



PMS Thematic Theme Latest Activities

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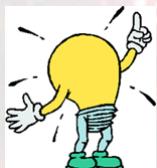
& members of the PMS Cooperation

May 24-27, 2005

COROT Week 8, Toulouse

After CW7 - Granada

- Pre-main Sequence (PMS) Thematic Theme
 - different research fields
 - Protoplanets
 - PMS variability: T Tauri & HAEBE stars
 - PMS solar-type stars
 - Interaction of PMS objects with circumstellar structure
 - PMS pulsation of A & F type stars
 - X-ray sources

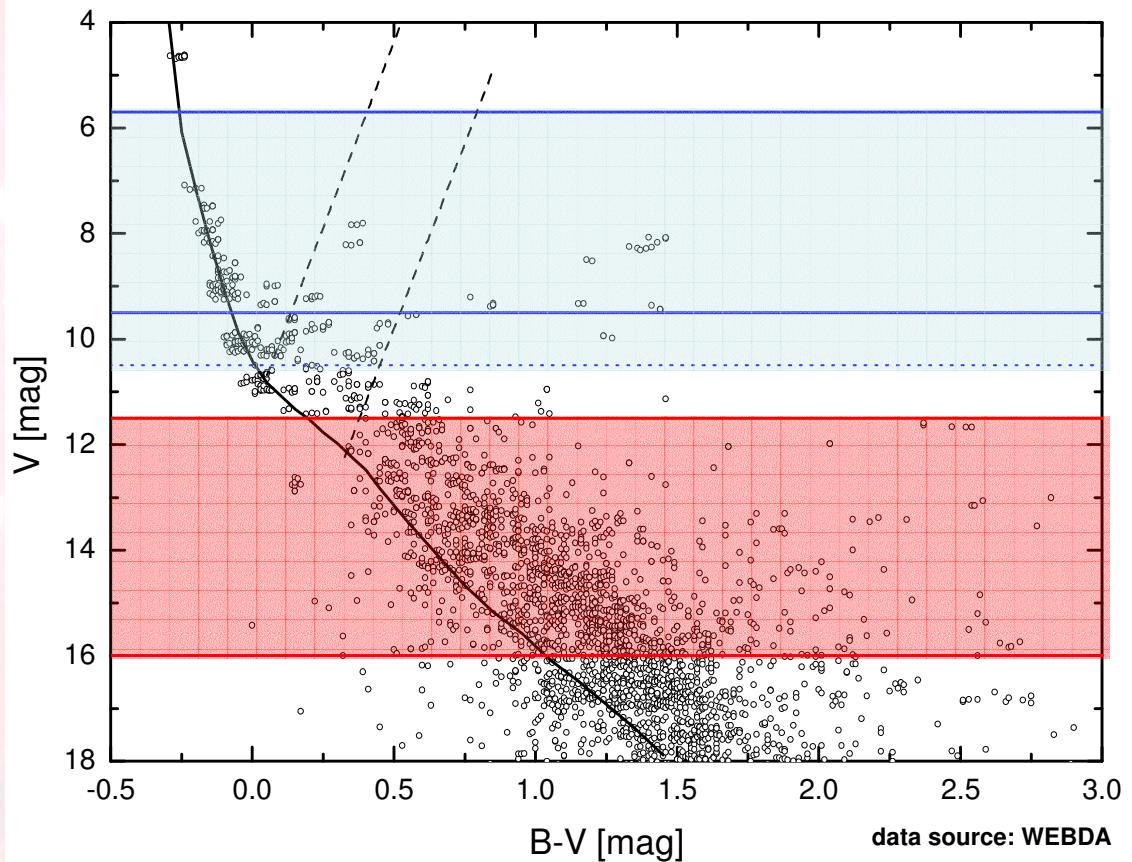


Short Run Proposal on NGC 2264

Why NGC 2264?

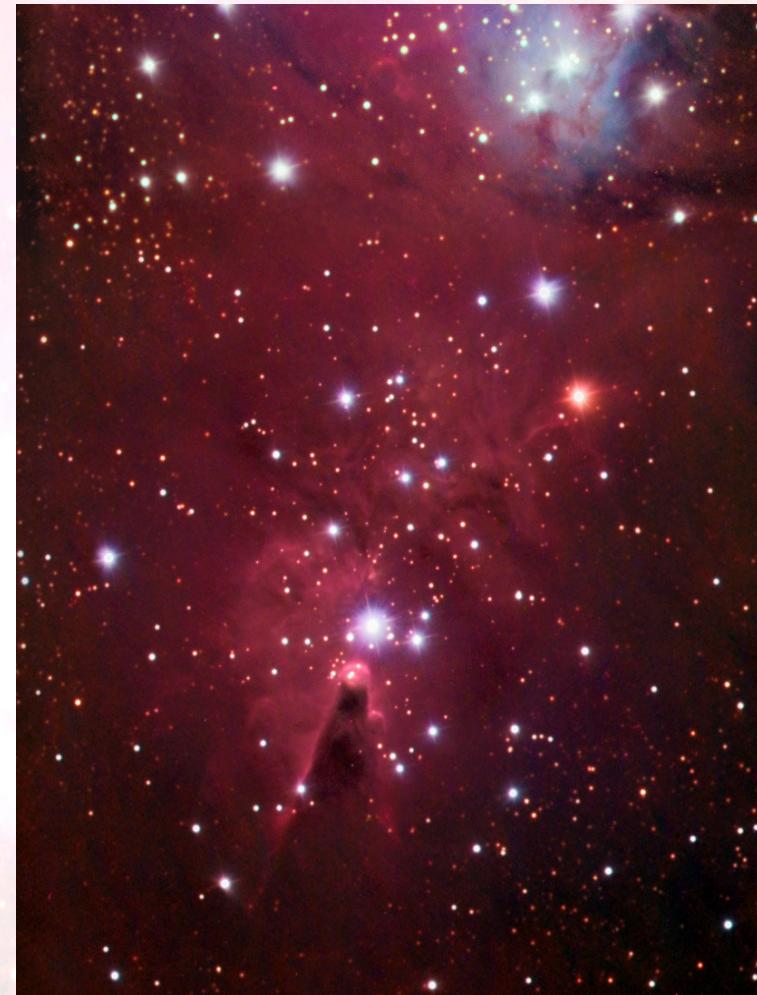
$\alpha = 06:41.1$ (2000.0)
 $\delta = 09:53.0$ (2000.0)

- age: 3-8 Myr
- diameter $\sim 40'$
- Seismo-field
 - bright members
- Exo-field
 - PMS objects
- well-studied in literature over the past decades



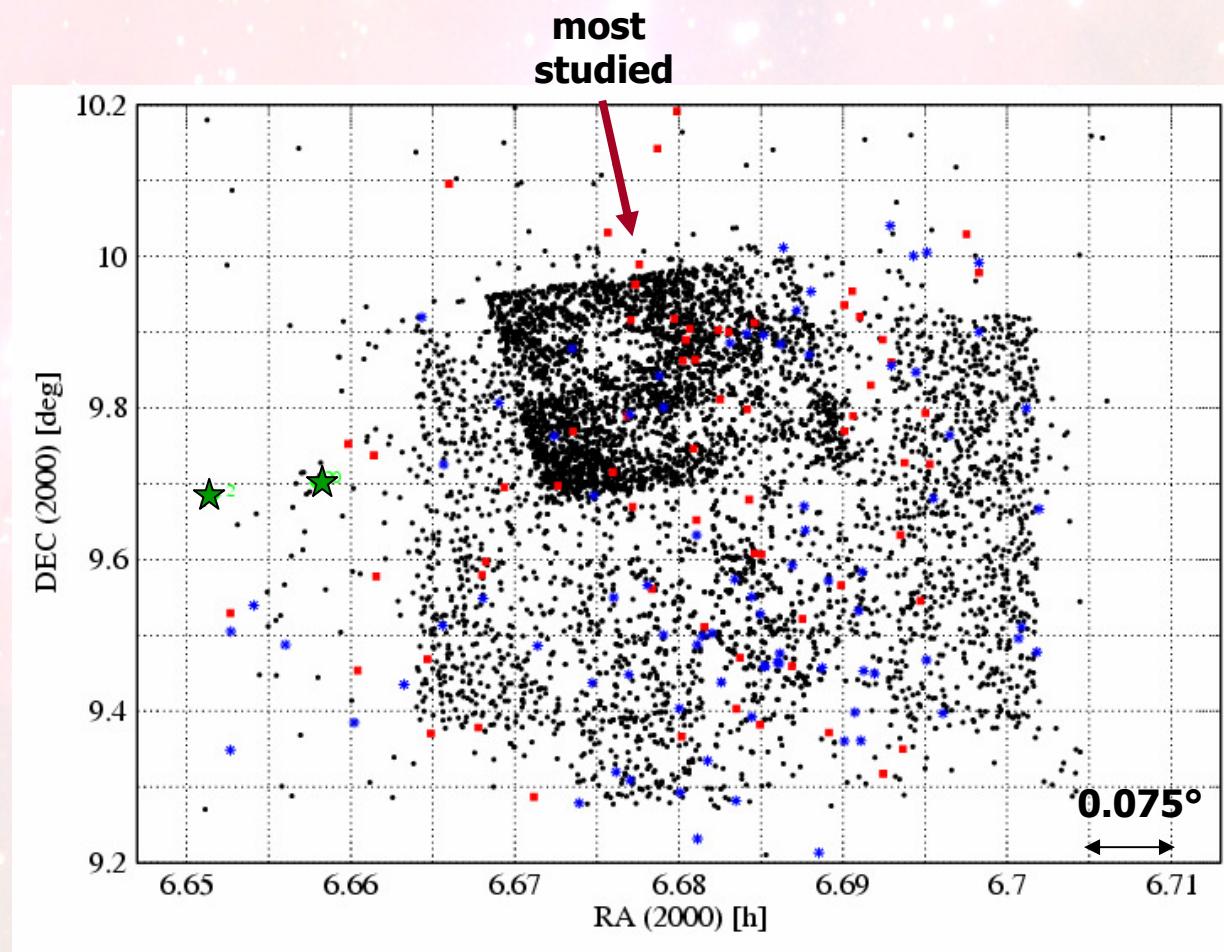
NGC 2264 – a “wide” field

- main sequence B stars
 - stars later than A0 are above ZAMS
 - asteroseismology (A & F)
 - HAEBE & T Tauri stars
 - solar-type stars
 - obscured region
 - gas & dust
 - circumstellar disks
 - protoplanets
 - X ray sources
 - ...
- ???
- !!!



NGC 2264 – central area

- 1 deg²
- ~ **6700 stars** (WEBDA)
 - not complete
- B stars location needed
- **A & F stars**
- **0<(B-V)<0.6**
- **V 588 Mon**
- **V 589 Mon**





Short Run Proposal

- **PI: F. Favata**
- 5 subteams with leaders
 - Exoplanet search in the lower mass YSOs – **S. Aigrain**
 - Interaction of YSOs with circumstellar matter – **S. Alencar**
 - *Asteroseismology* of PMS stars – **K. Zwitter**
 - Stellar activity and rotation – **G. Micela**
 - *Asteroseismology of main sequence B stars* – **C. Aerts**
- shared preparatory work – shared (possible) COROT data

Status of subteams

- “Protoplanets”
 - **S. Aigrain**, D. Queloz, M. Irwin, L. da Silva, S. Hodgkin, T. Guillot, F. Bouchy, F. Pont, S. Zucker, C. Moutou
- “Circumstellar Matter”
 - **S. Alencar**, J. Bouvier, R. de la Reza, M. Deleuil, M. Fernandez, J.F. Gameiro, J. Gregorio-Hetem, E. Moraux, C.A. Torres
- “Main Sequence B Stars”
 - **C. Aerts** - tbd
- “Activity”
 - **G. Micela**, E. Flaccomio, S. Sciortino, R. Jeffries, J. Stauffer, L. Rebull, J. Sanz, I. Pagano
- “PMS Asteroseismology”
 - **K. Zwintz**, E. Alfaro, P. Amado, J. Ballot, T. Boehm, C. Catala, A. Delgado, R. Garrido, M. Goupil, M. Marconi, J.P. Marques, M. Monteiro, F.J.G. Pinheiro, V. Ripepi, E. Rodriguez, S. Turck-Chieze

Current Status

- ✓ division in **subteams**
- ✓ first draft of **scientific justification** for each research field
- study of **technical feasibility** in each subgroup
 - ✓ crowding: no big problem
 - ✓ background: to be taken into account
 - dedicated windows
 - ⇒ S/N estimates ...
- pointing, roll angle etc. (**tbd**)
 - location of brightest stars important
 - selection of targets in the fields (**tbd**)



Collaboration welcome!

- **F. Favata**

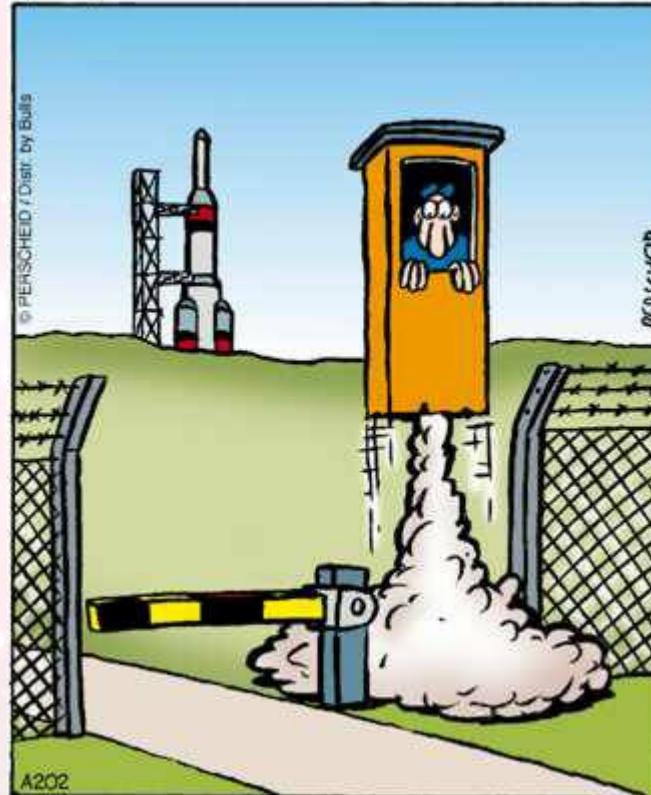
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Please feel free to contact us!

**So, we (again) hope that
this won't happen!**



"Again a launch failure due to computer problems..."