

# VESPA

## Recovering star formation histories from galactic spectra

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Institute for Astronomy  
University of Edinburgh

STAGES meeting  
Nottingham, 19th June 2007

# Introduction

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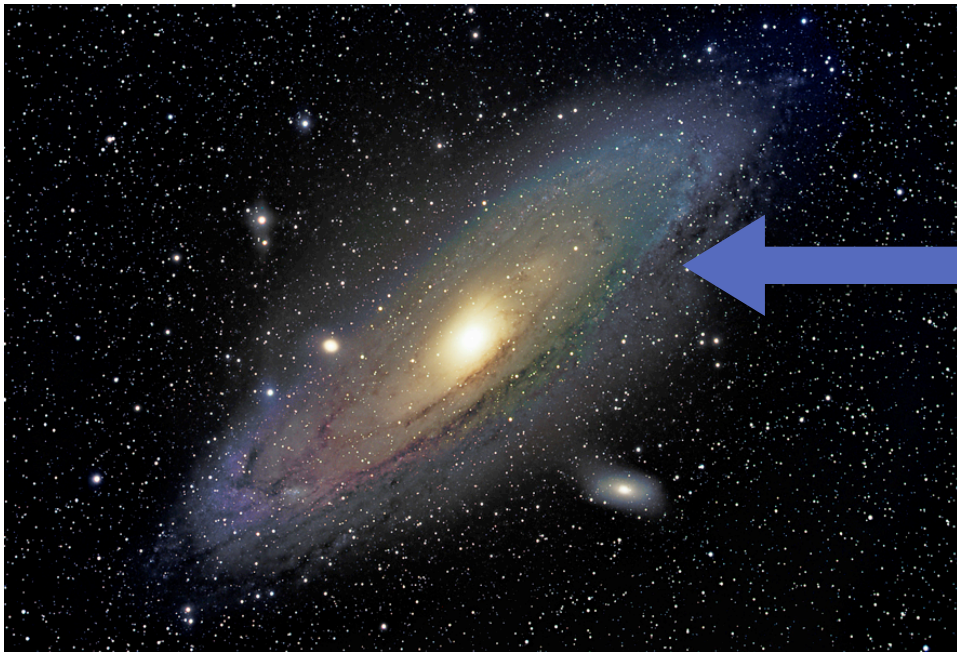
Every galaxy tells a story...



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What is its stellar mass?  
When did these stars form?  
What is their metallicity?  
How much dust is there ?

# The basic idea

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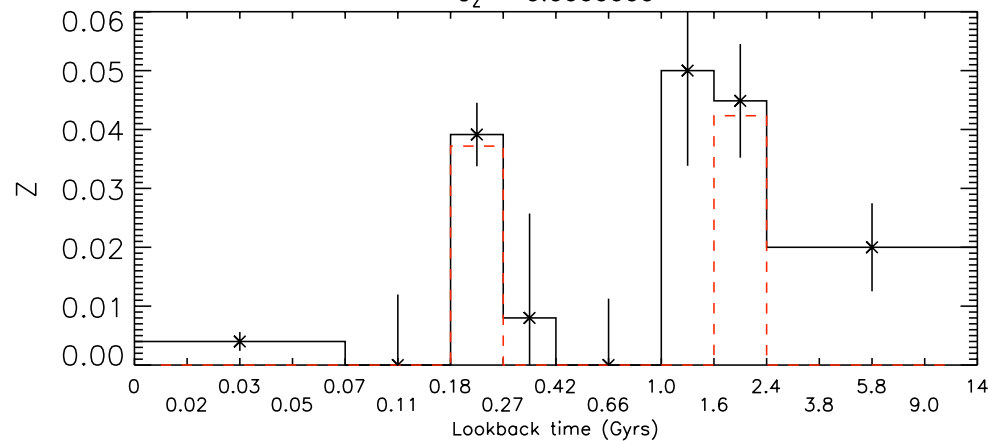
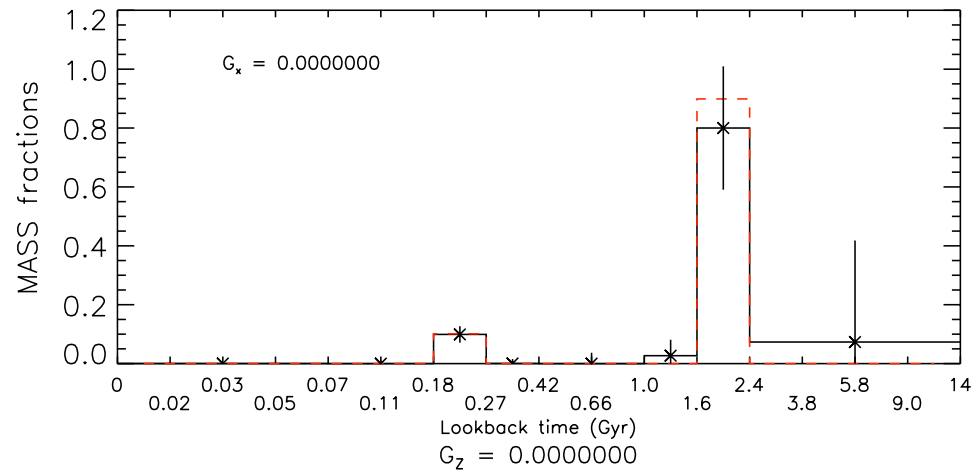
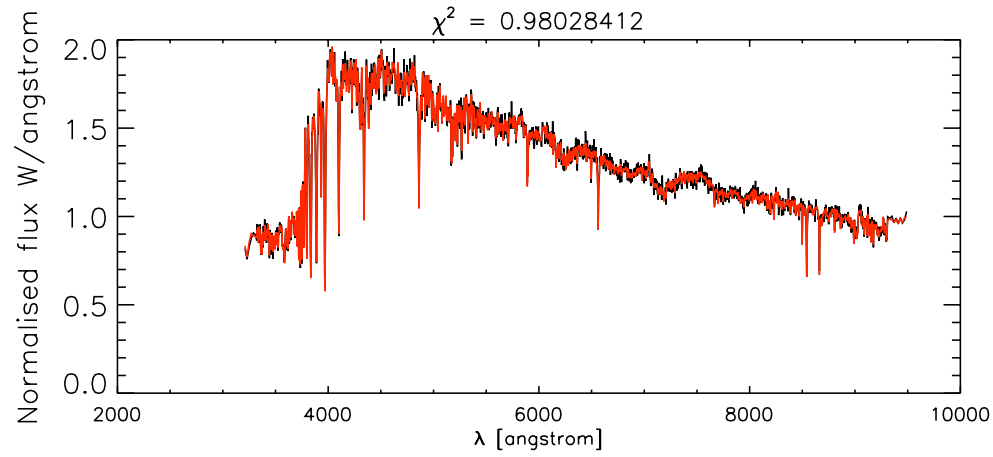
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- We want to find the solution, which for a given set of models, best fits the data.

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Robustness as opposed to high-definition solutions in parameters space.

# In a little more detail

( full details in Tojeiro et. al 2007, astro-ph/0704.0941)

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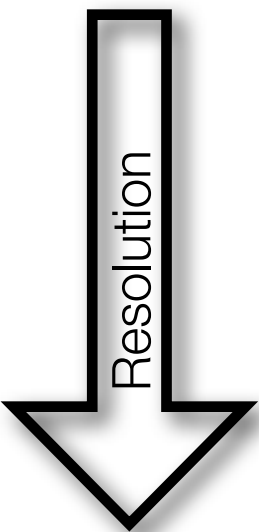
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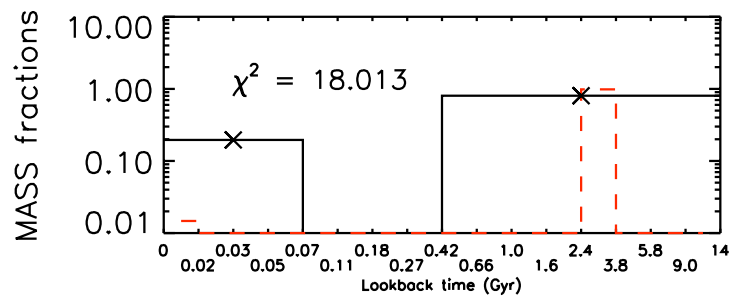
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  - Iterative process to go from **coarse to fine** resolution.

Input and recovered mass fractions

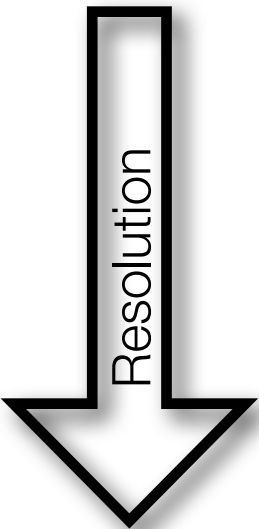
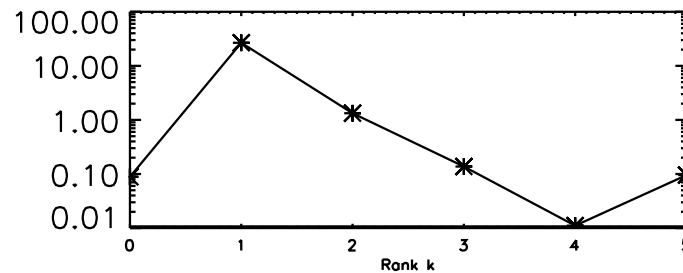
Perturbed singular values and noise



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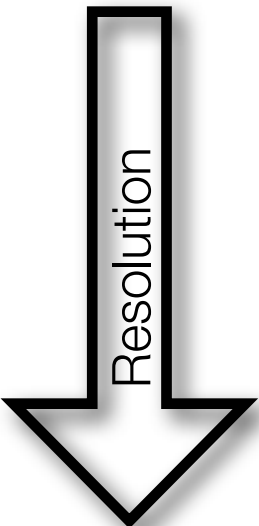
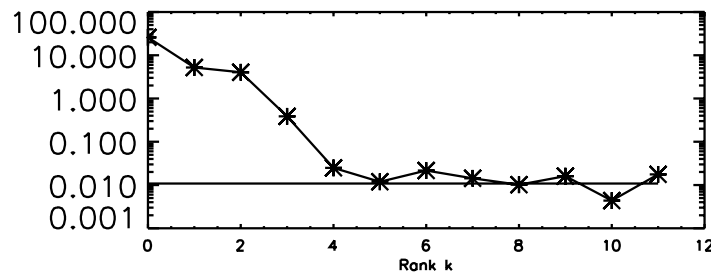
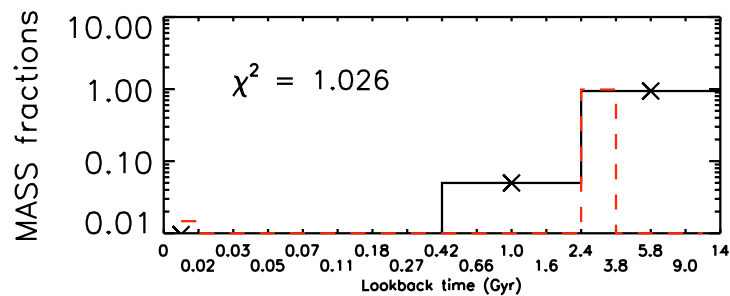
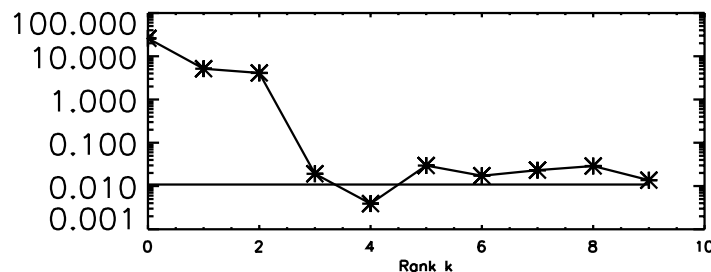
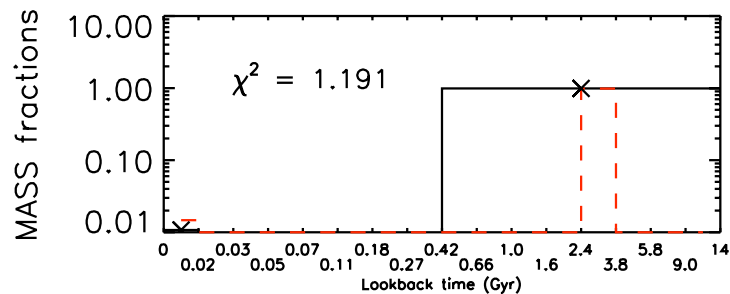
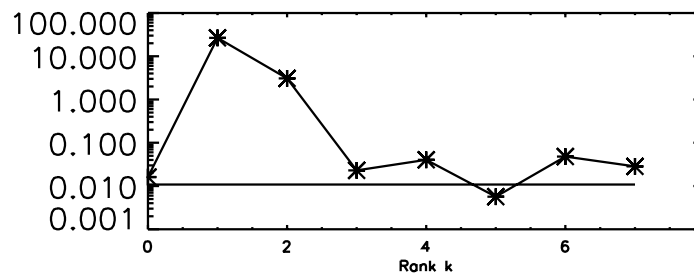
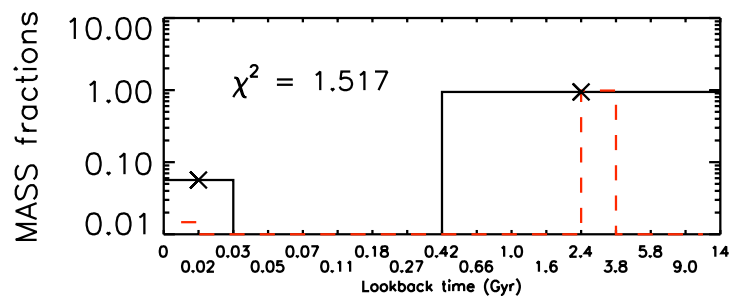
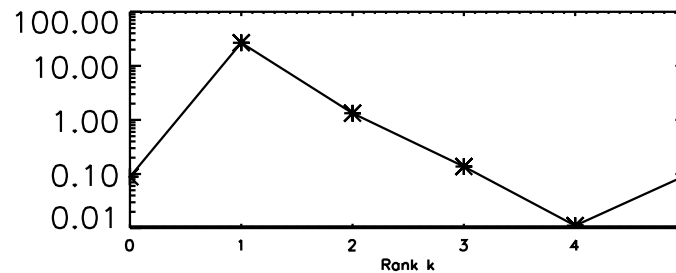
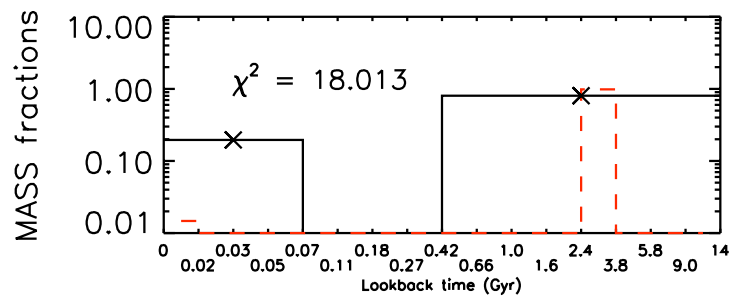


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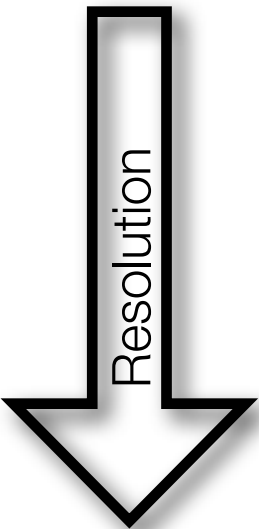
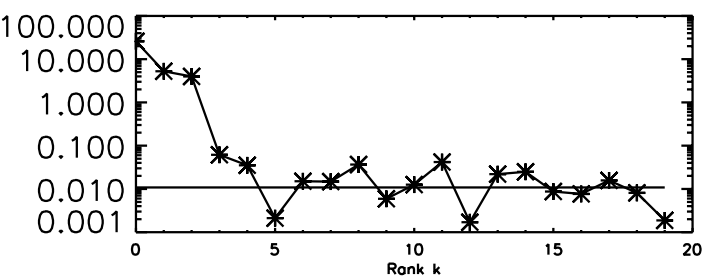
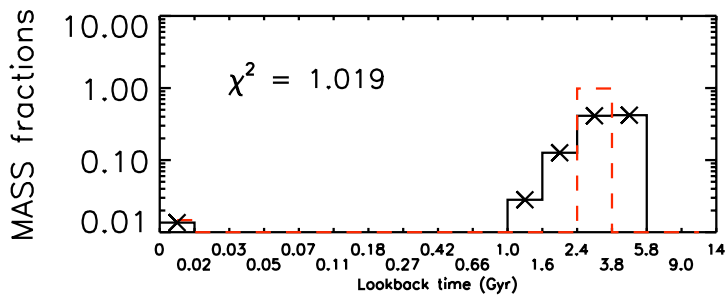
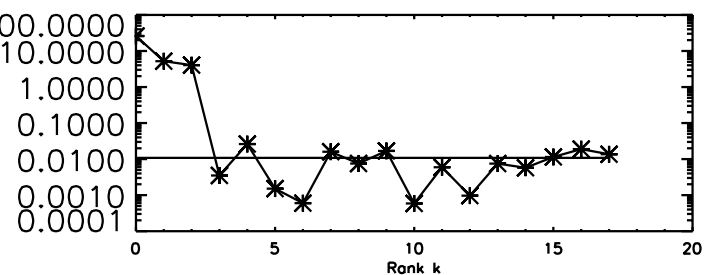
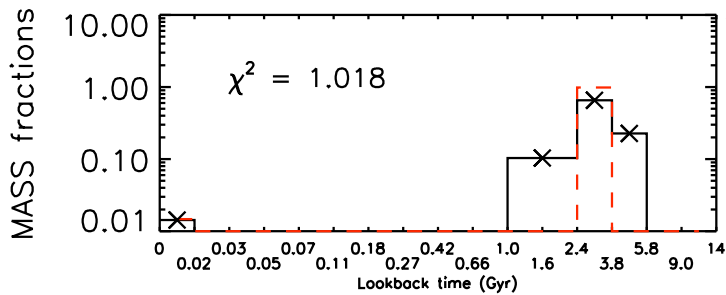
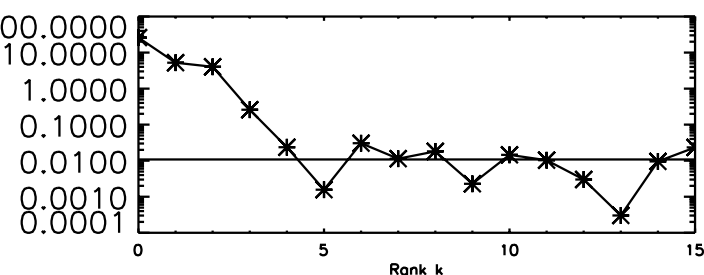
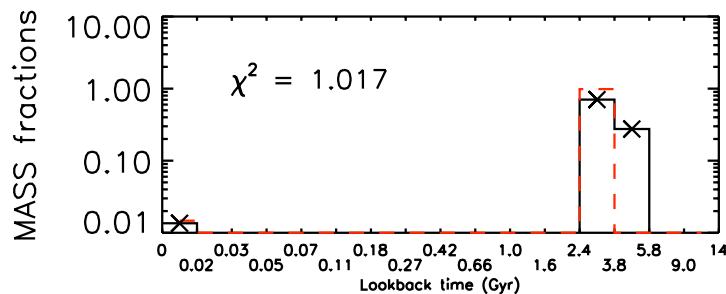
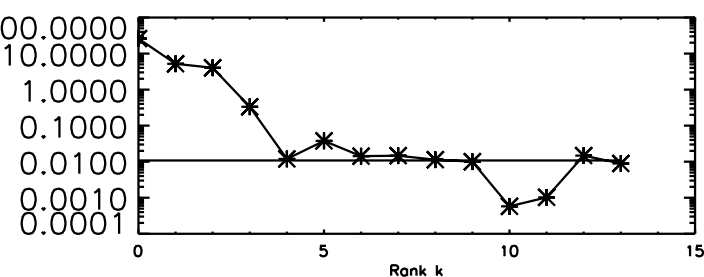
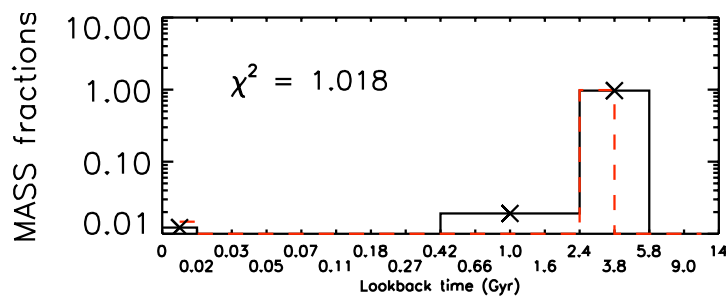
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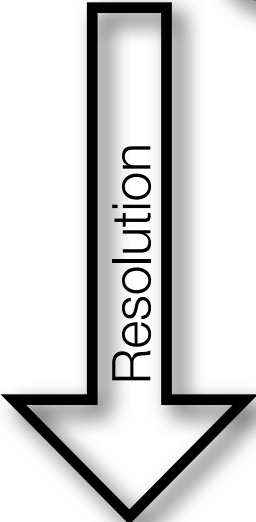
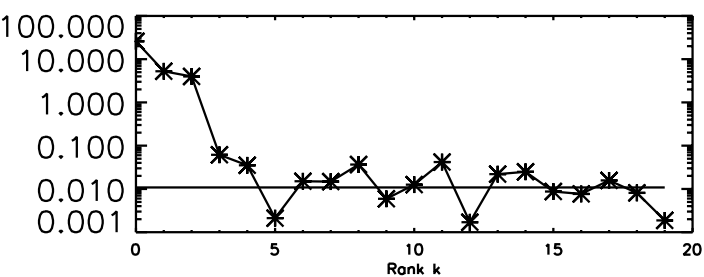
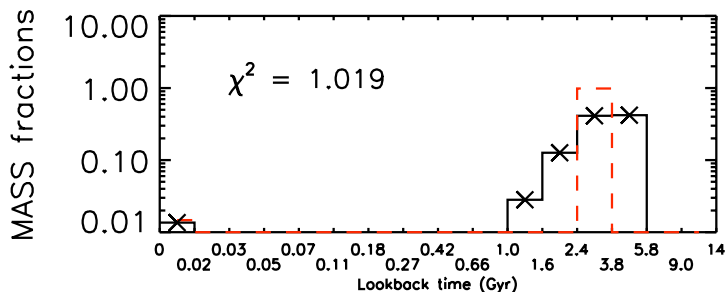
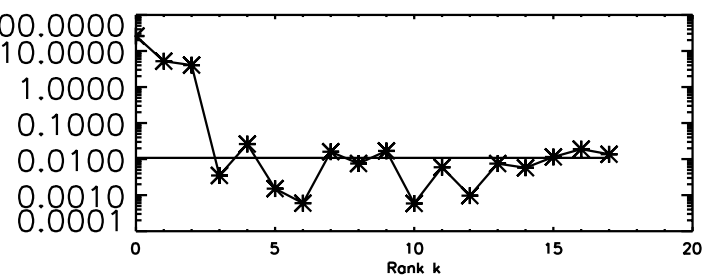
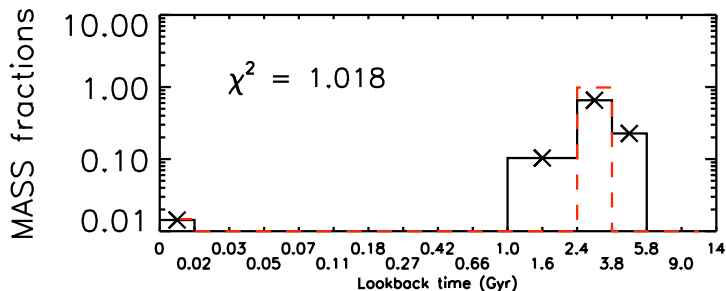
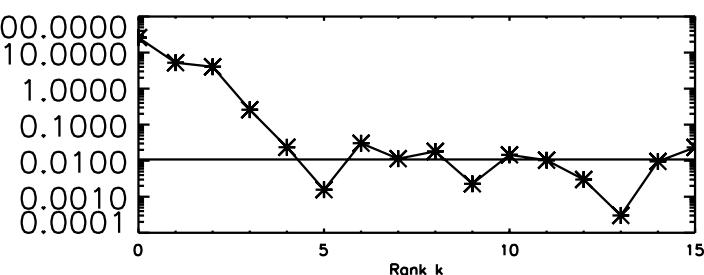
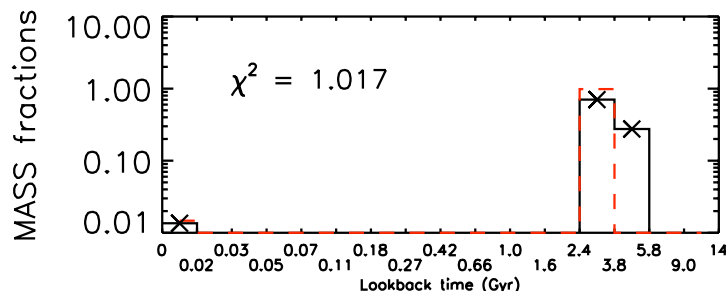
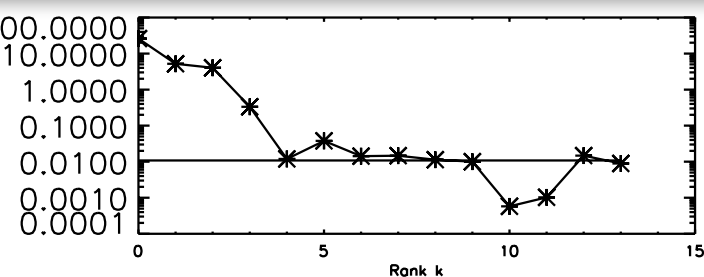
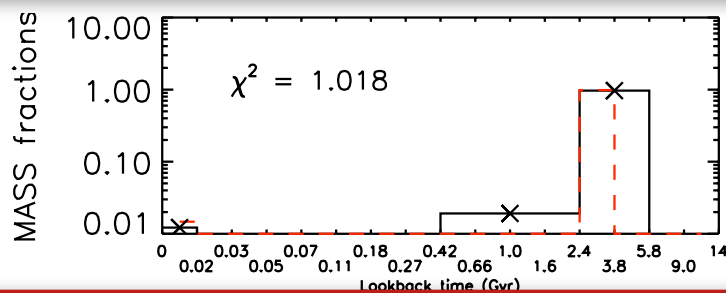
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  - Wavelength range.
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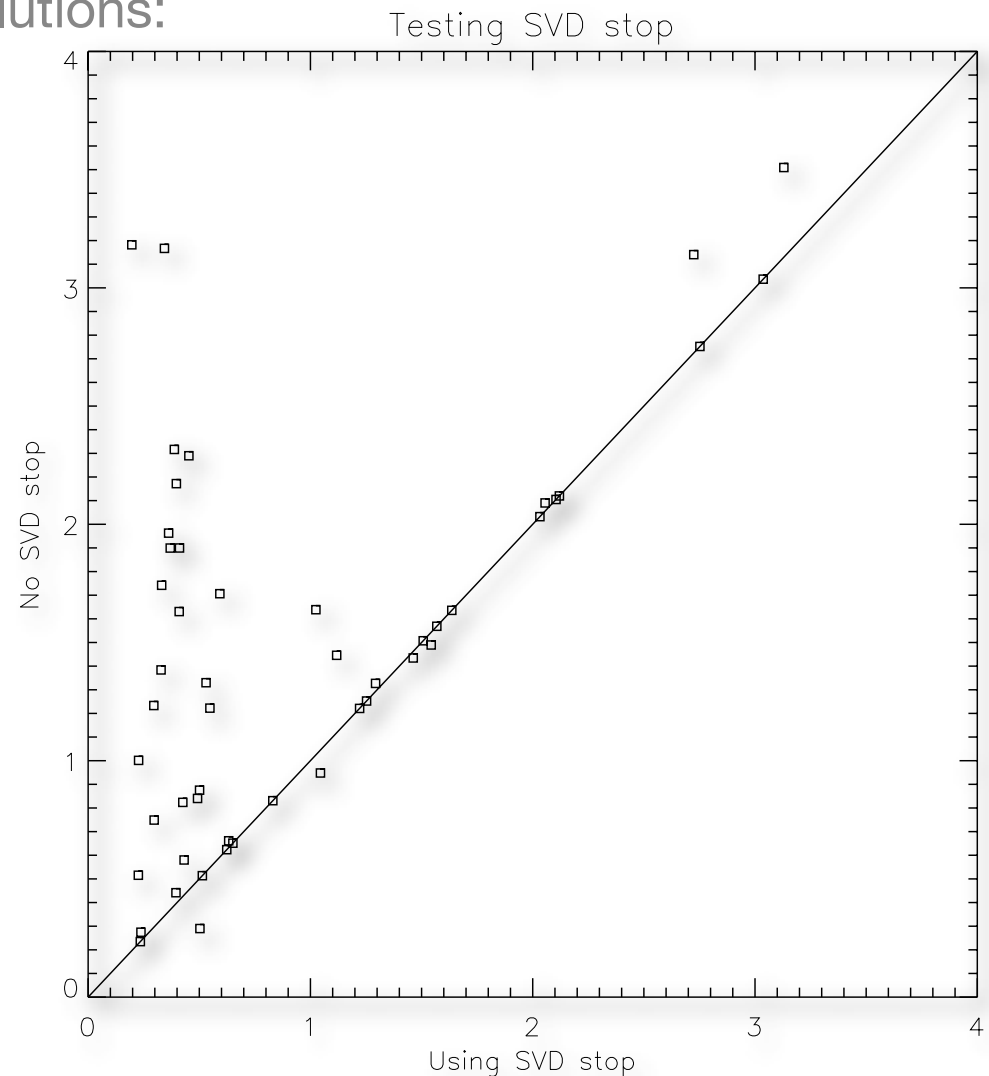
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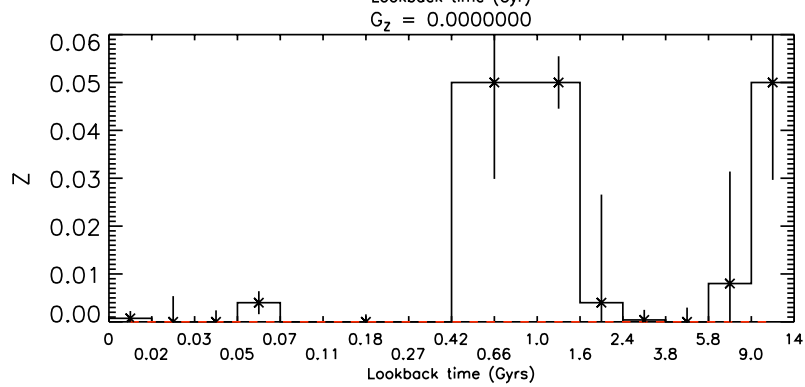
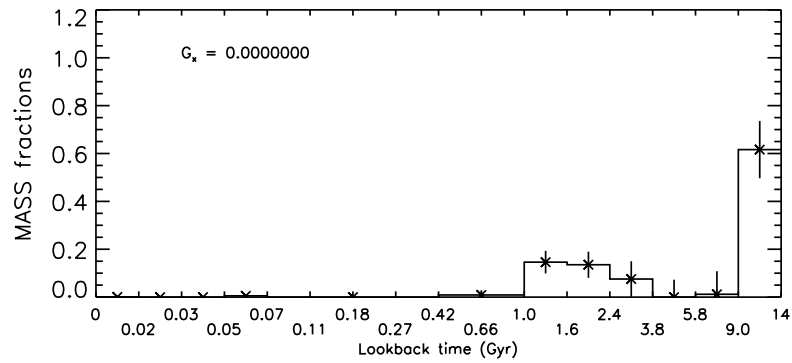
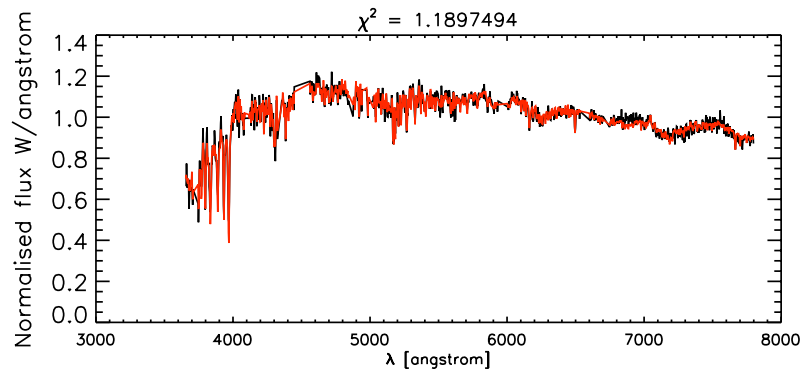
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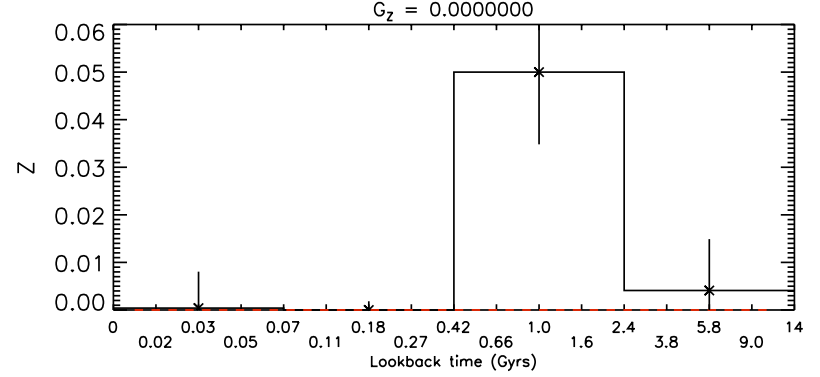
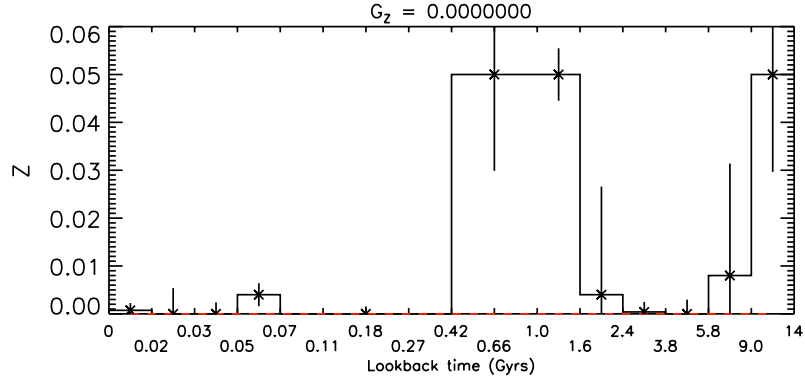
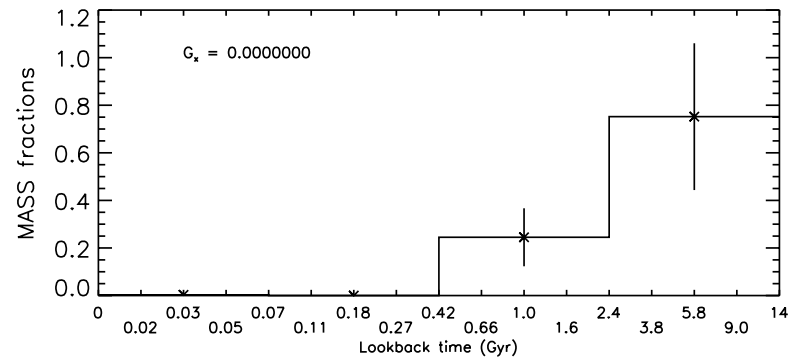
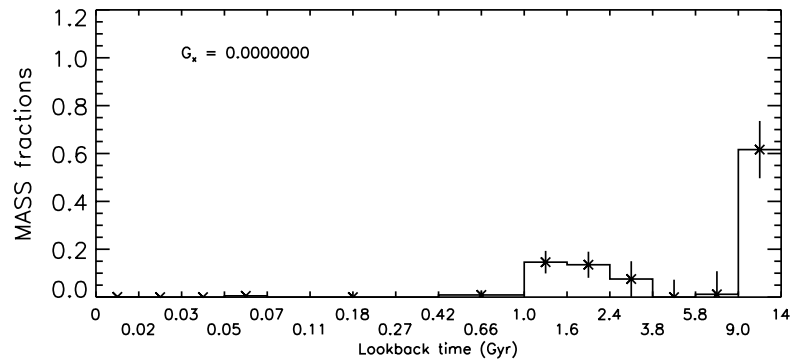
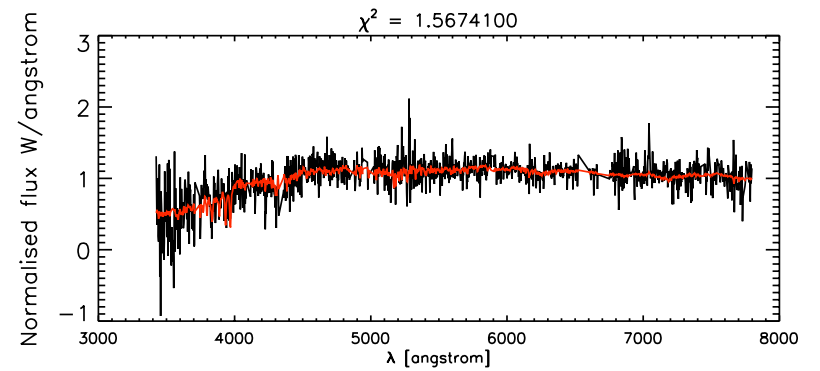
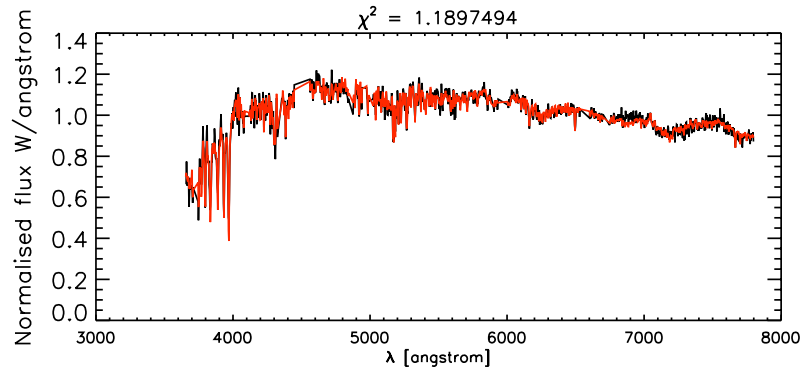
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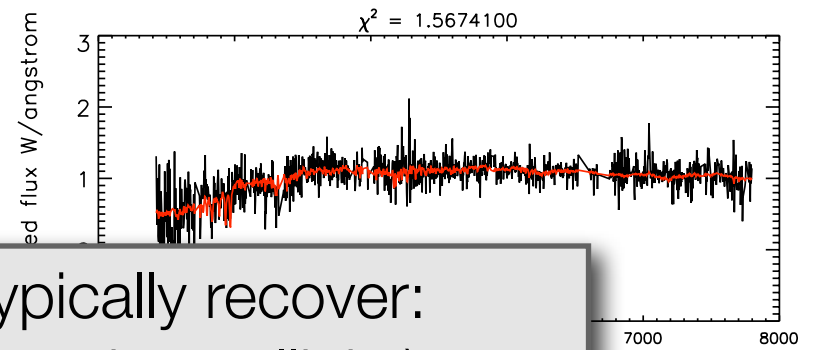
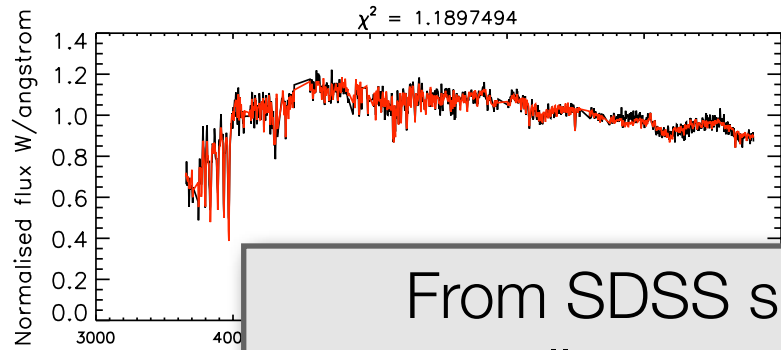
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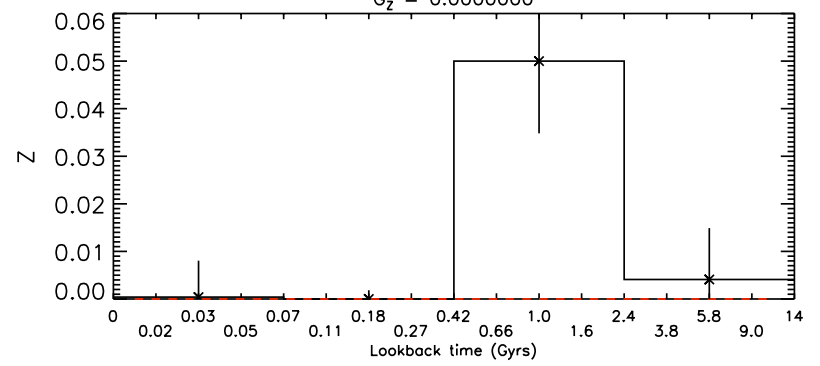
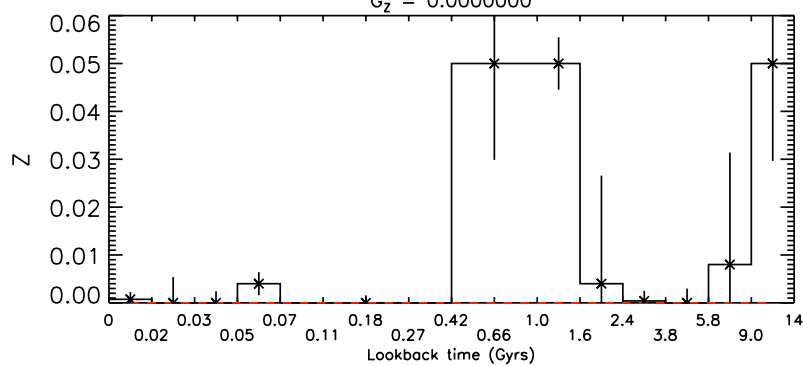
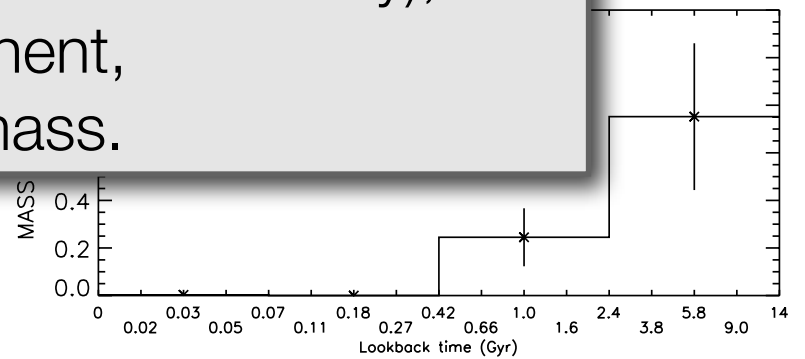
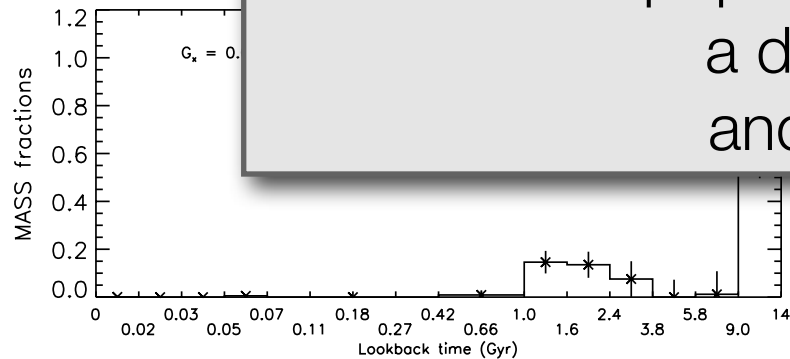
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From SDSS spectra we typically recover:  
2 stellar populations (age and metallicity),  
a dust component,  
and a stellar mass.



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  - VESPA is sensitive to poor photometric calibrations, but we are working on that.