The Lichtenknecker Database of the BAV

- **The Purpose**
- **The Data**
- **How to use it**

Frank Walter
Database Administrator

Why do we observe eclipsing binaries?

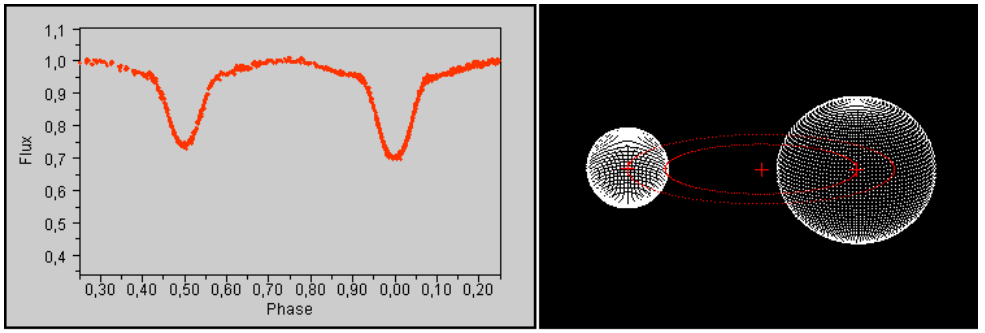
Observing an eclipsing binary means:

Observing a double star system and the motion of the two components around each other.

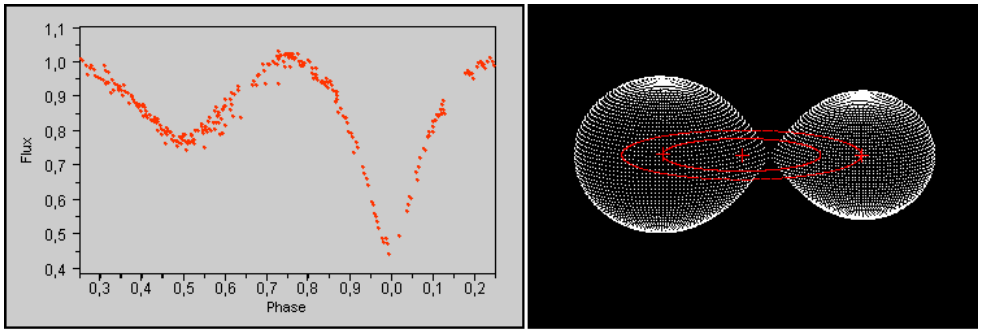
We have no other possibility, because the two components can not be separated.

What light-curves tell us

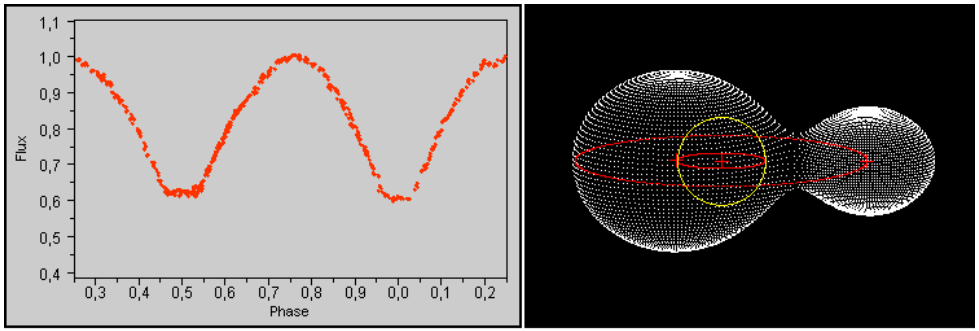
Type Algol
detached



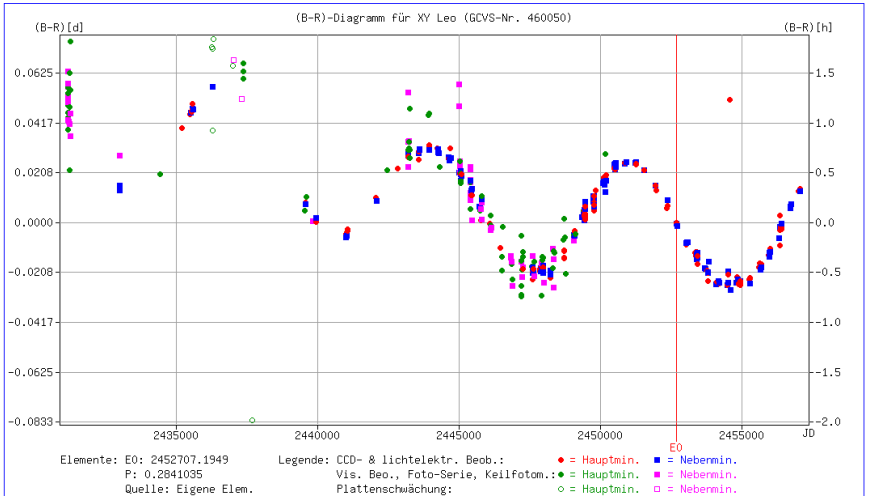
Type beta Lyr
semi-detached



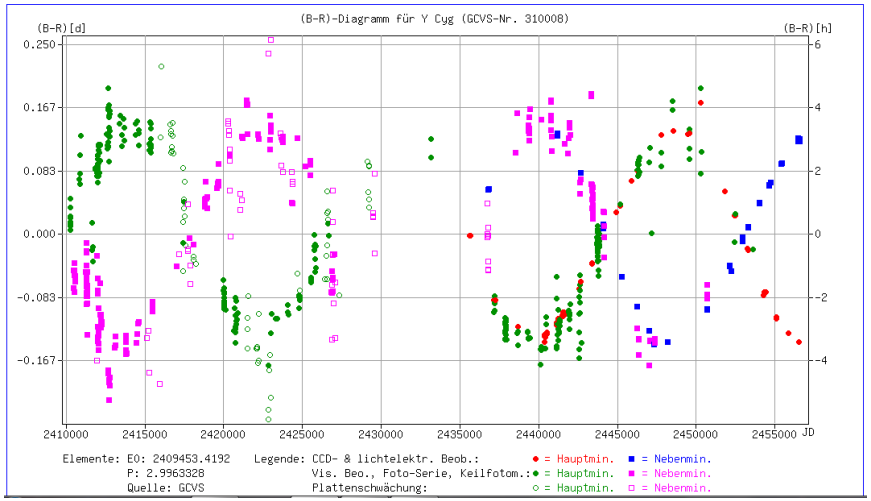
Type W UMa
contact



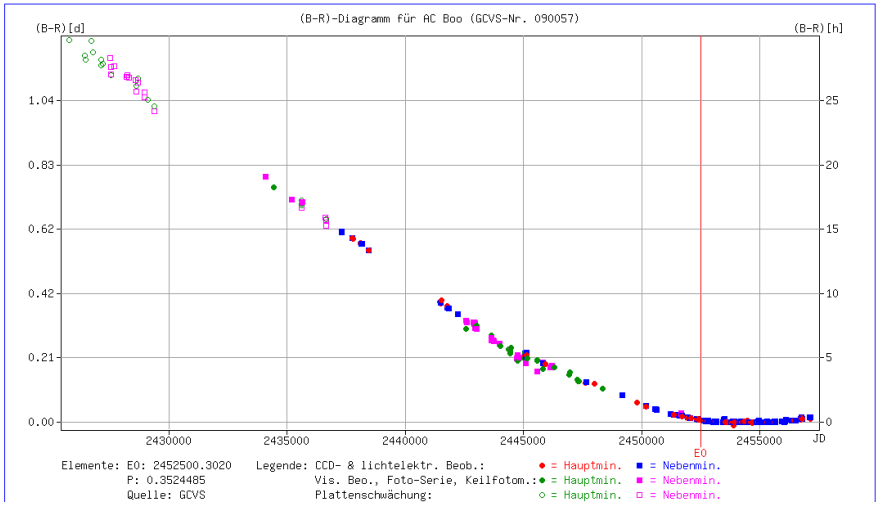
What (O-C)-Diagrams tell us



existence of a 3rd. body



apsidal rotation



mass transfer

LkDB: Data

The LkDB actually (Rev. 5.02) contains

- **eclipsing binaries: 2.175 eclipsing binaries**
- **TOM: 182.000**
- **Period: 1848 – 2015**
- **Sources of data: IBVS, JAAVSO, OEJV, BAVM, VSB, …**

- **Number of stars in GCVS: ~ 48.000**
- **Number of stars type „E“ in GCVS: 9251**

LkDB: Datastructure

- One record each eclipsing binary
- Record key: GCVS ident-number

- Each record contains a table of minima:
  - TOM (JD)
  - Number of fractional digits
  - Detector
    (eye, photographic series, photomultiplier, CCD)
  - Filters used
  - Observer‘s name
  - Source

LkDB Live Show

BAV Home Page

Other European Databases

CZECH ASTRONOMICAL SOCIETY

AN ATLAS OF O-C DIAGRAMS OF ECLIPSING BINARY STARS
Jerzy M. Kreiner