



gaia

GAIA

Gaia Object Generator GOG

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GOG

Provides:

**Epoch (transit) and combined (end-of-mission) data
True data, data as observed by Gaia and their errors**

Is based on:

A model of the Gaia instruments

Error models provided by the CUs (DPAC) (final Gaia data will be more complex)

Has two main simulation modes :

The GUMS universe model (integrated in GOG)

An external list of sources provided by the user



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GOG

GOG can be configured to use:

GUMS and its own integrated libraries

An external list of sources and its own integrated libraries

A user externally defined set of input spectra

The integrated spectral libraries :

LR spectral libraries used for BP/RP simulations: Basel2.2, BeLR (emission line), WD, QSO, Galaxy-Pegase-2

HR spectral libraries used for RVS simulations: MARCS, BeHR (emission line), Galaxy and QSOHR

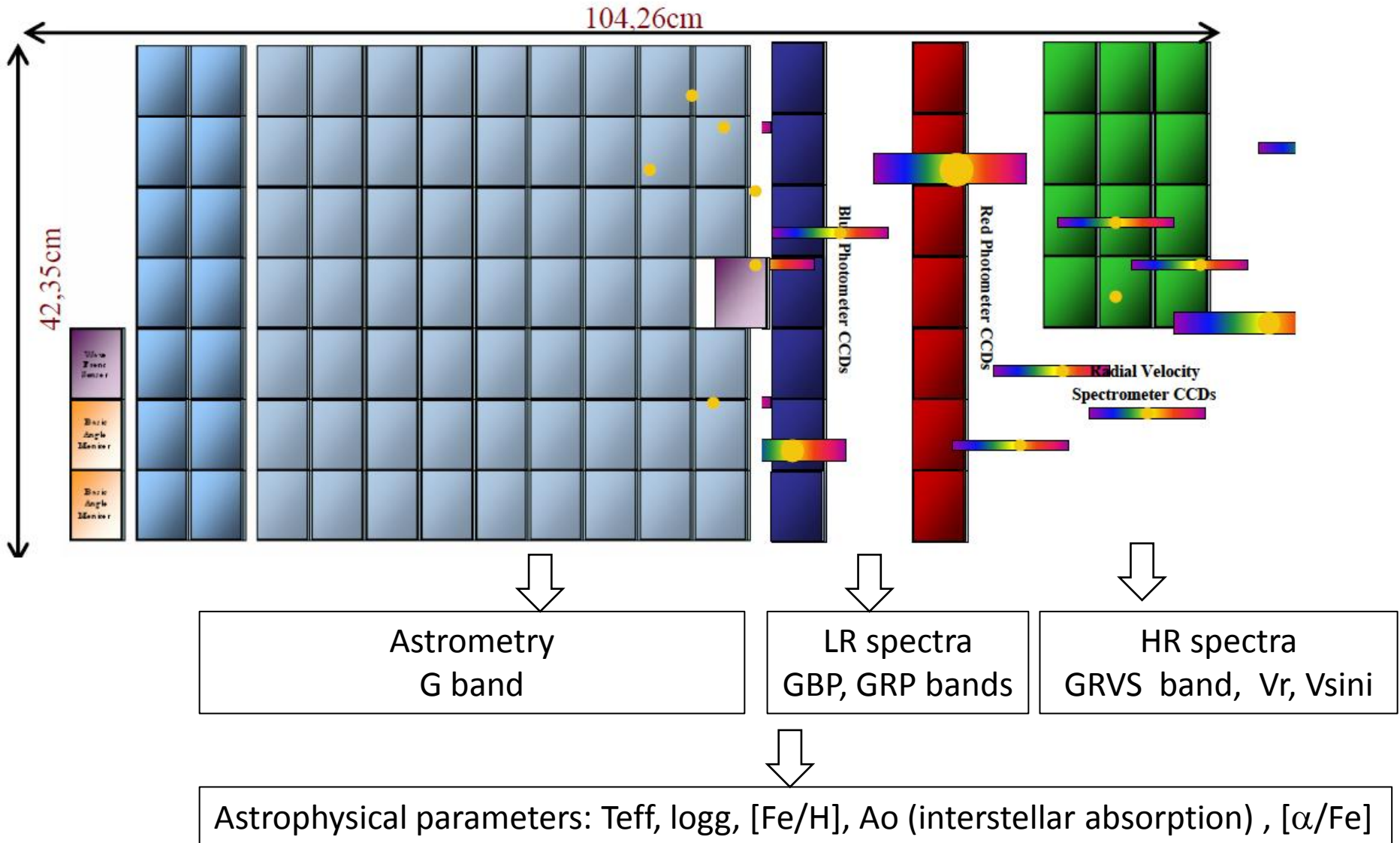
-(That's why is so big!)

The spectrum is associated to a source using minimum distance (Teff , logg and [Fe/H]) - interpolation is pending



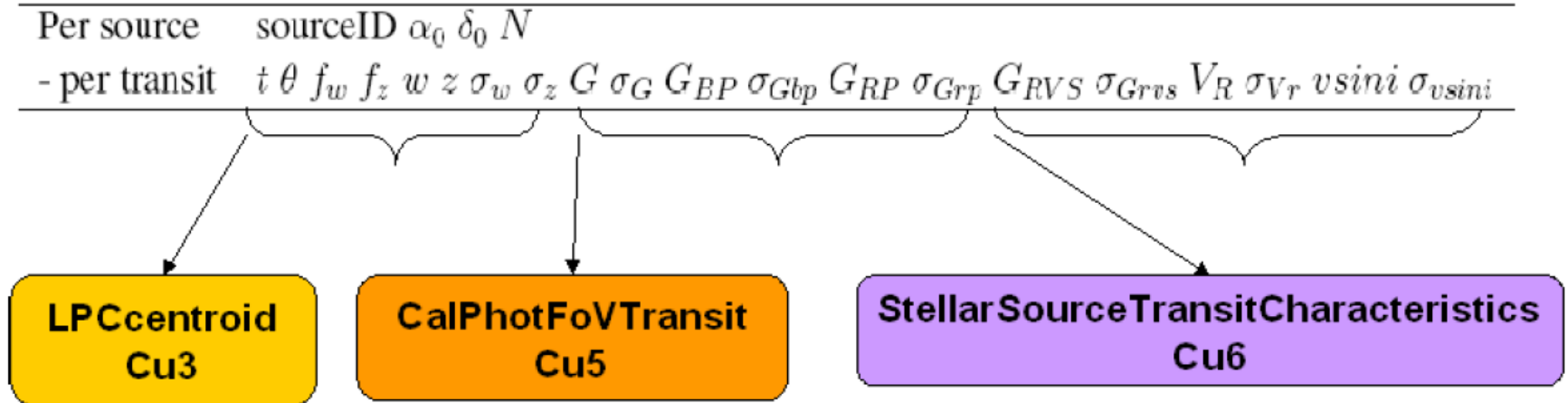
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Gaia focal plane



GOG: epoch parameters (per transit)

Output epoch parameters format



Epoch data will be provided in the last Gaia releases and will be mostly used to determine properties of multiple systems and variable sources



GOG: combined parameters (end-of-mission)

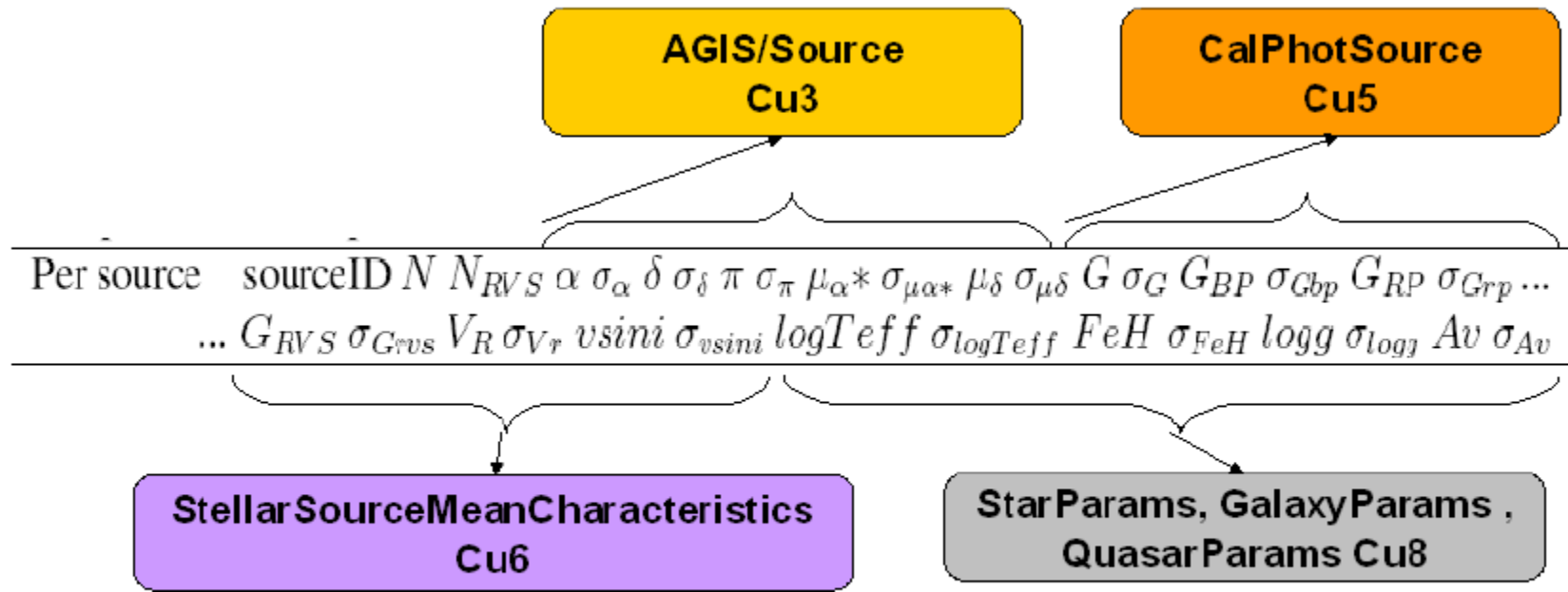


FIGURE 2: GOG combined data fields - MDB table mappings



Gaia error models

Astrometry
Photometry
Spectra
Radial Velocities
Rotational velocities
Astrophysical Parameters

We describe here both GOG approach and the receipts published in the Gaia Science Performance website