

# **The AIRUB Plate Collection and first steps of its scientific exploitation**

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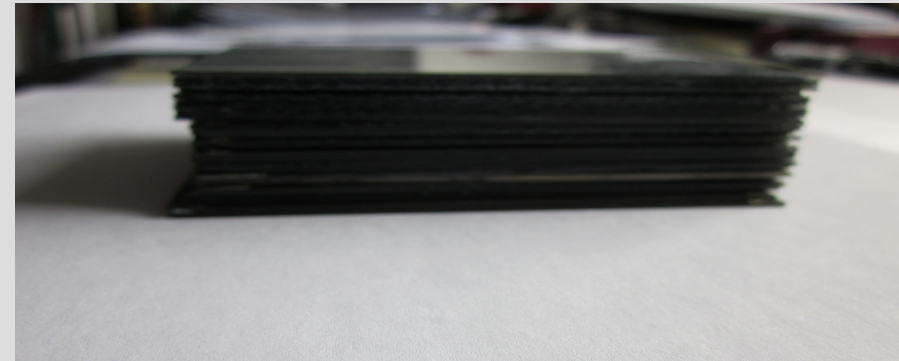


# Searching, sorting, and saving

Before...



and ...

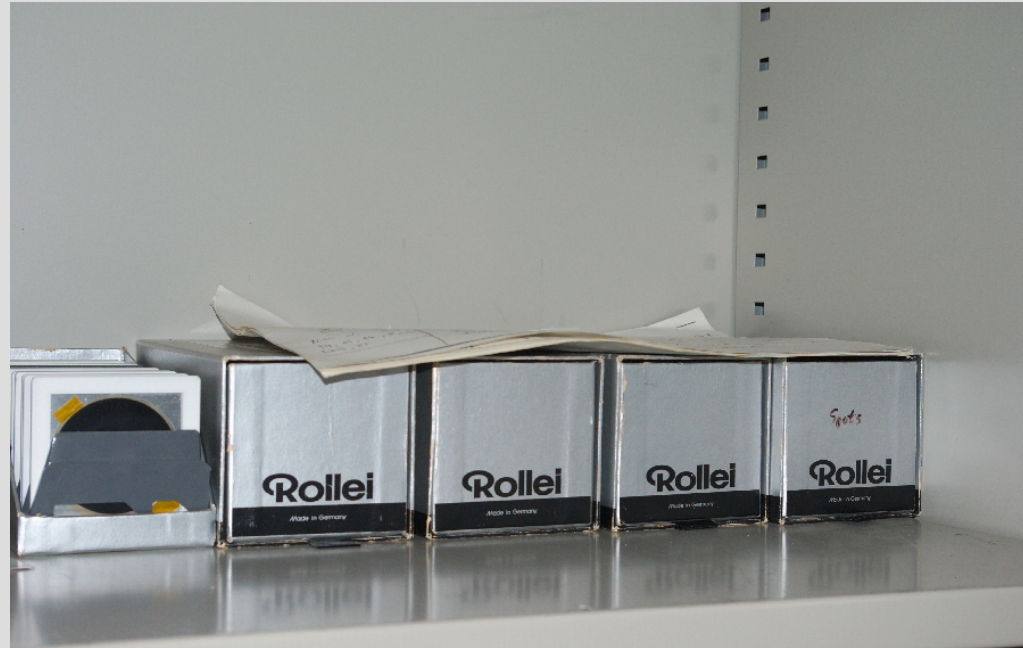


Current state...





# On the way to order...





# Large format plates



New temporary storage and analysis corner next to computer servers  
Temperature, but not humidity controlled...  
(well, humidity control is only manually...)

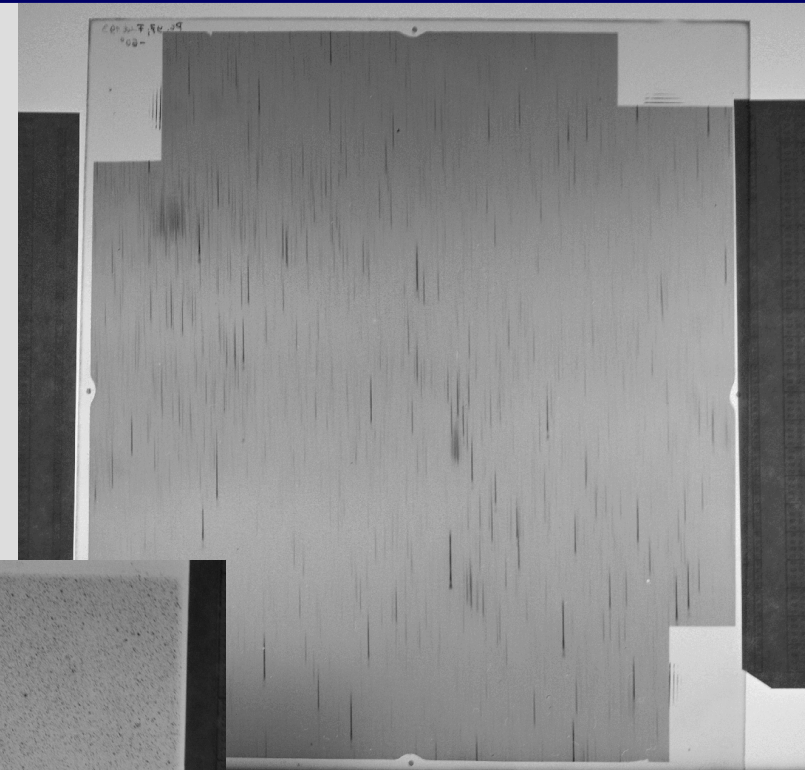
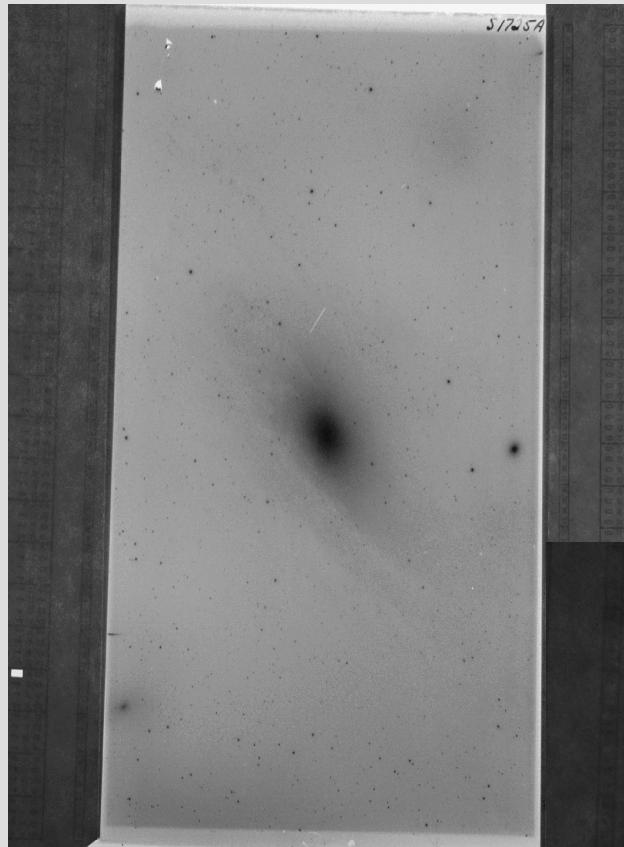


# Current state of the inventory

- ~ 820 large and smaller format glass plates from > 14 different telescopes
  - Imaging, objective prism, and spectral plates
  - Dates from ~1920 to ~1987
- Halley project archive (1986)
  - ~750 wide field images of Halley
  - ~200 film strips (5 images each) of comet nucleus/coma
- Gauss camera archive (extreme widefield UBVR images of Milky Way)
  - ~ 120 plates (Chile 1971,1972)
  - 6 film rolls (Chile 1971,1972)
  - 110 far UV images on slides from Gauss camera aboard STS-55 taken during the D2 space shuttle mission 1993
- Widefield images of Magellanic Clouds and MW fields (1971-1986)
  - ~ 50 plates
- Glass copy of ESO Quick Blue survey
- Film copies of Quick Blue and SRC-J surveys, as well as paper copies of POSS-I

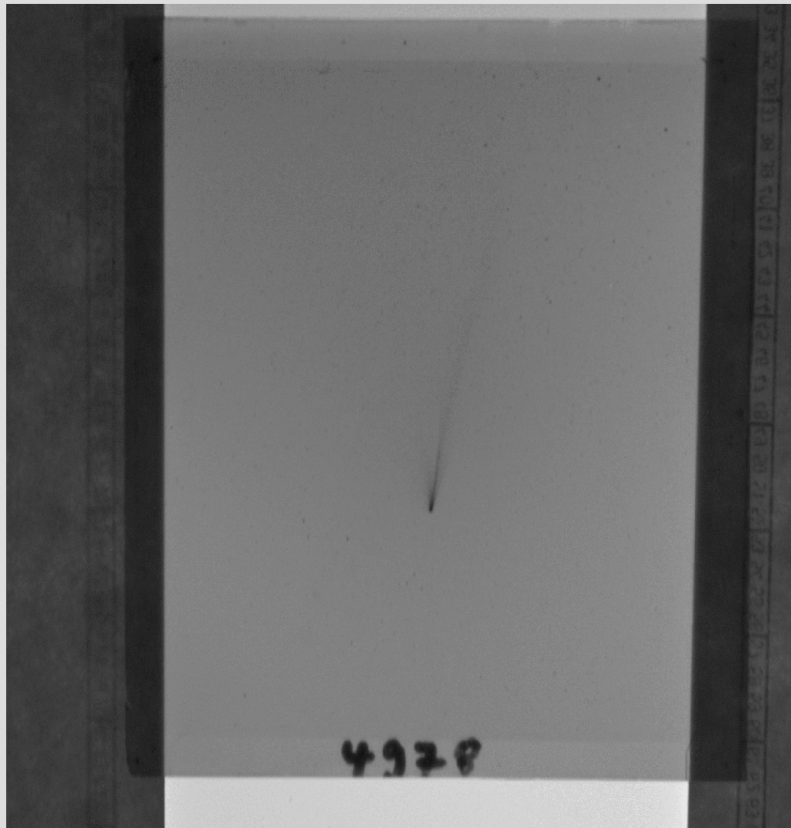


# Large format plate examples





# Halley archive



6x7 cm plates

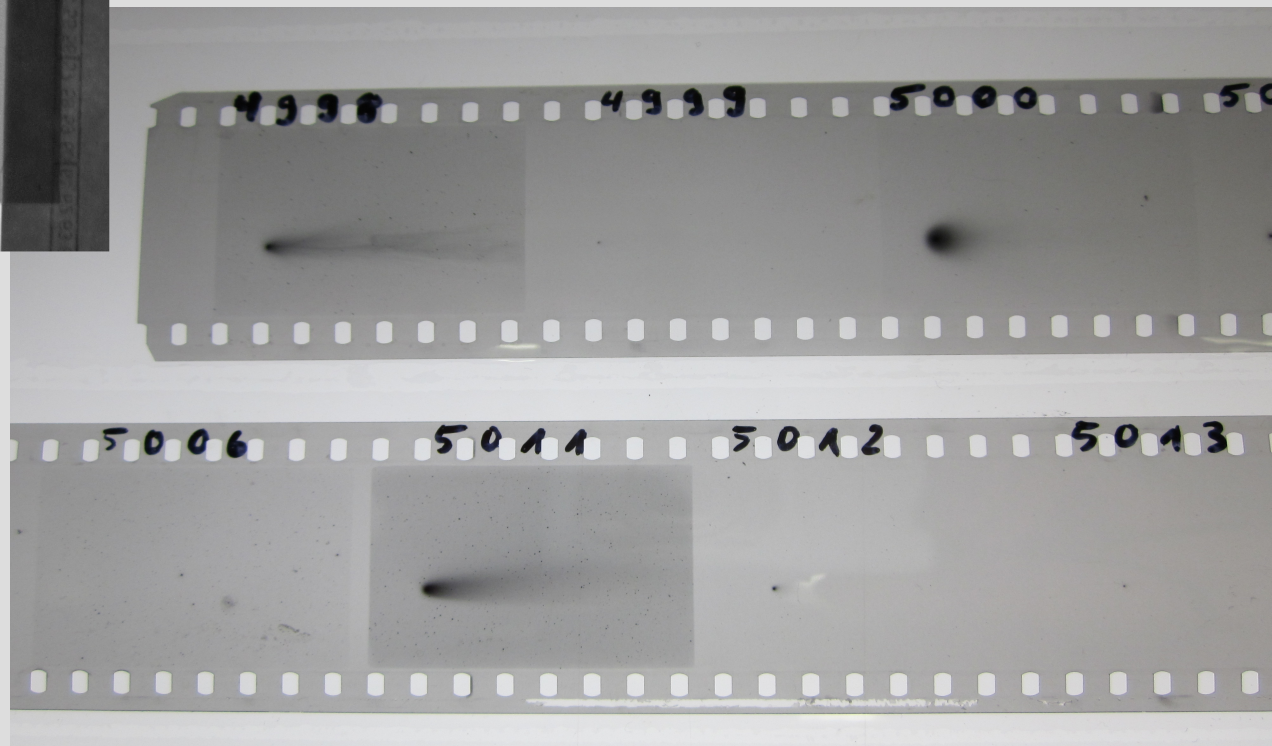
FFC during recent tests following upgrade with filter wheel and large format CCD



7.5cm f/4 photo lens

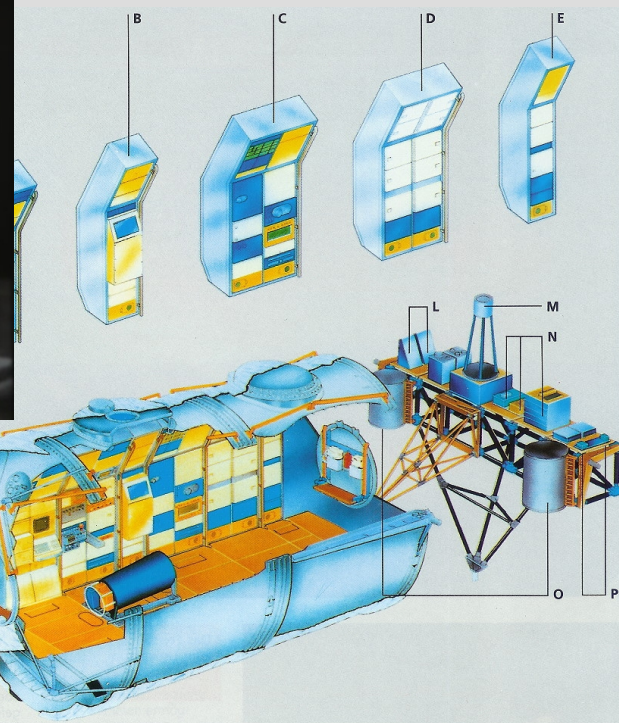
20cm f/3.8 flat field camera (FFC)

24x36mm films





# Gauss camera archive



Gauss camera on display at  
FH Aachen (Fachbereich Luft-  
und Raumfahrt)

Photo: D. Fischer





Current activity is mainly focussed on variability of evolved massive stars:

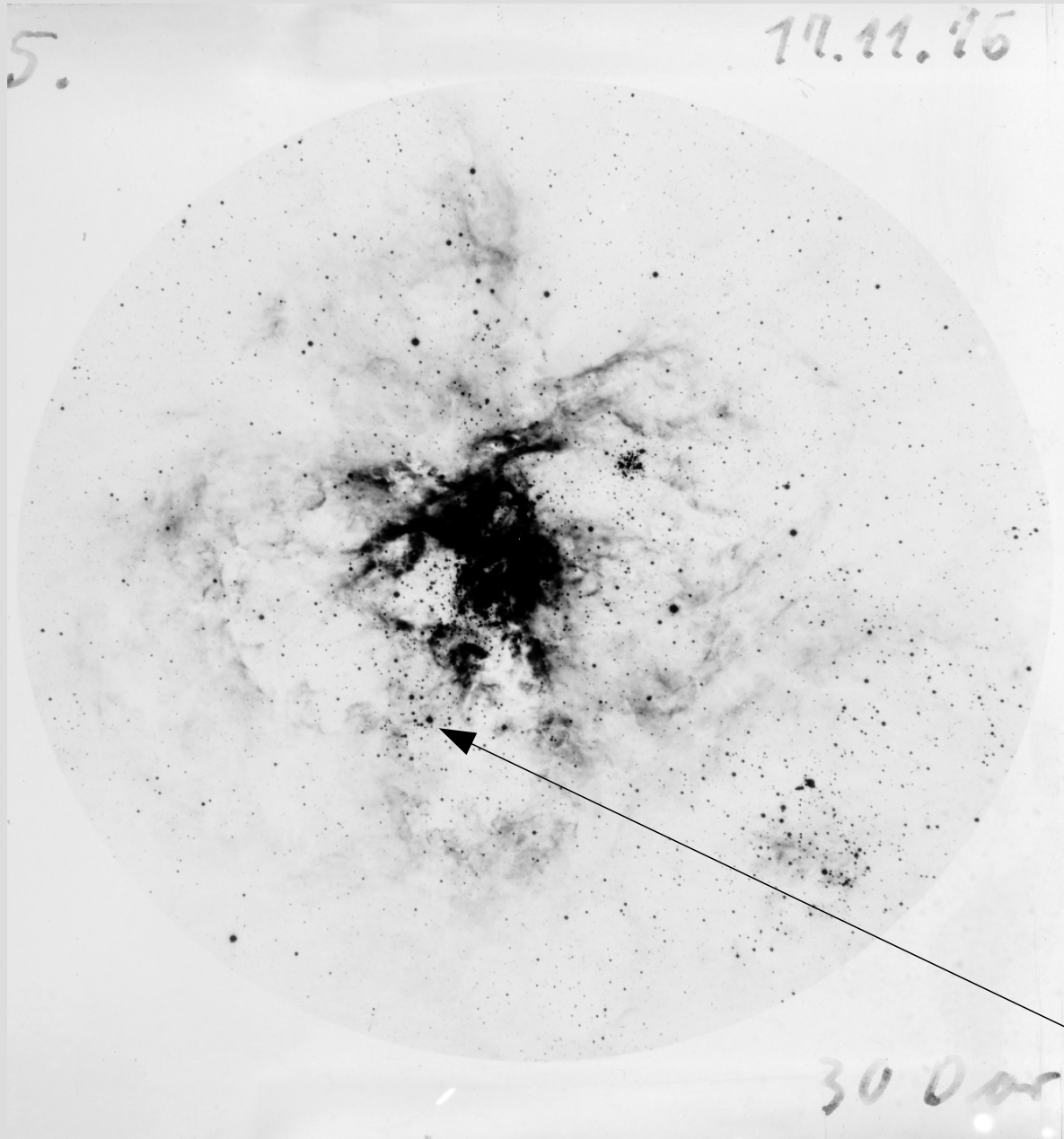
- use LMC/SMC plates (and Bamberg plate archive (U. Heber); ESO to be checked)
- use M31, M33 plates (with major contributions from Tautenburg (H. Meusinger) and in cooperation with US partners )
- objective prism plates (spectral changes in galactic evolved massive stars)
- variability of massive stars in clusters (with major contribution from Bonn (M.Geffert) )

Future:

- exploring use of Gauss imagery (especially UV) for massive star science
- looking into scan options for Halley archive



# Variable massive stars in 30 Dor



ESO 3.6m

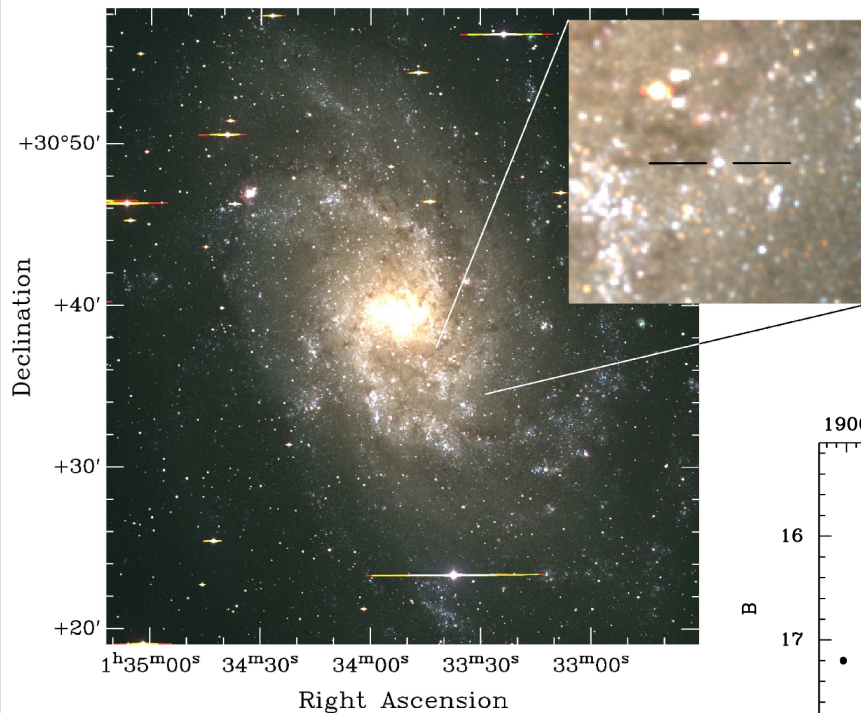
Set of ~30 plates taken between  
1976 and 1986

First plates scanned at Bonn

e.g.  
Luminous Blue Variable  
R 143



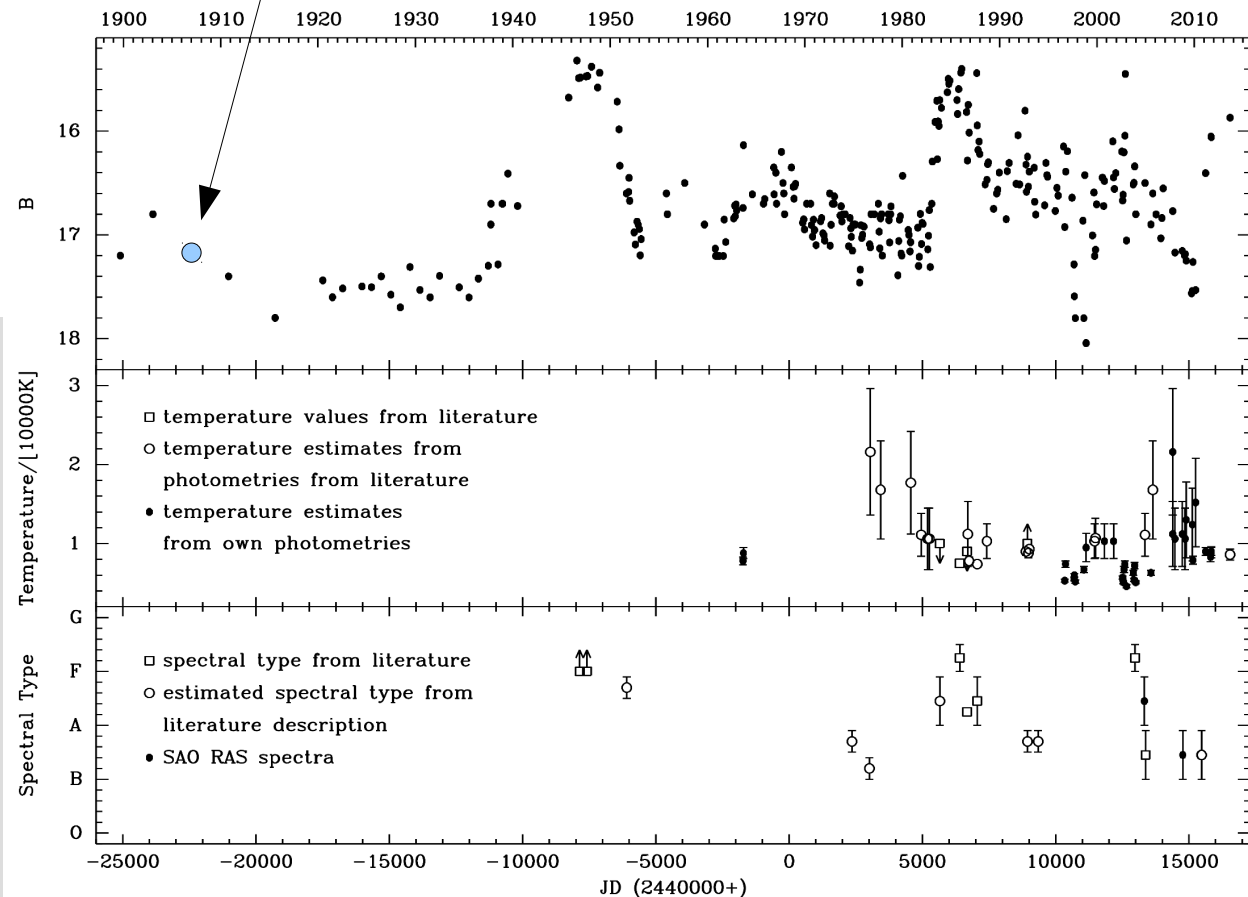
# M33 Var C



measurement on Waltz Reflector plate  
(taken 1908 by M. Wolf)  
scan from Heidelberg archive inside GAVO

Color image of M33 from  
Tautenburg 2m CCD data  
Inset: M33-Var C

Burggraf, Weis, Bomans et al.  
A&A submitted





Thank you for your attention !