Additional Programme

cnes

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Additional Programme Definition

Anything beyond Core Science, i.e.:

- Asteroseismology with data from exoplanetary fields
- Exoplanetary research with data from asteroseismology fields
- Any other science, not related to asteroseismology nor exoplanetary research.

Announcement of Opportunities:

LOI Nov. 2003; AO1: April 2005 - AO4: June 2008

Science addressed:

- Seismology
- Exoplanets
- Other:
  - activity, magnetic field, rotation
  - PMS
  - binaries
  - other (e.g. microlensing ...)
- Survey

#AO1+#AO4	Title	Proposer	Field
	Exoplanetary science		
15	*Reflected light of the planet HD 46375b*	Hans J. Deeg	Seismo short run
45	*Observation of the starlight reflected by a "Pegasi" planet*	Martin VANNIER	Seismo short run
46	*Photometric detection of "Pegasi" planets in the seismo fiel*	Martin VANNIER	Seismo long run
30	*Astrometric detection of planets in the SISMO field - long*	Jean Schneider	Seismo long run
13+1	*Search for radio emissions from extrasolar planets*	Walter D. Gonzalez	Exo long run
	Binaries		
2	*Fundamental properties of known close binaries with COROT*	Carla Maceroni	Exo long run
35	*A comprehensive study of close binaries observed by COROT*	Ignasi Ribas	Exo long & short run
27	*Detection of Gravitational lensing events in binary systems*	Jean Surdej	Exo long run
	Microvariability		
3	*Stellar microvariability. I. Unbiased study of COROT targets*	Fabio Favata	Seismo&Exo long & short
10	*Stellar microvariability.II.Spots maps and modelling*	Antonino Francesco LANZA	Exo long run
12	*Stellar microvariablity III.Convection & short term activity*	Suzanne Aigrain	Exo long run
36	*Characterisation of stellar granulation and stellar activity*	Frédéric Baudin	Seismo&Exo long & short
39	*Method for spot-detection on solar-like stars*	Adriana V. R. Silva	Exo long run
+2	*An accurate view on the light change of LPVs with COROT*	Thomas Lebzelter	Exo long run
	Rotation		
40	*The Sun in Time: The History of the Solar Angular Momentum*	José Renan De Medeiros	Exo long run
43	*Stellar Rotation in CoRoT Era*	Jose Renan De Medeiros	Exo long run
+3	*Period changes & differential rotation in CP stars*	Werner W. Weiss	Exo long run
	Seismology		
19	*Monitoring bright stars in the exoplanet fields.*	Ian Roxburgh	Exo long run
37	*Borders of the Instability Strip*	Werner W. Weiss	Exo long & short run
21	*Asteroseismology of High Amplitude Delta Sct stars*	Ennio PORETTI	Exo long run
21b	*Asteroseismology of High Amplitude Delta Sct stars*	Ennio PORETTI	Exo short run
11	*Asteroseismology of Delta Scuti stars with the exoplanet.*	Rafael Garrido	Exo long run
1	*The PMS delta Scuti instability strip*	Claude Catala	Exo long & short run
22	*gamma Doradus stars in the EXO fields*	MATHIAS Philippe	Exo long & short run
18	*Search of pulsations in HgMn stars*	Georges ALECIAN	Exo long run
25	*Asteroseismology and evolution of B and Be stars (long runs)*	Anne-Marie Hubert	Exo long run
26	*Asteroseismology and evolution of B and Be stars (short r.)*	Conny Aerts	Exo short run
28	*Asteroseismology and the Be phenomenon (long runs)*	Coralie Neiner	Exo long run
17a	*New Insights in Red Giants with COROT : Oscillation*	Joris De Ridder & Team	Exo long run
17b	*New Insights in Red Giants with COROT : Granulation*		
17c	*New Insights in Red Giants with COROT : AGB-oscillation*		
33	*Low amplitude variation of classical pulsating stars*	Zoltan Kollath	Exo long run
32=24	*Blazhko and double-mode RR Lyrae stars*	Merieme Chadid	Exo long & short run
20	*Asteroseismology of central stars of planetary systems*	VAUCLAIR SYLVIE	Exo long run
7	*Long Period sdB Pulsators in the COROT Exoplanet Fields*	S. Charpinet	Exo short run
9	*White dwarf pulsators*	VAUCLAIR, GERARD	Exo long run
	Clusters & stellar evolution		
34	*Young stars in the field of the Open Cluster Dolidze 25*	Vincenzo Ripepi	Exo long run
16	*A COROT short run on the NGC 2264 young cluster*	Fabio Favata	Exo short run
	Gravitational lensing		
23	*Detection of Gravitational lensing events in SS433*	Jean Surdej	Exo short run
42	*Study of Photometric Variability of QSOs/AGN, LEDA 85926*	Jean Surdej	Exo short run

A&A Highlights

Astronomy & Astrophysics

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5 Open access

Highlights - 15 January 2010 (vol. 509)

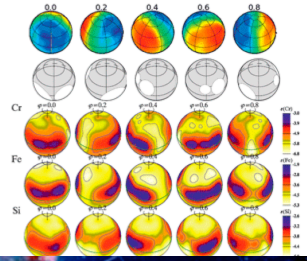
HIGHLIGHTS: this week in A&A

15 January 2010 (vol. 509)

In section 8. Stellar atmospheres

"Surface structure of the CoRoT CP2 target star HD 50773", by T. Lüftinger, H.-E. Fröhlich, W. Weiss, P. Petit, M. Auriere, N. Nesvacil, M. Gruberbauer, D. Shulyak, E. Alecian, A. Baglin, F. Baudin, C. Catala, J.-F. Donati, O. Kochukhov, E. Michel, N. Piskunov, T. Roudier, and R. Samadi, A&A 509, A43

Combined 60-day CoRoT photometry and ground-based spectropolarimetry allowed the magnetic field geometry and the surface distribution of various heavy elements of chemically peculiar star to be derived with unprecedented detail. These results will help for understanding the process of elemental diffusion in stars in the presence of a strong magnetic field.



New article-numbering system

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HIGHLIGHTS: this week in A&A

05 February 2010 (vol. 510)

In section 8. Stellar atmospheres

plex multiplet
27 Aquilae", by
K. Kolenberg, E.
S. Artemenko, M.
Weiss, A&A 510,

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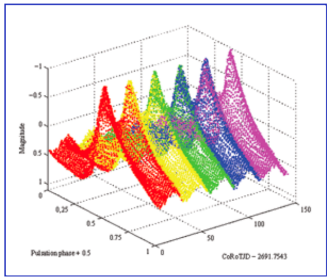
on. In this paper,
he CoRoT satellite
a host of new



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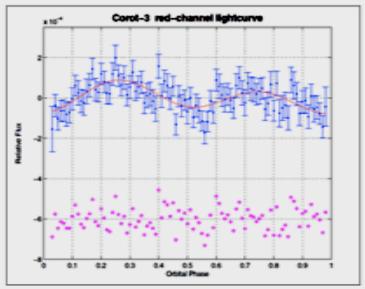
Highlight: Detection of ellipsoidal and relativistic beaming effects in the CoRoT-3 lightcurve (vol. 521)

In section 1. Letters to the Editor

20 October 2010

Detection of the ellipsoidal and relativisticbeaming effects in the CoRoT-3 lightcurve



by T. Mazeh and S. Faigler, A&A 521, L59

Close binary systems display three periodic photometric modulations: the ellipsoidal effect of the distortion of each component by the gravity of its companion, the reflection effect induced by the luminosity of each star only impinging on the close side of its companion, and the relativistic beaming effect induced by the stellar motion relative to the observer. Before space-based photometry, the last had only been observed once. Since then, it has been observed in two eclipsing binaries detected by the Kepler space mission. Mazeh & Faigler present the first detection of the combined ellipsoidal and beaming effect in a system with a planetary/brown dwarf companion, CoRoT-3. The amplitude of the beaming effect is measured as only 27 +/- 9 ppm, highlighting the extreme photometric accuracy that can now be reached by space-based instruments.

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Scientific Writing for Young

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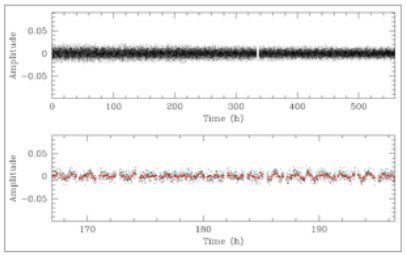
Highlight: CoRoT opens a new era in hot B subdwarf asteroseismology (vol. 516)

In section 1. Letters to the Editor

22 June 2010

CoRoT opens a new era in hot B subdwarf asteroseismology. Detection of multiple g-mode oscillations in KPD 0629-0016



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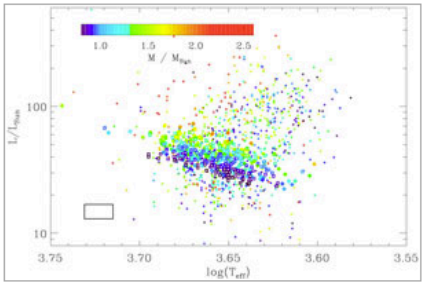
Highlight: Red-giant seismic properties analyzed with CoRoT (vol. 517)

In section 7. Stellar structure and evolution

28 July 2010

Red-giant seismic properties analyzed with CoRoT



by B. Mosser, K. Belkacem, M.-J. Goupil, et al. A&A 517, A22

This is the largest sample yet of independently obtained fundamental s parameters for red giant clump stars, one of the calibrators (and problem advanced stages of evolution and, especially, for globular clusters. With CoRoT data it is possible to perform statistical analyses of large samples of curves. This is a test example of how such a study can proceed.

Thematic Teams

- Pulsating G & K Giants (► Josefina Montalban)
- Be & sdB Stars (► Coralie Neiner)
- γ Doradus Stars (► Philippe Mathias)
- PMS (► Konstanze Zwintz)
- RR Lyr & HADS (► Ennio Poretti)
- Stellar activity and rotation (► Jose Renan)
- Binaries (► Carla Maceroni)
- & ad-hoc teams (e.g. Spitzer+Herschel+MOST ...)

Status

- CoRoT community organized in active sub-teams
- Same persons in Core Science and in APWG sub-teams
- Proposed “outside” (additional) science did not materialize (e.g. gravitational lensing)
- Unexpected marvels emerge from teamwork (e.g. relativistic beaming, clusters, RG & galactic structure, interaction with ISM, large international collaborations, ….)

Status

- CoRoT community organized in active sub-teams
- Same persons in Core Science and in APWG sub-teams
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- Unexpected marvels emerge from teamwork (e.g. relativistic beaming, galactic structure, clusters, interaction with ISM, large international collaborations)

Conclusion:

"Old" formal structures are out-of-date ?

(CNES Webpage?)

No formal Additional Program WG needed ?

Stars & their Planets

periodic: pulsating
stochastically driven
non-stochastically

periodic: non pulsating
EB
spots & rotation, ...

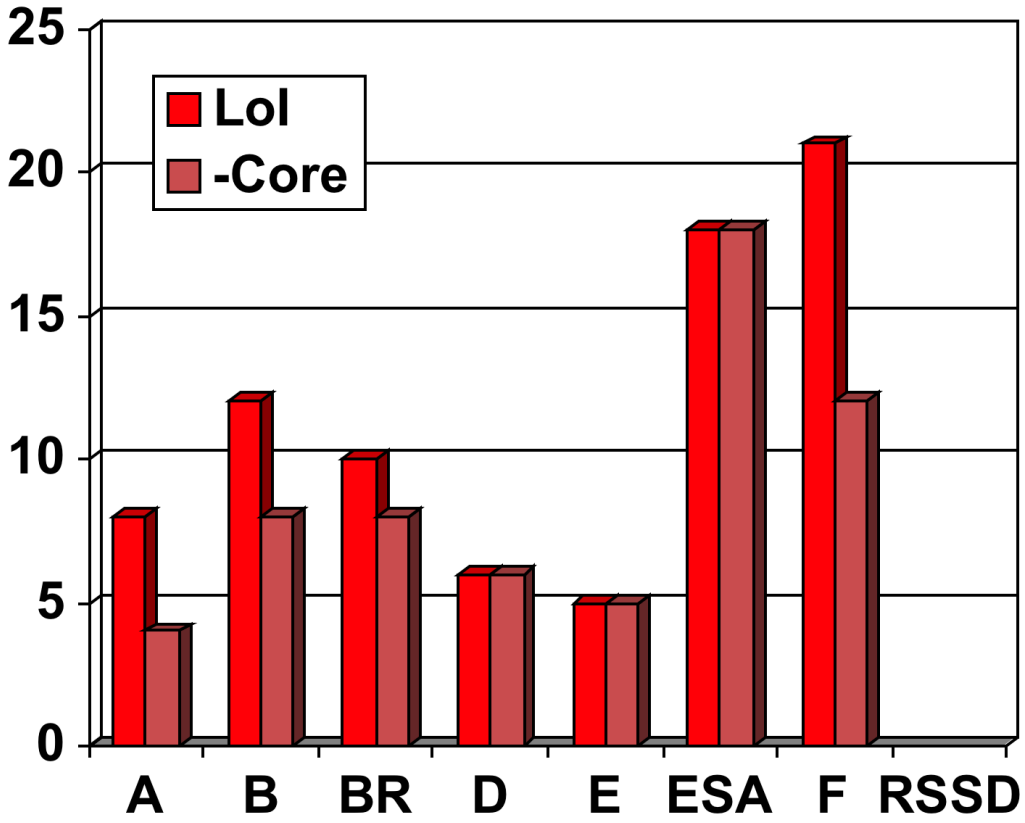
other variables
activity & cycles
granulation, ...

stars & environment
planet interaction, cluster,
galactic structure, ISM, etc.

cnes

Summary of LoI's from 2003

- 81 LoI received
- 55 different PIs + 250 + BAG + CoIs
- but 70% funding from F



ESA

NL	:	3
I	:	13
UK	:	2

LoI contents …

	Name PI		Team	Proposal	filename	LS	LE	SS	SE
1	Aerts Conny	B	BAG	OB Supergiants HD47240	AertsC_OB_HD47240			C	
2	Aerts Conny	B	BAG	spB HD45284	AertsC_spB_HD45284			C	
3	Aerts Conny	B	BAG	Survey of var. Stars	AertsC_SurvVar		x		
4	Alecian George								
5	Amado P.J.								
6	Antonello Ennio								
7	Arnold Luc								
8	Cameron Andrew								
9	Chadid Miriem								
10	Charpinet Stepha								
11	Cuisinier Francois								
12	Cuypers Jan								
13	DeRidder Joris								
14	delaReza R.								
15	Eisloeffel Jochen								

Keyword	Sei	Exo	AP	Svey	No	Comments
B sgiants HD47240 OB	C					HD plus OB in the field, CPsismo
spB HD45284	C					HD plus A+B in field, CP sismo
classif varstars	x			x		survey? Project Team?
HgMn	x			x		
rotation G K M			RA	x		G and later
Cepheids StrangeModes	x					LE + SE
Earthshine background			T			all background data
Activity noise F G K			RA			LE + SE
Blazhko RRLyr	C					LE + CP targets tbd
sDB survey	x					LE + SE targets tbd
LBV massiveStars Mira	C					LS+LE+SE Miras near primary M31 not in CVZ
OB survey	x			x		
Red Giant HD50890 Maia, 50846	C?			x		Giants + Maia stars, Coreprog ?
protoplanets TTau			E			targets tbd 20 to 50 days
Brown Dwarfs VLM rotation			RA			LE + SE targets tbd. No info on freq and ma