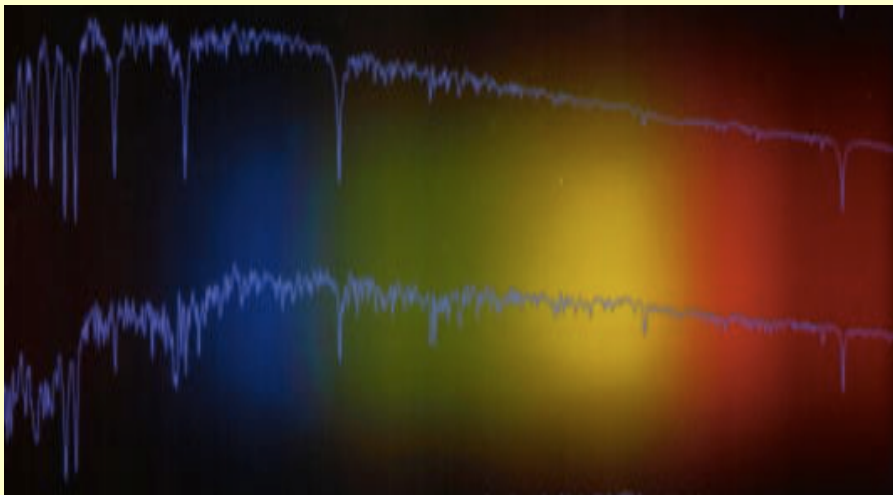




Spectral Classes Tool

Or: *do you like “like-stars”?*

(Found under “Tools” menu, MAST homepage)



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Goal: address this request

“Give me a list of MAST-observed stars and their logged attributes with a common spectral type (range).”

To solve there are issues:

1. Agreed upon spectral types
 - What are they?
 - Where do we get them?
 - If more than one is available, which do we use?



Goal: address this request

“Give me a list of MAST-observed stars and their logged attributes with a common spectral type (range).”

To solve there are issues:

1. Agreed upon spectral types
 - What are they?
Consultants give us modern complete list of types.
 - Where do we get them?
Skiff, Sky2000, Simbad catalogs.
 - If more than one is available, which do we use?
The most recent (...sigh!). (Should we instead use “community investigator clouds”?)



(Issues...)

2. Array of **spectral peculiarities** for a given type

Solution:

- two in common for all types (e.g. composite, p, e, n, ...)
- two for an individual spectral type
- e.g. for A stars: m, lam Boo, shell



Our solution is this search form.

Look under Tools in the MAST home page, upper menu.

The screenshot shows the 'Spectral Classes of Like Stars' search interface. At the top, there is a navigation menu with 'MAST', 'STScI', 'Tools', 'Mission_Search', 'Tutorial', and 'Site Search'. Below the menu, there are links for 'About MAST' and 'Getting Started'. A red banner prompts users to 'Please take The 2012 MAST User Survey'. The main title is 'Spectral Classes of Like Stars' with a '(Help) Field Descriptions Tip' link. There are two form options: 'Standard Form' (selected) and 'File Upload Form'. The search form includes a 'Search' button, a 'Reset' button, and a 'Clear Form' button. Below the buttons are input fields for 'Target Name', 'Right Ascension', 'Resolver' (set to 'NED'), 'Declination', 'Radius (arcmin)' (set to '3.0'), and 'Equinox (J2000)'. A table of classification options is displayed, with columns for 'Sp. Types', 'Subtypes', 'Lum. Class', and 'Peculiarities'. The 'Sp. Types' column lists O, B, A, F, G, K, M, L, T, Y, C, and CR. The 'Subtypes' column lists values from 0 to 10. The 'Lum. Class' column lists values from all to III-IV. The 'Peculiarities' column lists various spectral features like 'none comp.', 'p e', '[e],q', 'var s', 'n,nn', 'none', '[e],q', 'var s', 'n,nn', 'none', 'HgMn', 'Si', 'SiCrEu', 'SrCrEu', 'SiEu', 'Cr', 'Sr', 'none', 'PCyg', 'lam Boo', 'met-wk', 'met-str', 'Am', 'shell', 'Ba', and 'Rho Pup'. Below the table is a 'Classification String' input field. There are two 'User-specified field' sections, each with a dropdown menu and a 'Field Descriptions' link. The 'Output Columns' section has a list of fields (Mark, Mission Object Name, Classification String, Bibcode, Mission, Data ID, Instr Config, TT, tt, LL) with 'up', 'down', 'remove', and 'add' buttons. The 'Sort By' section has dropdowns for 'ang_sep ()', 'RA (J2000)', and 'Dec (J2000)', each with a 'Reverse' checkbox. The 'Output Coords' section has radio buttons for 'Sexagesimal', 'Degrees', and 'Hours'. The 'Output Format' section has a dropdown for 'HTML_Table'. There are checkboxes for 'Show Query' and 'Make Rows Distinct'. The 'Maximum Records' is set to 1001 and 'Records per Page' is set to 100. At the bottom, there are 'Search', 'Reset', and 'Clear Form' buttons. The footer contains links for 'Top of Page', 'Copyright', 'Suggestions', 'Email Us', 'Printer Friendly page', 'Contacts', and 'Last Modified: Jan 05, 2012 9:00'.



Here's an example:

“Show me a list of all A5IVm stars with MAST spectra.”

You can also filter this to show “unique observations.”


The screenshot shows the MAST website interface for searching spectral classes. The main heading is "Spectral Classes of Like Stars". Below the heading, there are two tabs: "Standard Form" (selected) and "File Upload Form". There are search, reset, and clear form buttons. The search criteria section includes fields for "Target Name", "Right Ascension", "Declination", "Resolver" (set to NED), "Radius (arcmin)" (set to 3.0), and "Equinox" (set to J2000). Below this is a table of filters:

Sp. Types	Subtypes	Lum. Class	Peculiarities			
O	all	all	none	none	none	none
A	0	IX	comp.		HgMn	PCyg
F	1	VIII	p		Si	lam Boo
G	2		e		SiCrEu	met-wk
K	3	VI	[e],q	[e],q	SrCrEu	met-str
L	4	Vb	var	var	SiEu	Am
T	5	Va,V	s	s	Cr	shell
Y	6	IV-V	n,nn	n,nn	Sr	Ba
C	7	IVb				Rho Pup
CR	8	IV				
	9	IVa				
	10	III-IV				

The "Sp. Types" dropdown is highlighted with an orange circle, showing "A5" selected. Below the filters, there are two "User-specified field" sections, each with a dropdown menu and a text input field. The "Output Columns" section has a list of fields with up/down arrows and a "reset" button. The "Sort By" section has three dropdown menus and "Reverse" checkboxes. The "Output Coords" section has radio buttons for "Sexagesimal", "Degrees", and "Hours". The "Output Format" section has a dropdown menu. The "Show Query" and "Make Rows Distinct" sections have checkboxes. The "Maximum Records" and "Records per Page" sections have dropdown menus. At the bottom, there are search, reset, and clear form buttons.



Results page for
“Show me a list of all
A5IVm stars with
MAST spectra.”

[Mission Search](#) / [Missions](#) / [Contacts](#) / [STScI](#) / [MAST](#) [Columns Help](#)
 **Spectral Classes of Like Stars** [Edit Query](#)

[Display numeric columns graphically using VOPlot](#)
 number of rows returned = 4
 Click on Bibcodes to see ADS paper.
 Click on Data ID entries to preview information on data set.
 Click on top column headers to sort the table on the column contents.
 Click on bottom column headers for more information about the data in that column.

Mark	Mission Object Name	Classification String	Bibcode	Data ID	TT	tt	LL	P1	P2	P3	P4	comment
<input type="checkbox"/>	HD 6619	kA2hA5mF0(IV)	1989ApJS...70..623	LWR16635	12	15	27	0	0	0	5	Skiff table correlation using target name/aliases, < 5 arcsec separation, and latest publication date
<input type="checkbox"/>	HD 6619	kA2hA5mF0(IV)	1989ApJS...70..623	SWP20736	12	15	27	0	0	0	5	Skiff table correlation using target name/aliases, < 5 arcsec separation, and latest publication date
<input type="checkbox"/>	HD 152431	ASIVm?	1953AnHar.119....1H	LWR16637	12	15	27	0	0	0	5	Skiff table correlation using target name/aliases, < 5 arcsec separation, and latest publication date
<input type="checkbox"/>	HD 152431	ASIVm?	1953AnHar.119....1H	SWP48094	12	15	27	0	0	0	5	Skiff table correlation using target name/aliases, < 5 arcsec separation, and latest publication date

Link to preview

Link to data

Link to paper:
spectral type

Inventory | Bibcode | Data | SpClass Codes | Catalog ranking info