

วิธีการได้มาซึ่งกราฟแสงจากฐานข้อมูลจาก Transiting Exoplanet Survey Satellite (TESS)

ผู้ใช้งานกรุณาอ้างอิง :

ฟ้ารุ่ง สุริยา บุญทิศ (2565). ฟิสิกส์ดาราศาสตร์เบื้องต้นของโนวา (Introduction to Astrophysics of Nova Eruption). กรุงเทพฯ : ดีเซมเบอร์รี่.

เข้าเว็บเพื่อดูดาวนโพลดข้อมูลจากลิงค์ต่อไปนี้ (ดาวโพลดข้อมูลจากฐานข้อมูลได้ทั้งของ Kepler และ TESS ในลิงค์เดียว <https://mast.stsci.edu/portal/Mashup/Clients/Mast/Portal.html>

(ในขณะที่ฐานข้อมูล THE K2 ECLIPTIC PLANE INPUT CATALOG (บางEPIC หรือ K2) จะมีลิงค์แยกออกไป บริเวณที่สำรวจก็ต่างจากของ Kepler เดิม คือ DEC +/- 30 deg <https://archive.stsci.edu/k2/> ซึ่งตอนนี้จะยังไม่กล่าวถึง)

ข้อมูลจากเว็บ MAST ข้อมูลของ TESS จะเป็นไฟล์ .fits หลังจากคีย์ตำแหน่งแล้วกด search จะมีรายการในฐานข้อมูลให้เลือกเบื้องต้น ได้ตรวจสอบพิกัดว่า เป็นดาวแปรแสงที่เราต้องการถูกต้องหรือไม่ จากนั้น คลิกดาวนโพลดไฟล์ ไฟล์ที่ได้จะเป็น binary ในรูป fits ซึ่งต้องใช้โปรแกรม fv ของนาซาในการแตกไฟล์ ดังขั้นตอนต่อไปนี้

The screenshot shows the MAST portal interface. At the top, there's a search bar with 'KIC 12189575' entered. Below the search bar, there's a table of search results. The table has columns for 'Action', 'Observation T...', 'Mission', and 'Provenance Name'. The results show 15 entries, all with 'science' as the observation type and 'TESS' as the mission. The provenance names are 'SPOC' for the first 12 entries and 'SPITZER_SHA SSC Pipeline' for the last 3 entries. On the right side, there's a star chart showing the location of the star in the sky, with its coordinates (RA: 22:54:49.4, DEC: +30:39:49.7) displayed. The interface also includes various filters and navigation options.

[Classic Form - N&S...](#)
[myofanews.com/...](#)
[Outlook](#)
[VDR | Search](#)
[Basic Function Des...](#)
[OBSERVATION MO...](#)
[Wepher Report](#)
[Home - Index](#)
[STScI | Multiple Arc...](#)

Select a collection... and enter target:
 MOST Observations by Object Name or RA/Dec
[About Collections...](#) [Show Favorites...](#) [Random Search](#) [Advanced Search](#)

Home Page **N&S: KIC 12109575** Astronomy
 Displaying 4 of 22 Total Rows **KEPLER 12109575, radial: 0.000327**

Filters: Clear Filters... Add Filters... Help...

Keyword/Text Filter:

Mission:

- KeplerFFL (0 of 0)
- HLSP (0 of 0)
- PS1 (0 of 0)
- SWFT (0 of 0)
- TESS (4 of 4)** I. select "TESS"
- SPECTER_SMA (0 of 0)
- Kepler (0 of 1)

Provenance Name:

- Kepler (14 of 22)
- PS1 (0 of 0)
- Cal SWFT (0 of 0)
- SPOC (4 of 4)**
- Kepler201001 (0 of 0)
- Kepler (0 of 0)
- Kepler Pipeline (0 of 0)

Instrument:

- Kepler (14 of 22)
- Photometer (4 of 4)**

RA	Dec	Calibration Level	Start Time	Exposure Len
19:56:20.818	+48:52:12.74	3	2019-07-18 20:32:31	1425.599702
19:47:43.155	+47:37:38.30	3	2019-08-15 21:02:51	1425.599270
19:02:58.758	+44:17:33.37	3	2021-07-24 11:42:26	475.189747
18:46:14.237	+50:26:32.75	3	2022-06-13 11:56:08	475.189770

2. Check RA-Dec to make sure there no your target in TESS for KIC 12109575

[Classic Form - N&S...](#)
[myofanews.com/...](#)
[Outlook](#)
[VDR | Search](#)
[Basic Function Des...](#)
[OBSERVATION MO...](#)
[Weather Report](#)
[Home - Index](#)
[STScI | Multiple Arc...](#)

KIC 12109575

other query modes:

Query: KIC 12109575

Basic data:
2MASS J19225888+5039498 -- Eclipsing Binary

Other object types: * (CC, Gaia), EP* (01147), ER (2945)
 ICRS coord. (ep=J2000): 19 22 58.820064520 +50 39 49.716978884 (Optical) [0.0417 0.0403 00] A 2009Cat.1358...09
 FK4 coord. (ep=01950 ep=1950): 19 22 41.3524250184 +50 35 56.731423057 [0.0417 0.0403 00]
 Gal coord. (ep=J2000): 682.1897808888888 +31.8782768280748 [0.0417 0.0403 00]
 Proper motions mas/yr: -33.460 12.145 [0.057 0.047 50] A 2009Cat.1358...09
 Radial velocity / Redshift / cz: 0(km/s) -28.2 [27.8] / z(-) -0.00004 [0.00001] / cz -19.20 [27.90] (Opt) E 2016A&A...334A...390
 Parallax (mas): 1.8094 [0.0400] A 2009Cat.1358...09
 Spectral type: K7IV C 2016A&A...334A...390
 Flares (4): G 13.352137 [0.00569] C 2009Cat.1358...09
 T 13.334 [0.820] C 2009Cat.1358...09
 H 16.813 [0.820] C 2009Cat.1358...09
 K 16.790 [0.823] C 2009Cat.1358...09

SIMBAD within 2

All **eDS** (CDSPortal)

within 5

Identifiers (5):
 An access of full data is available using the icon Vizer near the identifier of the catalogue

2MASS J19225888+5039498 **TIC 417656438**
 KIC 12109575 Gaia DR2 233062040195239552 Gaia DR2 233062040195239552

https://mast.stsci.edu/portal/MainApp/Client/MastPortal.html

Select a collection... and enter target:
MADT Observations by Object Name or RA/Dec
KIC 12109575

Upload Target List

Home Page | Mast: KIC 12109575

Displaying 1 of 72 Total Rows: KEPLER 12109575, radius: 3.0002"

Filters

Keyword/Text Filter

Mission

- KeplerRTS (0 of 31)
- PLSP (0 of 51)
- P01 (0 of 51)
- JWST (0 of 4)
- TESS (0 of 4)
- SPITZER_SMA (0 of 2)
- Kepler (1 of 1)**

Provenance Name

- Kepler (1 of 50)

Instrument

- Kepler (1 of 50)

RA	Dec	Calibration Level	Start Time	Exposure Len
19:21:58.894	+39:29:48.79	2	2019-09-02 00:04:08	1800

2. Check RA-Dec first to make sure it is the right one

1. select "Kepler"

AstroView

19:21:58.105 +39:29:48.79 d1
+ 02:07:09.8 - 19:29:49.79

RA DEC

https://mast.stsci.edu/portal/MainApp/Client/MastPortal.html

Select a collection... and enter target:
MADT Observations by Object Name or RA/Dec
KIC 12109575

Upload Target List

Home Page | Mast: KIC 12109575

Displaying 1 of 72 Total Rows: KEPLER 12109575, radius: 3.0002"

Filters

Keyword/Text Filter

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- TESS (0 of 4)
- SPITZER_SMA (0 of 2)
- Kepler (1 of 1)

Provenance Name

- Kepler (1 of 50)

Instrument

- Kepler (1 of 50)

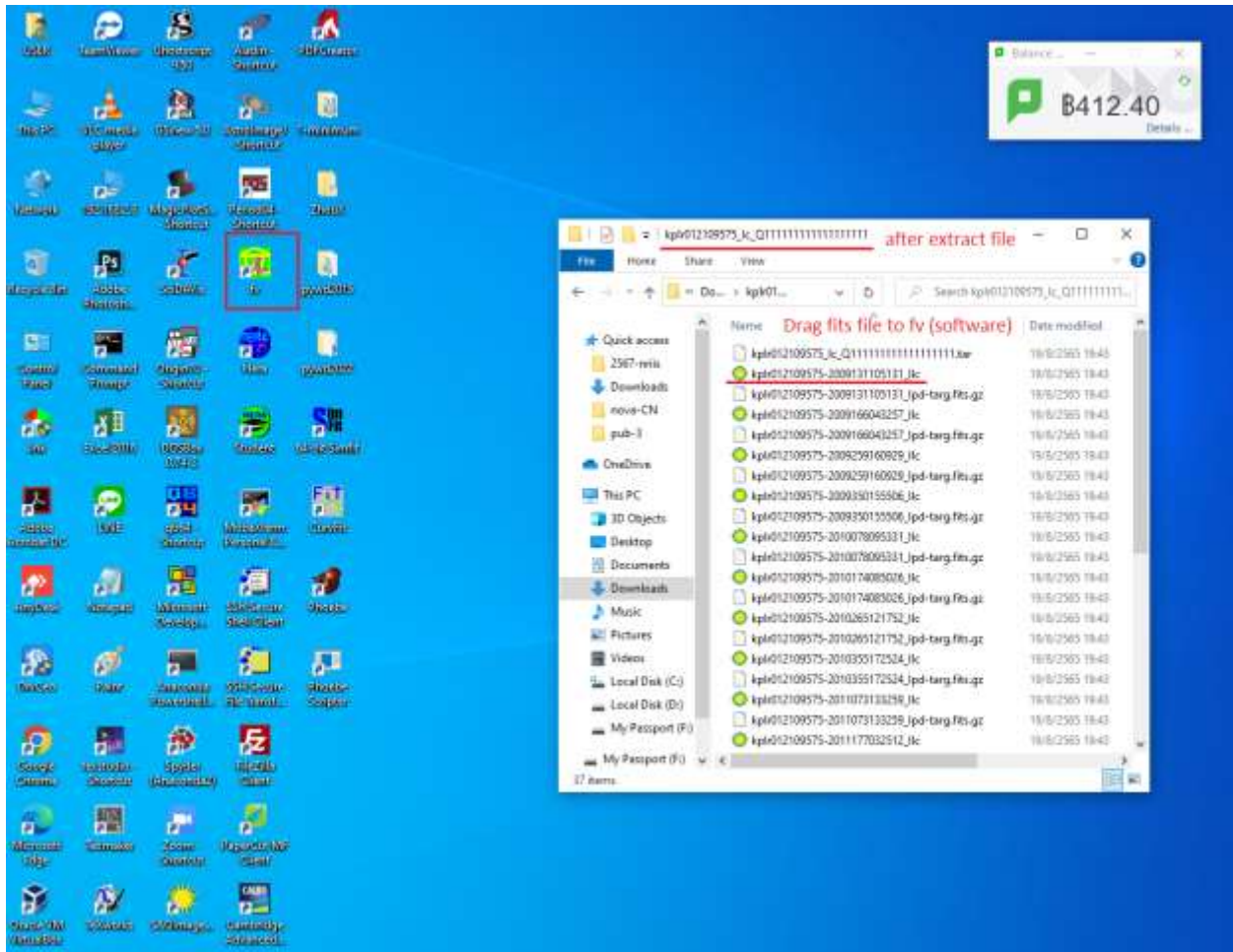
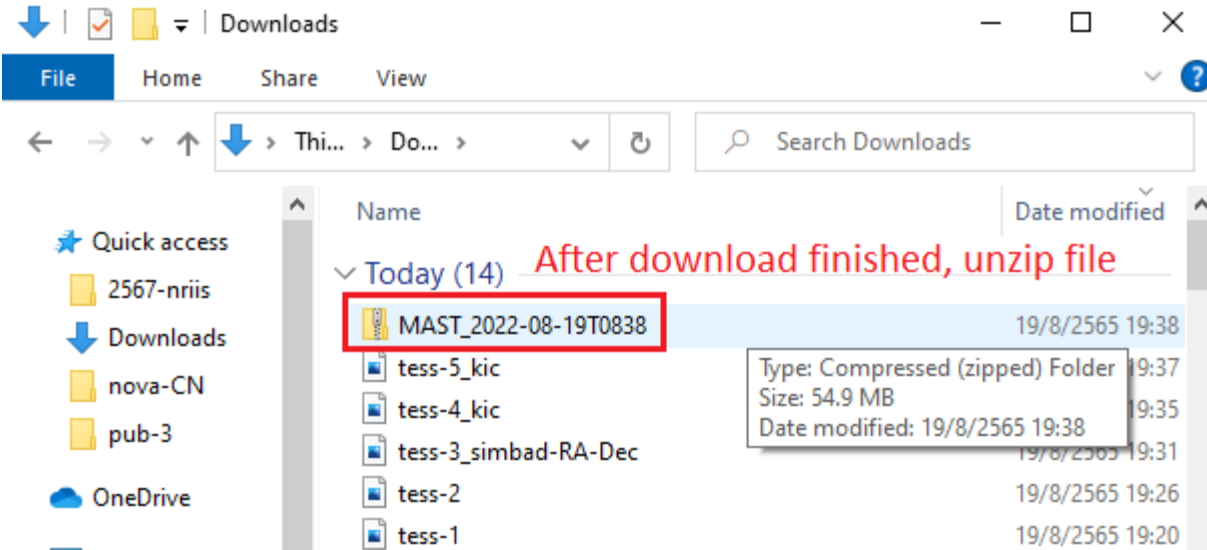
Actions	Observation T...	Mission	Provenance Name	Instrument	Project	Filter	Workband
1	*****	Kepler	Kepler	Kepler	Kepler	KEPLER	OPTICAL

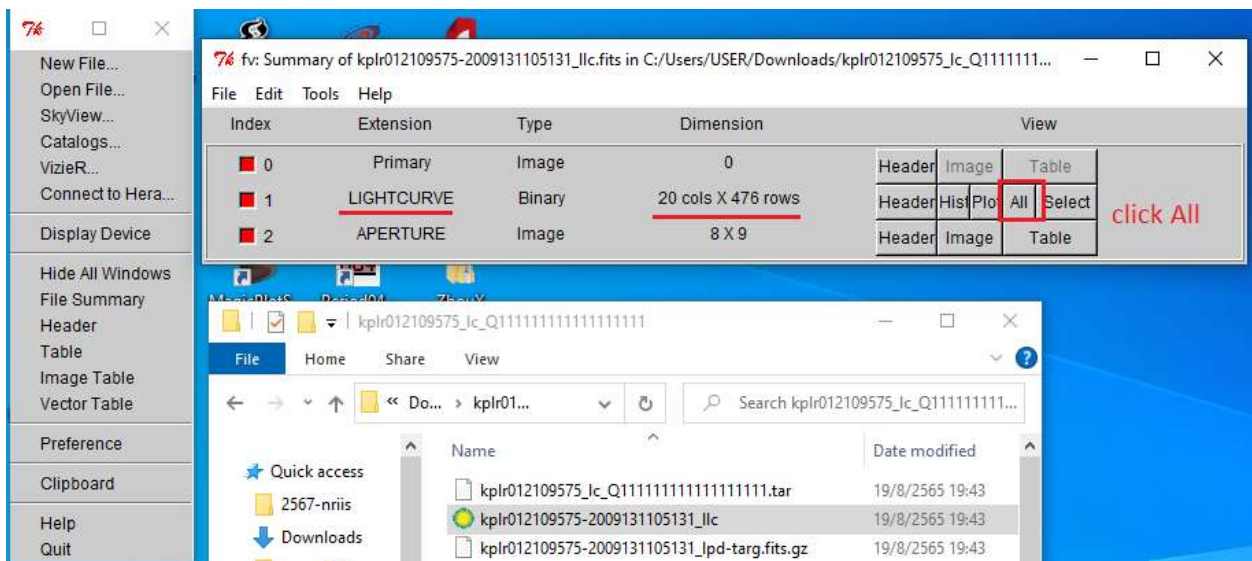
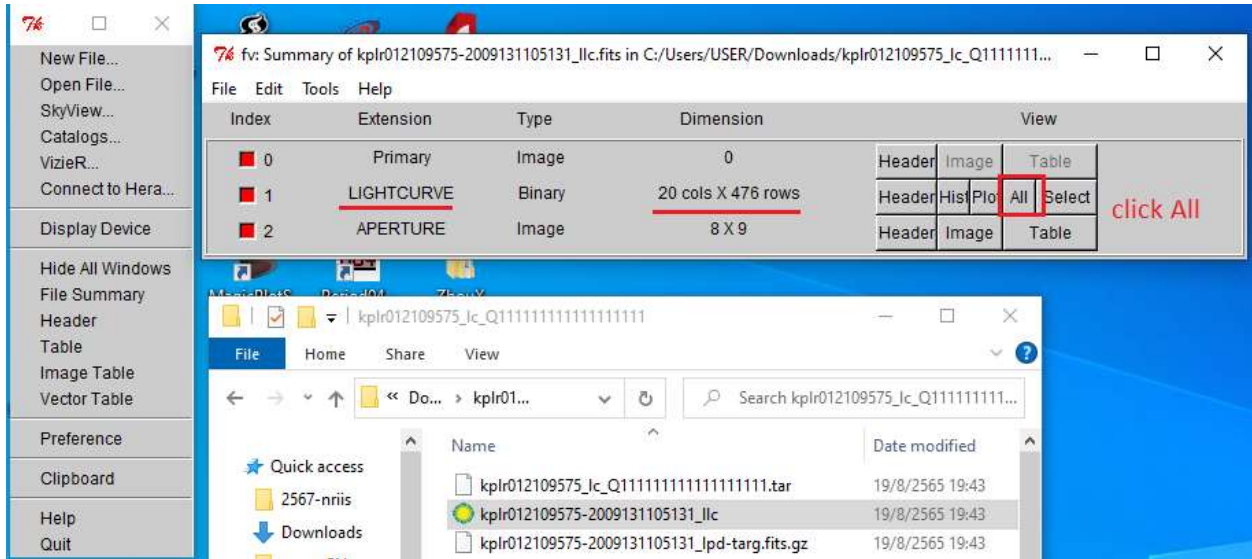
Download Data Products

AstroView

19:21:58.105 +39:29:48.79 d1
+ 02:07:09.8 - 19:29:49.79

RA DEC





File Edit Tools Help

TIME TIME CORR CADENCE SAP_FLUX SAP_FLUX_ERR SAP_BKG SAP_BKG_ERR PDOSAP_FLUX PDOSAP_FLUX_ERR

Select: All BJD - 2454833

Export to File options

Rows: A8 Selection Columns: A8 Selection Print Row Numbers

Output Format: Read Width Columns: CSV Format ("","") Use a defined separator (space below)

Column Separator (for example: ; or | default is ",")

0%

Save Cancel

Row	BJD	SAP_FLUX	SAP_FLUX_ERR	SAP_BKG	SAP_BKG_ERR	PDOSAP_FLUX	PDOSAP_FLUX_ERR
1	121.5388298	5.6140832E+004	7.6845145E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
2	120.5592641	5.5616191E+004	7.6591763E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
3	120.5796982	5.5200027E+004	7.6404915E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
4	120.6001326	5.3984809E+004	7.5876126E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
5	120.6205668	5.1778184E+004	7.4865870E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
6	120.6410010	5.3698586E+004	7.5740662E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
7	120.6614352	5.5426551E+004	7.6498961E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
8	120.6818696	5.6059836E+004	7.6775651E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
9	120.7023037	5.6875266E+004	7.7149811E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
10	120.7227380	5.7688121E+004	7.7511015E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
11	120.7431723	5.8385813E+004	7.7797055E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
12	120.7636065	5.8866887E+004	7.7995429E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
13	120.7840407	5.9149914E+004	7.8127847E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
14	120.8044750	5.9232402E+004	7.8163824E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
15	120.8249092	5.9227395E+004	7.8159881E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
16	120.8453434	5.9167492E+004	7.8135834E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
17	120.8657777	5.8032887E+004	7.7653093E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
18	120.8862120	5.5880152E+004	7.6698604E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
19	120.9066462	5.7547301E+004	7.7454305E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
20	120.9270804	5.8742828E+004	7.7945147E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
21	120.9475148	5.8607223E+004	7.7888184E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
22	120.9679489	5.8399746E+004	7.7801280E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
23	120.9883832	5.8136398E+004	7.7693372E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000
24	121.0088173	5.7706699E+004	7.7517924E+000	7.446120E+000	7.446120E+000	7.446120E+000	7.446120E+000

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Exported file

kplr012109575-2009131105131_llc_t1 19/8/2565 20:39

tess-12 19/8/2565 20:39

572	5.1778180E+004	7.4865870E+000	2.0393
573	5.3698590E+004	7.5740660E+000	2.0378
574	5.5426550E+004	7.6498960E+000	2.0388
575	5.6059840E+004	7.6775650E+000	2.0391
576	5.6875270E+004	7.7149810E+000	2.0365
577	5.7688120E+004	7.7511010E+000	2.0386
578	5.8385810E+004	7.7797060E+000	2.0348
579	5.8866890E+004	7.7995430E+000	2.0367
580	5.9149910E+004	7.8127850E+000	2.0375
581	5.9232400E+004	7.8163820E+000	2.0384

kplr012109575-2009131105131_llc_t1 - Notepad

File Edit Format View Help

TIME	SAP_FLUX	SAP_FLUX_ERR
D	E	E
BJD - 2454833	e-/s	e-/s
120.5388298	5.6140832E+004	7.6845145E+000
120.5592641	5.5616191E+004	7.6591763E+000
120.5796982	5.5200027E+004	7.6404915E+000
120.6001326	5.3984809E+004	7.5876126E+000
120.6205668	5.1778184E+004	7.4865870E+000
120.6410010	5.3698586E+004	7.5740662E+000
120.6614352	5.5426551E+004	7.6498961E+000
120.6818696	5.6059836E+004	7.6775651E+000
120.7023037	5.6875266E+004	7.7149811E+000
120.7227380	5.7688121E+004	7.7511015E+000
120.7431723	5.8385813E+004	7.7797055E+000
120.7636065	5.8866887E+004	7.7995429E+000
120.7840407	5.9149914E+004	7.8127847E+000
120.8044750	5.9232402E+004	7.8163824E+000
120.8249092	5.9227395E+004	7.8159881E+000
120.8453434	5.9167492E+004	7.8135834E+000
120.8657777	5.8032887E+004	7.7653093E+000
120.8862120	5.5880152E+004	7.6698604E+000
120.9066462	5.7547301E+004	7.7454305E+000
120.9270804	5.8742828E+004	7.7945147E+000
120.9475148	5.8607223E+004	7.7888184E+000
120.9679489	5.8399746E+004	7.7801280E+000
120.9883832	5.8136398E+004	7.7693372E+000
121.0088173	5.7706699E+004	7.7517924E+000

Not secure | dr5.lamost.org/result?sqlid=59730&rows=1000&page=1&sort=inputobj_input_id&order=asc

Classic Form - NAS... vtuofenrhuamdu Outlook VSK: Search Isaac Newton Grou... OBSERVATION MO... Weather Report Home - India STScI Mikulic Arc...

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Search Result

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	FITS	PHO	View	Simbad	input_id	input_rs	input_obj	dist(arcsec)	stid	stdate	stid	obj	obj	pland	spid	fiber
1					0	290.745330	50.983830	0.0127888099451	249604029	2014-09-27	58028	56027	56027	KP102323N50181.4	29	29
2					0	290.745330	50.983830	0.0984578009830	350704029	2015-05-29	57172	57171	57171	KP102323N50181.4	29	29
3					0	290.745330	50.983830	8.1456100490241	575709037	2017-05-31	57005	57004	57004	HD101718N49511.9	37	37

Not secure | dr5.lamost.org/result?sqlid=59730&rows=1000&page=1&sort=inputobj_input_id&order=asc

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	pland	stid	fiberid	class	SUBCLASS	z	ra	dec	lerr	logg	sn	rv
1	KP102323N50181.4	29	STAR	K7	-0.000385267	290.745330000	50.983833000	4495.58	4.330	-3.143	-11.58	
2	KP102323N50181.4	29	STAR	K5	-0.003448438	290.745300000	50.983830000	4495.58	4.219	-0.099	-134.44	
3	HD101718N49511.9	37	STAR	K5	-0.001352802	290.745379000	50.983804000	4477.79	4.340	-0.100	-40.55	