

A space-themed background featuring a large Earth in the bottom right corner, a smaller Moon in the top left, and a bright red star with a white core in the center. The background is filled with numerous small white stars.

# Welcome to the RoPACS mid-term review meeting

University of Hertfordshire  
3rd Dec 2010

# Overview of RoPACS progress (scientific and recruitment)

- RoPACS science drivers
- RoPACS structure and content
- Network management and communication
- Recruitment of Fellows
- Network-wide training of Fellows
- Scientific productivity and outputs
  
- Then more detail - in individual talks by the Fellows

# RoPACS science drivers



## Rocky planets and cool stars:

- The search for life-bearing planets requires small rocky planets that could have surface water
- Smaller lower-mass stars give improved transit and RV sensitivity to smaller lower-mass planets
- The HZ is closer in for cool stars, so habitable planets would be easier to detect
- Cool stars are the most common stars in the Galaxy – lots of planet “real-estate”

## Science drivers:

- Search for cool star planet populations
- Improve understanding of cool star properties and their planets
- Contribute to developing future space programmes to study exoplanets

# RoPACS structure and content

- Six academic nodes + industrial partner Astrium + 6 associated partners (DIAS, Leiden, Paris, SIM, SLC, UNED)
- RoPACS funded Fellows are part of a RoPACS community of ~70 people

	UH	UCAM	IAC	MPG	LAEFF	MAO	Astrium	APs
Staff	4	1	4	5	2	6	3	8
ESR-PhD	3	1	2	2	2	1	(1: UH)	-
Other-PhD	3	1	1	-	-	-	-	2
ER-PDRAs	1	1	1	1	-	-	-	-
Other-PDRAs	4	0	5	2	5	-	-	-

# RoPACS structure and content

RoPACS duration: 1<sup>st</sup> Dec 2008 – 30<sup>th</sup> Nov 2012

## Transit surveys facilities

- WFCAM Transit Survey on UKIRT (UH+UCAM lead)
- Omega-Cam and pre-cursor programmes (MPG)
- CoROT
- And now Kepler...

## Cool star surveys facilities

- UKIDSS + 2MASS + SDSS + SuperCOSMOS
- And now VISTA...

## Telescope facilities

- 6-10m: HET (GT), VLT, GTC, Magellan, Keck (US link)
- 2-4m: WHT, INT, LT, Calar-Alto, SOAR, ESO2.2, WT
- 1m: IAC80, CST

# RoPACS structure and content

Areas of RoPACS research focus:

- Searching for transits
  - IoA, MPE
- Identifying false positives
  - UH, MPE, IAC, LAEFF
- High resolution RV spectroscopy
  - MPE, IAC, UH
- Measuring planet radii and properties
  - MPE, IAC
- Detecting planetary light (+VO)
  - LAEFF, UH
- Understanding host and planetary systems
  - UH, MAO
- Planet properties and ESA's Cosmic Vision
  - UH, Astrium

# Management and communication

- Foundation - UH holds a legalised Consortium Agreement for RoPACS
- Local management is networked through regular meetings of a management board
  - During network meetings, and some by teleconf
  - Partner leaders and an ESR rep (Frith) sit on board
- RoPACS web-page is management & communication tool
  - Some public areas some private for network-only
  - Email lists available for RoPACS group discussions
  - Place to locate "best-practice" documentation
  - Dissemination of research products to the network (e.g. Light curves releases, candidate transits)
  - Means to share talks, posters, papers, press releases, telescope proposals etc

# Management and communication

- Communication - meetings at partner institutes
  - Update each-other on research progress
  - Explore new possibilities for collaboration
  - Have management meetings
  - Experience for Fellows giving talks
  - Opportunity to link with international meetings
- Started with a Kick-off meeting (Madrid)
- Followed by a meeting every ~6 months (Hatfield, Tenerife, Munich, Lisbon...)
- In 2<sup>nd</sup> period we plan: Cambridge, Madrid, Kiev, Munich



# Recruitment of Fellows

- RoPACS funds 11 ESR posts (3 year contracts) and 4 ER posts (2 year contracts)
- ESR recruitment in year 1, ER in year 2
- Coordinated by UH – via RoPACS web-site
- 31 ESR and 20 ER applications in total
- We interviewed 21 ESR and 12 ER applicants
- Prospective fellows visited institutes for interviews where possible
  
- All posts now recruited
- ESRs all enrolled on PhDs and in post for ~1 year to date
- ERs in post for 3 days – 5 months
- An international team of Fellows: Hungary, Portugal, USA, Finland, Greece, Chile, India, Italy, Mexico, UK, Brazil, Bulgaria, Russia

# Network-wide training of Fellows

- Using large telescopes: Observatory training on Mount Teide (IAC) – ESR presence on Teide for the full month of August 2010
- Using small telescopes: Training with small telescopes at the UH teaching observatory – 2<sup>nd</sup> Dec 2010
- Training with planetarium usage (out-reach) at the Science Learning Centre – 2<sup>nd</sup> Dec 2010
- Industrial training at Astrium – 2<sup>nd</sup> Dec 2010
  - Visit to Astrium site and tour of facilities
  - Training presentations by Astrium staff (2 hrs)
  - “Astrium and Science Mission Activities”
  - “Mission time-lines and technology readiness levels”

# Scientific productivity and outputs

Productivity of fellows - indicators:

- Talks – presenting results and good practise for presentation skills
- Conference posters – a good source of productivity for 1<sup>st</sup> year PhD student level
- Papers & proceedings – important to “expand” Fellows’ research profiles, so they maintain previous collaborative links while focusing on RoPACS project work (Fellow publications come from a variety of work)
- Press releases – important results
- Telescope time proposals - locking in future productivity

# Scientific productivity and outputs

## Productivity of fellows - indicators:

- Talks – 29 (incl 13 at an international conf)
- Conference posters – 10
- Papers & proceedings – 24
- Press releases to-date – 12
- Telescope time proposals
  - Year 2 very productive for telescope time awards
  - Transit follow-up: 65 nights on 2m telescopes, 15 nights on 4m telescopes, all our available GT triggered on HET
  - Cool star & companion studies: 20 nights on 2m telescopes, 6 nights on 4m class telescopes, 11 nights on 6-8m class telescopes

Thanks for your attention