



PMS Thematic Team

Activities since CW9

K. Zwintz

(Institute of Astronomy, Univ. Vienna,
Austria)

& members of the PMS Team

June 6-9, 2006

COROT Week 10, Nice

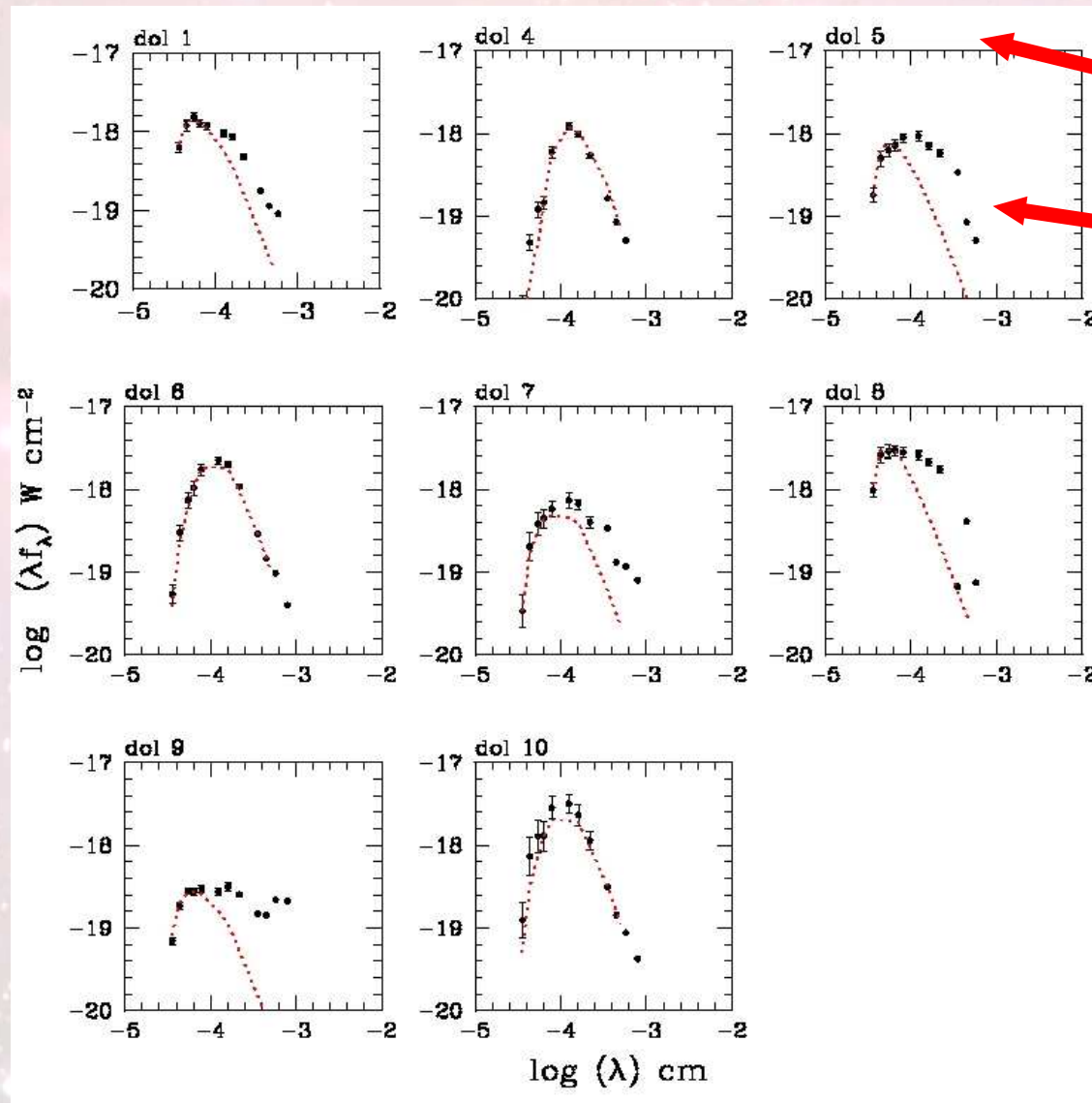


Status: Dolidze 25

(PI: V. Ripepi)

- **Dolidze 25:** distant, metal-poor open cluster
 - EXO-field during **LR2**
- **Phase I AP proposal:** **accepted**
 - **40 targets** (mainly PMS objects) in the field of the cluster
- **Preparatory Work:**
 - VIMOS@VLT spectra
 - BVRIJHK + IRAC bands (Spitzer satellite) photometry
 - SEDs for **13 potential COROT targets**
 - additional SEDs for **27 fainter stars**
 - Confirmation of the **PMS nature** of **8 stars**
 - including all **4 δ Scuti candidates**

Status: Dolidze 25



A8 - δ Scuti Cand.

IR excess

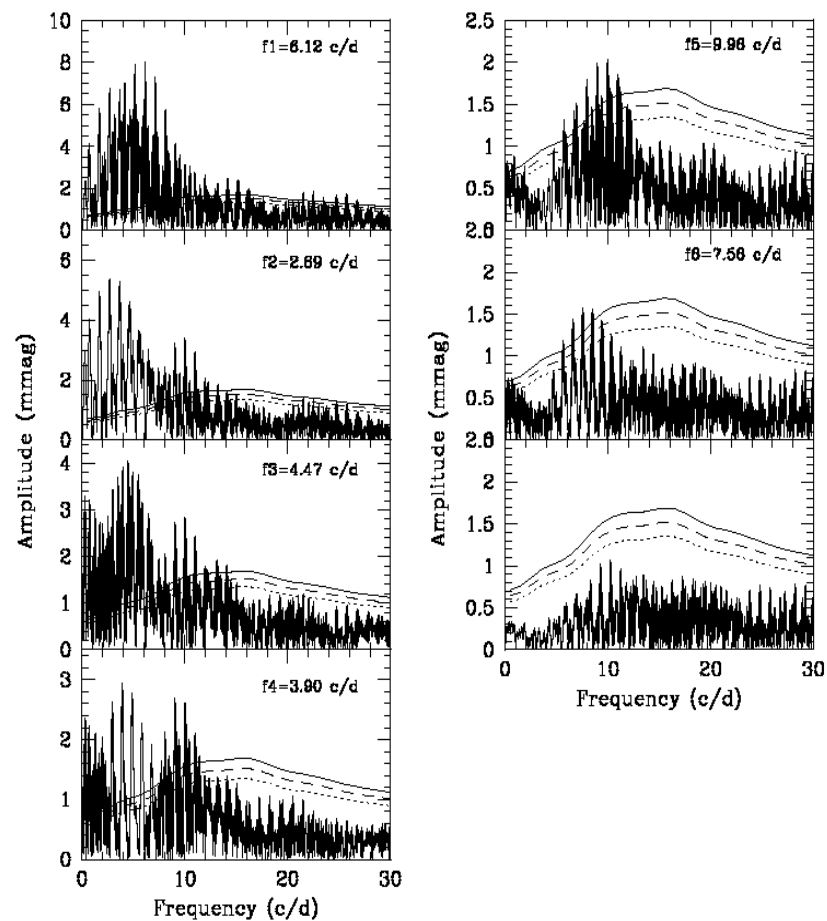
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VV Ser (PI: V. Ripepi)

- PMS δ Scuti candidate for short run in center direction
 - in **EXO field** ($V = 11.5$ mag)
 - in **SEISMO field**: bona-fide γ Doradus star **HD 167858**
(suggested short run target)
- variations on longer time scales
- uncertain stellar parameters
- probably a fast rotator: **$v \sin i > 100$ km/s**
- **6 pulsation periods** found photometrically

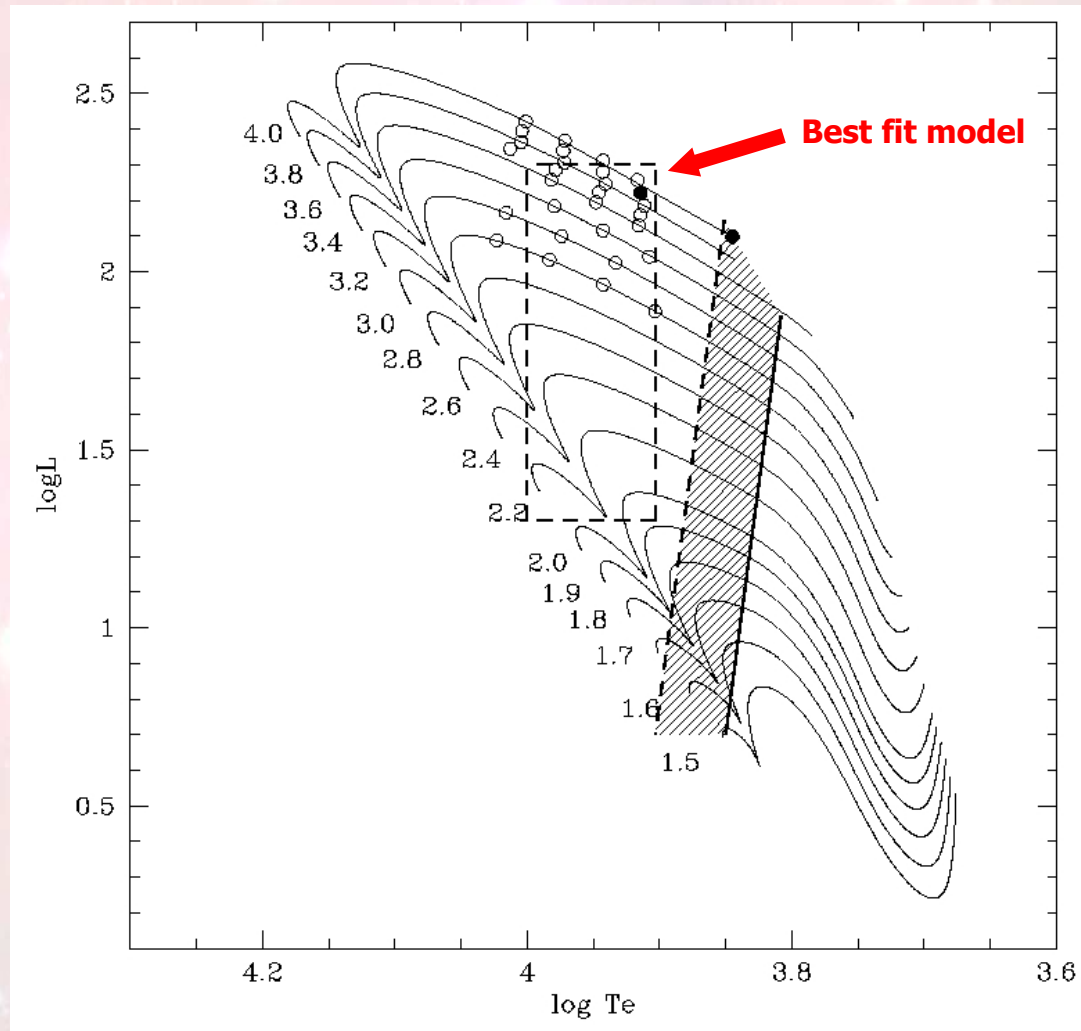


COROT Week 10, Nice

VV Ser (PI: V. Ripepi)

Comparison with
**nonradial
adiabatic models**
to constrain the
position in the HR-
diagram

Ripepi et al. 2006,
A&A, submitted



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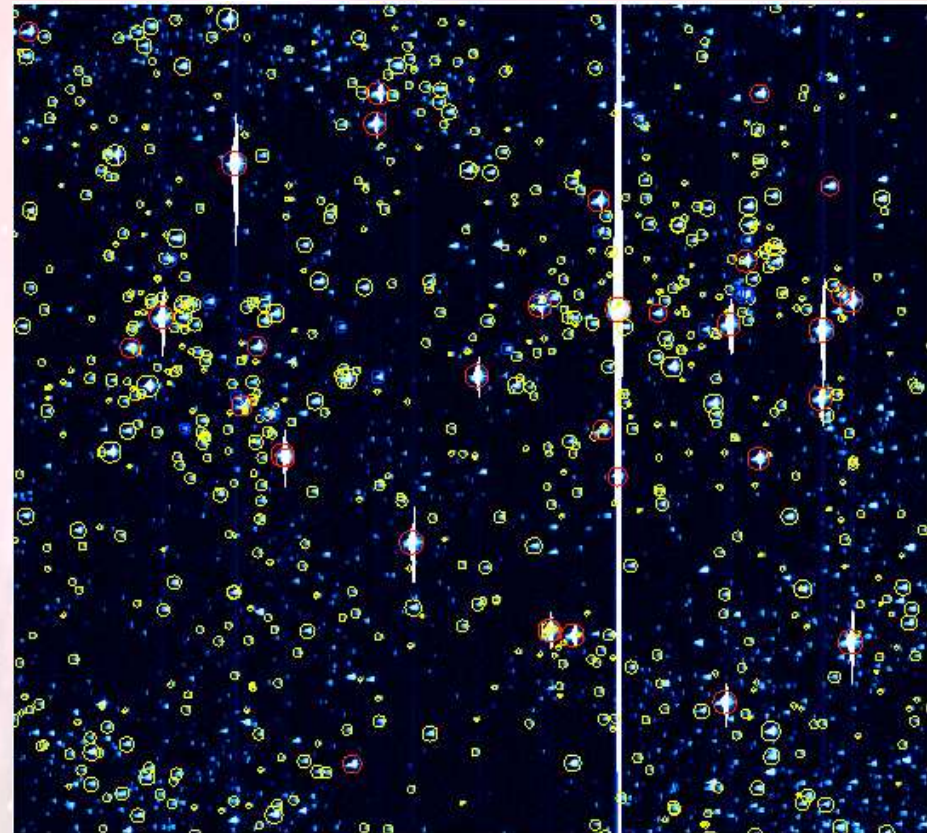
Status NGC 2264

(PI: F. Favata)

- Phase I (short run) proposal **accepted**
 - **4 scientific goals:**
 - accretion in CTTS
 - activity, rotation and flaring
 - asteroseismology
 - brown dwarf and planetary transits
 - scheduled for **2nd year** (orbit drift): **anticenter, 2008**
 - optimization using **in-flight performance**
- Phase II proposal: **Feasibility Study**
 - crowding, saturation, target availability, nebular background
 - **exact pointing**

NGC 2264: Potential Targets

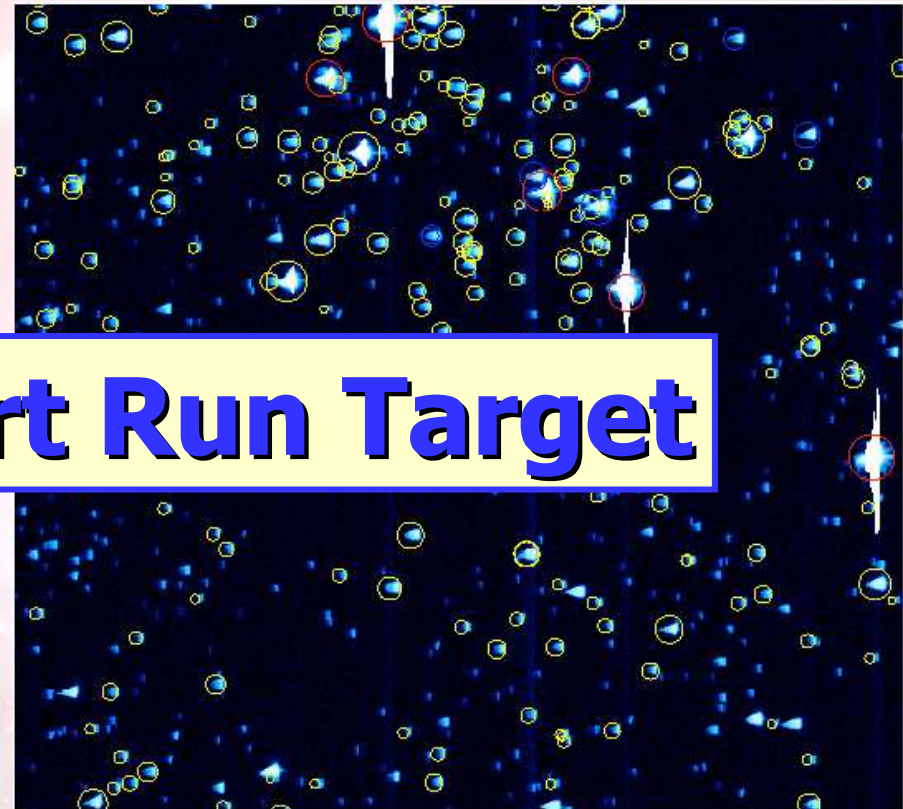
- **Two catalogs**
 - all stars: $R < 22$ mag
 - check contamination
 - targets of interest
- **Final target list**
 - **1350 objects**
 - plus **640 faint** targets
 - **1° region** around center
 - membership
- **simulated COROT image**
 - faithful estimate of „reality“



NGC 2264: Feasibility Study

- **Crowding**
 - imhomogeneous star density
 - **no crowding problem**
- **Saturation**
 - contamination of targets
 - **Perfect Short Run Target**
 - charge redistribution
 - **asteroseismology on brighter targets possible**
- **Target Availability** **OK**
- **Nebulosity**
 - higher background & noise

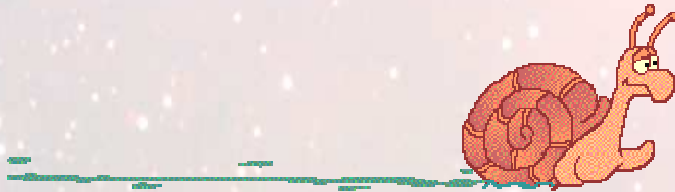
Zoom



PMS Team – Summary

- Ground-based preparations
 - **Dolidze 25**
- Feasibility check
 - **NGC 2264**
- more ideas for COROT
 - **VV Ser**

The team worked hard...



October 2006