



# **DCA WP3 Report**

## *Workshops*

### *On-site Support to data centres*

*Christophe Arviset (ESA-VO)*

*Paolo Padovani (ESO)*

# EURO-VO Workshop on how to publish data in the VO



## ESAC, 25-29 June 2007

<http://esavo.esac.esa.int/EuroVOWorkshopJune2007/>

# Workshop Organization

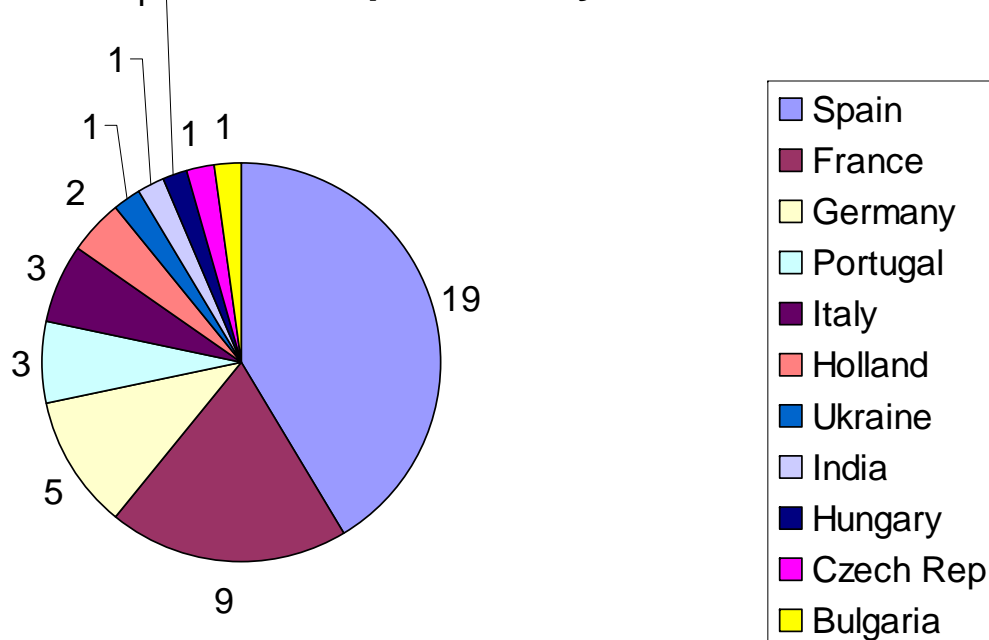
- ❑ Geared towards data centres and large projects to acquire the knowledge and experience necessary to allow them to become "publishers" in the VO.
  - Small data providers not excluded
  
- ❑ Around 70 participants registered
  - Around 45 "real" data centres participants
  - Advisors, ESA VO, ESO "excluded"
  
- ❑ Workshop pages
  - <http://esavo.esac.esa.int/EuroVOWorkshopJune2007/>
  
- ❑ Feedback from Advisors and Participants at:
  - <http://esavo.esac.esa.int/EuroVOWorkshopJune2007/SpeakersMonday.html>

# Workshop Programme

- Parallel sessions about publishing data using existing tools within EURO-VO
  
- Publishing catalogues
  - DSA, SAADA, DMMapper
  
- Publishing spectra
  - DALToolkit, MEX
  
- Publishing images
  - DALToolkit, SAADA, MEX
  
- VOEvent Hands-On Session

# June Workshop Participants

**EURO-VO DCA June Workshop Participants  
distribution per country**



Exclude Advisors, ESA VO and ESO

Many Spanish

Many French

Some German

Few Italian

Few Dutch

No UK

Some EC “outsiders” (link with WP6)

No real “large” projects

Several “small” projects, astronomers with their own data

**Any conclusions ?**

# Workshop Participants vs

## Draft Census

- ❑ “Cross-match” workshop participants with the draft census of data centres
  
- ❑ Try to determine
  - Which data centres attended and did not attend the workshop
  - Identify users who did not come from a data centre
  
- ❑ Goals of this exercise
  - Understand better the participation (or not)
  - Improve census (possible missing data centres?)
  - Plan possible WP3 visits
  
- ❑ Define better the scope and attendance for DCA June 2008 workshop

# VO-France (1/2)

| Partner in charge | Acronym              | Project Name  | Location               | Laboratory in charge               | Contact person  |
|-------------------|----------------------|---|------------------------|------------------------------------|---|
| CNRS              | CRAL VO projects     | HORIZON, MIGALE   | Lyon, France           | CRAL                               | Hervé Wosniak; Philippe Prugniel                                |
| CNRS              | POLLUX               | POLLUX - Stellar spectra Database   | Montpellier, France    | GRAAL                              | Agnès Lebre   |
| CNRS              | TERAPIX              | TERAPIX   | Paris, France          | IAP                                | Yannick Mellier   |
| CNRS              | IAP VO projects      | Planck HFI Data Processing Center; FUSE Explorer; EROS; MAAD Aladin   | Paris, France          | IAP                                | François Bouchet; Jean-Michel Desert; Jean-Baptiste Marquette;  |
| CNRS              | IDOC                 | IAS Data Operation Center (including MEDOC)   | Paris, France          | IAS                                | Gilles Poulleau   |
| CNRS              | BDAP                 | Planetary atmosphere Database   | Paris, France          | IPSL/SA                            | Eric Chassefière  |
| CNRS              | Besançon VO projects | Galaxy model; BDB Besançon Double star Database; Small bodies of the external solar system                                      | Besançon, France       | Observatoire de Besançon           | Annie Robin; Edouard Oblak; Jean-Marc Petit; Philinne Boussetot |
| CNRS              | OCA Cassiopée        | Data analysis software suites, CFHT cluster database  |                        | Observatoire de la Côte d'Azur     | Christophe Benoist; Eric Slezak                                 |
| CNRS              | OCA Gemini           | French Geodetic VO  |                        | Observatoire de la Côte d'Azur     | Florent Deleflie  |
| CNRS              | JMMC                 | Jean-Marie Mariotti Centre (LAOG + OCA)   | Grenoble, France + OCA | Observatoire de Grenoble           | Gilles Duvert   |
| CNRS              | LGGE OV project      | Ionospheric Centre for Space Meteorology in Grenoble; Spectroscopy and thermodynamics of solids in planetology and astrophysics | Grenoble, France       | Observatoire de Grenoble - LGGE    | Chantal Lathuillere; Bernard Schmitt                            |
| CNRS              | AMOL                 | "Radiative transfer" for interpretation of atomic and molecular data  | Grenoble, France       | Observatoire de Grenoble - LAOG    | Pierre Valiron  |
| CNRS              | ENVOL                | ENVironnement Virtual Observatory LAM (VIMOS, Fabry Perot, ...)   | Marseille, France      | Observatoire de Marseille Provence | Christian Surace  |
|                   | LAT                  | BASS 2000   | Toulouse, France       | Observatoire Midi-Pyrénées         | Nadège Meunier  |
| CNRS              | CESR VO projects     | CDPP, CASSIS  | Toulouse, France       | Observatoire Midi-Pyrénées         | Alain Klotz; Christian Jacquy                                   |

# VO-France (2/2)

| Partner in charge | Acronym                      | Project Name   | Location           | Laboratory in charge       | Contact person   |
|-------------------|------------------------------|--|--------------------|----------------------------|--|
| CNRS              | Portail OV Paris             | VO Portal - Paris Virtual Observatory Data Centre  | Paris, France      | Observatoire de Paris      | Pierre Le Sidaner  |
| CNRS              | GEPI VO projects             | GIRAFFE Archive; NRT Archive; BeSS database; VO "LEGACY" Portal  | Paris, France      | Observatoire de Paris      | Frédéric Royer; Jean-Michel Martin; Coralie Meiner; Jacques Vétois |
| CNRS              | IMCCE VO projects            | Solar System ephemeris and astronomy   | Paris, France      | Observatoire de Paris      | Jérôme Berthier  |
| CNRS              | LERMA VO projects            | Atomic and molecular Database; DALIA - Generic interface for data analysis; Definition of a Data Model for the Radioastronomy; Education HOU | Paris, France      | Observatoire de Paris      | Marie-Lise Dubernet; Frederic Boone; François Viallefond; Anne-    |
| CNRS              | LEISA VO projects            | BASS 2000 EGSO; COROT Data Centre; Cometary observations Database  | Paris, France      | Observatoire de Paris      | Jean Aboudarham; Annie Baglin; Dominique Bockelée-Morvan           |
| CNRS              | LUTH VO projects             | Numerical Portal of Paris  | Paris, France      | Observatoire de Paris      | Franck Le Petit  |
| CNRS              | SYRTE VO projects            | "Reference systems" Portal   | Paris, France      | Observatoire de Paris      | Anne-Marie Gontier   |
| CNRS              | CDS                          | Strasbourg astronomical Data Centre (Simbad, ViZieR, Aladin)   | Strasbourg, France | Observatoire de Strasbourg | Françoise Genova   |
| CNRS              | Other Strasbourg VO projects | Survey Science Center of XMM-Newton Satellite  | Strasbourg, France | Observatoire de Strasbourg | Christian Motch  |



# ESA

| Partner in charge | Acrongm | Project Name  | Location                            | Laboratory in charge | Contact person                       |
|-------------------|---------|---|-------------------------------------|----------------------|--------------------------------------|
| ESA               | IDA     | ISO Data Archive  | Villafranca del Castillo, Madrid, S | ESAC                 | Christophe Arviset                   |
| ESA               | XSA     | XMM-Newton Science Archive                              | Villafranca del Castillo, Madrid, S | ESAC                 | Christophe Arviset                   |
| ESA               | ISDA    | Integral Science Data Archive                           | Villafranca del Castillo, Madrid, S | ESAC                 | Christophe Arviset                   |
| ESA               | PSA     | Planetary Science Archive                               | Villafranca del Castillo, Madrid, S | ESAC                 | Christophe Arviset, Joe Zender (ESA) |
| ESA               | ESAVO   | Tools (VOSpec, VOQuest, Registry, DMMapper, DALtoolkit) | Villafranca del Castillo, Madrid, S | ESAC                 | Christophe Arviset, Pedro Osuna      |

# ESO (1/2)

| Partner in charge | Acronym         | Project Name  | Location          | Laboratory in charge | Contact person                      |
|-------------------|-----------------|---|-------------------|----------------------|-------------------------------------|
| ESA/ESO           | HST             | European Coordination Facility (HST archive)                        | Garching, Germany | ESO/ESA              | Paolo Padovani, Piero Rosati, Andre |
| ESO               | APEX            | Atacama Path Finder Experiment Data                                 | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | DSS, GSC        | Mirror copy of DSS I and II and GSC I and II                        | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | USNO            | Mirror copy of USNO-A2 and UCAC2                                    | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | Hipparcos/Tycho | Mirror copy of Hipparcos, Tycho-1 and Tycho-2 catalogues            | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | Tools           | Reduction pipelines for all VLT instruments                         | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | ADS mirror      | Mirror copy of ADS bibliography server                              | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | Tools           | Skycat, Jsky, Jipa  | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | Tools           | Ambient condition, Observation schedule, User publication databases | Garching, Germany | ESO                  | Paolo Padovani, Piero Rosati, Andre |

# ESO (2/2)

| Partner in charge | Acronym     | Project Name   | Location                             | Laboratory in charge | Contact person                      |
|-------------------|-------------|--|--------------------------------------|----------------------|-------------------------------------|
| ESO               | VLT/VUES    | Ultraviolet and Visible Echelle Spectrograph                             | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/FORS1   | Imager and Multi-object spectrograph (visible)                           | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/FORS2   | Imager and Multi-object spectrograph (visible)                           | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/ISAAC   | Near Infrared Imager and Spectrograph                                    | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/NACO    | Adaptive Optics Imager and Spectrograph (near infrared)                  | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/GIRAFFE | Multi-object fiber spectrograph (visible)                                | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/VIMOS   | Imager and Multi-object spectrograph (visible)                           | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/SINFONI | Near Infrared Integral Field Spectrograph                                | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/VISIR   | VLT spectrometer and imager (mid-infrared)                               | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/VINCI   | Interferometry Commissioning Instrument                                  | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/AMBER   | Near/mid Infrared focal interferometric instrument                       | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | VLT/MIDI    | Mid-Infrared Interferometric instrument                                  | Paranal, Chile, Archive in Garching  | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | 2.2m/WFI    | Wide-Field Imager @ 2.2m telescope                                       | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | 2.2m/Feros  | Echelle Spectrograph @ 2.2m telescope                                    | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | 3.6m/HARPS  | High Accuracy Radial velocity Planet Searcher (visible) @ 3.6m telescope | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | 3.6m/CES    | Echelle Spectrograph @ 3.6m telescope                                    | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | 3.6m/TIMMI2 | Thermal Infrared MultiMode Instrument                                    | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | 3.6m/EFOSC2 | ESO Faint Object Spectrograph and Camera                                 | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | NTT/EMMI    | ESO Multi-Mode Instrument  | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | NTT/SUSI2   | Superb-Seeing Imager   | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |
| ESO               | NTT/SOFI    | Infrared Spectrograph and Imaging Camera                                 | La Silla, Chile, Archive in Garching | ESO                  | Paolo Padovani, Piero Rosati, Andre |

# Spanish VO

| Partner in charge | Acronym   | Project Name  | Location                            | Laboratory in charge   | Contact person    |
|-------------------|-----------|---|-------------------------------------|------------------------|-------------------|
| INTA              | INES      | IUE Newly Extracted Spectra Archive   | Villafranca del Castillo, Madrid, S | LAEFF                  | Enrique Solano    |
| INTA              | GAUDI     | COROT Ground-based Asteroseismology Uniform Database Interface                | Villafranca del Castillo, Madrid, S | LAEFF                  | Enrique Solano    |
| INTA              | OMC       | Optical Monitoring Camera Archive   | Villafranca del Castillo, Madrid, S | LAEFF                  | Enrique Solano    |
| INTA              | CLASS0    | Photometry of Class 0 sources   | Villafranca del Castillo, Madrid, S | LAEFF                  | Carlos Rodrigo    |
| INTA              | VOSED     | SED Builder & Fitting tool  | Villafranca del Castillo, Madrid, S | LAEFF                  | Raúl Gutiérrez    |
| INTA              | DAMA      | Darwin Madrid Archive   | Villafranca del Castillo, Madrid, S | LAEFF                  | Raúl Gutiérrez    |
| INTA              | KURUCZ    | Kurucz ODFNEW/NOVER theoretical spectra                                       | Villafranca del Castillo, Madrid, S | LAEFF                  | Carlos Rodrigo    |
| INTA              | D'ALESSIO | D'Alessio models of irradiated accretion disks around pre-main sequence stars | Villafranca del Castillo, Madrid, S | LAEFF                  | Carlos Rodrigo    |
| INTA              | COELHO    | Coelho Synthetic stellar library  | Villafranca del Castillo, Madrid, S | LAEFF                  | Carlos Rodrigo    |
| INTA              | AMIGA     | Analysing the Interstellar Medium of Isolated Galaxies                        | Granada, Spain                      | IAA                    | Lourdes Verdes    |
| INTA              | PVOL      | Planetary Virtual Observatory & Laboratory                                    | Bilbao, Spain                       | Universidad País Vasco | Alekander Morgado |

# GAVO

| Partner in charge | Acronym                                | Project Name                           | Location            | Laboratory in charge  | Contact person         |
|-------------------|--|--|---------------------|-----------------------|------------------------|
| MPG               | <a href="mailto:SDSS@MPA">SDSS@MPA</a> | Sloan SkyServer Mirror                 | Garching, Germany   | MPA                   | Gerard Lemson          |
| MPG               | Millenium                              | Virgo consortium's Millenium Data Base | Garching, Germany   | MPA                   | Gerard Lemson          |
| MPG               | ROSAT                                  | ROSAT                                  | Garching, Germany   | MPE                   | Wolfgang Voges         |
| MPG               | RAVE                                   | radial velocity experiment survey      | Potsdam, Germany    | AIP                   | Ilya Nickelt-Czyzowski |
| MPG               | ARI-ZAH                                | ARI catalogues                         | Heidelberg, Germany | ARI-ZAH               | Joachim Wambsganss     |
| MPG               | GAVO                                   | German VObs project                    | Garching, Germany   | MPE                   | Gerard Lemson          |
| MPG               | PHOENIX                                | Synthetic spectra Phoenix code         | Hamburg, Germany    | Hamburger Sternwarte  | Peter Hausschildt      |
| MPG               |  | stellar spectra for hot-compact stars  | Tuebingen, Germany  | Universityt Tuebingen | Thomas Rauch           |

# NOVA

| Partner in charge | Acronym      | Project Name                        | Location                             | Laboratory in charge | Contact person |
|-------------------|--------------|-------------------------------------|--------------------------------------|----------------------|----------------|
| NOVA              | VST-OMEGACAM |                                     |                                      | OmegaCEN             |                |
| NOVA              | LOFAR        | LOFAR and other radioastronomy data |                                      | ASTRON               | Hanno Holties  |
| NOVA              | Astro-Wise   |                                     | University of Groningen, Netherlands | OmegaCEN-NOVA        |                |
| NOVA              | TARGET       |                                     | University of Groningen, Netherlands |                      |                |

# INAF

| Partner in charge | Acronym        | Project Name   | Location       | Laboratory in charge             | Contact person     |
|-------------------|----------------|--|----------------|----------------------------------|--------------------|
| INAF              | IA2            | INAF Centre for Astronomical Archives (TNG, Italian LBT, ITVO) | Trieste, Italy | INAF - OA Trieste                | Riccardo Smareglia |
| INAF              | VVDS           | VIMOS-VLT Deep Surveys   | Milan, Italy   | INAF - IASF Milan                | Bianca Garilli     |
| INAF              | ASDC           | ASI Science Data Centre Multi-Mission Archive                  | Rome, Italy    | INAF + ASI                       | Paolo Giommi       |
| INAF              | DSS-II, GSS-II |  | Turin, Italy   | INAF - OA Turin                  | Roberto Morbidelli |
| INAF              | Sne RTN        | Asiago Supernovae Archive                                      | Asiago, Italy  | INAF - OA Padova                 | Andrea Baruffolo   |
| INAF              | AA&ASL         | Asiago Archive and Asiago Spectral Libraries                   | Asiago, Italy  | INAF - OA Padova                 | Andrea Baruffolo   |
| INAF              | DFBS           | Digitized First Byurakan Survey                                | Rome, Italy    | INAF Rome + University of Rome I | Roberto Nesci      |
| INAF              | ZELLAC         | Spectroscopic Library of BL Lac objects                        | Padova, Italy  | INAF - OA Padova                 | Renato Falomo      |
| INAF              | IRA-RC         | IRA Radio Catalogue  | Bologna, Italy | INAF - IRA Bologna               | Mauro Nanni        |
| INAF              | WINGS          | Wide-field Nearby Galaxy-cluster Survey                        | Padova, Italy  | INAF - OA Padova                 | Giovanni Fasano    |
| INAF              | BaSTI          | A Bag of Stellar Tracks and Isochrones                         | Teramo, Italy  | INAF - OA Teramo                 | Santi Cassisi      |

# AstroGrid

| Partner in charge | Acronym | Project Name  | Location       | Laboratory in charge | Contact person   |
|-------------------|---------|---|----------------|----------------------|------------------|
| LUIAstroGrid      | CASU    | Cambridge Astronomical Survey Unit (WFCAM, ING, UKIRT, AAO, Planck, Gaia, VISTA, VST, WFC, WHT, WFMOS)                                | Cambridge, UK  | CASU                 | Guy Rixon        |
| LUIAstroGrid      | WFAU    | Wide-Field Astronomy Unit (SSA, AAT 6df-z, UKIRT WFCAM Science Archive, USNO-B, SDSS DR1-5, 2MASS, VSA, ESO-VST Surveys, GAIA, WFMOS) | Edinburgh, UK  | WFAU                 | John Taylor      |
| LUIAstroGrid      | LEDAS   | LEicester Database and Archive Service (w/XMM-Newton, Lobster, Einstein, EXOSAT, Ginga, ROSAT, ASCA, Chandra, XMM-Newton, SWIFT,      | Leicester, UK  | LEDAS                | Duncan Law-Green |
| LUIAstroGrid      |         | Jodrell Bank (Merlin, Interferometric, e-Merlin, ALMA)  | Manchester, UK | Jodrell Bank         | Simon Garrington |
| LUIAstroGrid      | UCL     | University College London (Solar-B, SDO, SOHO, ReSIK, Yokoh, SMP/XP, BGD Solar)   | London, UK     | UCL                  | Elizabeth Auden  |
| LUIAstroGrid      | RAL     | Rutherford Appleton Laboratory (EISCAT, Ionosonde, SOHO, TRACE, CHIANTI, Cluster, STEREO, Solar-B, SDO, NGS)                          | Oxon, UK       | RAL                  | Matthew Wild     |



# DCA Partners Participants not

## in Census

|                             |   |       |
|-----------------------------|---|-------|
| Cardiel Nicolás             | Dpto Astrofisica, Universidad Complutense de Madrid | Spain |
| Pons Bordería María Jesús   | Dpto Astrofisica, Universidad Complutense de Madrid | Spain |
| Pascual Sergio              | Dpto Astrofisica, Universidad Complutense de Madrid | Spain |
| Ceballos Maite              | Instituto de Fisica de Cantabria (CSIC-UC)          | Spain |
| RODON JOSE RAMON            | Instituto de Fisica de Cantabria (CSIC-UC)          | Spain |
| Leisy Pierre                | Isaac Newton Group                                  | Spain |
| Perez Prieto Jorge A        | Instituto de Astrofisica de Canarias                | Spain |
| Montejo Salazar Fco. Javier | Real Observatorio de la Armada                      | Spain |

# Non DCA Partners Participants

## not in census

|                   |  |                |
|-------------------|--|----------------|
| Amorim Ligia      | SIM- FCUL  | Portugal       |
| Moitinho André    | SIM - FCUL   | Portugal       |
| Anton Sonia       | SIM  | Portugal       |
| Kryvdyk Volodymyr | National Taras Shevchenko University of Kyiv           | Ukraine        |
| Skoda Petr        | Astronomical Institute Ondrejov                        | Czech Republic |
| Tsvetkov Milcho   | Institute of Astronomy, Bugarian Academy of Sciences   | Bulgaria       |
| Holl Andras       | Konkoly Observatory                                    | Hungary        |
| Sinha Rita        | Inter-University Centre for Astronomy and Astrophysics | India          |

□ Some in WP6 census

# Next DCA Workshop

- ❑ Week of June 23 2008 at ESO
- ❑ Need to define scope, program, etc.
- ❑ Logistic Contact: Mar Sierra ([msierra@eso.org](mailto:msierra@eso.org))

# On-site Support to Data Centres

# On-Site Support to Data

## Certification

List of more detailed tasks and schedule:



|               |   |
|---------------|---|
| November 2006 | Prepare a Wiki page with all the list of visits, including follow-up activities |
|---------------|---|



|               |  |
|---------------|--|
| December 2006 | Get list of data centres and associated "priority" targets<br>Get priority list of IVOA standards to give support on |
|---------------|--|



|              |  |
|--------------|--|
| January 2007 | Prepare list of visits to the data centres, including dates, IVOA standard to give support on, contact point, DCA partners involved, ... |
|--------------|--|



|               |  |
|---------------|--|
| February 2007 | Make the list of available tools and/or best practices for publishing data into the VO |
|---------------|--|



|           |  |
|-----------|--|
| July 2007 | After the June 2007 workshop, publish on-line all the tutorials material given during the workshop |
|-----------|--|



|                  |  |
|------------------|--|
| After each visit | Update list of visits to the data centre, including dates, IVOA standard to give support on, contact point, DCA partners involved, ... |
|------------------|--|

No real progress in cycle 1 (apart from workshop)

Plan still to be updated

- Use feedback from June Workshop, census ?