

ESO Public Surveys

Opportunities for Public Outreach



Richard Hook

ESO Survey Telescopes Public Information Officer

for the ESO EPO department



Outline

- ESO Outreach - people, skill and products
- Image processing
- Unique opportunities from Public Surveys
- Suggested way forward

We are here to help you...

Outreach at ESO

ESO and Hubble outreach now merged

Head: **Lars Lindberg Christensen**

Contact for surveys: **Richard Hook** (working with Olivier Hainaut and Henri Boffin)

Extensive team with skills in all aspects of interaction with the media - and decision makers and the general public; graphic design, video production, document production and image processing.

Outreach Activities - press releases

About 50/year from ESO and 20/year from Hubble (plus about 8 IAU and 4 International Year of Astronomy, IYA 2009)

Three classes:

- Instrument (technical developments)
- Science (associated with refereed papers)
- Photo releases

Also release Video News Releases in HD that are widely used by broadcasters (\approx 5 mins, with script and voiceover).

Extensive and efficient distribution channels.

LATEST NEWS STORIES



ESO 28/08 - Science Release:

The Double Firing Burst

Astronomers from around the world combined data from ground- and space-based telescopes to paint a detailed portrait of the brightest explosion ever seen. The observations reveal that the jets of the gamma-ray burst called GRB 080319B were aimed almost directly at the Earth.

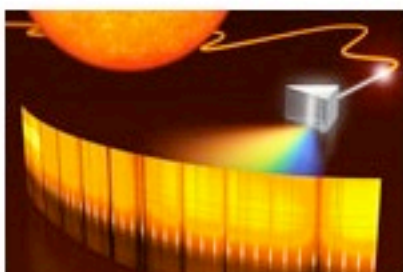
[More...](#)

ESO 27/08 - Science Release:

Mind the Gap

Astronomers have been able to study planet-forming discs around young Sun-like stars in unsurpassed detail, clearly revealing the motion and distribution of the gas in the inner parts of the disc. This result, which possibly implies the presence of giant planets, relies on the use of a very clever method enabled by ESO's Very Large Telescope.

[More...](#)



ESO 26/08 - Instrument Release:

A Fine-Tooth Comb to Measure the Accelerating Universe

Astronomical instruments needed to answer crucial questions, such as the search for Earth-like planets or the way the Universe expands, have come a step closer with the first demonstration at the telescope of a new calibration system for precise spectrographs. The method uses a Nobel Prize-winning technology called a 'laser frequency comb', and is published in this week's issue of Science.

[More...](#)



Other Areas of Work

(much in external collaborations)

Production of posters, calendars and other printed material

Exhibitions

Education (eg, “catch a star”)

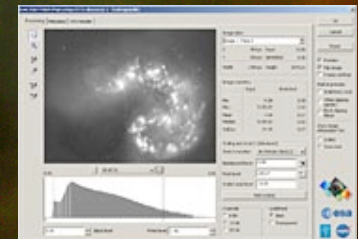
Publications (ESO Messenger, ST-ECF Newsletter, CAP Journal)

Leader in IAU outreach and IYA 2009



Image Processing Expertise

- Developed FITS Liberator
- Pioneered use of 16bit processing and handling of extended dynamic range
- Help from skilled amateurs in the community
- Pioneered colour images from DSS
- Close liaison with Hubble Heritage @ STScI
- Graphical skills



Hubble news,
video material,
printed material,
etc etc...

Hubblecast via
iTunes/YouTube
etc



> Million
downloads/month

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NEWS

27-Aug-2008 heic0818:
News: Clash of clusters provides new dark matter clue



A powerful collision between galaxy clusters has been captured by the NASA/ESA Hubble Space Telescope and NASA's Chandra X-ray Observatory. This clash of clusters provides striking evidence for dark matter.

20-Aug-2008 heic0817:
News: Hubble sees magnetic monster in erupting galaxy



The Hubble Space Telescope has found the answer to a long-standing puzzle by resolving giant but delicate filaments shaped by a strong magnetic field around the active galaxy NGC 1275. It is the most ...

11-Aug-2008 heic0816:
Photo: Hubble unveils colourful star birth region on 100 000th orbit milestone



In commemoration of the NASA/ESA Hubble Space Telescope completing its 100 000th orbit around the Earth in its 18th year of exploration and discovery, scientists have aimed Hubble to take a snapshot o...

bbblecast19 Special: Bigger is be



Hubble Picture of the Day



Servicing Mission 4



Hubble Video of the Day

- Hubble News
- Hubblecast
- Hubblecast HD
- Hubblecast Full HD

TOP 25 IMAGES

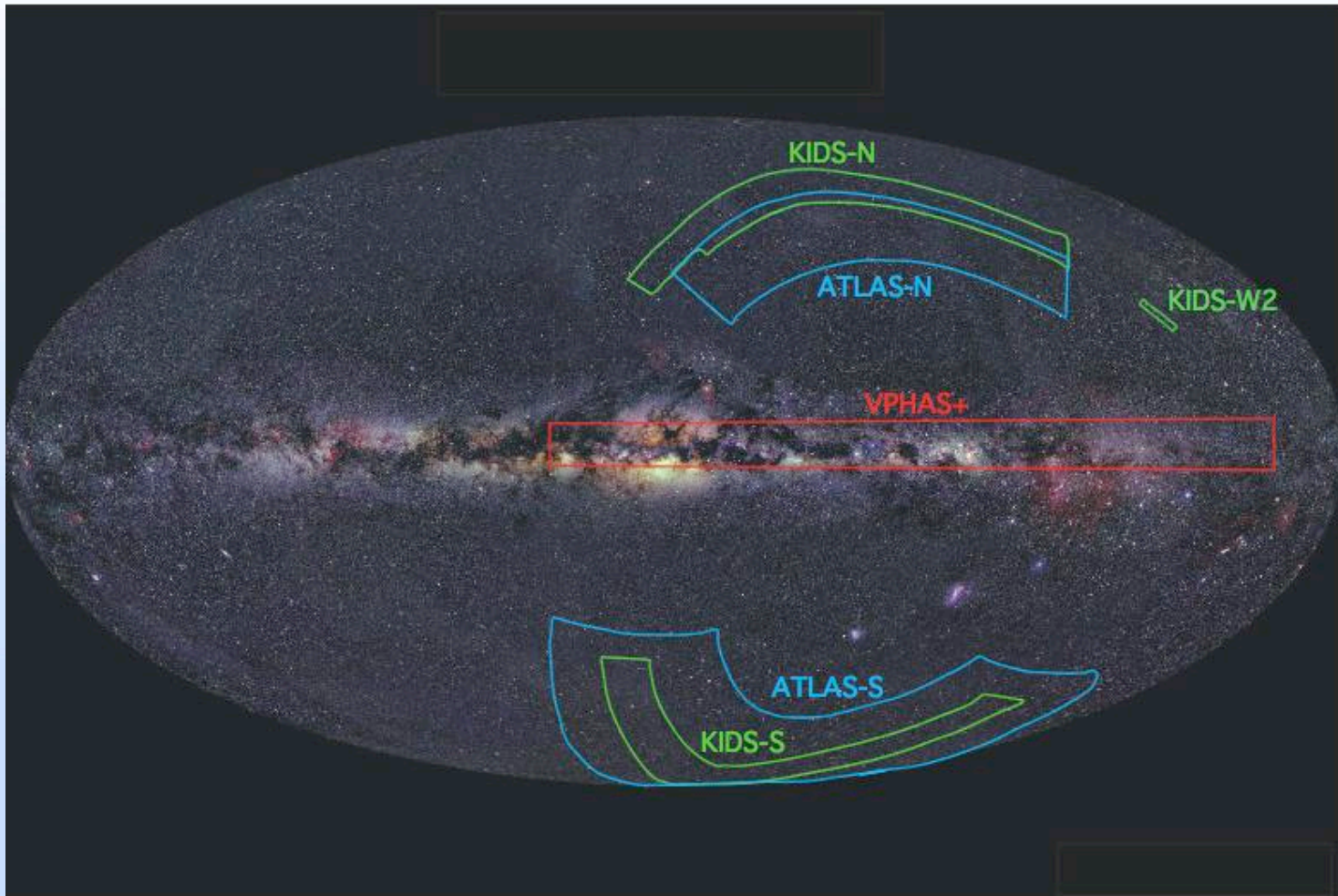


ESA Space Science ST-ECF
esa Space Science Hubble Space Telescope

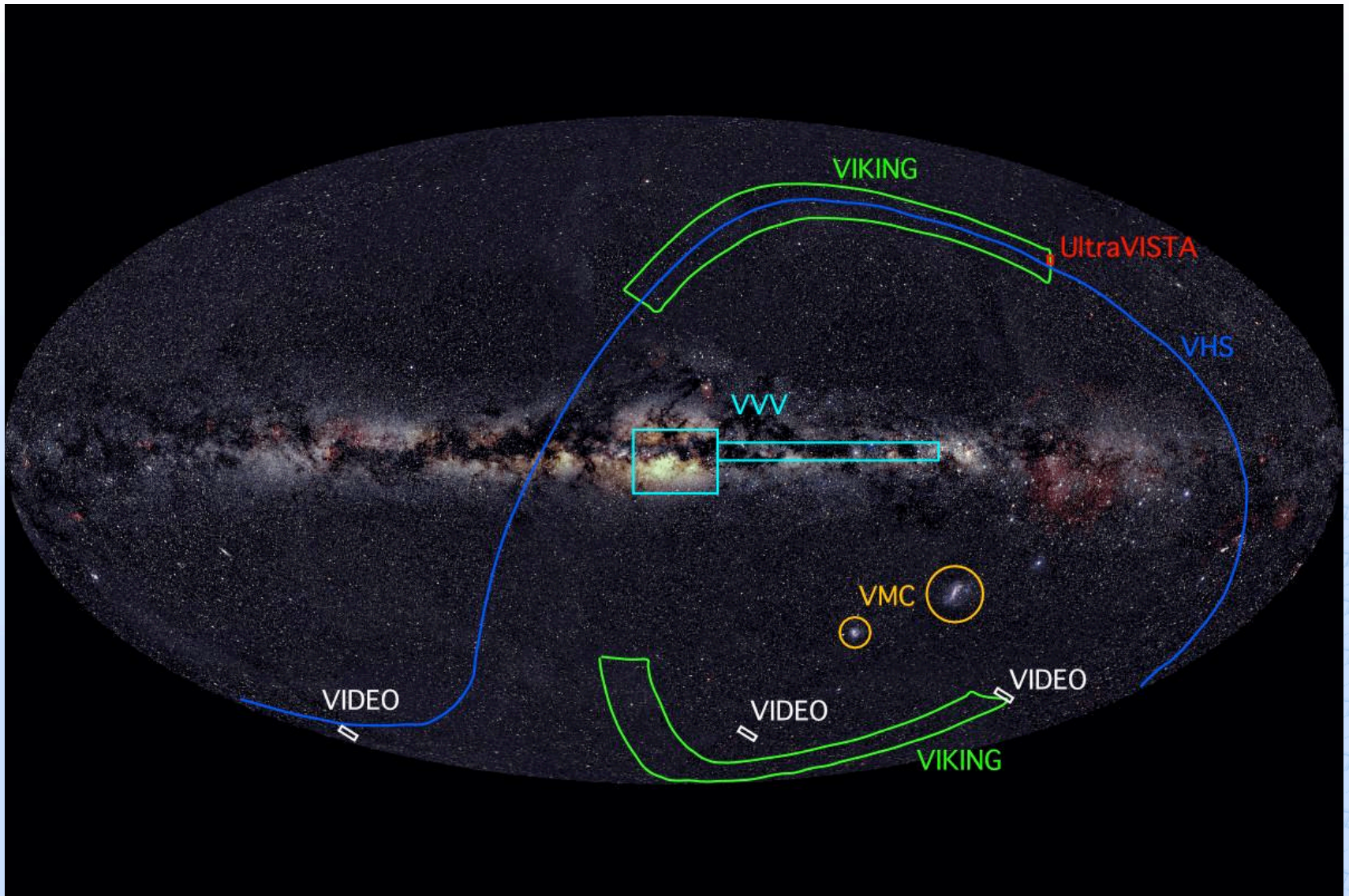
ESA SciTech ESO
esa SciTech ES-O

Unique VST/VISTA Opportunities

- Resolution ($\approx 0.6''$) and depth MUCH better than previous surveys in the south
- The “photogenic resolution” (resolution elements/tile ≈ 5000 - better than Hubble/ACS)
- Uniform coverage of large areas
- Huge numbers of objects will be imaged “in passing”
- The time domain



VST surveys



VISTA surveys

Possible Outreach projects

- Press releases to announce progress and technical milestones
- Science and photo releases
- Huge high quality images:
 - Large prints (Gpixels, several square metres)
 - Browsable through appropriate web tools
- Products available via Google Sky / WW Telescope
- “Webcam window on the universe”
- Planetaria products
- Create images of specific objects as the surveys pass over them - depends on survey strategies and timing
- At later times, educational projects (eg, Galaxy Zoo/SDSS)

Collaborations

All releases will be offered as possible joint releases with external institutes

- Open workflow allows close interactions if desired
- Transparent process
- Proposed mailing lists of contacts in the different teams

Tentative Timeline

- VISTA First light (press rel. & possible Video News Release) - when the team is ready
- Propose ESOcast on VISTA (with 1st light)
- Image releases associated with mini-survey science verification of VISTA in early 2009
- VST commissioning activities and first light

Summary

- ESO has a very effective and mature outreach department
- VST/VISTA have huge outreach potential
- We are ready to help you!
- Additional ideas to rhook@eso.org please...