

SpectraLib Database

<http://gaia.esa.int/spectralib/>

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SpectraLib Database: Purpose

- The SpectraLib Database currently provides access to synthetic spectra of Zwitter, Castelli and Munari (A&A 417, 1055-1062 (2004)) with a total of 183 588 based on Kurucz's ATLAS9 models

| Characteristic | Value |
|-----------------------|----------------------------|
| Resolving Power | 8 500 , 11 500 , 20 000 |
| Spectral Range | 7653 - 8747 Å |
| Effective Temperature | 3550 – 46500 K |
| Log g | 0 – 5.0 |
| M/H | -3.0 – 0.5 |
| V (rot) | 0 – 500 km s ⁻¹ |
| ξ | 0 and 0.4 |
| Micro turbulence | 0,2,4 |

SpectraLib Database: Features

- Actively maintained at ESTEC
- Is intended to be a service for the Gaia Community
- Is extendable to include other such large-scale synthetic spectra

SpectraLib Database: Features II

- Web-based interface <http://gaia.esa.int/spectralib/>
- Access on-line (browser) (requires Java)
- Form-based interface. Allows you to select any combination of spectra
- Output is available as a display or download in FITS format
- Supplied spectral display package is provided by StScI (SpecView) and is part of AVO standard package

Online Features:

- Reads standard FITS files
- Display crosshair X,Y positions
- Convert to multiple units
- Zoom in and out
- Panning

Offline Features:

- Multiple spectral display
- Basic spectral line fitting

SpectraLib: Technical

Currently based on an algorithm that combines parameters to define the filename: e.g.
f765875v000r11500m10a09500g40k2nover.fits

Advantage: Any combination is possible, provided the spectrum is available

Disadvantage: The casual user has no possibility of finding out what spectra are available

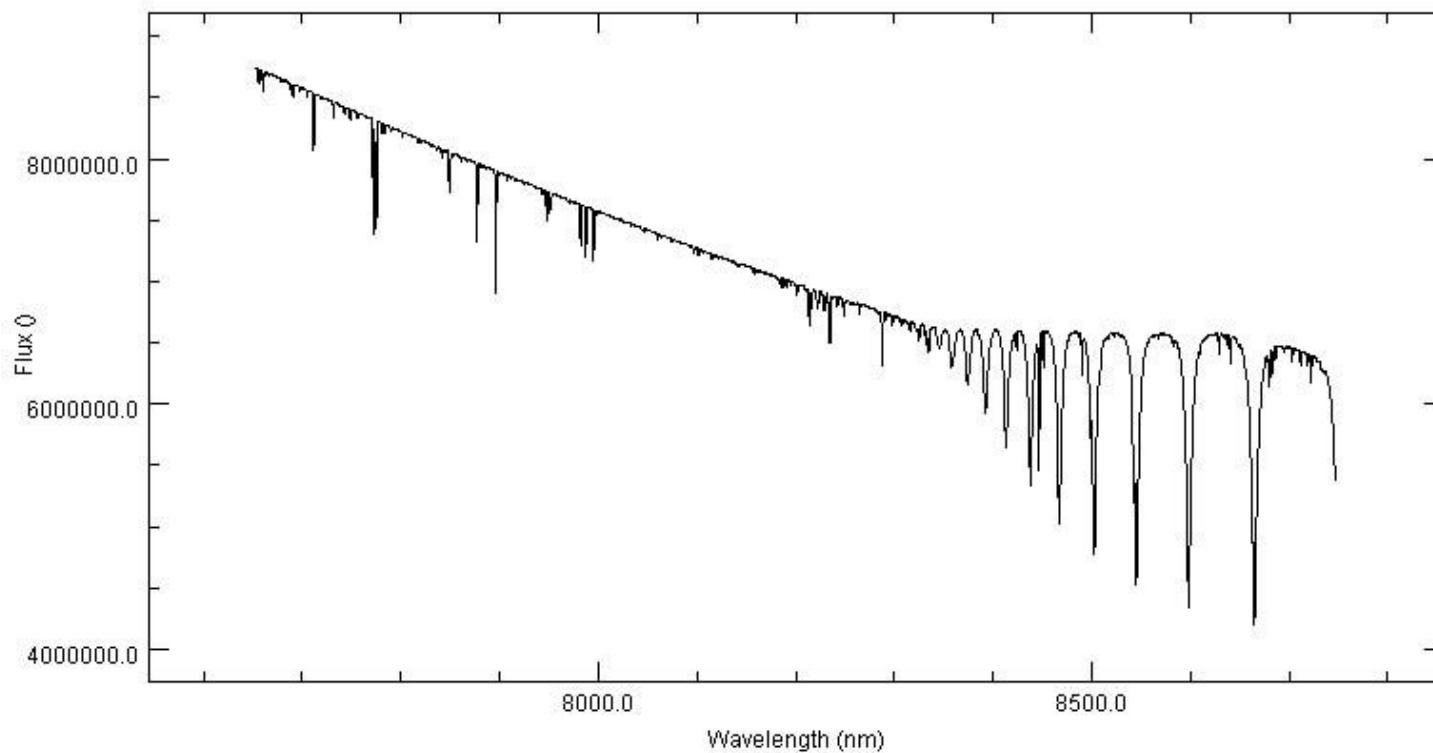
Example of Spectral Output

Cursor

X axis: Wavelength Y axis: Flux

7673.0264 9307483.0 Print

Grid off Auto [Refresh] [Home] [Left] [Zoom In] [Zoom Out] [Right] Units



Pan

Future Release

- Multiple Sources of Spectra
- All meta data will be placed in an Oracle Database, to allow more sophisticated searches
- Access from Gaia Parameter Database
- All other suggestions are welcome

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Welcome to ESA's web site for the Gaia scientific community. For more about this and other Gaia web sites follow the 'More about Gaia' link.

News from Gaia

2004-05-27 ICAP-VS-SA meeting presentations
 The classification, variable star, and science alerts working groups held a joint meeting in Cambridge on 15-16 April 2004. The presentations given at the meeting are available on the [Meetings page](#) of the [Variable Star Working Group www site](#) and show the current activities, the inter-relationship of the groups, and future plans. Decisions on the algorithms to be implemented in the GDAAS2 data analysis prototype will be made soon.

2004-05-24 Gaia photometric filters enter final design phase
 The Photometry Working Group has circulated three documents of relevance to the choice of the photometric system design for Gaia, which will be finalised over the next few months: (a) procedures for the photometric system recommendation (Anthony Brown et al, 11 May, PWG-AB-003); (b) scientific targets for the photometric system design (Carme Jordi et al, 14 May, UB-PWG-009); (c) quantification of the target priorities (Carme Jordi et al, 14 May, UB-PWG-015). With the selection of the photometric filters for Gaia now entering the final design phase, all interested parties are invited to provide their comments to the document authors in the coming weeks, to assist convergence of this important activity. Documents are available on Livelink, or from the authors.

2004-05-17 Gaia M1 demonstrator successfully entered

Gaia Symposium:
The Three Dimensional Universe with Gaia

Late registration until
15 September

Picture of the week

Spectralib

Gaia people

Dimitri Pourbaix
Spotlight on ...

Demonstration

<http://gaia.esa.int/spectralib/>