

A tcl GUI for STECKMAP

(work in progress)

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STECKMAP

- *Stellar content & kinematics*
- *Ocvirk et al. 2006, MNRAS, 365, 46-84*
- *uses whole spectrum*
- *flexible method, adapts to various data quality regimes thanks to MAP formalism*
- *Extensively tested*

Why a GUI ?

- *It's EASIER, more intuitive (not that many people are acquainted with yorick)*
- *allows non-specialist to still get something out of the data*
- *also allows pedagogical use of complex software to show possible limits of spectra interpretation*

Package features

- *On-the-fly flux recalibration*
- *Several SSP models already plugged in:
Bruzual&Charlot 2003, PEGASE-HR, Gonzalez-Delgado 2005, soon MILES.*
- *Hence, allows to study the impact of theoretical uncertainties on recovered Star formation histories which DOMINATES the error budget in high S/N regimes*
- *... more to come: simulation facility, Monte-carlo facility, user-defined basis from templates...*

DATA panel

Wavelength axis not linked to load nor load dir.
load dir has less options than load

Directory: **Select Dir.**

File:

- NGC2344.fits
- NGC2344.pdb
- NGC4621-1.fits
- NGC4621-1.pdb
- STECKMAP0.01.tcl
- STECKMAP0.01.tcl~
- ytk.i

Options:

Force log sampling

Wavelength axis

- Auto
- 1
- 2

Collapse

from to

Estimated average SNR

Redshift

Load **Load Dir** **Dismiss**

STEPLEN

0.0e+00

1.0e+00

1.0e+00

1.0e+00

5.1e-01

1.0e+00

STEPLEN

0.0e+00

1.0e+00

3.2e-02

STEPLEN

0.0e+00

1.0e+00

1.0e+00

1.0e+00

System : 1 (4036.4460,

SSP Basis Panel

SSP model

- Bruzual&Charlot 2003
- PEGASE-HR (Le Borgne et al. 2004)
- Gonzalez-Delgado 2005 Salpeter IMF Padova tracks
- Gonzalez-Delgado 2005 Salpeter IMF Geneva tracks

wavelength range (Angstroms)

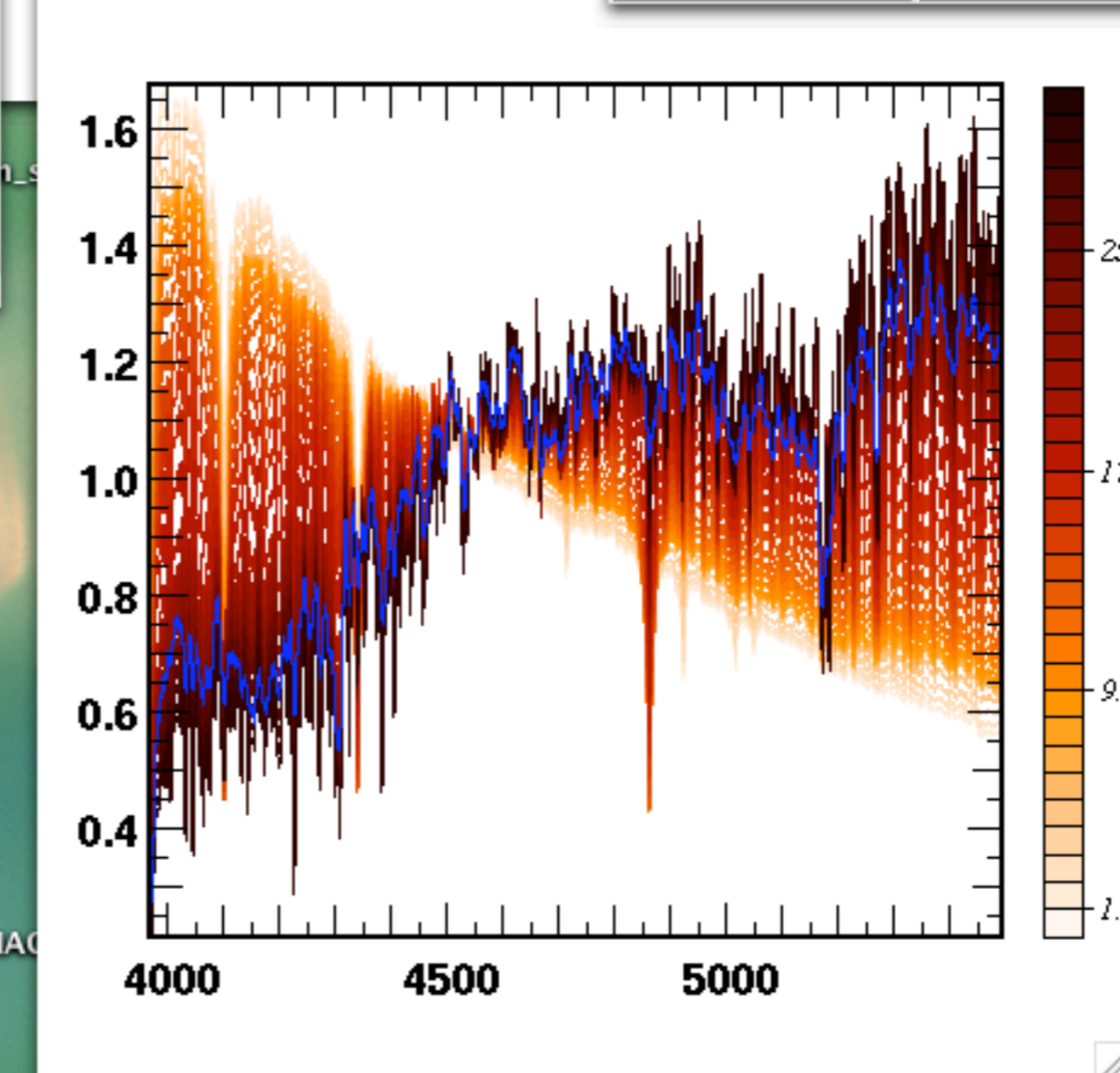
Resolution

Sampling (Angstrom)

Age bins (Myr) Min Max nbins

Normalize

Compute **Plot** **Dismiss**



FITTING ENGINE PANEL

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Kinematics

1D 2D from (km/s) to (km/s)

Extinction / flux recalibration

- Calzetti 1999
- NPEC

Hyperparameters

- LOSVD
- Stellar Age Distribution
- Age Metallicity Relation
- Flux recalibration

Fit **Dismiss**

grosson

cool_vibes

dep-ethereal

recettes

uninstallz

xterm

ITER	EVAL	CPU [s]	FUNC	GNORM	STEPLEN
0	1	4.20e-01	2.0116615795633974e+04	4.7e+03	0.0e+00
100	115	2.87e+01	3.5963619798320465e+00	4.0e+01	1.0e+00
200	216	5.40e+01	2.4755253200242753e+00	2.1e+01	1.0e+00
300	318	7.96e+01	2.2521663429192755e+00	1.6e+01	1.0e+00
400	493	1.23e+02	2.1423888303933087e+00	1.3e+01	5.1e-01
408	501	1.25e+02	2.1383346279896593e+00	9.0e+00	1.0e+00

warning: too many function evaluations (501)

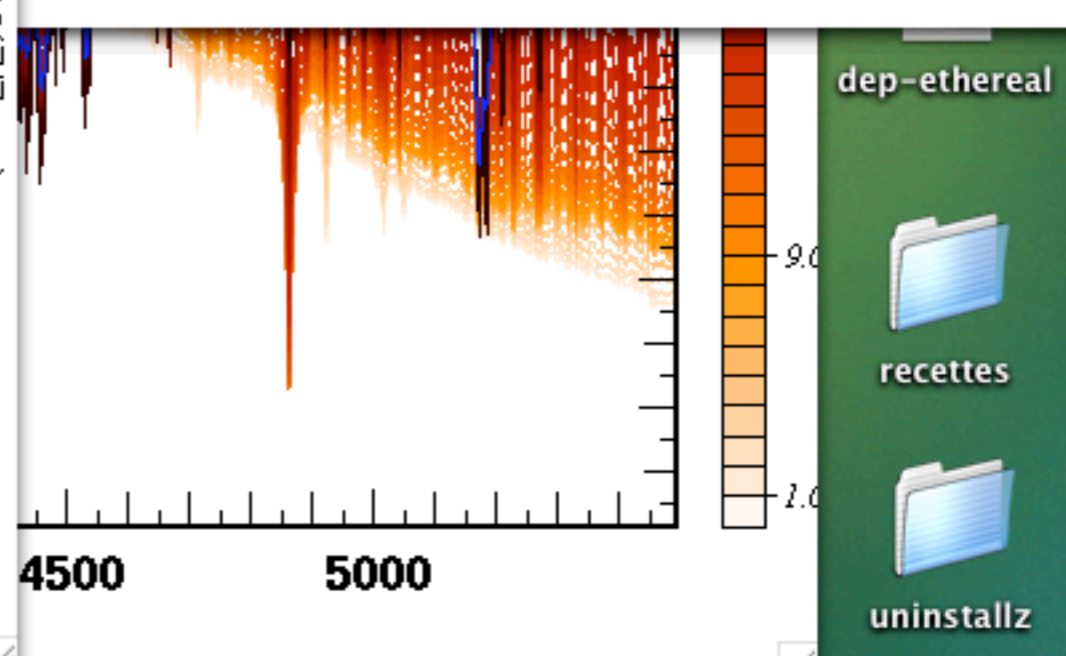
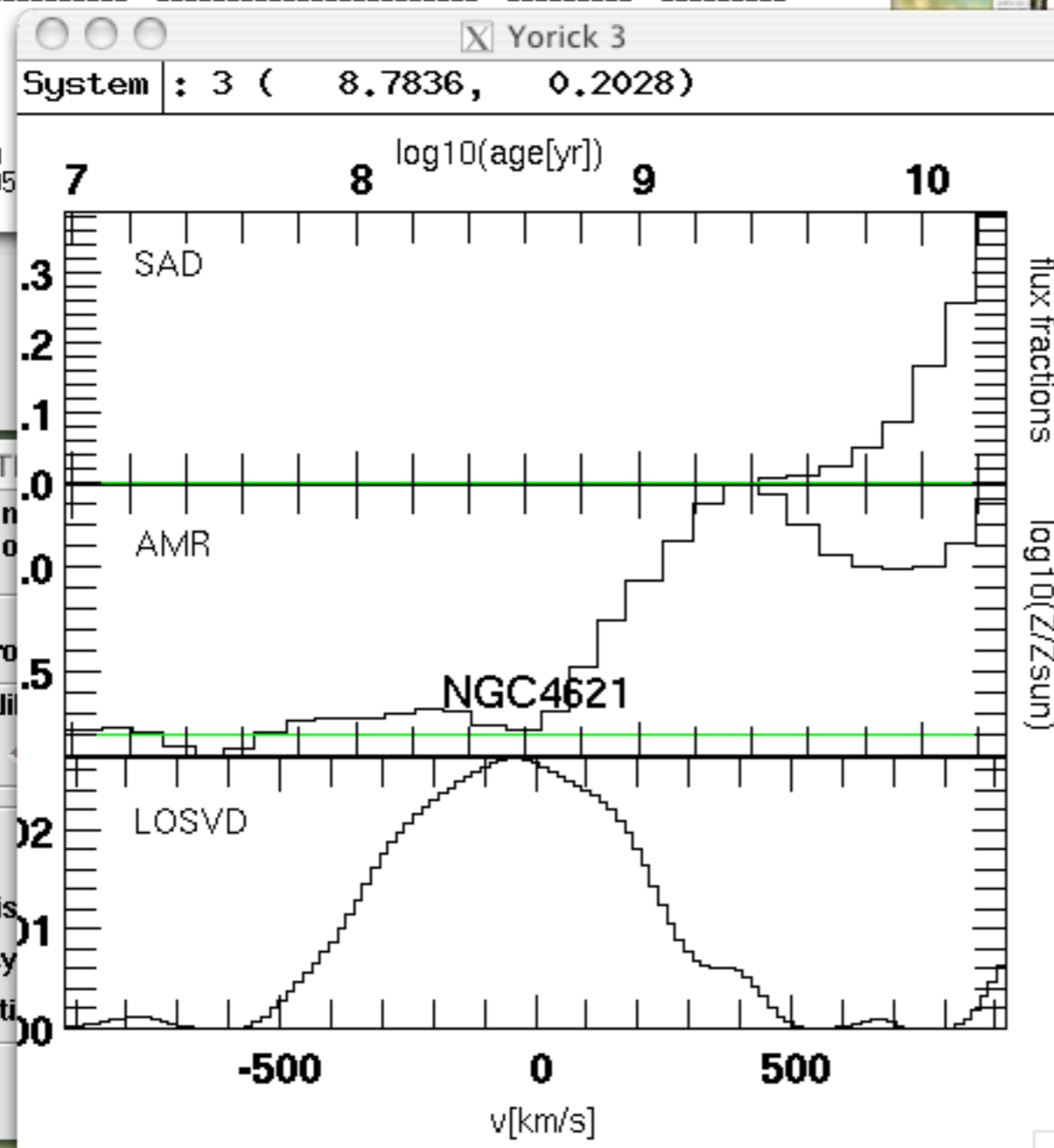
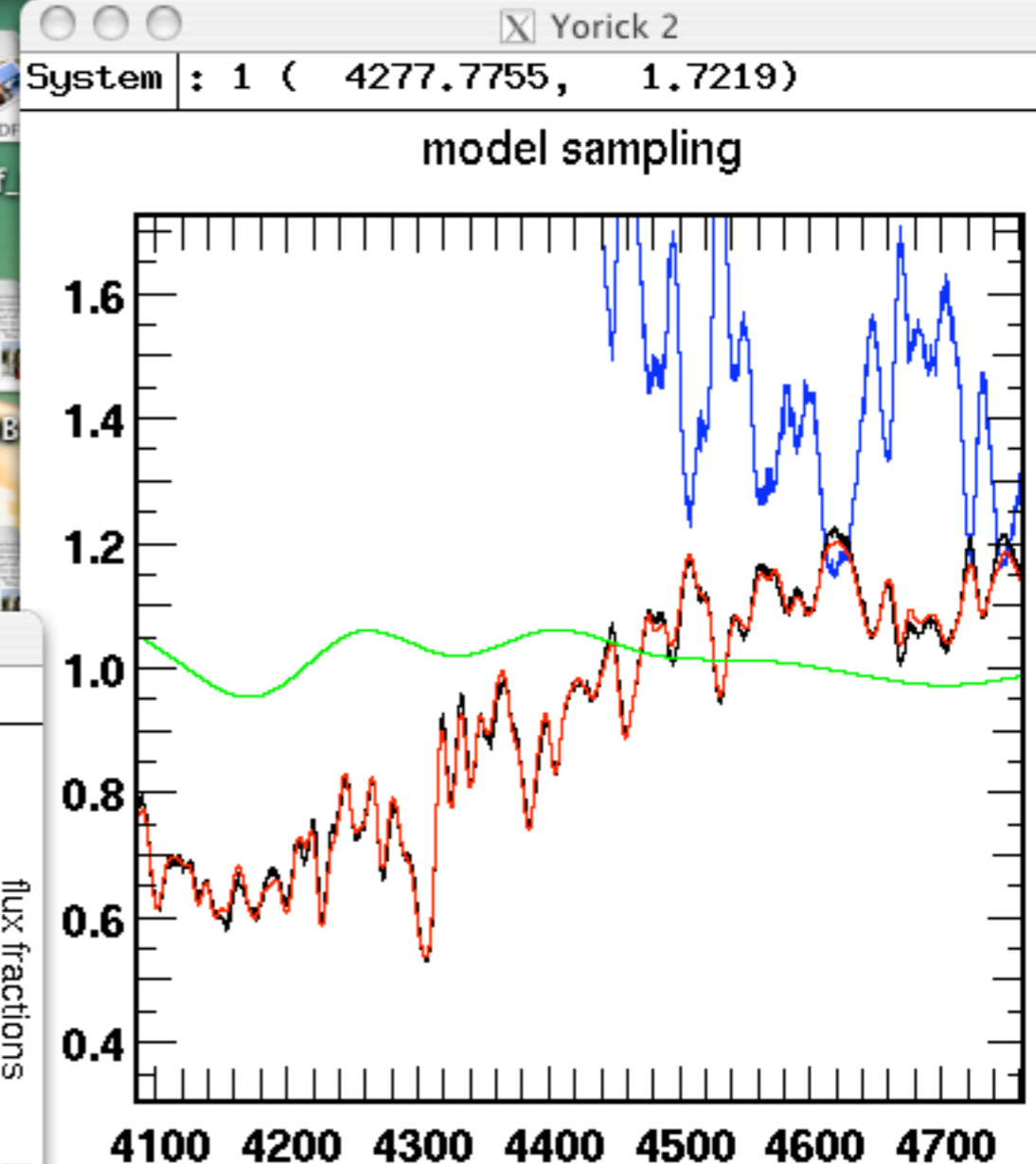
ITER	EVAL	CPU [s]	FUNC	GNORM	STEPLEN
0	1	2.30e-01	2.1383346279896593e+00	9.0e+00	0.0e+00
100	215	5.31e+01	2.1180263065503393e+00	5.4e+00	1.0e+00
199	521	1.26e+02	2.0890547809086071e+00	5.6e+00	3.2e-02

warning: too many function evaluations (521)

ITER	EVAL	CPU [s]	FUNC	GNORM	STEPLEN
0	1				
100	208				
200	434				
256	501				

warning: too many function evaluations (501)

ITER	EVAL	CPU [s]	FUNC	GNORM	STEPLEN
0	1				
100	208				
200	434				
256	501				
3	3695				



Load

FIT

Wavelength axis n
load dir has less o

Kinematics

1D 2D fro

Extinction / flux recal

Calzetti 1999

Hyperparameters

1.e4 LOSVD

Stellar Age Dis

Age Metallicity

Flux recalibrati

Fit

dep-ethereal

recettes

uninstallz

STAY TUNED!!

(work in progress)

Check out progress on:

http://astro.u-strasbg.fr/Obs/GALAXIES/stecmap_eng.html