

GRB archive

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1 Confirmed GRBs

1.1 GRB 190206A

The extremely bright, short-duration, hard-spectrum GRB 190206A triggered the HED detector on board the ASIM at $T_0 = 2019-02-06\ 03:49:28.312000$ UT. The burst light curve shows a single pulse at $T_0+0.3$ s. and has a total duration of 40 ms. GRB 190206A was detected among several spacecrafts; Konus-Wind, SWIFT (missing link) and IPN.

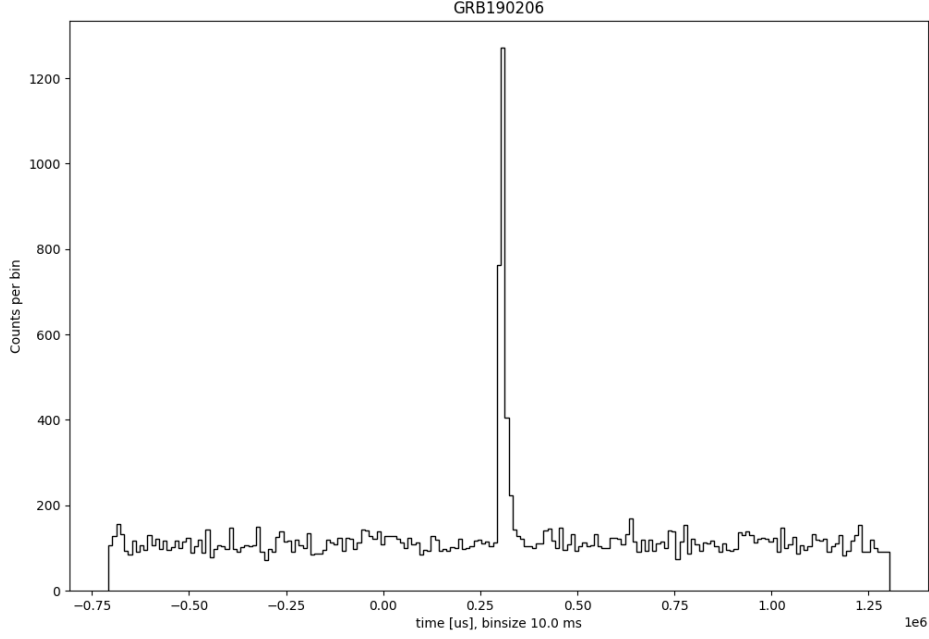
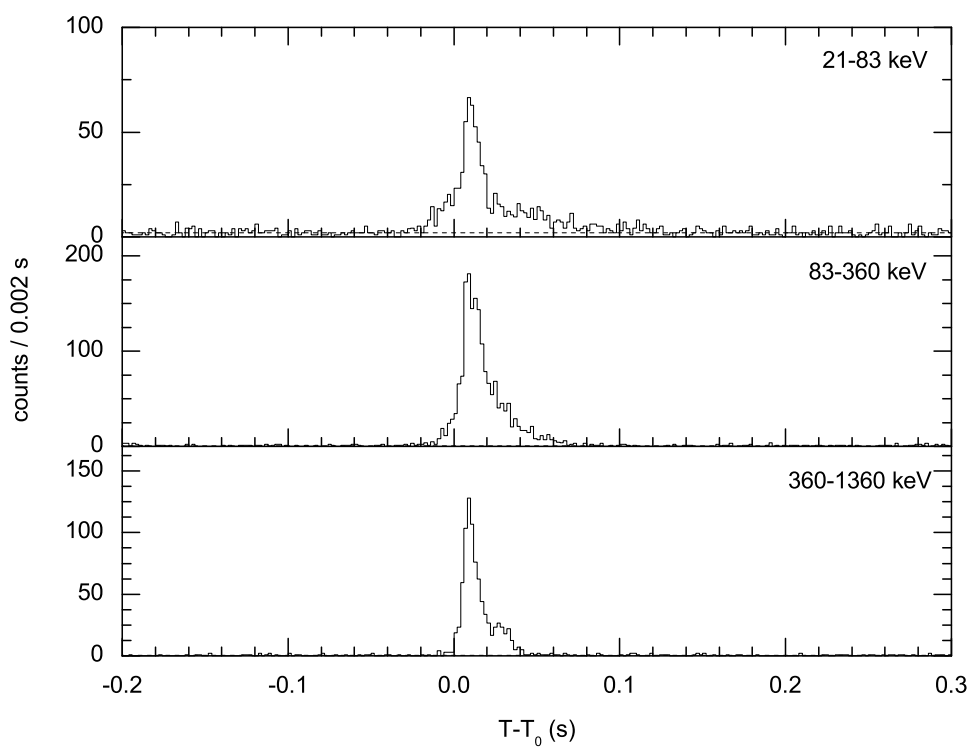
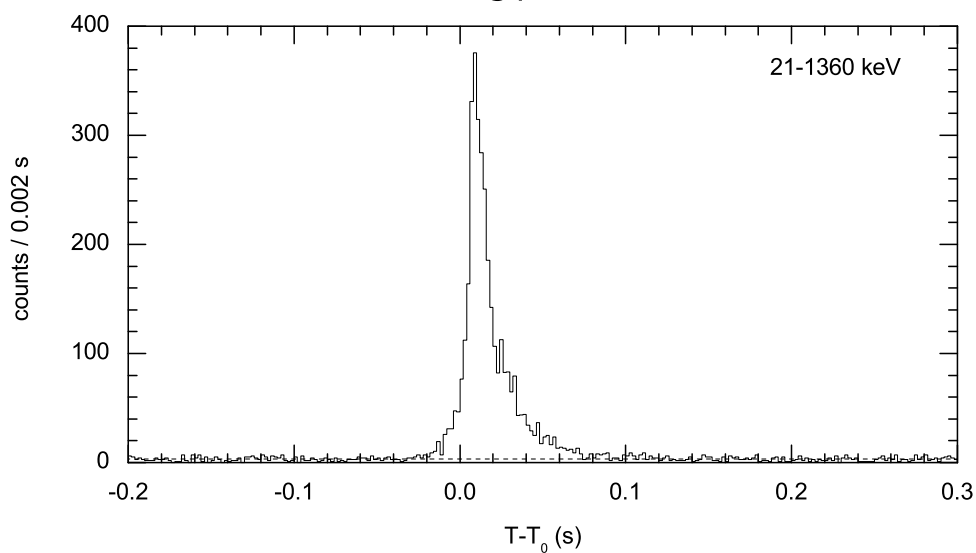


Figure 1: Light curve from HED detector on board ASIM. 10 ms binsize.

Konus-Wind was triggered at $T_0 = 03:49:23.926$ UT. The burst light curve shows a single smooth pulse which starts at T_0 s and has a total duration of around 0.1 s. There is no evidence of an extended emission following the burst. The burst had a fluence of $1.64(-0.17, +0.17) \times 10^{-5}$ [erg/cm²], and a 16-ms peak flux, measured from $T_0+1.024$ s, of $6.44(-0.75, +0.76) \times 10^{-4}$ [erg/cm²/s]. The emission is seen up to around 10 MeV. The spectrum of the burst is typical of short-hard GRBs. Assuming the measured fluxes, GRB 190206A is the third-brightest short GRB detected by KW since November, 1994 in terms of peak flux, and among the dozen brightest short GRBs, in terms of the fluence.

KONUS-WIND GRB 190206
 $T_0 = 13763.926$ s UT (03:49:23.926)

S1



1.2 GRB 190305A

The long duration GRB 190305A triggered the HED detector on board ASIM at $T_0 = 2019-03-05\ 13:05:19.779$ UT. The burst light curve shows a single pulse at $T_0+0.5$ s. and has a total duration of around 1.8 s shown in HED plot. GRB 190305A was detected among several spacecrafts; Konus-Wind, IPN, AGILE/MCAL, X-ray sources have been detected by SWIFT/XRT and CALET.

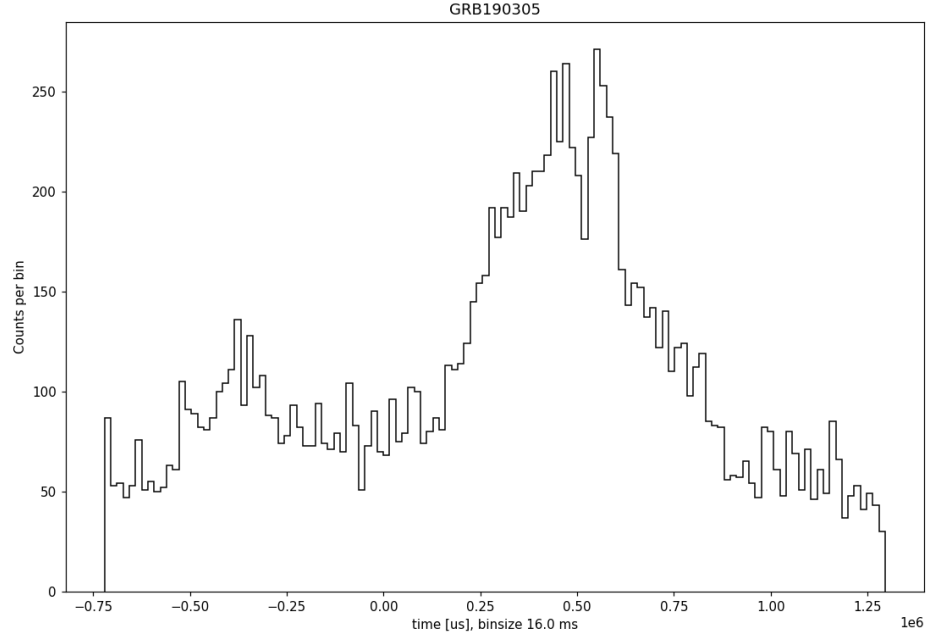
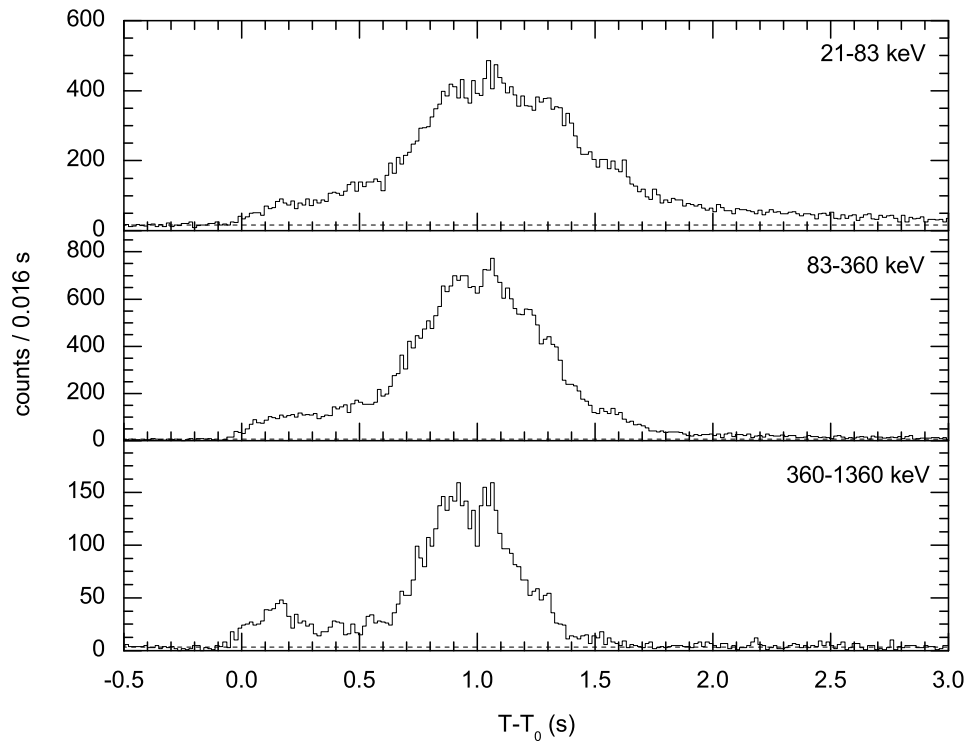
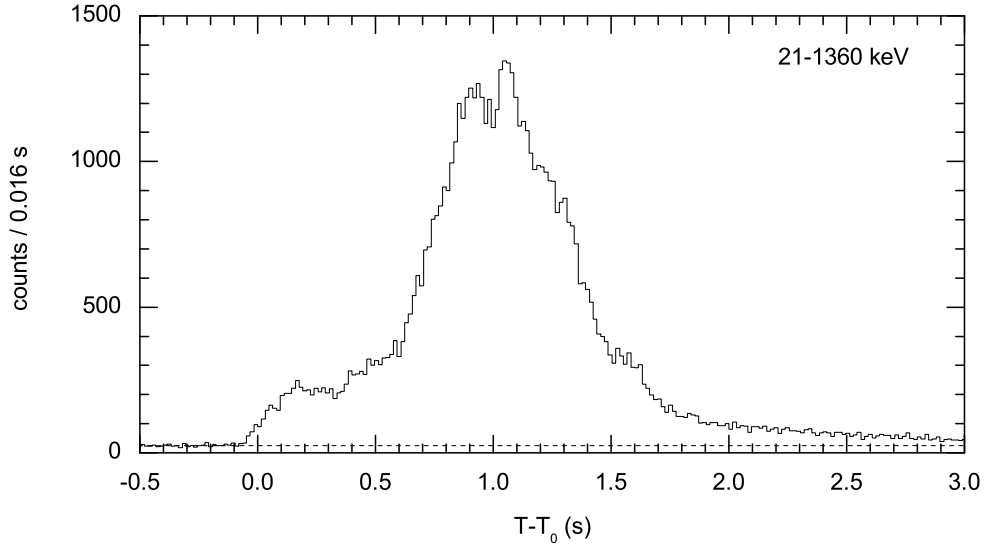


Figure 3: GRB 190305A light curve from HED. 16 ms binsize. Total duration around 1.8 s

Konus-Wind was triggered at $T_0 = 13:05:15.900$ UT. As observed by Konus-Wind, the burst had a fluence of $1.47(-0.04, +0.04) \times 10^{-4}$ erg/cm², and a 64-ms peak flux, measured from $T_0+1.024$ s, of $2.00(-0.08, +0.08) \times 10^{-4}$ erg/cm²/s (both in the 20 keV - 10 MeV energy range).

KONUS-WIND GRB 190305
 $T_0 = 47115.900$ s UT (13:05:15.900)

S1



1.3 GRB 190606A

The short-duration, very bright GRB 190606A triggered the HED detector on board the ASIM spacecraft at $T_0 = 2019-06-06\ 01:55:07.164000$ UT. The burst light curve shows a single pulse which starts at $T_0+0.5$ s and has a total duration of around 0.2 s. GRB 190606A was detected among several spacecrafts; Konus-Wind, FERMI, AGILE and IPN

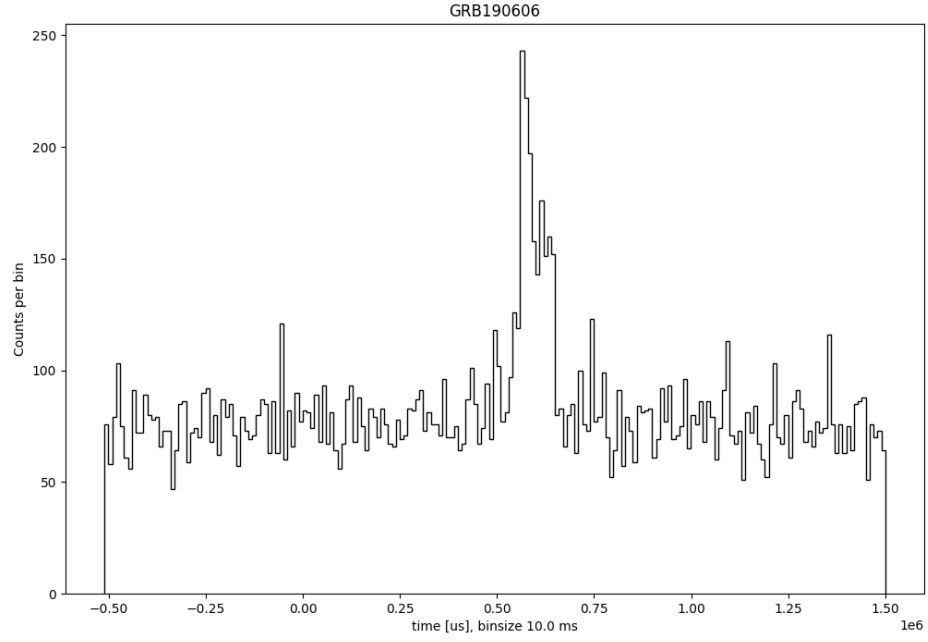


Figure 5: Light curve from HED detector on board ASIM. 10 ms binsize

KONUS-WIND GRB 190606
 $T_0 = 6903.800$ s UT (01:55:03.800)

S1

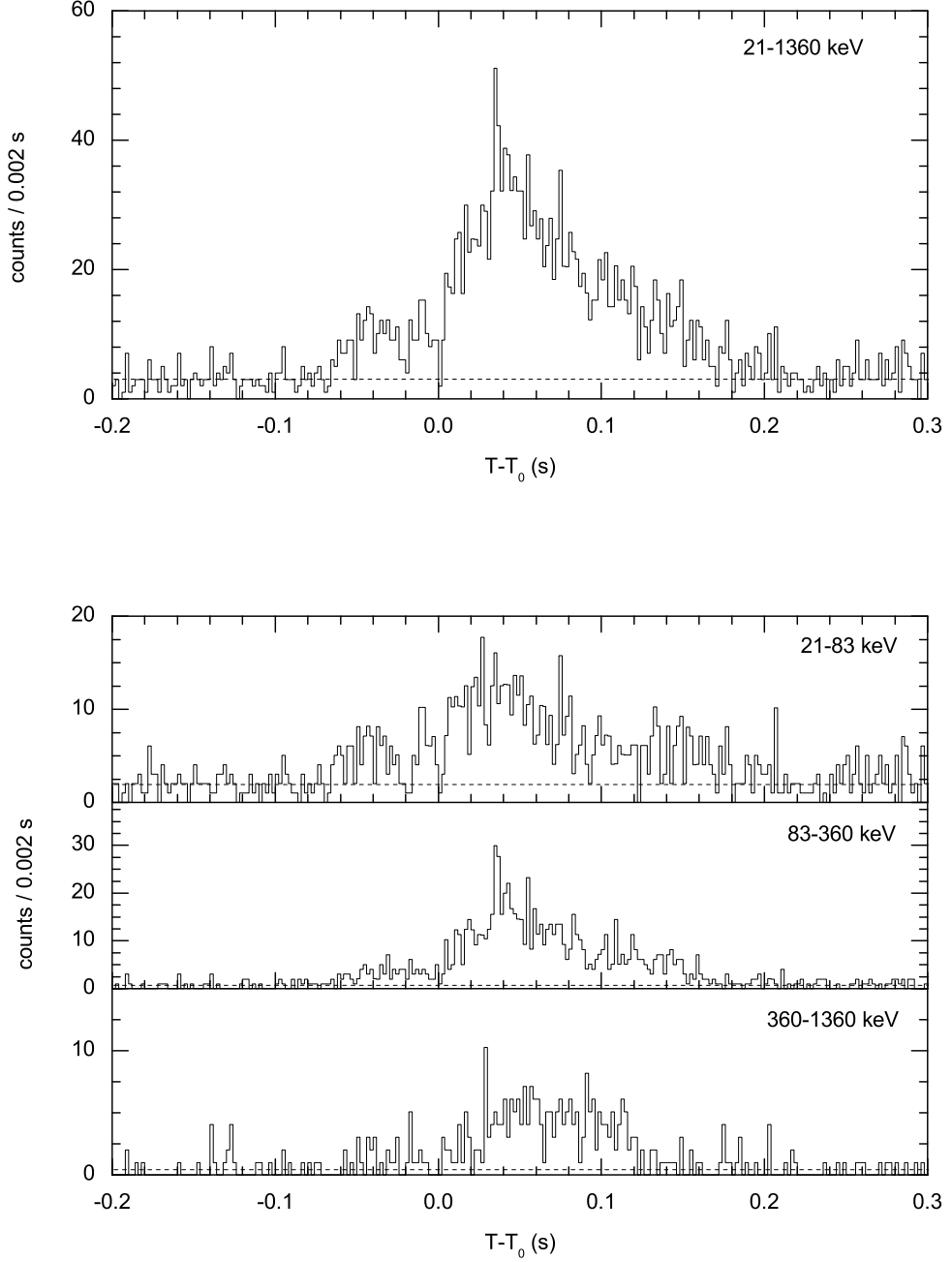


Figure 6: Light curves from Konus Wind. 2 ms binsize. KW was triggered at 01:55:03.800 UT. The burst had a fluence of $1.16(-0.18, +0.18) \times 10^{-5}$ [erg/cm²], and a 16-ms peak flux, measured from $T_0 + 0.034$ s, of $1.45(-0.39, +0.35) \times 10^{-4}$ [erg/cm²/s].

GRB #	GRB 190206A	GRB 190305A	GRB 190606A
Date Time	2019-02-06 03:49:28.312	2019-03-05 13:05:19.779	2019-06-06 01:55:07.164
Other Satellites	KW, SWIFT	KW, SWIFT, AGILE	KW,FERMI, AGILE, INTEGRAL
Location [Ra, Dec]	313.330 deg, -30.510 deg	340.399 deg, -10.588 deg	88.386 deg, 21.574 deg
GCN #	23880 (KW) 23879 (IPN)	23939 (KW) 23936 (IPN) 23930 (AGILE)	24784 (KW) 24765 (IPN) 24764 (FERMI)
T90	0.1 s	1.8 s	0.2 s
Peak Flux [erg/cm2 s]	$6.44(-0.75,+0.76)\times10^{-4}$ (16 ms)	$2.00(-0.08,+0.08)\times10^{-4}$ (64 ms)	$1.45(-0.39,+0.35)\times10^{-4}$ (16 ms)
Fluence [erg/cm2]	$1.64(-0.17,+0.17)\times10^{-5}$	$1.47(-0.04,+0.04)\times10^{-4}$	$1.16(-0.18,+0.18)\times10^{-5}$
Model	Exp cutoff	Band	Exp cutoff Band
alpha	-0.58(-0.10,+0.12)	-0.44(-0.04,+0.05)	-1.19(-0.10,+0.12) -0.88(-0.26,+0.45)
beta	-	-2.82(-0.11,+0.10)	- -1.67(-0.27,+0.15)
Ep / Ec [keV]	1600(-223,+248)	387(-15,+16)	3194(-1324,+2736) 664(-388,+1038)