VOSA

A VO Spectral Energy Distribution Analyzer

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Introduction

VOSA (VO Sed Analyzer)

- a web tool: http://svo.cab.inta-csic.es/theory/vosa/
- designed to automatically determine physical parameters from comparison of observed photometry with collections of theoretical models.
- for several objects at the same time. *(∼ 1000 objects)*
- More than 300 users analysing data.
- More than 6000 data files analysed.
- Using VO tools and services.

Workflow

1. **Build object SEDs.**
   - Object properties: name resolution, distance, extinction.
   - User photometry tables + VO catalogs.
2. **Analyze object SEDs.**
   - Fit observed data with theoretical spectra models and/or templates from the VO and estimate physical properties for the objects. (Chi-square test + Bayes analysis)
   - Generate a Hertzsprung-Russel diagram using the estimated parameters, obtaining isochrones and evolutionary tracks from the VO (only stars).
3. **Save results** as VOTable, ASCII, png, eps...

Two different workflows

Theoretical model services

Documents Models Services

VOSA: VO Sed Analyzer

VO SED Analyzer

Services: VOSA Filters TSAP S3if

My data Users Models Uploads LogOut

VOSA

VOSA allows to analyze both stellar and galactic data but, given that the physics involved is not the same, there are some important differences between both cases.

Please, select first what type of objects you want to work with in this session.

Stars and brown dwarfs

Galaxies

Acknowledging VOSA in publications:
Please include the following in any published material that makes use of VOSA:

This publication makes use of VOSA, developed under the Spanish Virtual Observatory project supported from the Spanish MICINN through grant AyA2008-02156.

Referencing VOSA in publications:
If your research benefits from the use of VOSA, we would appreciate if you could include the following reference in your publication:

Bayo, A., Rodrigo, C., Barrado y Navascués, D., Solano, E., Gutiérrez, R., Morales-Calderón, M., Allard, F. 2008, A&A 492,277B.

News: SED building

- More filters.
  - Filter properties from the SVO Filter Profile Service.
  - $\sim$ 1800 filters available.
  - Better correspondence with the Photometry Data Model.
- More options.
  - *nofit*: including points in the SED that won't be used for the analysis.
  - *Av range*: specifying an extinction range so that extinction becomes a fit parameter.
- More VO photometry catalogues.

New: SED: more filters

Filter Profile Service

An experiment about filter standardization in the VO

Funded by INTA — Ministerio de Ciencia e Innovación

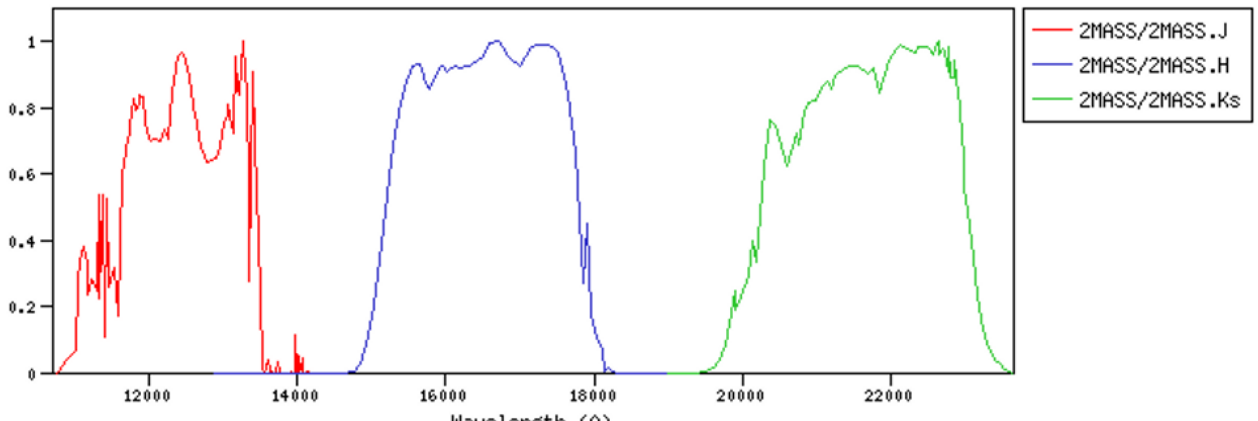
VO Service Browse Search AuthId: Passw: Login Register

2MASS | AAO | AKARI | CAHA | CFHT | CTIO | DENIS | GALEX | Gemini | Generic | Geneva | GTC | Hipparcos | HST | IAC80
INT | IRAS | IUE | Keck | KPNO | LaSilla | MSX | NIRT | NOT | OAF | Paranal | SAO | SLOAN | Spitzer | Subaru
TCS | TNG | TYCHO | UKIRT | WHT | WISE

2MASS filters:

Filter ID	λmean	λeff	λmin	λmax	Weff	ZP (Jy)	Obs. Facility	Instrument	Description
2MASS/2MASS.J	12350.0	12350.0	10806	14068	1624.1	1594.0	2MASS		2MASS J
2MASS/2MASS.H	16620.0	16620.0	14787	18231	2509.4	1024.0	2MASS		2MASS H
2MASS/2MASS.Ks	21590.0	21590.0	19544	23552	2618.9	666.8	2MASS		2MASS Ks

Filter Plots



New: SED: more filters

Filter Profile Service

An experiment about filter standardization in the VO

Funded by

VO Service Browse Search AuthId: Passw: Login Register

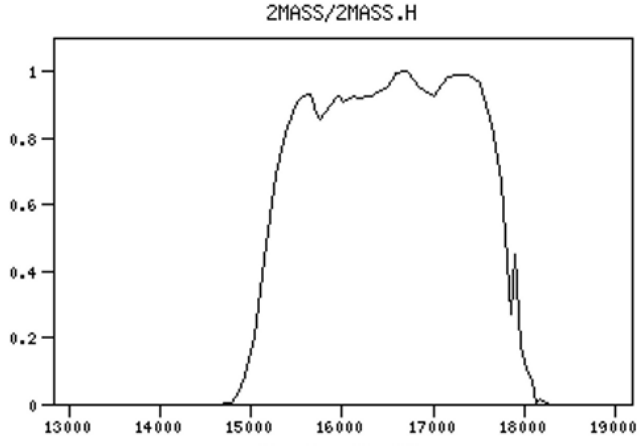
Most of the filters from the SVO Filter Profile Service are available to be used in VOSA using the FilterID as name.

Some of them are not in the list below, in some cases to make the list more easy to browse (because they seem to be less popular filters) and in other cases because not all the synthetic photometry is ready yet. In any case, you can try to use them too.

If you want to upload your own photometry into VOSA as magnitudes, make sure that VOSA will transform those magnitudes to fluxes as you expect (click on the filter name in this list to see the details of the transformation for that case). If not, please, transform your photometry to fluxes before uploading it.

You can click on the table headers to sort the list by that field

Filter ID	λ_{eff}	W_{eff}	A_f/A_V	ZP (Jy)	Mag.Sys.	ZP Type	Description
2MASS/2MASS.H	16620.00	2509.40	0.19	1024.00	Vega	Pogson	2MASS H



2MASS/2MASS.H

a.k.a. **2MASS_H** (you can still use the old vosa name for this filter in your input files)

VOSA will assume that, if you include in your input file magnitudes corresponding to this filter, these magnitudes must be transformed to fluxes using the following relation:

$F = F_0 * 10^{-mag/2.5}$

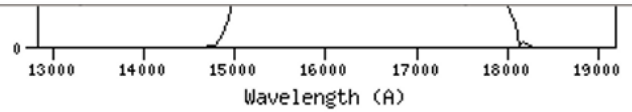
where

- F_0 = 1024.00 Jy *(1.13e-10 erg/cm2/s/A)*

If this is not right for your case, please, transform your magnitudes to fluxes before uploading them to VOSA

More info about this filter in the Filter Profile Service

New: SED: more filters



them to VOSA

More info about this filter in the Filter Profile Service

2MASS/2MASS.J	12350.00	1624.15	0.31	1594.00	Vega	Pogson	2MASS J
2MASS/2MASS.Ks	21590.00	2618.86	0.13	666.80	Vega	Pogson	2MASS Ks
AAO/AAO.aao1	4351.69	1035.57	1.31	3926.34	Vega	Pogson	AAO #1, aao glass b, B
AAO/AAO.aao14	6418.54	1601.36	0.83	2962.97	Vega	Pogson	AAO #14, aao glass os, O*
AAO/AAO.aao2	5349.43	909.82	1.04	3636.87	Vega	Pogson	AAO #2, aao glass v, V
AAO/AAO.aao21	3634.27	642.64	1.57	1717.18	Vega	Pogson	AAO #21, aao cus04, U
AAO/AAO.aao22	4391.67	1067.90	1.30	3967.53	Vega	Pogson	AAO #22, kpno b, B
AAO/AAO.aao23	5416.22	1044.08	1.02	3592.21	Vega	Pogson	AAO #23, kpno v, V
AAO/AAO.aao24	6499.55	1303.98	0.82	2970.27	Vega	Pogson	AAO #24, kpno r, R
AAO/AAO.aao25	8172.24	1715.45	0.59	2370.40	Vega	Pogson	AAO #25, kpno i, I
AAO/AAO.aao3	6677.10	1111.97	0.79	2866.13	Vega	Pogson	AAO #3, aao glass r, R
AAO/AAO.aao4	8578.38	3028.26	0.54	2265.66	Vega	Pogson	AAO #4, aao glass i, I
AAO/AAO.aao44	4369.69	959.06	1.31	4018.21	Vega	Pogson	AAO #44, anu 75 b, B
AAO/AAO.aao45	5397.00	890.11	1.03	3625.75	Vega	Pogson	AAO #45, anu 75 v, V
AAO/AAO.aao46	6358.40	1360.61	0.84	3017.04	Vega	Pogson	AAO #46, anu 75 r, R
AAO/AAO.aao47	7784.64	1107.80	0.63	2478.48	Vega	Pogson	AAO #47, anu 75 i, I
AAO/AAO.aao48	3692.74	546.01	1.55	1844.33	Vega	Pogson	AAO #48, u 48, U
AAO/AAO.aao49	4267.82	963.03	1.34	3869.58	Vega	Pogson	AAO #49, b 49, B
AAO/AAO.aao5	4430.24	1100.90	1.29	3942.03	Vega	Pogson	AAO #5, aao glass bj, BJ
AAO/AAO.aao50	5386.72	961.22	1.03	3608.97	Vega	Pogson	AAO #50, v 50, V
AAO/AAO.aao53	4692.92	27.22	1.22	4214.00	Vega	Pogson	AAO #53, taurus 469.2, He II
AAO/AAO.aao54	5022.47	46.99	1.13	3942.02	Vega	Pogson	AAO #54, taurus 502.3, [O III]
AAO/AAO.aao55	5898.78	44.01	0.93	3353.00	Vega	Pogson	AAO #55, taurus 590.4, He I/Na D
AAO/AAO.aao56	6308.96	42.00	0.85	3137.01	Vega	Pogson	AAO #56, taurus 631.4, [O I]
AAO/AAO.aao57	6585.67	44.75	0.80	2521.60	Vega	Pogson	AAO #57, taurus 658.4, H alpha

New: SED: more VO Photometry catalogues

- New catalogues.
  - DENIS,
  - MSX6C,
  - AKARI, IRC and FIS,
  - IRAS,
  - C2D, Taurus and GLIMPSE Spitzer catalogues,
  - WISE.
- New releases.
  - UKIDSS DR5/7,
  - SDSS DR8
- More than 20 catalogues.

New: SED: more VO Photometry catalogues

More VO Photometry catalogues

MSX6C Infrared Point Source Catalog

Version 2.3 of the Midcourse Space Experiment (MSX) Point Source Catalog (PSC), which supersedes the version (1.2) that was released in 1999 (Cat. V/107), contains over 100,000 more sources than the previous version.. More Info.

Filters: MSX/MSX.A MSX/MSX.C MSX/MSX.D MSX/MSX.E

Search radius: 5 arcsec

Show magnitude limits

AKARI/IRC mid-IR all-sky Survey (ISAS/JAXA, 2010)

The AKARI/IRC Point Source Catalogue Version 1.0 provides positions and fluxes for 870,973 sources observed with the InfraRed Camera (IRC). More Info.

Filters: AKARI/IRC.S9W AKARI/IRC.L18W

Search radius: 5 arcsec

Show magnitude limits

AKARI/FIS All-Sky Survey Point Source Catalogues (ISAS/JAXA, 2010)

The AKARI/FIS All-Sky Survey Bright Source Catalog Version 1.0 provides positions and fluxes for 427071 point sources in the 4 far-infrared wavelengths centered at 65, 90, 140 and 160μm. More Info.

Filters: AKARI/FIS.N60 AKARI/FIS.WIDE-S AKARI/FIS.WIDE-L AKARI/FIS.N160

Search radius: 5 arcsec

Show magnitude limits

C2D Spitzer and Ancillary Data

C2D Fall '07 Full CLOUDS Catalog (CHA_II, LUP, OPH, PER, SER).

Filters: Spitzer/IRAC.I1 Spitzer/IRAC.I2 Spitzer/IRAC.I3 Spitzer/IRAC.I4 Spitzer/MIPS.24mu Spitzer/MIPS.70mu

Search radius: 5 arcsec

Show magnitude limits

GLIMPSE Source Catalog (I + II + 3D)

The Galactic Legacy Infrared Midplane Survey Extraordinaire (GLIMPSE), is a survey of Galactic Plane central parts made with the Infrared Array Camera (IRAC) aboard the Spitzer Space Telescope (SST).. More Info.

Filters: Spitzer/IRAC.I1 Spitzer/IRAC.I2 Spitzer/IRAC.I3 Spitzer/IRAC.I4

Search radius: 5 arcsec

Show magnitude limits

Taurus Catalog

Spitzer Legacy Science Program (Taurus) Public Database, October 2008 v2.1.

Filters: Spitzer/IRAC.I1 Spitzer/IRAC.I2 Spitzer/IRAC.I3 Spitzer/IRAC.I4 Spitzer/MIPS.24mu Spitzer/MIPS.70mu

Search radius: 5 arcsec

Show magnitude limits

UKIDSS Large Area Survey DR7

UKIDSS Large Area Survey DR7. The search is restricted to class -1 (star) or -2 (probable star) objects. More Info.

Filters: UKIRT/UKIDSS.Y UKIRT/UKIDSS.J UKIRT/UKIDSS.H UKIRT/UKIDSS.K

UKIDSS Galactic Clusters Survey DR7

UKIDSS Galactic Clusters Survey DR7. The search is restricted to class -1 (star) or -2 (probable star) objects. More Info.

Filters: UKIRT/UKIDSS.Z UKIRT/UKIDSS.Y UKIRT/UKIDSS.J UKIRT/UKIDSS.H

More VO Photometry catalogues

Filters: UKIRT/UKIDSS.Y UKIRT/UKIDSS.J UKIRT/UKIDSS.H UKIRT/UKIDSS.K

Search radius: 5 arcsec

Show magnitude limits

Filters: UKIRT/UKIDSS.Z UKIRT/UKIDSS.Y UKIRT/UKIDSS.J UKIRT/UKIDSS.H UKIRT/UKIDSS.K

Search radius: 5 arcsec

Show magnitude limits

UKIDSS Galactic Plane Survey DR6

UKIDSS Galactic Plane Survey DR6. The search is restricted to class -1 (star) or -2 (probable star) objects. More Info.

Filters: UKIRT/UKIDSS.J UKIRT/UKIDSS.H UKIRT/UKIDSS.K

Search radius: 5 arcsec

Show magnitude limits

UKIDSS Ultra Deep Survey DR5

UKIDSS Ultra Deep Survey DR5. The search is restricted to class -1 (star) or -2 (probable star) objects. More Info.

Filters: UKIRT/UKIDSS.J UKIRT/UKIDSS.H UKIRT/UKIDSS.K

Search radius: 5 arcsec

Show magnitude limits

UKIDSS Deep Extragalactic Survey DR7

UKIDSS Deep Extragalactic Survey DR7. The search is restricted to class -1 (star) or -2 (probable star) objects. More Info.

Filters: UKIRT/UKIDSS.J UKIRT/UKIDSS.H UKIRT/UKIDSS.K

Search radius: 5 arcsec

Show magnitude limits

WISE catalogue

WISE.

Filters: WISE/WISE.W1 WISE/WISE.W2 WISE/WISE.W3 WISE/WISE.W4

Search radius: 5 arcsec

Show magnitude limits

Optical

Tycho-2 Catalogue

The Tycho-2 Catalogue is an astrometric reference catalogue containing positions and proper motions as well as two-colour photometric data for the 2.5 million brightest stars in the sky.. More Info.

Filters: TYCHO/TYCHO.B TYCHO/TYCHO.V

Search radius: 5 arcsec

Show magnitude limits

CMC-14

The full CMC-14 catalog (around 95.85million source in the region -30 to +50°). More Info.

Filters: SLOAN/SDSS.r

Search radius: 5 arcsec

Show magnitude limits

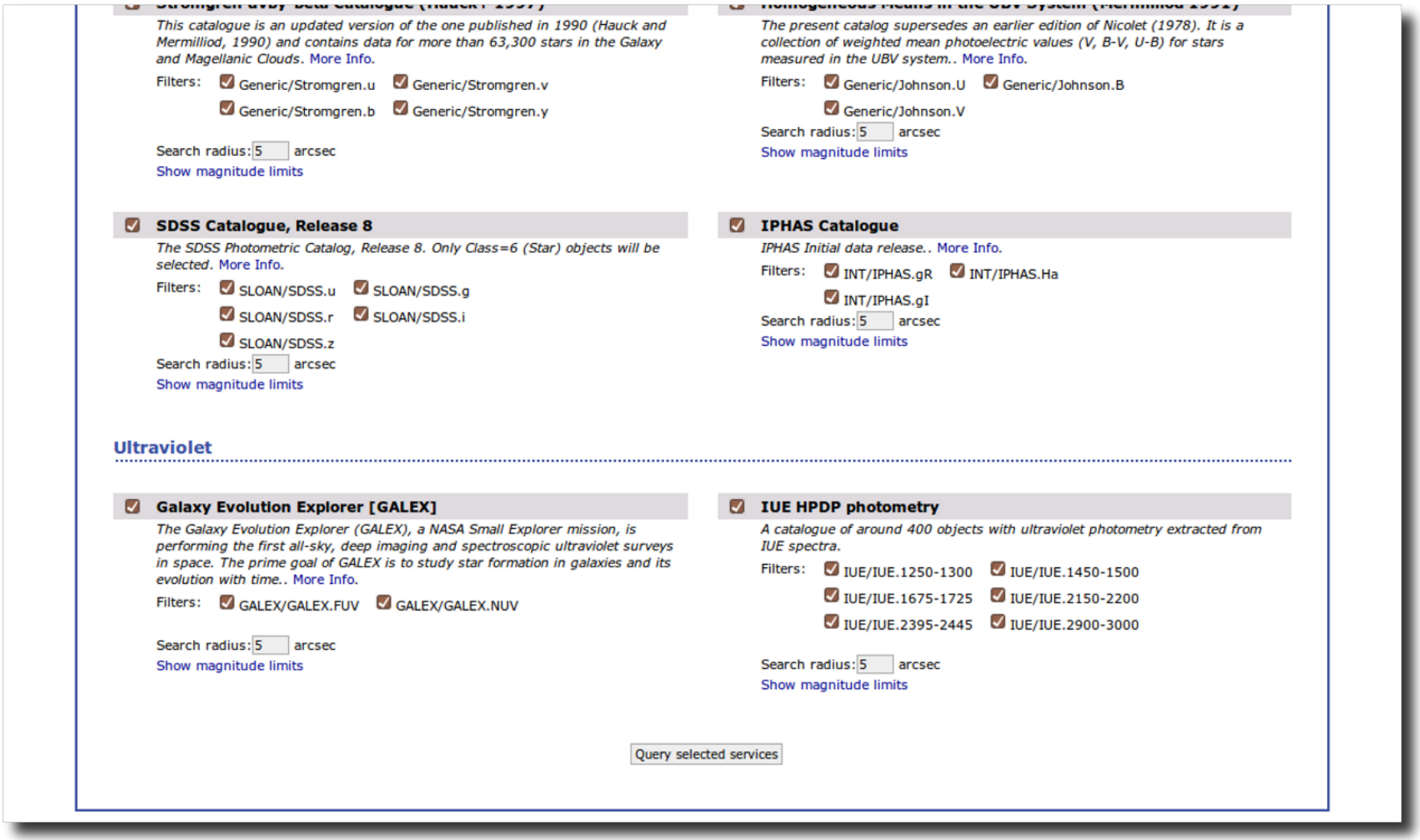
Stromgren uvby-beta Catalogue (Hauck+ 1997)

This catalogue is an updated version of the one published in 1990 (Hauck and Mermilliod, 1990) and contains data for more than 63,300 stars in the Galaxy

Homogeneous Means in the UBV System (Mermilliod 1991)

The present catalog supersedes an earlier edition of Nicolet (1978). It is a collection of weighted mean photoelectric values (V, B-V, U-B) for stars

More VO Photometry catalogues



Final SED

Object data

ChaHa1
ChaHa10
ChaHa11
ChaHa12
ChaHa13
ChaHa2
ChaHa3
ChaHa4
ChaHa5
ChaHa6
ChaHa7
ChaHa8
ChaHa9
excess
See all

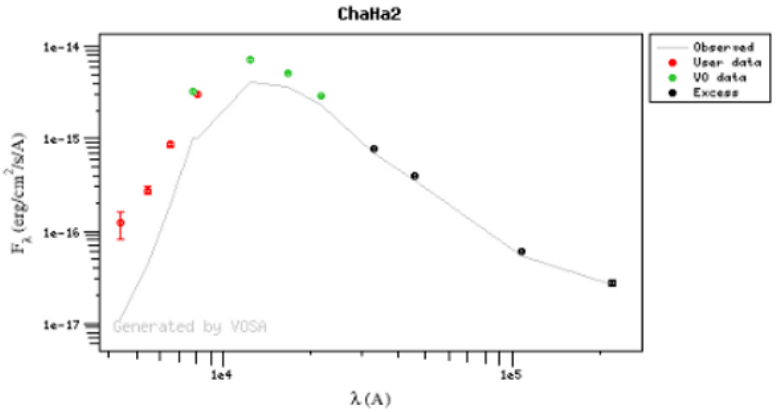
ChaHa2

Position: (166.929167,-77.566389) Distance: 160 pc A_V: 2.0

Data for this object:

		Final		User		VO		
Filter	λ_{med}	Flux	ΔF	Flux	ΔF	Flux	ΔF	
Generic/Johnson.B	4378.11999165	1.211241e-16	3.904581e-17	1.211241e-16	3.904581e-17	---	---	Delete
Generic/Johnson.V	5466.11399596	2.764148e-16	2.545874e-17	2.764148e-16	2.545874e-17	---	---	Delete
CFHT/CFHT.R	6515.8719123	8.586614e-16	3.954282e-17	8.586614e-16	3.954282e-17	---	---	Delete
DENIS/DENIS.I	7862.1015966	3.217687e-15	1.185440e-16	---	---	3.217687e-15	1.185440e-16	Delete
CFHT/CFHT.I	8090.44887259	3.051053e-15	1.405062e-16	3.051053e-15	1.405062e-16	---	---	Delete
2MASS/2MASS.J	12350	7.213639e-15	1.594562e-16	---	---	7.213639e-15	1.594562e-16	Delete
2MASS/2MASS.H	16620	5.157575e-15	1.235079e-16	---	---	5.157575e-15	1.235079e-16	Delete
2MASS/2MASS.Ks	21590	2.898952e-15	5.607070e-17	---	---	2.898952e-15	5.607070e-17	Delete
WISE/WISE.W1	33156.5603084	7.832506e-16	4.328403e-18	---	---	7.832506e-16	4.328403e-18	Delete
WISE/WISE.W2	45644.9905454	3.935687e-16	2.537431e-18	---	---	3.935687e-16	2.537431e-18	Delete
WISE/WISE.W3	107868.444578	6.032565e-17	5.556197e-19	---	---	6.032565e-17	5.556197e-19	Delete
WISE/WISE.W4	219149.640363	2.726999e-17	1.632579e-18	---	---	2.726999e-17	1.632579e-18	Delete

Excess detected from **WISE/WISE.W1**. Points with larger wavelength will not be considered in model fit.
You can manually specify where excess starts.
Apply excess from WISE/WISE.W1



News: SED analysis

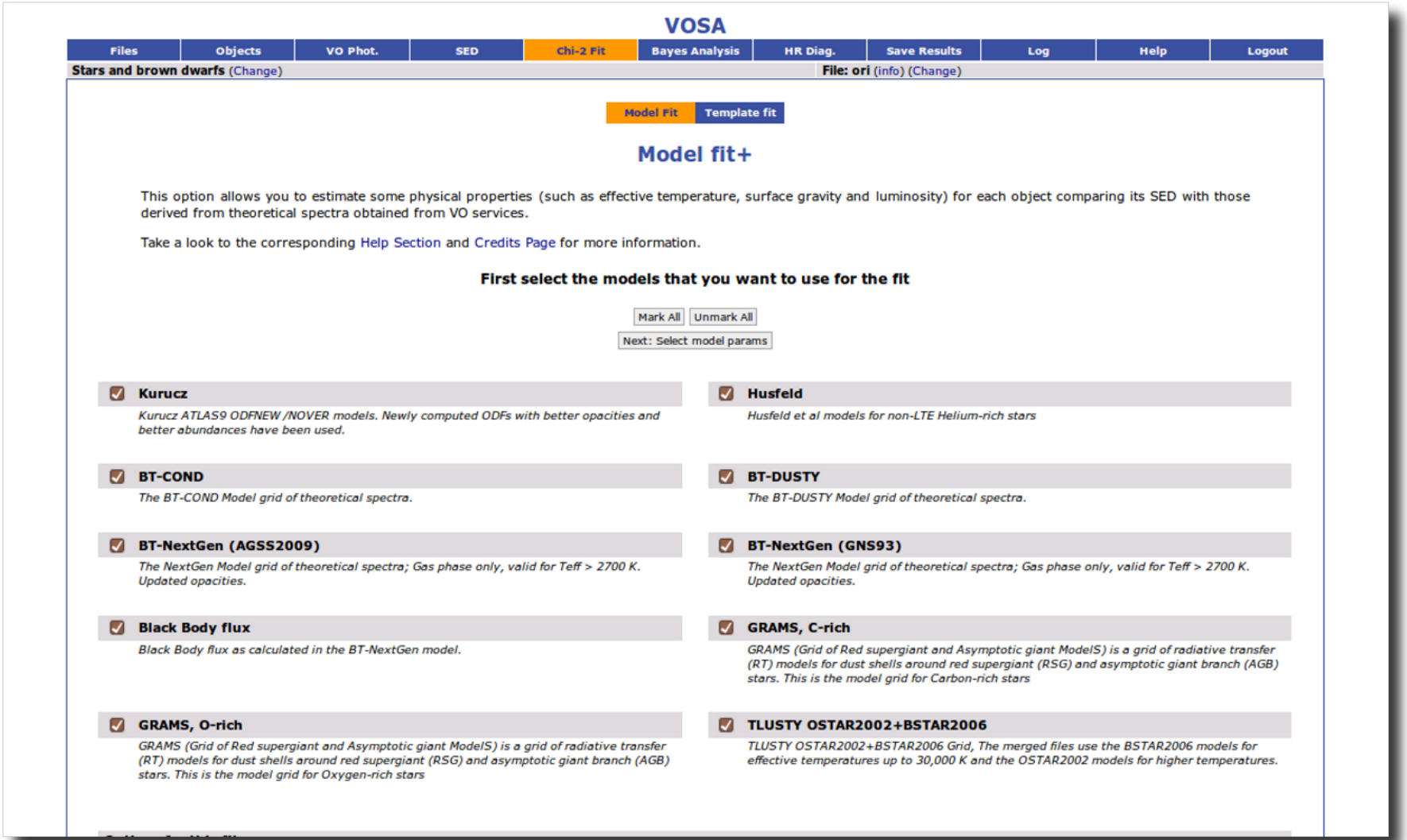
Chi-2 fitting and Bayes analysis.

- New theoretical models.
- New observational templates.
- Extinction as a fit parameter.
  - Having the right value for the extinction is very important because it changes the SED, specially for hot objects.
  - Now, the user can give an Av range so that VOSA estimates the best value of the extinction together with model parameters.

News: Analysis: New theoretical models

- New Lyon models.
  - BT-NextGen (AGS2009 and GNS93),
  - BT-Cond,
  - BT-Dusty,
- Red supergiants and AGB stars.
  - GRAMS C-rich,
  - GRAMS O-rich
- Simple Black Body.
- 10 models for stars and 5 for galaxies.

News: Analysis: New theoretical models



News: Analysis: New theoretical models

VOSA

Files | Objects | VO Phot. | SED | Chi-2 Fit | Bayes Analysis | HR Diag. | Save Results | Log | Help | Logout

Stars and brown dwarfs (Change) **File: prueba** (info) (Change)

Model Fit | Template fit

Model fit+

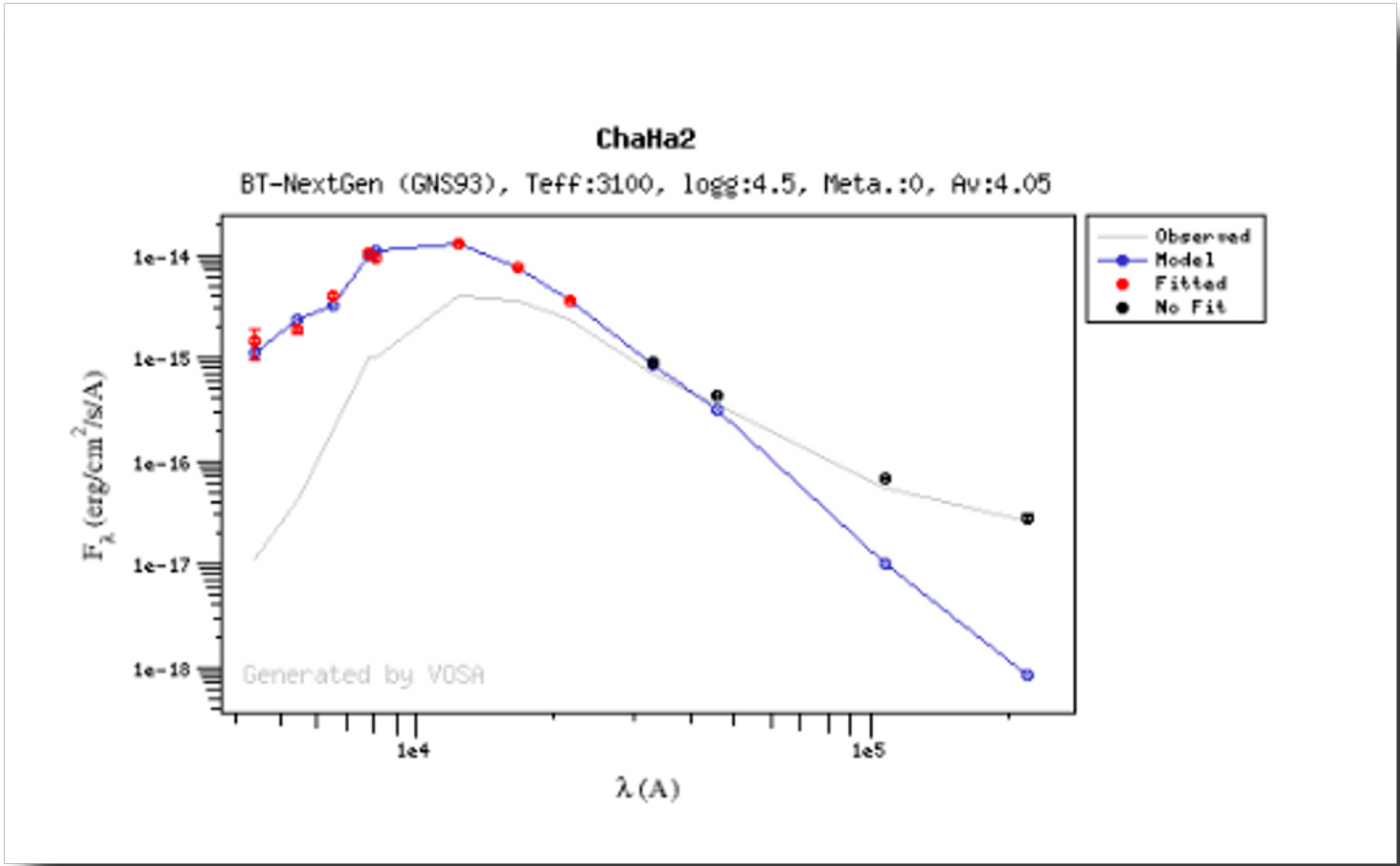
Bestfit
ChaHa1
ChaHa10
ChaHa11
ChaHa12
ChaHa13
ChaHa2
ChaHa3
ChaHa4
ChaHa5
ChaHa6
ChaHa7
ChaHa8
ChaHa9

Best fit+ results

Show graphs | Delete this fit

Object	RA	DEC	D (pc)	Model	T_{eff}	logg	Meta.	more	χ^2	M_d	F_{tot}	ΔF_{tot}	F_{obs}/F_{tot}	L_{bol}/L_{sun}	$\Delta L_{bol}/L_{sun}$	λ_{max}	A_V	N_{fit}/N_{tot}	Data VOtables
ChaHa1	166.820833	-77.598333	160.000	BT-NextGen-GNS93	2600	3	0	---	6.464e+0	1.090e-20	2.718e-11	4.941e-13	0.44	2.168e-2	3.942e-4	21590	1.68	8/12	Syn.Spec.
ChaHa10	167.106667	-77.658333	160.000	BT-NextGen-GNS93	3900	4	0	---	1.346e+1	1.024e-20	1.657e-10	4.157e-14	0.49	1.322e-1	3.317e-5	8090	7.21	5/5	Syn.Spec.
ChaHa11	167.128333	-77.655278	160.000	BT-NextGen-GNS93	2700	3	0	---	4.155e+0	2.917e-21	8.499e-12	1.041e-13	0.45	6.781e-3	8.307e-5	21590	1.68	8/8	Syn.Spec.
ChaHa12	166.656250	-77.718611	160.000	BT-NextGen-GNS93	2800	2.5	0	---	1.615e+1	1.114e-20	3.789e-11	3.045e-13	0.51	3.023e-2	2.429e-4	33156	1.68	9/12	Syn.Spec.
ChaHa13	167.076667	-77.736667	160.000	BT-NextGen-GNS93	2900	5	0	---	2.003e+1	2.883e-20	1.174e-10	9.711e-13	0.54	9.370e-2	7.749e-4	33156	1.68	9/12	Syn.Spec.
ChaHa2	166.929167	-77.566389	160.000	BT-NextGen-GNS93	3100	4.5	0	---	9.593e+0	3.319e-20	2.021e-10	6.253e-13	0.59	1.613e-1	4.989e-4	21590	4.05	8/12	Syn.Spec.
ChaHa3	166.970417	-77.615556	160.000	BT-NextGen-GNS93	2800	5	0	---	3.189e+1	2.109e-20	6.541e-11	5.390e-13	0.46	5.219e-2	4.301e-4	33156	1.68	9/12	Syn.Spec.
ChaHa4	167.081667	-77.654722	160.000	BT-NextGen-GNS93	2900	4.5	0	---	2.261e+1	2.352e-20	1.077e-10	6.634e-13	0.56	8.596e-2	5.293e-4	21590	1.68	8/12	Syn.Spec.
ChaHa5	167.106667	-77.696111	160.000	BT-NextGen-GNS93	3100	4	0	---	1.677e+1	2.921e-20	1.328e-10	6.918e-13	0.44	1.060e-1	5.520e-4	21590	3.26	8/8	Syn.Spec.
ChaHa6	167.167500	-77.571389	160.000	BT-NextGen-GNS93	2500	4.5	0	---	1.966e+1	3.496e-20	8.927e-11	5.653e-13	0.50	7.123e-2	4.510e-4	21590	1.68	9/13	Syn.Spec.
ChaHa7	166.910000	-77.591667	160.000	BT-NextGen-GNS93	2700	2.5	0	---	9.684e+0	8.431e-21	2.459e-11	1.743e-13	0.45	1.962e-2	1.391e-4	21590	2.47	8/12	Syn.Spec.
ChaHa8	166.949167	-77.668889	0.000	Not enough points to make a fit															
ChaHa9	166.830000	-77.547778	160.000	BT-NextGen-GNS93	3100	4.5	0	---	1.108e+1	1.564e-20	8.589e-11	1.805e-13	0.54	6.853e-2	1.440e-4	21590	6.42	8/12	Syn.Spec.

News: Analysis: New theoretical models

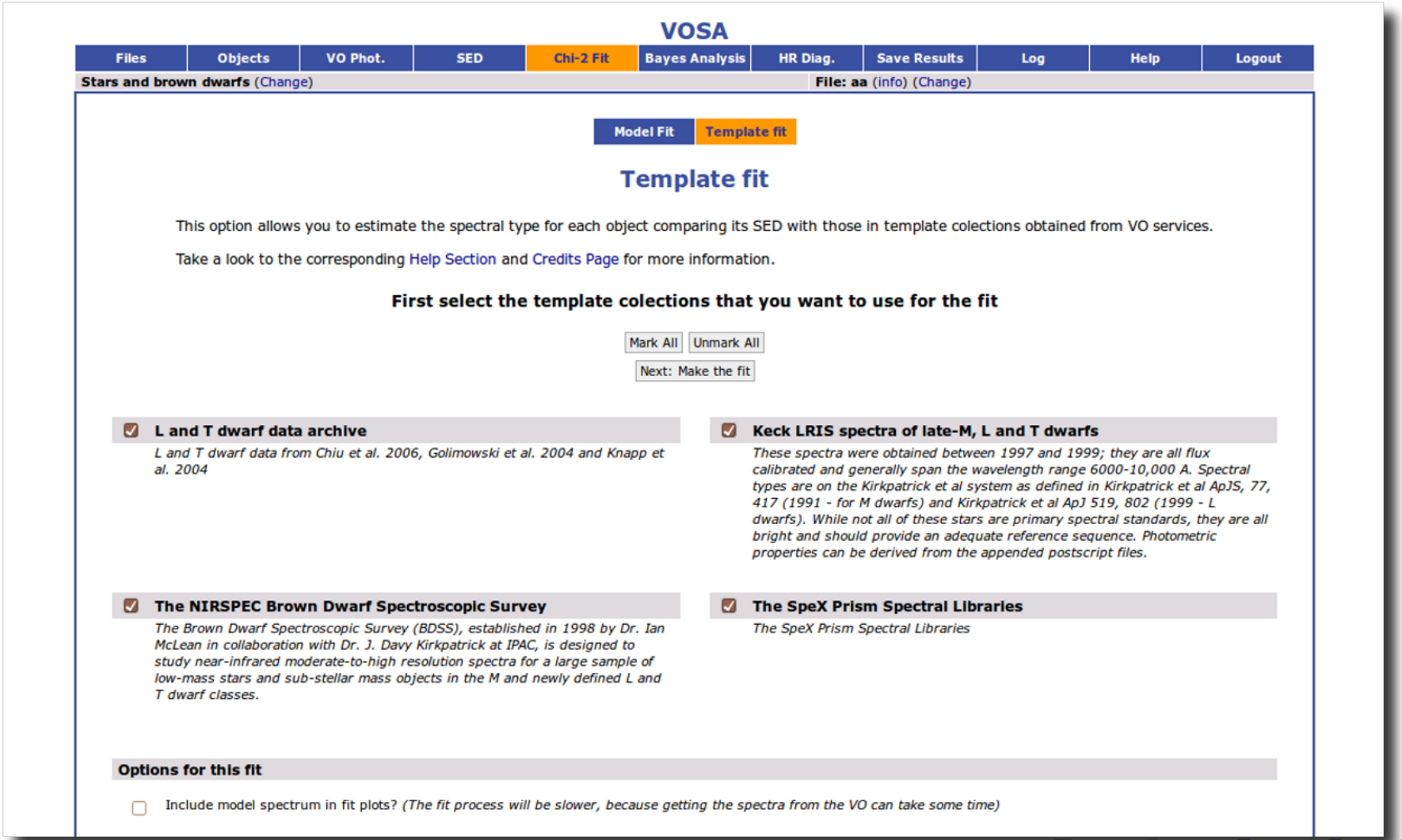


News: Analysis: Observational templates

Comparition of the observed SED with observational templates is useful to estimate the object spectral type.

- Four collections of observational templates.
- Chi-2 fitting, similar to the one for theoretical models.
- Bayesian analysis, similar to the one for theoretical models.

News: Analysis: Observational templates



News: Analysis: Observational templates

VOSA

Files | Objects | VO Phot. | SED | Chi-2 Fit | Bayes Analysis | HR Diag. | Save Results | Log | Help | Logout

Stars and brown dwarfs (Change) **File: prueba** (info) (Change)

Model Fit | Template fit

Template fit

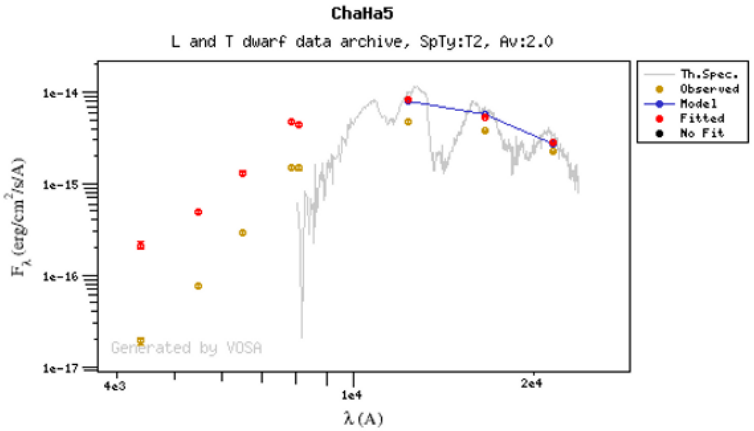
Bestfit
ChaHa1
ChaHa10
ChaHa11
ChaHa12
ChaHa13
ChaHa2
ChaHa3
ChaHa4
ChaHa5
ChaHa6
ChaHa7
ChaHa8
ChaHa9

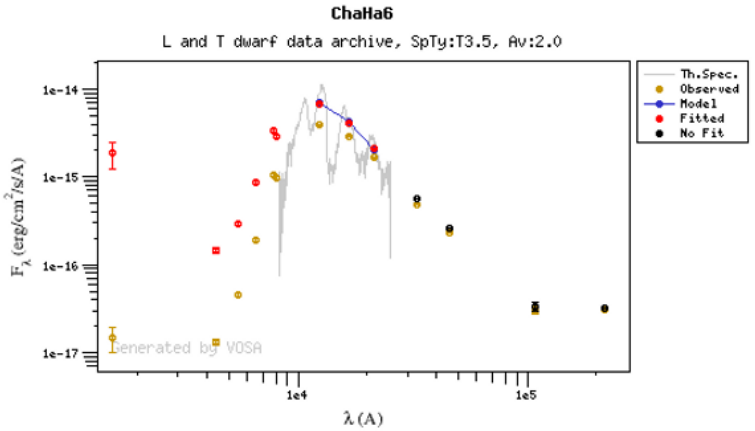
Best fit+ results

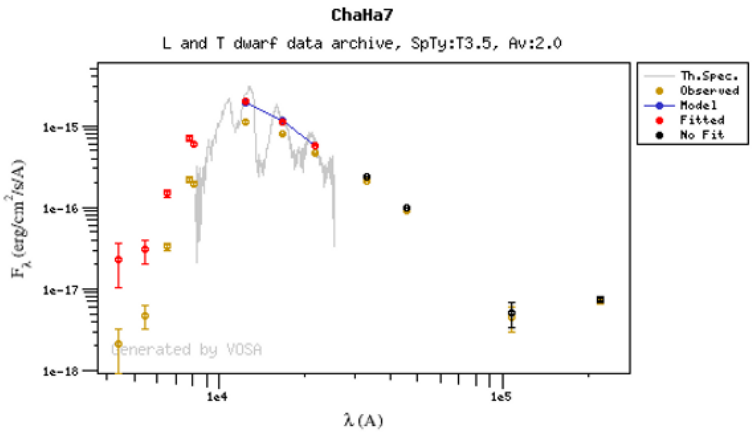
Show graphs | Delete this fit

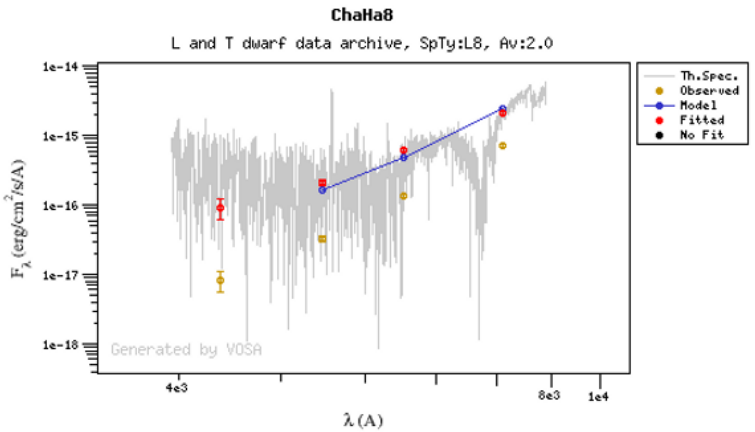
Object	RA	DEC	Model	SpTy	more	A_v	χ^2	M_d	λ_{max}	N_{fit}/N_{tot}	Data VOtables
ChaHa1	166.820833	-77.598333	Chiu et al. 2006	T3.5	---	2.0	1.178e+1	4.446e+1	21590	3/12	Spec.
ChaHa10	167.106667	-77.658333	Chiu et al. 2006	L8	---	2.0	1.919e+1	2.530e+1	8090	4/5	Spec.
ChaHa11	167.128333	-77.655278	Chiu et al. 2006	T3	---	2.0	3.339e+0	4.806e+0	21590	3/8	Spec.
ChaHa12	166.656250	-77.718611	Chiu et al. 2006	T3.5	---	2.0	4.795e+0	6.298e+1	33156	3/12	Spec.
ChaHa13	167.076667	-77.736667	Chiu et al. 2006	T3.5	---	2.0	5.142e+0	1.850e+2	33156	3/12	Spec.
ChaHa2	166.929167	-77.566389	Chiu et al. 2006	T3	---	2.0	6.717e+0	1.084e+2	21590	3/12	Spec.
ChaHa3	166.970417	-77.615556	Chiu et al. 2006	T3.5	---	2.0	3.649e-1	1.215e+2	33156	3/12	Spec.
ChaHa4	167.081667	-77.654722	Chiu et al. 2006	T3.5	---	2.0	4.437e+0	1.334e+2	21590	3/12	Spec.
ChaHa5	167.106667	-77.696111	Chiu et al. 2006	T2	---	2.0	1.007e+1	1.844e+2	21590	3/8	Spec.
ChaHa6	167.167500	-77.571389	Chiu et al. 2006	T3.5	---	2.0	7.718e-1	1.263e+2	21590	3/13	Spec.
ChaHa7	166.910000	-77.591667	Chiu et al. 2006	T3.5	---	2.0	4.932e+0	3.509e+1	21590	3/12	Spec.
ChaHa8	166.949167	-77.668889	Chiu et al. 2006	L8	---	2.0	4.015e+1	9.777e+1	8090	3/4	Spec.
ChaHa9	166.830000	-77.547778	Chiu et al. 2006	L8	---	2.0	4.030e-2	3.051e+1	21590	3/12	Spec.

News: Analysis: Observational templates





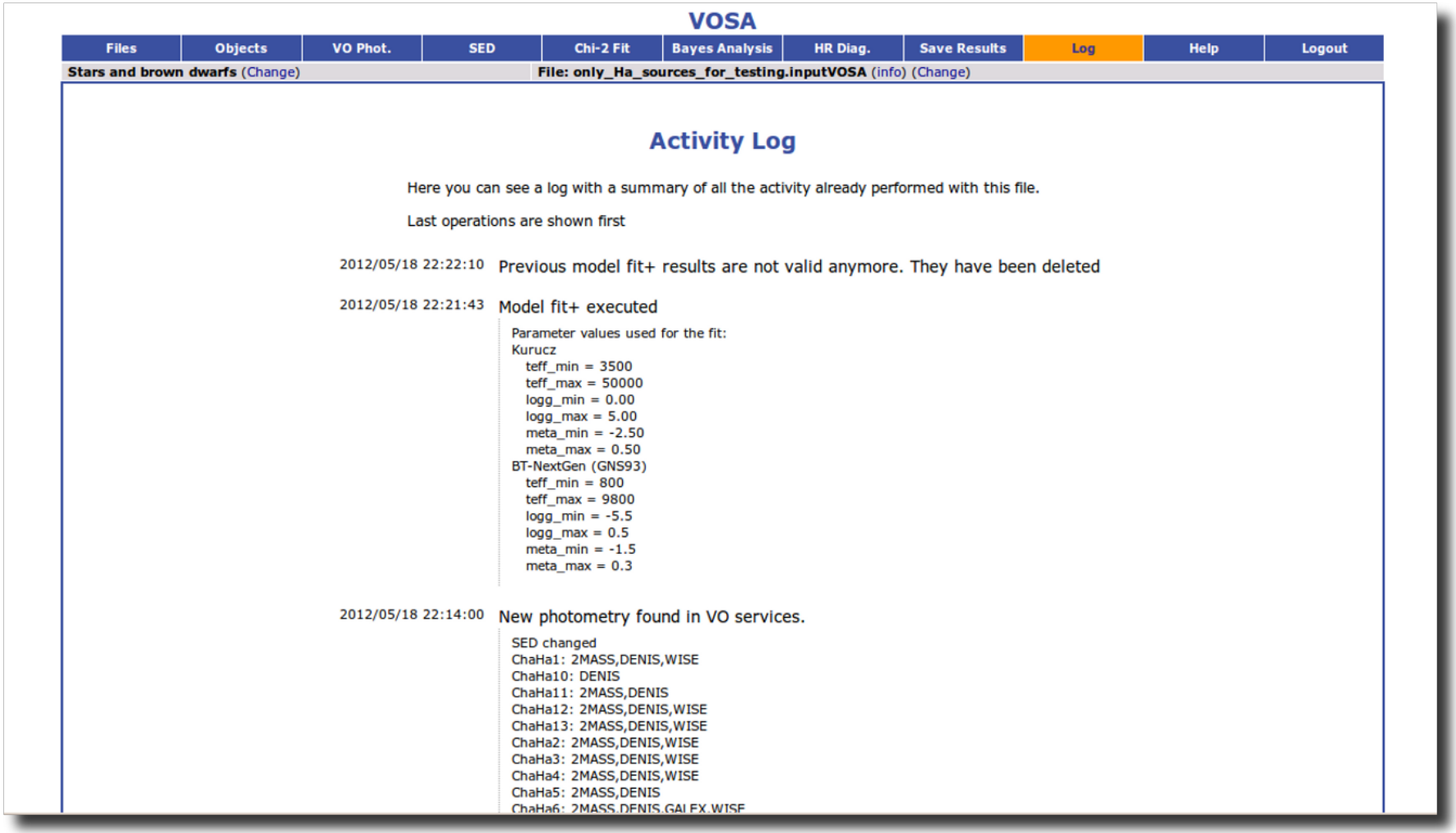




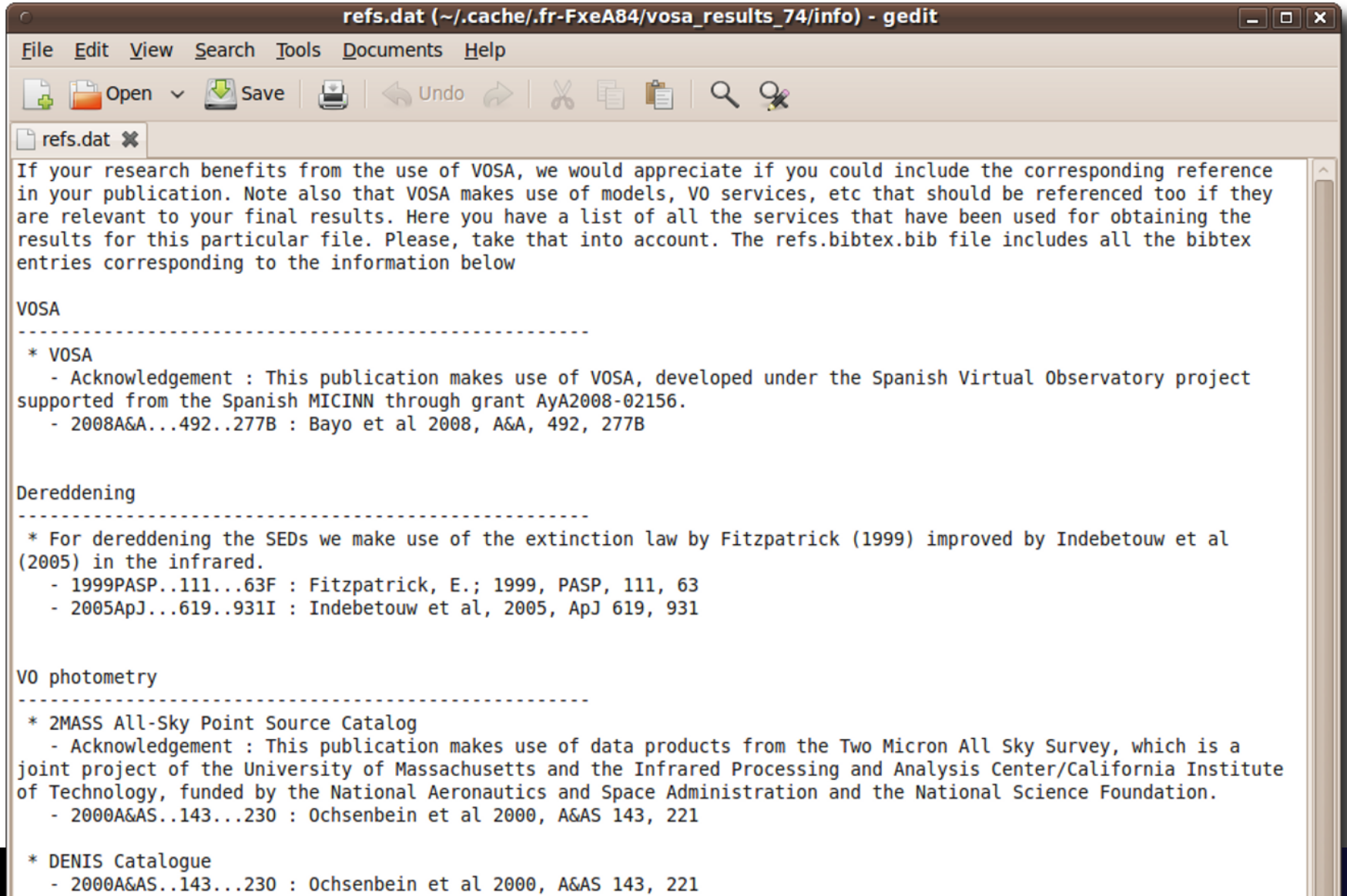
News: more information.

- **Log** of all the work done.
  - VO services consulted, fit made, fit undone, models used, etc since the file was uploaded.
  - Web visualization and downloadable file.
- **References**
  - Description of all the references for external services, models, etc used to obtain the results for a user file.
  - Bibtex file with the bibtex entries for those references.
  - Always included in downloads.

News: Log info



News: References



News: References

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File Edit View Search Tools Documents Help

Open Save Undo

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        {Solano}, E. and {Guti{\'e}rrez}, R. and {Morales-Calder{\'o}n}, M. and
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    title = "{VOSA: virtual observatory SED analyzer. An application to the Collinder 69 open cluster}",
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 keywords = {astronomical data bases: miscellaneous, stars: formation, stars: circumstellar matter, stars: low-mass,
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     year = 2008,
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  adsnote = {Provided by the SAO/NASA Astrophysics Data System}
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@ARTICLE{1999PASP..111...63F,
   author = {{Fitzpatrick}, E.~L.},
    title = "{Correcting for the Effects of Interstellar Extinction}",
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     year = 1999,
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   volume = 111,
    pages = {63-75},
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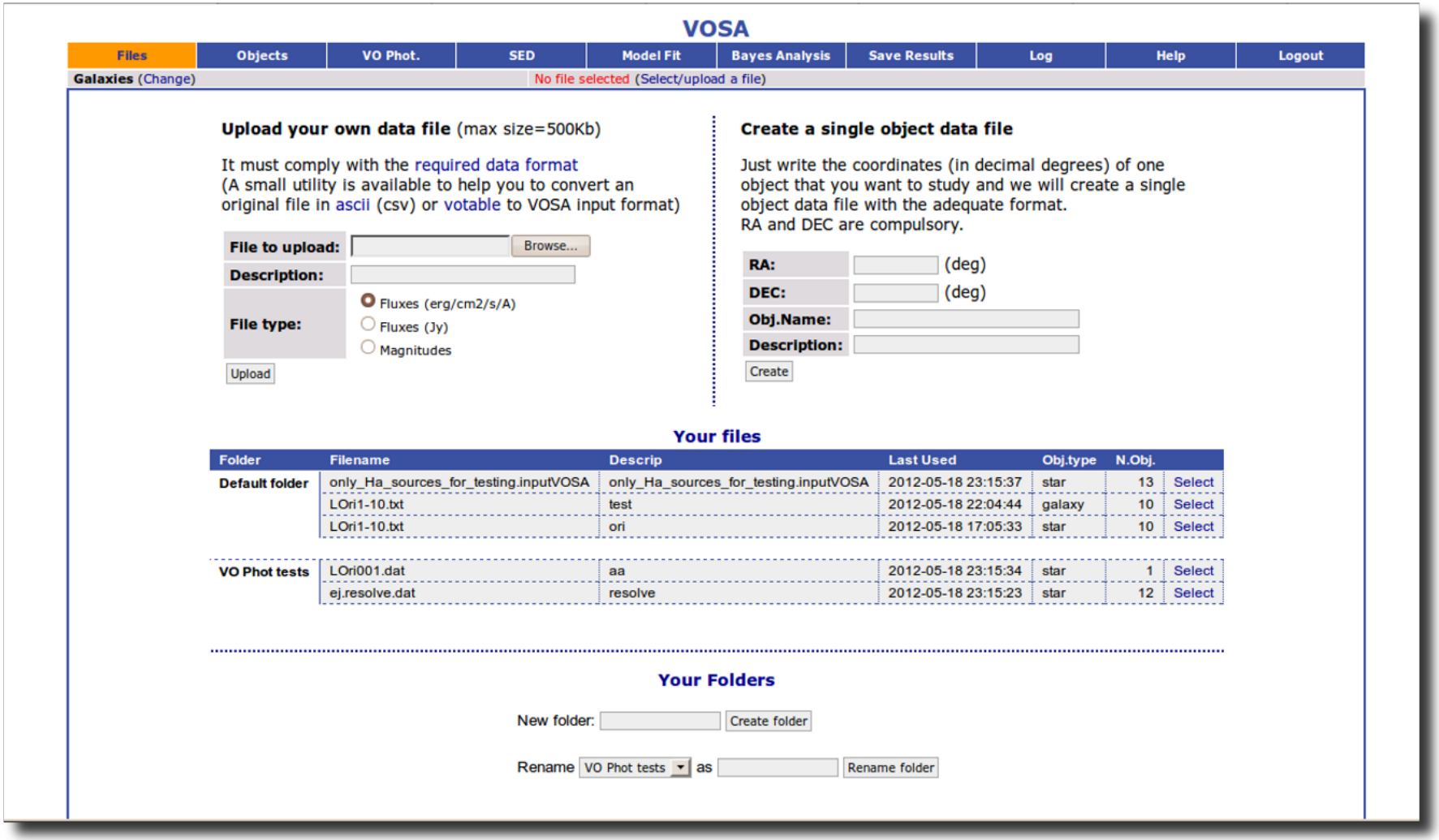
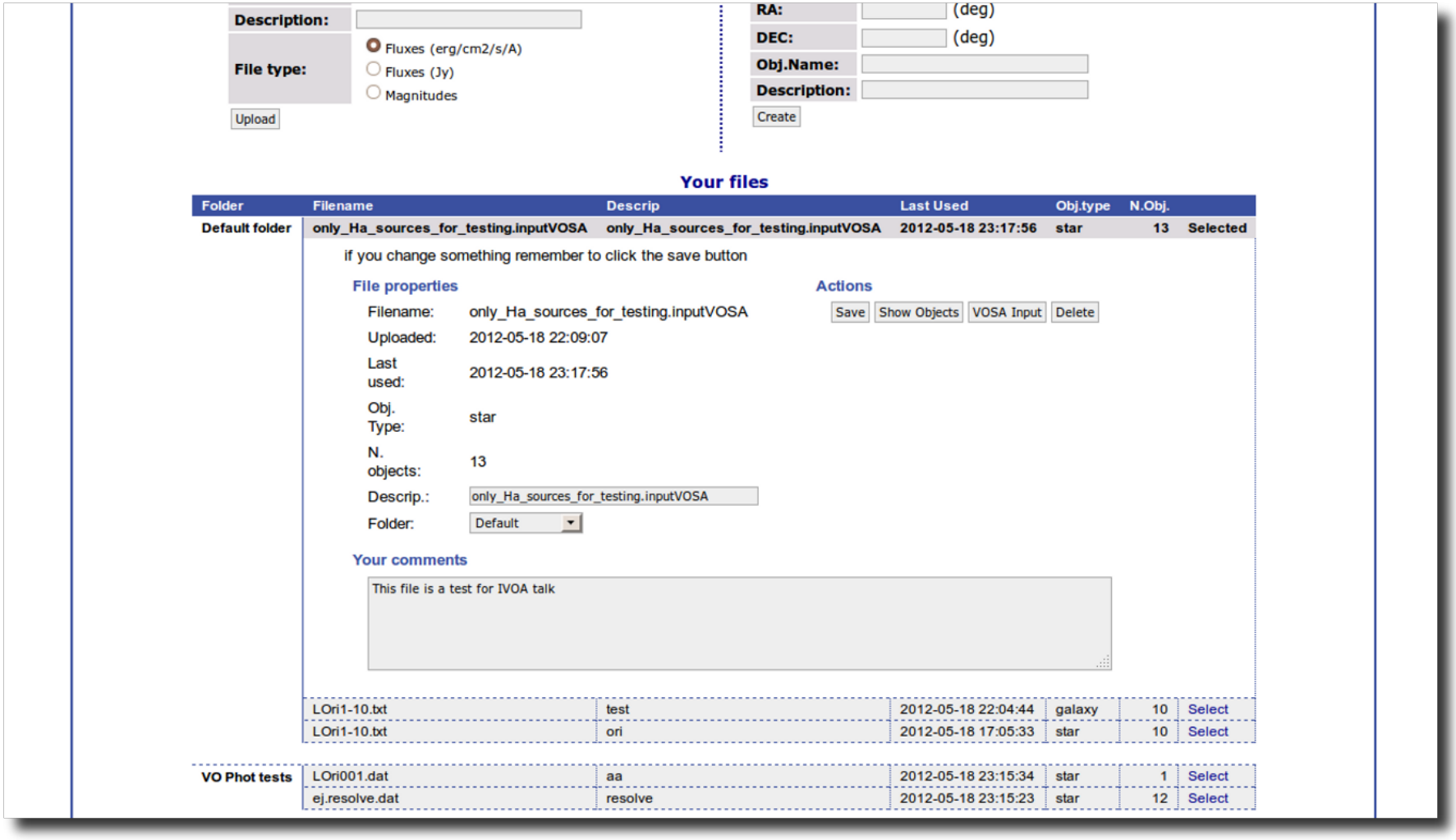
News: Input user files.

- Single object search.
  - No need to create a file.
  - Just one object coordinates.
- Input files management.
  - No sessions anymore.
  - Easy access to old files.
  - Organization of files in user folders.

News: Input user files



News: Input user files



Try it

All this is implemented in new **beta** version:

- http://svo2.cab.inta-csic.es/theory/vosa/
- Still testing it
- Feel free to try it

THANK YOU!