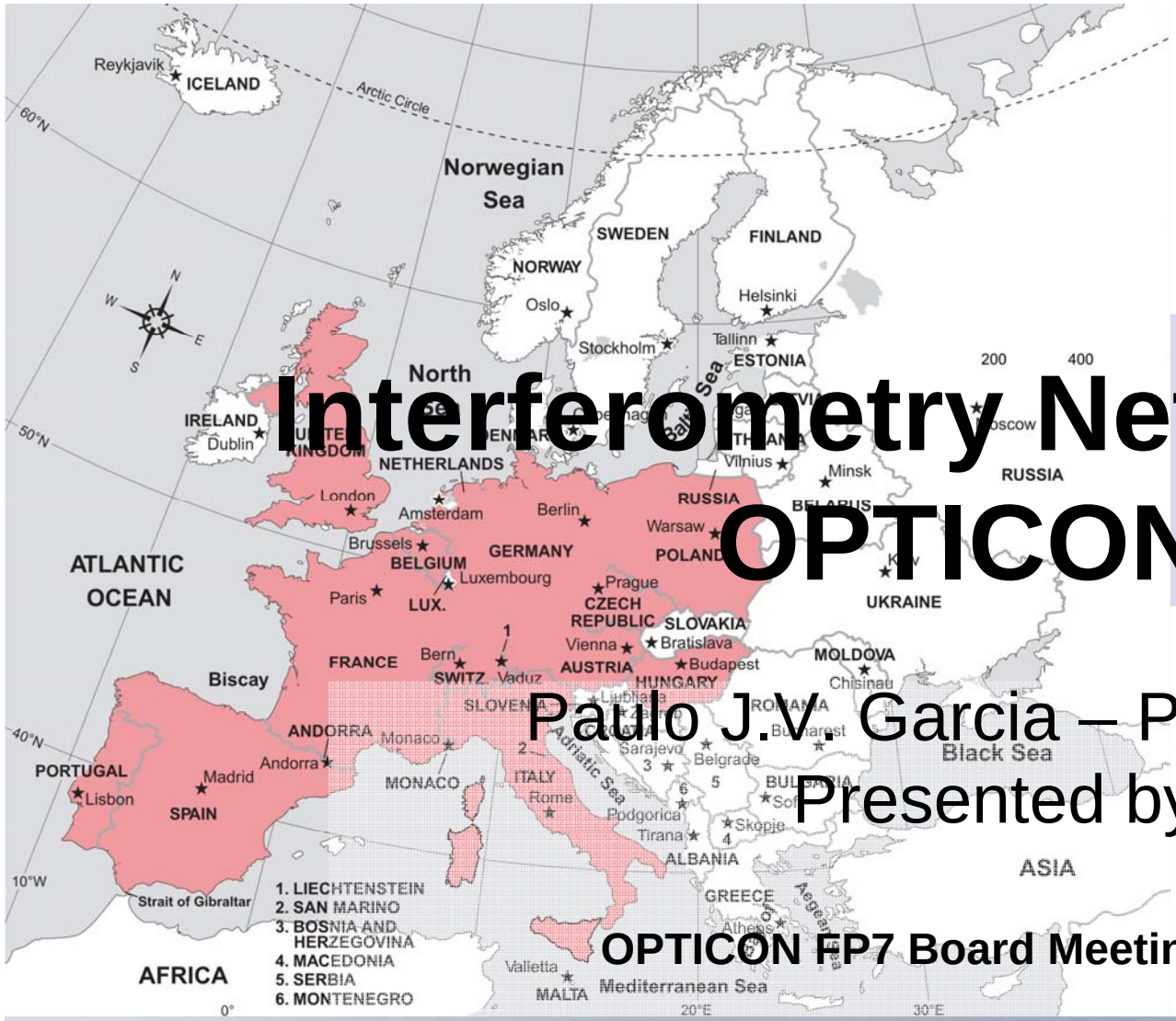
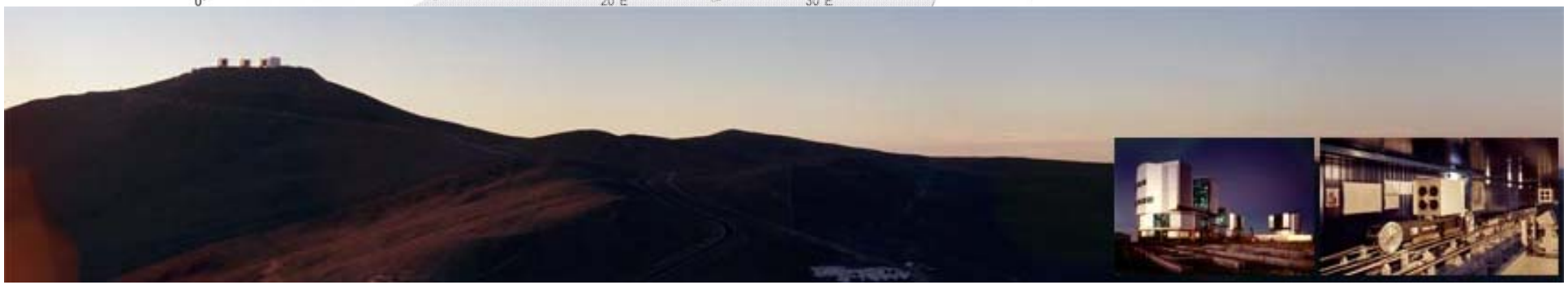


Interferometry Networking OPTICON/WP11.2

Paulo J.V. Garcia – Porto University
Presented by Éric Thiébaut

OPTICON FP7 Board Meeting, 15th October 2012

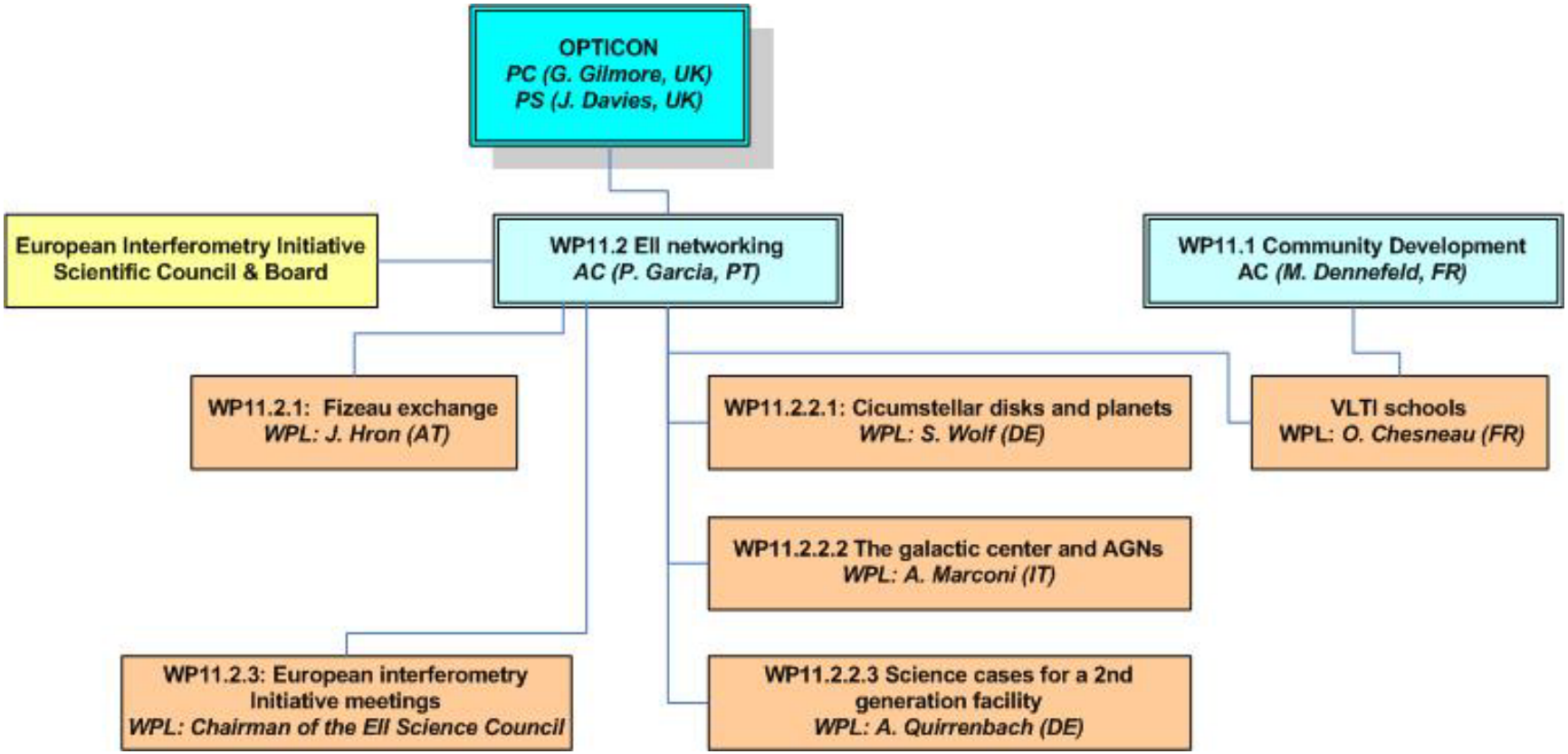


- 2/3 aims of OPTICON for FP7
  - Bring together researchers, instrument builders, national and international agencies to further increase the quality of astronomical research in Europe
  - Develop scientific cases, initiate technical investigations, and begin planning for next-generation world-class observational facilities, ensuring the continuing excellence and development of European astronomy on the world stage
- WP11.2 goal: Fulfill the OPTICON aims at the “Coordination” level for the optical interferometric activities building on the FP6 experience.

Workpackages

- **WP11.2** The European interferometric initiative
  - **WP11.2.1** Fizeau exchange grants
  - **WP11.2.2** Circumstellar disks and planets working group
  - **WP11.2.3** AGNs and the galactic center working group
  - **WP11.2.4** Science cases for a second generation facility working group
  - **WP11.2.5** EII science council meetings
- Summer Schools
- Detailed information available at:
  - http://www.european-interferometry.eu

Project overall organization

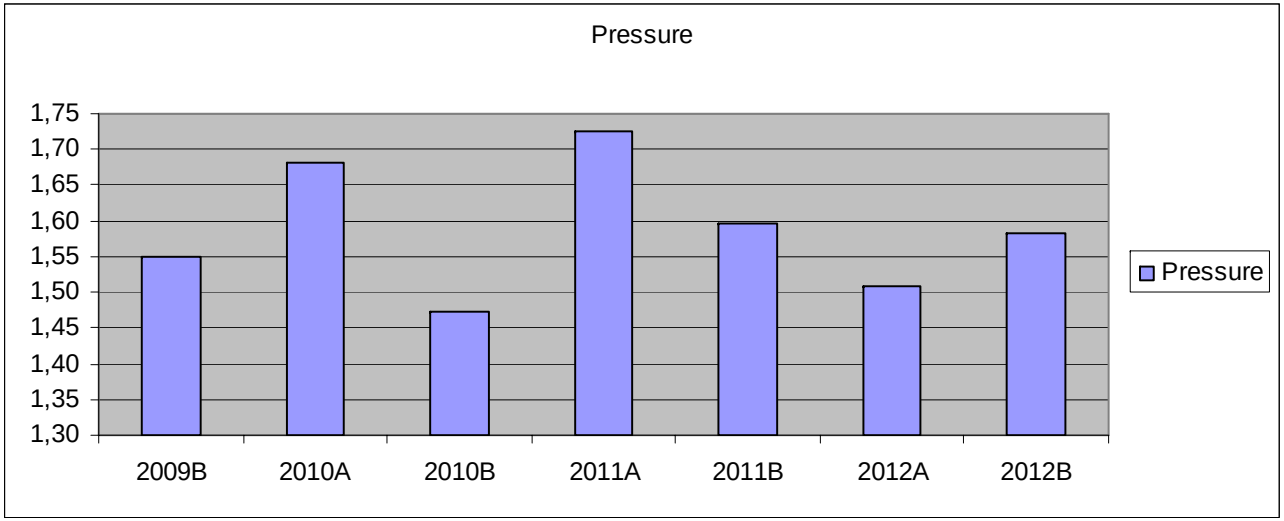


Fizeau exchange grants

- Goals
  - **Strengthen** nascent collaborations
  - **Spread** interferometric knowledge across Europe
  - **Enhance** the active participation of new countries in interferometric activities.
- Method
  - Fund short research/technical/training exchange visits (1 week – 1 month)
  - Priority to young researchers and “knowledge poor” institutes
  - Competitive calls twice a year (March and September)
- Selection committee
  - Members from non-funded Interferometry JRA/NET partners
  - Hron (AT, chair), Mosoni (HU, deputy), Haniff (UK), Niedzielsky (PL), Surdej (BE)
  - **Selection is independent from project office**
  - Conflict of interest rules implemented

Fizeau exchange grants

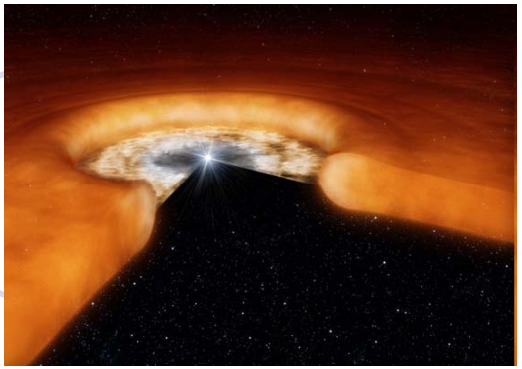
- Publicity
  - Announced at OLBIN and other mailing lists
  - Poster circulated at JENAM 2010 to 500 astronomers and 500 institute addresses
- Around 80 exchange grants awarded during the OPTICON 2009-2012 programme
- Typical pressure stable around 1.6 (minimum ~1.5 defined by project office)



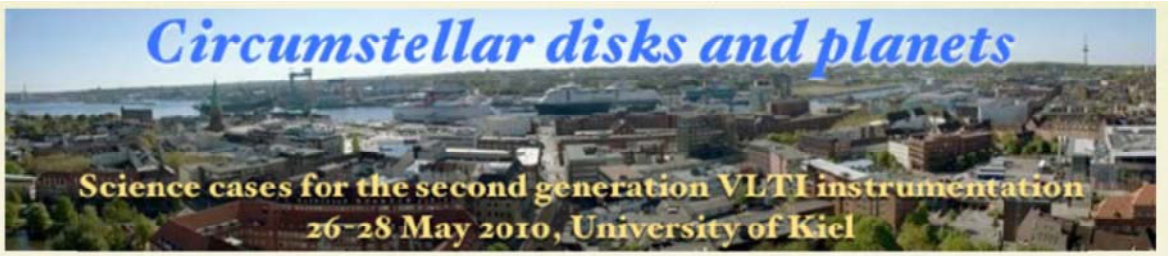
The FP7 execution: working groups

- **WP11.2.2** Circumstellar disks and planets working group
- **WP11.2.3** AGNs and the galactic center working group
- **WP11.2.4** Science cases for a second generation “facility”
- **WP11.2.5** EII science council meetings

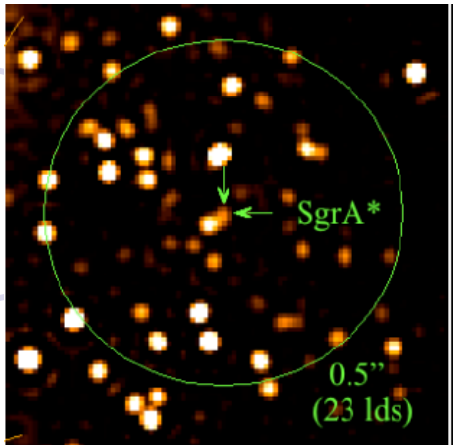
Working group: Circumstellar disks and planets



- Sebastian Wolf (chair) and Fabien Malbet (deputy)
- Meeting in Kiel 26-28 May 2010
  - “Theory of disk formation and evolution”, Alexander
  - “Theory of planet formation”, Mordasini
  - “High-resolution disk observations”, Duchene
  - “Interferometry of disks”, Tatulli
  - “Exoplanets”, Pont
  - “Keck ASTRA”, Pott
  - “VLTI: PRIMA & GRAVITY”, Berger
  - “VLTI: VSI/Matisse”, Wolf
  - “LBT”, Herbst
  - “MROI”, Creech-Eakman
  - “Space Interferometry Mission-Lite, FKSI”, Malbet
  - “ALMA”, Dutrey
  - “European Extremely Large Telescope: EPICS and METIS”, Brandner
  - “JWST”, Pantin
- **Report published**
  - Wolf et al., 2012, Astronomy & Astrophysics Reviews, vol. 20, p. 52



Working group: AGNs and the galactic center



- Alessandro Marconi (chair), Stefan Gillessen (deputy)
- Meeting in Lisbon 28-30 November 2011
  - "Supermassive black holes & the broad line region in AGN", Ferrarese
  - "The dusty torus and the AGN unified model", Elitzur
  - "Science from VLT (AO observations)", Davies
  - "Highlights from Optical Interferometry (recent AGN/GC VLT-I & Keck-I science)", Meisenheimer
  - "The Galactic center", Eisenhauer
  - "PRIMA science", Delplancke
  - "GRAVITY science", Paumard
  - "MATISSE science", Lopez
  - "Future VLT instruments", Casali (Gilmozzi)
  - "E-ELT", Gilmozzi
  - "ALMA & JWST", Maiolino
  - "Submm VLBI", Falcke
- Report in preparation
  - Plans to submit it to Astronomy & Astrophysics Reviews later in 2012

Working group:
Science cases for a second generation "facility"

- Andreas Quirrenbach (chair), Guy Perrin (co-chair) and Jean Surdej (deputy).
- Meeting in Lisbon 8-9 September 2010, during JENAM2010
  - Perspectives of Interferometry from the Ground, Glindemann/Quirrenbach
  - Perspectives of Space Interferometry, Lawson
  - What kinds of interferometric science will be feasible from the ground?, Buscher
  - The case of imaging at the VLTI and the need to combine up to 6 to 8 telescopes, Malbet / Garcia
  - Interferometric Detection of Planets, Coude du Foresto
  - Planet Formation with Interferometry, Wolf
  - Imaging protoplanetary disks around young stars: the first image of the inner disk obtained with VLTI/AMBER on MWC275, Malbet
  - Sub-milliarcsecond imaging of stellar sources at the CHARA array, Pedretti
  - Fundamental Parameters of Stars, ten Brummelaar
  - Circumstellar Matter, Chesneau
  - Interferometric observations and modeling of Massive Young Stellar Objects, Oudmaijer
  - High-resolution 1-D imaging of the atmosphere of the red Supergiant Betelgeuse in the 2.3 micron CO lines with VLTI/AMBER, Ohnaka
  - The Center of our Galaxy, Gillessen
  - xtragalactic Astronomy, Jaffe
  - Resolving the nuclear dust structure in nearby AGNs, Burtscher
  - Stellar physics at very high angular and spectral resolution: from VEGA/CHARA to future large optical arrays, Mourard/Chesneau
  - Round table discussion, Coude du Foresto, Hummel, Perrin, Surdej, Quirrenbach, ten Brummelaar
- Report
  - **Presentations available at EII web**

EII Meetings

- Face-to-face meetings
  - Paris, May 2010
  - Amsterdam, July 2012
- Teleconfs
  - September and November 2011

VLTI Schools

- Olivier Chesneau (chair)
- Background
  - A well established tradition that had a strong impact on the development of the field,
  - Many student trained (at a rate of about ~20 new per year)
  - Two formats:
    - The short one (4-7 days)
    - The long one (10-15 days, following the famous Goutelas School in 1996)
  - Long duration web-site, still very useful
    - http://www.vlti.org/home.php
  - Key support from JMMC
- Financial support:
  - 2005-2009: FP6 from Europe (Marie Curie programme)
  - 2010-2013: Erasmus Intensive Programme + OPTICON/Fizeau exchange grants
- Activities
  - 2010 Porquerolles School (co-fund from OPTICON/Fizeau)
  - 2011 AMBER data reduction school (co-fund from OPTICON/Fizeau)

VLTI Schools: Porquerolles

- Financial support from the Intensive Programs (EU)
- Successful organization in 2010 but IPs are not flexible enough for our needs:
  - Managed by Universities only (Erasmus program),
  - Minimum duration 11days,
  - Strict rules for money management,
- same program each year, with the goal to open an Erasmus Mundus cooperation

Overall comments

- Networking programme is a success
- Impressive amount of activities undertaken
- Very high quality output
- This is achieved via the backup of an organized and active optical interferometry community.

Thank you!