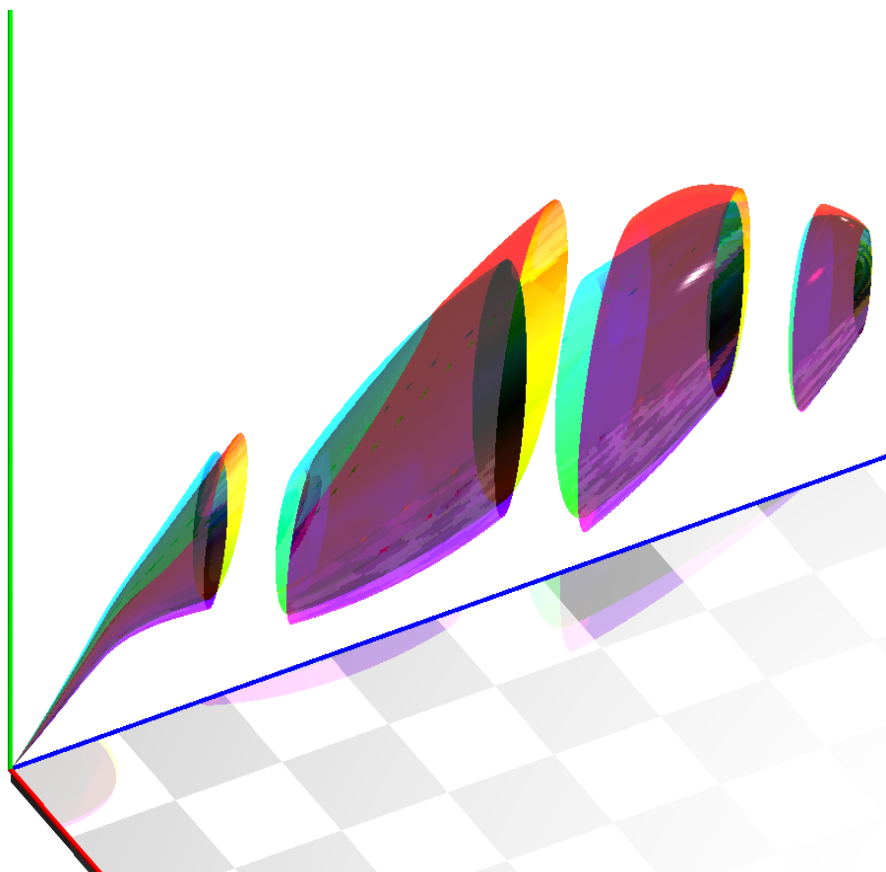


# Program 2012

**I**nternational  
**O**cean  
**V**ector  
**W**ind  
**S**cience  
**T**eam



**Centraal Museum**  
**Utrecht, the Netherlands**  
**12 - 14 June 2012**



The EUMETSAT  
Network of  
Satellite Application  
Facilities



Royal Netherlands  
Meteorological Institute  
Ministry of Infrastructure and the  
Environment

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## Cradle of Dutch weather



For historically interested meteorologists, our city must be one of the places to be. Of course, because this year's International Ocean Vector Wind Science Team Meeting is taking place here. But there are a few more reasons, about which, I suppose, as meteorologists you are well informed.

As mayor of Utrecht, not specifically trained in meteorology, I sometimes remark jokingly that Dutch weather was born in our city. Quite apart from the fact that, for obvious reasons, I mostly do not win much approval with such a remark, this is, in fact, more than a joke because the consciousness, in our country, of weather as a phenomenon was really

born here. The famous Dutch meteorologist Buys Ballot started his distinguished career with measurements in our own Dom Tower (height: 112,32 metres), revealing that precipitation varies with height.

Later, he focused on establishing reliable monitoring networks, on land and sea, eventually discovering that wind does not move straightly from high to low pressure, but, instead, depending on hemisphere, either cyclonically or anticyclonically. He became one of the pioneers of weather charts and weather forecasts. The Royal Dutch Meteorological Institute, which Buys Ballot founded in 1854, was domiciled here in Utrecht at Sonnenborgh, one of the city's former bastions. A visit to this cradle of Dutch meteorology (in 1897 the Institute moved to De Bilt) is surely figuring on your programme.

The more because the KNMI moved to a place so close to our city, Utrecht has remained a City of Science and Culture since, accommodating one of the country's largest universities, where half of our city's about 67,000 students read. You'll meet them for example during a stroll in our medieval inner city, which I cannot recommend too strongly. And if anticyclonic movement really becomes too intrusive, you'll find attractive museums, cafés and restaurants for shelter everywhere.

A. Wolfsen  
mayor of Utrecht

## Invitations



All IOVWST participants are cordially invited on behalf of the mayor of Utrecht to attend a welcome reception and brief guided tour in the **Museum Speelklok** Tuesday 18:00-19:30.



The IOVWST meeting organizers welcome all participants and their spouses to enjoy “la cucina Italiana originale” at the conference dinner in **La Cantina di David** at the Oude Gracht 88 Wednesday 18:00.

After dinner there will be time to visit large video screens in Utrecht city centre to enjoy the European Championship soccer derby Germany-Netherlands, starting at 20:45.

## Good to know

Wifi network is CMU-Public with password centraalmuseum .

You are guest in a museum featuring a precious collection of arts. Please visit and admire this collection by all means. However, keep a safe distance and do not touch pieces of art as this will be at your own risk.

We appreciate it when the name tags are returned after the meeting.



**Tuesday June 12<sup>th</sup>: Morning**

8:30 Centraal Museum building opens  
Poster boards ready for setup

**Introductory Session**

Chair: Ad Stoffelen

9:00 Introduction from the organizing committee  
Mark Bourassa (FSU)

9:05 The Local Host  
Ad Stoffelen

9:10 CEOS OSWV Virtual Constellation Status and Next Steps  
Dr. Paul Chang (NOAA/NESDIS), Hans Bonekamp and B.S. Gohil

9:25 NASA Programmatic Perspectives: Present Status and the Way Forward  
Dr. Peter Hacker (NASA HQ) and Dr. Eric Lindstrom

9:40 GCOM Mission Overview  
Prof. H. Shimoda (JAXA)

9:55 ASCAT on Metop: status and plans  
Dr. Hans Bonekamp (EUMETSAT), Craig Anderson, Julia Figa, Julian Wilson

10:10 Oceansat-2 Scatterometer - Status and Value added Products  
Dr. RAJ KUMAR (Indian Space Research Organisation), Suchandra A Bhowmick, Abhisek Chakraborty, and A S Kiran Kumar

10:30 Break & Poster Viewing

11:00 HY2A Scatterometer validation  
Dr. Qingtao Song (NSOAS), Xiaolong Dong

**First Results from OSCAT, HY2A and MetOp-B**

Chair: Paul Chang

11:20 OCEANSAT Scatterometer Winds By Eumetsat  
Dr. Anton Verhoef (KNMI), Ad Stoffelen, Jeroen Verspeek, Yun Richeng

11:40 The JPL Ku-Band Scatterometer Data Product  
Dr. Alex Fore (Jet Propulsion Laboratory), Bryan Stiles, Alexandra Chau, Brent Williams, Sermsak Jaruwatanadilok, R. Scott Dunbar, and Ernesto Rodriguez

12:00 NOAA OSCAT Ocean Surface Vector Wind Products  
Dr. Zorana Jelenak (NOAA/NESDIS - UCAR), Seubson Soisuvarn, Suleiman Alsweiss, Qi Zhu, Micah Baker and Paul S. Chang

12:20 Scatterometer Wind Services at KNMI  
Dr. Ad Stoffelen (KNMI), Tilly Drienaar, Anton Verhoef, Jeroen Verspeek, Jur Vogelzang and Marivi Tello

12:40 Evaluation of Marine Surface Vectors observed by Oceansat-2 Scatterometer  
Professor Naoto Ebuchi (Hokkaido University),

13:00 **Lunch (60 minutes)**

**Tuesday June 12<sup>th</sup>: Afternoon**

**First Results from OSCAT, HY2A and MetOp-B (Continued)**

Chair: Paul Chang

- 14:00 OSCAT backscatter drift evaluation using ocean and natural land targets  
Dr. Sermsak Jaruwatanadilok (Jet Propulsion Laboratory), Bryan W. Stiles, Alexander Fore, and R. Scott Dunbar
- 14:20 Discussion

**New Products**

Chair: Svetla M. Hristova-Veleva

- 14:45 Multiple Scatterometer Hurricane Winds Ten years of optimized QuikSCAT cyclone winds validated against best track speeds, H\*WIND and SFMR, and initial OceanSAT-2 cyclone winds  
Dr. Bryan Stiles (Jet Propulsion Laboratory), Rick Danielson, W. Lee Poulsen, Michael J. Brennan, and Svetla M. Hristova-Veleva
- 15:05 Towards An Optimal Noise Versus Resolution Trade-Off In Wind Scatterometry  
Dr. Brent Williams (Jet Propulsion Laboratory)
- 15:25 Break & Poster Viewing
- 15:55 Status Update on PO.DAAC's OVW Products and Services  
Mr. David Moroni (JPL)
- 16:15 Development of Consistent Geophysical Model Functions for Different Scatterometer Missions: Ku and C-band  
Dr. Lucrezia Ricciardulli (Remote Sensing Systems), Frank J. Wentz
- 16:35 QSCAT2012 Geophysical Model Function  
Dr. Alexandra Chau (Jet Propulsion Laboratory), Bryan Stiles, R. Scott Dunbar, Ernesto Rodriguez
- 16:55 The Ice Contamination Ratio Method: Accurately Retrieving Ocean Winds Closer to the Sea Ice Edge While Eliminating "Ice Winds"  
Professor David Long (Brigham Young University)
- 17:15 Discussion
- 17:40 Close for the day
- 18:00 Centraal Museum building closes

**18:00 Reception at Museum de Speelklok**, Steenweg 6, Utrecht  
(1.1 km; 15 minute walk)

Welcome by Frits Brouwer, General Director of KNMI

## Wednesday June 13<sup>th</sup>: Morning

8:30 Centraal Museum building opens

### Surface Fluxes

Chair: Mark Bourassa

9:00 QuikSCAT-based evaluation of CMIP3 and CMIP5 models  
Dr. Tong Lee (Jet Propulsion Laboratory), Duane Waliser, Frank Li, and Michelle Gierach

9:15 Buoyance Parameterization in Stress Generation  
Dr. W Timothy Liu (Jet Propulsion Laboratory), Xiaosu Xie

9:30 Identifying Loci for Ocean Forecast Model Error from Ensembles of Surface Winds based on QuikSCAT and COAMPS  
Dr. Ralph Milliff (CIRES, University of Colorado), Dr. Polly Smith, Prof. Andrew M. Moore and Prof. Christopher A. Edwards

9:45 Discussion

### Oceanography

Chair: Tony Lee

10:00 Covariability of Wind and Sea Surface Height in the Tropical Pacific: Part 1  
Dr. Tom Farrar (Woods Hole Oceanographic Institution), Theodore Durland

10:15 Covariability of Wind and Sea Surface Height in the Tropical Pacific: Part 2  
Dr. Ted Durland (College of Earth, Ocean and Atmospheric Sciences, Oregon State University), J. Thomas Farrar, Dudley Chelton

10:30 Break & Poster Viewing

11:00 Self - Induced Ekman Pumping Over Oceanic Mesoscale Eddies  
Professor Dudley Chelton (Oregon State University), Peter Gaube

11:15 Bayesian sea-ice detection in the ASCAT Wind Data Processor  
Mr. Jeroen Verspeek (KNMI), Maria Belmonte, Ad Stoffelen, Anton Verhoef and Jur Vogelzang

11:30 Modeled sensitivity of the upper-ocean properties in the Nordic Seas to wind forcing  
Dr. Dmitry Dukhovskoy (COAPS FSU), Dr. Mark Bourassa

11:45 Time Dependent Wind-Driven Surface Currents  
Dr. Kathleen Dohan (Earth and Space Research),

12:00 Constraining a global, eddy, ocean and sea ice model with scatterometer data  
Dr. Dimitris Menemenlis (Jet Propulsion Laboratory, California Institute of Technology), David Moroni, Hong Zhang

12:15 Spatial variability of upwelling on a shelf with complex geometry inferred from scatterometry  
Dr. Steve Morey (COAPS-FSU)

12:30 Discussion

13:00 Lunch (60 minutes)

**Wednesday June 13<sup>th</sup>: Afternoon**

**Future Missions**

Chair: Hans Bonekamp

- 14:00 Development Status of the Wind Scatterometer for EPS Second Generation  
Dr. Chung-Chi Lin (ESA - ESTEC), F. Fois, M. Betto, H. Barré and G. Mason, ESA-ESTEC; S. Banfi and P. Schluessel, EUMETSAT
- 14:20 Polarization options for ASCAT Second Generation  
Dr. Maria Belmonte Rivas (Atmospheric Chemistry Division - National Center for Atmospheric Research), Ad Stoffelen, Gerd-Jan van Zadelhoff
- 14:40 Preliminary Considerations About the Calibration of a Ku-Band Rotating Fan-Beam Scatterometer of CFOSAT  
Dr. Xiaolong Dong (CAS Key Laboratory of Microwave Remote Sensing, National Space Science Center/Center for Space Science and Applied Research, Chinese Academy of Sciences), Jintai Zhu, Risheng Yun, Di Zhu
- 15:00 Wide-Swath Simultaneous Measurements of Winds and Surface Currents  
Dr. Ernesto Rodriguez (JPL/Cal Tech),
- 15:15 Derivation of a cross-polarization GMF at extreme wind speeds from RadarSAT-2 measurements  
Dr. Gerd-Jan van Zadelhoff (KNMI), Ad Stoffelen, Paris Vachon, John Wolfe
- 15:30 Break & Poster viewing
- 16:00 Applications of L-Band Scatterometry and Radiometry to Aquarius and SMAP  
Dr. Simon Yueh (Jet Propulsion Laboratory), Wenqing Tang, Alexander Fore, Jullian Chaubell, Gary Lagerloef
- 16:15 Summary of Science Thoughts for Possible Future NASA Missions, Part I  
Professor Mark Bourassa (Florida State University), Ernesto Rodríguez, Alexandra Chau, Dudley Chelton, Alex Fore, Peter Gaube, Michelle Gierach, Tony Lee, Jim McWilliams, Larry O'Neill, Dragana Perkovic, Bryan Stiles, Svetla-Hristova Veleva, Duane Waliser, Brent Williams, Shang-Ping Xie, Simon Yeuh
- 16:30 Summary of Science Thoughts for Possible Future NASA Missions, Part 2  
Dr. Ernesto Rodríguez (Jet Propulsion Laboratory), Mark Bourassa, Alexandra Chau, Dudley Chelton, Alex Fore, Peter Gaube, Michelle Gierach, Tony Lee, Jim McWilliams, Larry O'Neill, Dragana Perkovic, Bryan Stiles, Svetla-Hristova Veleva, Duane Waliser, Brent Williams, Shang-Ping Xie, Simon Yeuh
- 16:45 Discussion
- 17:30 Close of day
- 18:00 Centraal Museum building closes
- 18:00 Dinner at restaurant La Cantina di David**, Oudegracht 88, Utrecht  
(1.5 km, 18 minute walk)  
All participants and accompanying persons are kindly invited .



## Thursday June 14<sup>th</sup>: Morning

8:30 Centraal Museum building opens

### **Climate Data Records and Calibration/Validation**

Co-Chairs: Ralph Milliff and Gerrit Burgers

9:00 Rain-induced wind variability depicted by scatterometers  
Dr. Marcos Portabella (Unitat de Tecnologia Marina (UTM-CSIC)), Wenming Lin, Ad Stoffelen, Anton Verhoef, Antonio Turiel, Joaquim Ballabrera, Jeroen Verspeek

9:15 Singularity analysis for the estimation of rain impact on ASCAT winds  
Dr. Wenming Lin (Institut de Ciències del Mar (ICM-CSIC)), Marcos Portabella, Antonio Turiel, Ad Stoffelen, Anton Verhoef, Jur Vogelzang

9:30 Using structure functions to compare ASCAT and QuikSCAT winds  
Dr. Gregory King (Centro de Geofísica - IDL, University of Lisbon), Jur Vogelzang and Ad Stoffelen

9:45 Characterizing Differences between C-band and Ku-band scatterometer winds.  
Dr. Abderrahim Bentamy (Ifremer), Semyon A. Grodsky, B. Chapron, D. Croizé-Fillon, Vladimir N. Kudryavtsev, James A. Carton

10:00 The impact of resolution on SST-Induced Surface Wind Response: Is that the answer for observed differences in QuikSCAT and ASCAT retrievals?  
Dr. Svetla Hristova-Veleva (Jet Propulsion Laboratory), Ernesto Rodriguez

10:15 Decadal change in ocean surface vector wind fields suggested by global synthesis of multiple satellite sensors (1987 – present)  
Dr. Lisan Yu (Woods Hole Oceanographic Institution)

10:30 Break & Poster Viewing

11:00 How Precisely Can One Infer Decadal Wind Trends from Satellites?  
Mr. Frank Wentz (Remote Sensing Systems)

11:15 Sampling needs for Operational Applications (invited)  
Ad Stoffelen (KNMI)

11:25 Sampling needs for Climate Studies (invited)  
Dudley Chelton (Oregon State University)

11:35 Discussion

### **Meteorology**

Co-Chairs: Jérôme Patoux and Christophe Payan

12:00 Evidence of and a Theory for 10-Km Wavelength Convergence Lines in Tropical Cyclone Surface Wind Retrievals  
Ralph Foster (Applied Physics Laboratory)

12:15 Towards an extreme wind climatology for Dutch Water Defenses  
Dr. Gerrit Burgers (KNMI), Sofia Caires (Deltares)

12:30 Seasonal and Geographical Variability of the Surface Wind and Stress Responses to SST over Mid-Latitudes  
Dr. Larry O'Neill (Oregon State University), Dudley Chelton, Steve Esbensen

12:45 On the Interpretation of Scatterometer Winds Near Sea Surface Temperature Fronts  
Professor James Edson (University of Connecticut), Amanda Plagge and Doug Vandemark and Amanda

13:00 Lunch

## Thursday June 14<sup>th</sup>: Afternoon

- 14:00 The Effects of Gap Wind Induced Vorticity, the ITCZ, and Monsoon Trough on Tropical Cyclogenesis  
Heather Holbach (Florida State University - COAPS), Mark Bourassa
- 14:15 A Decomposition of the MJO by Satellite Wind Partitioning  
Dr. Jérôme Patoux (University of Washington), Ángel Adames-Corraliza and Ralph C. Foster
- 14:30 Slow changes in ocean vector wind: Evidence of the Walker circulation slowdown over the past six decades  
Dr. Hiroki Tokinaga (IPRC/Univ. of Hawaii), Shang-Ping Xie
- 14:45 Break & Poster viewing
- 15:15 Intensification of the Pacific Walker Circulation (PWC) during the Last Quarter Century  
Mr. Frank Wentz (Remote Sensing Systems), Carl Mears and Lucrezia Ricciardulli
- 15:30 Assimilation of Scatterometer Winds at ECMWF  
Dr. Giovanna De Chiara (ECMWF),
- 15:45 On the potential benefits of using scatterometer data in the North Sea operational coastal wave forecasting system  
Dr. Sofia Caires (Deltares), Dr. Martin Verlaan
- 16:00 Status On The Use Of Scatterometer Winds At METEO-France  
Mr. Christophe Payan (CNRM and GAME, Météo France and CNRS),
- 16:15 National Hurricane Center Ocean Vector Wind Update  
Dr. Michael Brennan (NOAA/NWS/NCEP/National Hurricane Center), Hugh D. Cobb III, Rick Danielson, Golf Soisuvann, and Bryan W. Stiles
- 16:30 Use of ASCAT and OSCAT Winds at the NOAA Ocean Prediction Center  
Mr. Joseph Sienkiewicz (NOAA Ocean Prediction Center), Gregory McFadden, Paul Chang, Zorana Jelenak, Seubson Soiuvarn, Michael Folmer, and Scott Jacobs
- 16:45 Discussion
- 17:15 Wrap up Discussion
- 17:40 End of day
- 18:00 Centraal Museum building closes

## Posters

### Future Missions

Ocean Calibration And Validation Of Ku-Band Scatterometers

Dr. Risheng Yun (Key Laboratory of Microwave Remote Sensing (MIRS,CAS),Center for Space Science and Applied Research(CSSAR,CAS),Chinese Academy of Sciences), Ad Stoffelen, Jeroen Verspeek, Anton Verhoef, Xiaolong Dong

### Meteorology

Using Surface Pressure to Produce Scene-Wide, km-Scale Tropical Cyclone Surface Wind Retrievals From SAR

Ralph Foster (Applied Physics Laboratory), Jerome Patoux, Jochen Horstmann, Chris Wackerman

An Evaluation Study for Improving Gap Flow Simulations in Coastal Areas on Continental Portugal

Dr. Paulo Costa (LNEG),

Marine Training Workshop on the Use of Satellite Wind and Wave Products in South American Waters

Dr. Stan Wilson (UCAR), Luiz Machado, INPE; Mark Bourassa, FSU; Mark Higgins, EUMETSAT; Paul Chang & Zorana Jelenak, NOAA

A Model-Based Examination of SST-Related Changes in Surface Winds Due to Baroclinicity and Boundary-Layer Stability

Mr. Paul Hughes (EOAS and COAPS at Florida State University), Mark A. Bourassa

Steps towards a SAR-based wind atlas in the Baltic Sea

Dr. Charlotte Hasager (DTU Wind Energy), M. Badger, A. Peña, T. Mikkelsen, A. Hahmann, F. Bingöl

Hurricane-force extratropical cyclones measured by satellite scatterometry

Dr. Zorana Jelenak (NOAA/NESDIS - UCAR), Joseph Sienkiewicz and Paul S. Chang

Arctic Sea Ice Age Classification and Mapping using Ku-band Scatterometer Data

Professor David Long (Brigham Young University)

ASCAT wind scaling

Dr. Jur Vogelzang (KNMI), Dr. Ad Stoffelen

Resolving Vorticity in New Wind Products: Advantages of Finer Resolution and Improved Retrievals through Rain

Professor Mark Bourassa (Florida State University), Heather M. Holbach

Space-time interpolation of satellite winds in the Tropics

Dr. Jérôme Patoux (University of Washington), Gad Levy

Scatterometer - Met-Buoy Comparisons: QuickSCAT Versions 2 and 3

Prof. Ted Strub (Oregon State University) and Corinne Janes

## **Climate Data Records and Cal/Val**

Monitoring ASCAT-A Calibration using Ocean Backscatter  
Dr. Craig Anderson (eumetsat), Hans Bonekamp, Julia Figa

NWP SAF Scatterometer Monitoring  
Mr. James Cotton (UK Met Office), Masaya Takahashi, Robert Tardif, Dave Offiler, Bryan Conway

Extending the Land/Ice Scatterometer Climate Record  
Professor David Long (Brigham Young University)

A Comparison of Windspeeds in Extra-Tropical Cyclones  
Mr. Tom Philp (NCEO/University of Reading), Dr. Kevin Hodges

Airborne Cross-polarization Observations of the Sea-Surface NRCS in High Winds  
Stephen Frasier (University of Massachusetts), Joseph W. Sapp, Paul S. Chang, Zorana Jelenak, Micah Baker

## **Oceanography**

Influence of sea surface temperature gradient and roughness changes due to a slick on the motion of surface oil: A simple idealized study  
Dr. Yangxing Zheng (Florida State University), Mark A. Bourassa, Paul Hughes

Measurements of the Effect of Rain on the L-Band Sea Surface Brightness Temperature for the Aquarius Instrument  
Dr. David Weissman (Hofstra University)

## **New Products**

Wind Stress Curl Differences in QuikSCAT Level 2B Data (R2 vs. R3) and Preliminary OceanSAT-2  
Dr. Jeremiah Brown, Dr. Ralph Milliff (NWR, CIRES, University of Colorado),

Feasibility Assessment of Simultaneous Ocean Wind and Current Measurements  
Jos de Kloe, Ad Stoffelen, KNMI; Andrea Recchia, Davide D'Aria, Aresys; Johnny Johannessen, NERSC; Alexis Mouche, Fabrice Collard, CLS; Bertrand Chapron, IFREMER; Vivien Enjolras, TAS-F; Franco Fois, Chung-Chi Lin, ESTEC

The ASCAT Level 3 Global Wind product of MyOcean  
Tilly Driesenaar, Anton Verhoef, Ad Stoffelen (KNMI)

GMF development by ASCAT and ASAR  
Alexis Mouche

## Dinner Suggestions

### **Restaurant de Garde**

*Drieharingstraat 10-12*

*Utrecht (centrum)*

Dutch restaurant (€ 35,00 - € 70,00 excl. drinks)

### **Restaurant De Aal**

*Oudegracht a/d Werf 159*

*3511 AL Utrecht*

French restaurant (€ 23,50 - € 50,00 excl. drinks)

### **Restaurant De Eetkamer**

*Steenweg 29*

*3511 JL Utrecht*

Mediterranean restaurant (25,00 - € 65,00 excl. drinks)

### **Restaurant King Arthur**

*Oudegracht 101-103*

*3511 AE Utrecht*

English restaurant (€ 25,00 - € 35,00, excl. drinks)

### **Stadskasteel Oudaen**

*Oudegracht 99*

*3511 AE Utrecht*

Dutch restaurant (€ 25,00 - € 65,00 excl. drinks)

### **Café Le Journal**

*Neude 32-34*

*3512 AG Utrecht*

Dutch restaurant (€ 15,50 – € 35,00 excl. drinks)

### **Tapasbar El Mundo**

*Voorstraat 18*

*Utrecht*

Tapas/Spanisch (€ 15,00 – € 50,00 excl. drinks)

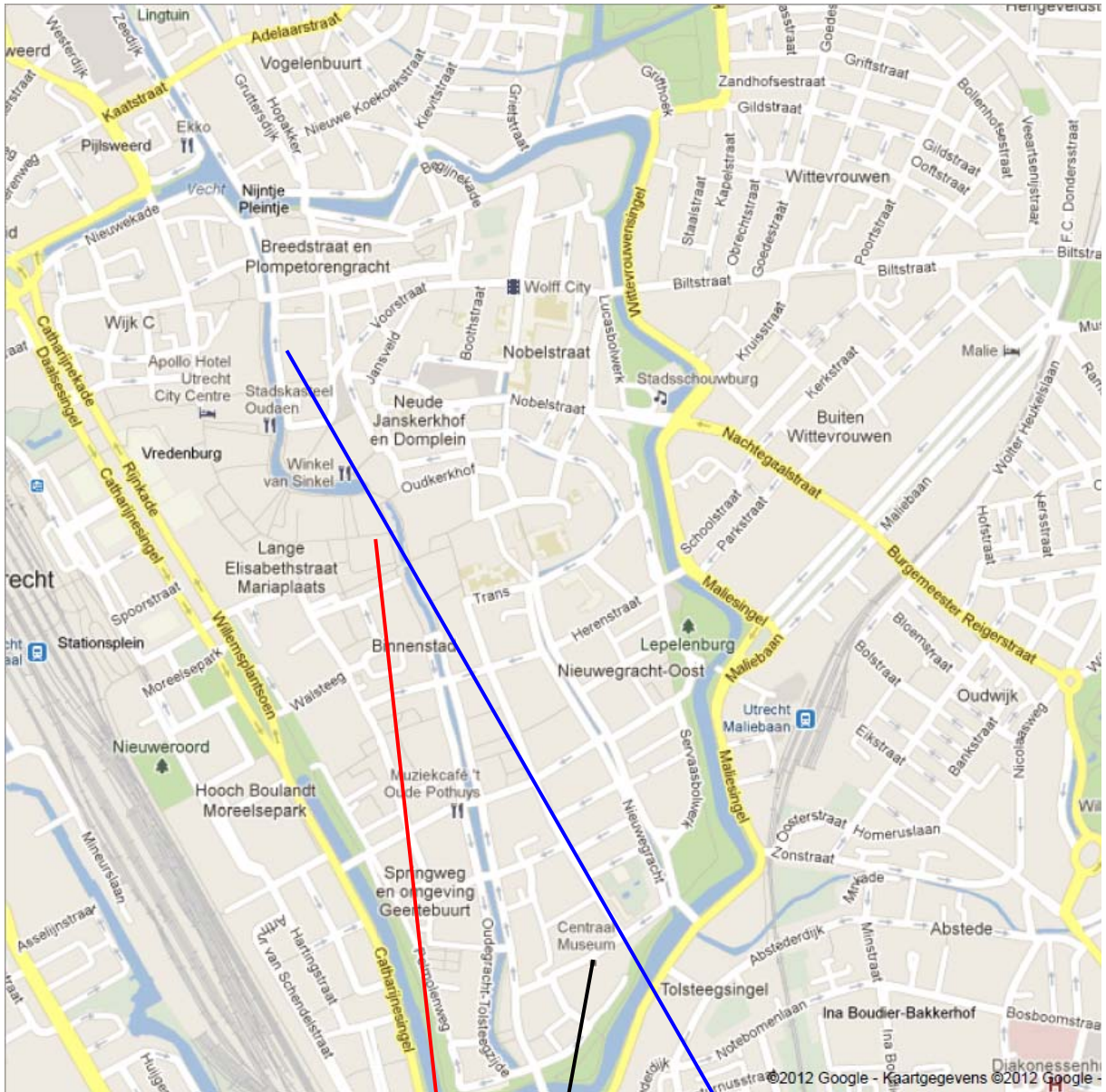
### **Eetcafé De Beurs**

*Neude 37-39*

*3512 AG Utrecht*

Dutch restaurant (€ 15,00 - € 50,00 excl. drinks)

# Utrecht Map IOVWST



**Museum Speelklok, Steenweg 6**

**Centraal Museum, Agnietenstraat**

**Restaurant La Cantina di David, Oude Gracht 88**

## Notes

## Notes



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The EUMETSAT  
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