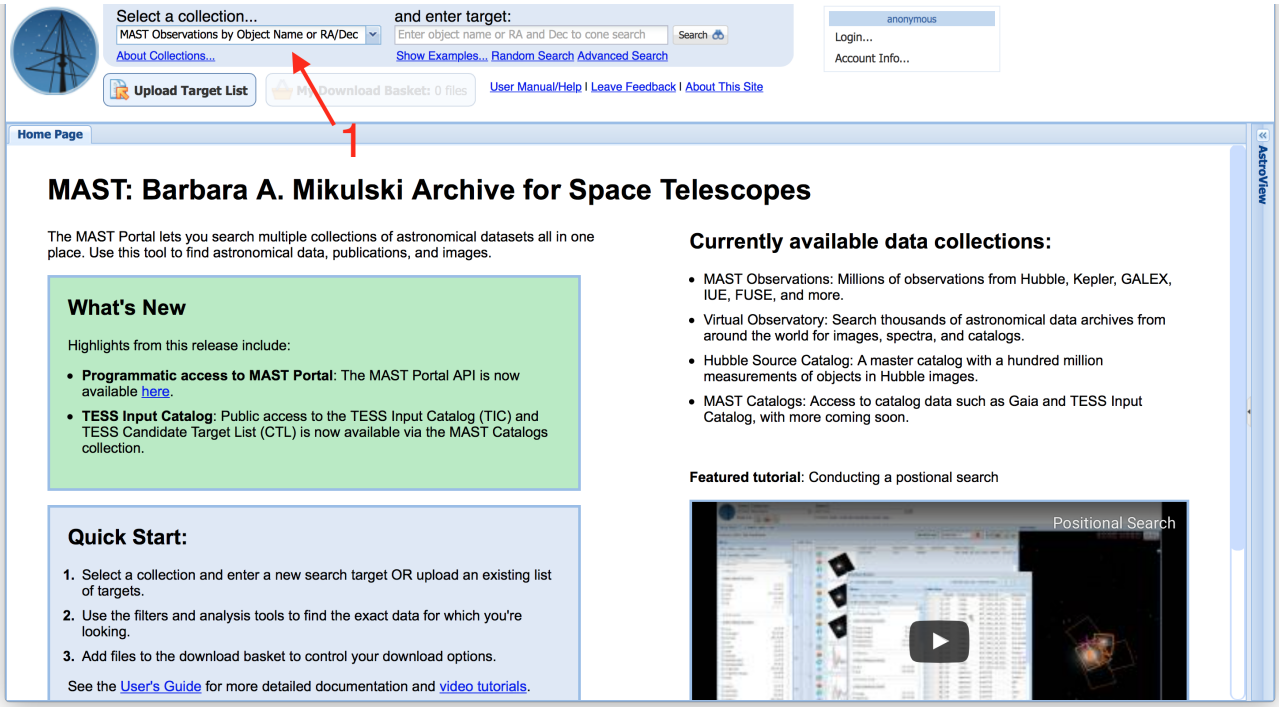
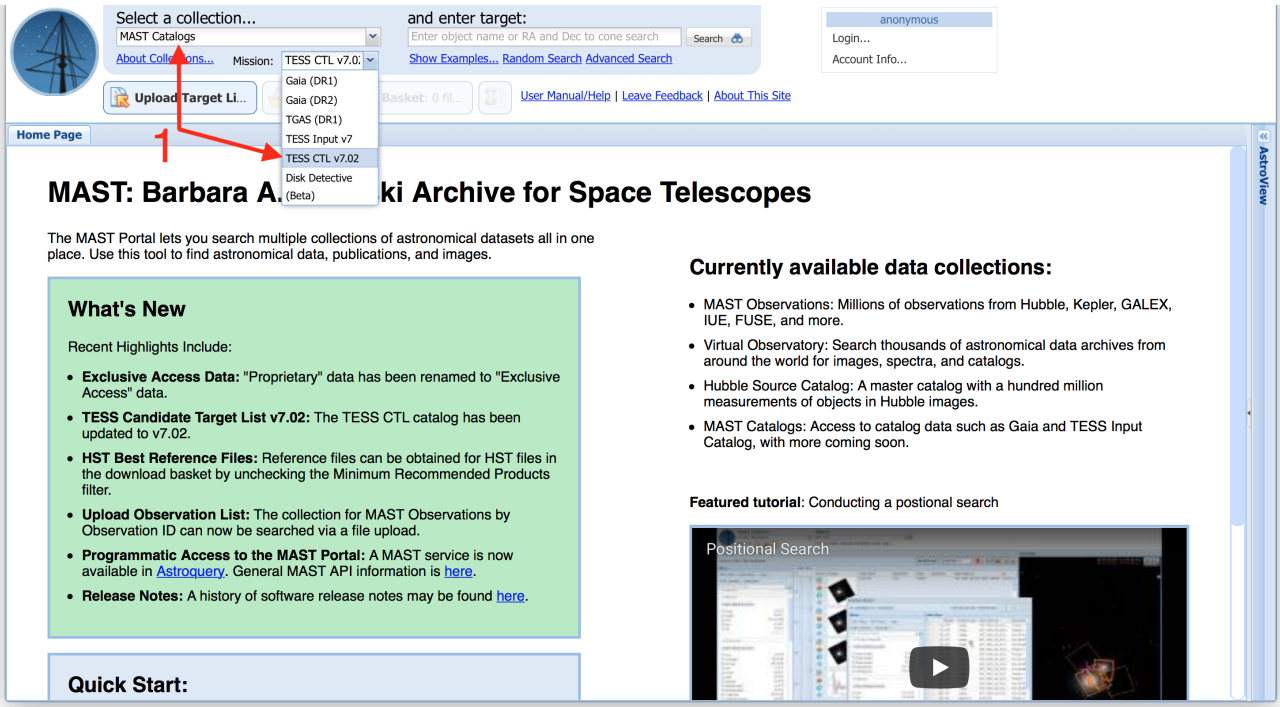
6.0.2 - Search the exoCTL centered on K2 Campaign 2.

This tutorial will show you how to do a search on a single coordinate, within the TESS Exoplanet Candidate Target List (exoCTL) in the MAST Portal. Specifically, we will do a search centered on the K2 Campaign 2 field.

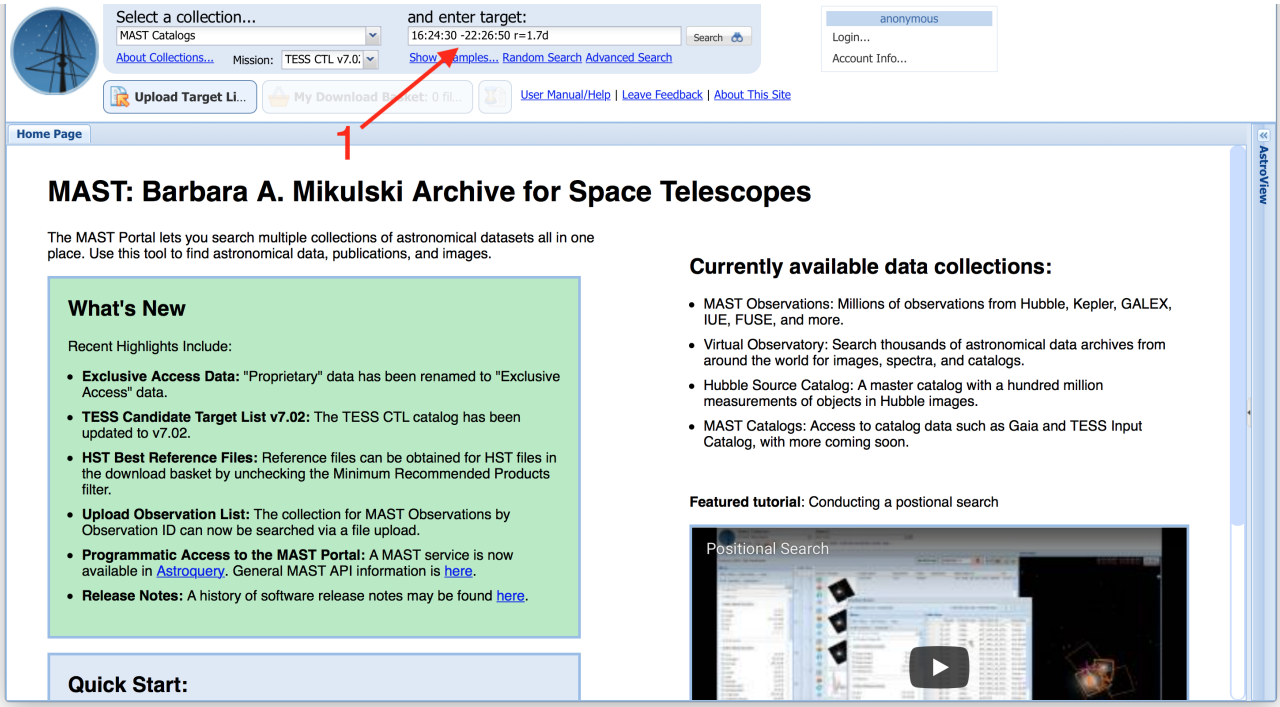
Step 1 - Select Collection: Upon visiting the MAST Portal, the first step is to change the collection of data we are searching in from the Context menu (Item #1) at the top left.



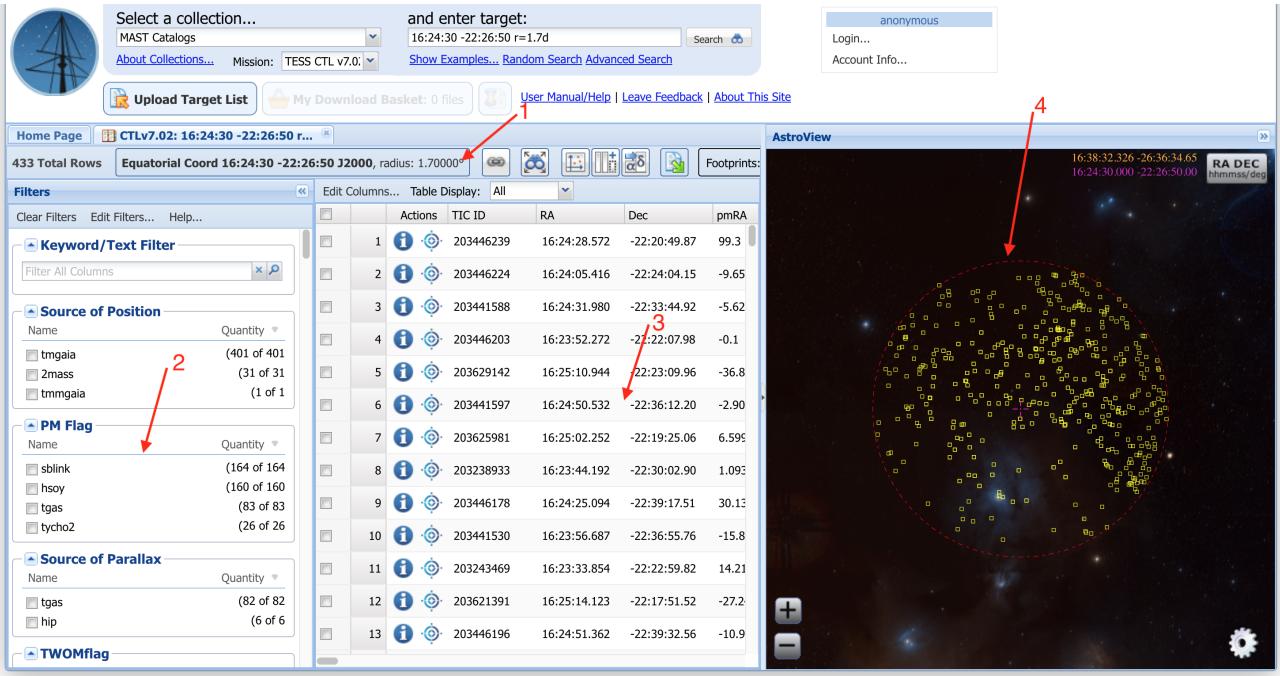
Step 2 - Select TESS xCTL: From the Context drop-down menu, select **MAST Catalogs**, then, in the Mission drop-down menu that appears (Item #1), select **TESS CTL v7.02** for the exoCTL list. Note that the version number will change as newer editions replace older ones in the Portal.



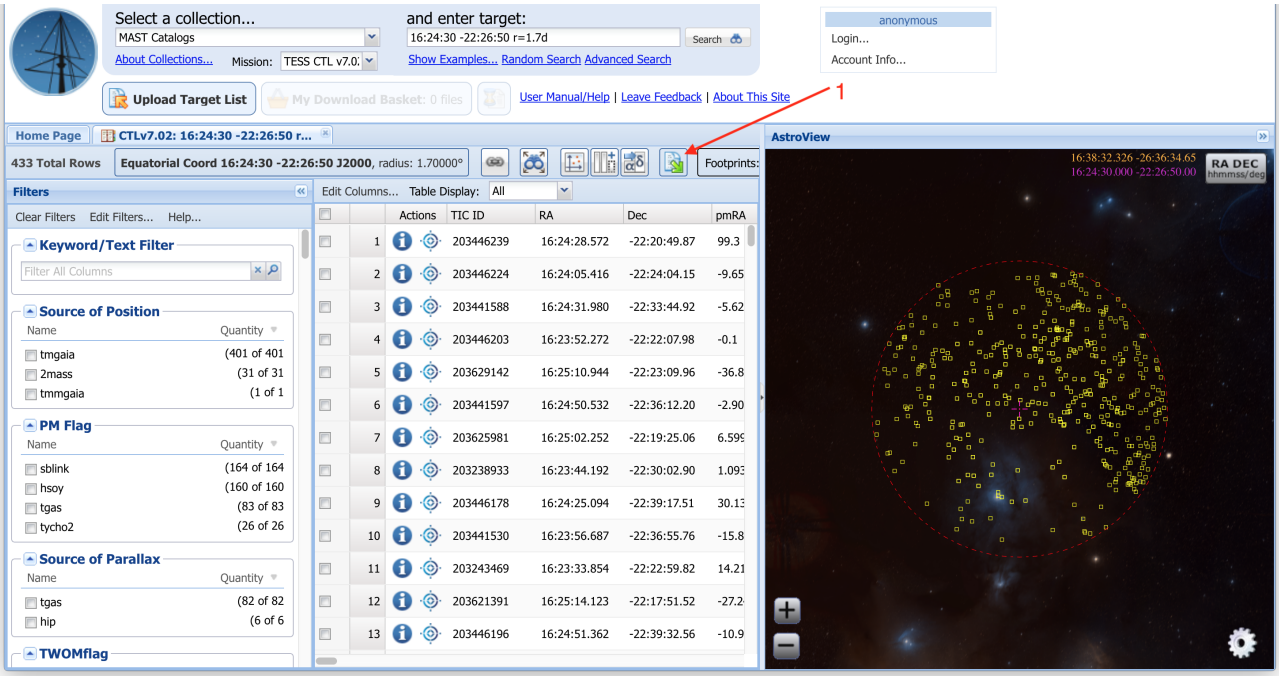
Step 3 - Enter Coordinates For Query: We are now ready to do a target search by entering text into the Search Box (Item #1). The Search Box can accept coordinates in either decimal degrees or in sexagesimal format. You can specify a search radius by adding r = and then your desired radius. For example, **r = 0.3d** is a 0.3 degree search radius, **r = 5m** is a 5 arcminute search radius, and **r = 3s** is a 3 arcsecond search radius. For our example, we'll search on the K2 Campaign 2 field center located at **16:24:30 -22:26:50** with a search radius of **1.7d**, which is roughly the size of a Kepler module. Note that this search may take a while, since searches with radii larger than a degree typically return a lot of rows.



Step 4 - Understanding The Search Results: We now see the results of our search. First, note that the search radius we specified is reported back to us in the query translation button (Item #1). The search results area has three main panels, on the left is the Filters panel (Item #2), where you can select subsets of your returned rows by filtering column values. In the middle is the Search Results Grid (Item #3), which contains the table of results itself (hint: columns can be sorted by clicking on the headers). On the right is the AstroViewer (Item #4), which is a 3D sky map that will overplot the footprints of observations or catalog objects from your search results, and offers a wide range of background images from surveys that span the electromagnetic sepctrum from X-rays to the radio. We can see all the TIC sources in our 1.7 degree search radius quite clearly.



Step 5 - Save Your Results: You can save the search results at any time using the Export Button (Item #1). From the dialog menu that appears, you'll be able to select the format of your output file and whether you want to export all the available columns in the catalog, or only those that are currently displayed in the Search Results Grid.


Select a collection...
MAST Catalogs
About Collections...
Mission: TESS CTL v7.0
and enter target:
16:24:30 -22:26:50 r=1.7d
Search
Show Examples... Random Search Advanced Search
anonymous
Login...
Account Info...
Upload Target List
My Download Basket: 0 files
User Manual/Help | Leave Feedback | About This Site
1
Home Page
CTLv7.02: 16:24:30 -22:26:50 r...
433 Total Rows
Equatorial Coord 16:24:30 -22:26:50 J2000, radius: 1.70000°
Footprints:
Filters
Clear Filters
Edit Filters...
Help...
Keyword/Text Filter
Filter All Columns
Source of Position
Name
Quantity
tmgaia (401 of 401)
2mass (31 of 31)
tmmgaia (1 of 1)
PM Flag
sblink (164 of 164)
hsoy (160 of 160)
tgas (83 of 83)
tycho2 (26 of 26)
Source of Parallax
tgas (82 of 82)
hip (6 of 6)
TWOMflag
Edit Columns...
Table Display: All
Actions
TIC ID
RA
Dec
pmRA
1 203446239 16:24:28.572 -22:20:49.87 99.3
2 203446224 16:24:05.416 -22:24:04.15 -9.65
3 203441588 16:24:31.980 -22:33:44.92 -5.62
4 203446203 16:23:52.272 -22:22:07.98 -0.1
5 203629142 16:25:10.944 -22:23:09.96 -36.8
6 203441597 16:24:50.532 -22:36:12.20 -2.90
7 203625981 16:25:02.252 -22:19:25.06 6.599
8 203238933 16:23:44.192 -22:30:02.90 1.093
9 203446178 16:24:25.094 -22:39:17.51 30.13
10 203441530 16:23:56.687 -22:36:55.76 -15.8
11 203243469 16:23:33.854 -22:22:59.82 14.21
12 203621391 16:25:14.123 -22:17:51.52 -27.2
13 203446196 16:24:51.362 -22:39:32.56 -10.9
AstroView
16:38:32.326 -26:36:34.65
16:24:30.000 -22:26:50.00
RA DEC
hhmmss/deg