

SSWG  
ESO role in European Astronomy

“SURVEYS”

ESO present strategy is summarized in three (plus one) steps:

- Full exploitation of VLT-VLTI
- Build ALMA and have it operational by 2010
- Prepare the next step (EELT) (2011)
- VST & VISTA: Optical and IR surveys are part of the basic strategy of ESO.

Question raised in/to Council: New projects are born in space and ground based surveys (f.i. LSST) →

- Is ESO strategy adequate?
- Shall ESO take a share in LSST?
- Would this be affordable?

# Reply (SSWG, endorsed by Council):

- No action shall harm the present ESO strategic plan. (to say it straight: there is no room in the budget for major involvement in other projects)
- At the same time, it is vital for ESO to have an active role in the “changing landscape” of science organisation in Europe. Can ESO be instrumental in fostering the astronomical research in Europe, beyond the boundary set by its budget?

Surveys and large data bases access are an optimal starting point for increasing the coordination of capabilities and expertise in Europe:

- Coherent with the general strategy
- Building blocks already exist:
  - PSP
  - The Virtual Observatory
- >200 scientists involved in Europe (PSP report)
- Minimal impact on present ESO structure
- Easier than other options: communities are already fully engaged with ESO (no invasion of other's backyard)

Task: develop a plan

# SURVEYS:

## Main conclusions endorsed by Council

- Focus on an aggressive strategy in strengthening the European capability of managing huge amounts of data for a) full exploitation of VST and VISTA; b) evolve this capacity forward to deal with LSST scale activities
- “Be Happy (and Prepared!) Consumers”. Be prepared to future evolution: strong engagement in follow up of space and ground based future survey projects by:
  - a) powerful data handling capabilities;
  - b) use/evolution of some of the existing 4-8 mt ESO telescopes aimed at massive spectroscopic follow up (STC, VIMOS and other VLT instruments role, echoes conclusions of the “VLT in the EELT era” meeting)
- A distributed model (centre-periphery) is going to be applied in ALMA, with ESO in the role of coordinating European Institutes . Its effectiveness needs to be monitored and evaluated, but it may represent a model.

# Starting points

- Surveys require very significant commitments of resources.
- Not only support, but full participation of a large fraction of the community, recognizing the value of the proposed approach, are necessary
- We do not start from scratch: VST and VISTA surveys (PSP), VO are important building blocks
- ESO shall neither use extensive internal resources nor “rule” other’s work.
- ESO should:
  - i) provide a “basket”, to be filled by the interested groups, and ESO itself;
  - ii) be the warrant of continuity, homogeneity, quality, access ...
  - iii) have the capability of reproducing the data flow end to end in house (quality control of the deliveries)

# Some ideas

- Mostly a voluntary organisation, with groups accepting to be committed within a general framework.
- The structure could reproduce the “regional centers” structure adopted in ALMA
- Driven by a committee (mostly) composed by people involved in the work and interested the scientific outcome:
  - planning the work share among the groups (avoid duplications)
  - proposing mid term goals
  - checking the results (time and quality)
  - involving users
  - reporting to STC
- PSP and VO committees to merge in it on the medium term
- A core group resident at ESO: interface, secretariat, quality control, ..other
- Funding: mostly local (ARC like); EU program? Evolution of the present VO program?
- Role of SSWG: only a midwife.

# Next steps

- Support the concept that ESO will act, within Europe, “beyond its own budget”.
- Appoint a working group (Cou., STC, PSP, VO, others) to:
  - Identify what already exists and what is needed
  - Define the structure and plan the evolution of existing structures/bodies
  - Define an appropriate timing
  - .....

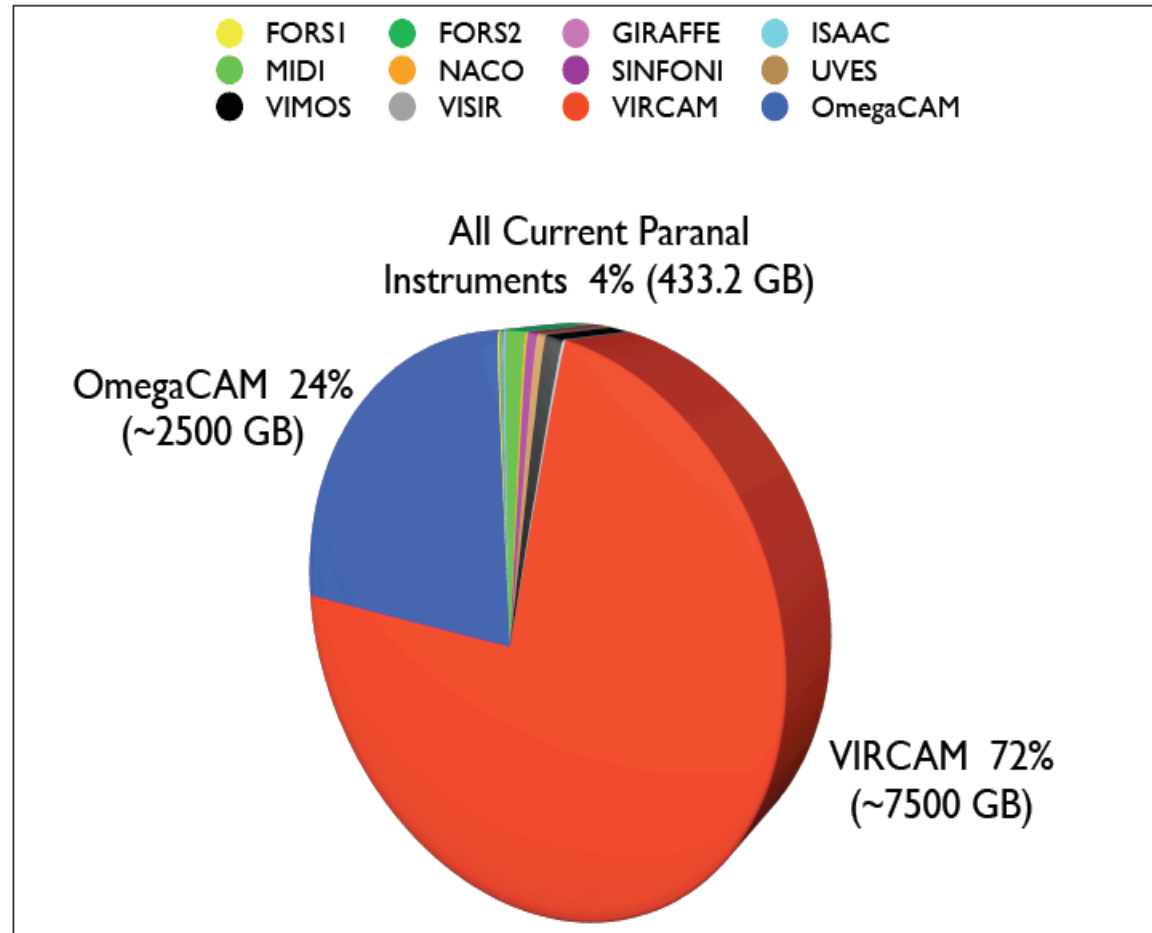


From Duccio  
Macchetto's  
presentation

# Public Surveys: Data flow

Expected  
monthly  
dataflow (raw  
calibration and  
science frames)  
from Survey  
Telescopes  
ESO PS raw data  
are available  
from ESO  
archive  
immediately

Bruno Marano



Surveys: European Coordination

# SSWG1: ESO role in European Astronomy

Go through “cases”: four then selected:

- *Large Solar Telescope*
- *SKA*
- *Antarctica*
- *Large computing facilities for Astrophysics and Cosmology.*

“The SSWG will proceed first getting the basic information from Astronet to prepare the SSWG members, and to identify contact points for each of these projects.”