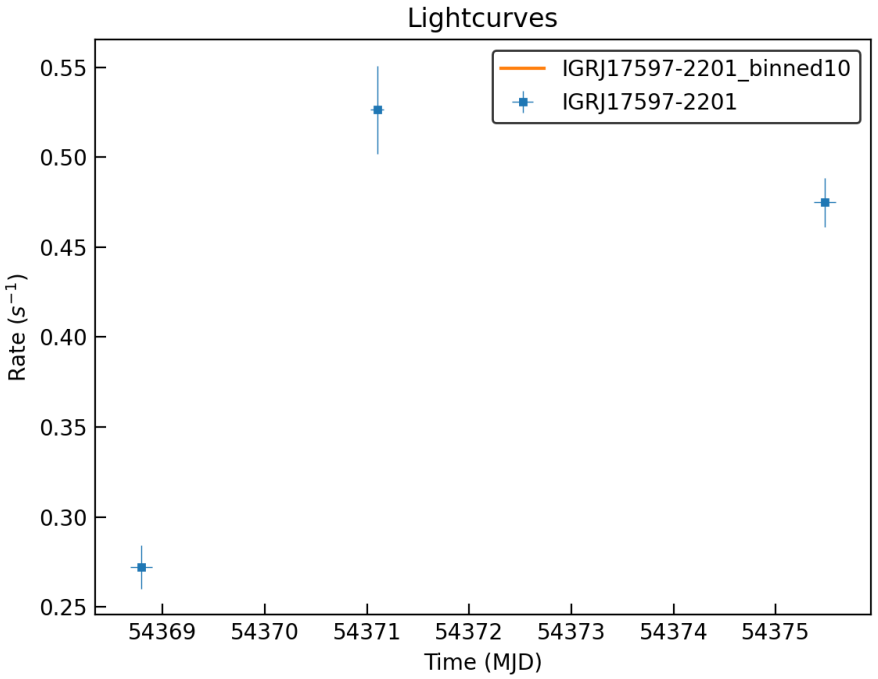


IGRJ17597-2201

RXTE and Swift - Simbad



RXTE



Swift

Literature

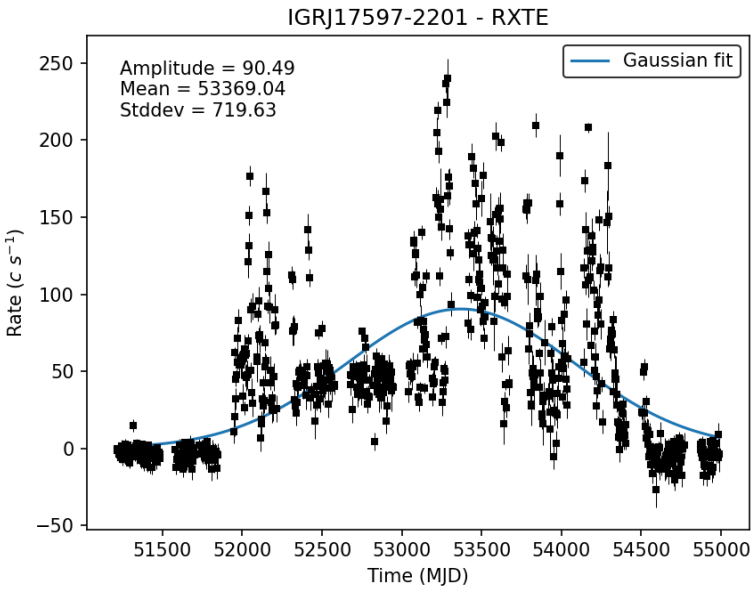
The regular galactic bulge scans performed with RXTE showed that the source demonstrates a strong erratic flux variability in the standard X-ray band. There was an observational evidence of dipping behavior that implies high inclination of the binary. Also there were observed X-ray bursts, suggesting that the source is a neutron star binary. No QPO or pulsations were detected (Markwardt & Swank 2003b).

IGR J17597-2201 is a low mass X-ray binary, harboring a neutron star. link

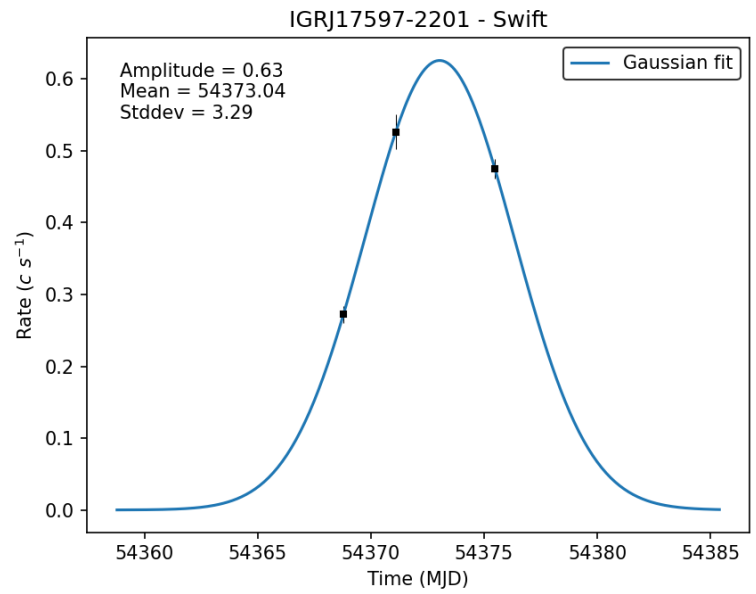
Distance estimation
IGR J17597-2201 was observed continuously during both series of our Galactic Center field observations. The source flux was 2.5 times higher in 2003 than in 2004 (see Table 1). Such a change in the source flux was accompanied by a strong change of its spectral shape (Fig. 6). During 2003 observations the source was hard and its flux was detected up to $\sim$100 keV; during 2004 the source spectrum was much softer (see Fig. 6). Such a difference can be interpreted as a spectral transition from the hard/low to the soft/high state of the neutron star binary. As such a transition typically occurs in the luminosity range around $\sim 0.01 L_{\rm Edd} \sim 10^{36}$ erg s^{-1} (see e.g. Maccarone 2003, and references therein), we can roughly (within a factor of $\sim$2) estimate the distance to the source $d \sim 5-10$ kpc, that may confirm that IGR J17597-2201 is located in the Galactic bulge. link

Markwardt and Swank (2003)
In RXTE PCA pointed observations on 01 and 03 June 2001; and 09 and 11 Oct 2001, there was evidence of dipping behavior (~30% dips; ~5 min duration). A period of 1-3 hours is suggested, but highly unconstrained because of the time sampling. No QPOs or pulsations were detected.
The PCA X-ray spectrum was consistent with power law plus soft emission, with photon indices ranging between 1.8 and 2.9. An emission line associated with Fe K, (centroid 6.5-6.7 keV) is present with equivalent widths in the 130-250 eV range.
On 22.843 Apr 2003, during a PCA bulge scan this year, an apparent X-ray burst was detected from a position consistent with the source. Unfortunately, the scan contained only the tail of the burst, and so a reliable peak flux is not yet available.
The combination of these observations suggests that IGR J17597-2201 (= XTE J1759-220) is a neutron star in a short-period binary.

Outbursts (1)

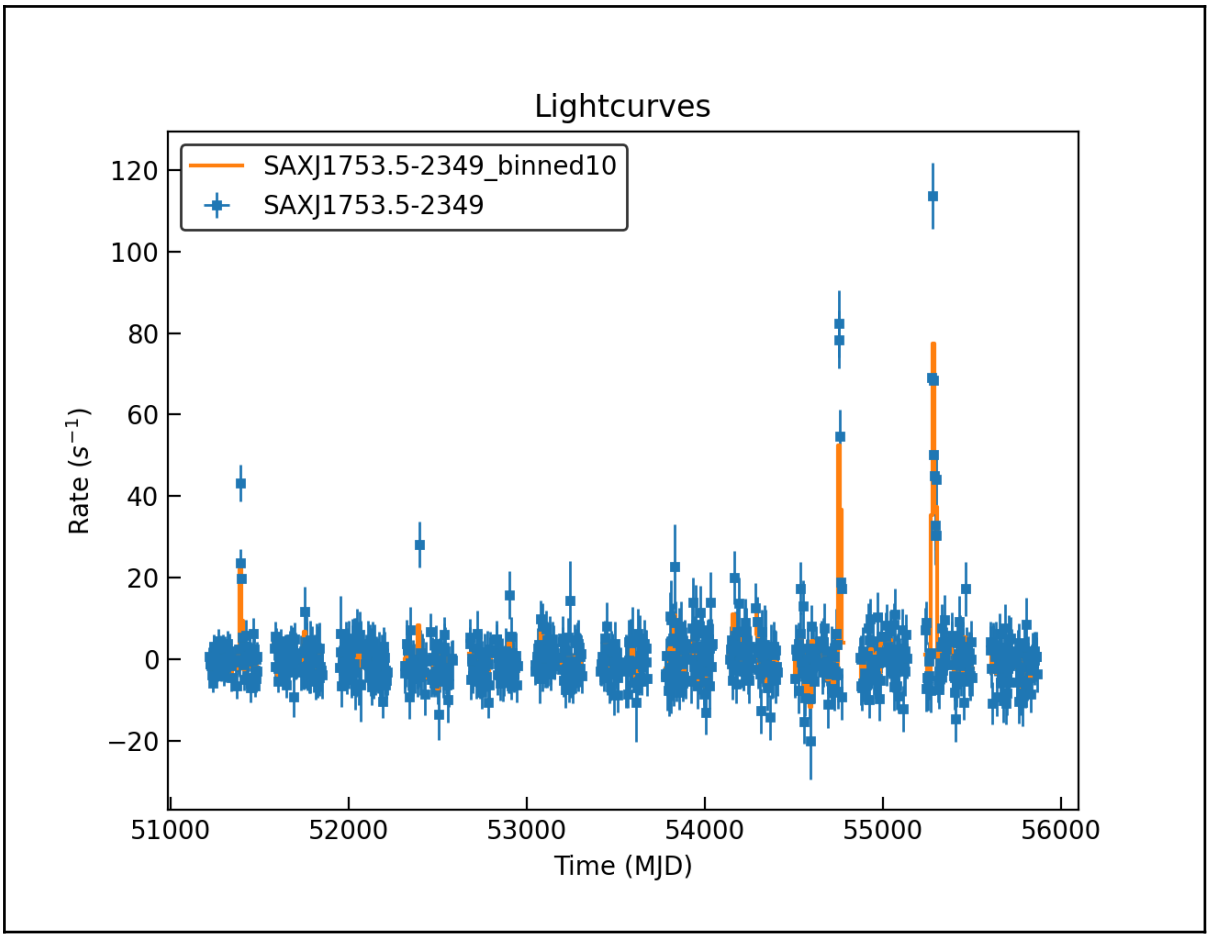


Opmerkingen
Dit is een hele lange uitbarsting met sterk wisselende counts. Uitbarstingen langer dan 1 jaar worden quasi-persistant genoemd. Gauss is duidelijk geen geschikte fit. Niet gebruikt voor schatting van de lengte.



SAXJ1753.5-2349 *

RXTE PCA - Simbad



Literature

Some of the "burst-only" systems, e.g. SAX J1806.5–2215, SAX J1753.5–2349, as well as 1RXS J180408.9–342058, have been also episodically displayed luminous outburst with peak luminosity above 1036 erg s−1 . These sources, observed at both "very faint" luminosity and standard luminosity regimes, are defined as "hybrid" VFXTs (see, e.g. Degenaar & Wijnands 2009; Del Santo et al. 2010, 2011). link

We present near-infrared (NIR) imaging observations of three transient neutron star X-ray binaries, SAX J1753.5-2349, SAX J1806.5-2215 and AX J1754.2-2754. link

Analysis

I have fitted the third outburst with the decay model from Arash. This resulted in the following parameters:

t_l = 7,954 +- 0.572
t_e = 5,999 +- 0.562 days = 5,183*10^5 sec
tt = 55298,3 +- 1.101
logLt = 1,51 +- 0.046
logLe = 1,48 +- 0.054

We can use the outer disc radius R_0 to determine the P_orb using equation 7 as in Stoop et al 2021. The outer radius can be extracted from the exponential decay time using equation 5 in Stoop et al 2021:

R_0 = sqrt(3*v*t_e)

Powell et al 2007 uses that the viscosity is:

v = 4 * 10^14 cm^2 s^-1

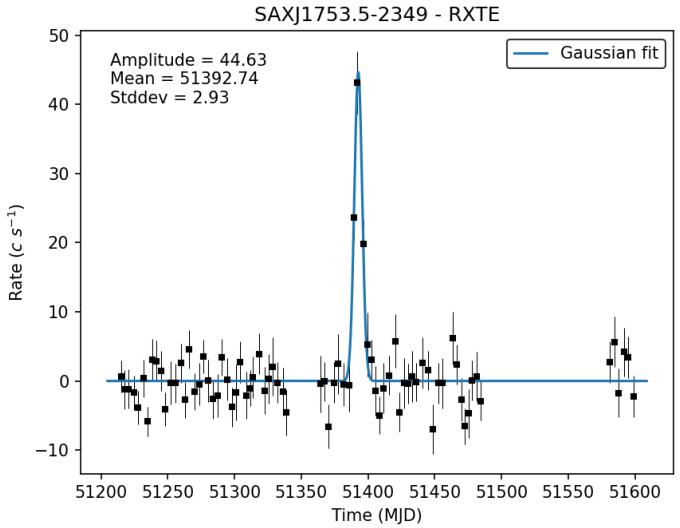
Rewriting equation 5:

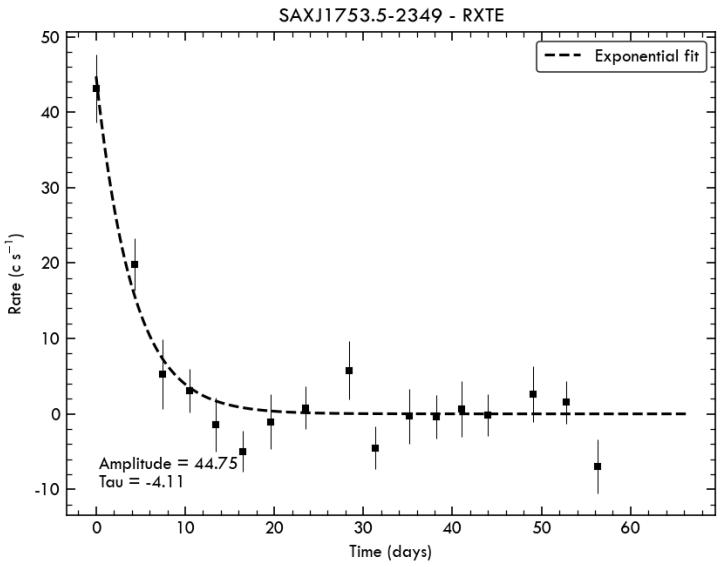
R_0 = 3,5 * 10^7 sqrt(t_e)
R_0 = 2,520 * 10^10 cm

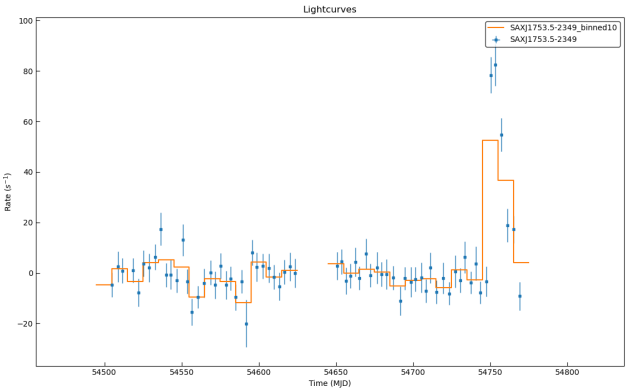
Now using that r_circ = R_0 in eq 7 we get:

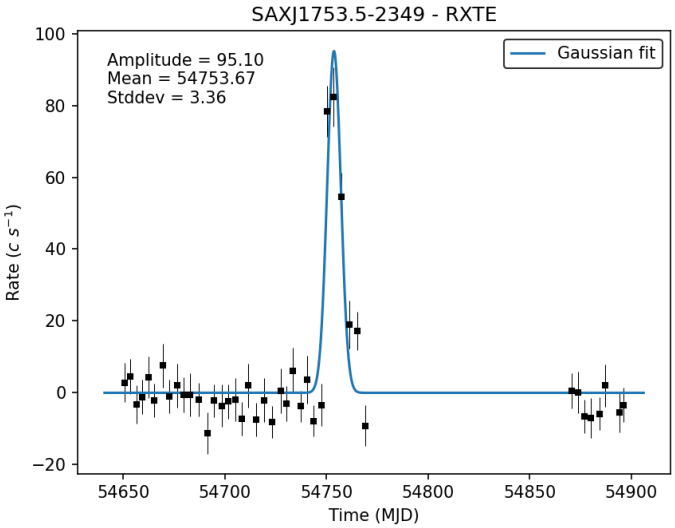
P_orb = 3,656h
Ik heb hier de zons radius in cm gebruikt en q=0.1

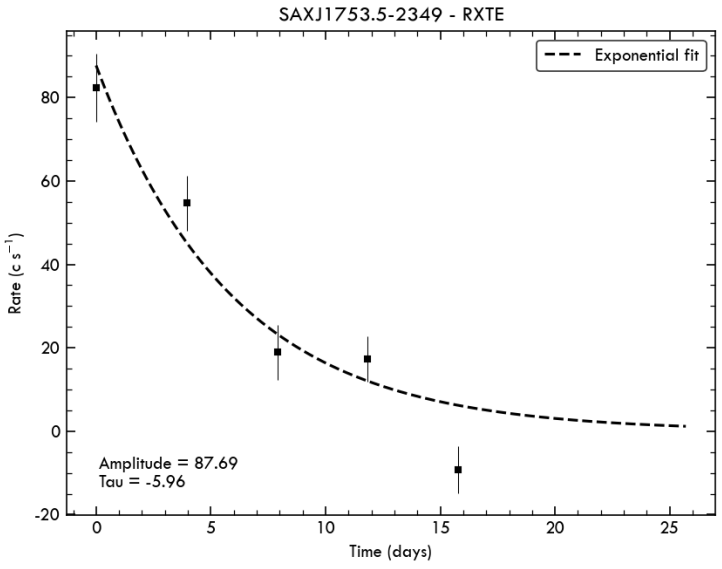
Outbursts (3)

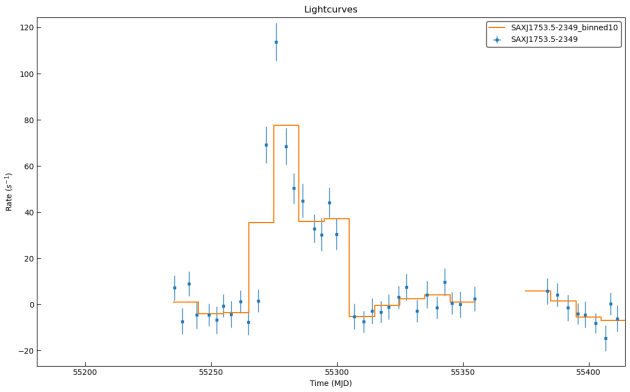

SAXJ1753.5-2349 - RXTE
Gaussian fit
Amplitude = 44.63
Mean = 51392.74
Stddev = 2.93
Rate (c s^{-1})
Time (MJD)

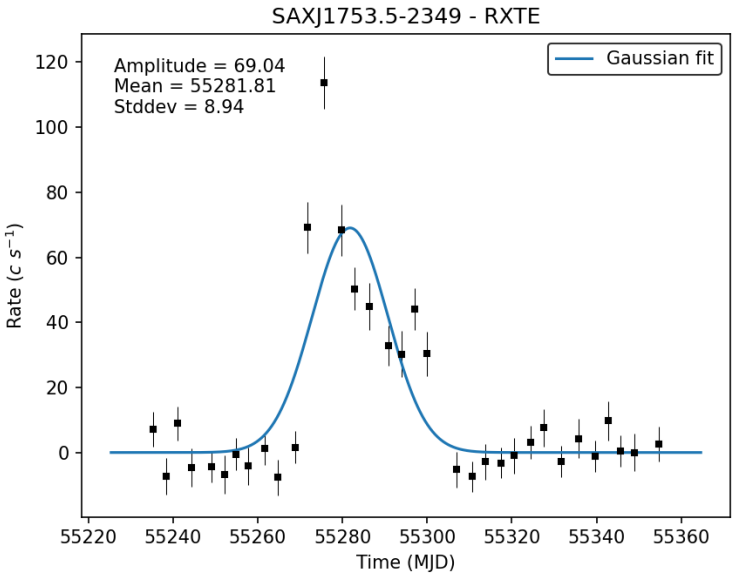

SAXJ1753.5-2349 - RXTE
Exponential fit
Amplitude = 44.75
Tau = -4.11
Rate (c s^{-1})
Time (days)


Lightcurves
SAXJ1753.5-2349_binned10
SAXJ1753.5-2349
Rate (s⁻¹)
Time (MJD)

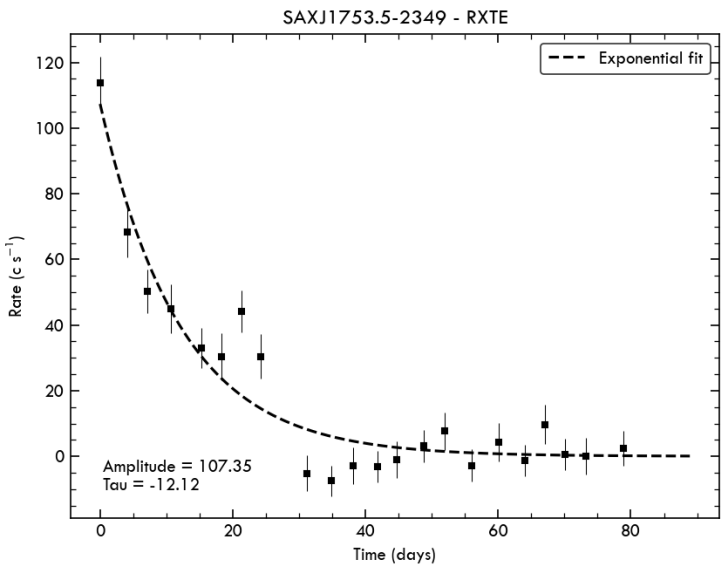

SAXJ1753.5-2349 - RXTE
Amplitude = 95.10
Mean = 54753.67
Stddev = 3.36
Gaussian fit
Rate (c s⁻¹)
Time (MJD)


SAXJ1753.5-2349 - RXTE
Exponential fit
Amplitude = 87.69
Tau = -5.96
Rate (c s⁻¹)
Time (days)

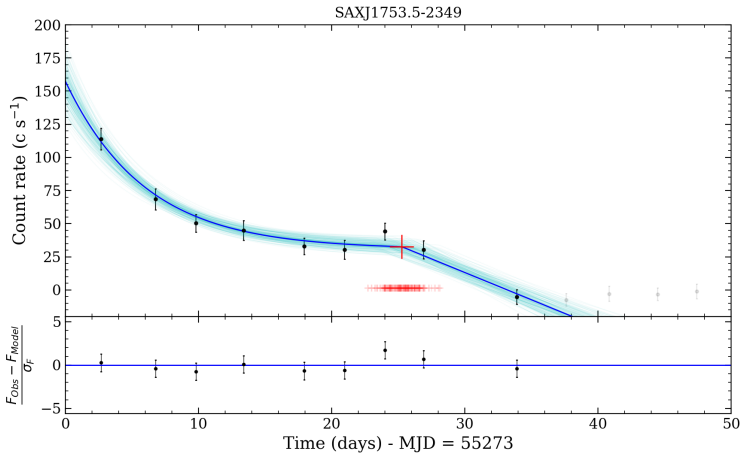




Opmerkingen
De uitbarsting lijkt sterk te stijgen en langzaam uit te doven.



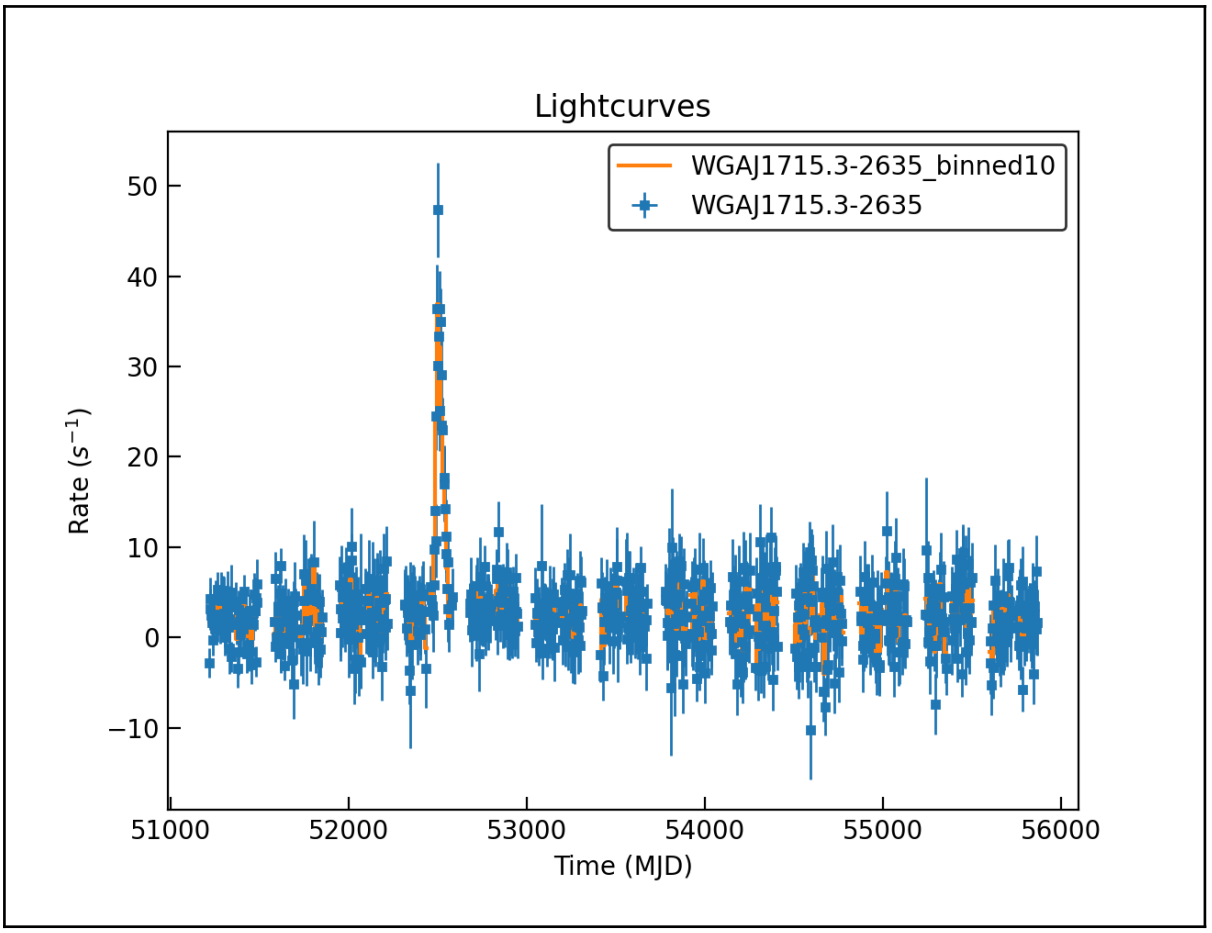
Opmerkingen
Na 20 dagen is er een afwijking. Mogelijk geschikt voor decay fit.



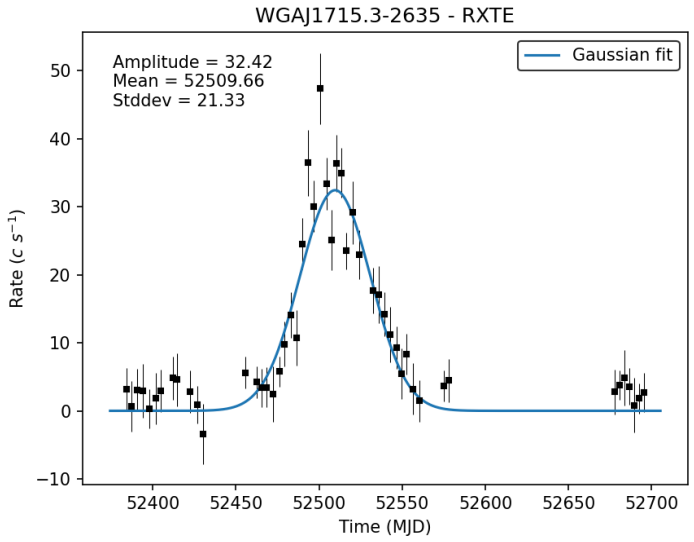
t_l = 7.954 +- 0.572
t_e = 5.999 +- 0.562
tt = 55298.3 +- 1.101
logLt = 1.51 +- 0.046
logLe = 1.48 +- 0.054

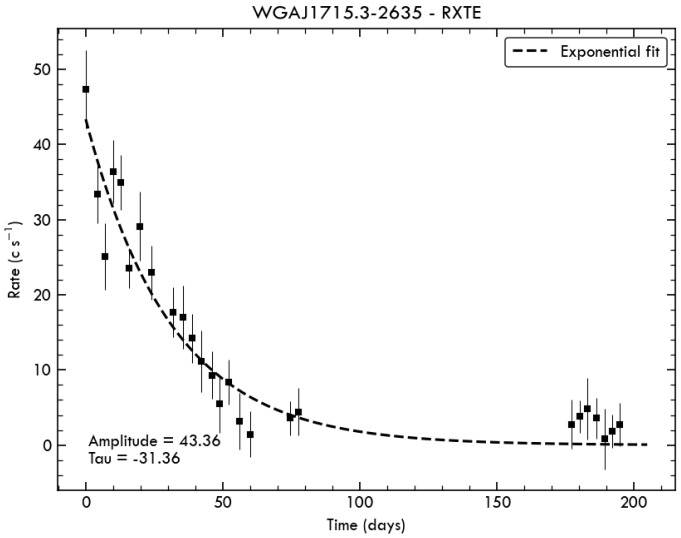
WGAJ1715.3-2635

RXTE PCA



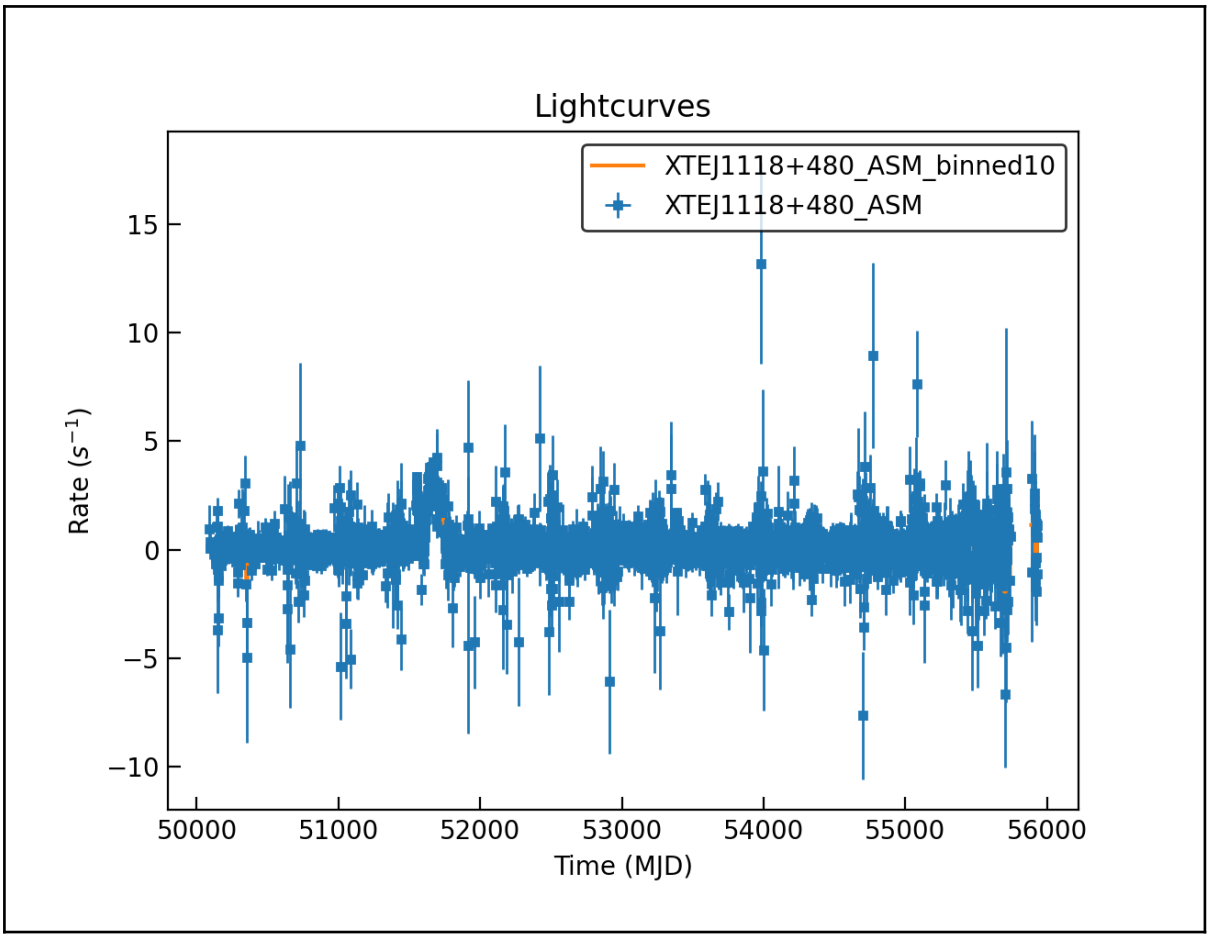
Outbursts (1)


WGAJ1715.3-2635 - RXTE
Amplitude = 32.42
Mean = 52509.66
Stddev = 21.33
Gaussian fit
Rate (c s^{-1})
Time (MJD)


WGAJ1715.3-2635 - RXTE
Exponential fit
Amplitude = 43.36
Tau = -31.36
Rate (c s^{-1})
Time (days)

XTEJ1118+480 *

RXTE ASM



Literature

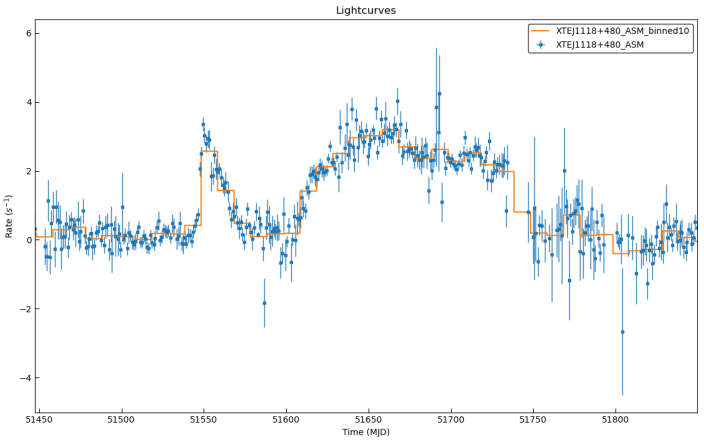
Black holes candidate, perdio detection:

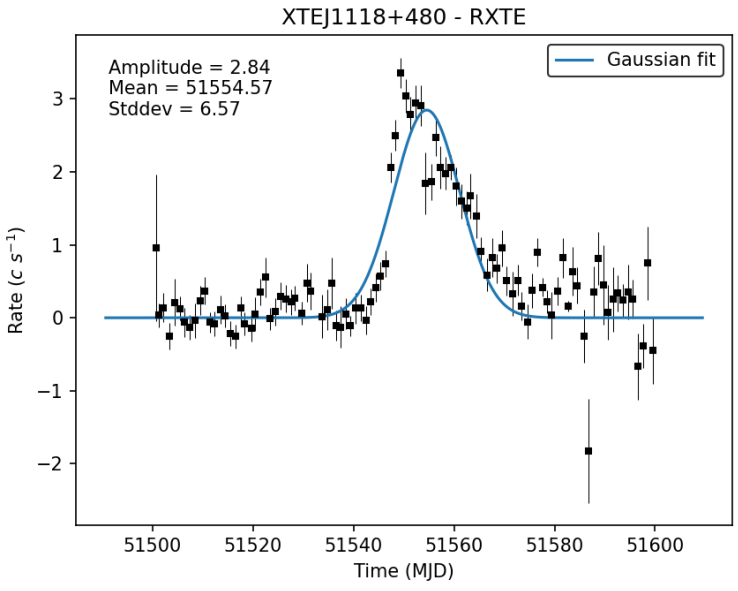
https://ui.adsabs.harvard.edu/abs/2004ApJ...612.1026T/abstract

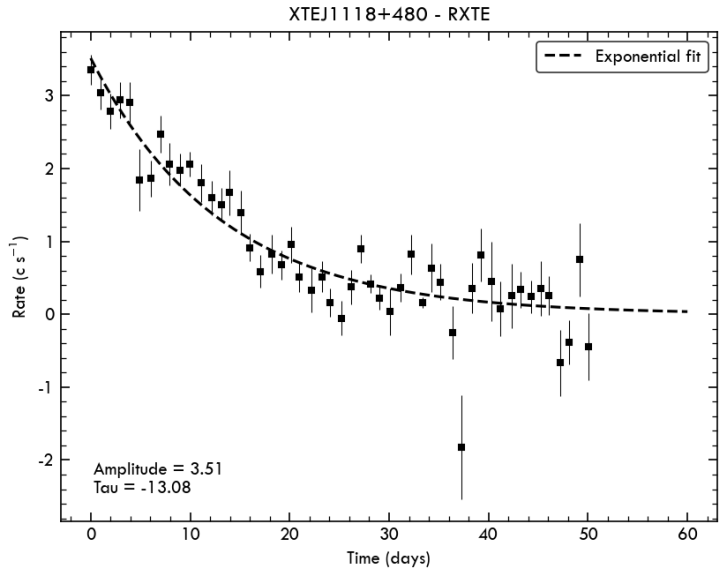
Analyses

This source is at a distance of 1,8 +- 0,6 kpc
https://ui.adsabs.harvard.edu/abs/2004ApJ...612.1026T/abstract

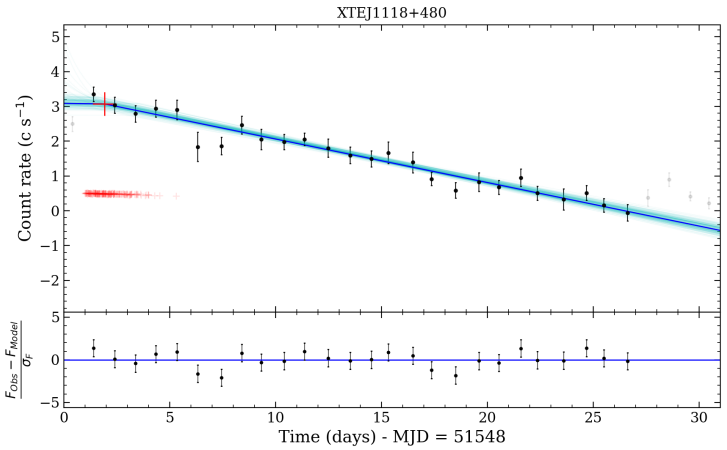
Outbursts (2)

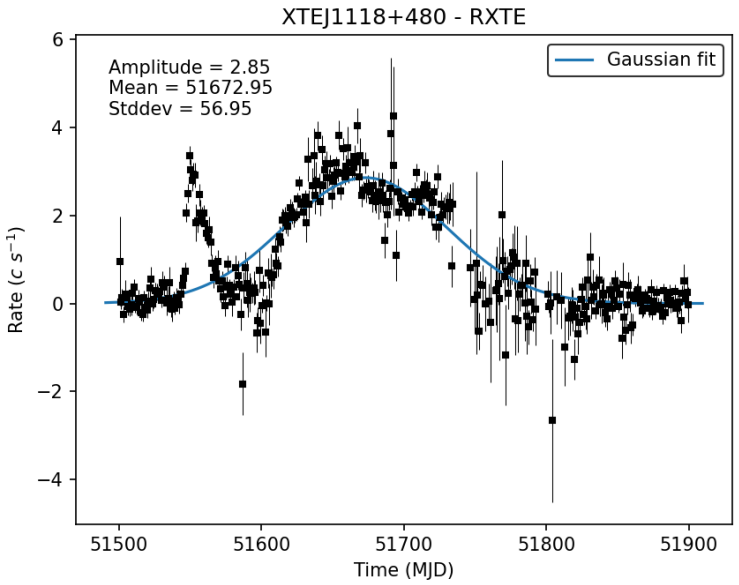

Lightcurves
XTEJ1118+480_ASM_binned10
XTEJ1118+480_ASM
Rate (s^{-1})
Time (MJD)

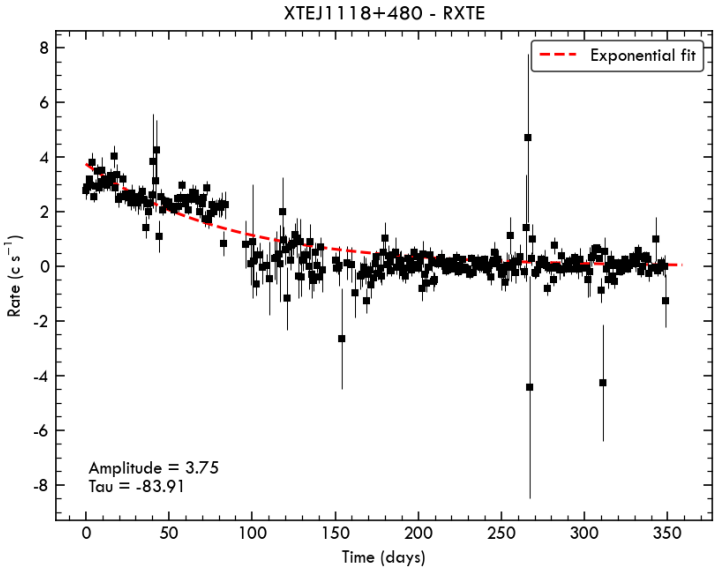

XTEJ1118+480 - RXTE
Amplitude = 2.84
Mean = 51554.57
Stddev = 6.57
Gaussian fit
Rate ($c\ s^{-1}$)
Time (MJD)

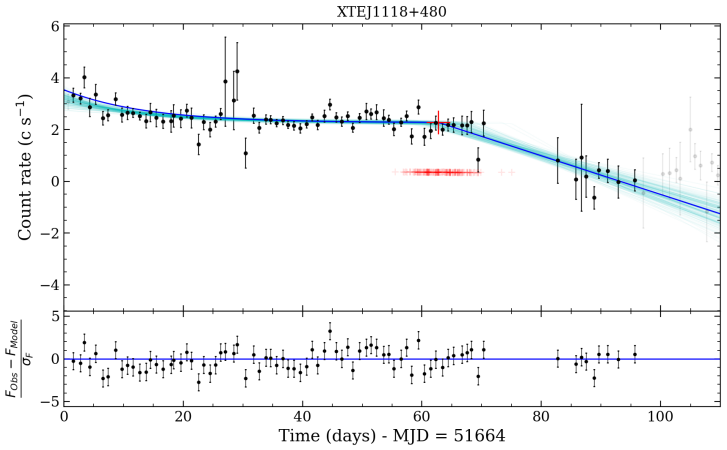


Opmerkingen
Mogelijk geschikt voor decay fit.



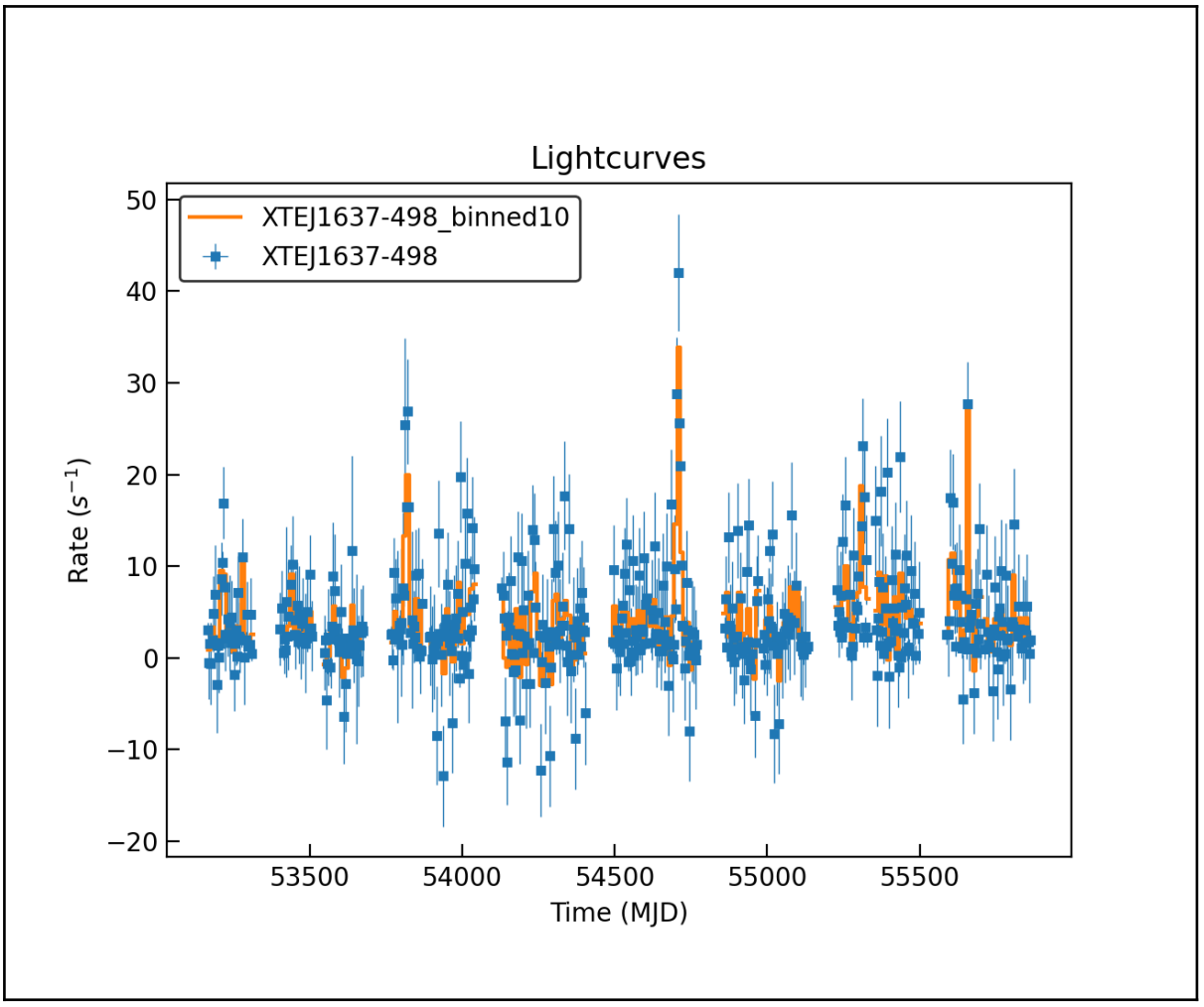

XTEJ1118+480 - RXTE
Amplitude = 2.85
Mean = 51672.95
Stddev = 56.95
Gaussian fit
Rate (c s^{-1})
Time (MJD)
6
4
2
0
−2
−4
51500
51600
51700
51800
51900


XTEJ1118+480 - RXTE
Exponential fit
Amplitude = 3.75
Tau = -83.91
Rate (c s^{-1})
Time (days)
8
6
4
2
0
-2
-4
-6
-8
0
50
100
150
200
250
300
350


XTEJ1118+480
Count rate (c s^{-1})
$\frac{F_{Obs}-F_{Model}}{\sigma_F}$
Time (days) - MJD = 51664

XTEJ1637-498

RXTE PCA

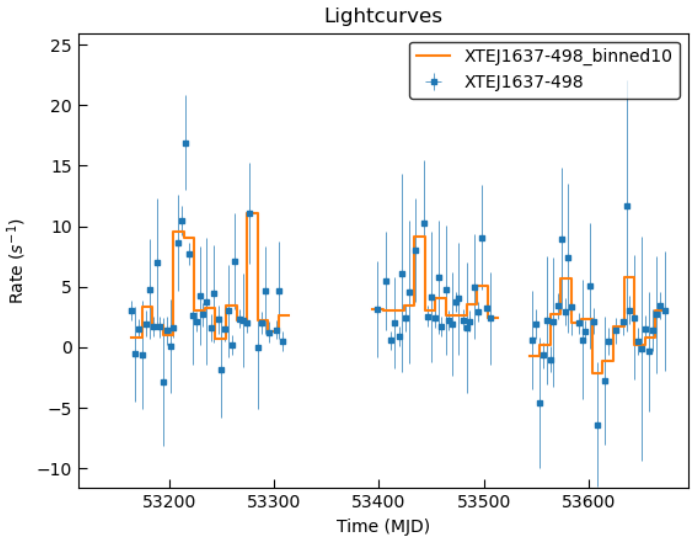


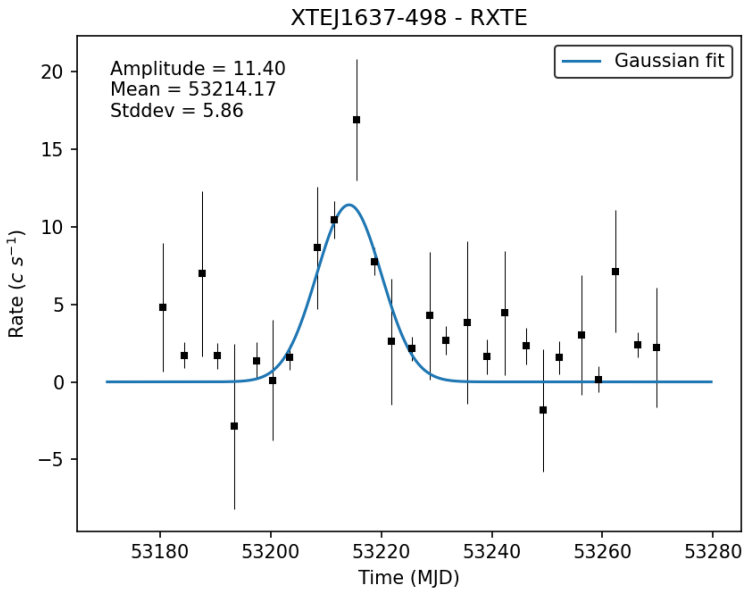
Literature

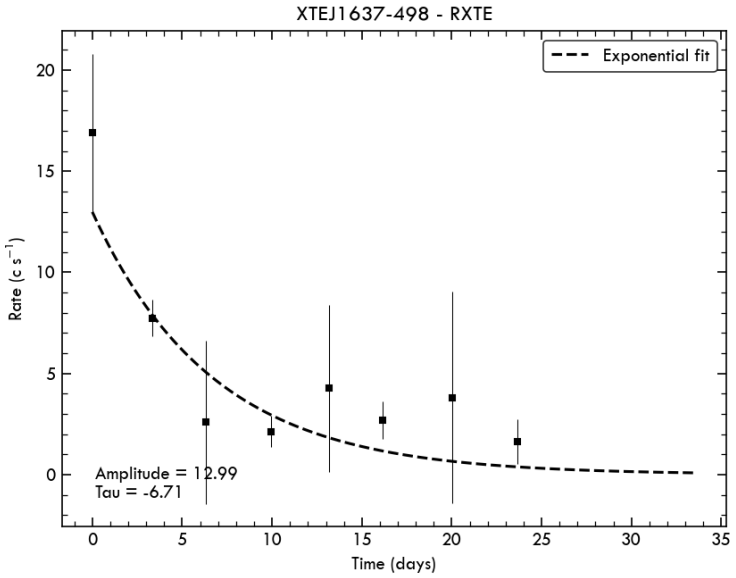
Suggestions for this source to be a LMXB. link

Outbursts (5)

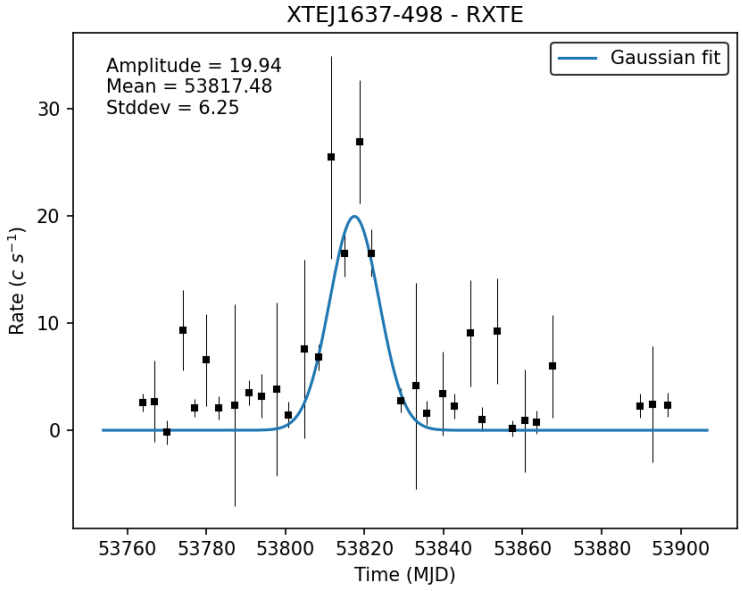
Vier duidelijke uitbarstingen, in het begin een kleinere uitbarsting

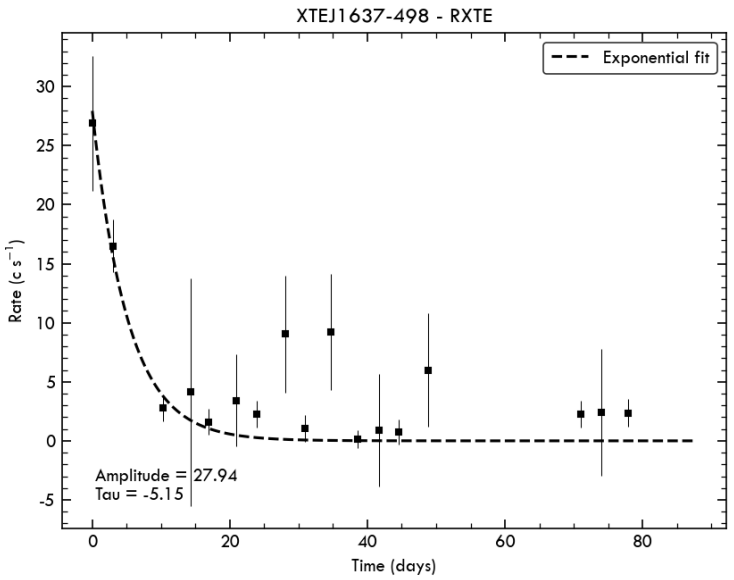


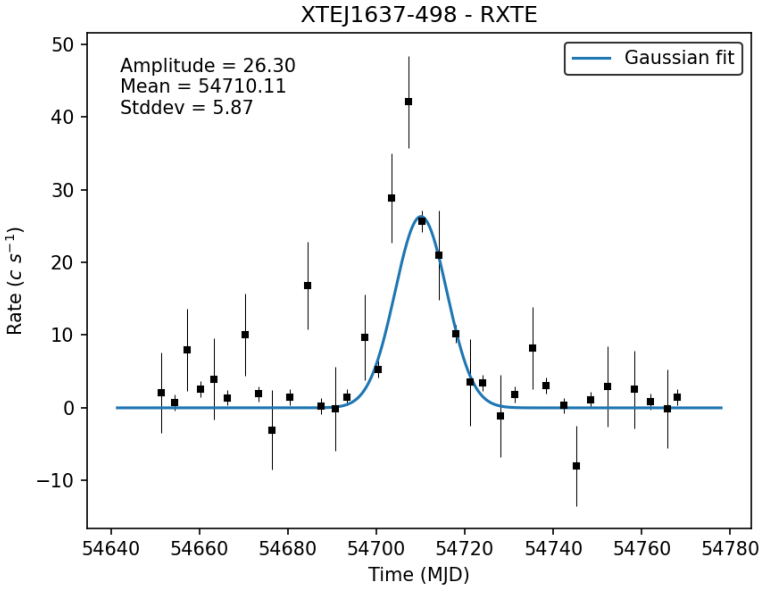


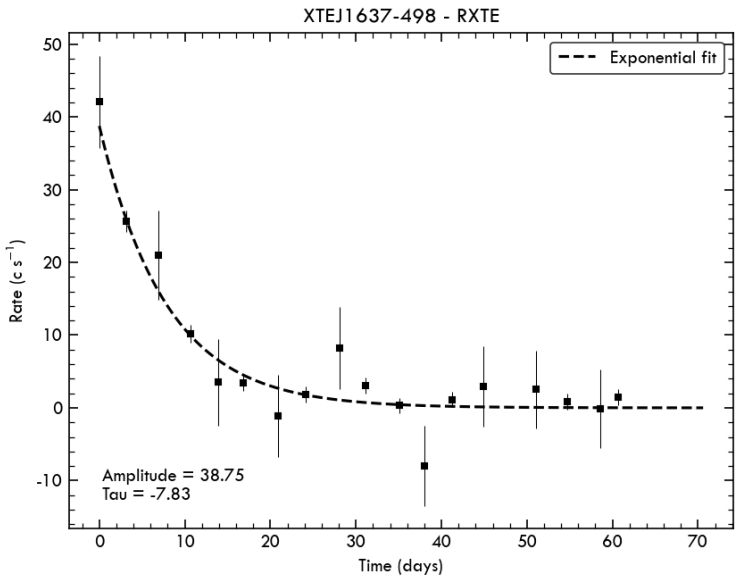


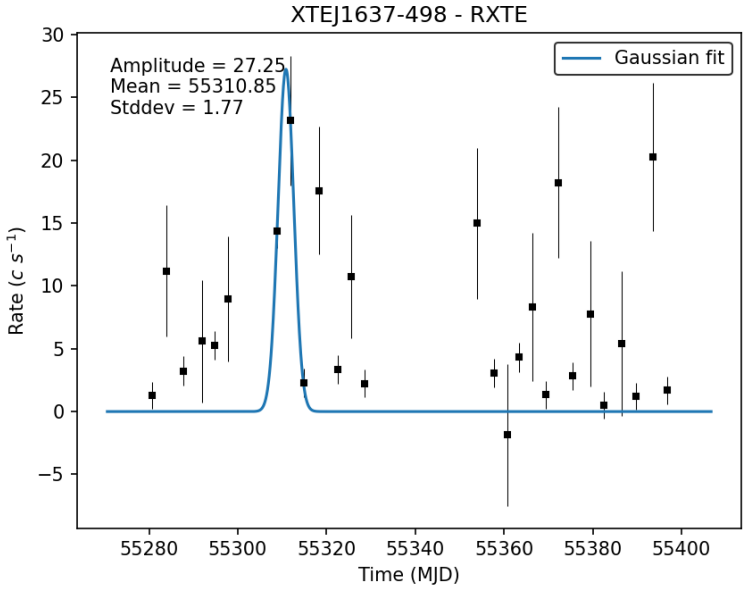
Opmerkingen
Het sterk toenemende gedeelte heeft maar 2 tot 3 datapunten dus wellicht geen hele overtuigende fit.



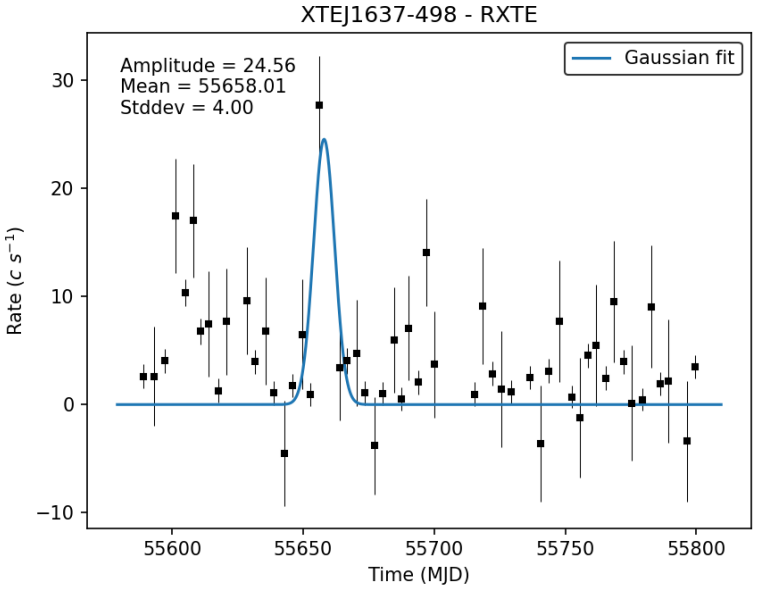

XTEJ1637-498 - RXTE
Exponential fit
Amplitude = 27.94
Tau = -5.15
Rate (c s^{-1})
Time (days)


XTEJ1637-498 - RXTE
Gaussian fit
Amplitude = 26.30
Mean = 54710.11
Stddev = 5.87
Rate (c s^{-1})
Time (MJD)

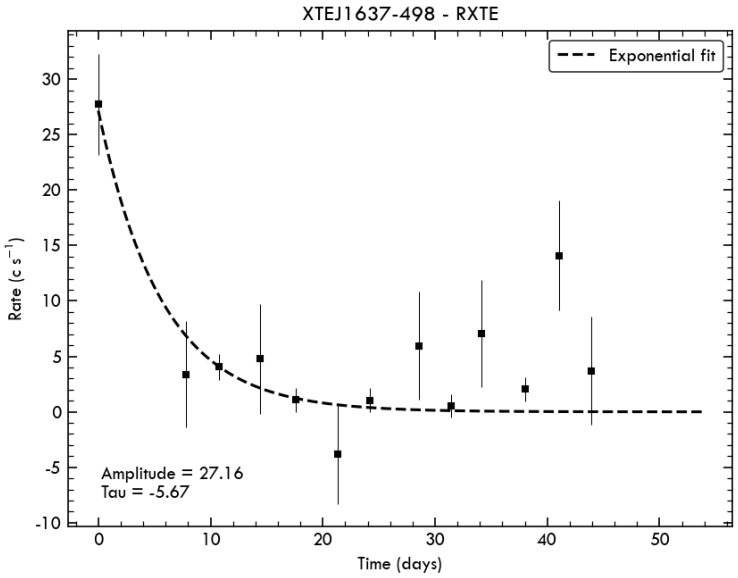




Opmerkingen
Moelijk te fitten. De uitbarsting lijkt eerder te beginnen rond 55285MJD en te eindigen rond 55330MJD. Daarna zijn nog 3 hogere rates te zien wat misschien oscilaties na de uitbarsting zijn. Exponentiele fit niet geschikt door de sterke variabiliteit.



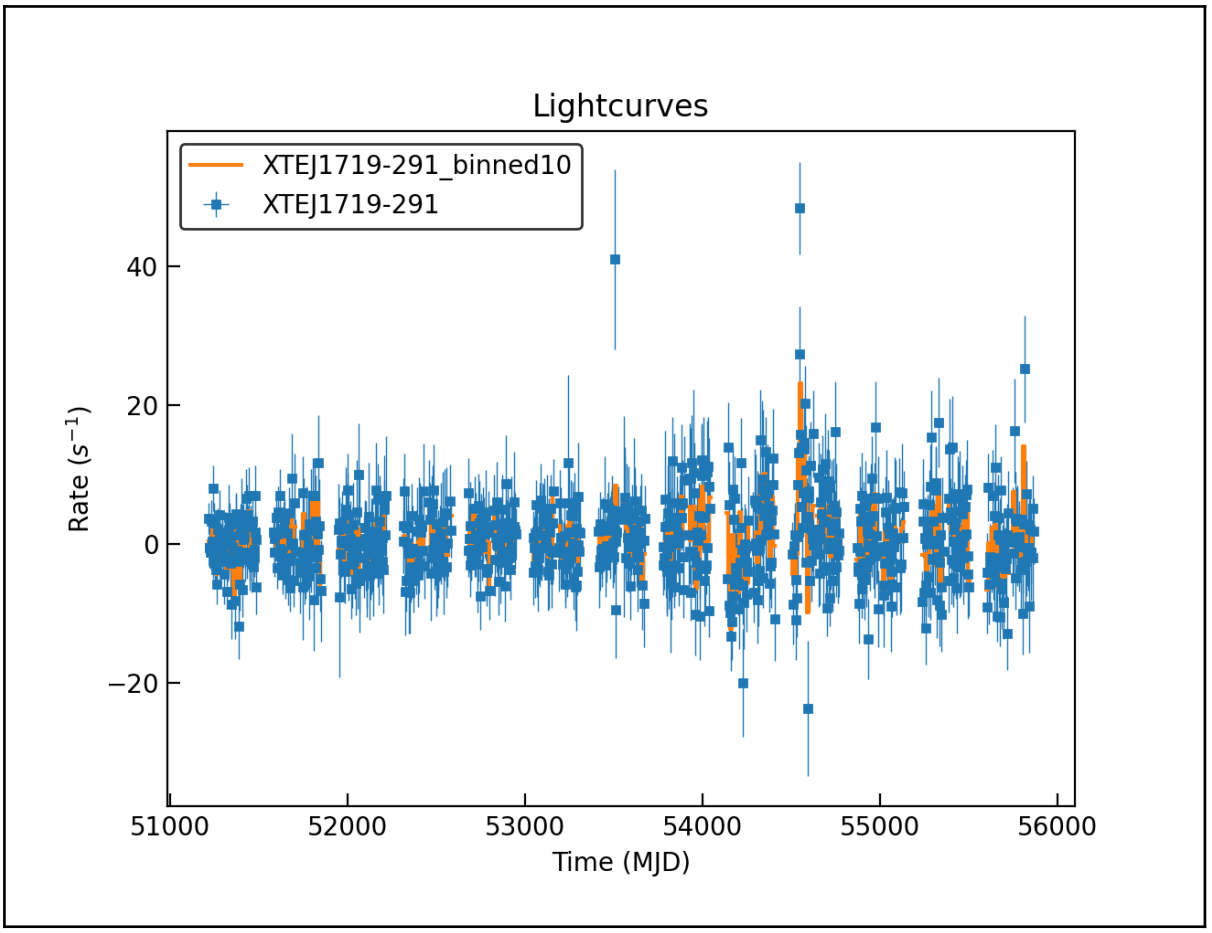
Opmerkingen
Stddev gefixed omdat die anders convergeerde naar stddev 1.3 wat mij minder goed leek te passen dan deze fit.



Opmerkingen
Uitbarsting is te herkennen door maar 1 datapunt met een hogere count van 28. De exponent lijkt goed te fitten maar het heeft eigenlijk maar 1 datapunt om te fitten dus deze fit geeft denk ik een vertekend beeld.

XTEJ1719-291

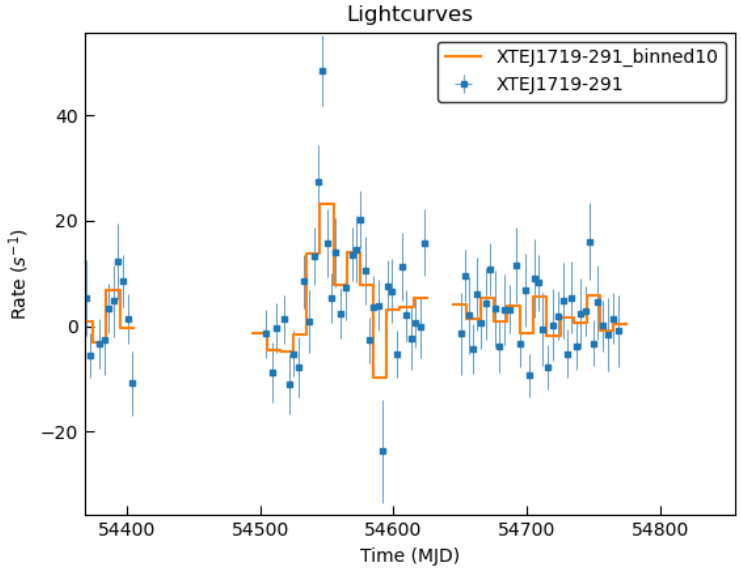
RXTE PCA

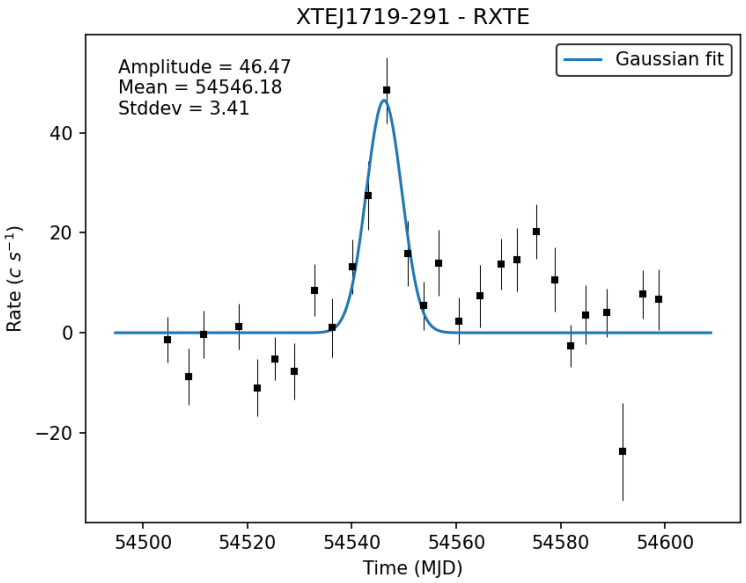


Literature

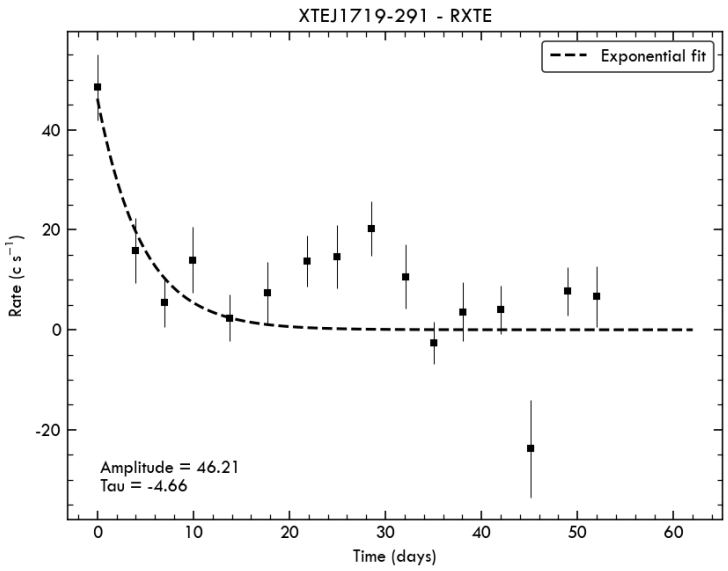
Suggestion for neutron star nature link.

Outbursts (1)



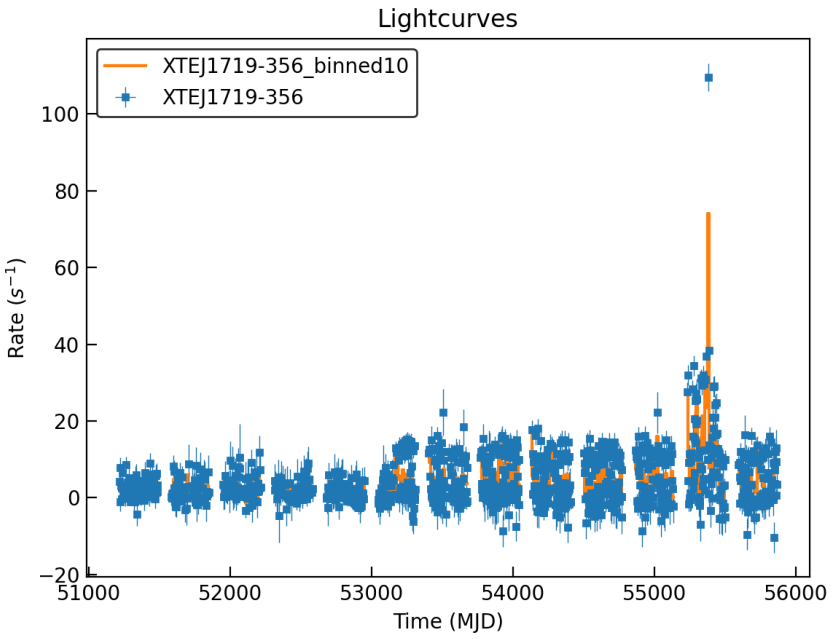


Opmerkingen
Je ziet nog een kleine verhoging na de uitbarsting.

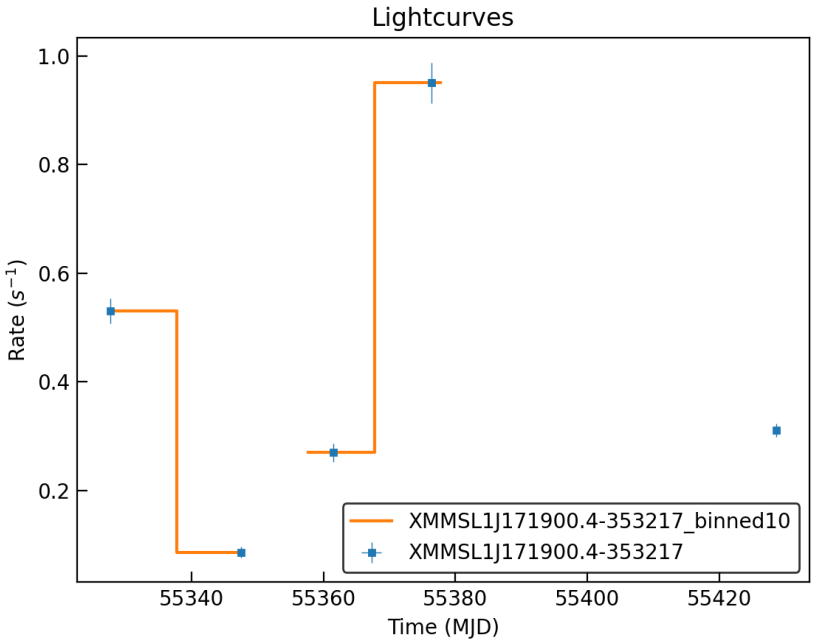

XTEJ1719-291 - RXTE
Exponential fit
Rate (c s^{-1})
Time (days)
Amplitude = 46.21
Tau = -4.66
40
20
0
-20
0
10
20
30
40
50
60

XTEJ1719-356

RXTE PCA and Swift (XMMSL1 J171900.4-353217)

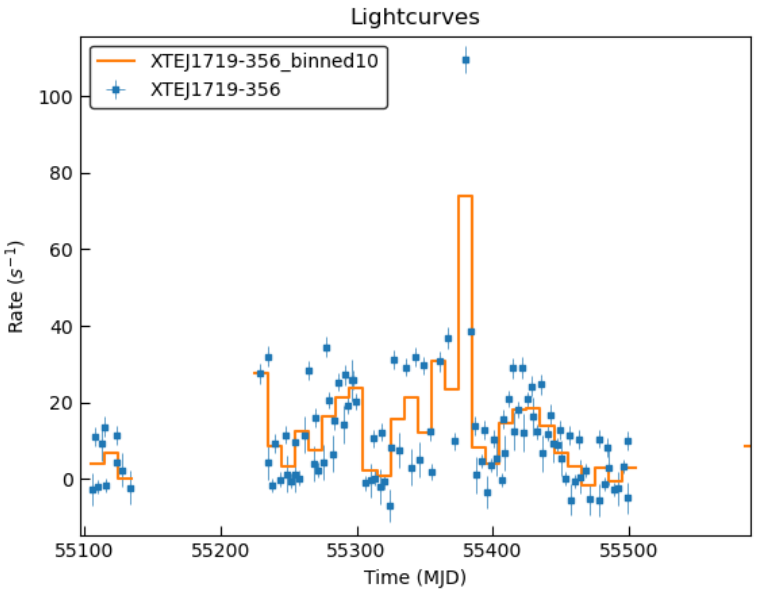


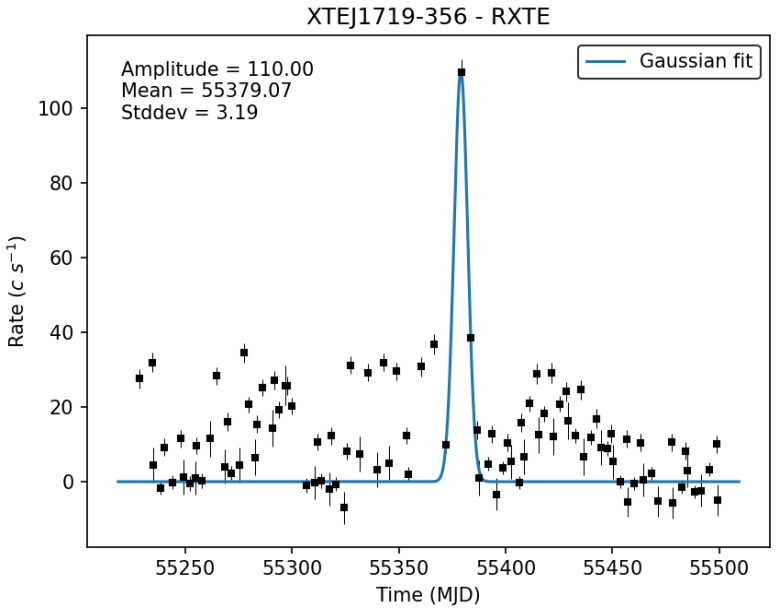
RXTE



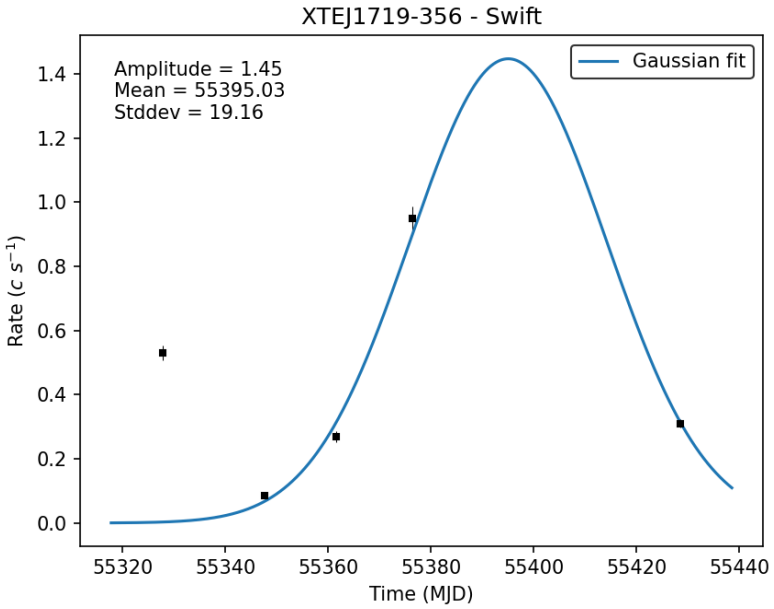
Swift

Outbursts (1)

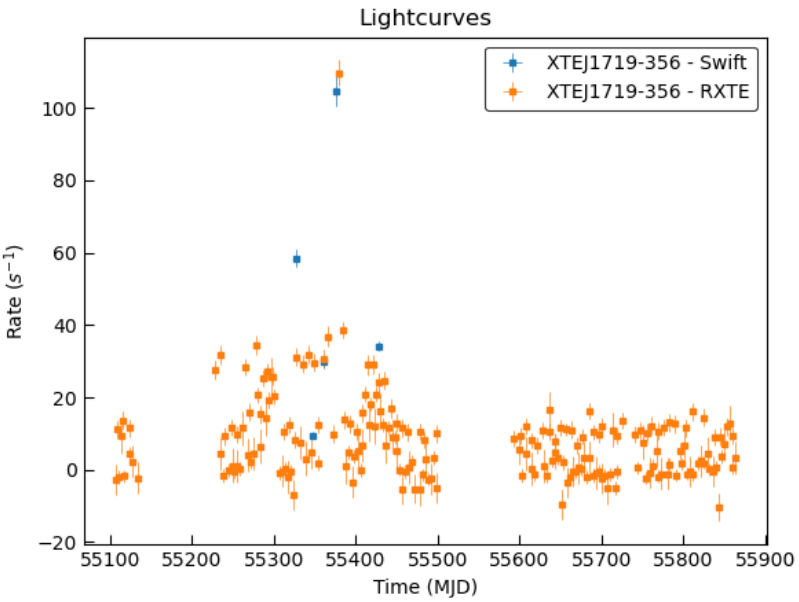




Opmerkingen
De fit lijkt oke maar de omringende counts zijn ook verhoogd. Door de variabiliteit van deze bron is een gauss niet de beste benadering voor de werkelijke vorm.



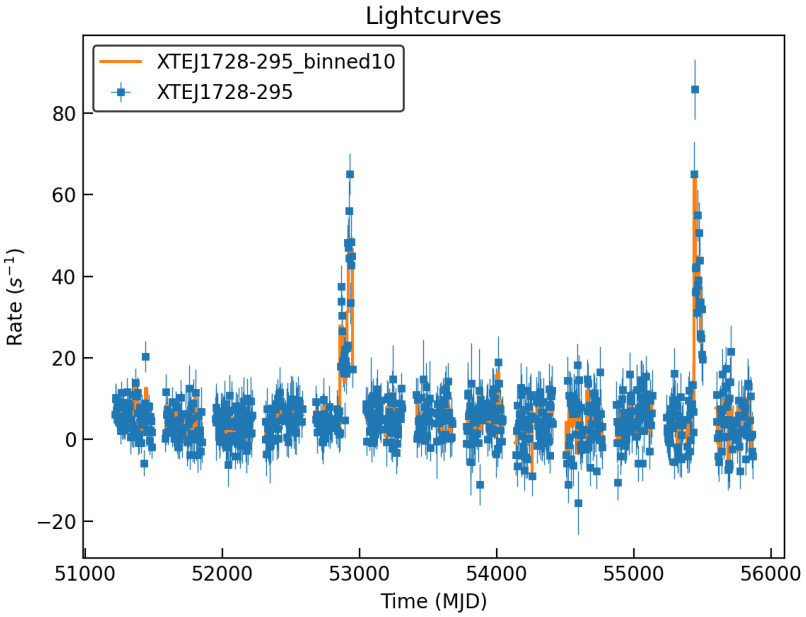
Opmerkingen
Het linker datapunt wijkt erg af van de fit. Gechecked: alle datapunten zijn gemaakt in de PC mode). Deze bron vertoont grote variabiliteit dus is een gauss niet de beste representatie.

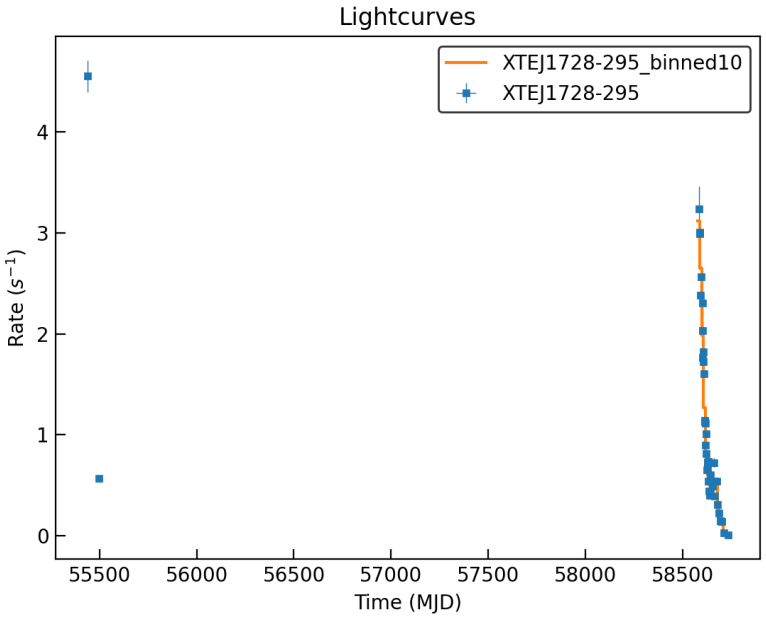


Opmerkingen
De datapunten van Swift zijn er niet veel maar kunnen wel een betere signal to noise ratio hebben.

XTEJ1728-295 *

RXTE PCA and Swift

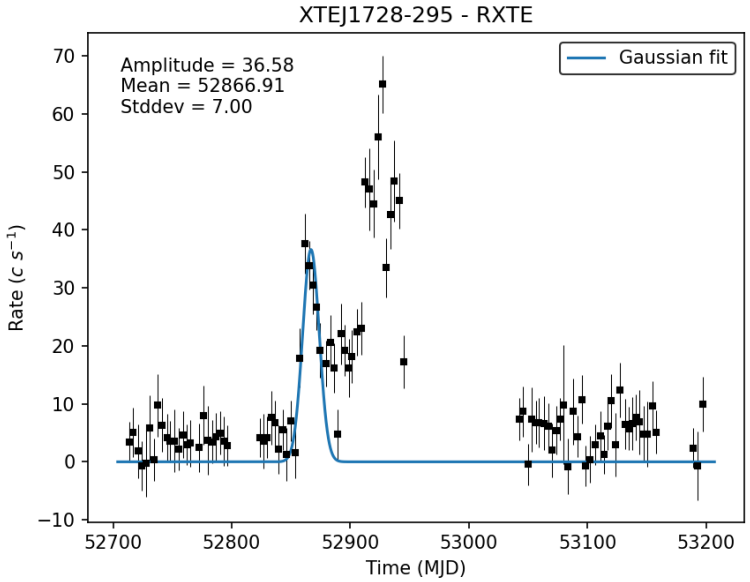




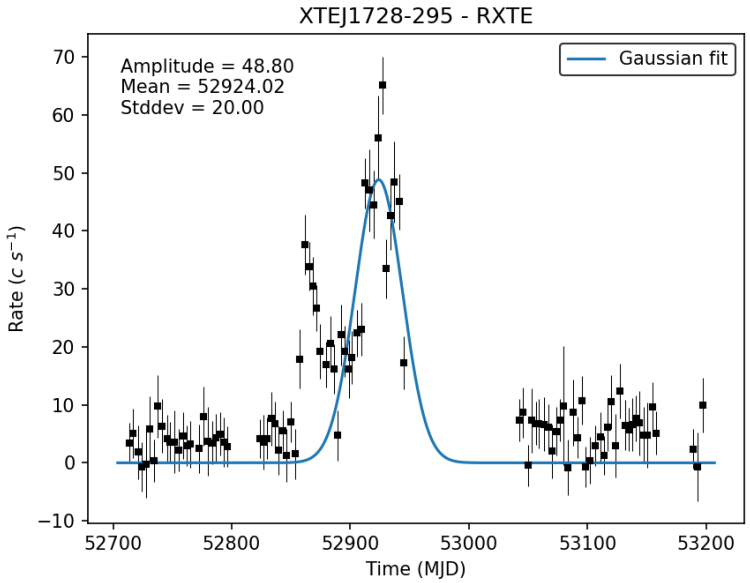
Literature

The broad-band X-ray spectrum as well as the power-density spectrum is indicative of a low-hard state in a low-mass X-ray binary, although nothing conclusive can be said about the nature of the compact object (neutron star or black hole). The results we report here allow us to conclude that IGR J17285-2922 is a low-mass X-ray binary, located at a distance greater than 4 kpc. link

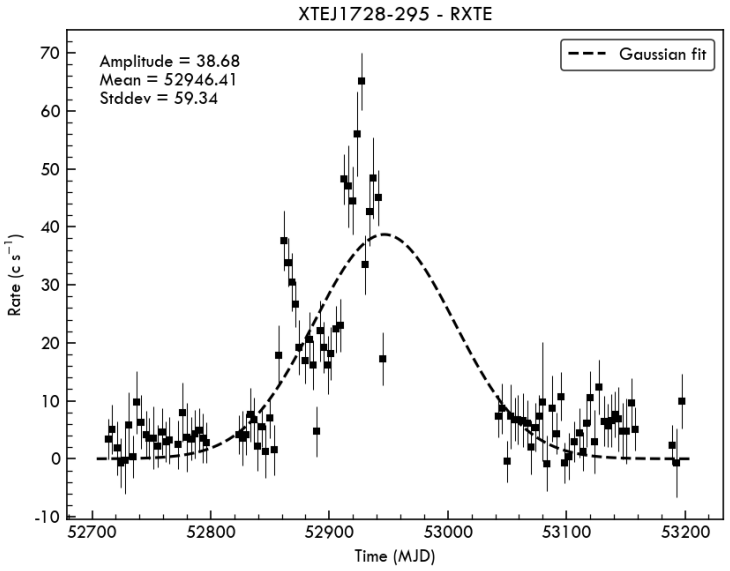
Outbursts (3)



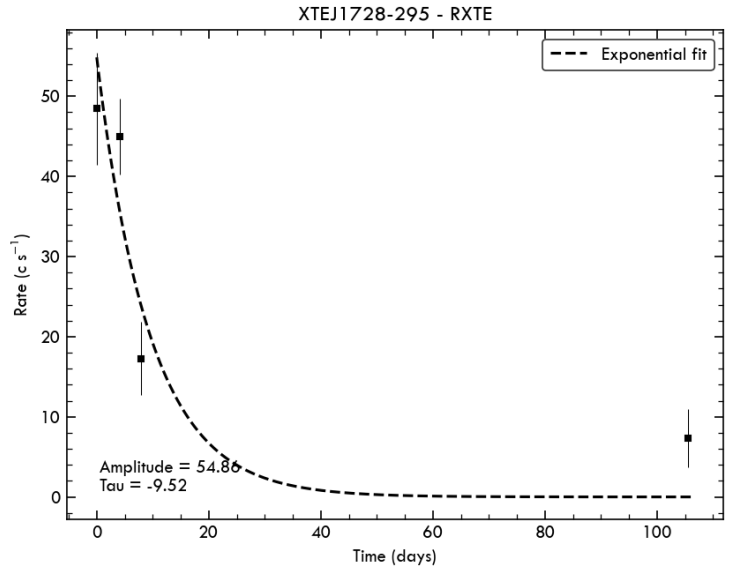
Opmerkingen
Deze fit niet gebruikt.



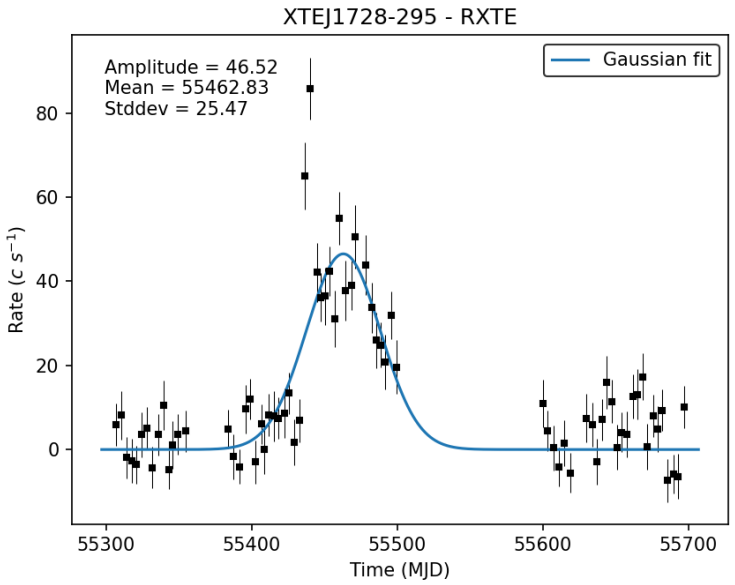
Opmerkingen
Gauss niet de beste vorm, deze fit niet gebruikt, zie volgende.



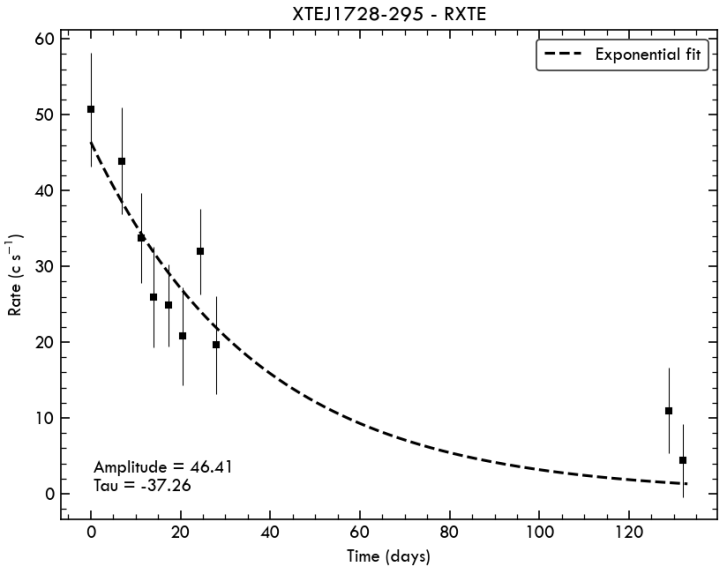
Opmerkingen
Deze fit lijkt me beter dan het opsplitsen van twee uitbarstingen. Door de sterke variabiliteit lijkt me een exponentiele fit geen goede representatie.



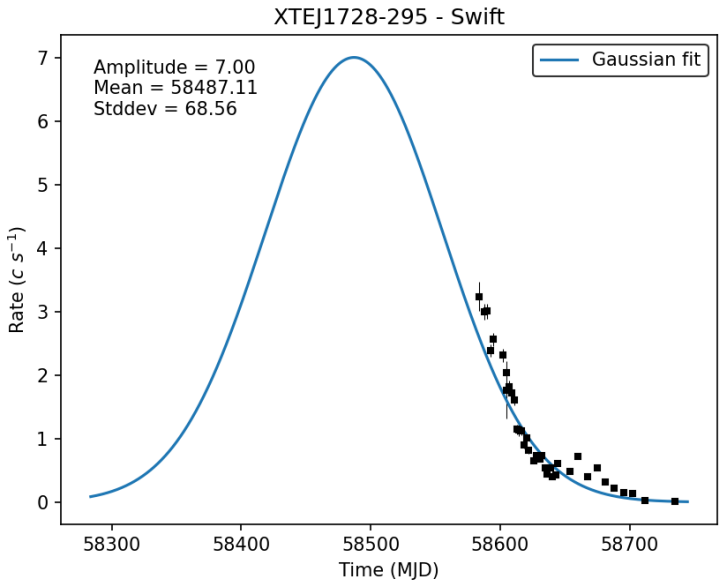
Opmerkingen
Moeilijke te fitten door de sterke variabilteit. Wel gebruikt voor schatting van de decay time.



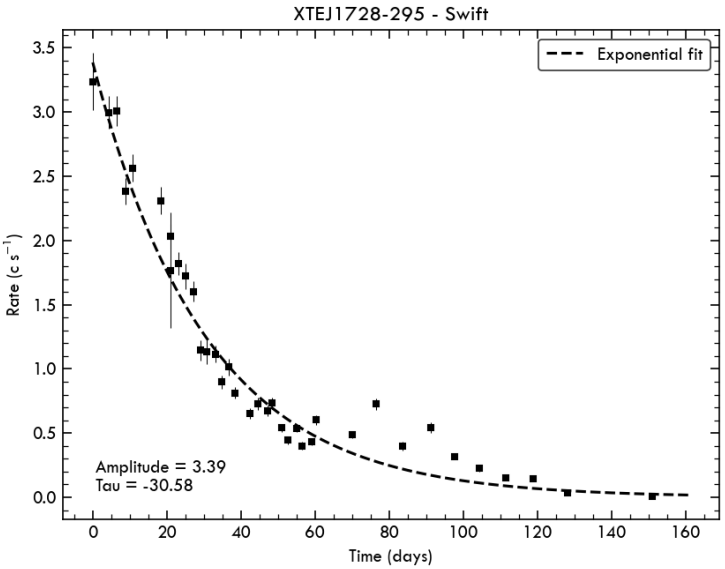
Opmerkingen
Gauss niet de beste vorm maar voor het bepalen van de lengte van de uitbarsting wel oke denk ik. Niet geschikt voor exponent.



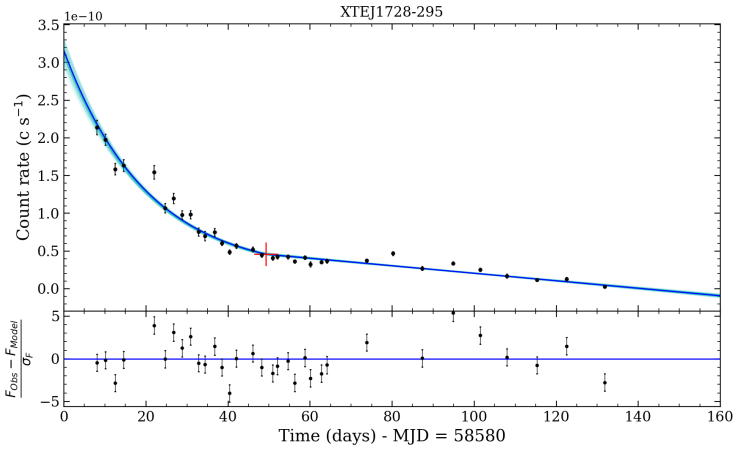
Opmerkingen
Alleen het laatste deel van de uitbarsting gefit.



Opmerkingen
Moeilijk te fitten.

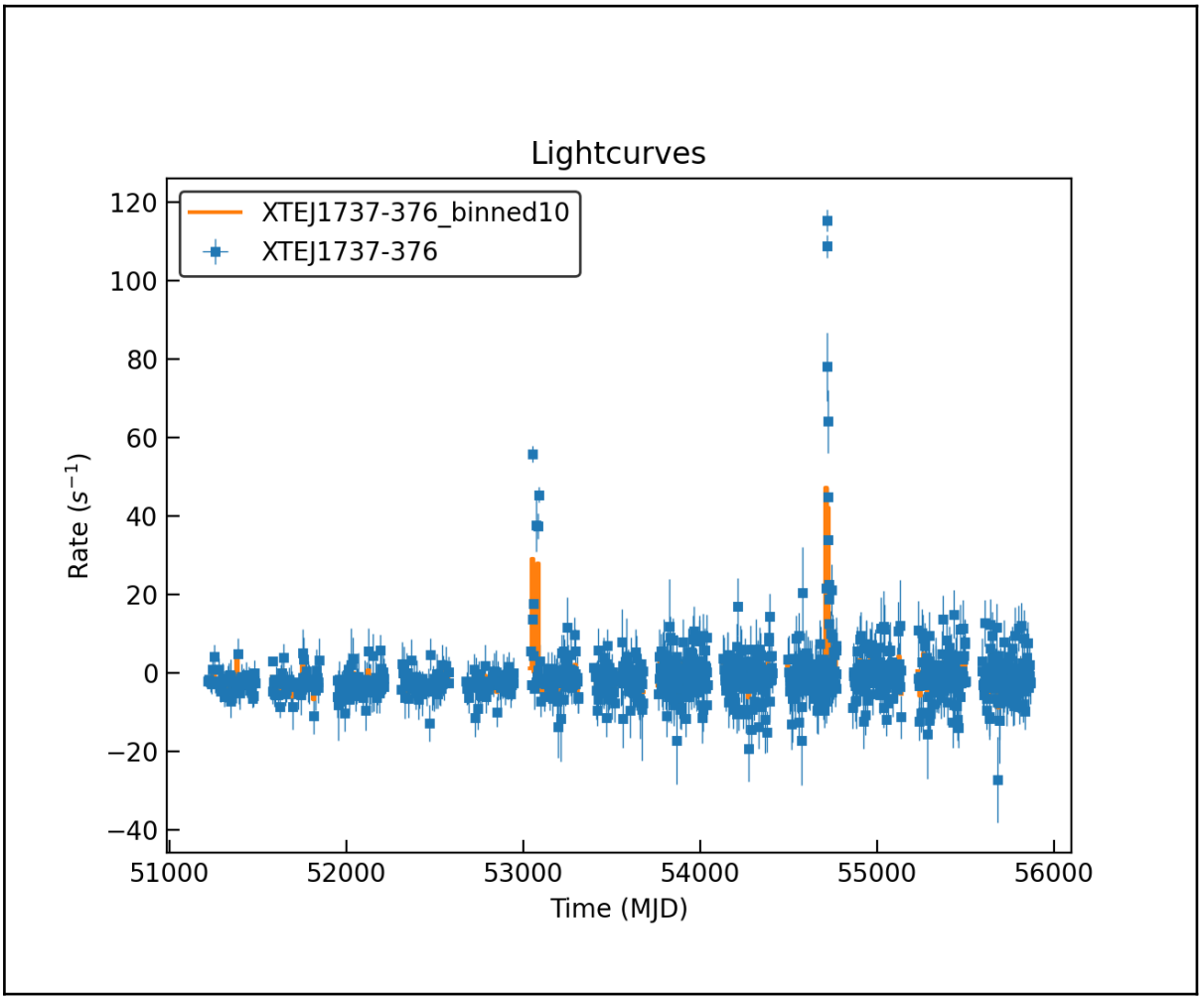


Opmerkingen
Geschikt voor decay fit (Stoop et al.).


XTEJ1728-295
1e−10
Count rate (c s^{-1})
$\frac{F_{Obs}-F_{Model}}{\sigma_F}$
Time (days) - MJD = 58580

XTEJ1737-376 **

RXTE PCA (IGR J17379-3747 (==IGR J17380-3749==XTE J1737-376))

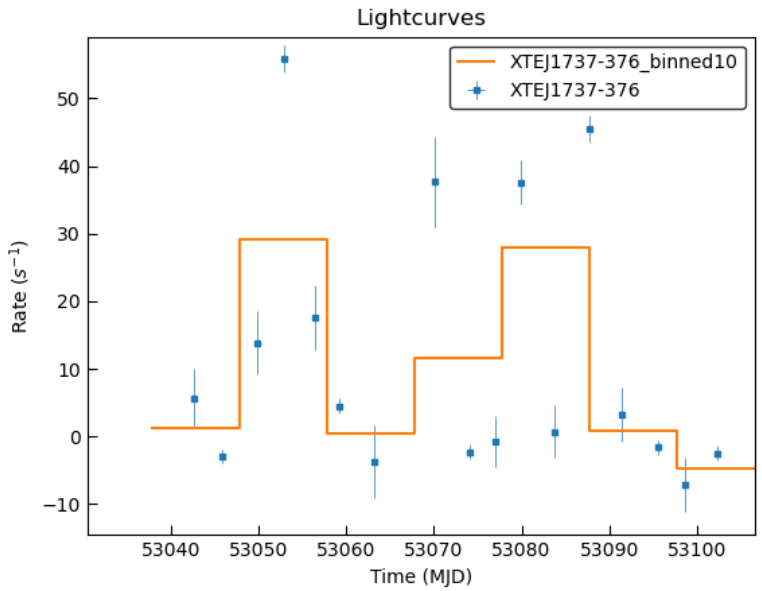


Literature

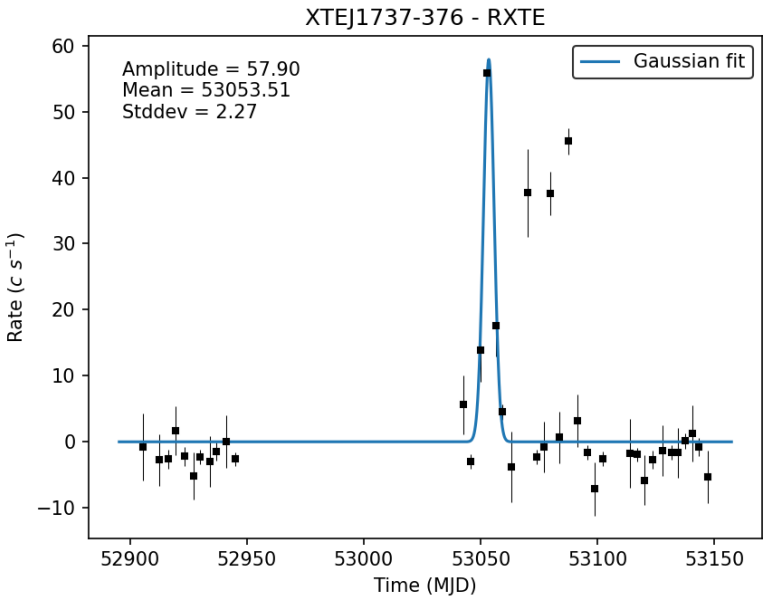
During the second consecutive all-sky survey the ART-XC telescope onboard the SRG observatory scanned over the position of a known Galactic X-ray binary IGR J17379-3747 (==IGR J17380-3749==XTE J1737-376) on Sep. 29. This source demonstrates type-I bursts (Chelovekov, Grebenev 2010) and hosts a very rapidly spinning neutron star (ATel#11507).

https://www.aanda.org/articles/aa/full_html/2018/08/aa33205-18/aa33205-18.html

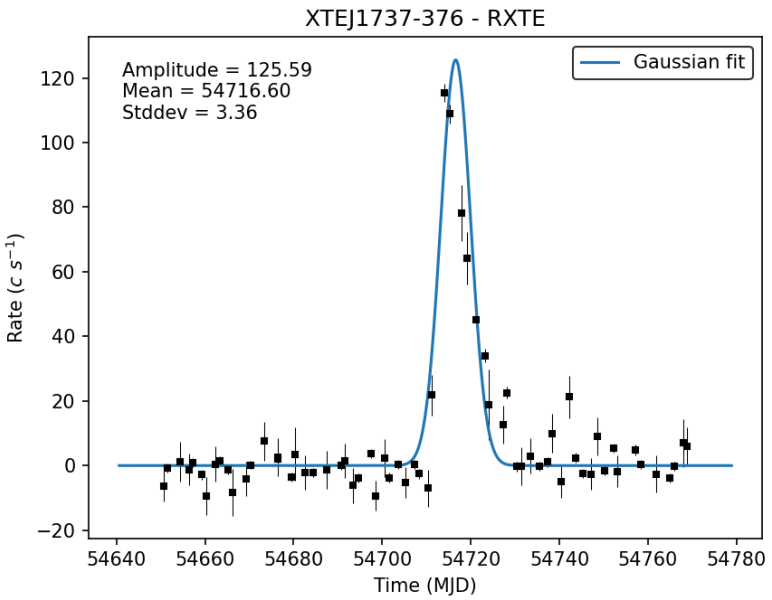
Outbursts (2)

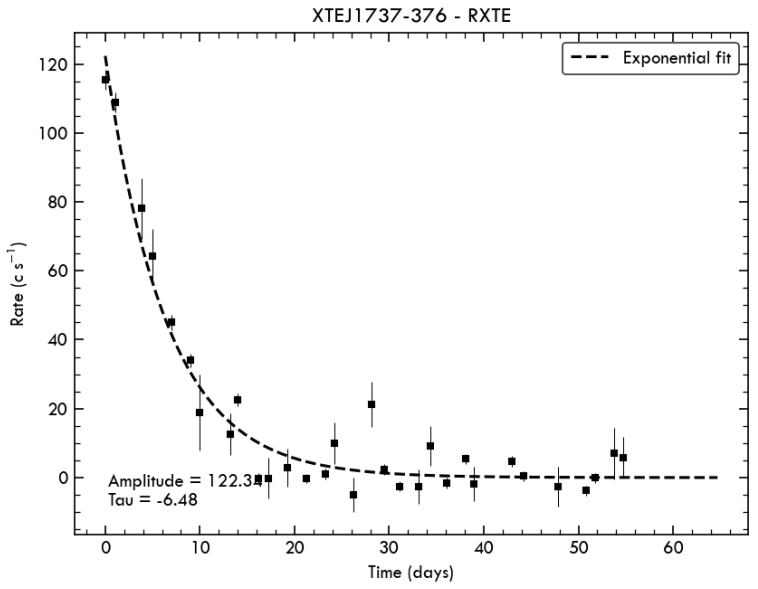


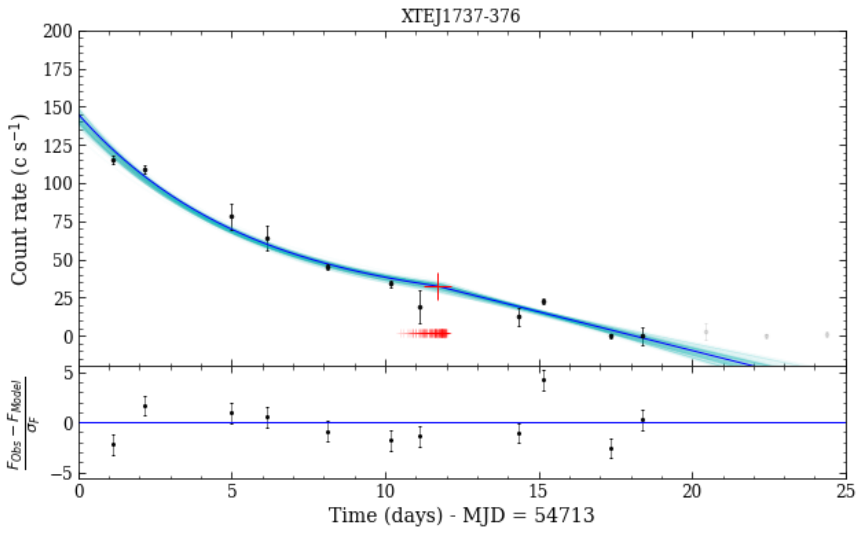
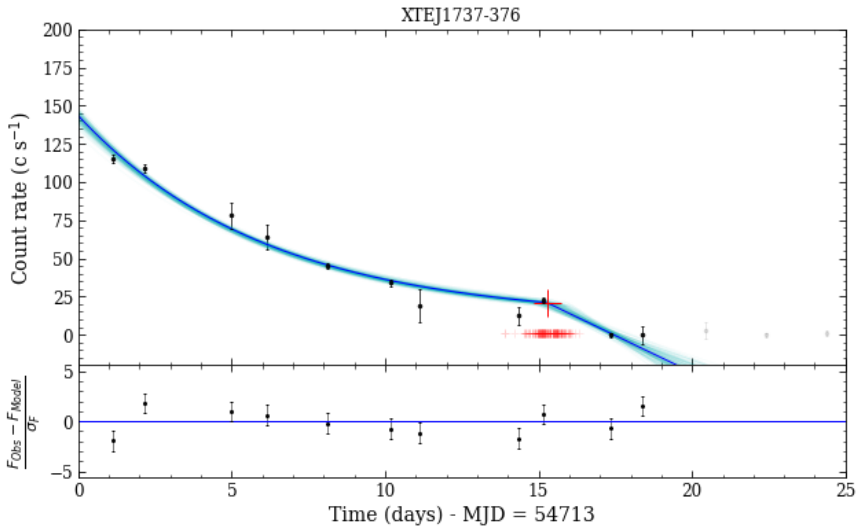
Opmerkingen
Dit is waarschijnlijk een uitbarsting met na oscillaties.



Opmerkingen
Na de uitbarsting is er nog verhoogde activiteit te zien.

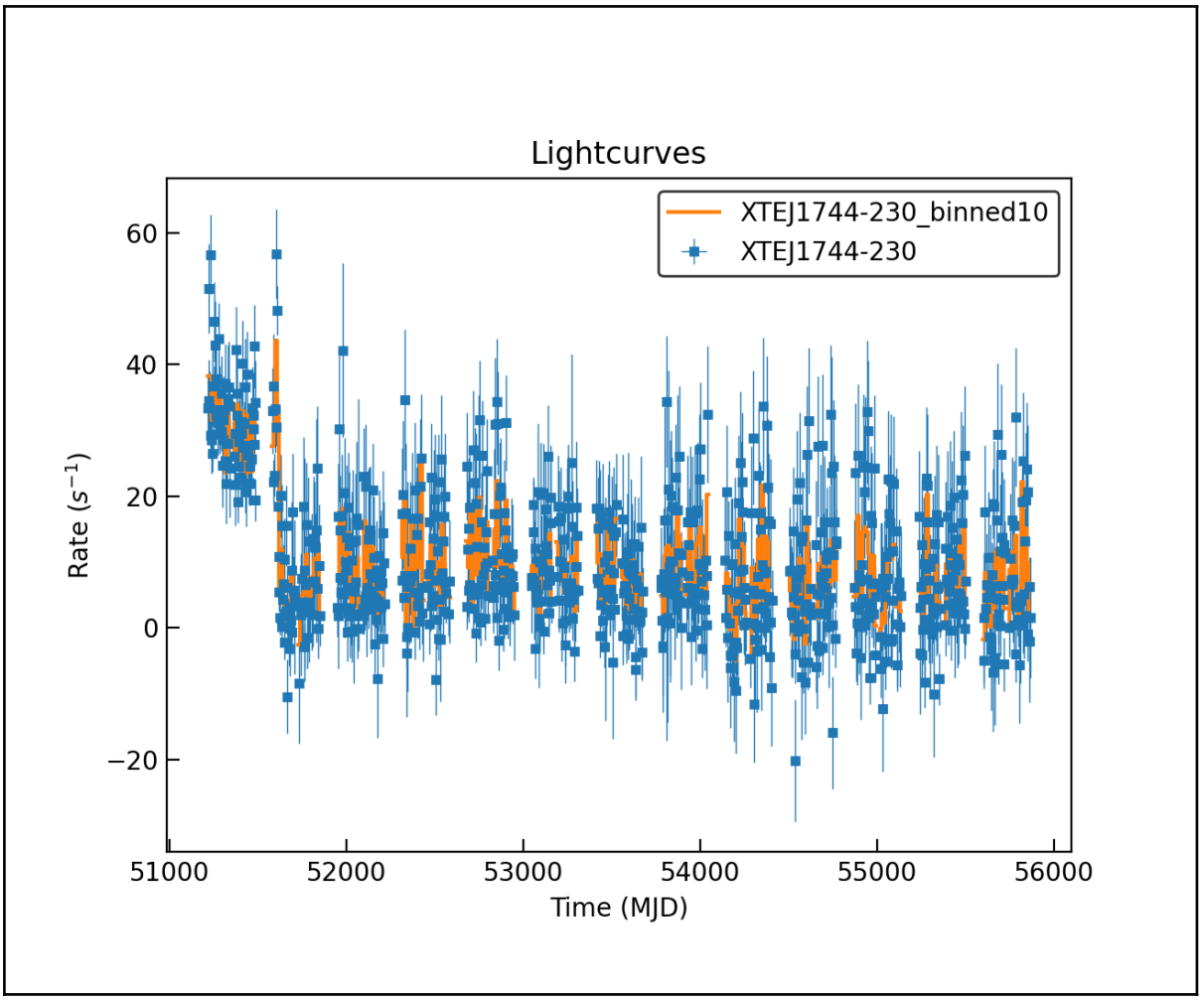

XTEJ1737-376 - RXTE
Amplitude = 125.59
Mean = 54716.60
Stddev = 3.36
Gaussian fit
Rate (c s^{-1})
Time (MJD)


XTEJ1737-376 - RXTE
Exponential fit
Amplitude = 122.38
Tau = -6.48
Rate (c s^{-1})
Time (days)

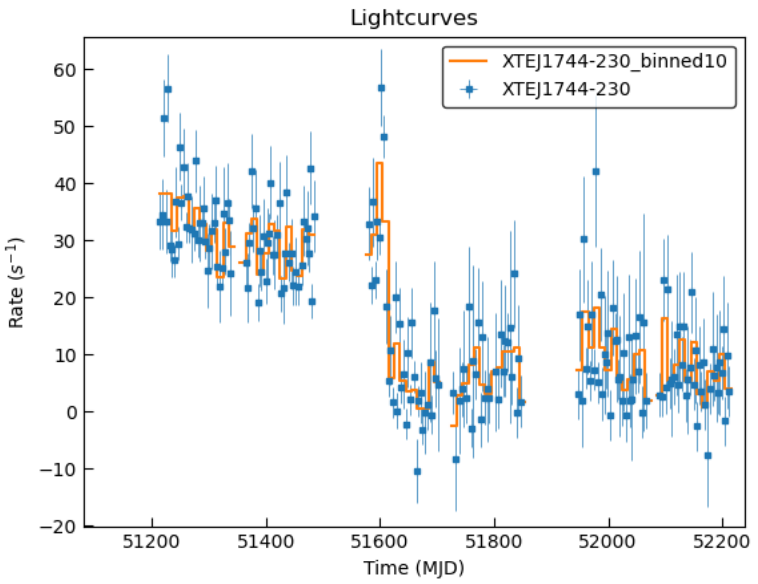
	**Opmerkingen** Bij deze heb ik de brink time gefixed op tt = pm.Uniform('tt', outburst_start+5, outburst_end-8)
	**Opmerkingen** tt = pm.Uniform('tt', outburst_start+1, outburst_end-1)

XTEJ1744-230

RXTE PCA



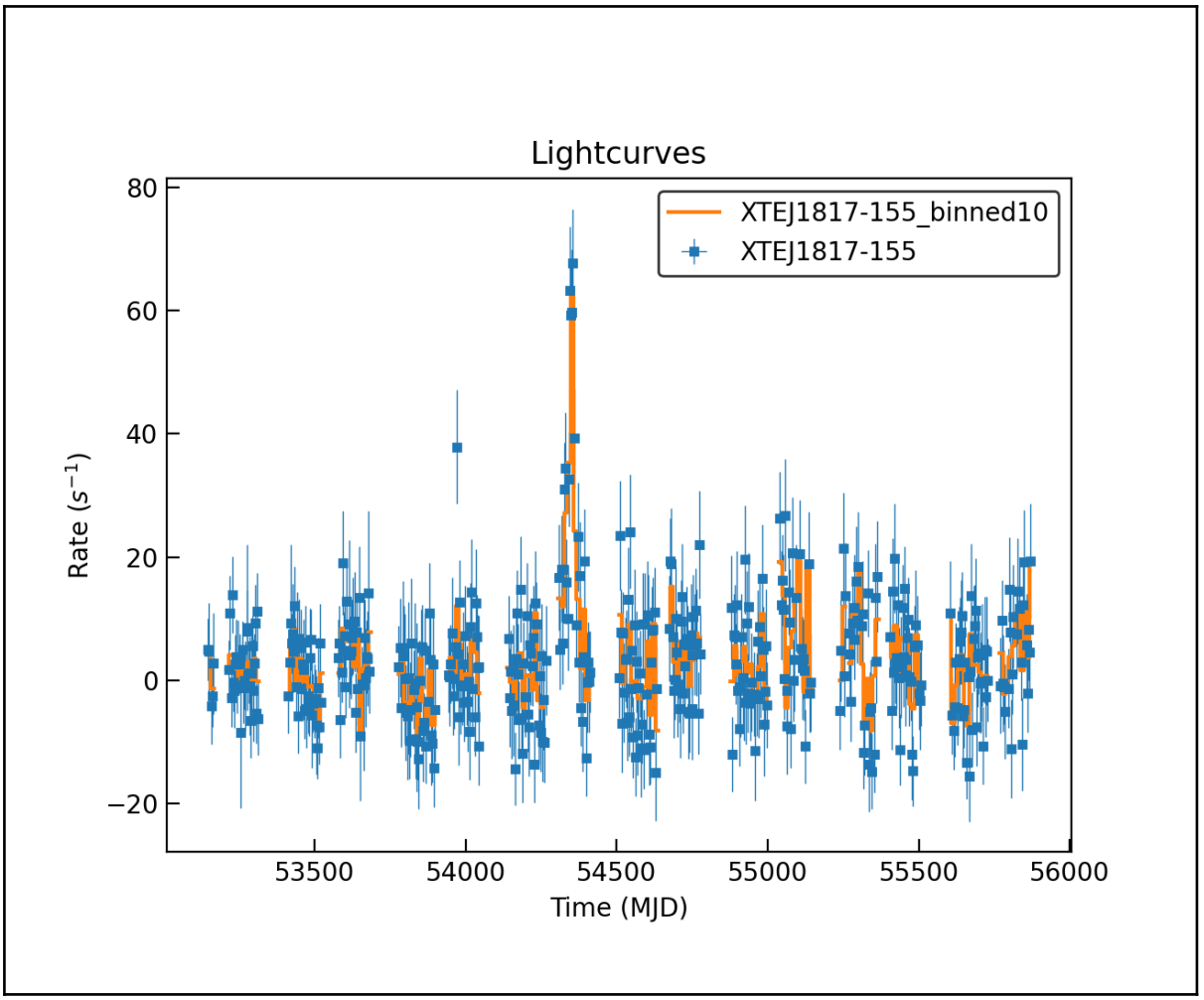
Outbursts (1)



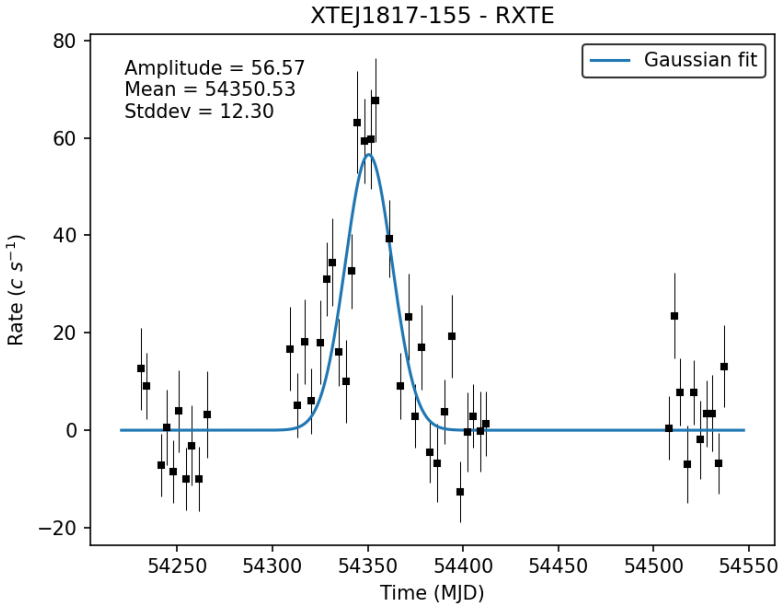
Opmerkingen
Dit is een langere uitbarsting, langer dan een jaar dus een quasi-persistant uitbarsting.

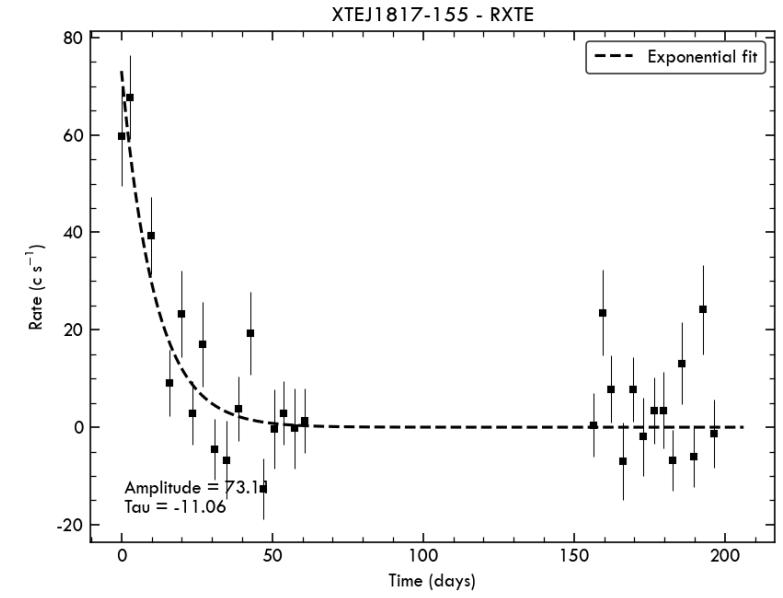
XTEJ1817-155

RXTE PCA (IGR J18175-1530 = XTE J1817-155 link)



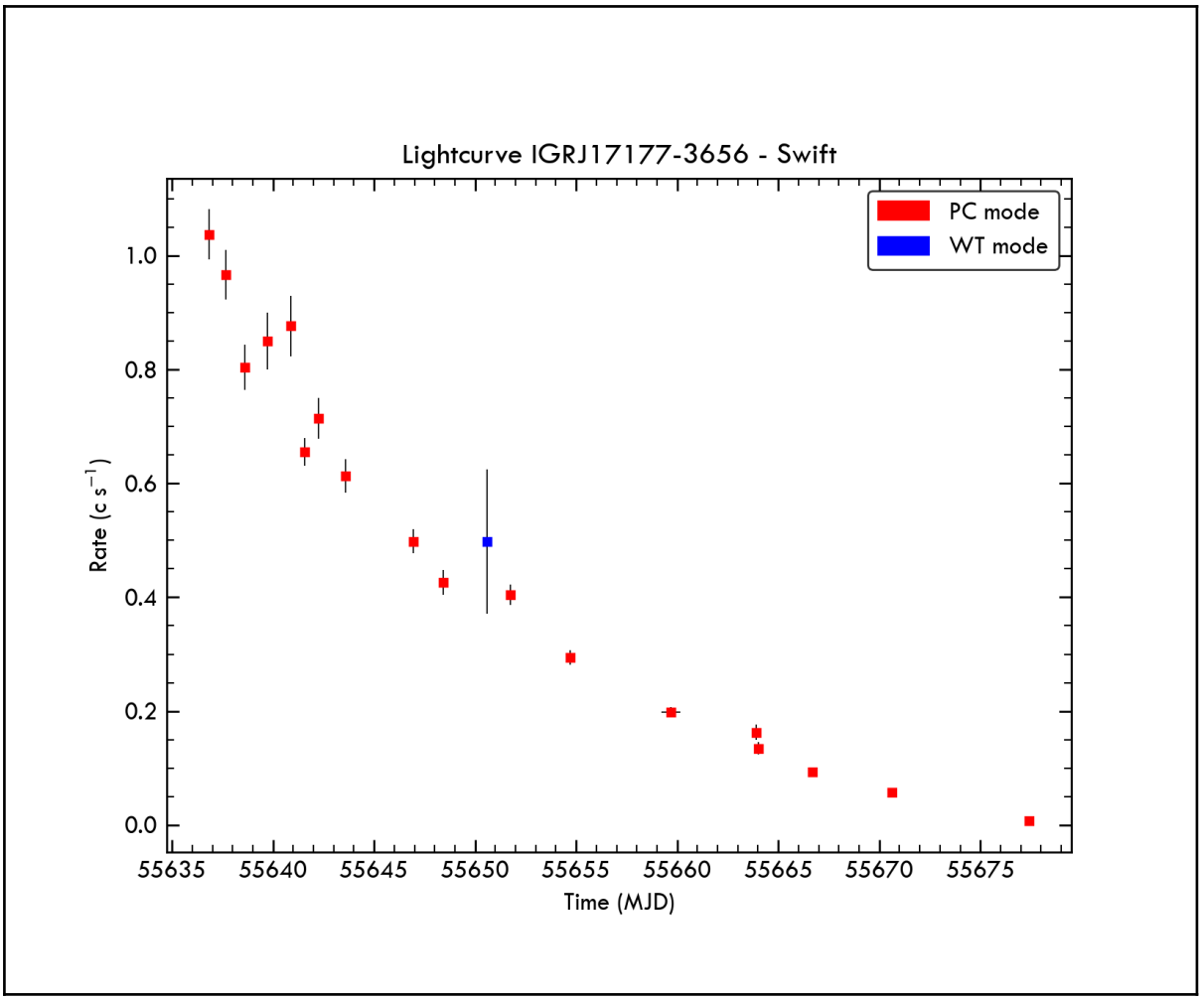
Outbursts (1)


XTEJ1817-155 - RXTE
Gaussian fit
Amplitude = 56.57
Mean = 54350.53
Stddev = 12.30
Rate (c s^{-1})
Time (MJD)
80
60
40
20
0
−20
54250
54300
54350
54400
54450
54500
54550


XTEJ1817-155 - RXTE
Exponential fit
Amplitude = 73.1
Tau = -11.06
Rate (c s^{-1})
Time (days)
80
60
40
20
0
-20
0
50
100
150
200

IGRJ17177-3656 *

Swift

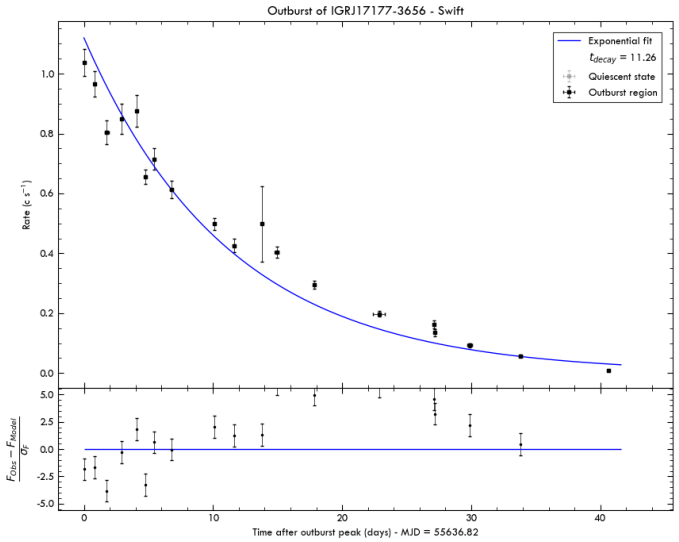


Literature

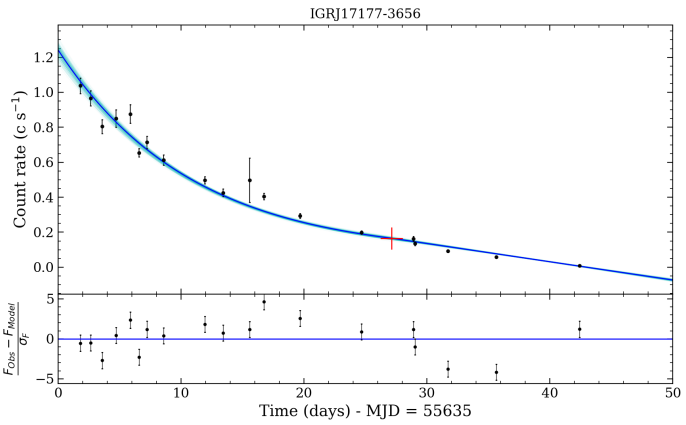
https://ui.adsabs.harvard.edu/abs/2011ApJ...738..183P/abstract

Analyse

Outbursts (1)

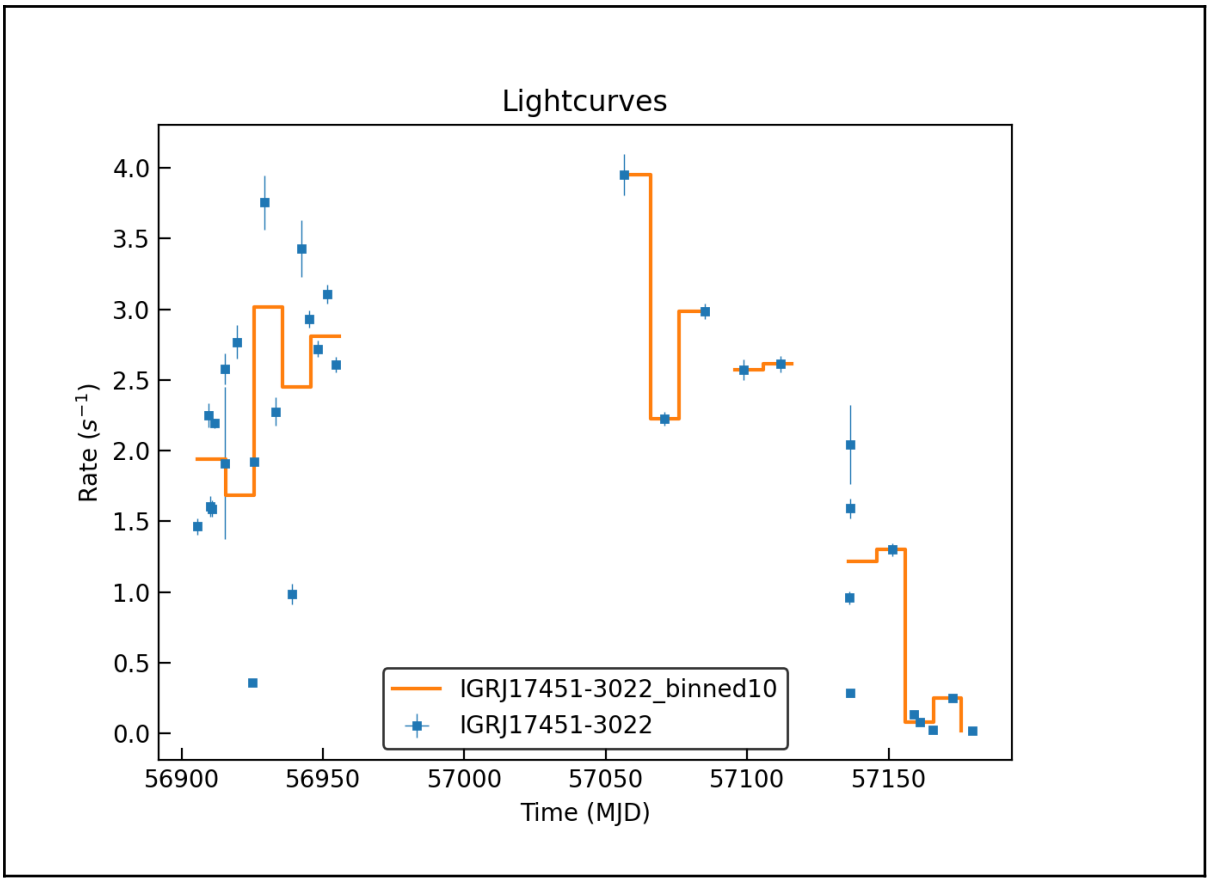


Opmerkingen
Mogelijk geschikt voor decay fit.

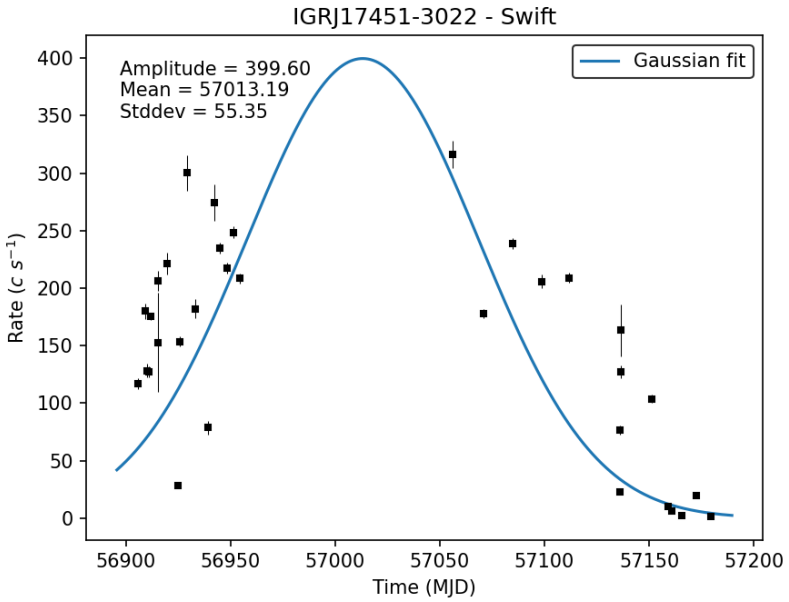


IGRJ17451-3022

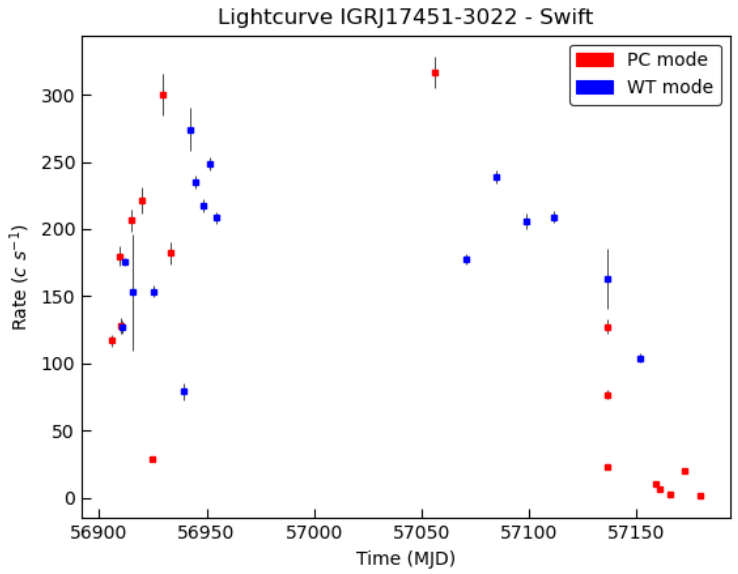
Swift



Outbursts (1)

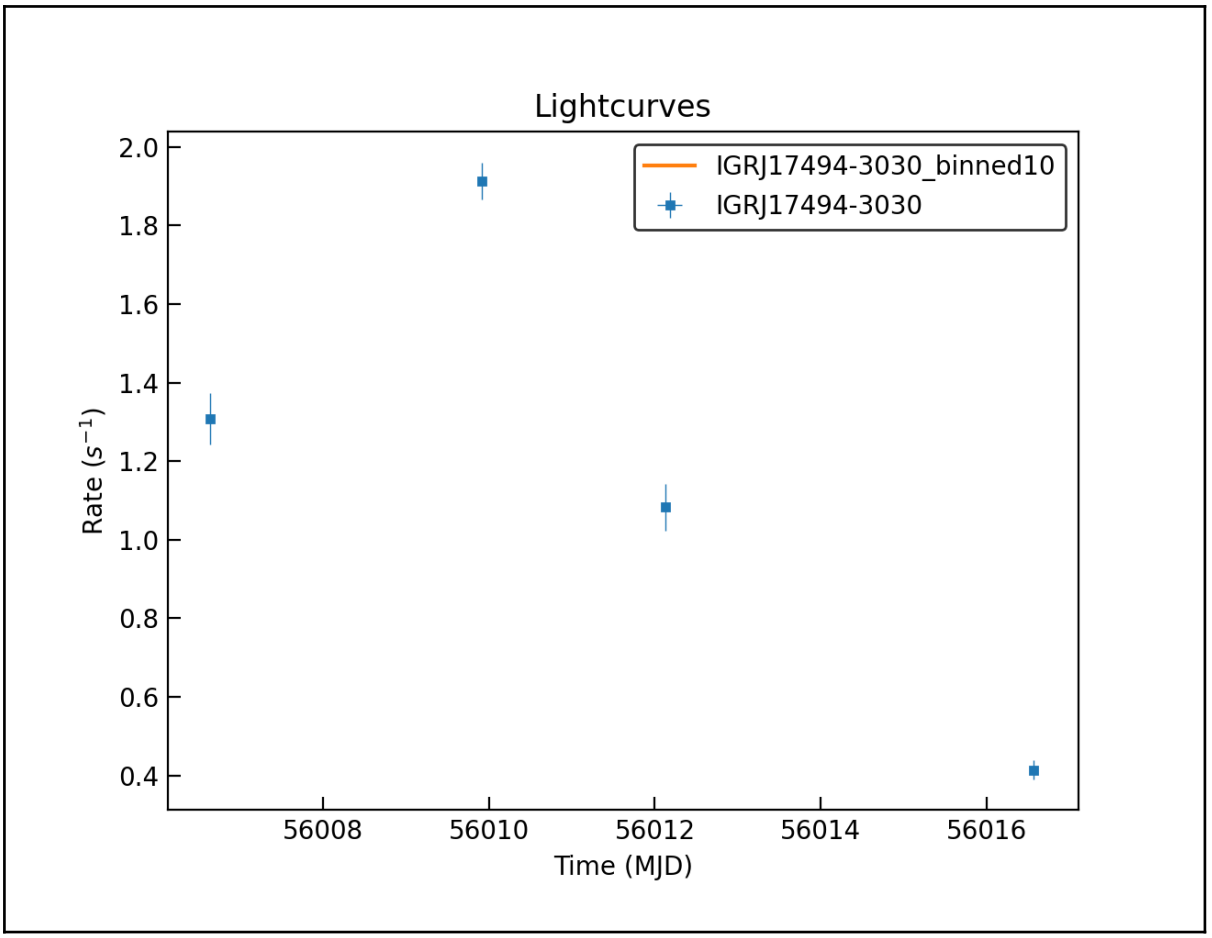


Opmerkingen
Gauss lijkt niet echt een goede representatie te zijn.
Zijn er rond 57000 geen counts omdat de bron dan te zwak is of omdat er niet geobserveerd is?

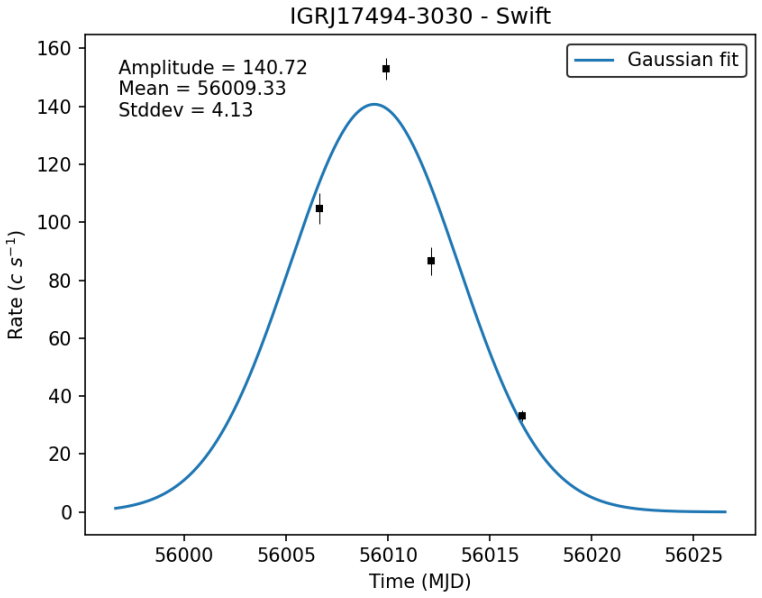


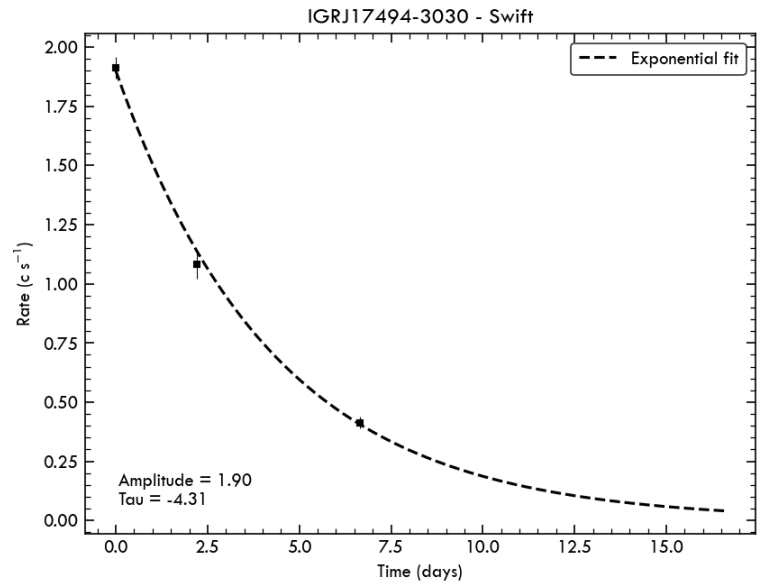
IGRJ17494-3030

Swift



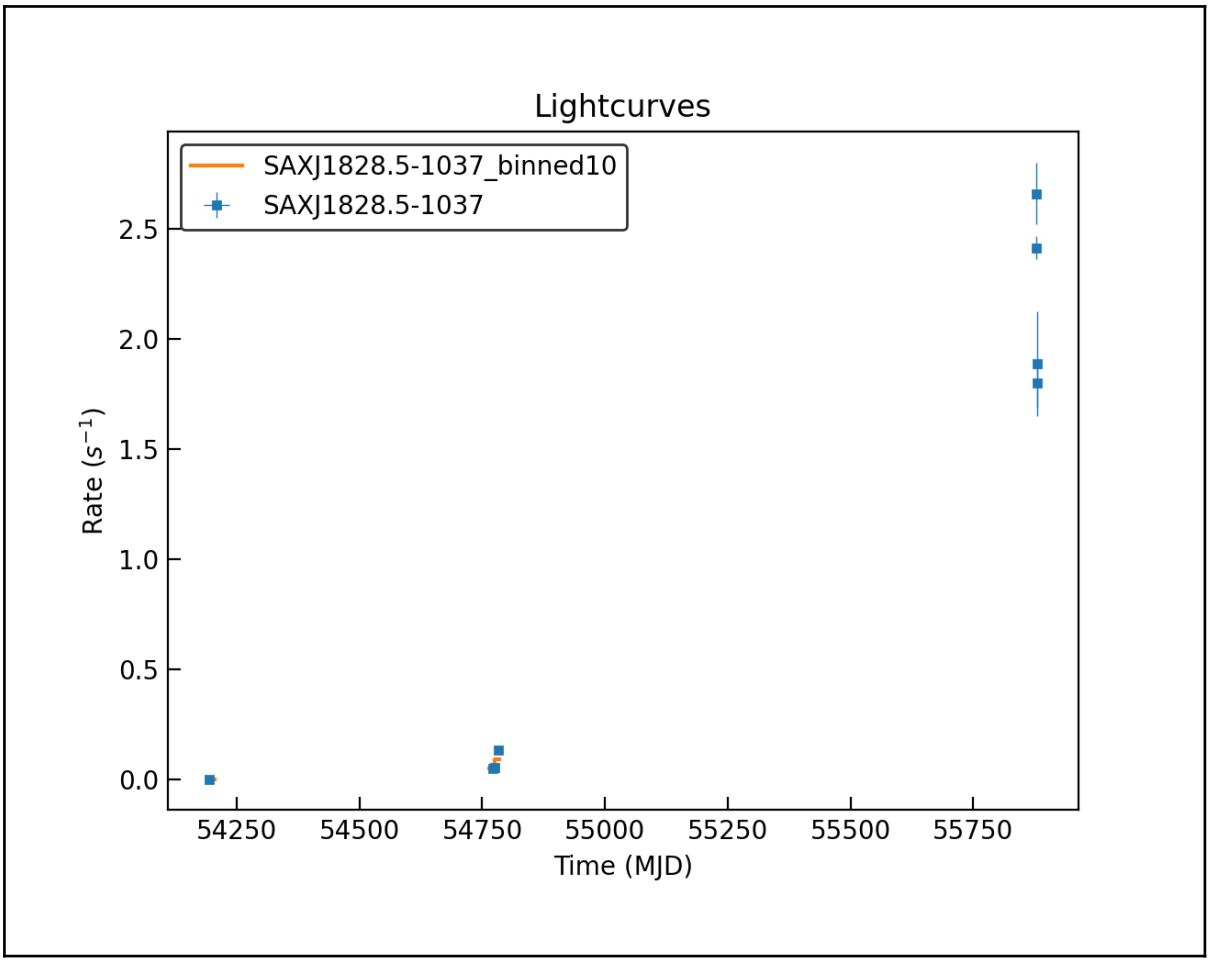
Outbursts (1)


IGRJ17494-3030 - Swift
Gaussian fit
Amplitude = 140.72
Mean = 56009.33
Stddev = 4.13
Rate (c s^{-1})
Time (MJD)
0
20
40
60
80
100
120
140
160
56000
56005
56010
56015
56020
56025

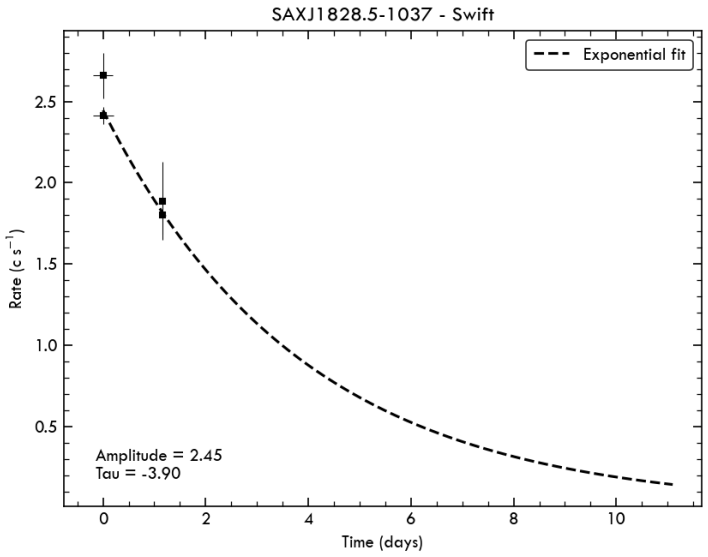

IGRJ17494-3030 - Swift
Exponential fit
Amplitude = 1.90
Tau = -4.31
Rate (c s^{-1})
Time (days)
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0.0
2.5
5.0
7.5
10.0
12.5
15.0

SAXJ1828.5-1037

Swift



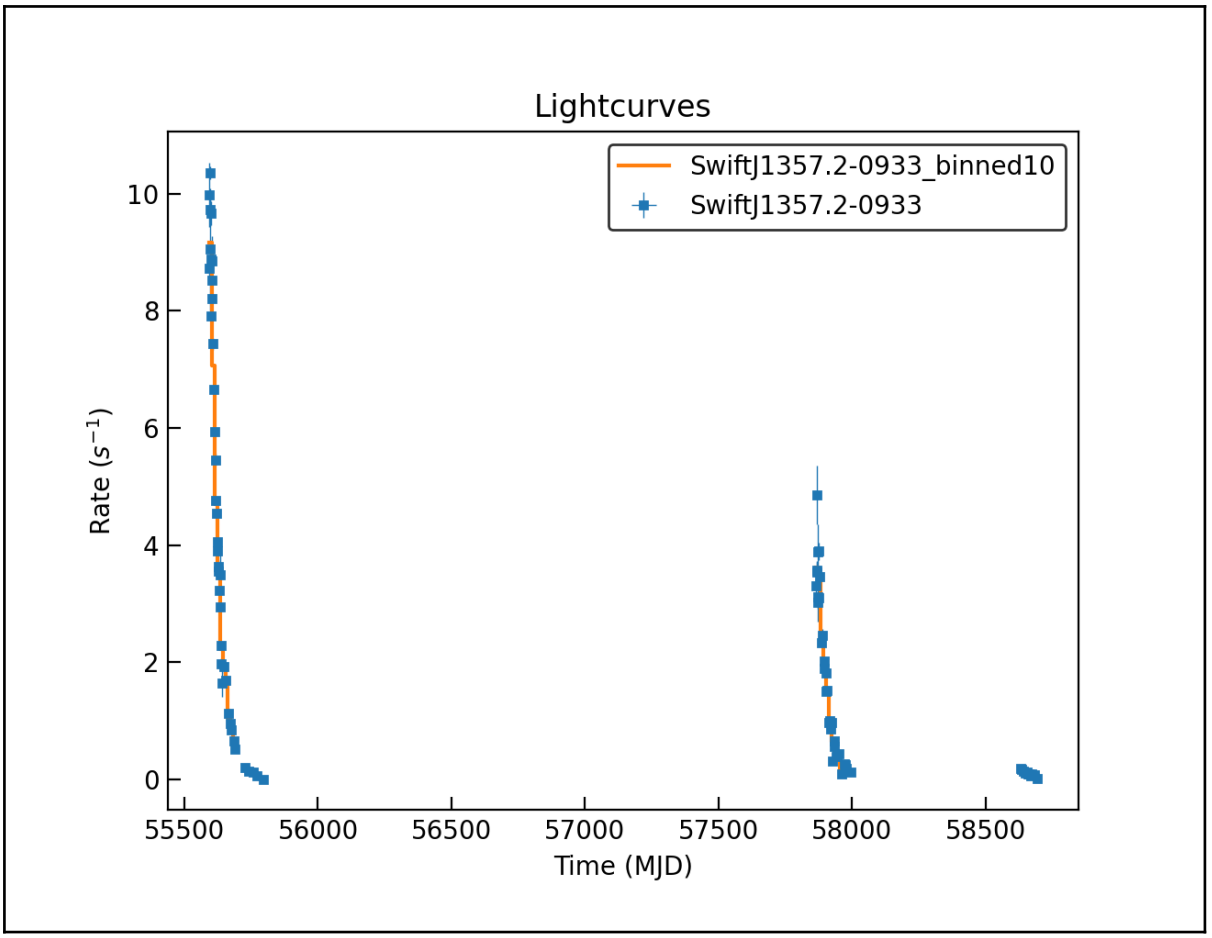
Outbursts (1)



Opmerkingen
De uitbarsting heeft maar 4 datapunten dus wellicht niet heel geschikt om te fitten.

SwiftJ1357.2-0933

Swift



Literature

Deze bron is misschien intrinsiek veel herderer. Discussie over de helderheid, wind vanuit de accretieschijf wat vaak alleen voorkomt bij hele heldere bronnen.
https://ui.adsabs.harvard.edu/abs/2015MNRAS.454.2199M/abstract
https://ui.adsabs.harvard.edu/abs/2013MNRAS.428.3083A/abstract
https://ui.adsabs.harvard.edu/abs/2019MNRAS.489L..47C/abstract

Analysis

De P_orb van dit systeem is bekend, 0.11 dagen, link. Hiermee kunnen we de outer radius berekenen met behulp van Heinke et al 2015 eq 12.

R_circ = 2.68 * 10^10

Vervolgens kunnen we dit met Heinke et al 2015 omrekenen naar een kritische helderheid waarboven de schijf volledig geioniseerd is en daarom exponentieel afvalt.

L_crit = 2.657 * 10^35 erg s^-1

De lightcurves staan in count rates dus die moeten we omrekenen om dit te vergelijken met de L_crit. Hiervoor gebruiken we de tool link. Voor de Nh gebruik ik 0.99 * 10^22 zoals ook Stoop heeft gebruikt.

Hiermee geeft de tool voor een count rate van 1 het volgende:

FLUX = 5.852 * 10^-11 erg cm^-2 s^-1

Unabsorbed FLUX = 6.349 * 10^-11 erg cm^-2 s^-1

Deze flux kunnen we vervolgens omrekenen naar de lichtkracht van het systeem waneer we de afstand schatten via:

L = 4 * pi * F * D^2

Voor de afstand zijn meerdere schattingen:

D = 1.5kpc = 4.628 * 10^21

Padilla et al. 2013 Mulitwavelength spectral evolution during the 2011 outburst of the very faint X-ray transient Swift J1357.2-0933

Hiermee krijg ik:

L = 1.575 * 10^34 voor 1 count

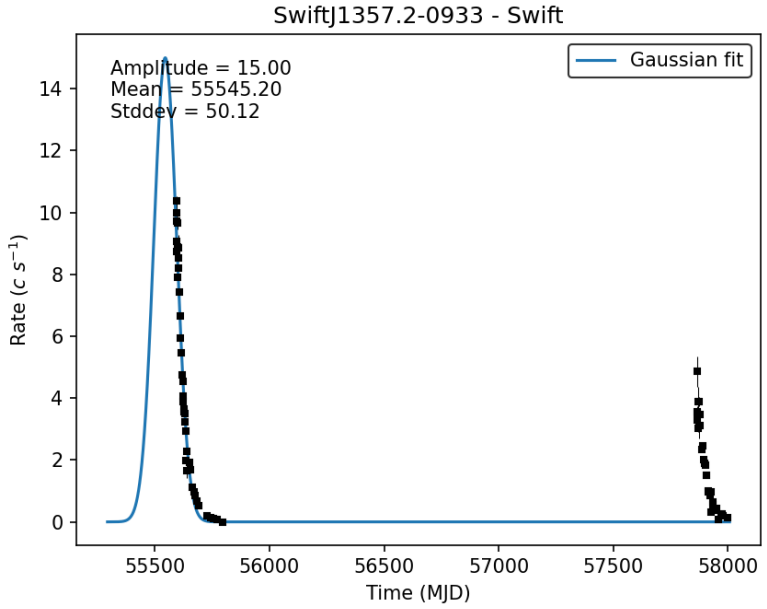
D = >6.3kpc = 1.944 * 10^22

Charles et al 2019 Hot, dense He II outflows during the 2017 outburst of the X-ray transient Swift J1357.2-0933

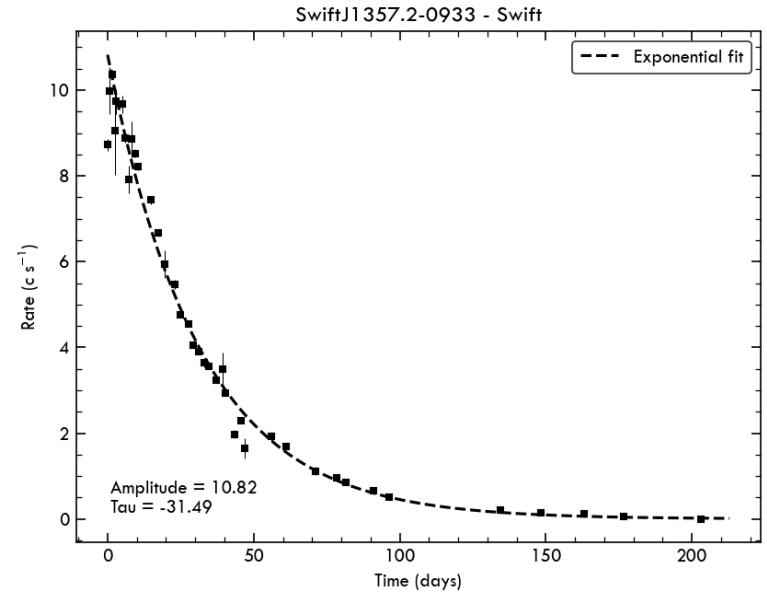
Hiermee krijg ik

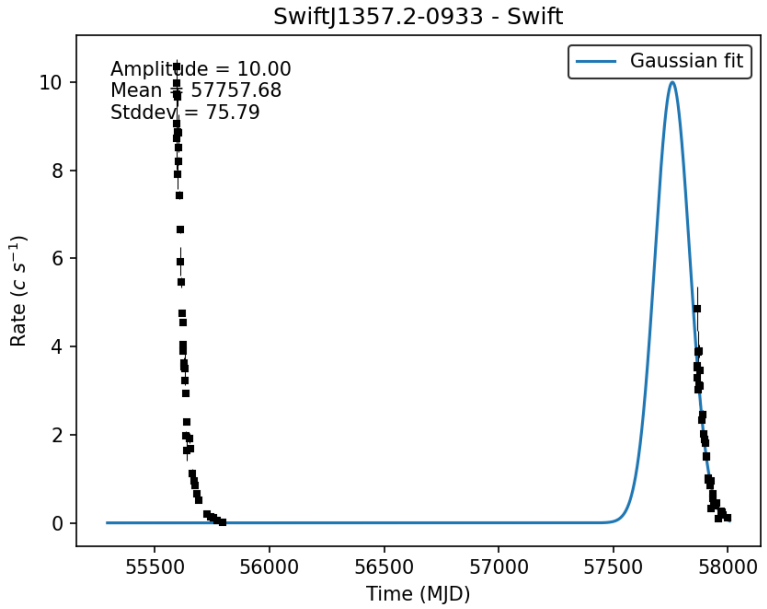
L = 2.779 * 10^35 voor 1 count

Outbursts (2)

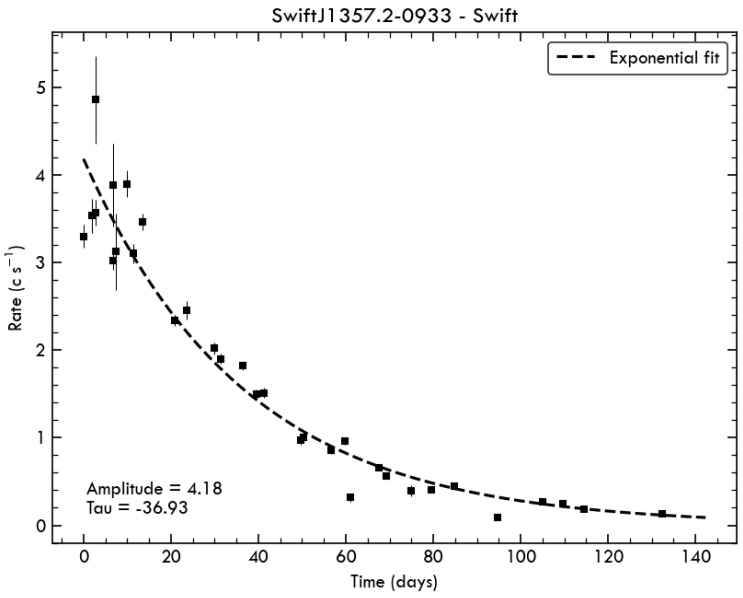


Opmerkingen
Amplitude gefixed anders fit hij op een amplitude van 40000.



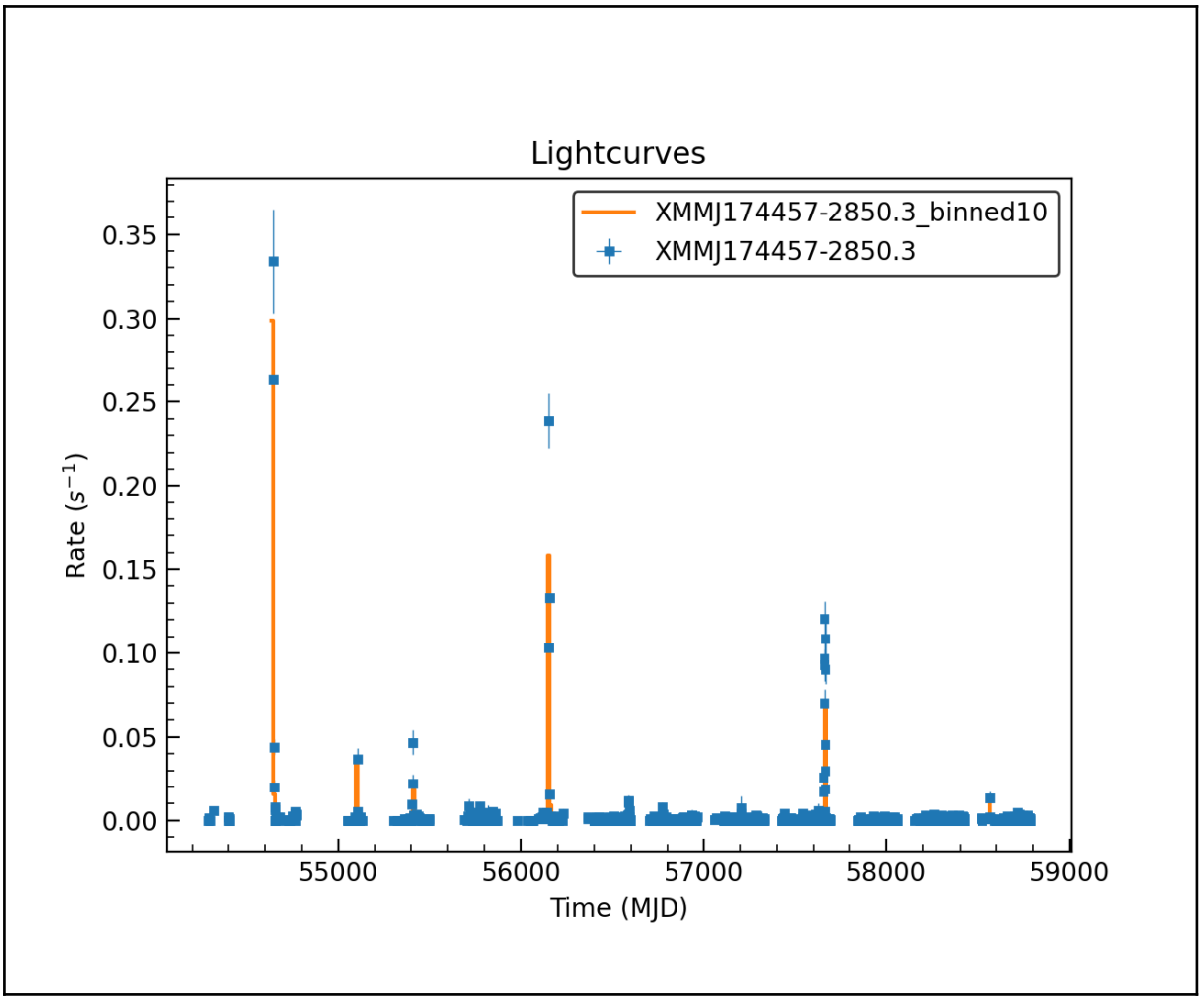


Opmerkingen
Amplitude gefixed op 10 anders fit hij op 2000. Met een amplitude van 2000 is de stdev 143 en met amplitude van 20 is de stdev 60.



XMMJ174457-2850.3 *

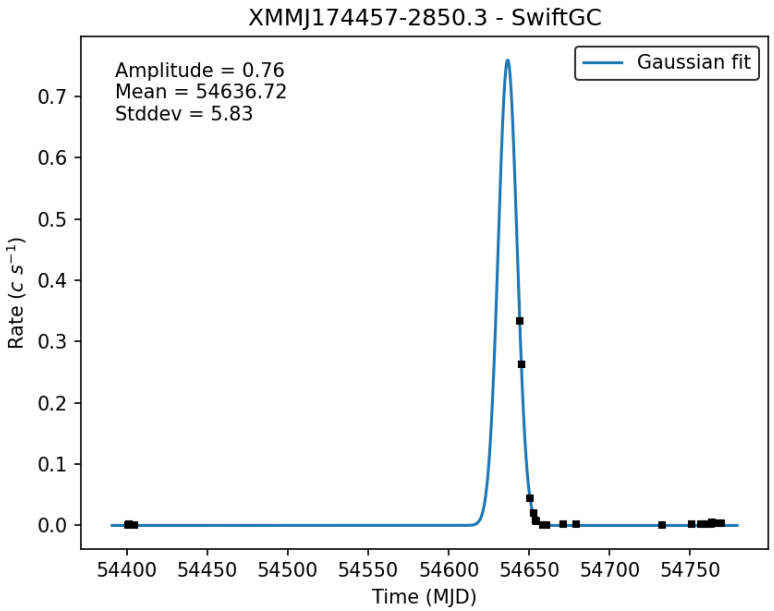
SwiftGC

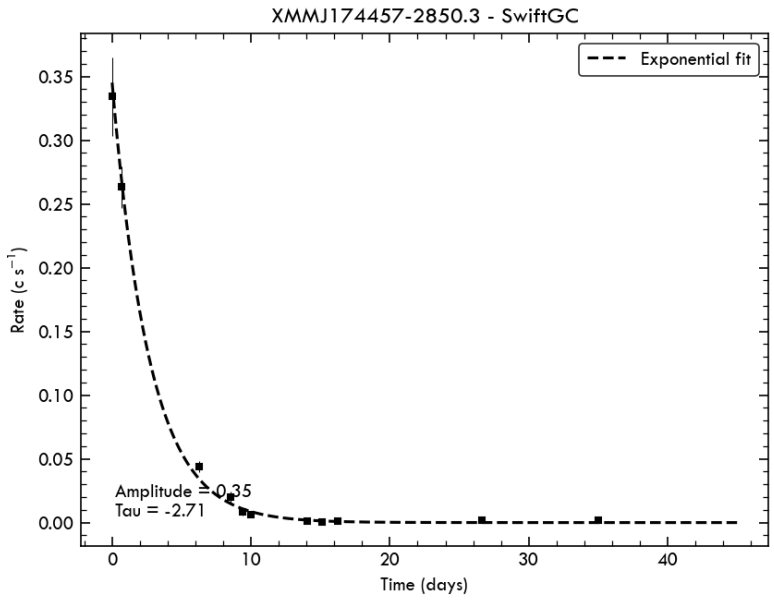


Literature

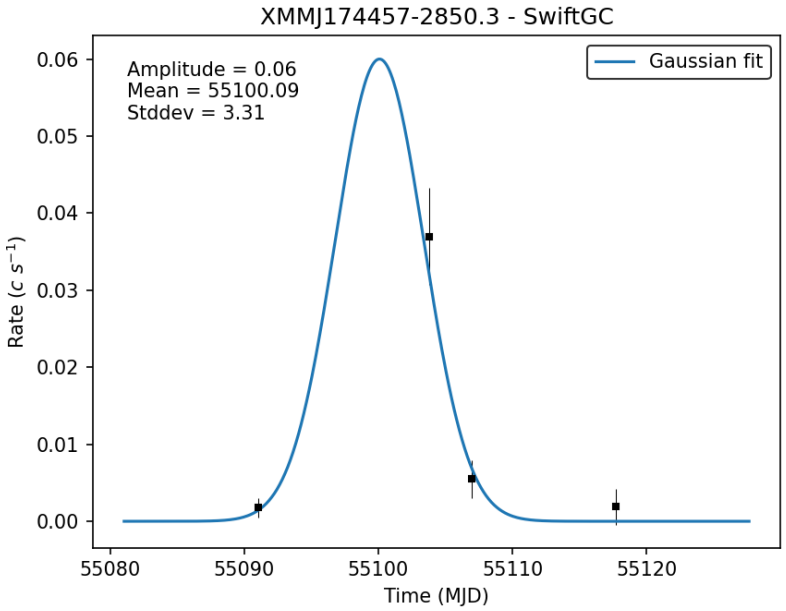
This source is identified as a neutron star LMXB.
https://www.researchgate.net/publication/263238089_The_peculiar_Galactic_center_neutron_star_X-ray_binary_XMM_J174457-28503

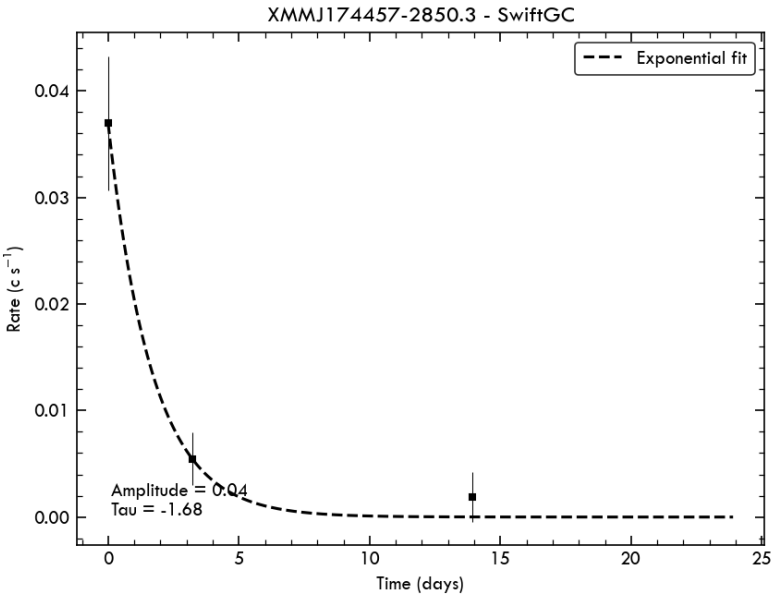
Outbursts (3/5)



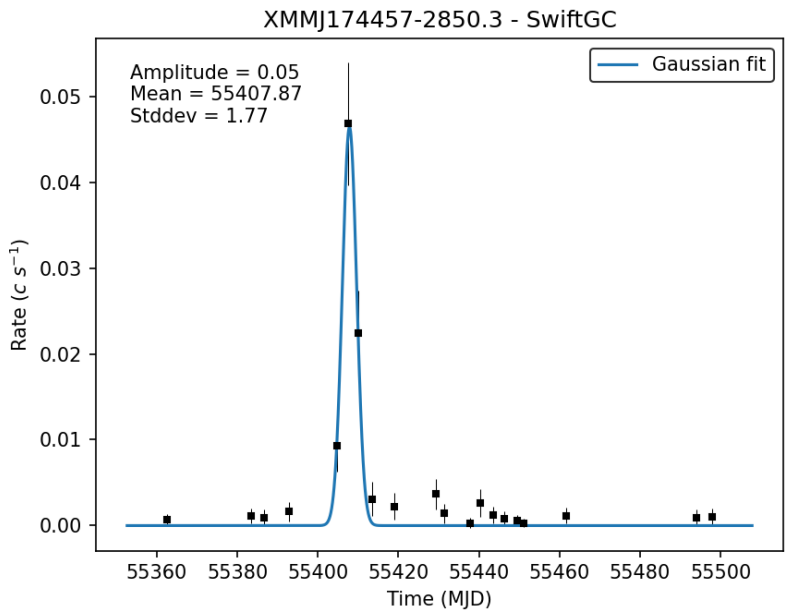


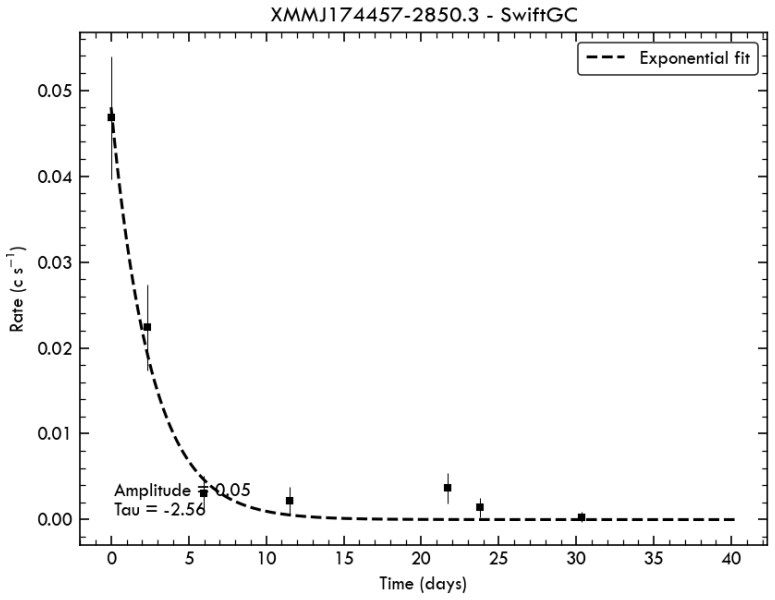
Opmerkingen
Niet veel datapunten maar wel kleine errorbars, mogelijk geschikt voor decay fit. Zijn dit genoeg datapunten om te fitten?

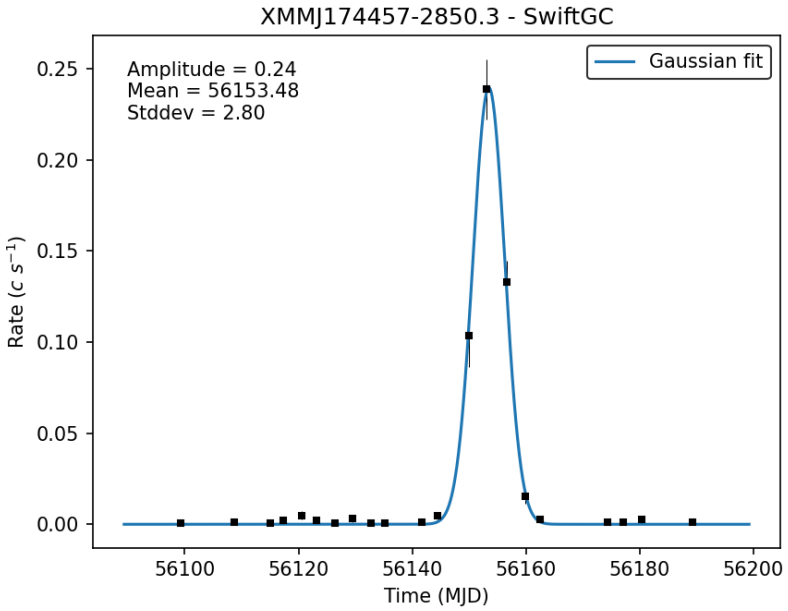


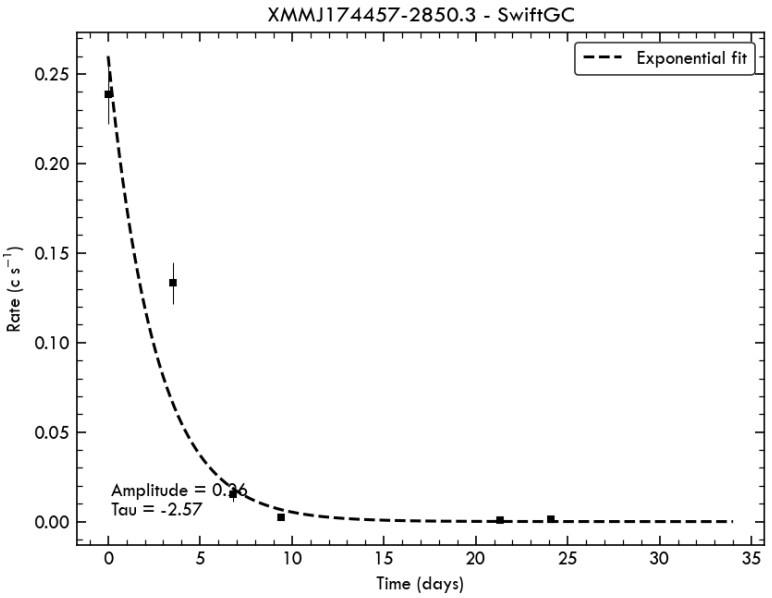


Opmerkingek
Maar 2 datapunten met verhoogde counts dus misschien niet helemaal geschikt om mee te fitten.

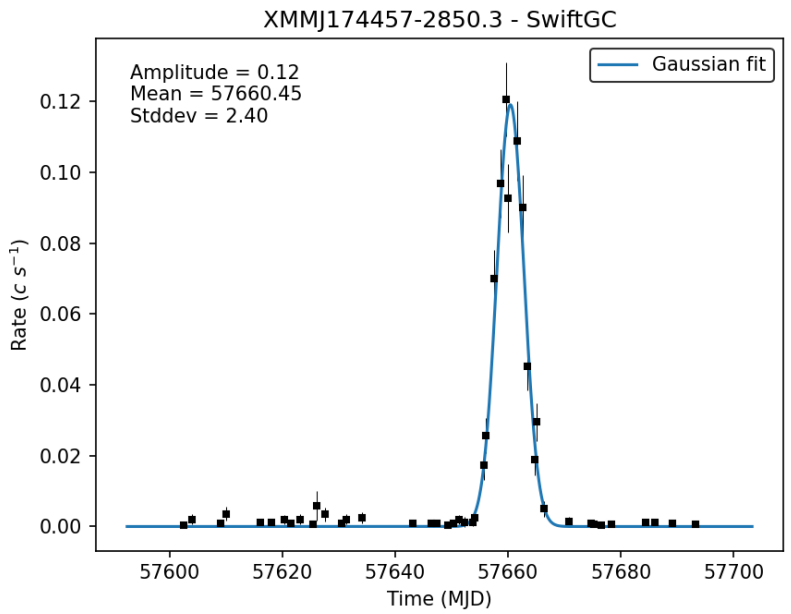

XMMJ174457-2850.3 - SwiftGC
Gaussian fit
Amplitude = 0.05
Mean = 55407.87
Stddev = 1.77
Rate (c s^{-1})
Time (MJD)

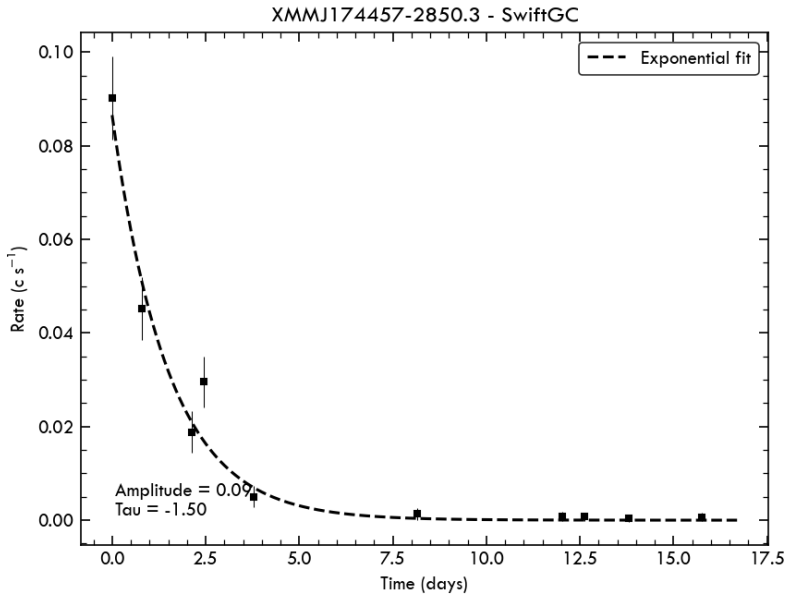

XMMJ174457-2850.3 - SwiftGC
Exponential fit
Amplitude = 0.05
Tau = -2.58
Rate (c s^{-1})
Time (days)





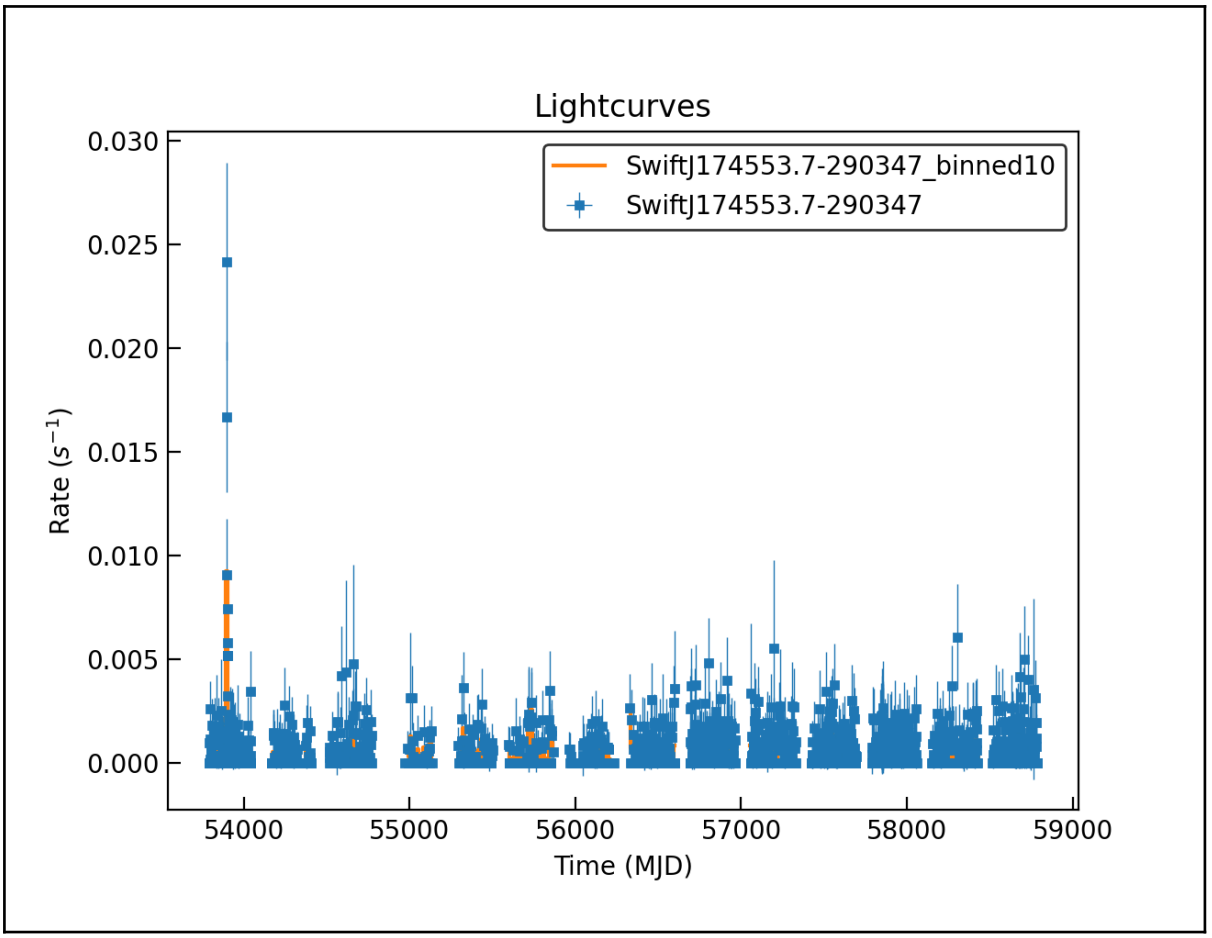
Opmerkingen
1 datapunten ligt er buiten, dus misschien is een exponent bij deze uitbarsting geen goede representatie.


XMMJ174457-2850.3 - SwiftGC
Gaussian fit
Amplitude = 0.12
Mean = 57660.45
Stddev = 2.40
Rate (c s^{-1})
Time (MJD)


XMMJ174457-2850.3 - SwiftGC
Exponential fit
Amplitude = 0.09
Tau = -1.50
Rate (c s^{-1})
Time (days)

SwiftJ174553.7-290347

SwiftGC

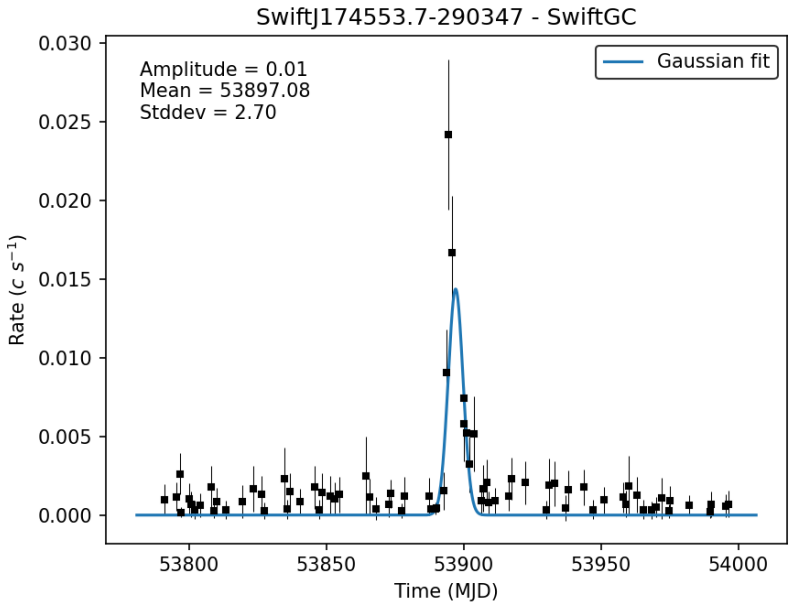


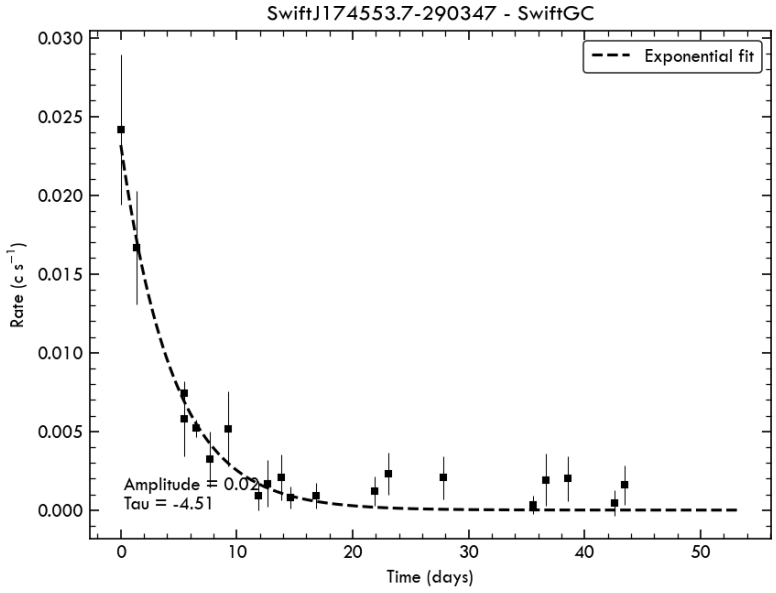
Literature

was found active for a duration of approximately 2 weeks in June 2006 (see Fig. 2). The source reached a peak luminosity of 2.0 × 1035 erg s−1, while the average outburst luminosity was 4.9 × 1034 erg s−1 (both 2−10 keV). link

If Swift J174553.7-290347 and XMM J174457-2850.3 are X-ray binaries, their quiescent luminosities are relatively high and might point towards a neutron star nature (e.g., Lasota 2007), athough the orbital period of both these systems is unknown. We note that the absorption towards our transients is very high (>6 × 1022 cm−2). Therefore, any thermal emission from the neutron star surface cannot be observed and we can only detect contributions from a powerlaw component, which is frequently observed for neutron stars at similarly low quiescent luminosities (e.g., Jonker 2007). link

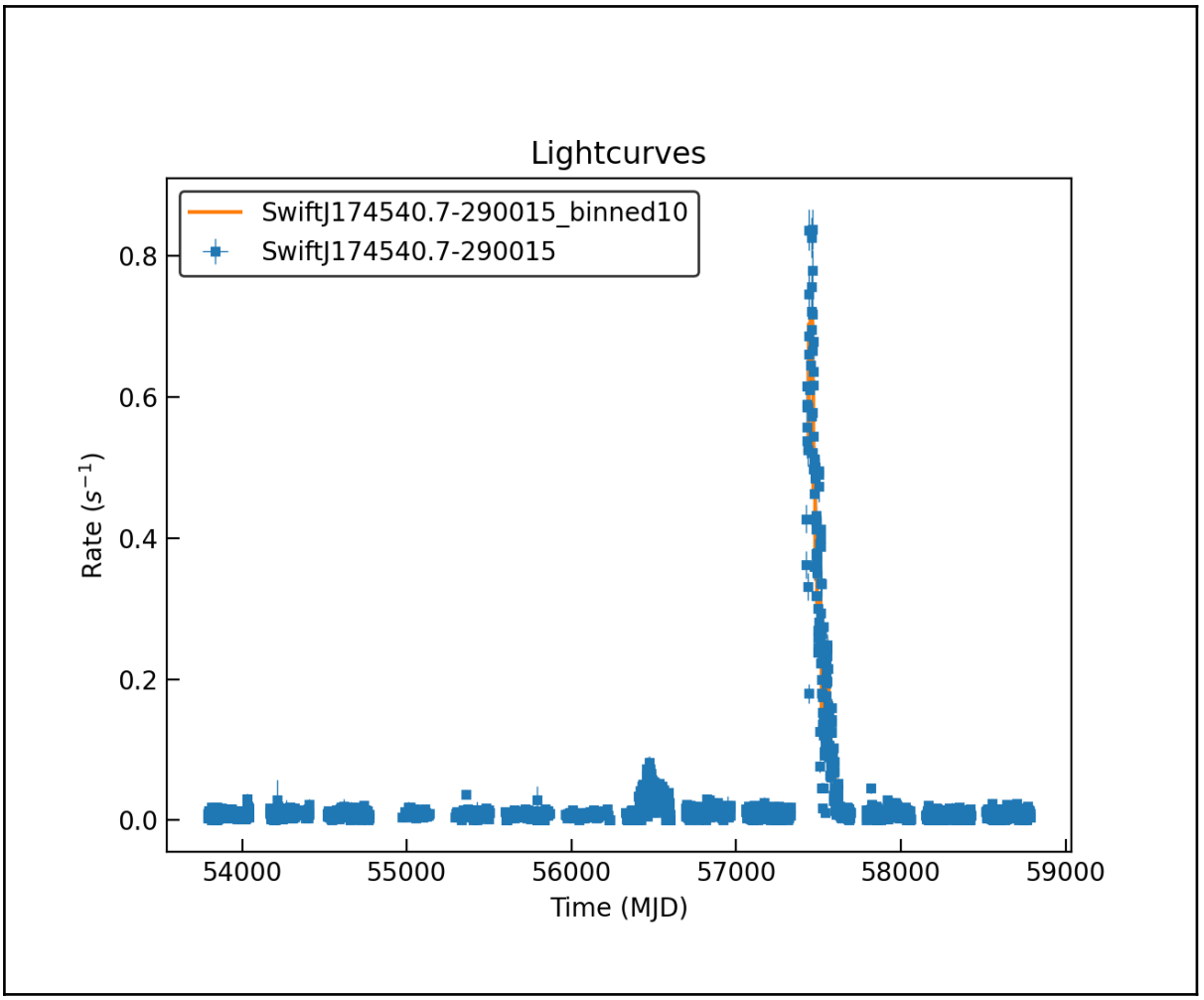
Outbursts (1)


SwiftJ174553.7-290347 - SwiftGC
Gaussian fit
Amplitude = 0.01
Mean = 53897.08
Stddev = 2.70
Rate (c s^{-1})
Time (MJD)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
53800
53850
53900
53950
54000

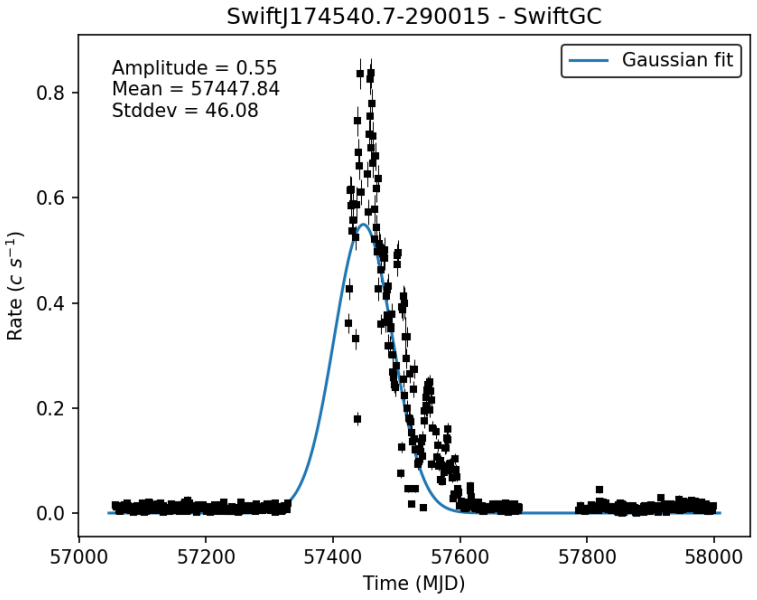

SwiftJ174553.7-290347 - SwiftGC
Exponential fit
Amplitude = 0.02
Tau = -4.51
Rate (c s^{-1})
Time (days)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
0
10
20
30
40
50

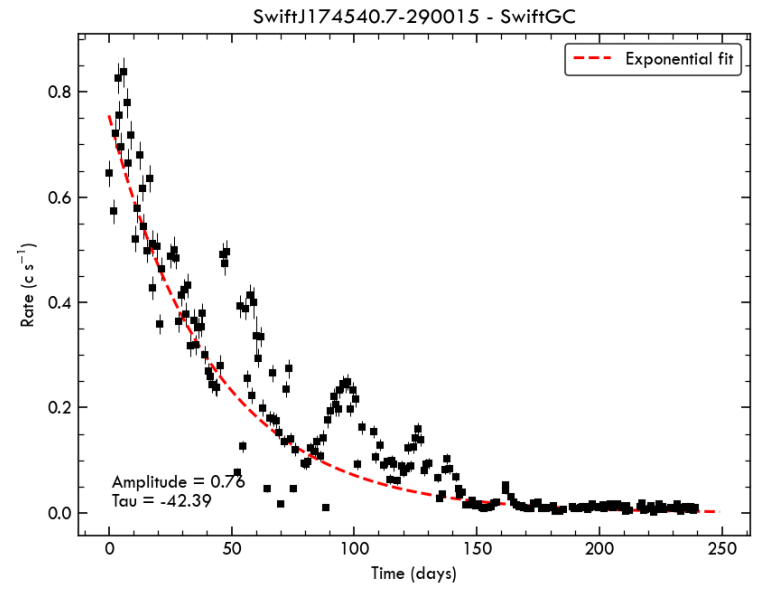
SwiftJ174540.7-290015

SwiftGC



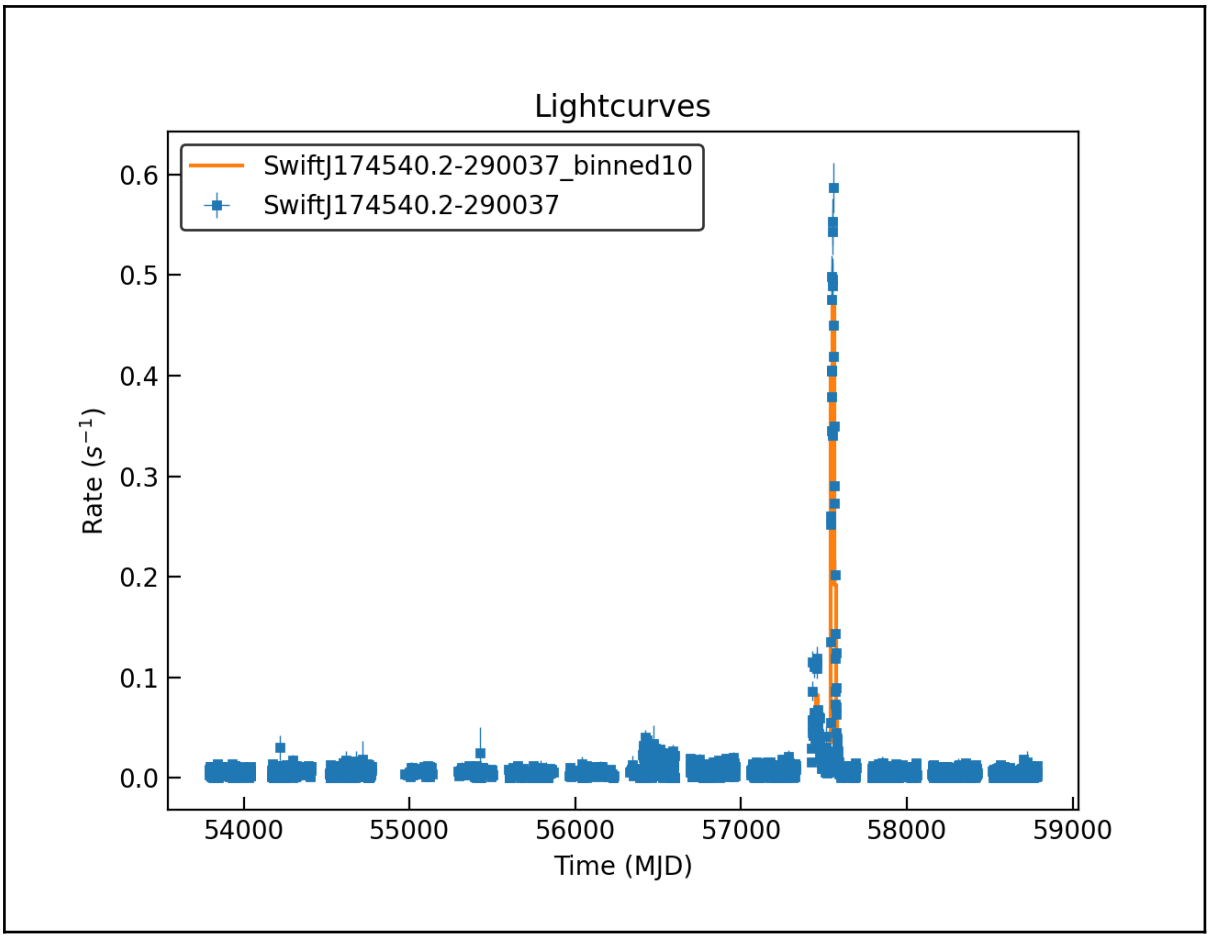
Outbursts (1)


SwiftJ174540.7-290015 - SwiftGC
Gaussian fit
Amplitude = 0.55
Mean = 57447.84
Stddev = 46.08
Rate (c s^{-1})
Time (MJD)

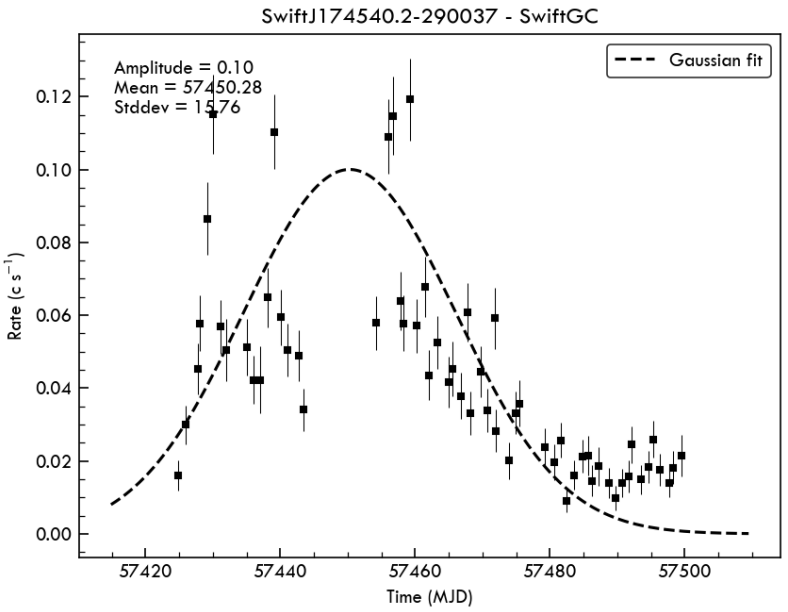

SwiftJ174540.7-290015 - SwiftGC
Exponential fit
Amplitude = 0.76
Tau = -42.39
Rate (c s^{-1})
Time (days)

SwiftJ174540.2-290037

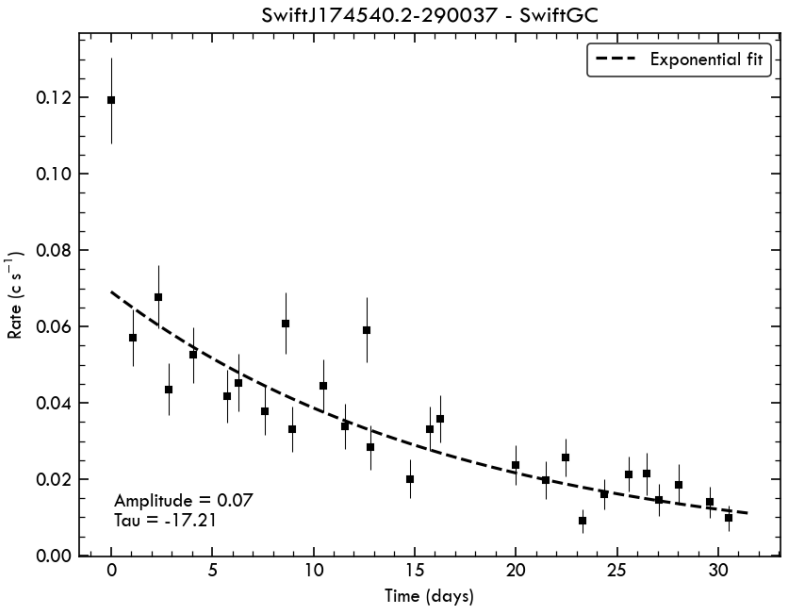
SwiftGC



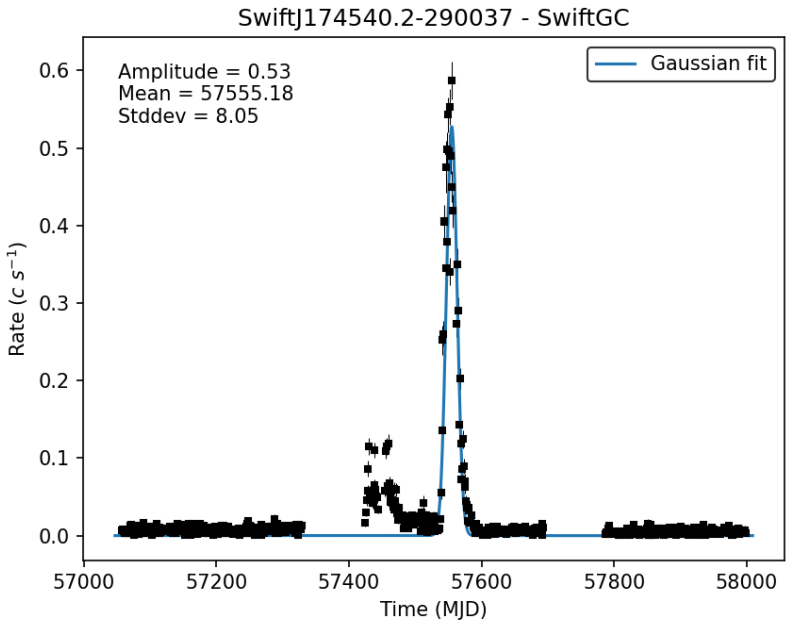
Outbursts (2)

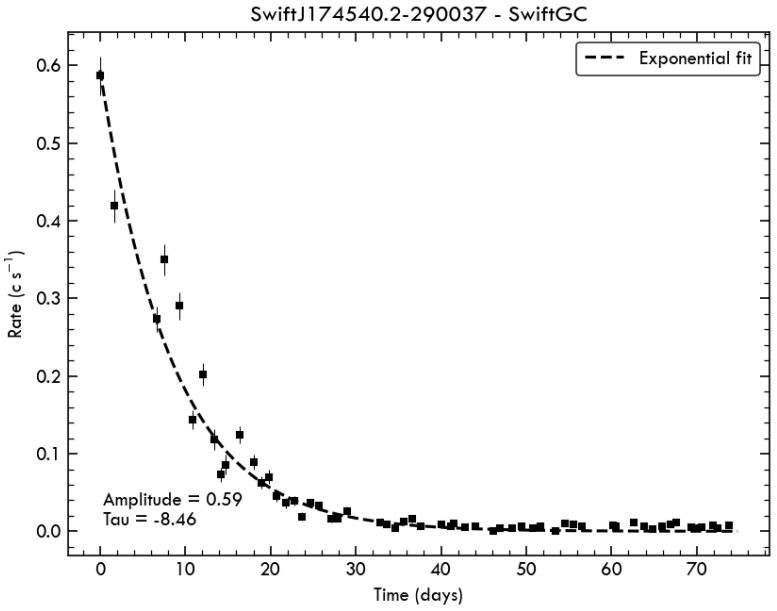


Opmerkingen
Duidelijk geen goede fit maar wel gebruikt voor de schatting van de lengte van de uitbarsting.



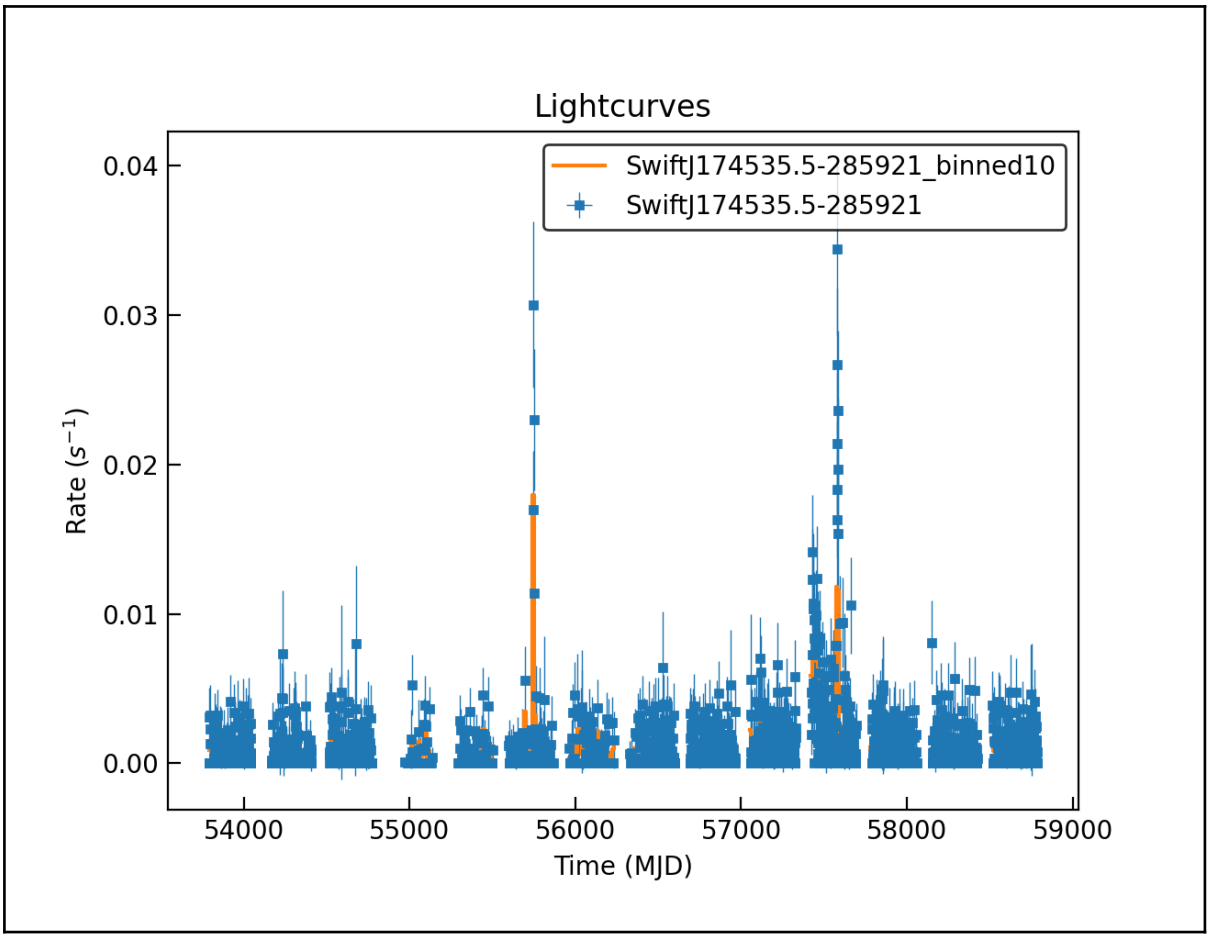
Opmerkingen
Geen hele overtuigende fit door de sterke variabiliteit van de uitbarsting. Wel gebruikt voor een schatting van de decay time.


SwiftJ174540.2-290037 - SwiftGC
Gaussian fit
Amplitude = 0.53
Mean = 57555.18
Stddev = 8.05
Rate (c s^{-1})
Time (MJD)

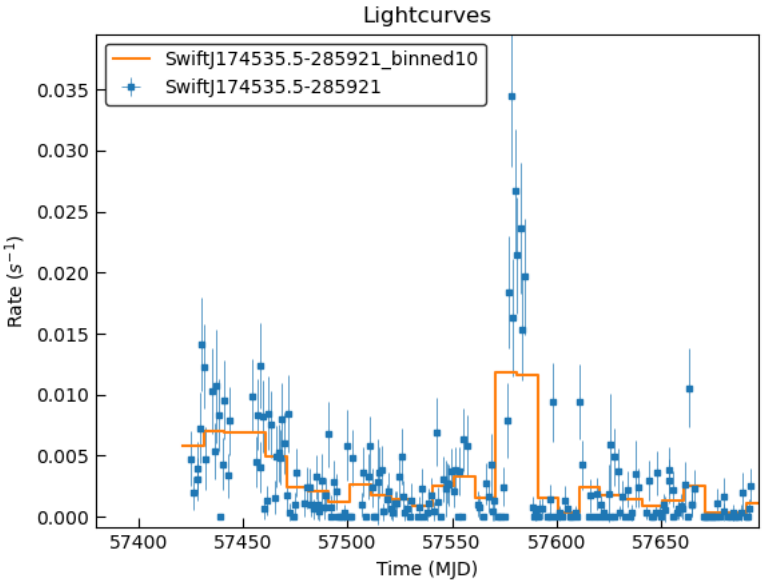

SwiftJ174540.2-290037 - SwiftGC
Exponential fit
Amplitude = 0.59
Tau = -8.46
Rate (c s^{-1})
Time (days)

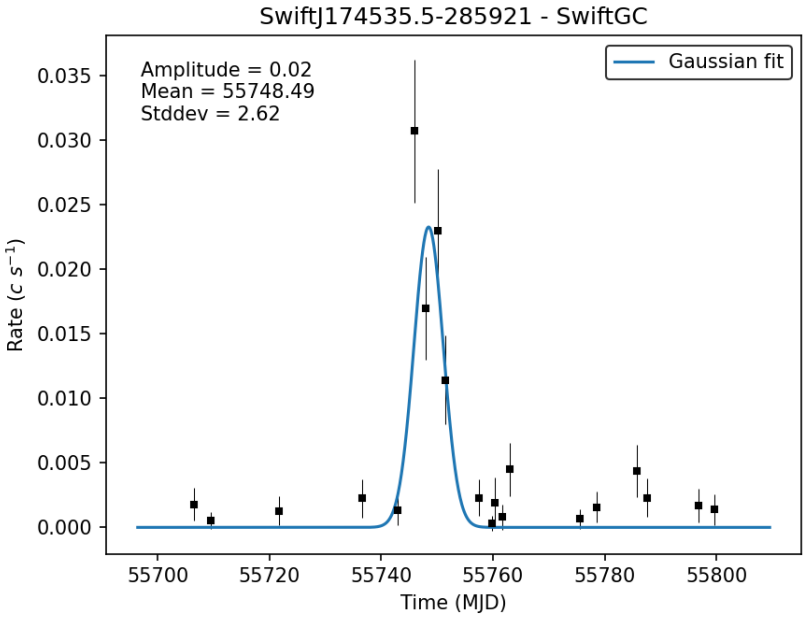
SwiftJ174535.5-285921

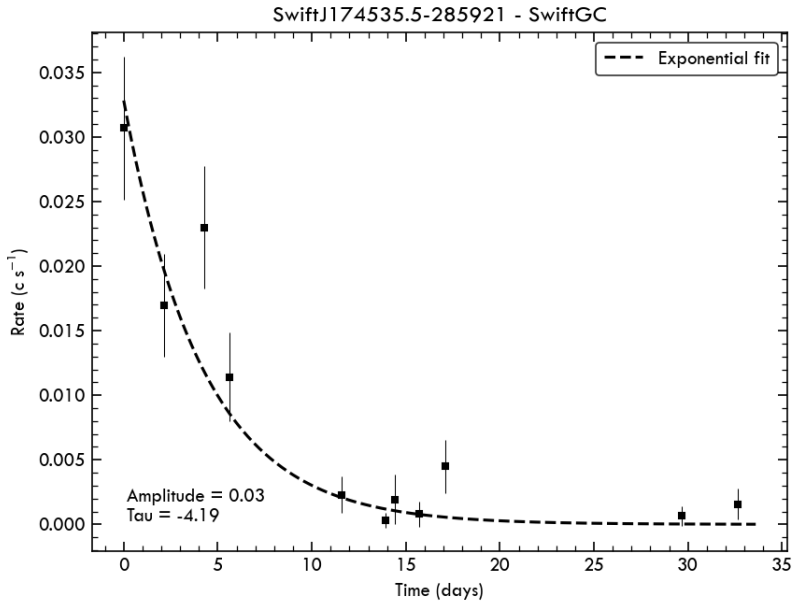
SwiftGC

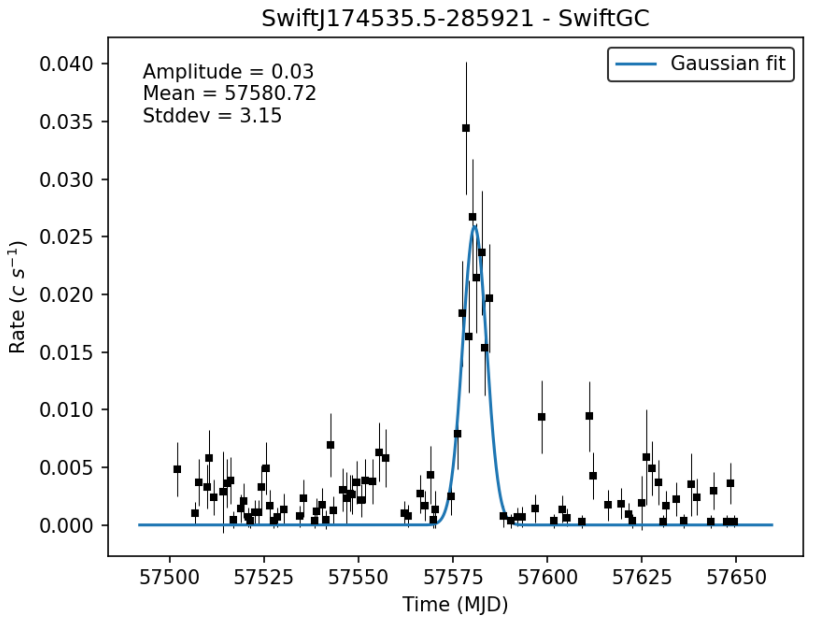


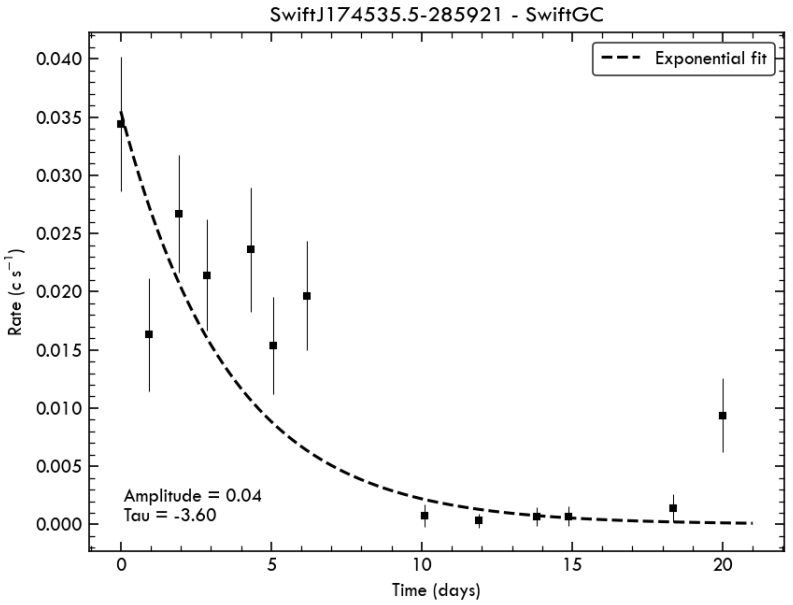
Outbursts (3)


Lightcurves
SwiftJ174535.5-285921_binned10
SwiftJ174535.5-285921
Rate (s^{-1})
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
57400
57450
57500
57550
57600
57650
Time (MJD)


SwiftJ174535.5-285921 - SwiftGC
Gaussian fit
Amplitude = 0.02
Mean = 55748.49
Stddev = 2.62
Rate ($c\ s^{-1}$)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
55700
55720
55740
55760
55780
55800
Time (MJD)


SwiftJ174535.5-285921 - SwiftGC
Exponential fit
Amplitude = 0.03
Tau = -4.19
Rate (c s^{-1})
Time (days)

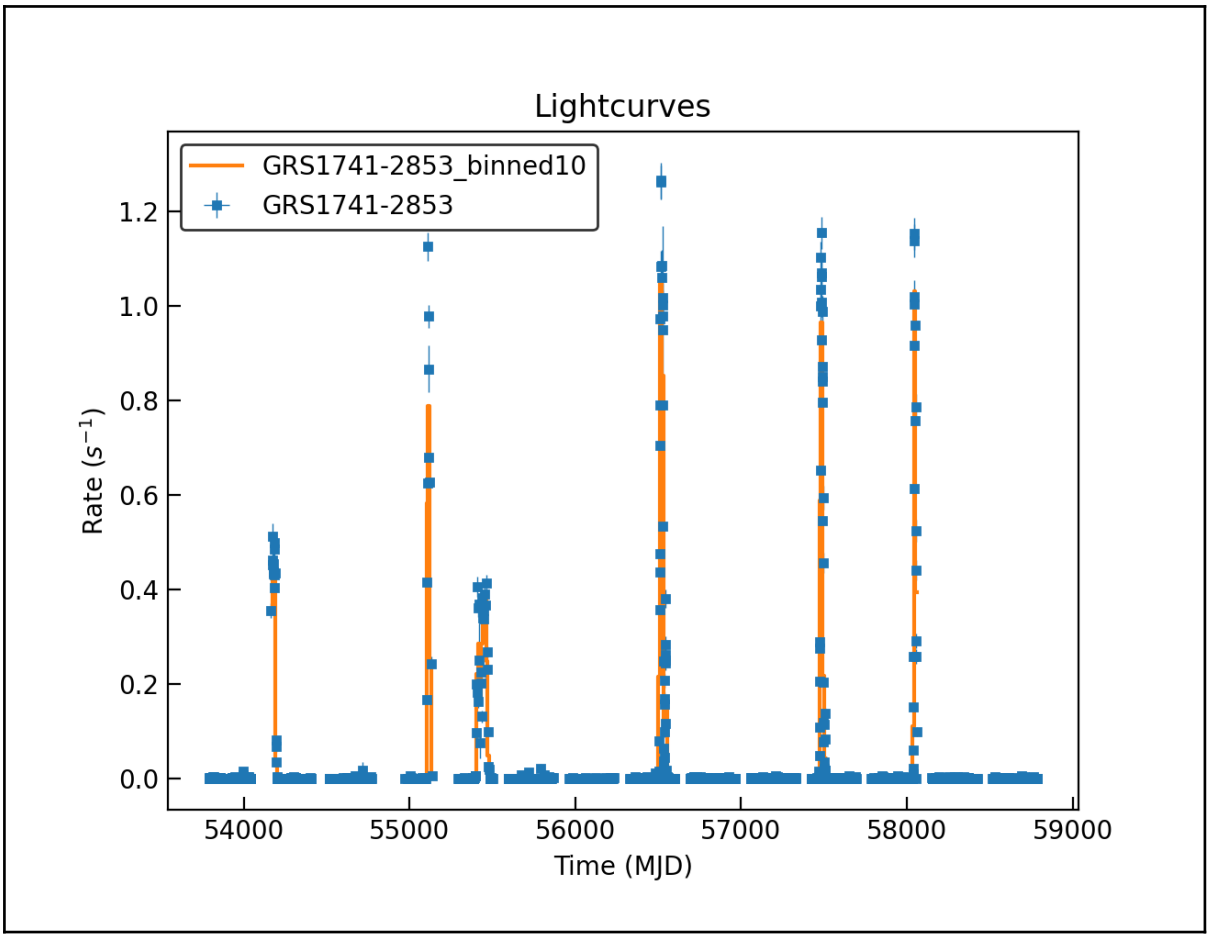

SwiftJ174535.5-285921 - SwiftGC
Gaussian fit
Amplitude = 0.03
Mean = 57580.72
Stddev = 3.15
Rate (c s^{-1})
Time (MJD)



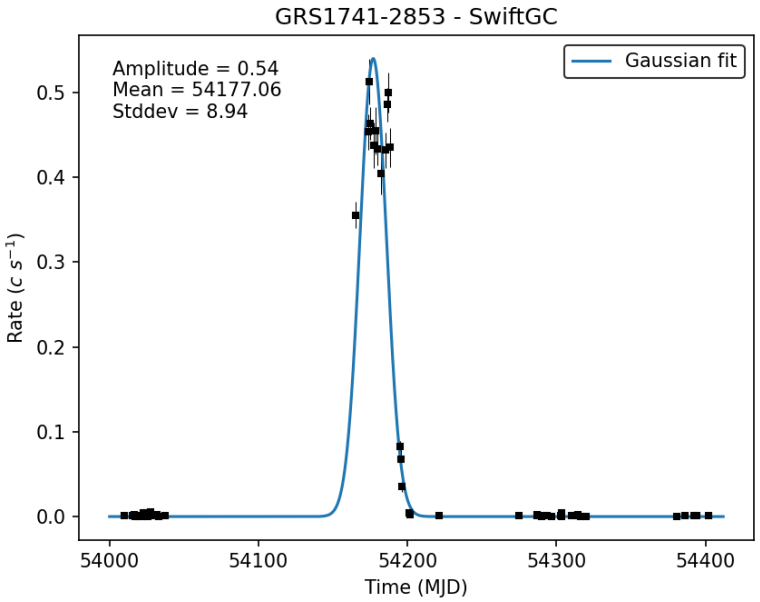
Opmerkingen
Exponentiele fit lijkt geen goede weergave van de werkelijke vorm. Wel gebruikt voor een schatting van de decay time

GRS1741-2853

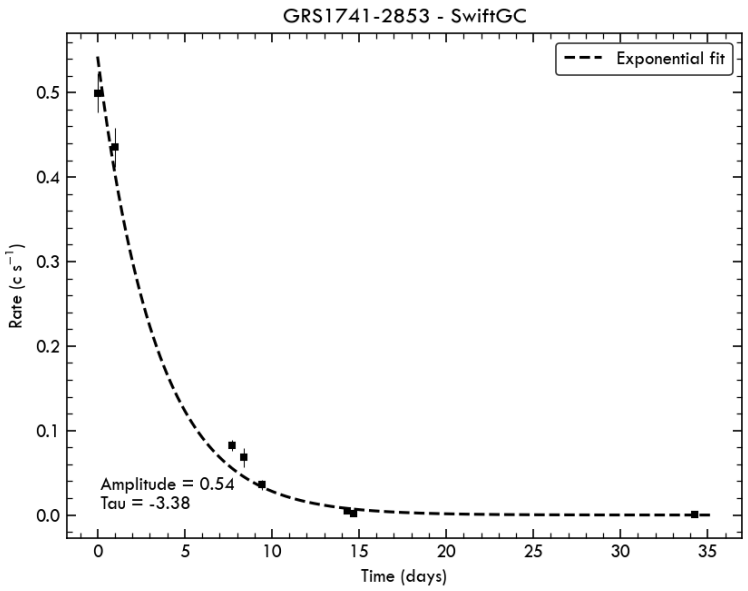
SwiftGC



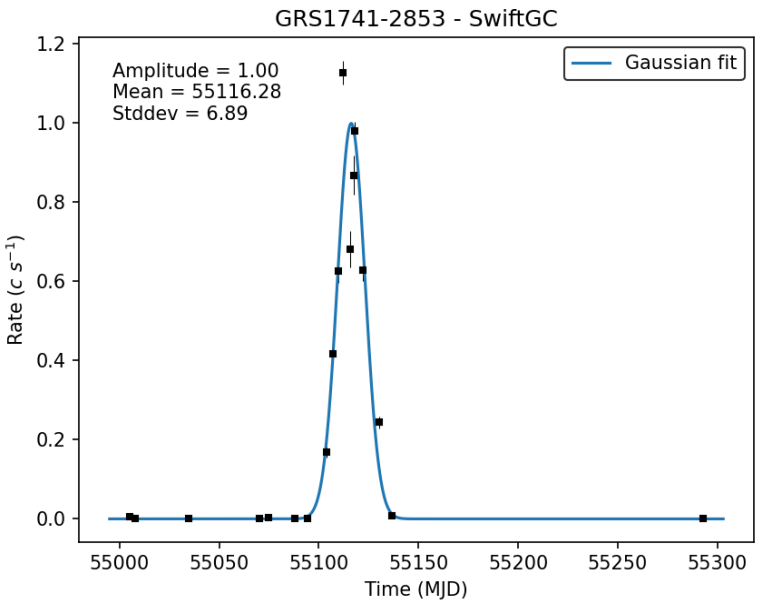
Outbursts (8)

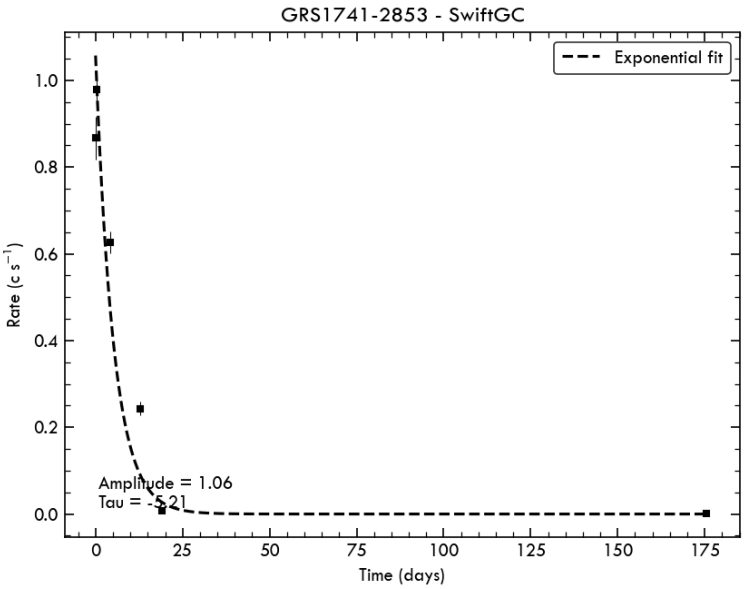


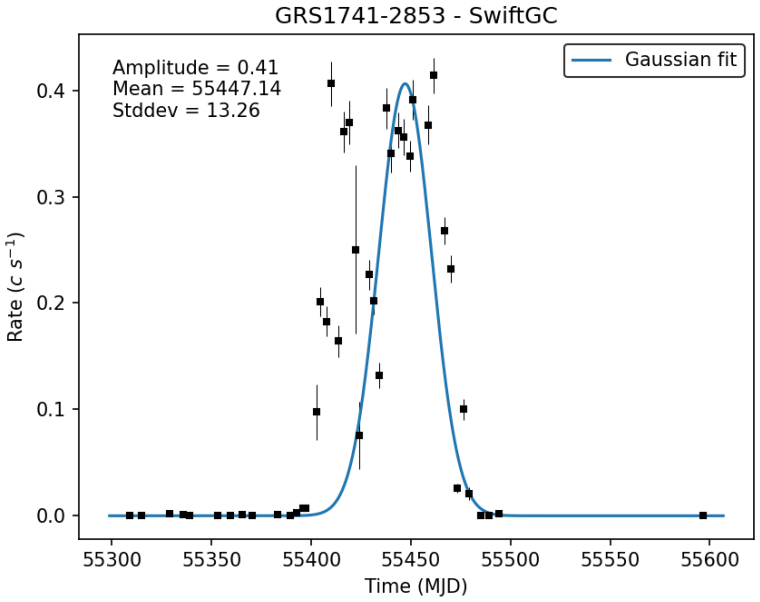
Opmerkingen
Er lijkt even een plateau te zijn op de top dus een gauss is wellicht niet de beste weergave. Wel gebruikt voor schatting van de lengte.

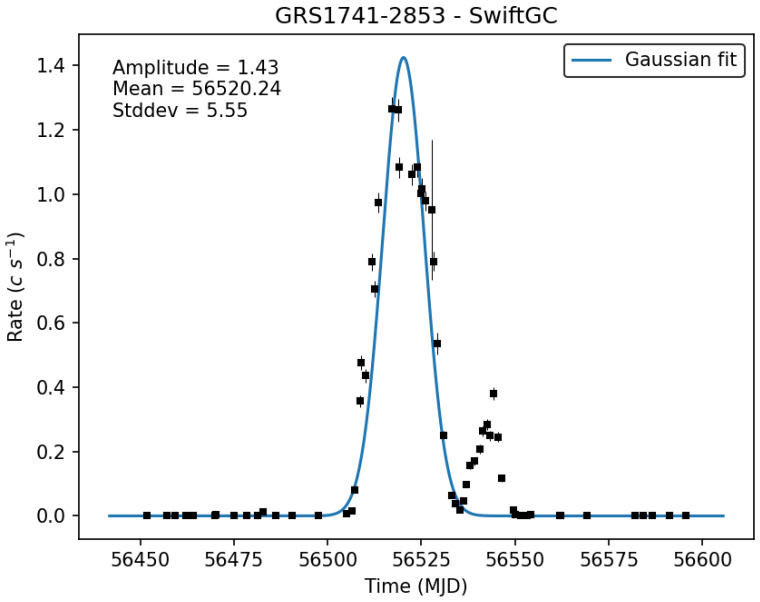


Opmerkingen
Alleen het laatste deel na het plateau gefit.

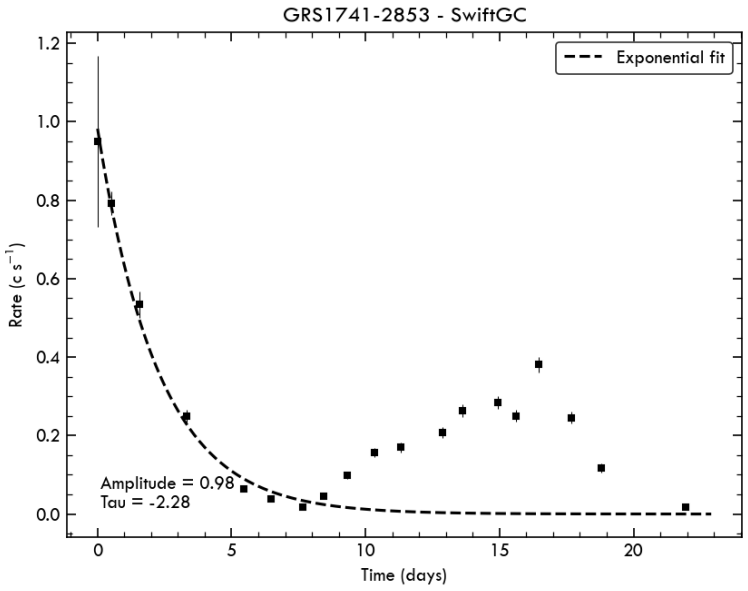

GRS1741-2853 - SwiftGC
Gaussian fit
Amplitude = 1.00
Mean = 55116.28
Stddev = 6.89
Rate (c s^{-1})
Time (MJD)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
55000
55050
55100
55150
55200
55250
55300


GRS1741-2853 - SwiftGC
Exponential fit
Amplitude = 1.06
Tau = -5.21
Rate (c s^{-1})
Time (days)
1.0
0.8
0.6
0.4
0.2
0.0
0
25
50
75
100
125
150
175

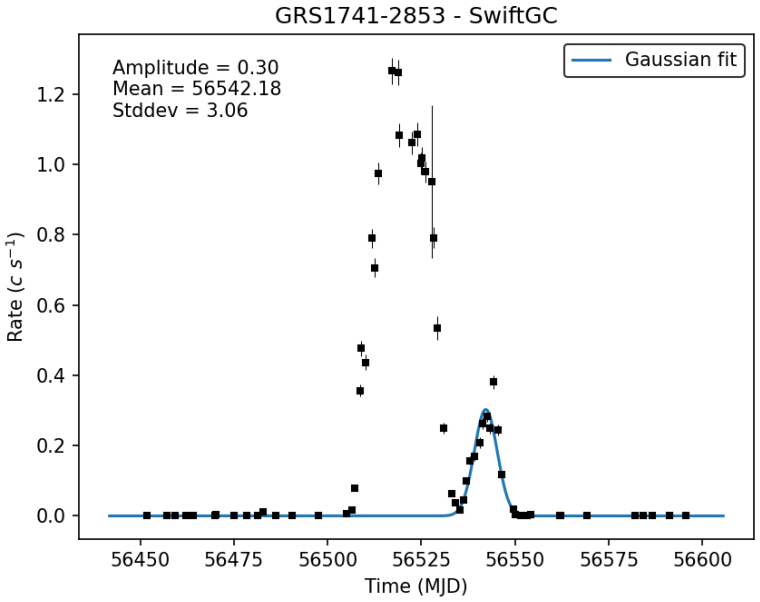


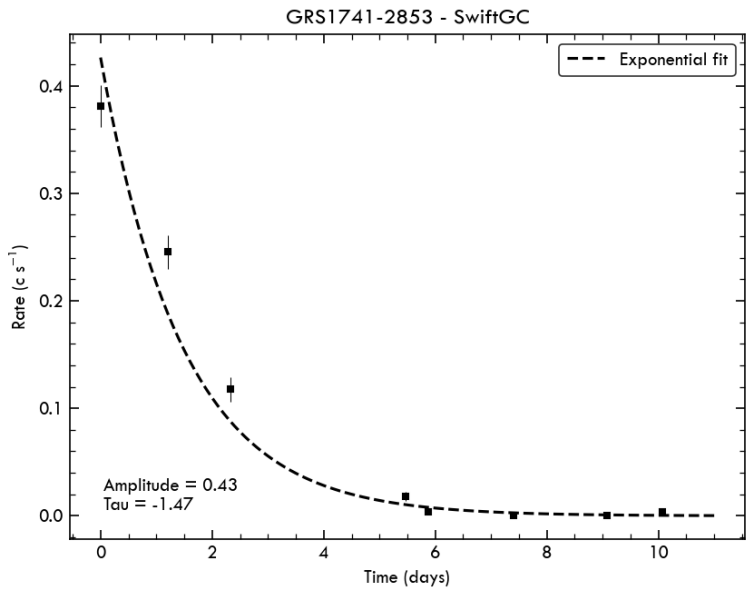


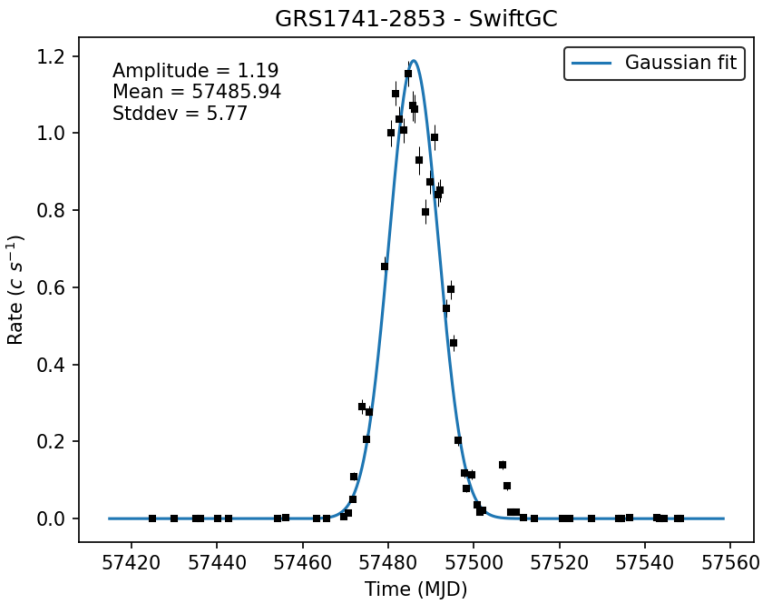
Opmerkingen
Gauss fit niet een goeie representatie. De counts wisselen sterk. Wel gebruikt voor schatting van de lengte. Exponentiele fit is hier niet geschikt door de sterke variabiliteit.



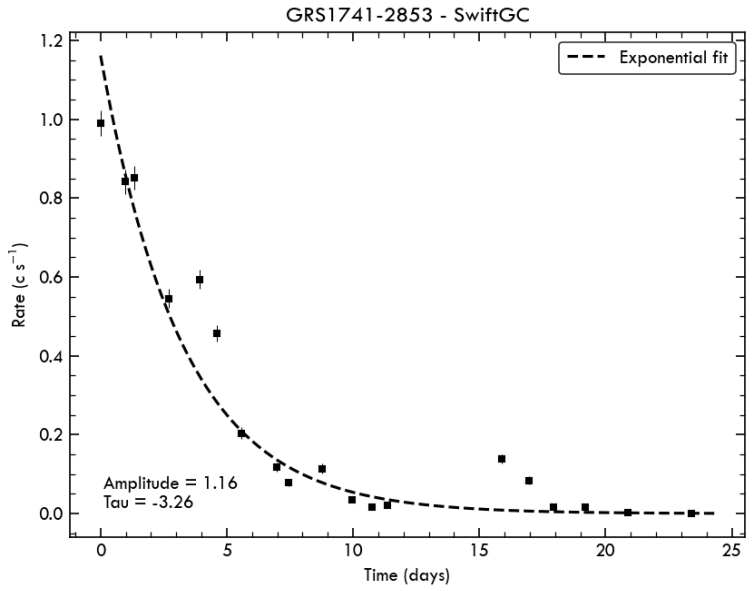
Opmerkingen
Alleen het gedeelte na het plateau gefit.



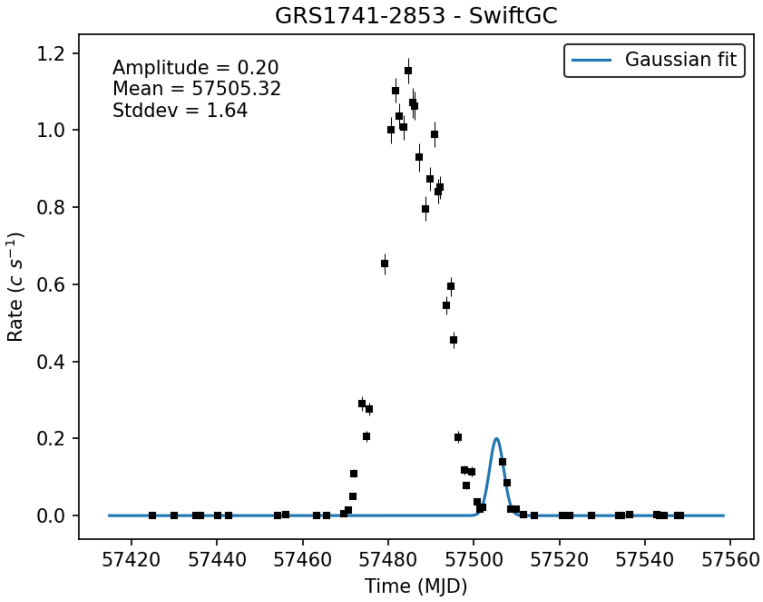




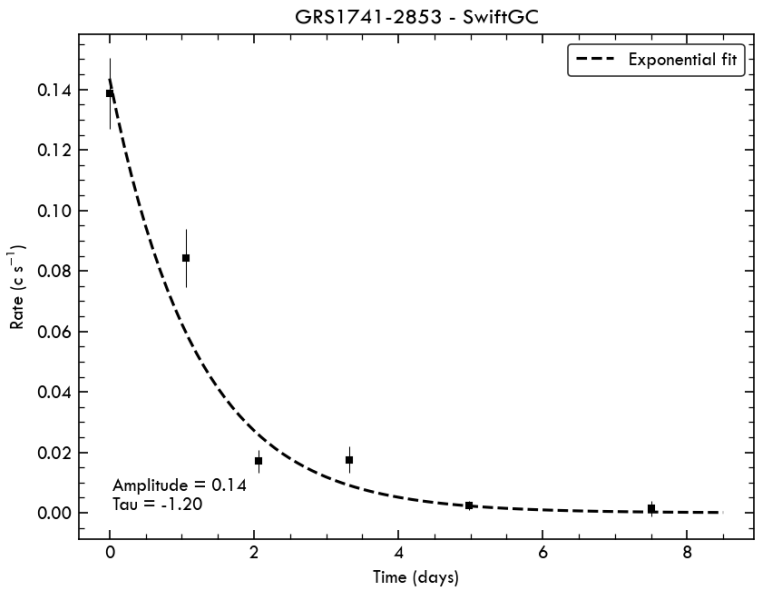
Opmerkingen
Ook hier is direct na de uitbarsting een kleinere uiitbarsting te zien.

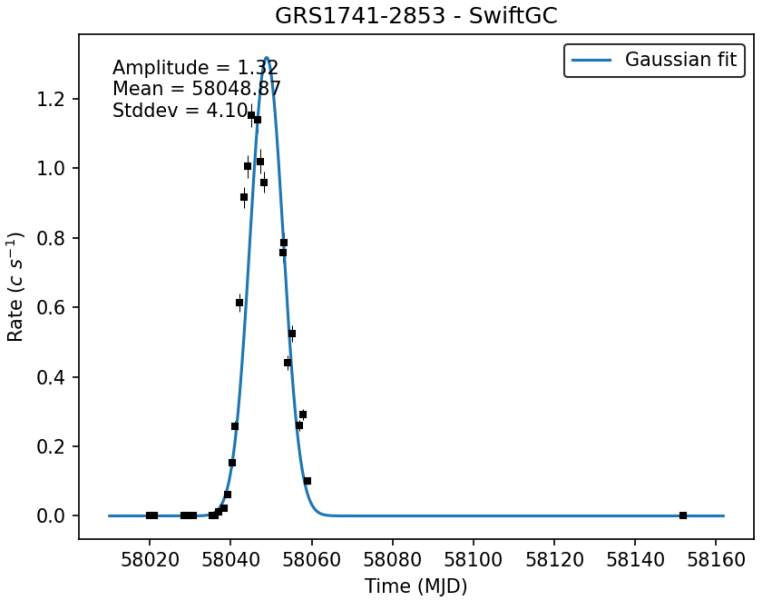


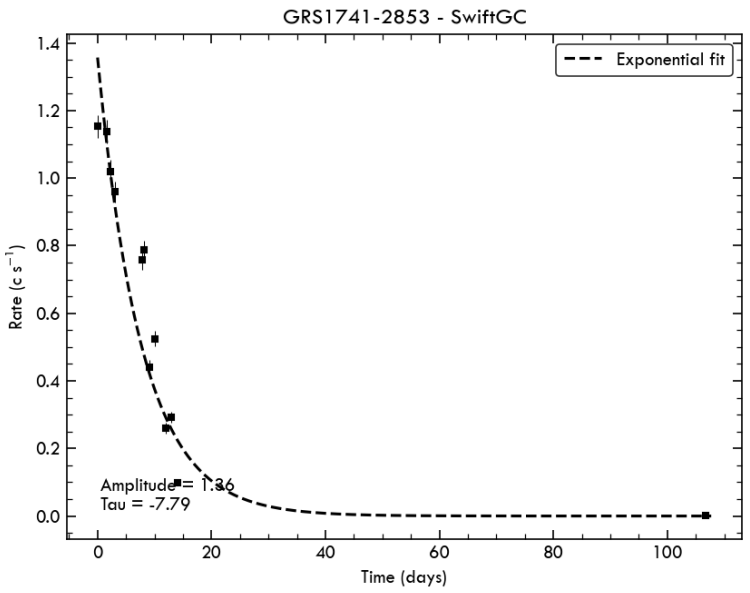
Opmerkingen
Kijkend naar de hele uitbarsting die variabel is de exponent wellicht niet de beste weergave voor de vorm, maar voor de decay time een goede schatting denk ik.



Opmerkingen
2/3 datapunten om aan te fitten dus niet heel geschikt voor een betrouwbare fit.


GRS1741-2853 - SwiftGC
Exponential fit
Amplitude = 0.14
Tau = -1.20
Rate (c s^{-1})
Time (days)


GRS1741-2853 - SwiftGC
Gaussian fit
Amplitude = 1.32
Mean = 58048.87
Stddev = 4.10
Rate (c s^{-1})
Time (MJD)


GRS1741-2853 - SwiftGC
Exponential fit
Amplitude = 1.36
Tau = -7.79
Rate (c s^{-1})
Time (days)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
0
20
40
60
80
100