



# BalticGrid-II Project

## Stellar spectra modeling

The SYNTSPEC application

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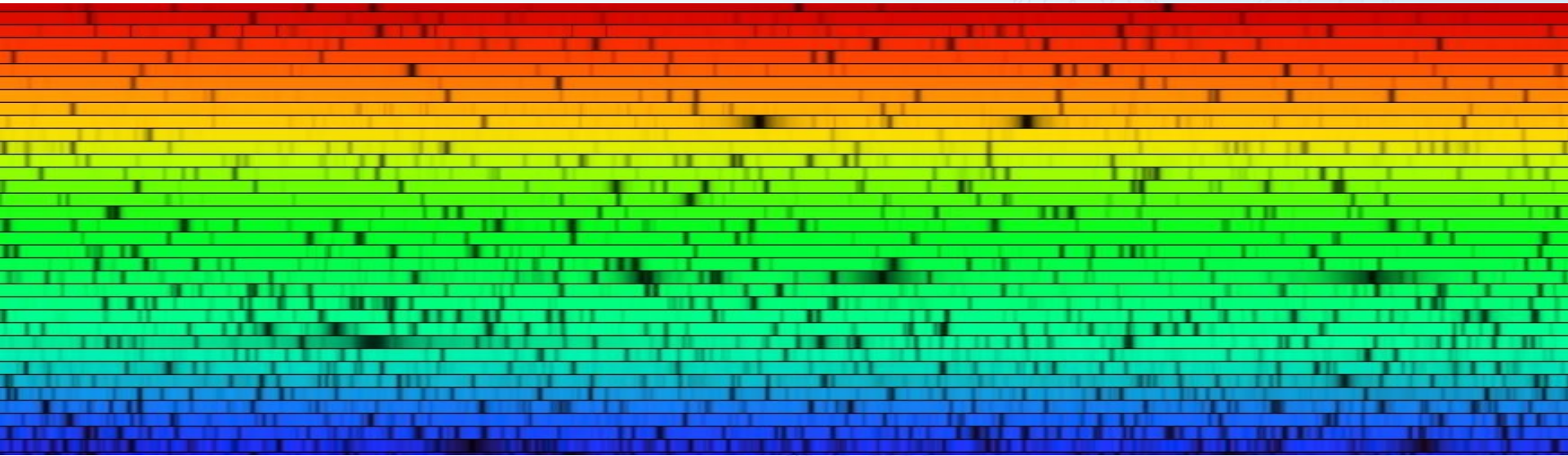
Institute of Theoretical Physics and Astronomy





# SPECTROSCOPY

- The chemical evolution of the Galaxy is mostly studied by analyzing a chemical composition of stars.
- The detailed chemical composition of stars can only be determined by stellar spectra.





# SYNTSPEC

Syntspec is used for:

- Chemical analysis of Galactic Red clump stars;
- Chemical analysis of open clusters in the Galactic disk;
- Investigation of chemical evolution of the Galactic thick disk;
- Chemical analysis of stars in neighboring galaxies;
- Analysis of chromospherically active stars.





Failas Taisa Rodymas Žurnalas Adresynas Priemonės Žinynas

http://sig.balticgrid.org/gridcom/syntspec/apps/SYNTSPEC-Elements.zip

gridcom

Home Files Applications > SYNTSPEC-Elements.zip Works

Models 44017M05.OPC Wavelength begin 4000 Wavelength end 7000 Wavelength step 0.01

XITE5 0.8 XLBOFF 0

**FWHM and profile functions for convolutions**

FWHM of first convolution 80

FWHM of second convolution 30

**Profile for 1-st Profile for 2-nd**

Exponential Gaussian RAD-TAN Rotational

**Abundance of element**

Element number (Z) 26

Abundance from 7.40 to 7.70

Abundance step 0.05

+ 01 H 12.00	+ 11 Na 2.00 2.50
+ 02 He 10.93	+ 14 Si 1.30 2.50
+ 03 Li 1.10	+ 20 Ca 1.80 2.50
+ 04 Be 1.40	+ 26 Fe 1.40 2.50
+ 05 B 2.55	+ 56 Ba 2.50 3.00
+ 06 C 7.52	+ 22 Ti 2.50 3.00
+ 07 N 7.42	
+ 08 O 8.83	
+ 09 F 4.56	
+ 10 Ne 8.08	
+ 11 Na 6.33	

Change! Refresh

Save

[VIEW Modeliu keitykla](#)

**Application:** SYNTSPEC-Elements.zip  
**Version:** 0.0.3  
**Description:** Stellar spectra modeling.  
**Work name:** Fe4400\_7-8 (required)  
**Job Count:** 38 (required)

Launch

Version: 0.97, Copyright © 2006, 2007 Vilnius University

W3C CSS W3C XHTML 1.0

Dokumentas įkeltas

• The SYNTSPEC application combined with GRIDCOM user interface provides a great possibility to calculate stellar synthetic spectra.

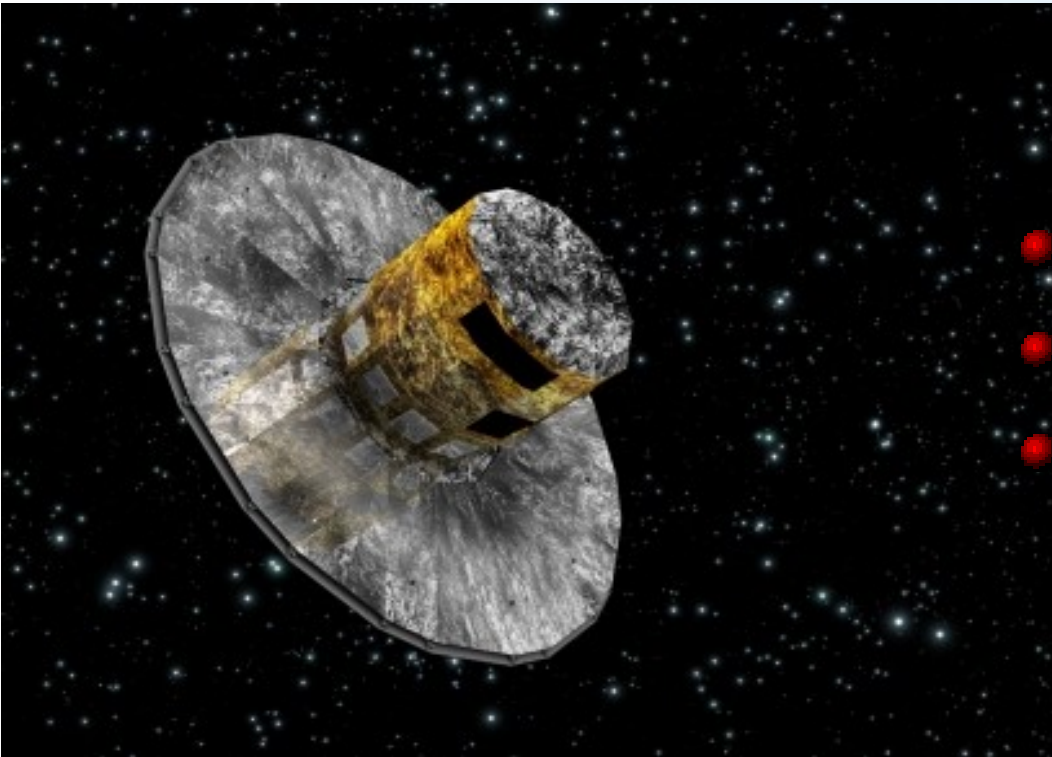






# Future plans

- In our future plan is the analysis of data to be provided in great numbers by the GAIA space mission of the European Space Agency (ESA).



- <http://www.balticgrid.org>
- <http://balticgrid.itpa.lt>
- <http://sig.balticgrid.org>

