A Compendium of Aerosol Types Based on Mahalanobis Distances and Aeronet Data

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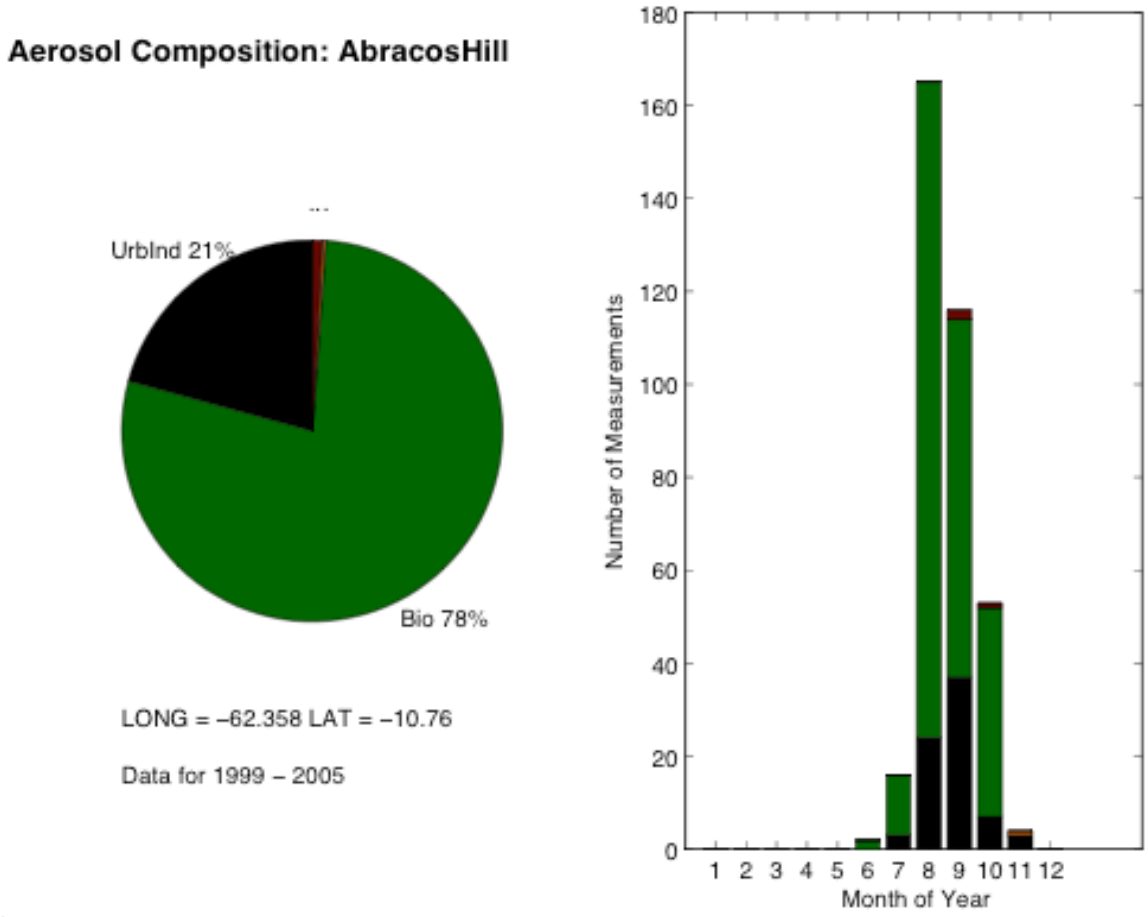
Abracos Hill, Brazil



The Abracos Hill sun photometer is located in Western Brazil near the Bolivian border. The nearest town is Ouro Preta Do Oeste (population 40,000) located 5 km east of the site. The area where the site is located is primarily grassland with jungle nearby. The aerosol is biomass with some urban pollution. The site was active from 1999 to 2005. Data were obtained primarily during the months of May to November.

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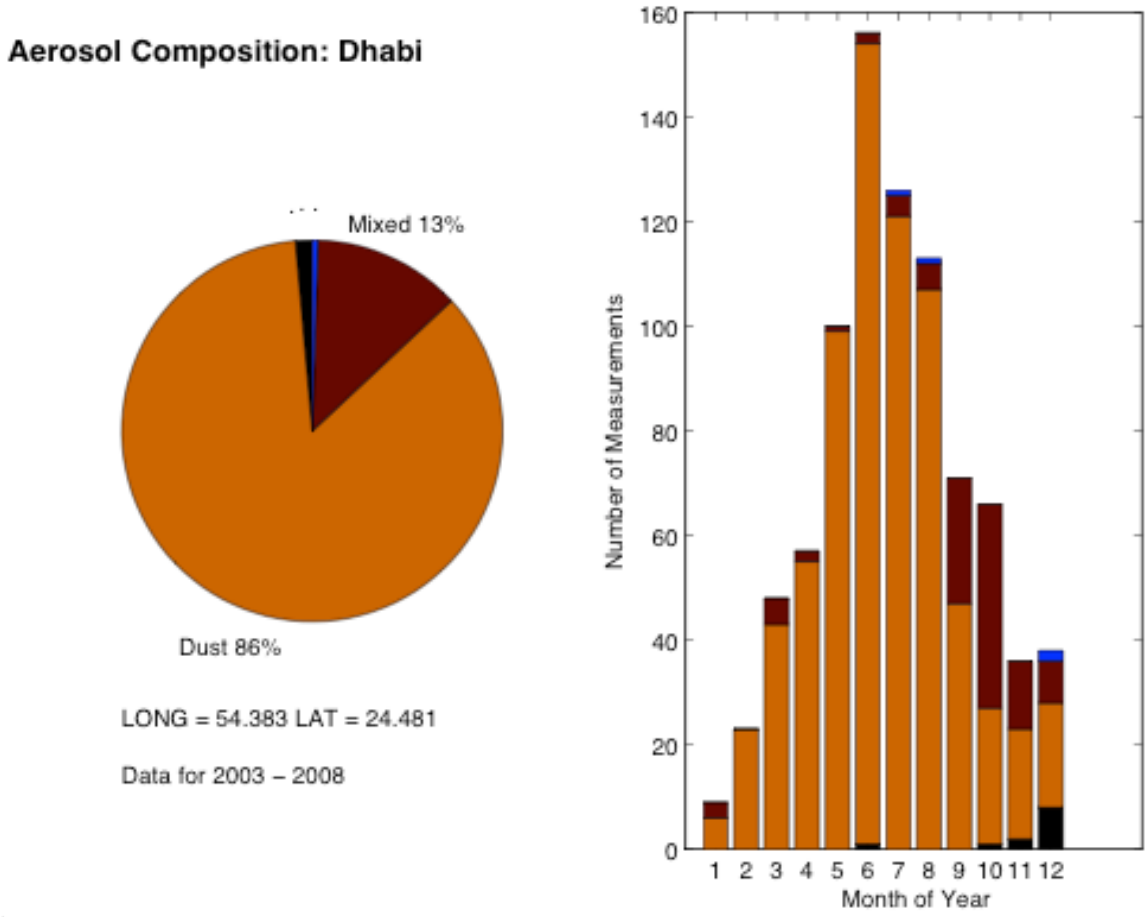
Abu Dhabi, UAE



Abu Dhabi is an island city in the Persian Gulf with a population of about one million. The AERONET website lists this location as Dhabi. The AERONET location is on the west coast of the Arabia Peninsula, facing the Persian Gulf.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008.

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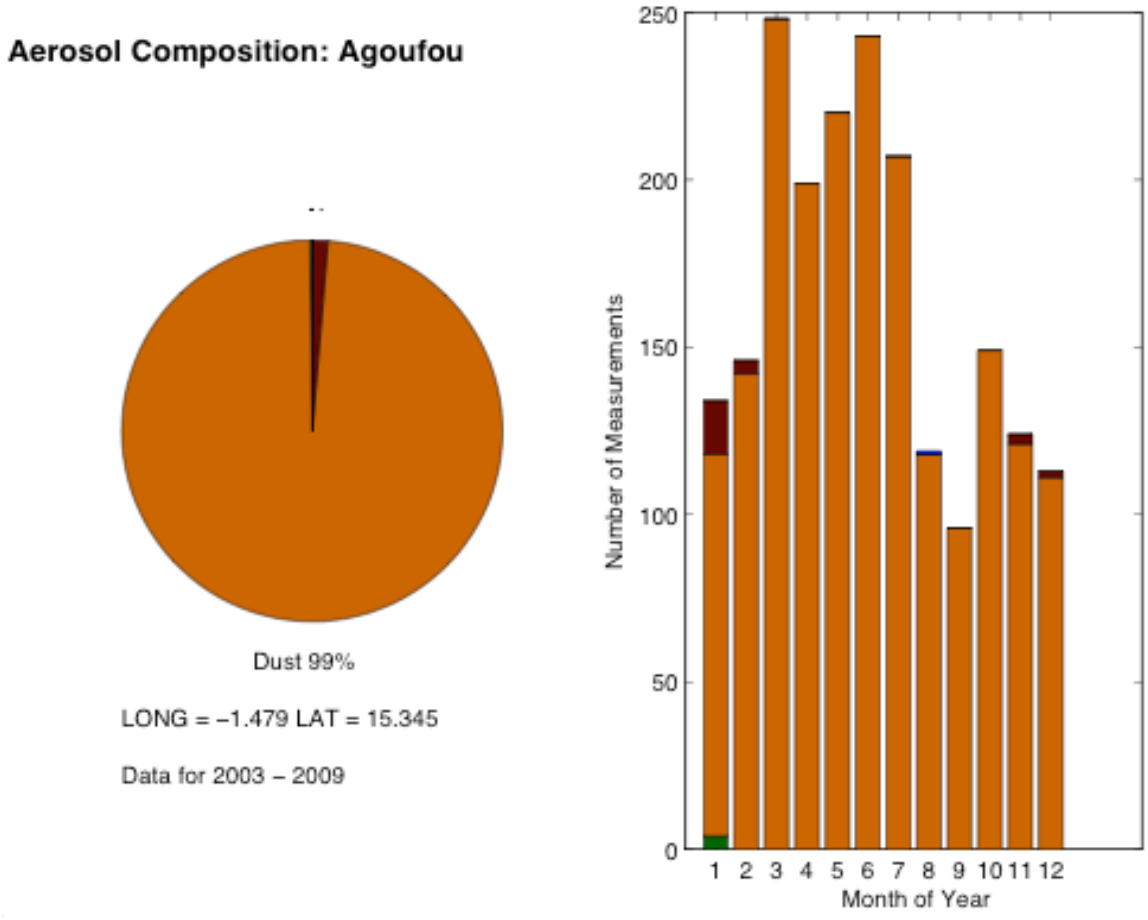
Agoufou, Mali



The sun photometer site is located on a sand dune near the village of Agoufou in Mali. Our Mahalanobis calculations used more than a thousand inversions over a seven-year period and indicated that the aerosol is nearly all dust.

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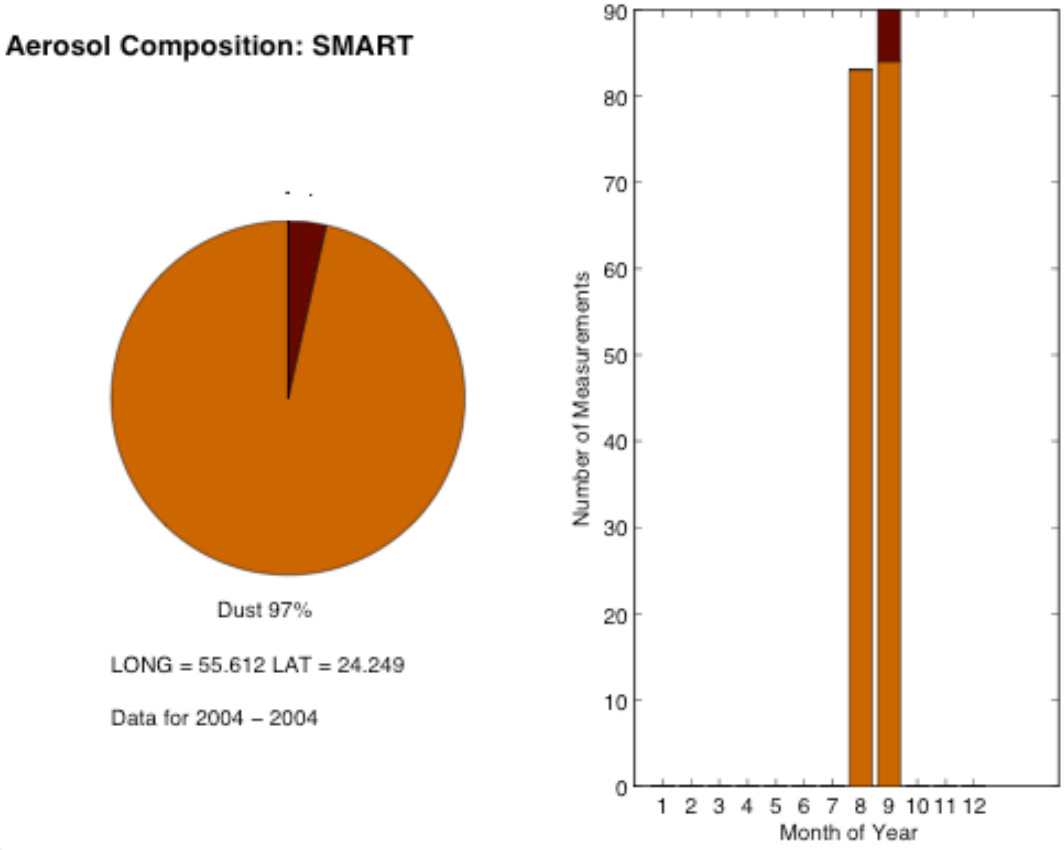
Al Khaznah, UAE



Al Khaznah is located 100 km east of the Persian Gulf in the United Arab Emirates. Sun photometer measurements were made in June through September. Our MD calculations show all dust with the exception of September containing a small amount of mixed aerosol. Data are only available for 2004.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008.

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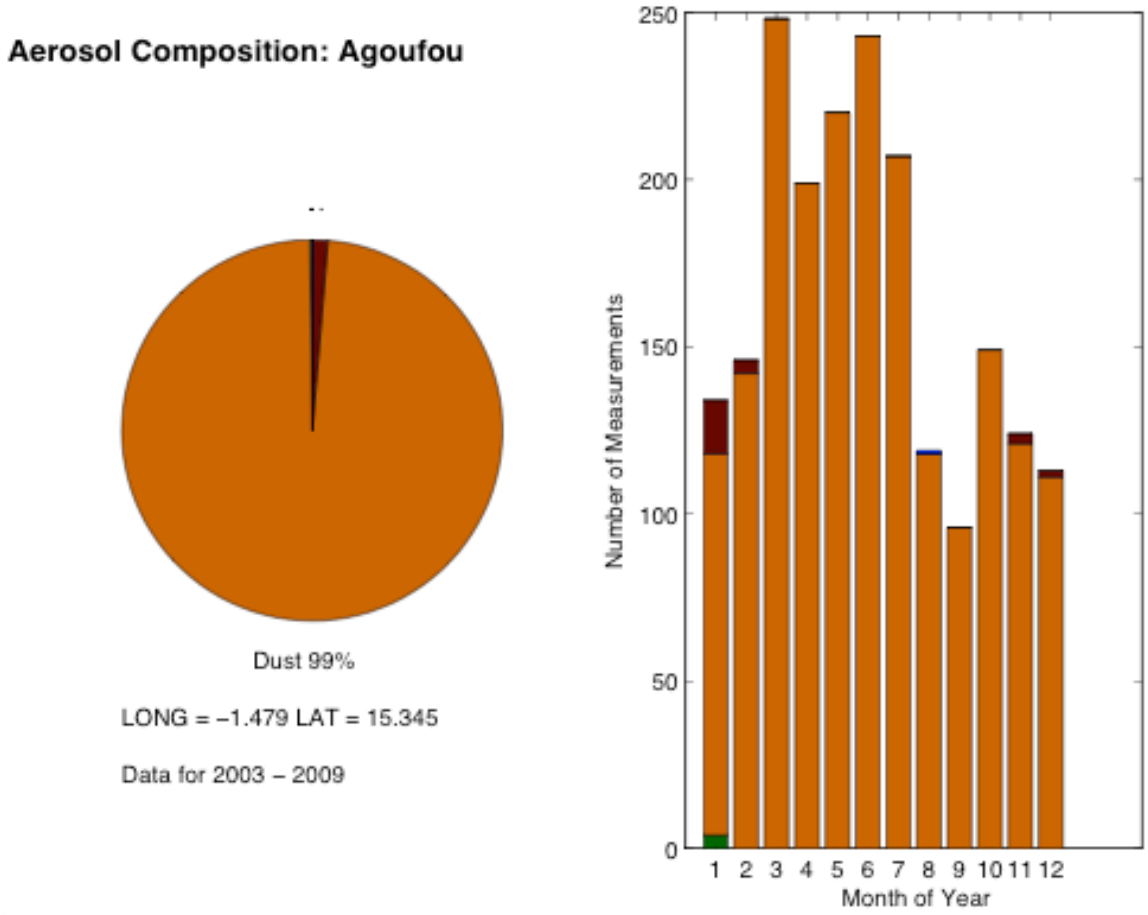
Al Qlaa, UAE



The Al Qlaa site (Ras Al Qlaa) is on the Trucial Coast of the Al Gharbia region of the emirate of Abu Dhabi in the United Arab Emirates, about 210 km west of Abu Dhabi. The data is only available for a three-month period from June through August of 2004.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029 /2007 JD008944, 2008.

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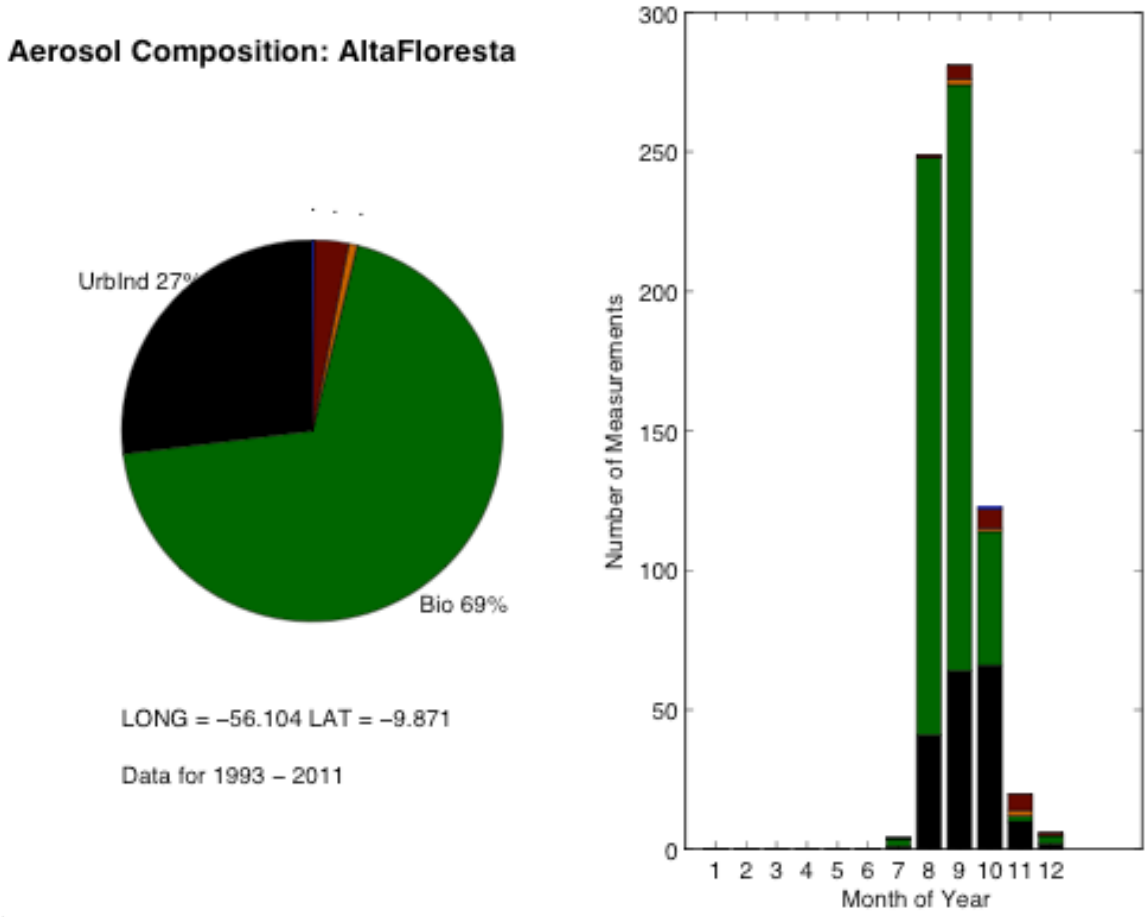
Alta Floresta, Brazil



The site is in the Mato Grosso, Brazil (Western Brazil). The population of Alta Floresta is approximately 50,000. The aerosol data shows mostly biomass with some urban industrial aerosol. Data are given for the months June through December.

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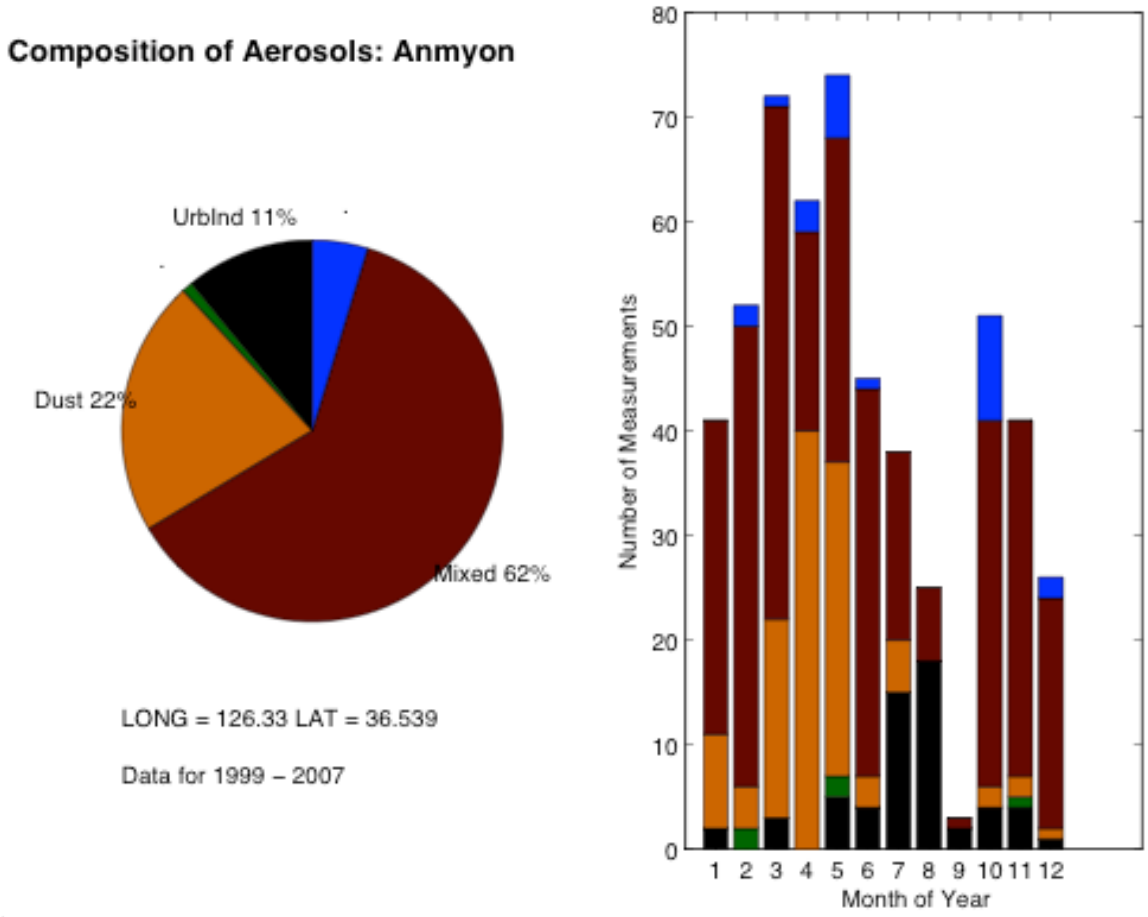
Anmyon, South Korea



Anmyon (Anmeyondo) is an island on the west coast of South Korea. The sun photometer is located on a hill 47 meters above the sea. This is also a long-term site participating in the WMO Global Atmosphere Watch (GAW). Meteorological data may be obtained through GAWSIS2.2 at: [http://gaw.empa.ch/gawsis/reports.asp]. As of 2009, the island hosts a fully operational NOAA Earth Systems Research Laboratory station: Information can be obtained at http://www.esrl.noaa.gov/gmd/aero/net/amy/index.html.

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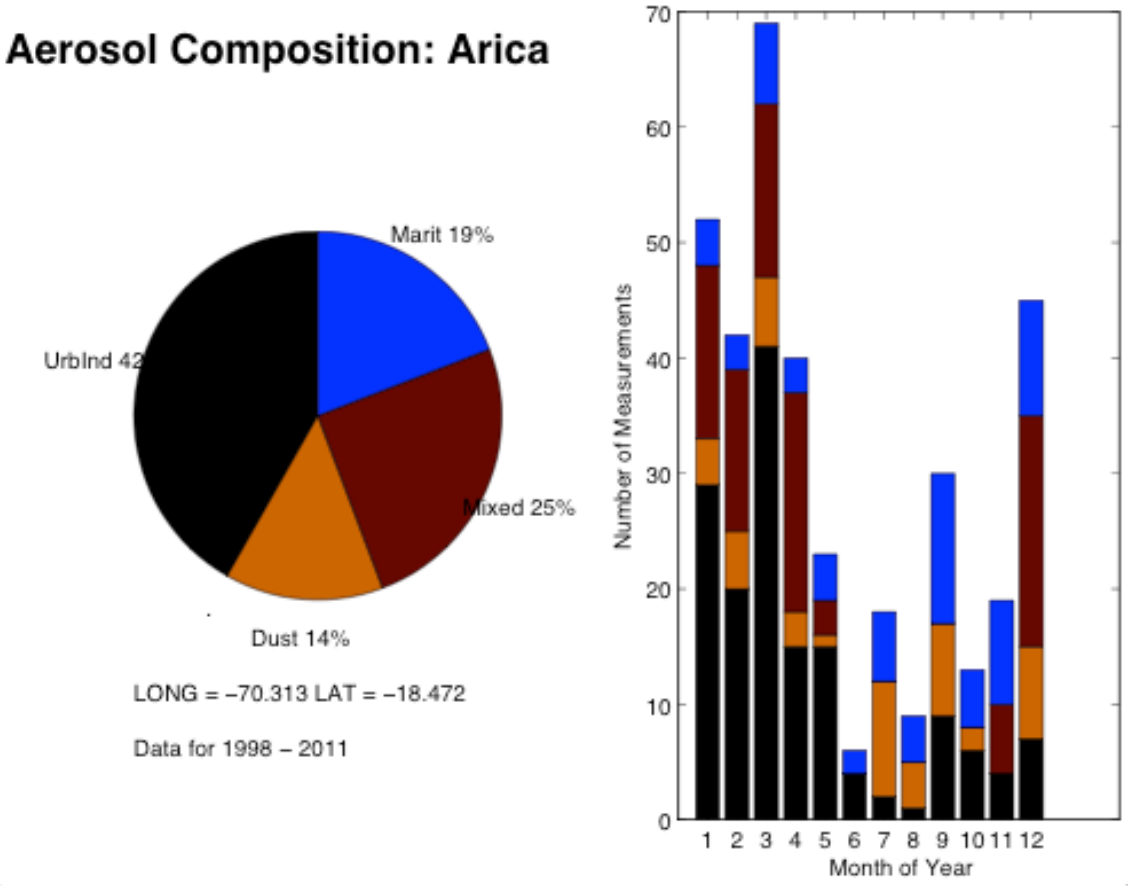
Arica, Chile



Arica is located in Northern Chile on the Pacific Ocean near the Peruvian border. It is an industrial city and an important port, having a population near 200,000. It is near two lush valleys that dissect the Atacama Desert, which surrounds the city. Arica is known as the driest inhabited place on Earth. Nevertheless, our calculations indicate urban industrial, mixed, and maritime aerosol, as well as dust.

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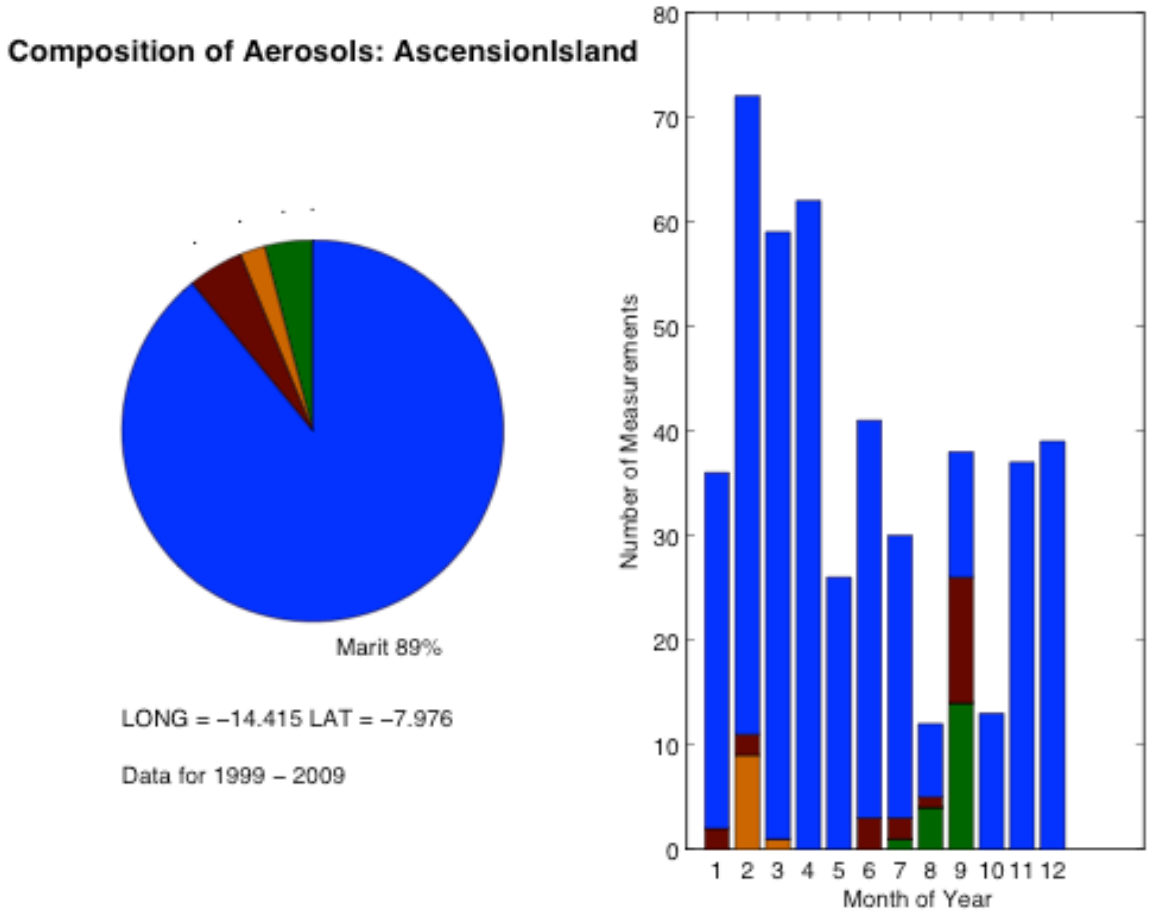
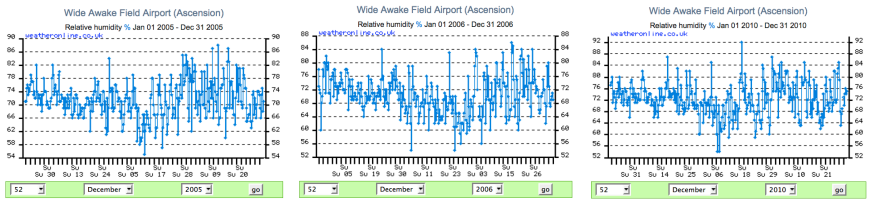
Ascension Island

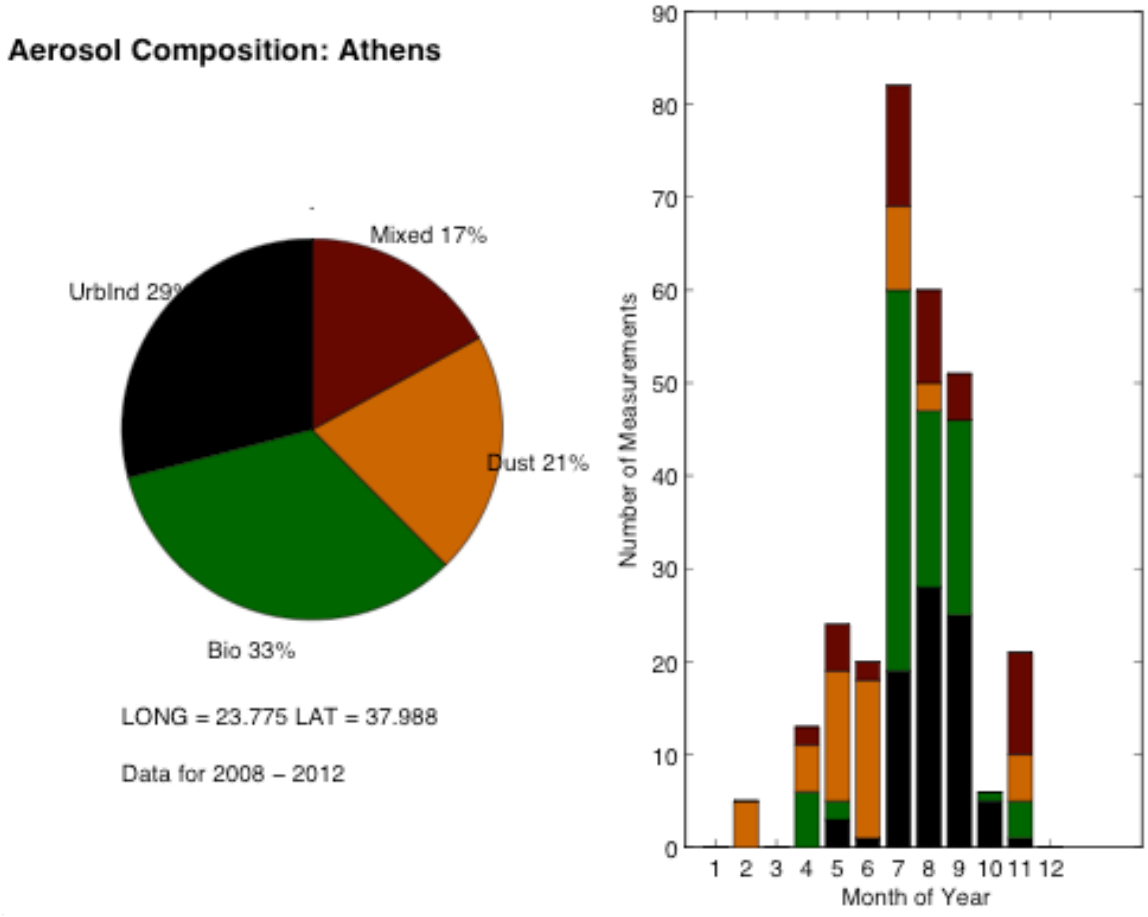


Ascension Island is located in the middle of the South Atlantic Ocean. The island is inhabited by less than 1000 people. It has a maritime tropical climate. It is the home of a British RAF installation, and has a substantial airport complex. The AERONET instrument site is on the northeast corner of the island, a few meters above the shore. As expected from its location, the aerosol type is mainly maritime.

Since we were unable to obtain daily relative humidity records, we include thumbnails of the annual local relative humidity near the AERONET station. Displayed are relative humidities for 2005, 2006, and 2010. Return to Table



Athens, Greece



Athens has a population of over 3 million people in the urban area. The city itself has a population of about 700,000. The aerosol distribution is roughly evenly distributed among urban industrial, mixed, biomass, and dust. The AERONET site is about 10 km from the Mediterranean but the MD algorithm did not detect maritime aerosol. In the AERONET website this site is listed as ATHENS-NOA.

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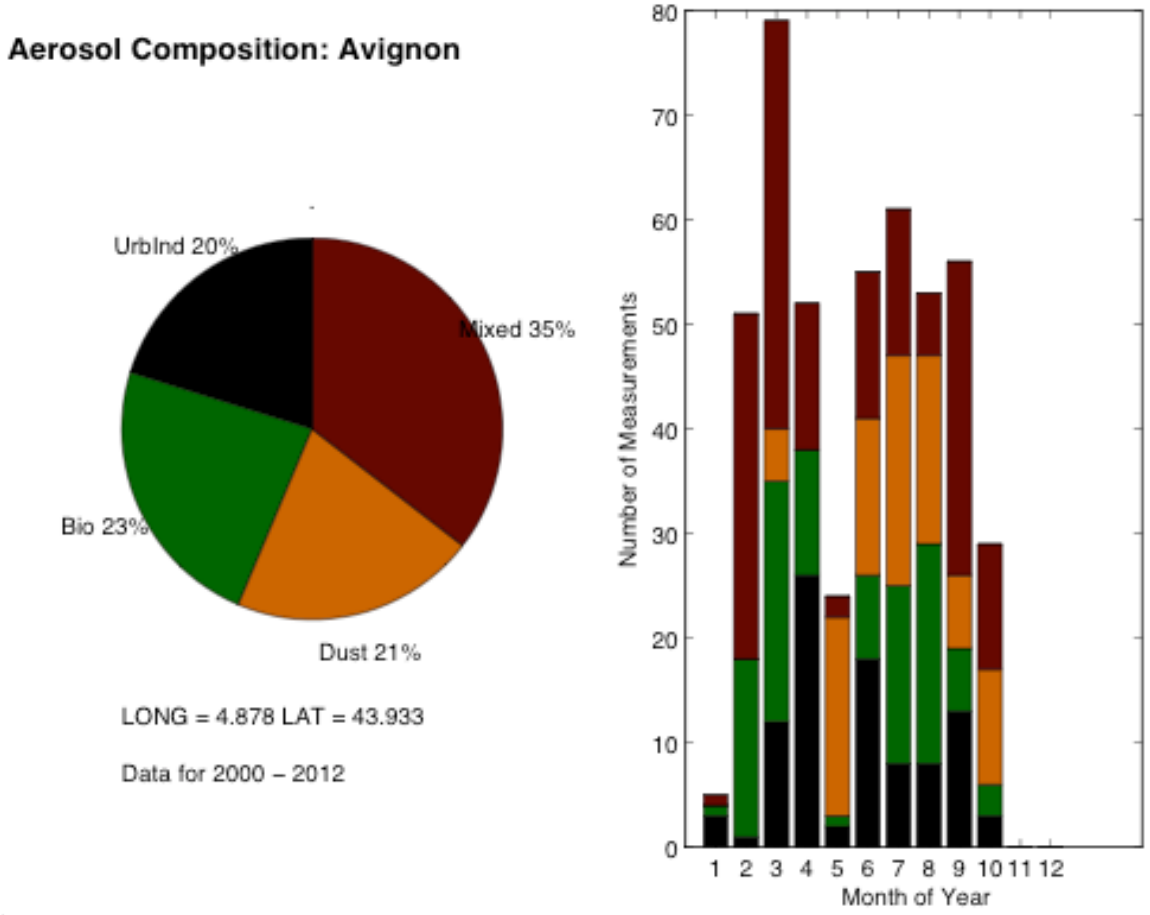
Avignon, France



Avignon is a city of 95,000 people located in Southern France. The sun photometer is located in an agricultural region, some 10 km to the east of the city. The city attracts a large number of tourists.

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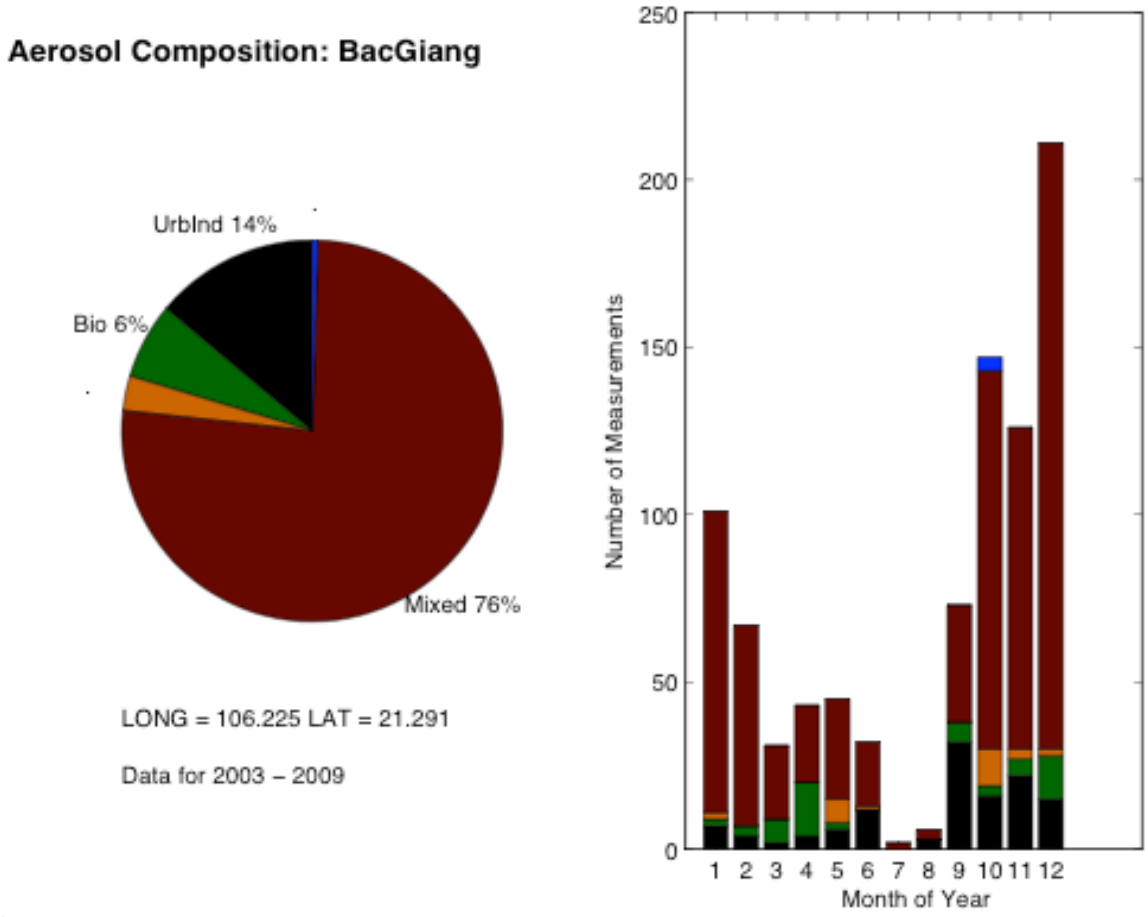
Bac Giang, Vietnam



Bac Giang is a city in northern Vietnam with a population of about 130,000. The Bac Giang province is primarily agricultural.

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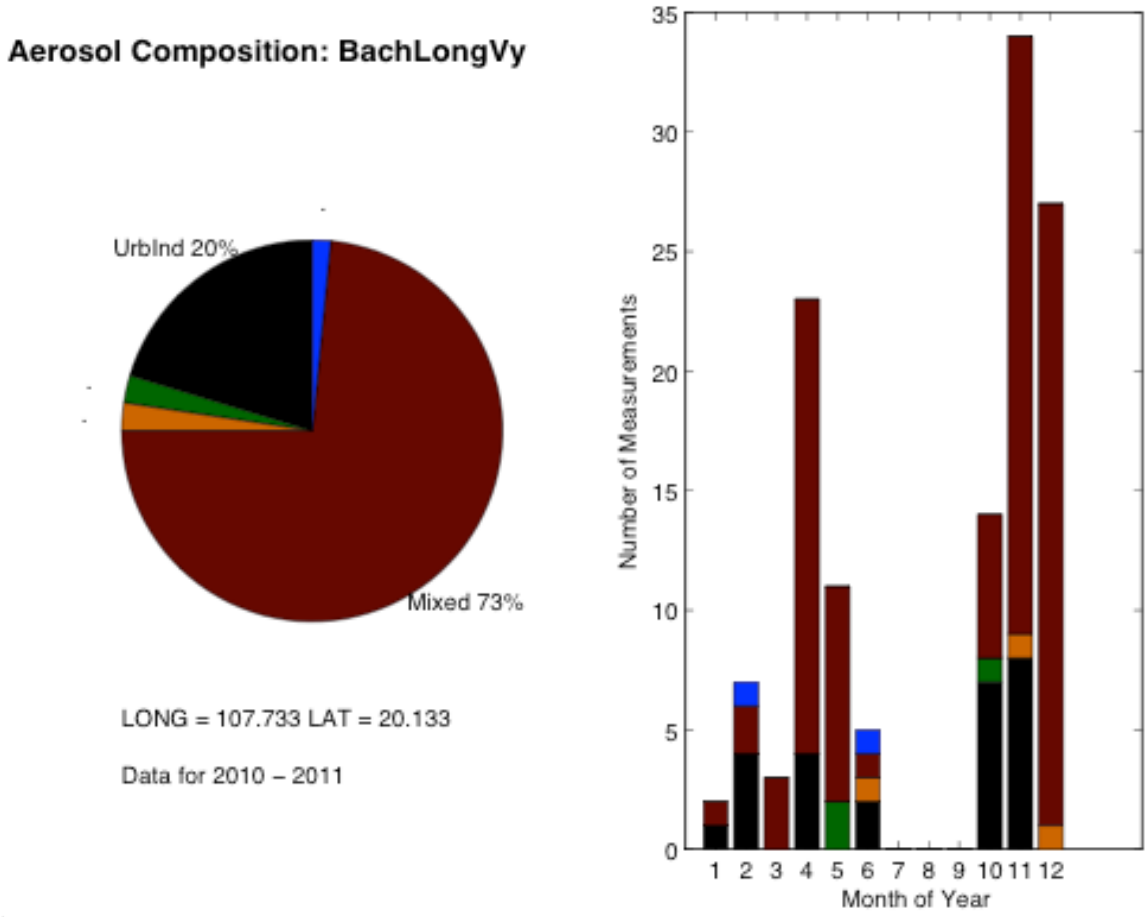
Bach Long Vy, Vietnam



Bach Long Vy is an island off the coast of Vietnam in the Gulf of Tonkin. The aerosol is primarily mixed but has a significant amount of urban industrial. We do not find much maritime aerosol in the data record.

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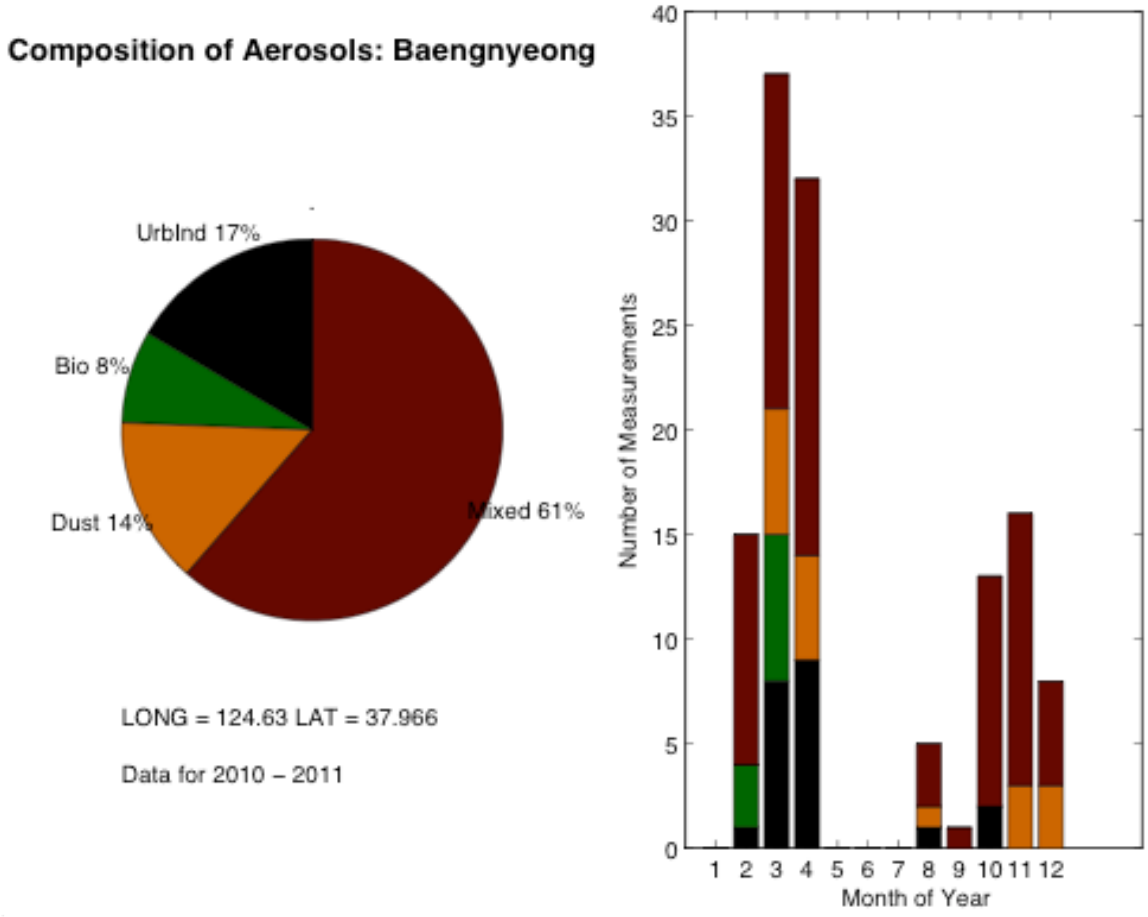
Baengnyeong Island, South Korea



Baengnyeong Island is on the boundary between North and South Korea. The island is primarily forested and has no significant sources of pollution. It lies about 20 km from the mainland. We expected maritime aerosol at this site, but the Mahalanobis distance algorithm (and relative humidity data) did not yield any such values.

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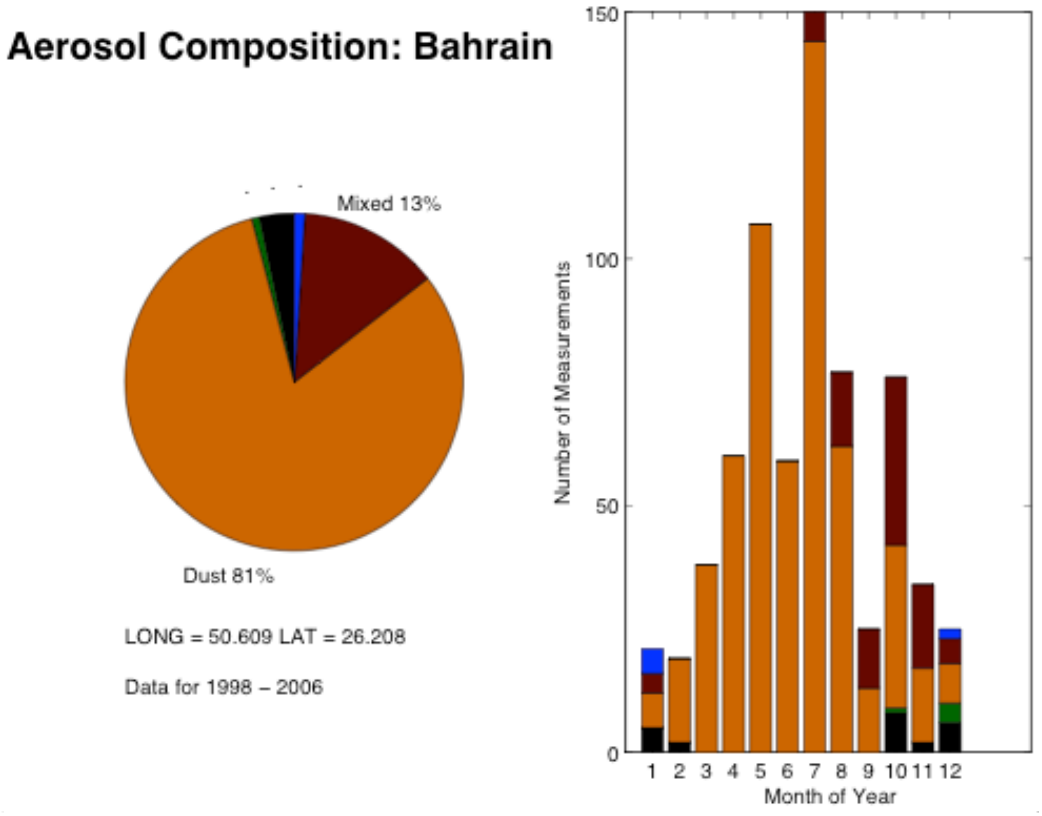
Bahrain



Bahrain is a small island country located in the Persian Gulf with a population of 1.2 million. The site ran from 1998 to 2006 and is no longer operational. The aerosol distribution is primarily dust with maritime and mixed aerosol also present. It is a financial center and also an important exporter of oil. Consequently, shipping is a significant local industry. This AERONET site served as part of the ground network for a short-term comprehensive aerosol study.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008.

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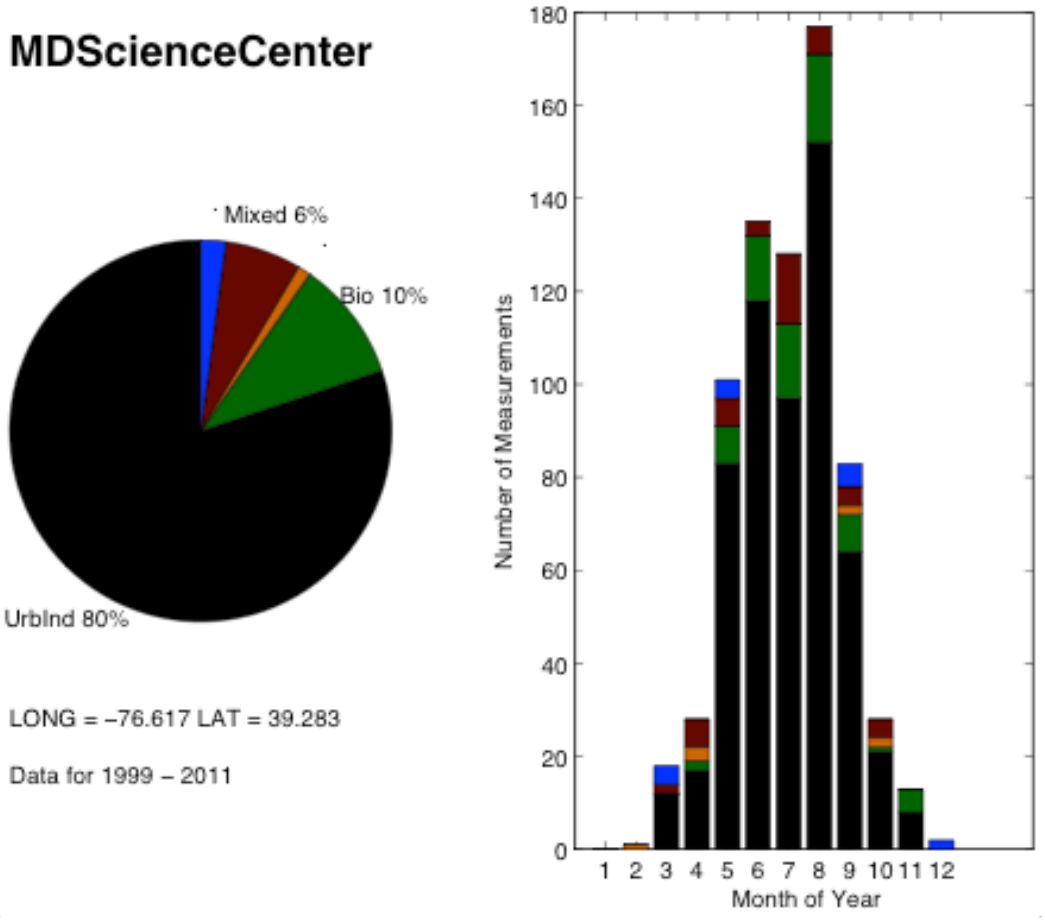
Baltimore, Maryland, USA (MD Science Center)



This instrument is located on the roof of the Maryland Science center, next to the Inner Harbor in Baltimore, Maryland. The surrounding area is metropolitan urban with a population of 2.7 million. Baltimore's inner harbor was a major port and a major manufacturing center, which has shifted to a service-oriented economy. The site is listed on the AERONET website under the name MD_Science_Center.

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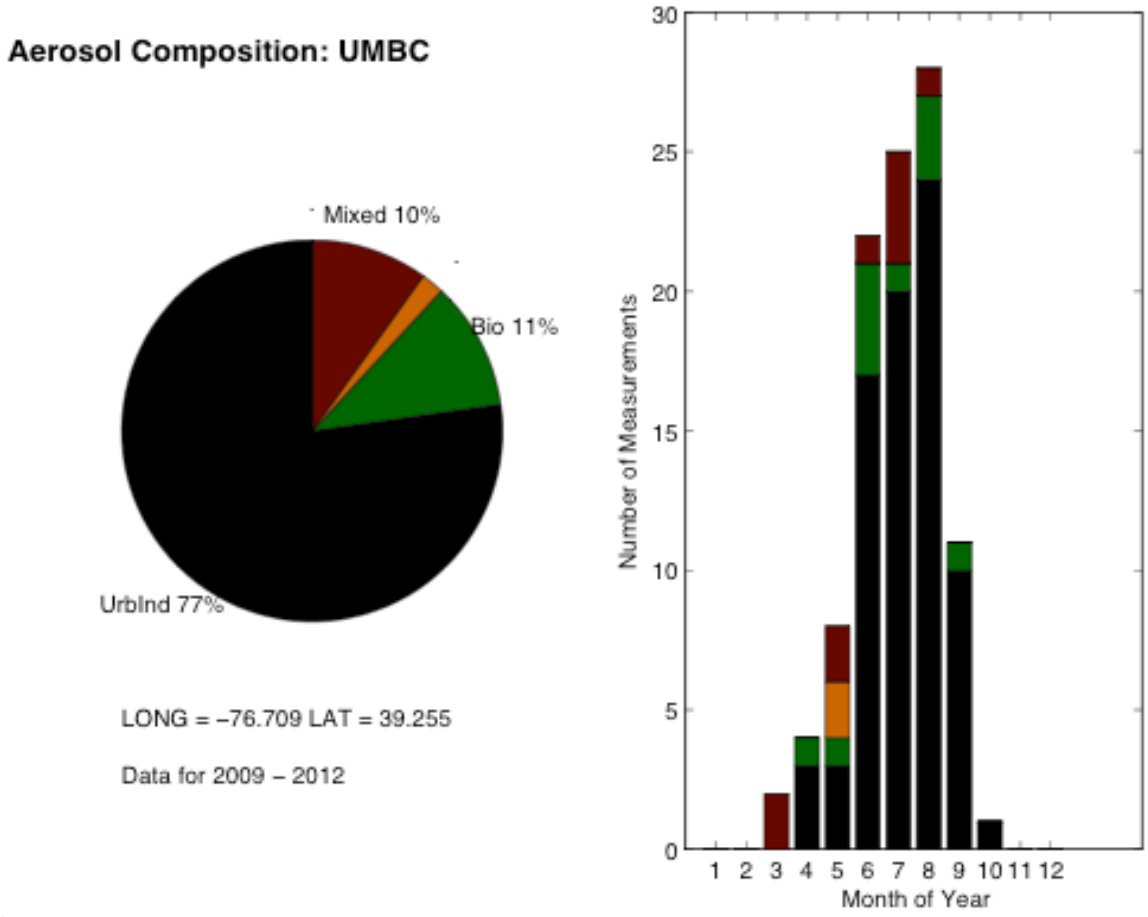
Baltimore, Maryland, USA (UMBC)



This instrument is located at the University of Maryland, Baltimore County (and specified in the AERONET sites as UMBC). It is 10 km distant from Baltimore proper (i.e., the inner harbor). The metropolitan area has a population of ~ 2.6 million. There is no industry and little manufacturing, but it is a transportation center. To the west are local rural areas.

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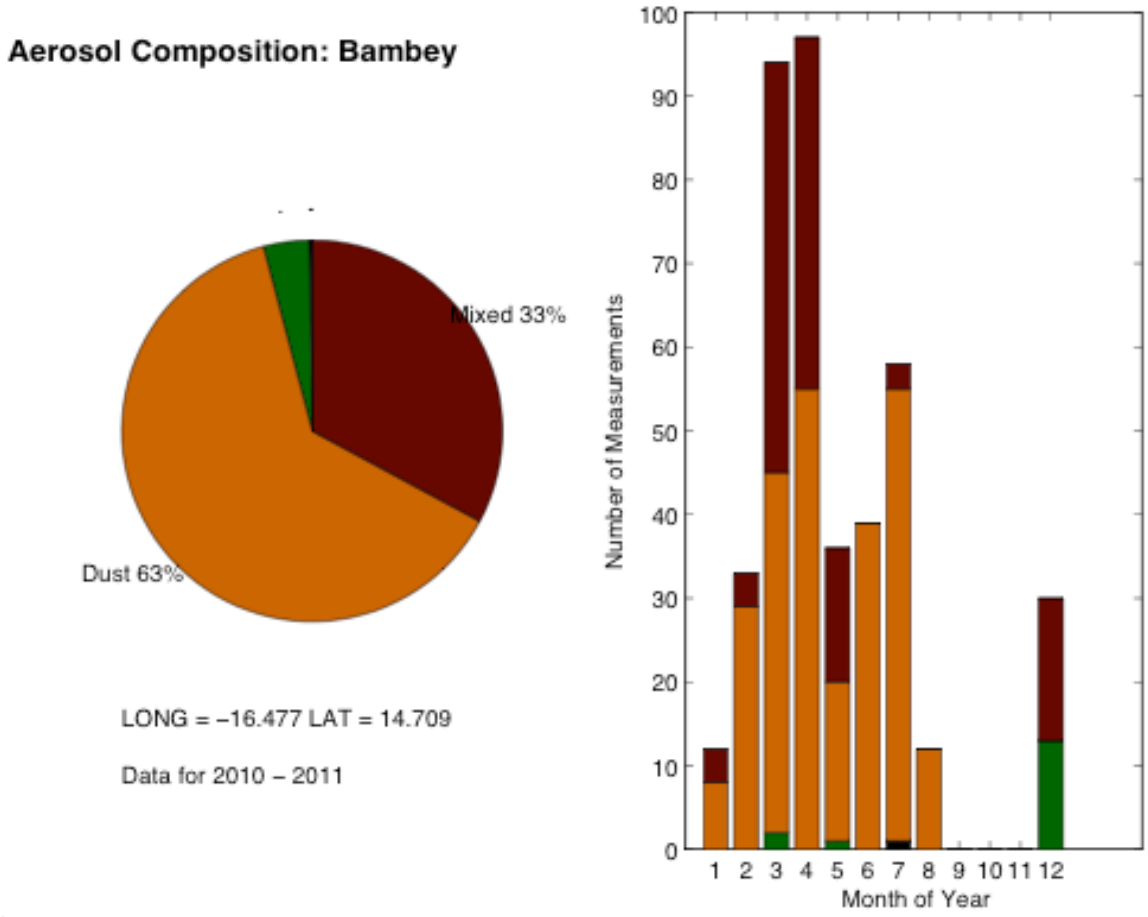
Bambey (ISRA), Senegal



Bambey is in the western part of Senegal about 60 km from the Atlantic coast. It is a small city of about 25,000 inhabitants which lies south of the Sahara desert. The sun photometer is in a field belonging to ISRA (Institut Senegalais de Recherche Agricole). The region is known for dust transport from the Sahara. AERONET specifies the site as Bambey-ISRA.

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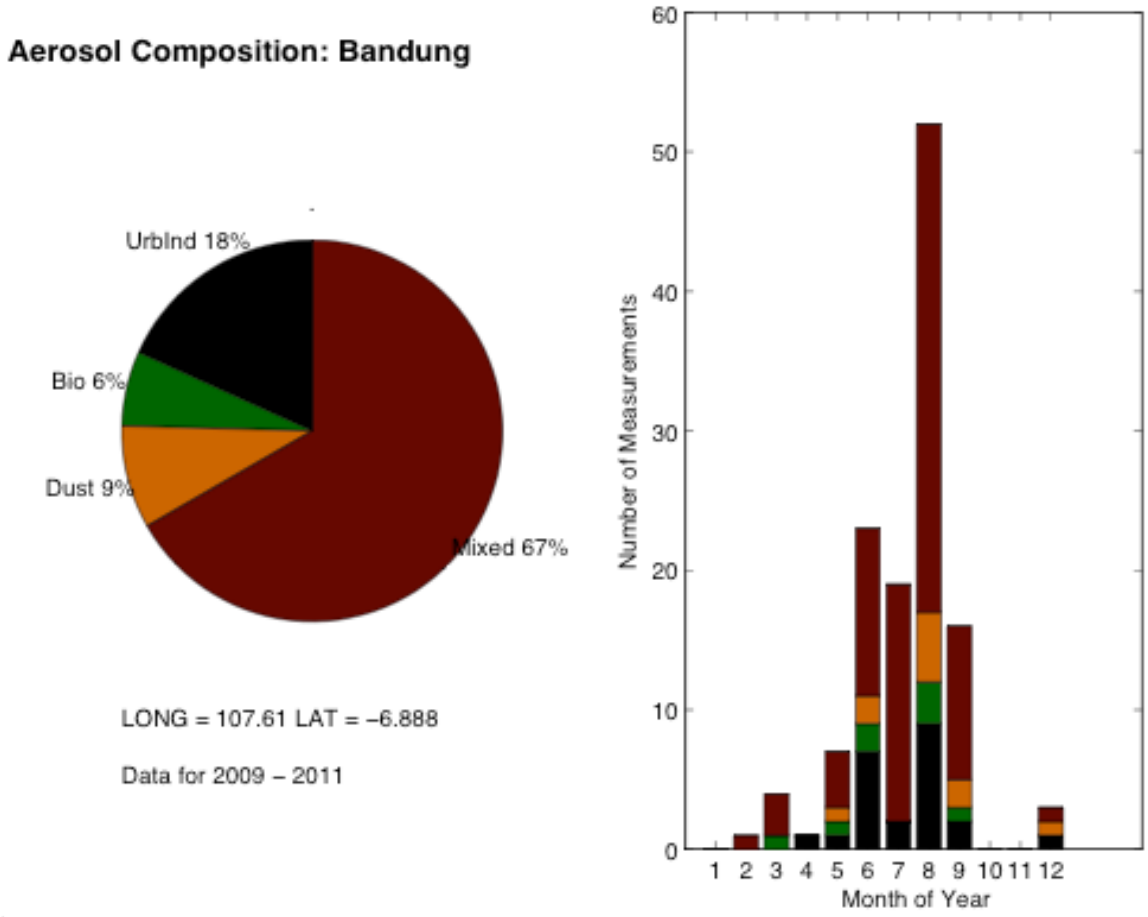
Bandung, Indonesia



Bandung is located in West Java province of Indonesia. It is the second largest metropolitan area and third largest city of the country; it has a population of 2.4 million. It lies in a river basin and is surrounded by volcanoes. It is about 100 km from the sea.

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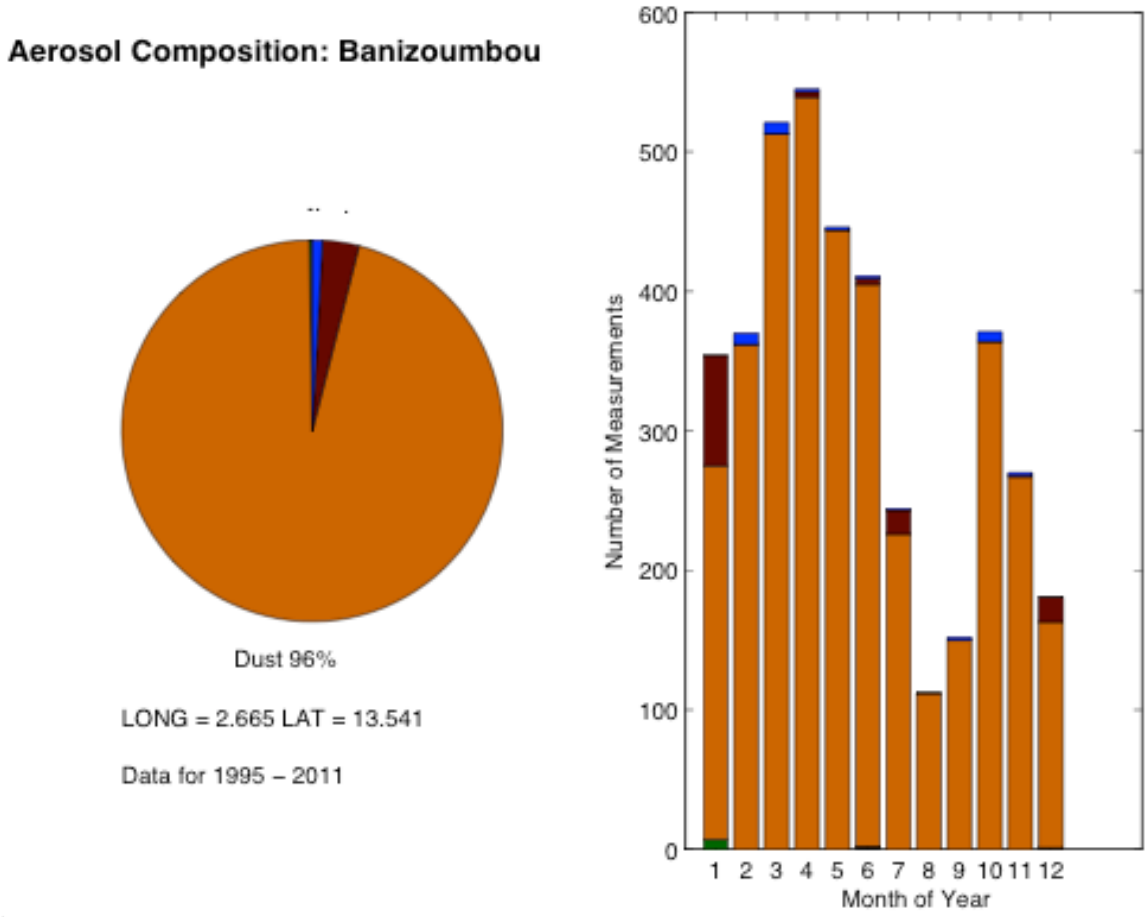
Banizoumbou, Niger



Banizoumbou, Niger is located at the southern end of the Sahara desert. The nearest town to Banizoumbou is Niamey, 50 km to the north. The aerosol is almost exclusively dust. The regions north of this site are considered source locations for the so-called Saharan Air Layer, which often transports dust north and west across the Atlantic Ocean.

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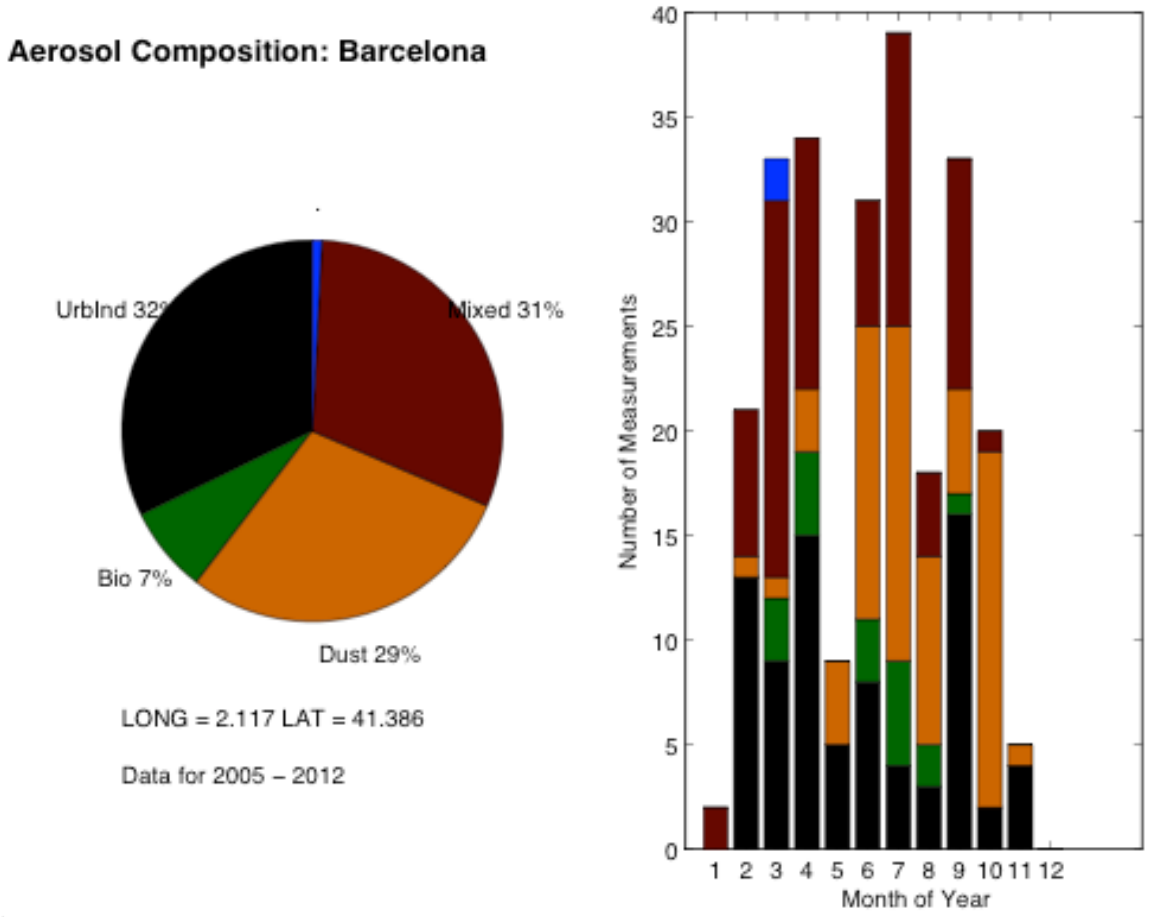
Barcelona, Spain



Barcelona is the second largest city in Spain. The population of the city is 1.6 million and of the urban area is 4.5 million. The sun photometer is located in the city, about 5 km from the city center and 6 km from the sea. Barcelona is an industrial city. The dust component (which is most prevalent in the summer) is believed to be African in origin.

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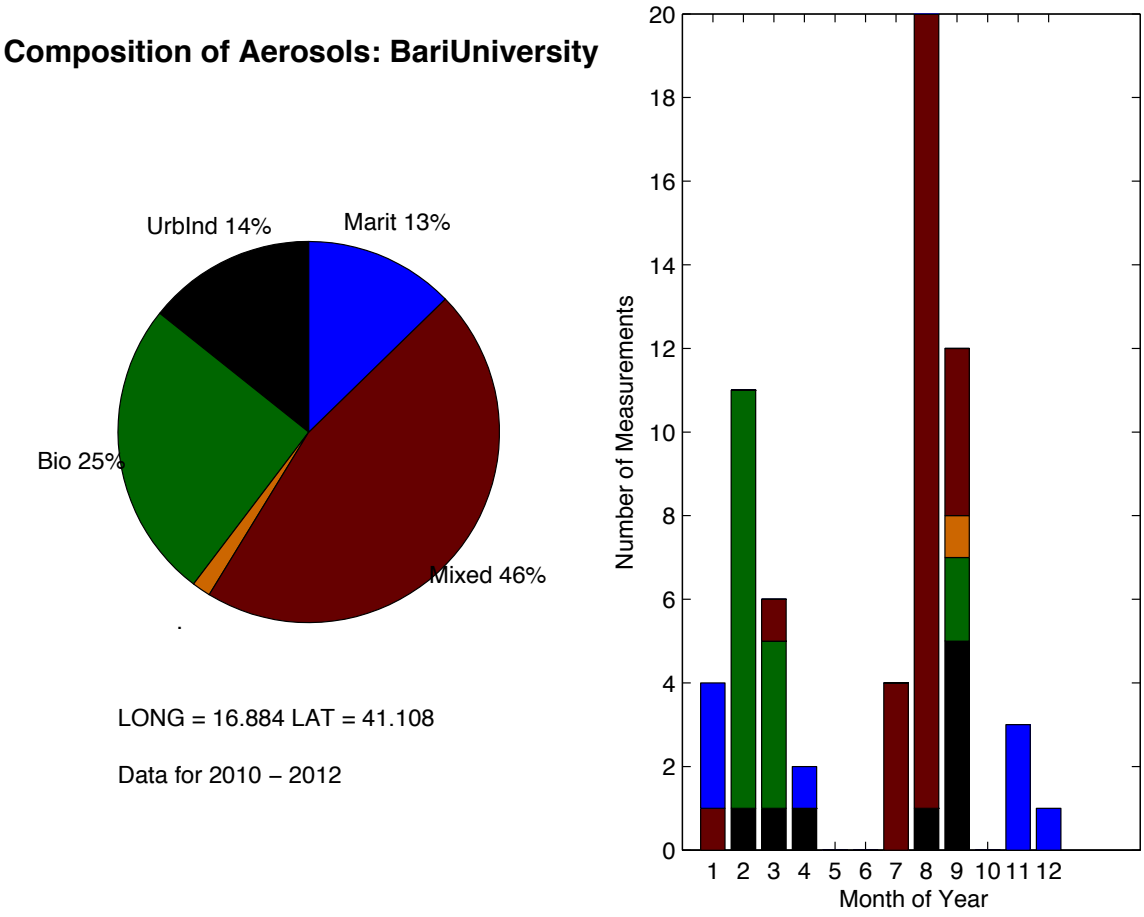
Bari, (University)
Italy



Bari is a city in southern Italy on the Adriatic Sea. The city has a population of 320,000, and the metropolitan area has a population of about one million. The site is denoted Bari_University in the AERONET website.

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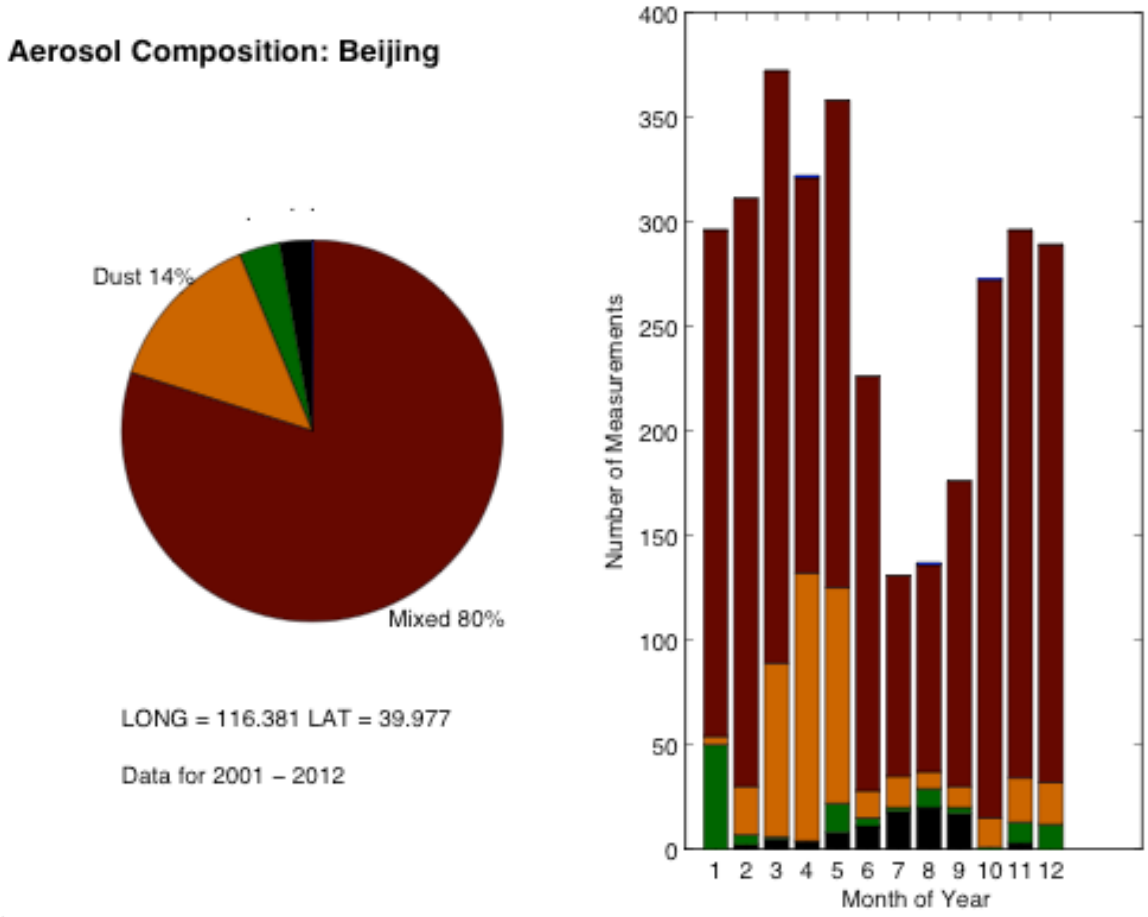
Beijing, China



Beijing has a population of about 21 million. The aerosol loading in Beijing is frequently extremely high. The aerosol has been chemically typed by numerous investigators. Our MD calculations characterize it as primarily mixed aerosol, but there is a significant amount of dust in spring and urban industrial aerosol in summer.

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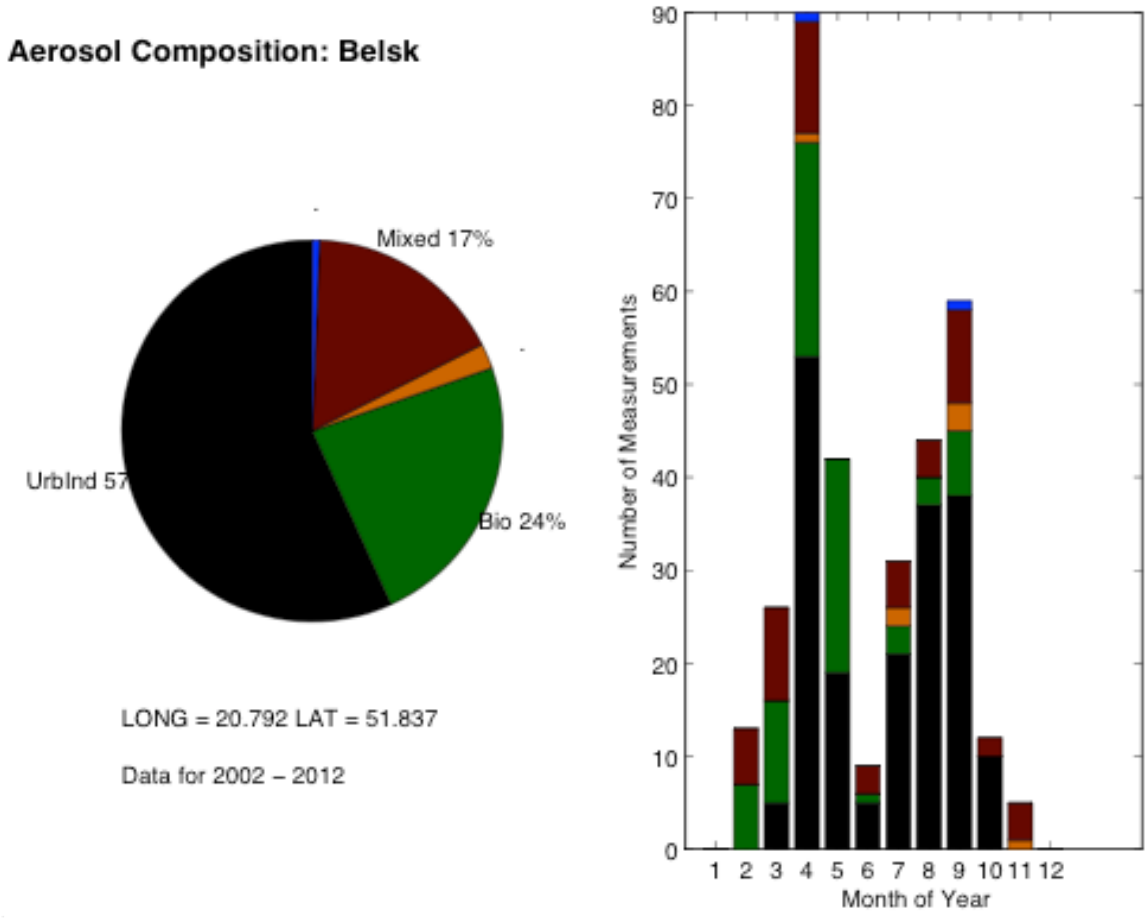
Belsk, Poland



Belsk is a village in a rural region of Poland, about 50 km south of Warsaw. It is probable that urban industrial aerosol is transported from Warsaw. Biomass aerosols are prevalent in Spring.

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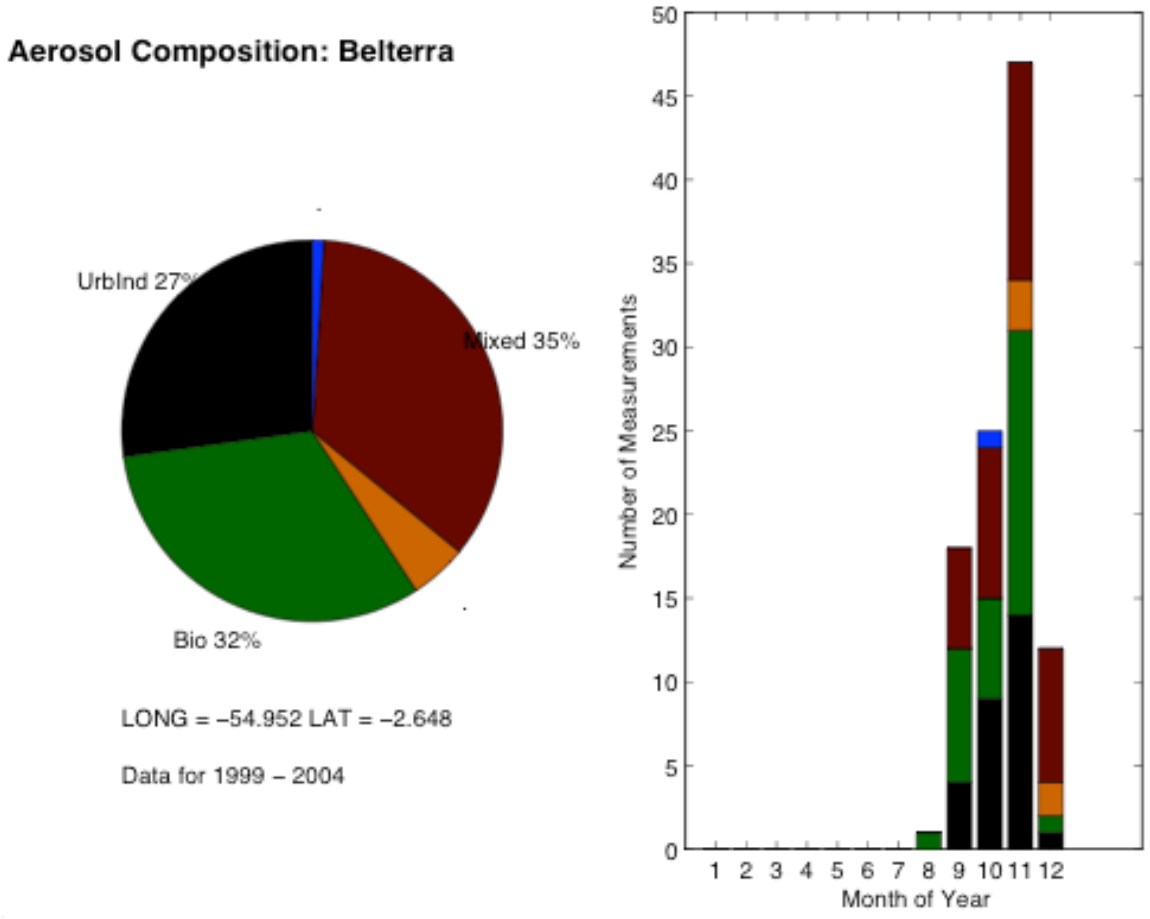
Belterra, Brazil



Belterra is a small town some 40 km from Santarem, Brazil, at the confluence of the Tapajos and Amazon rivers. Santarem has a population of nearly 300,000 people and is an important port city. The region is known for soybean production, which, it is claimed, has led to deforestation.

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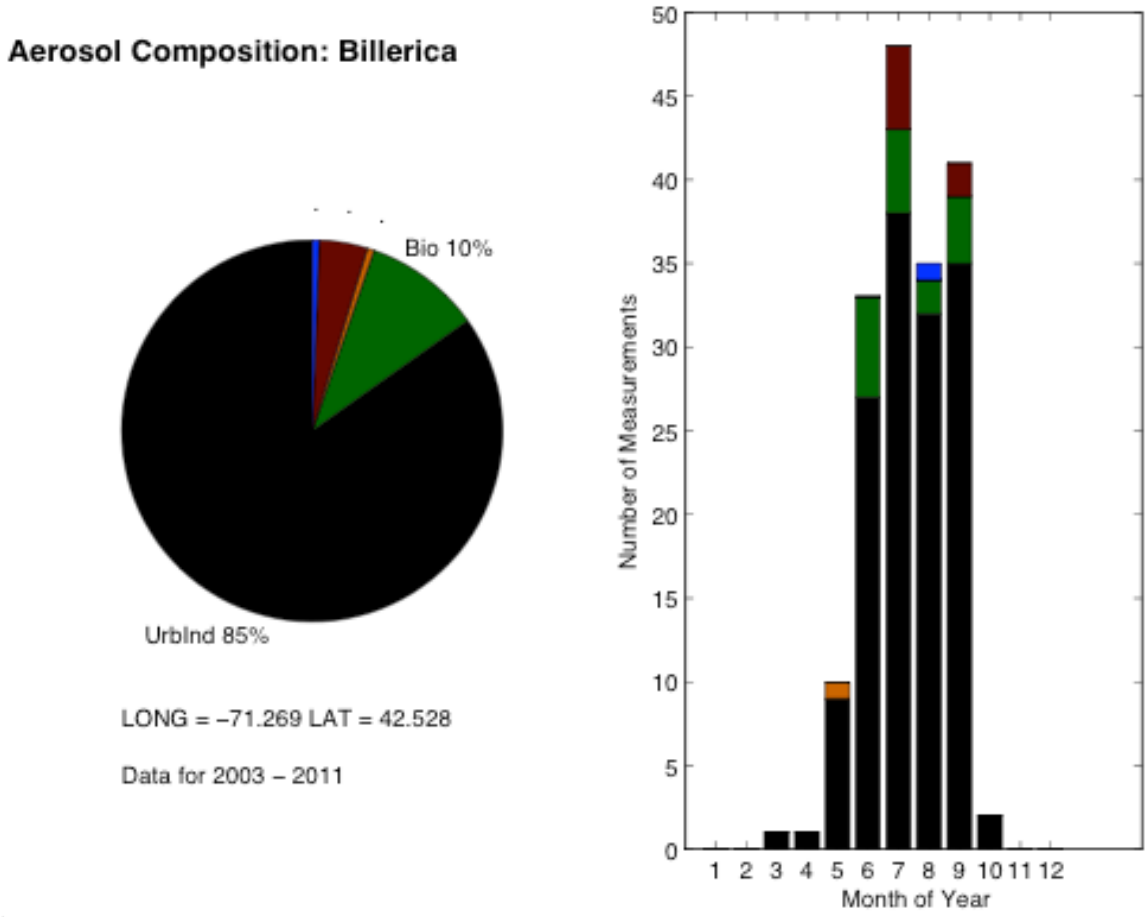
Billerica, Massachusetts, USA



Billerica, Massachusetts is near Boston with a population of 40,000 people. It is probable that the aerosol at Billerica is the same as the Boston aerosol. Boston is a major commercial and industrial city with a population of 636,000, but Greater Boston has a population of 4.5 million and the Greater Boston Commuting Region has 7.6 million.

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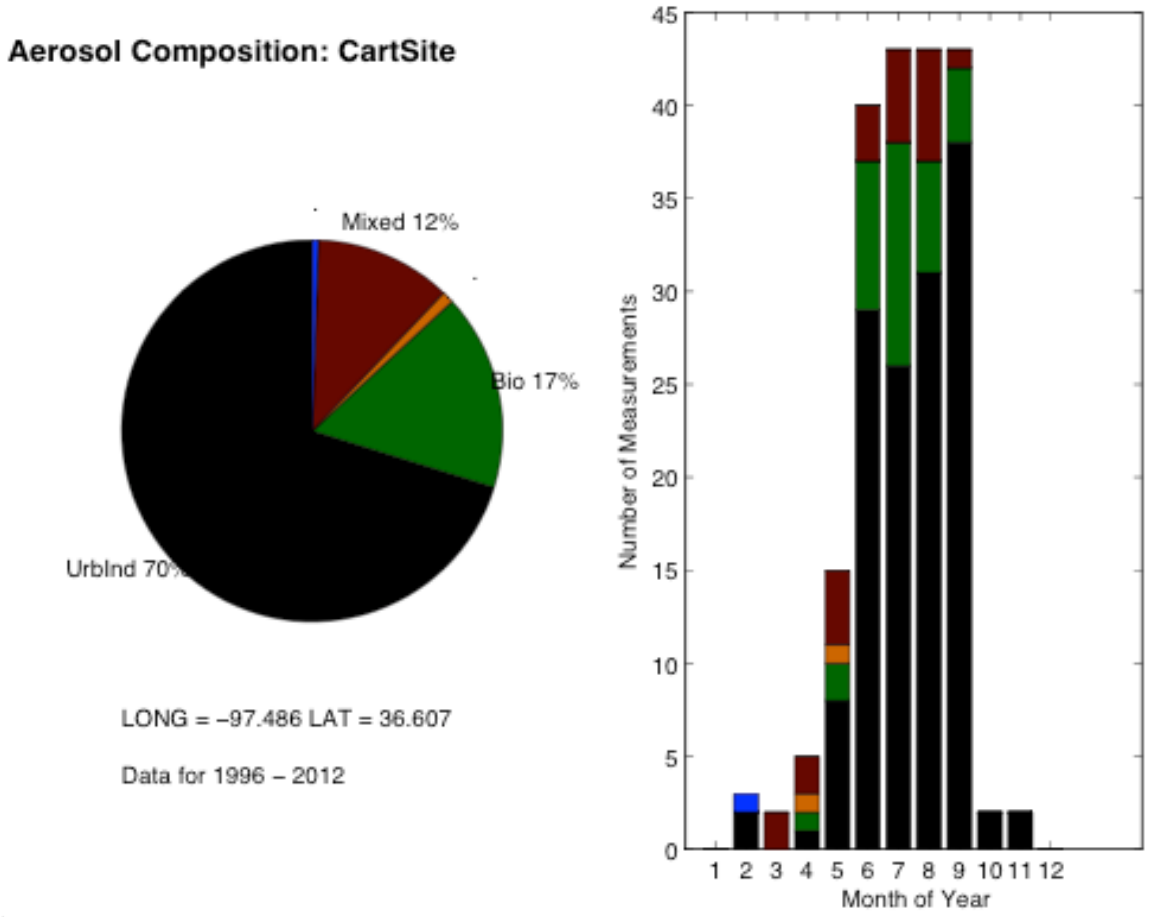
Billings, Oklahoma, USA (CART Site)



The CART site, near Billings, Oklahoma, USA is about 50 km west of Ponca City, Oklahoma. CART stands for the Cloud and Radiation Testbed and is part of the Department of Energy's atmospheric radiation measurement program. The site is on the Southern Great Plains of the United States, far from any urban areas. The village of Billings has about 400 inhabitants. The AERONET website lists this site as CART_SITE.

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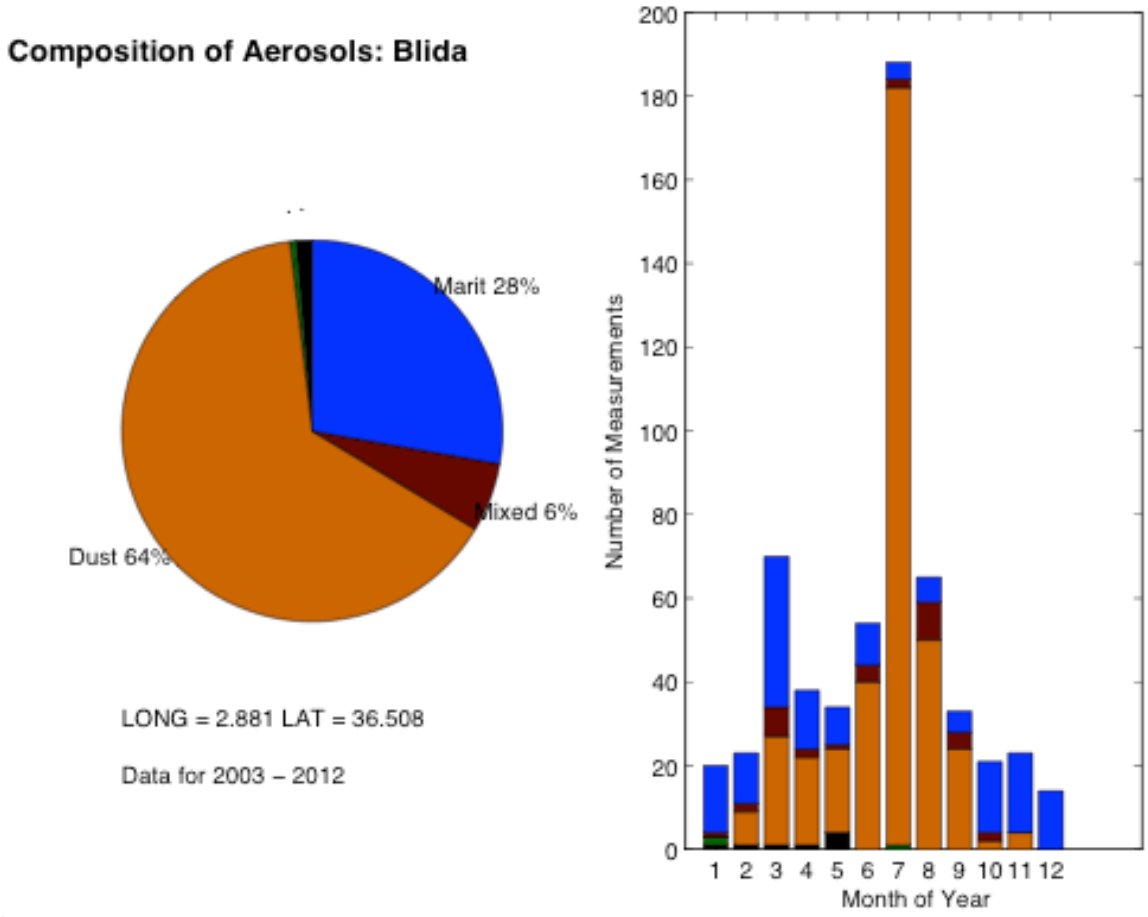
Blida, Algeria



Blida, Algeria is located at the northern edge of the Sahara dessert. The AERONET site is about 30 km from the sea and is located on the campus of Blida University in the city. Blida lies in a fertile plane at the base of the Atlas Mountains, and is surrounded by orchards and gardens. The Sahara desert lies to the south on the other side of the mountains. The Mediterranean Sea lies about 30 km to the north. The university is the home of the Algerian Meteorological Institute. The rather large fraction of maritime aerosol is surprising for a location this far from the sea.

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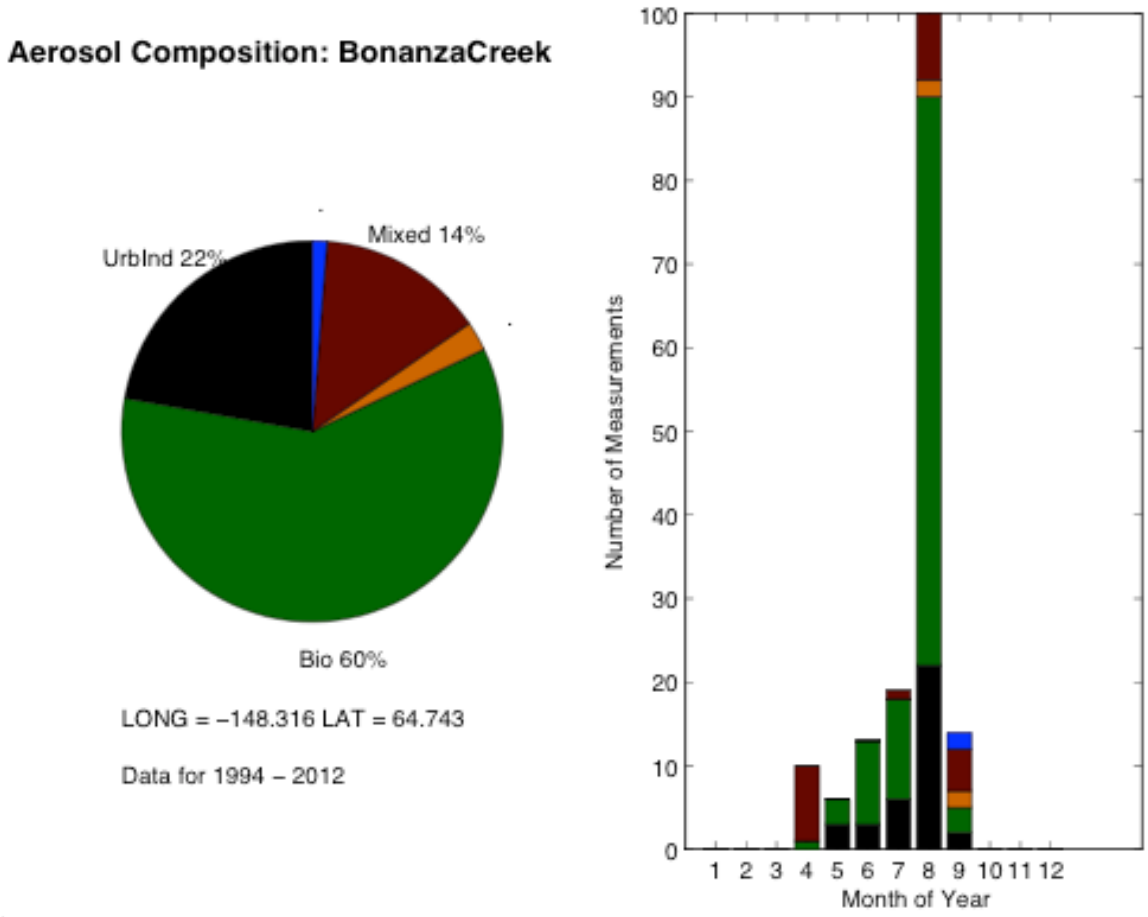
Bonanza Creek, Alaska, USA



Bonanza Creek is a rural region about 30 km downwind from Fairbanks Alaska. The aerosol is mainly biomass burning. The prevailing winds in August are towards or away from Fairbanks, perhaps due to the fact that the instrument at Bonanza Creek is in a valley oriented towards Fairbanks. In August 2004 and 2005 the smoke from numerous forest fires covered the sky above Bonanza Creek.

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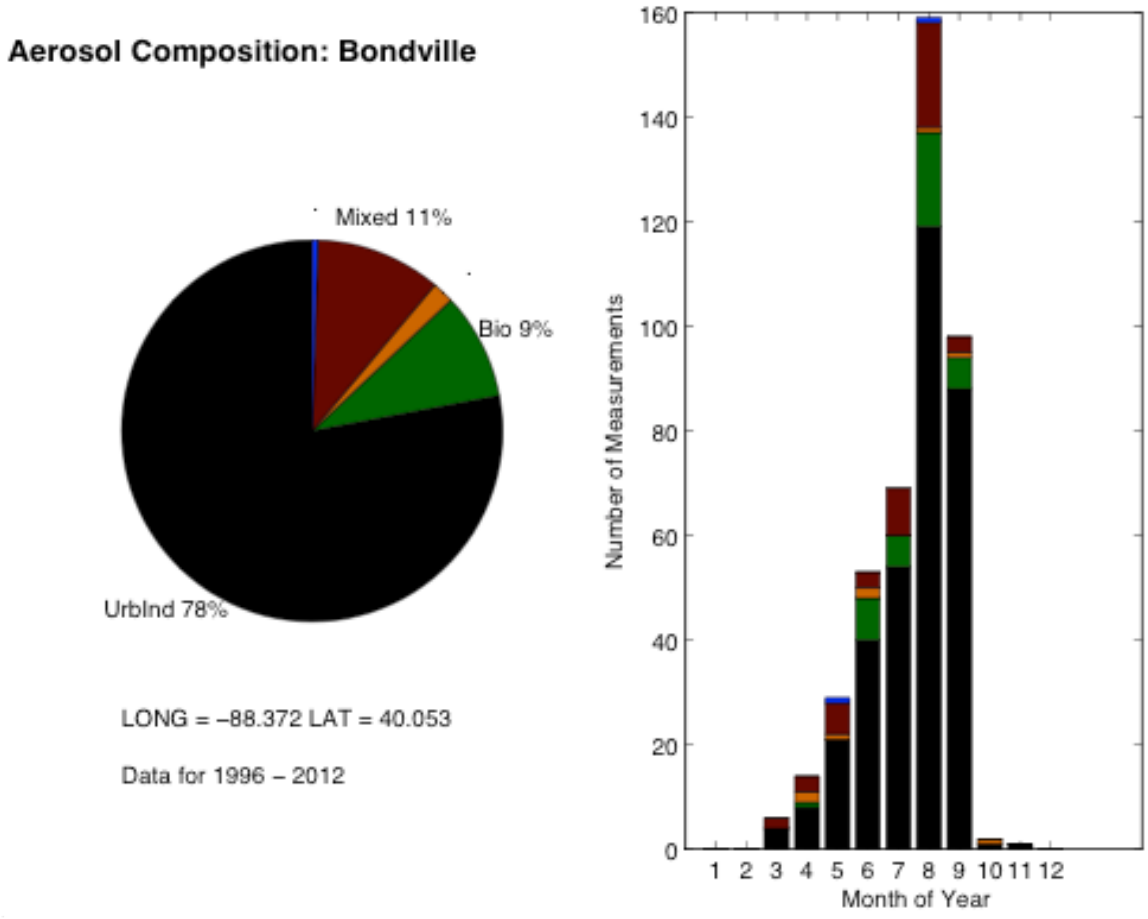
Bondville, Illinois
USA



Bondville, Illinois is a village with a population of 440 people. It is 3 km from the western edge of Champaign, Illinois and about 220 km south of Chicago. Champaign and its sister city Urbana have a population of about 120,000. It is probable that the aerosol at Bondville is characteristic of the aerosol at Champaign.

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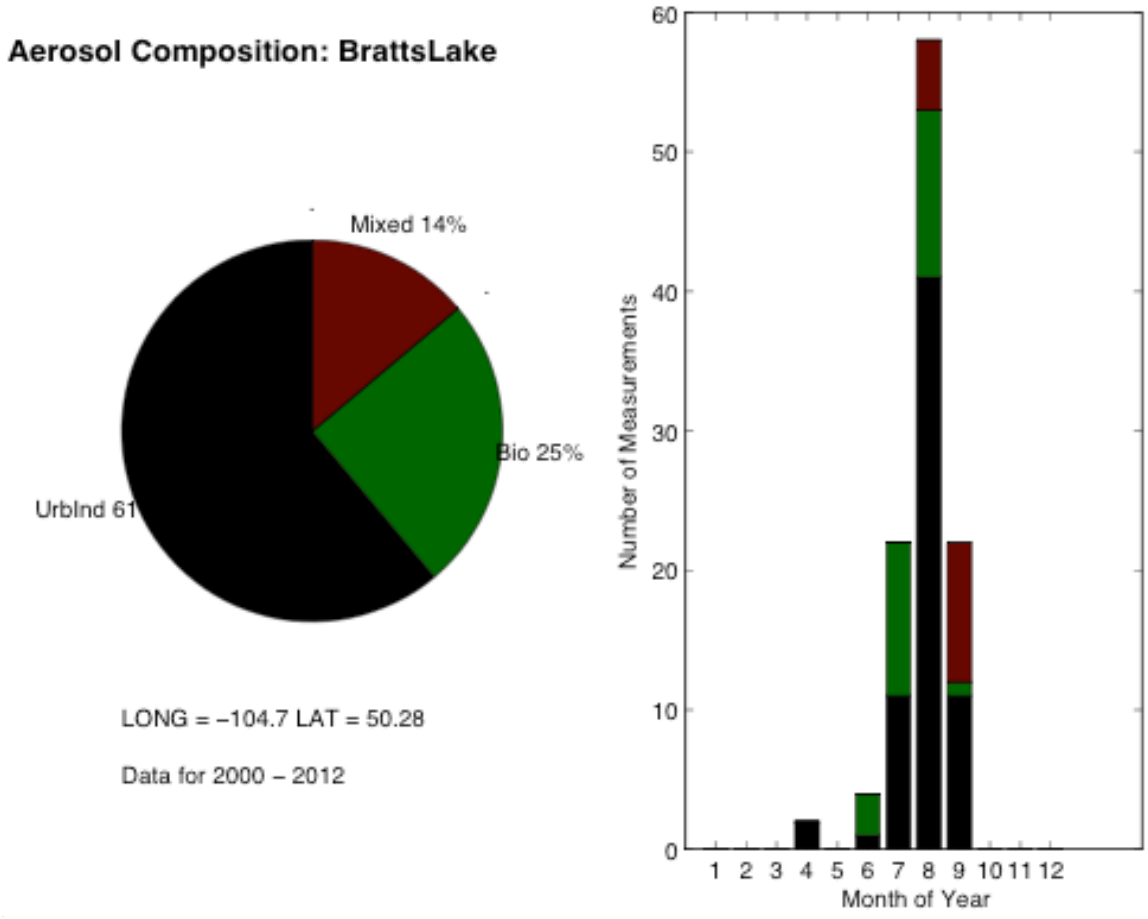
Bratt's Lake, Canada



Bratts Lake is on the Canadian Prairie, about 30 km south-southwest of Regina. Regina has a population of about 200,000. This instrument at this site also contributes to the AEROCAN Network [http://www.aerocanonline.com/templates/nature/index.html], a branch of the Meteorological Service of Canada. The site is part of the WMO Global Atmosphere Watch World Data Centre for Aerosols (GAW WDCA). http://www.gaw-wdca.org.

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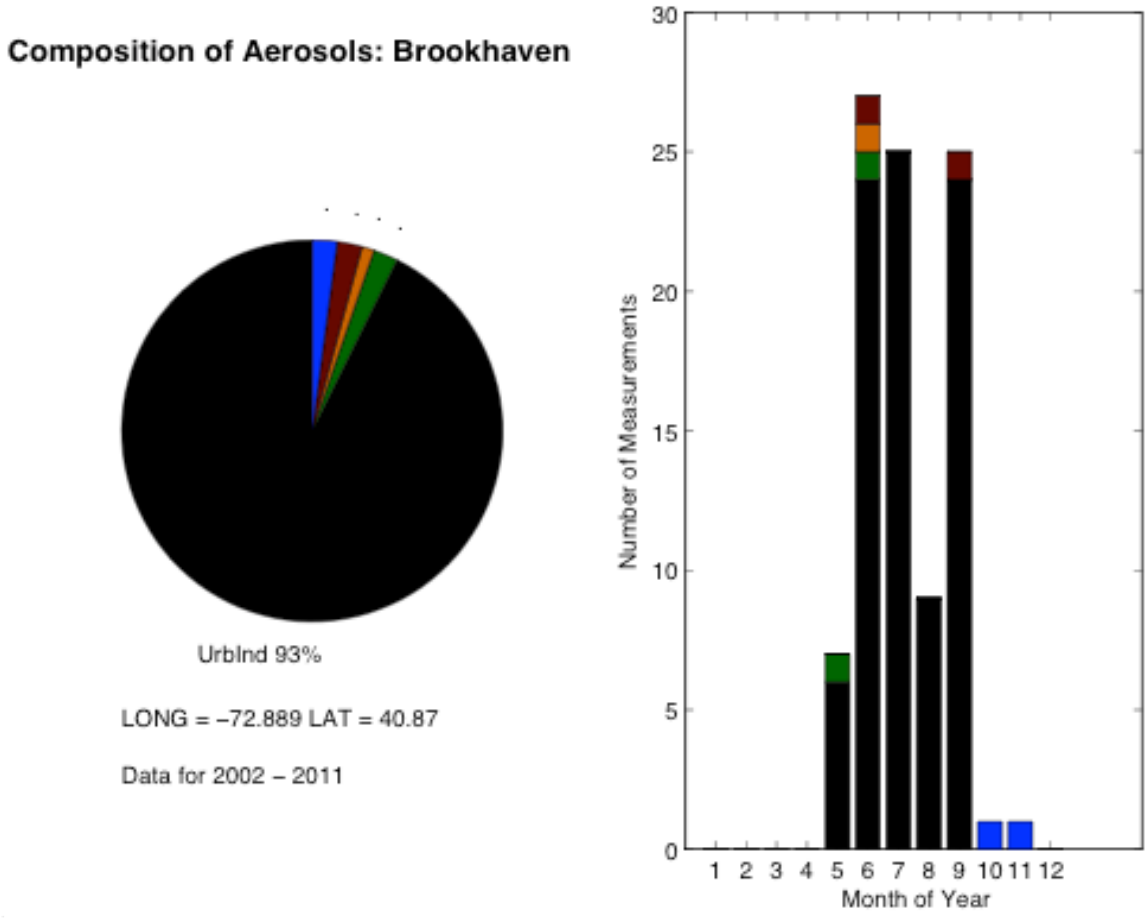
Brookhaven National Laboratory, Upton, New York, USA



The Brookhaven National Laboratory is located on Long Island, New York. The aerosol is primarily urban industrial with a very small amount of maritime in the winter months. The sun photometer is located in an area that is a mix of grassy area and wooded area. The lab is located in the center of Long Island about 15 miles from the Atlantic Ocean and about the same distance from the Long Island Sound. Brookhaven is considered part of the New York metropolitan area.

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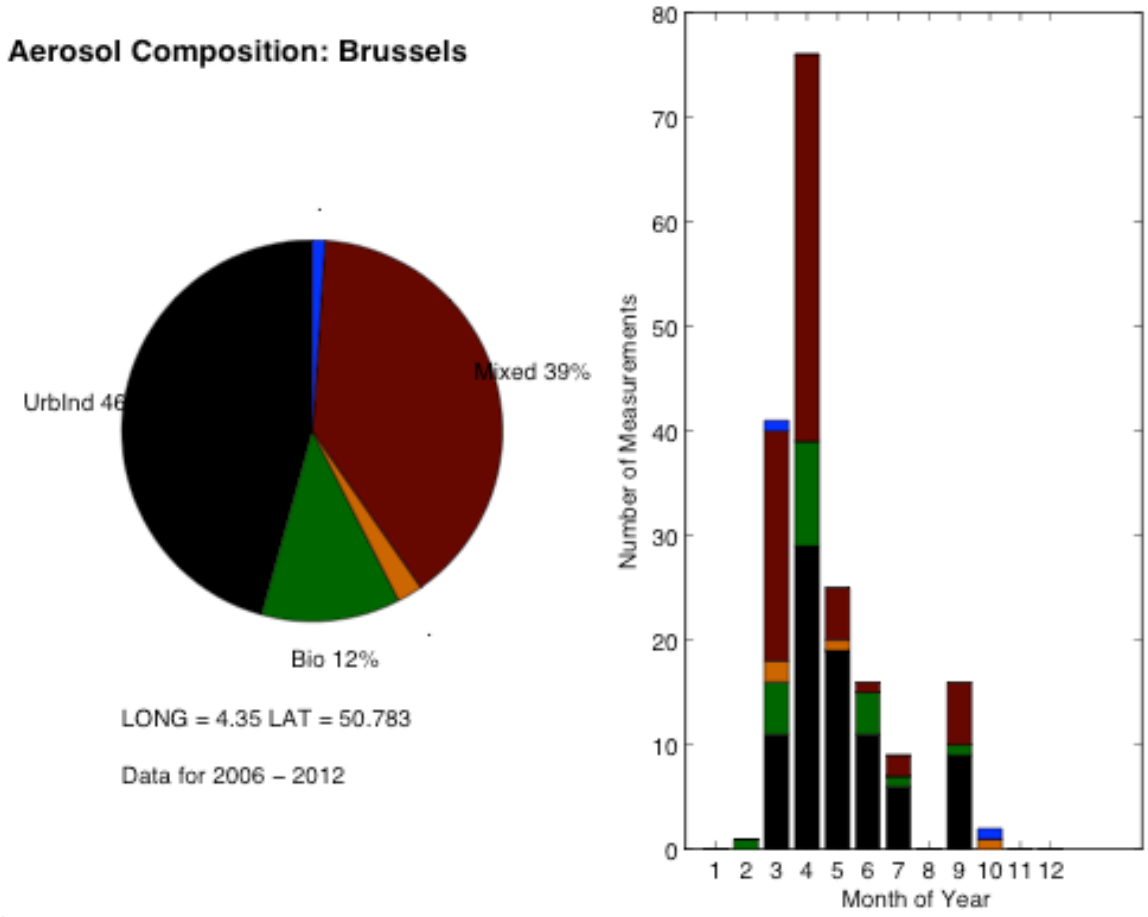
Brussels, Belgium



Brussels, the capital of Belgium, is a city of about 1.2 million. Its economy is largely service oriented, with some industry. The AERONET sun photometer is located in the city of Uccle (population 90,000), a part of the Brussels municipal area.

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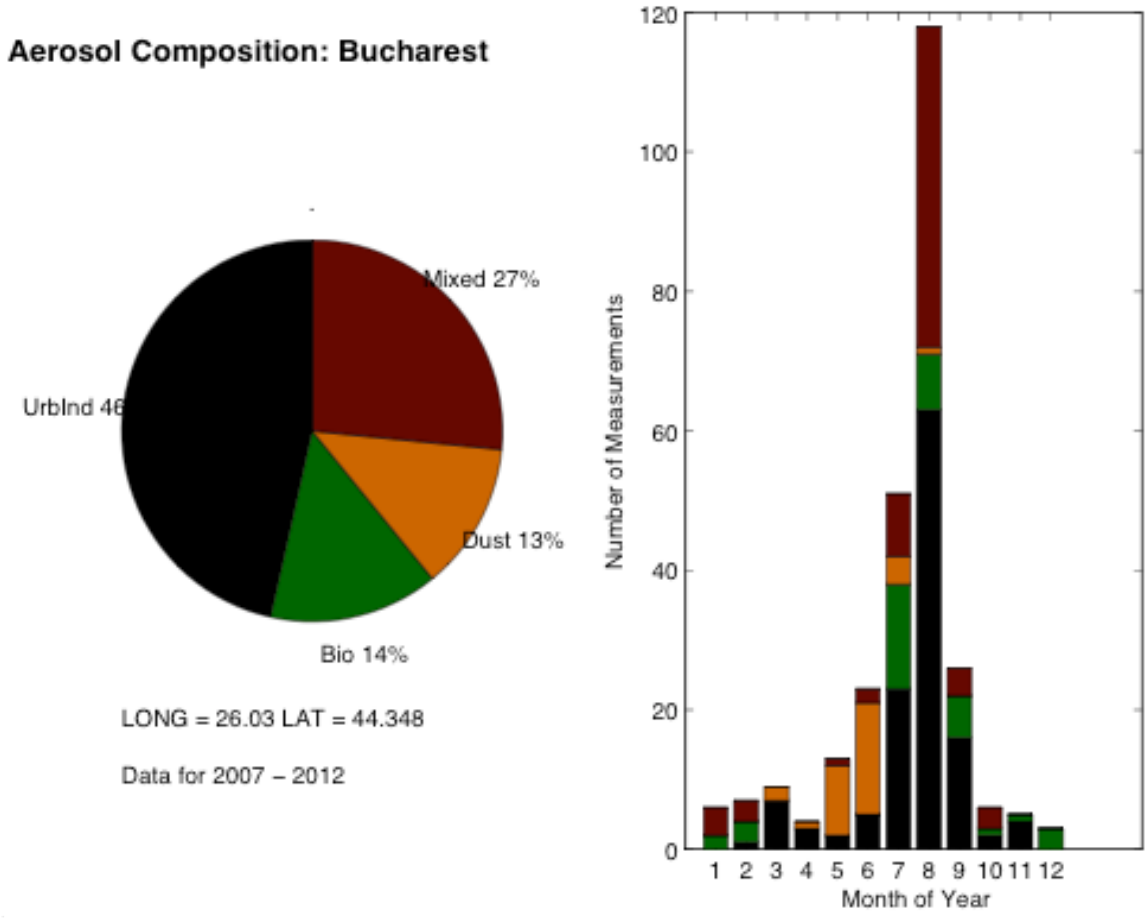
Bucharest, Romania



The sun photometer in Bucharest, Romania is located at the National Institute of R&D for Optoelectronics (INOE) and the AERONET website lists the data under the name "Bucharest_Inoe." The site is 6 km outside of the city of Bucharest. Bucharest has nearly 2 million inhabitants. It is the capital of Romania and is its leading industrial center.

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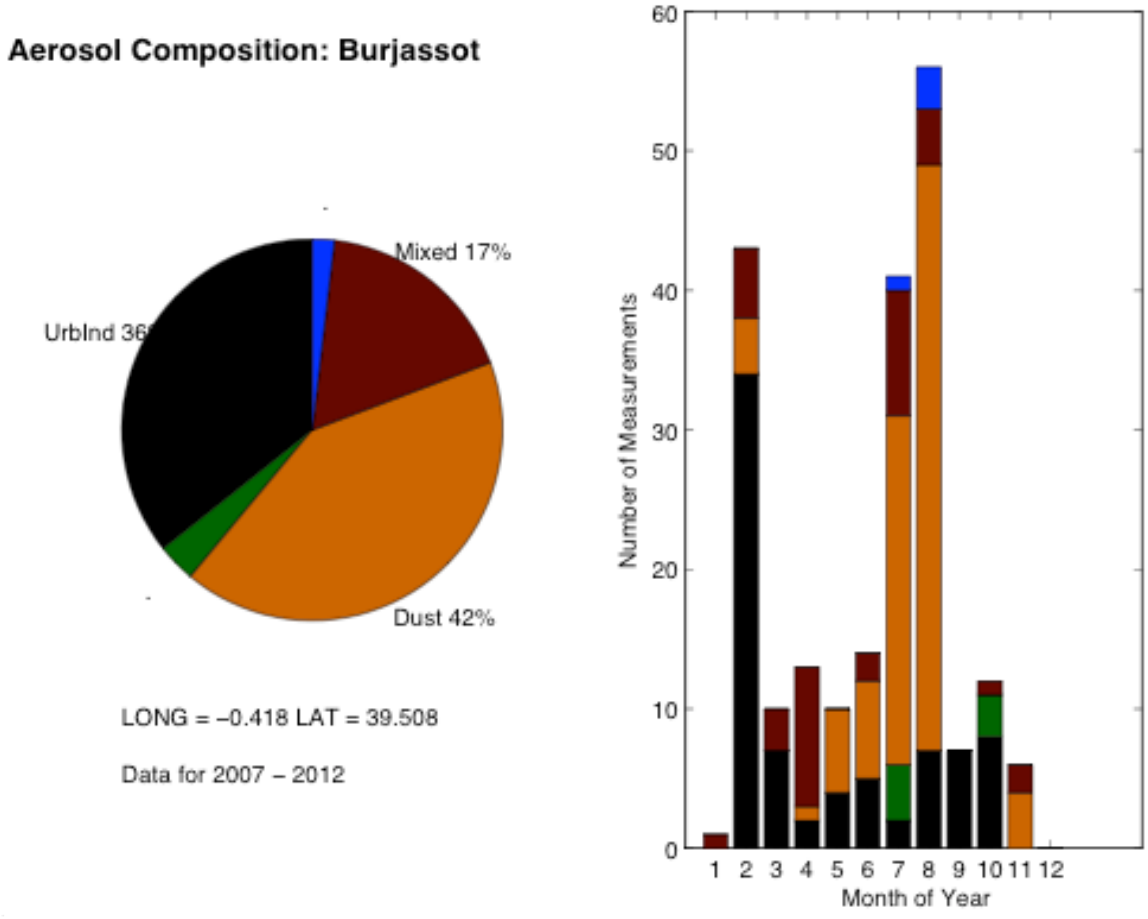
Burjassot
(Valencia, Spain)



The sun photometer is located in the small city of Burjassot (population 35,000) about 5 km northwest of Valencia, a city whose metropolitan area has a population of 1.4 million. The site is about 10 km west of the Mediterranean coast. The region has light industry. The dust is probably African in origin.

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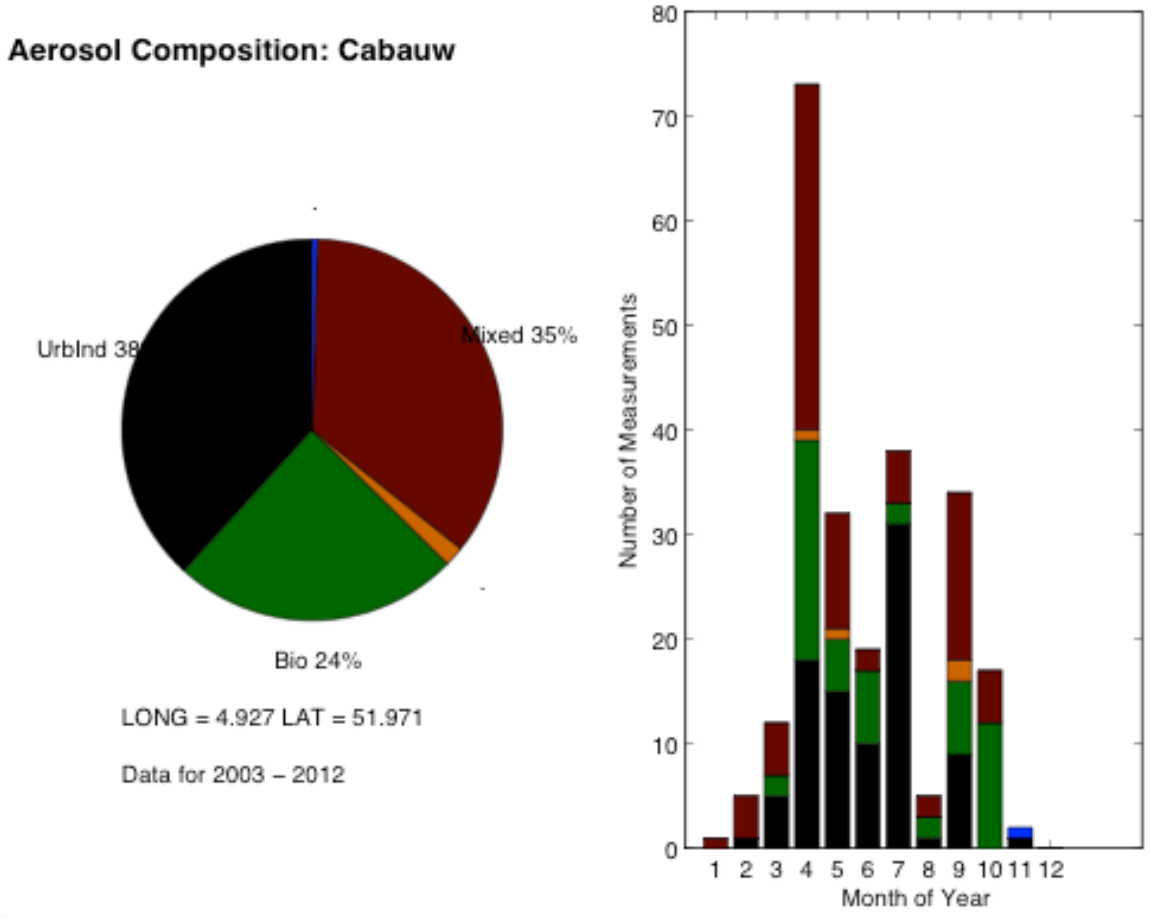
Cabauw,
The Netherlands



This site is located in the western part of the Netherlands in a polder 0.7 m below average sea level. This site is approximately 60 km south of Amsterdam and 60 km east of the port city of The Hague. The immediate area is agricultural, with an adjacent residential community about 600 m to its east, and a roadway 500 m south. The village itself has only about 320 residents and the surrounding farms less than 1000.

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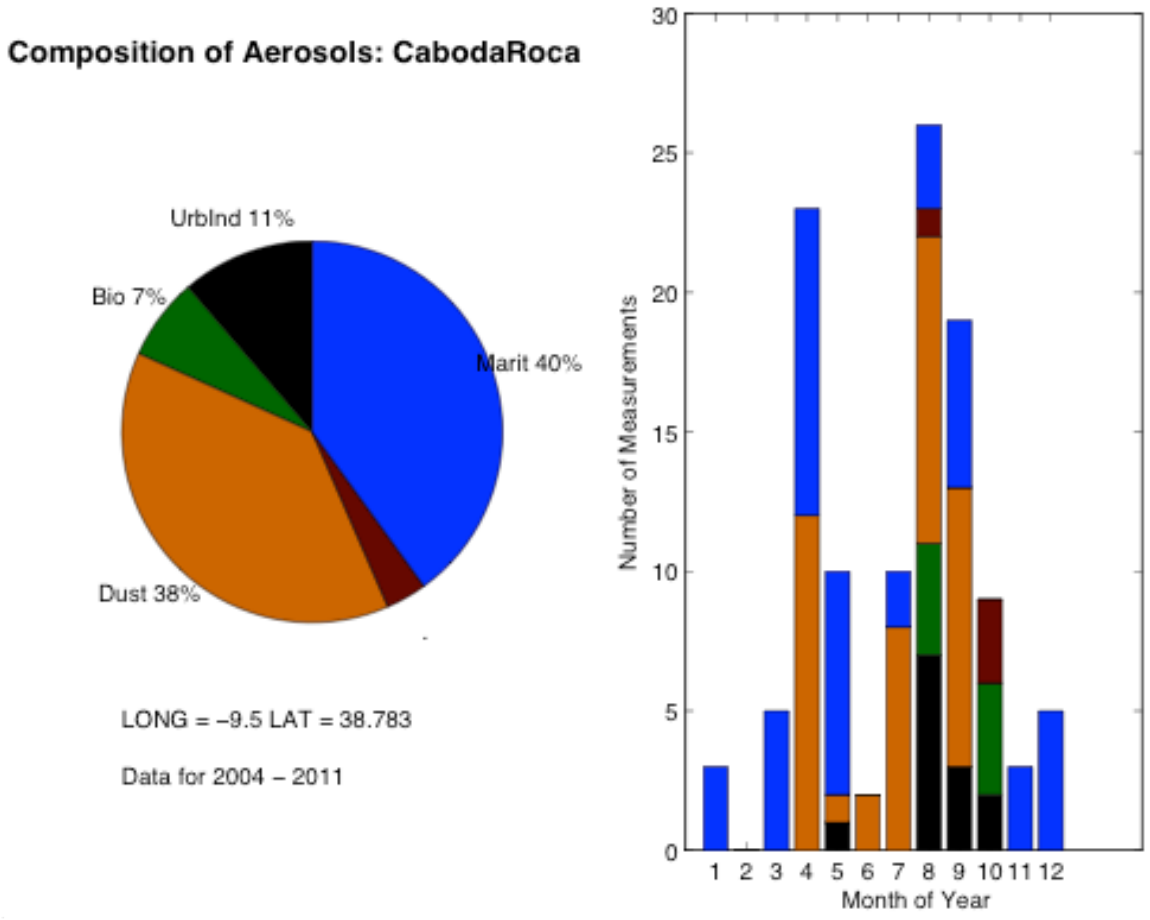
Cabo da Roca, Portugal



The site is located at the westernmost point of the European continent, on the Atlantic coast of Portugal. The site is some 30 km northwest of Lisbon. The instrument is installed within the facilities of Cabo da Roca Lighthouse, which is on a cliff promontory 140 m above the ocean. The adjacent area to the east is a national park.

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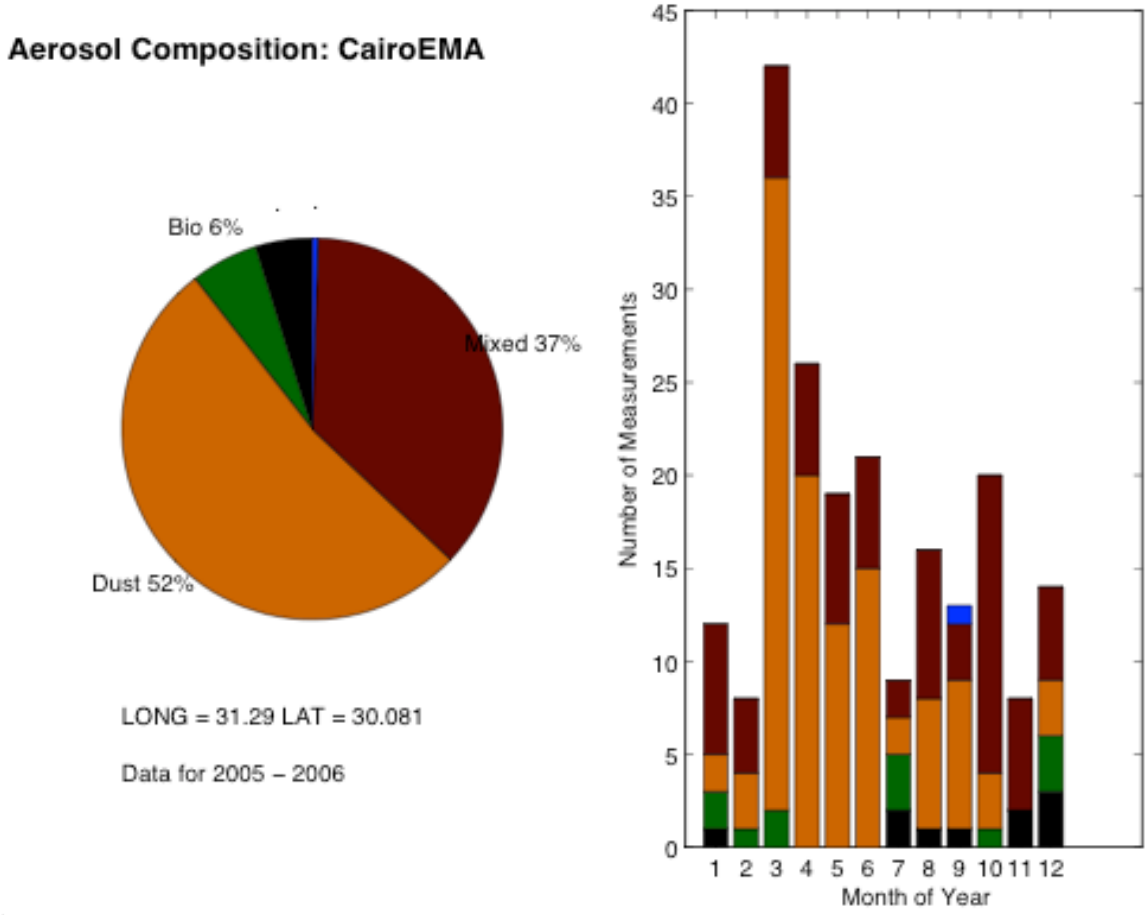
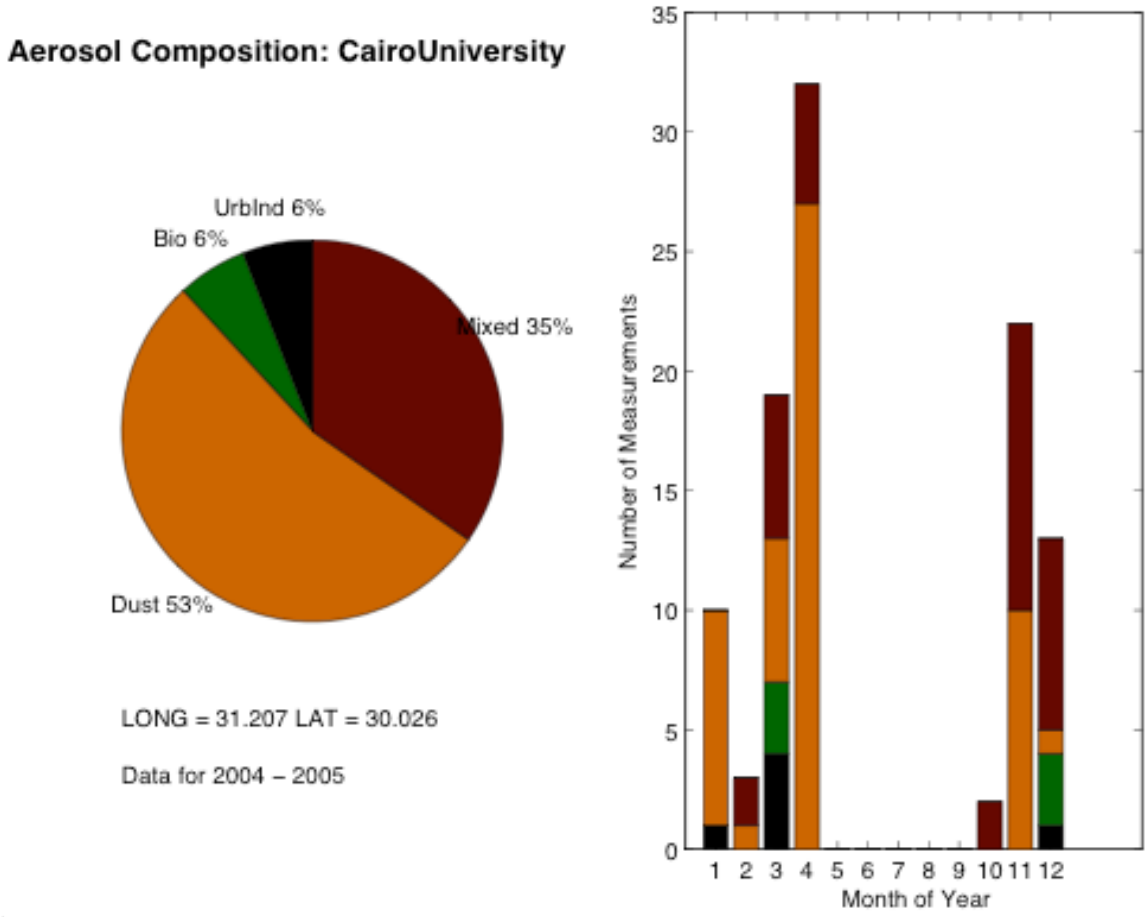
Cairo (EMA), Egypt



There are three AERONET sites in Cairo, two are at EMA, the Egyptian Meteorological Authority. The other AERONET site is at the University. The EMA site is to the East of the Nile about 4 km from the center of the city. Metropolitan Cairo has a population of about 10 million

Return to Table

Cairo University, Egypt



The AERONET sun photometer is located on the campus of Cairo University (Giza) near the west bank of the Nile. Giza is part of metropolitan Cairo, a few kilometers southwest of central Cairo. As might be expected, the aerosol distribution is quite similar to that of Cairo EMA.

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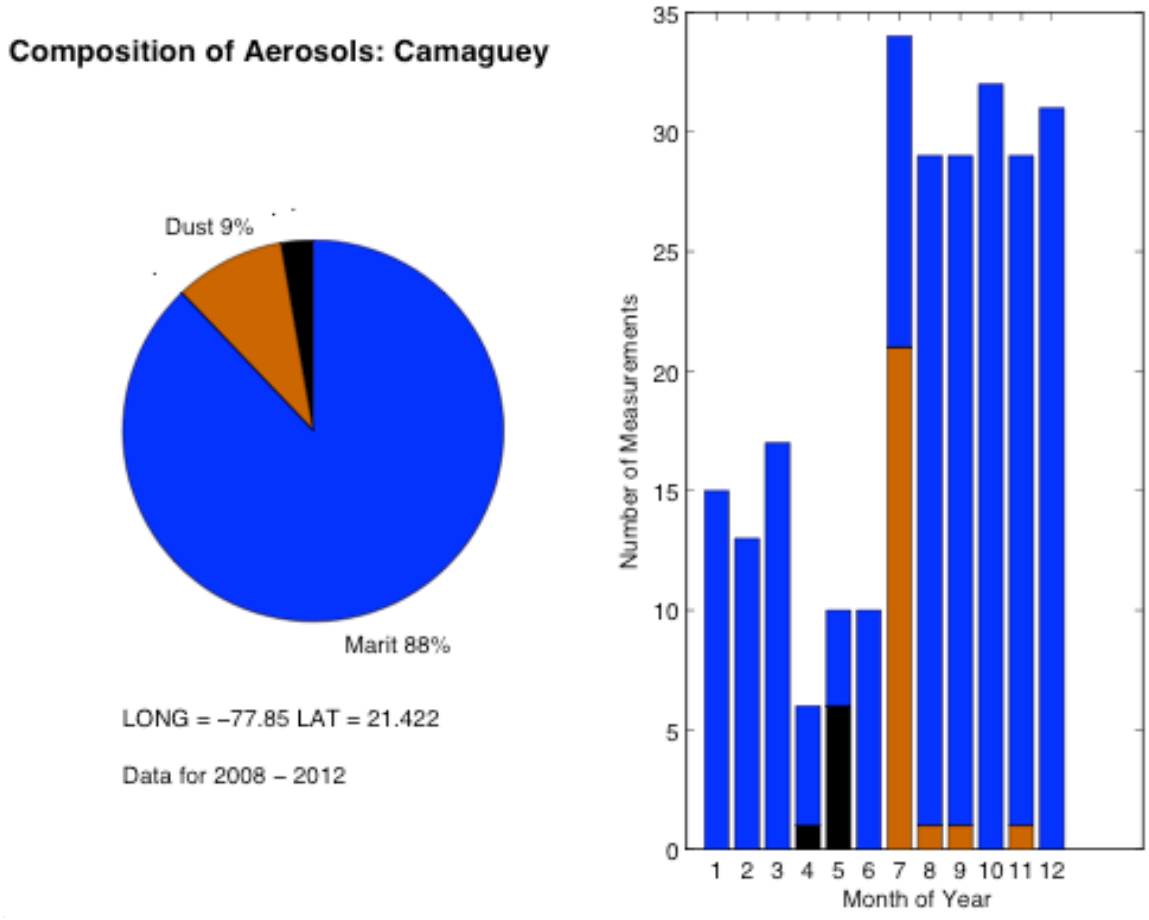
Camaguey, Cuba



Camaguey is the third largest city in Cuba with a population exceeding 320,000 inhabitants. Camaguey is about 60 km from the sea in either direction (East or West). The aerosol is primarily maritime, but in the summer months there is a significant amount of dust transported from Africa.

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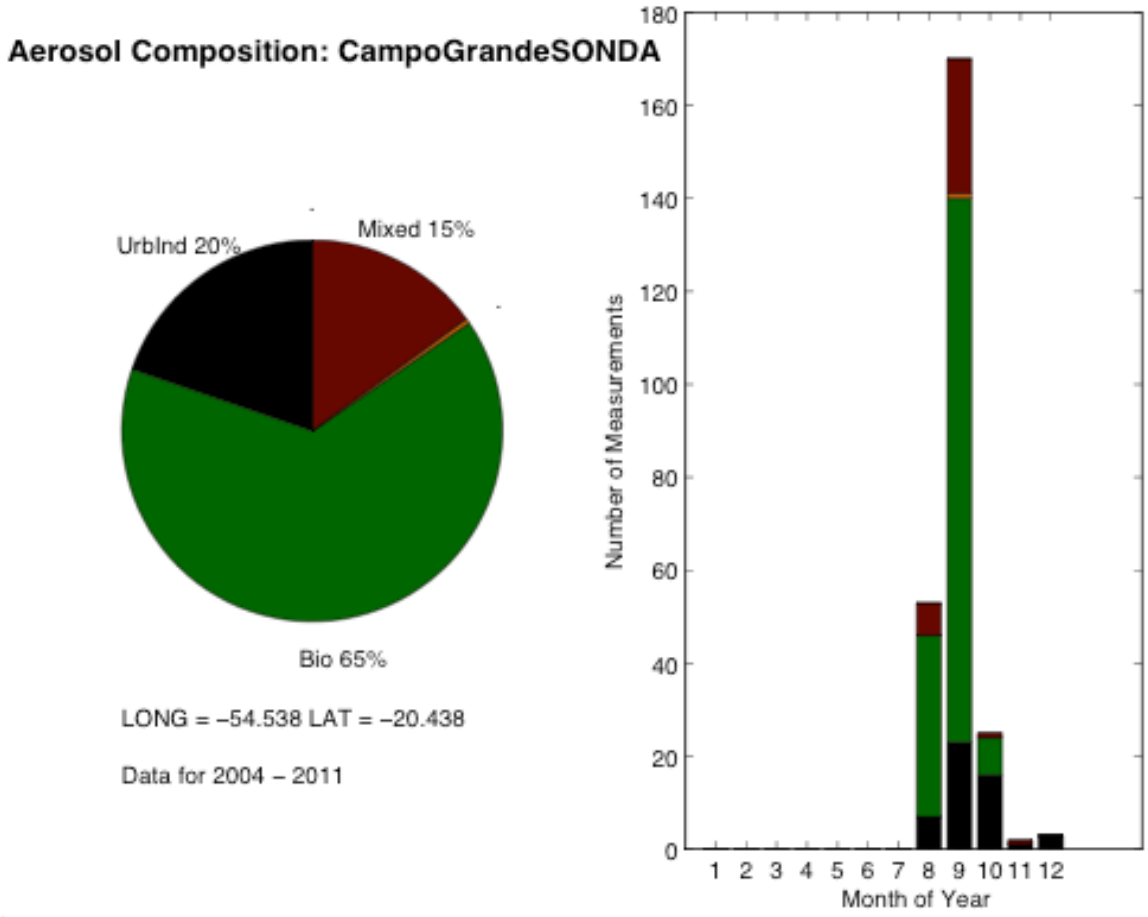
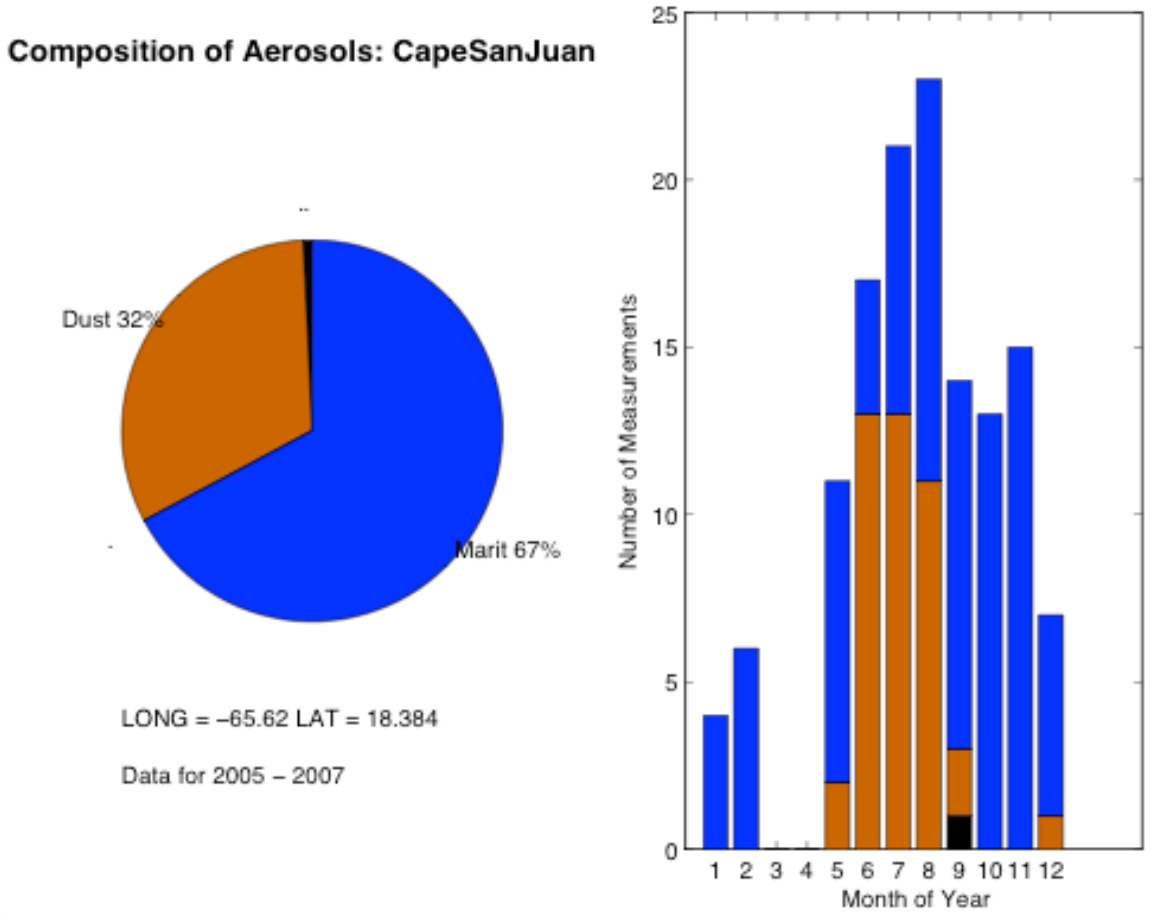
Campo Grande, Brazil



Campo Grande (denoted Campo_Grande_SONDA in the AERONET webpage) is a city of about one million located in the center-west region of Brazil. SONDA stands for Systema de Organicao Nacional de Dados Ambietais (System of the National Organization of Environmental Data). The AERONET site is located in a rural area near the city limits.

Return to Table

Cape San Juan, Puerto Rico, USA



The sun photometer is located on the eastern edge of the island of Puerto Rico in the nature reserve of Cabezas de San Juan. The sea is within half a kilometer in three directions. As expected, most of the aerosol is maritime except for Saharan dust during the summer months. Further details on the link between African dust aerosols and Caribbean aerosols can be found at: http://coastal.er.usgs.gov/african_dust/. A reference to the study of Puerto Rican aerosol at this site can be found at: http://gers.uprm.edu/geol6225/pdfs/a_ramirez.pdf .

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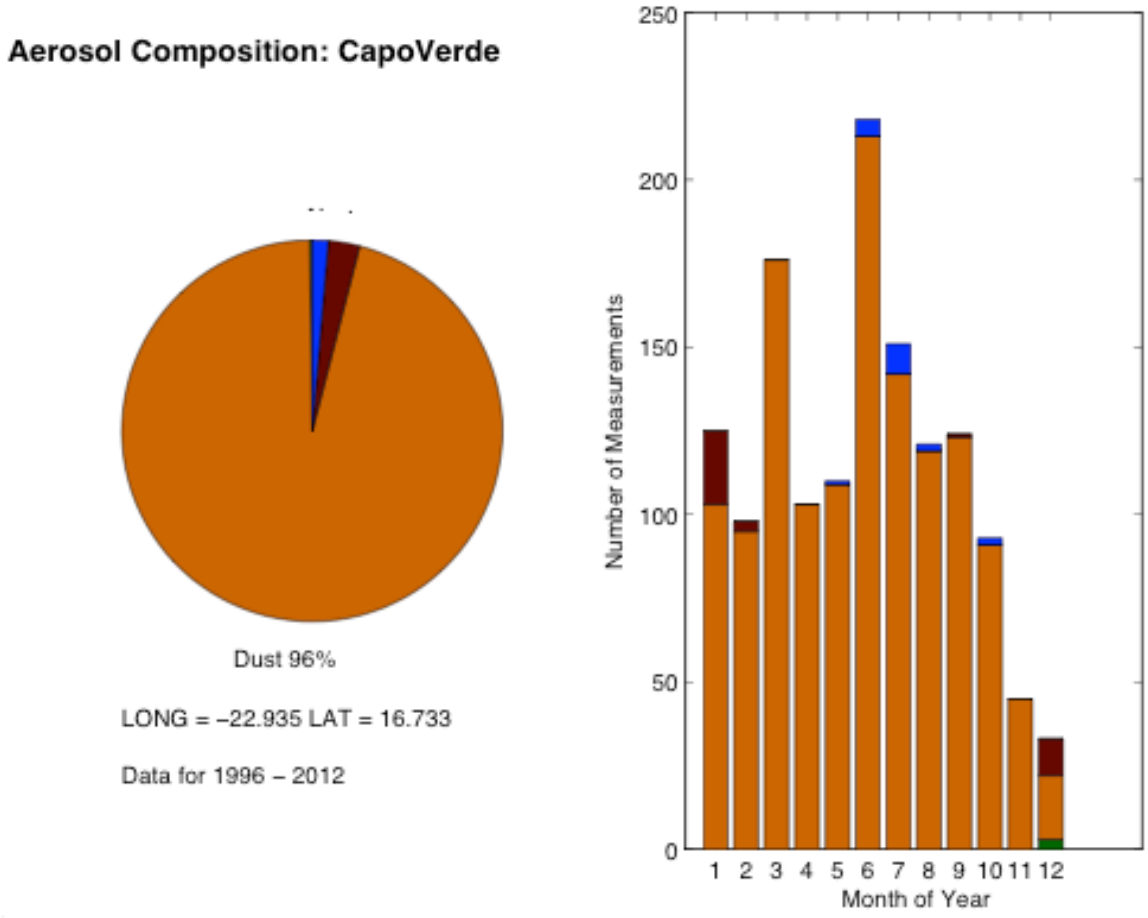
Capo Verde



Capo Verde (Cape Verde) is an island republic comprised of an archipelago of ten islands in the Atlantic Ocean, off the coast of Africa. The instrument is located at the Instituto Nacional de Meteorologia e Geofisica on Sal Island. The region is subjected to strong north-eastern winds that transport dust from the Sahara. The region is considered part of the Sahelian Arid Belt.

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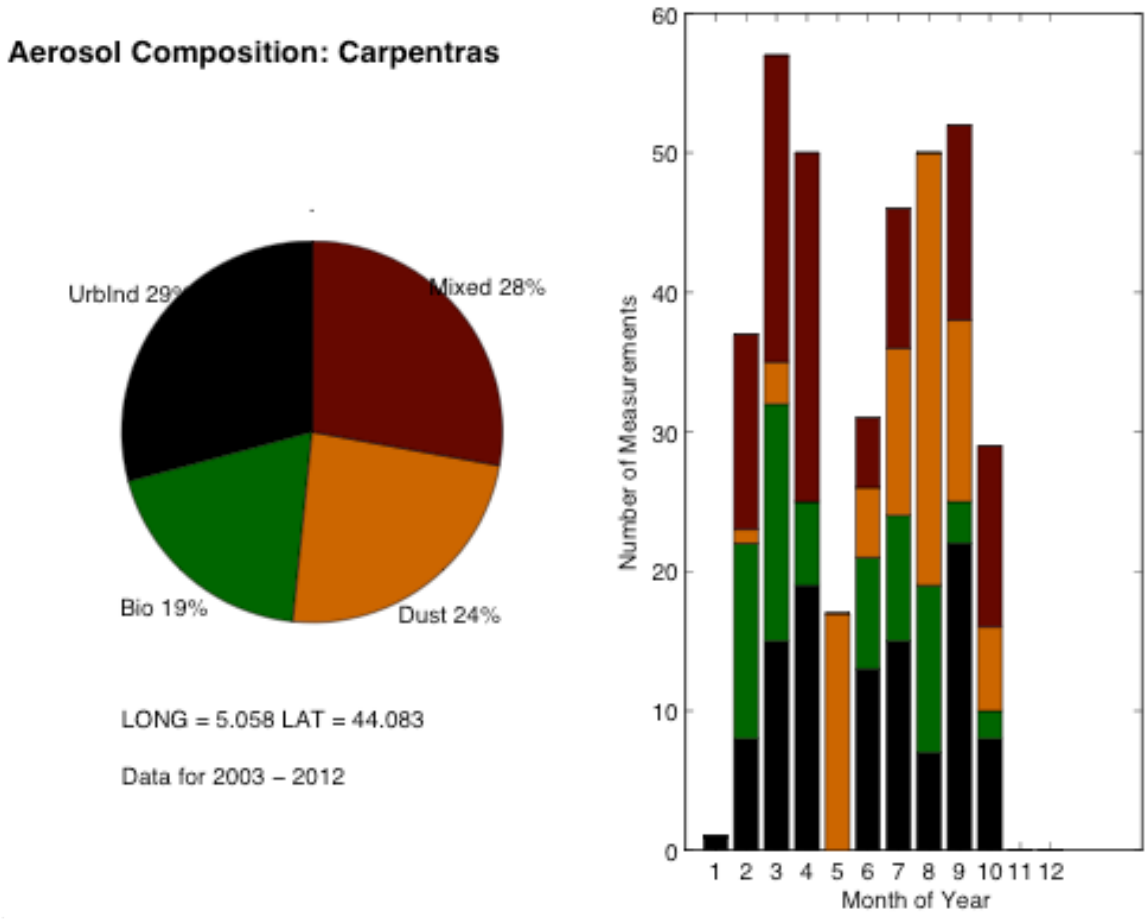
Carpentras, France



Carpentras is a town in south-eastern France with a population of about 30,000. It is near Avignon. The sun photometer is about a kilometer north of the town. It might be noted that the aerosol composition is very similar to that of Avignon.

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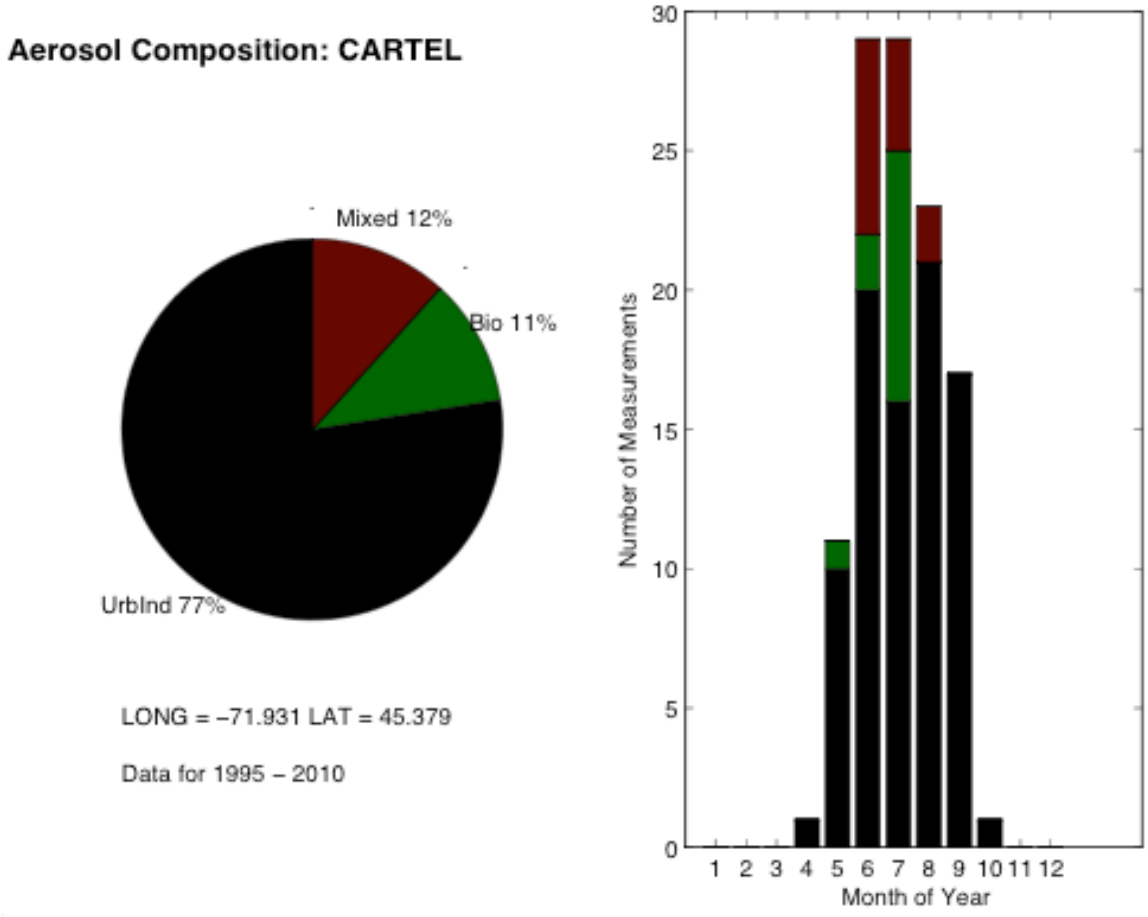
CARTEL
Sherbrooke, Quebec
Canada



The instrument is located on the campus of the University of Sherbrooke. The city of Sherbrooke has a population of about 200.000. The instrument is part of the AEROCAN network, under the directorate of the Centre d'Applications et de Recherches en Teledetection (CARTEL). The site is listed as "CARTEL" on the Aeronet web page. Project information regarding Canadian Sunphotometer Network sites can be accessed directly from AEROCAN at http://www.aerocanonline.com/. A network mission overview is at : http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=01494146,

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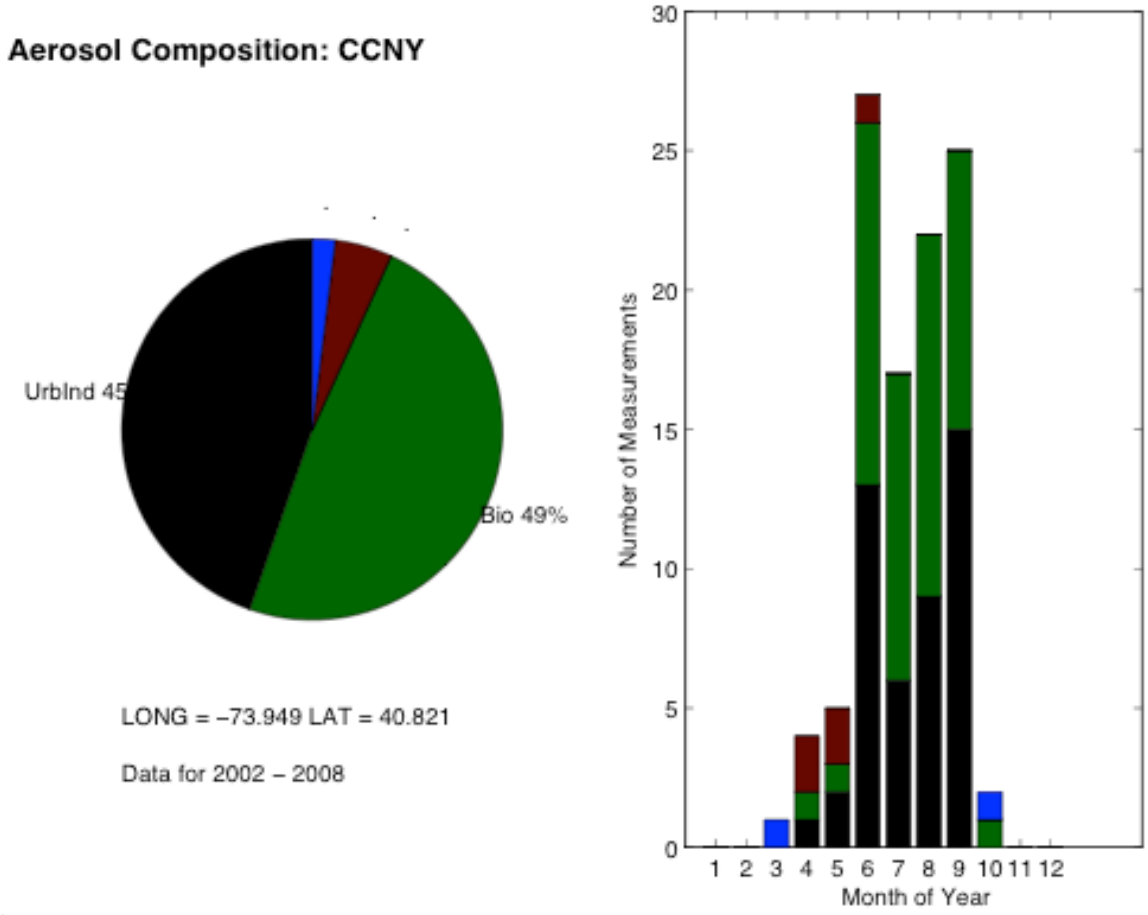
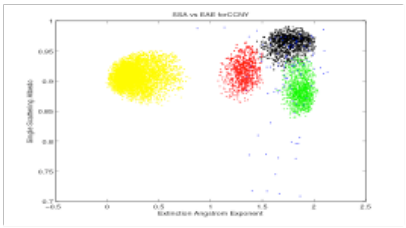
CCNY (New York City), USA



CCNY stands for City College of New York. The instrument is located on top of a building in New York City. This is in a heavily urbanized area. The identification of biomass burning aerosol is difficult to explain. Scatterplots of SSA vs EAE indicate the presence of a significant number of observations in which the Single Scattering Albedo is less than 0.85. Our urban industrial reference cluster assumes SSA greater than 0.9. These "outliers" are identified as biomass. See scatterplot below.



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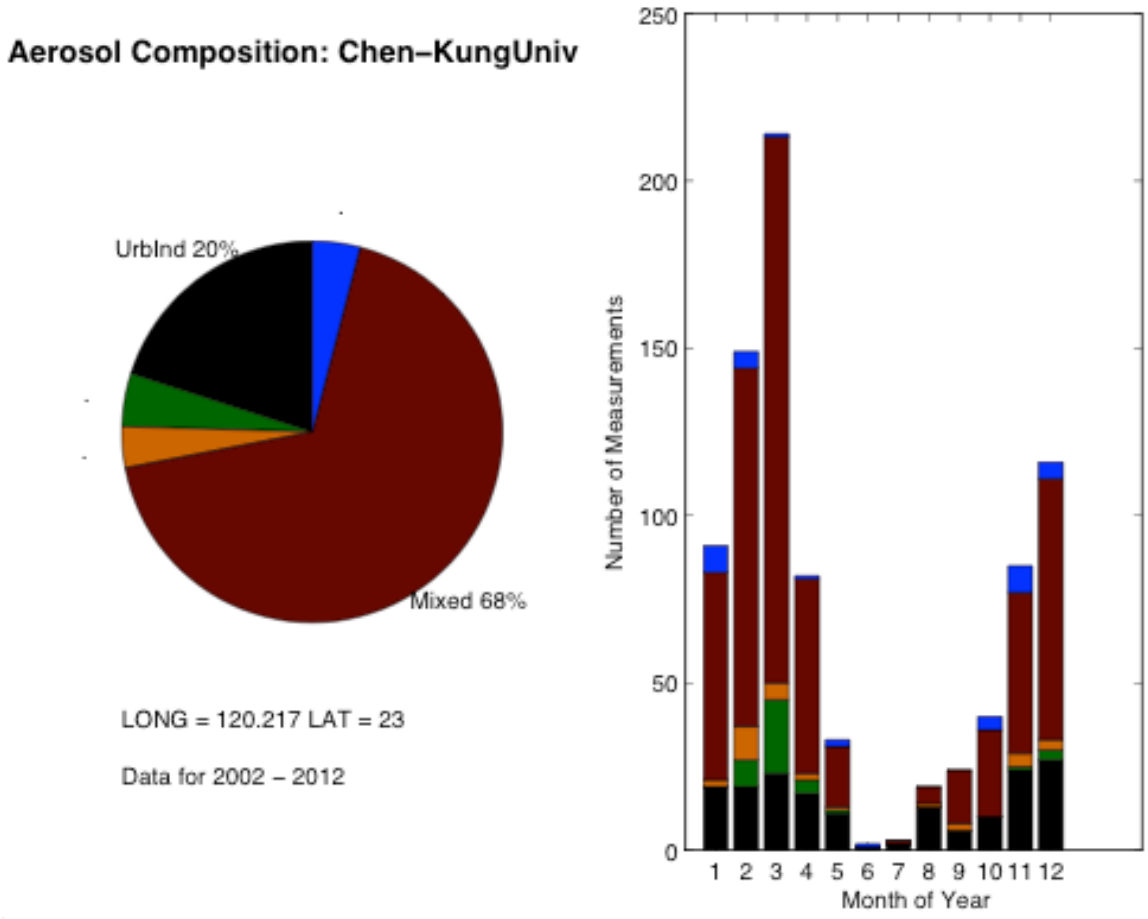
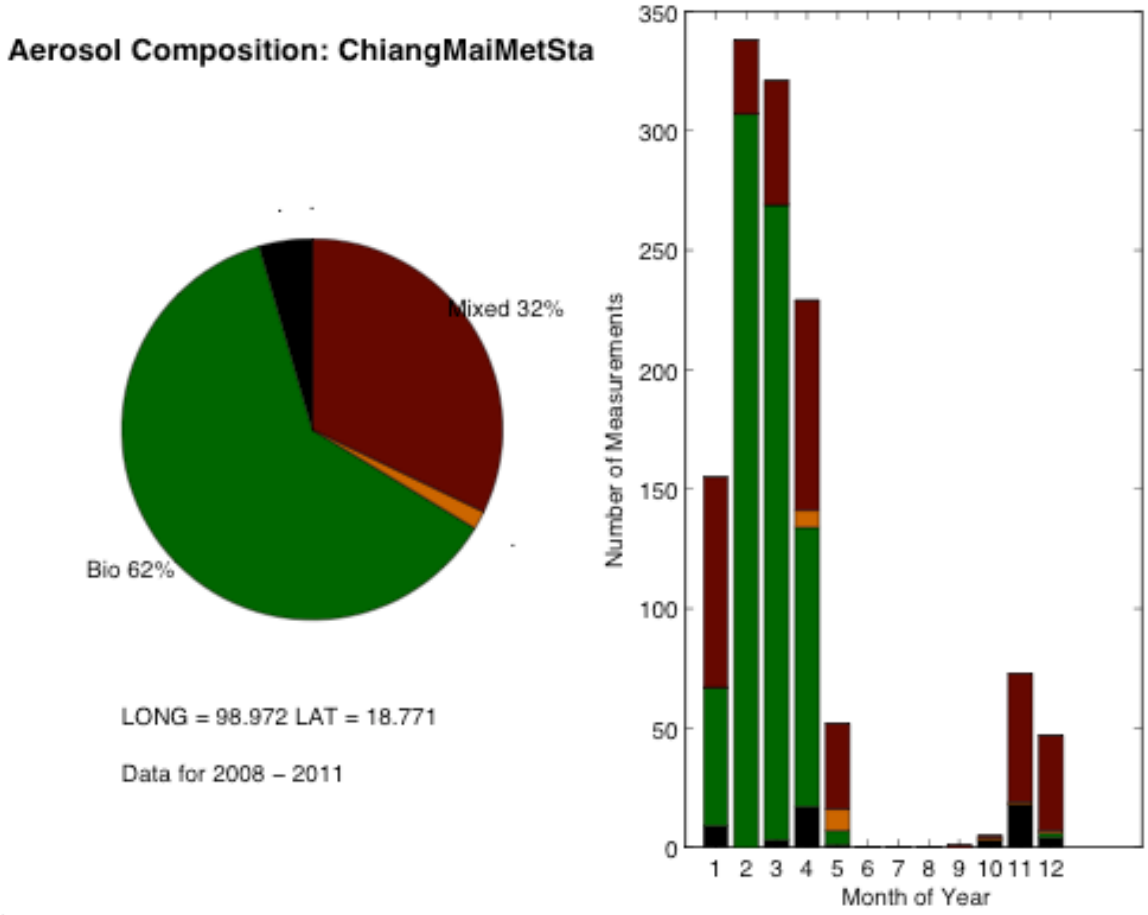
Chen-Kung University Taiwan



This instrument is located in the southern part of the historic Tainan City metropolitan area [population ~ 1.8 million]. The site is urban, it lies less than 12 km from the western shore on the southwest portion of the island of Taiwan. Similar to many large Asian cities, the seasonal aerosol is of a mixed type. The tropical rain season is greatest in the June, July and August months, which may explain a decrease in the available AERONET measurements for those months.

Return to Table

Chiang Mai, Thailand (Chiang Mai Met Station)



The instrument is located on the roof of the meteorological station near the airport at Chiang Mai, Thailand. Chiang Mai, with a population of about 150,000 (Metropolitan area population near one million) is the largest city in northern Thailand. Chiang Mai has acknowledged serious air pollution problems, including the trapping of forest fire smoke in the mountains along the Thai-Myanmar border. Pollution is reported as being particularly severe in the weeks leading up to April.

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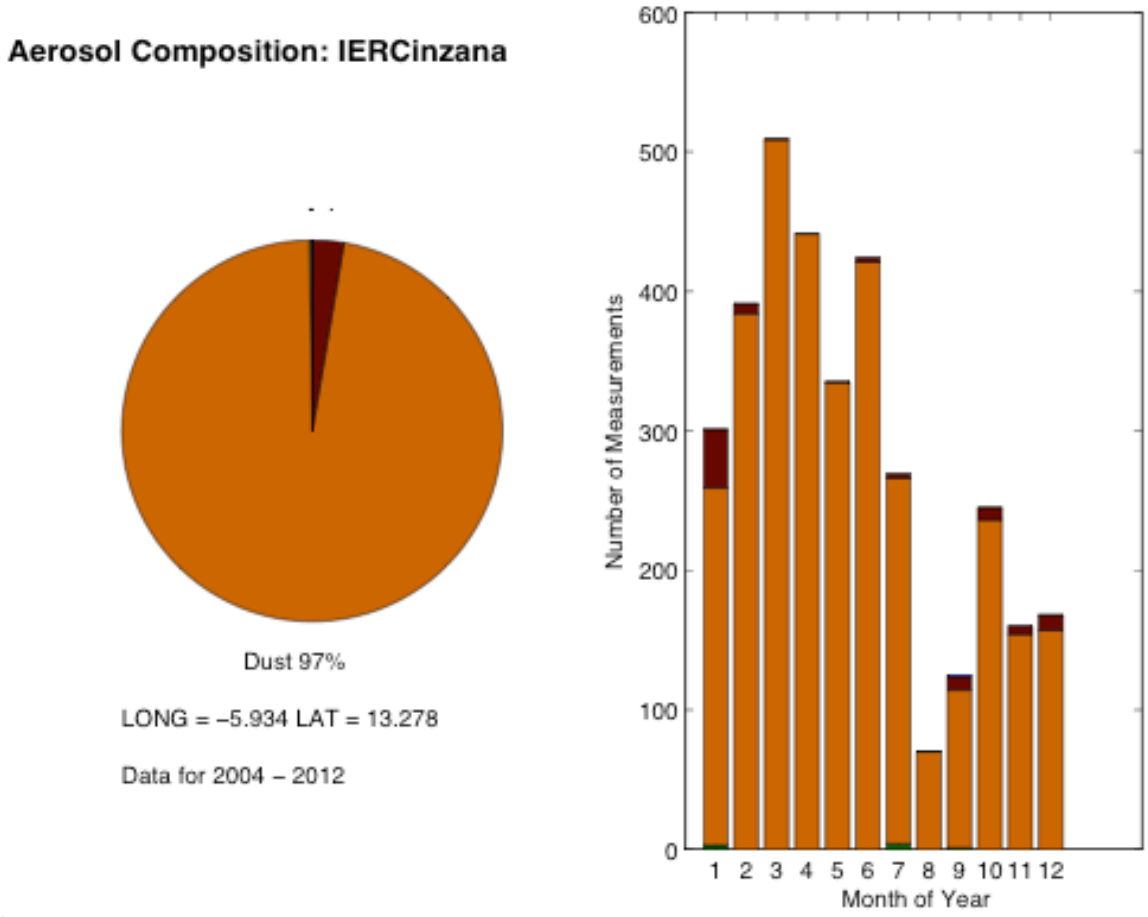
Cinzana, Mali



The instrument is located in a small, cultivated region near the village of Cinzana-Gare. Cinzana is a rural commune with a population of about 36,000. The region is characterized as semi-arid. The instrument is located at the IER research station. The AERONET website lists this site as IER-Cinzana.

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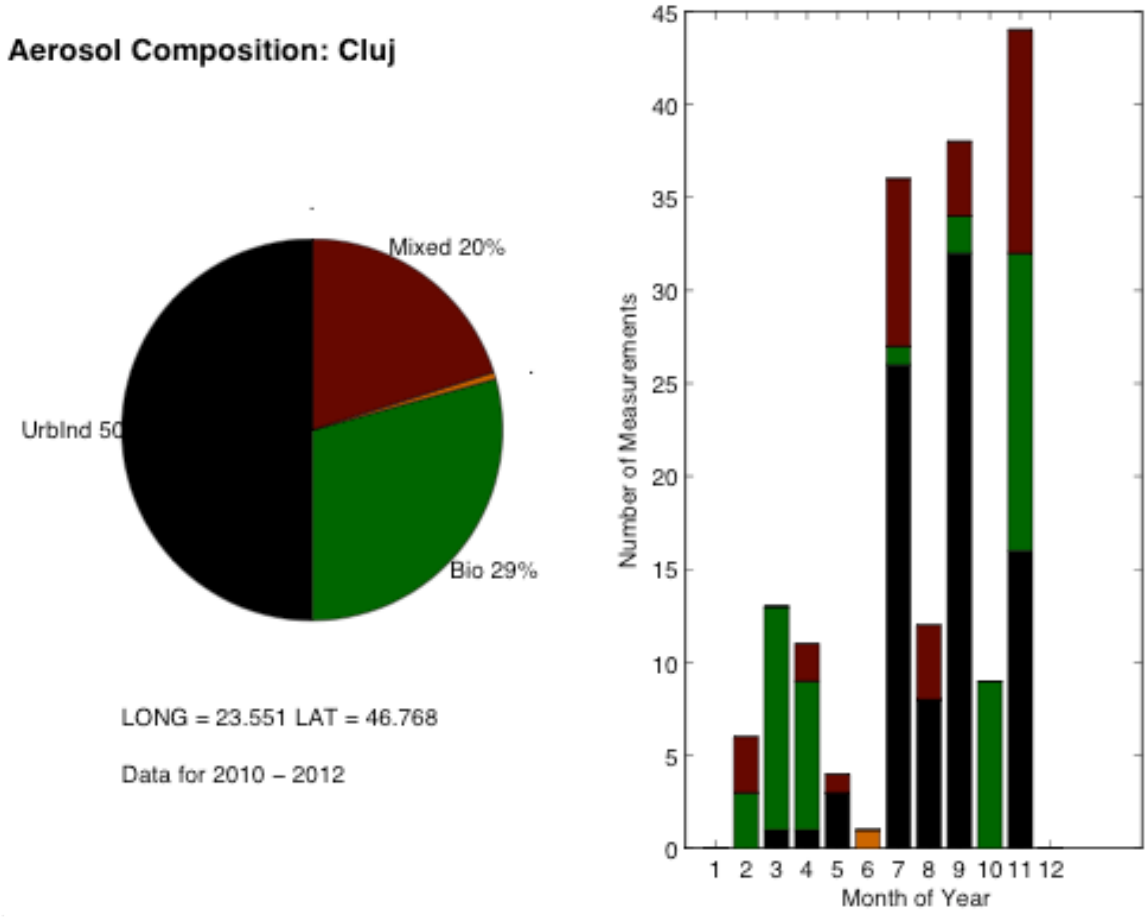
Cluj-Napoca, Romania



Cluj-Napoca is a city in Romania of about 330,000 inhabitants. The instrument is near the eastern boundary of the city. AERONET lists this site as CLUJ_UBB where the last three letters represent the institute that is in charge of the sun photometer.

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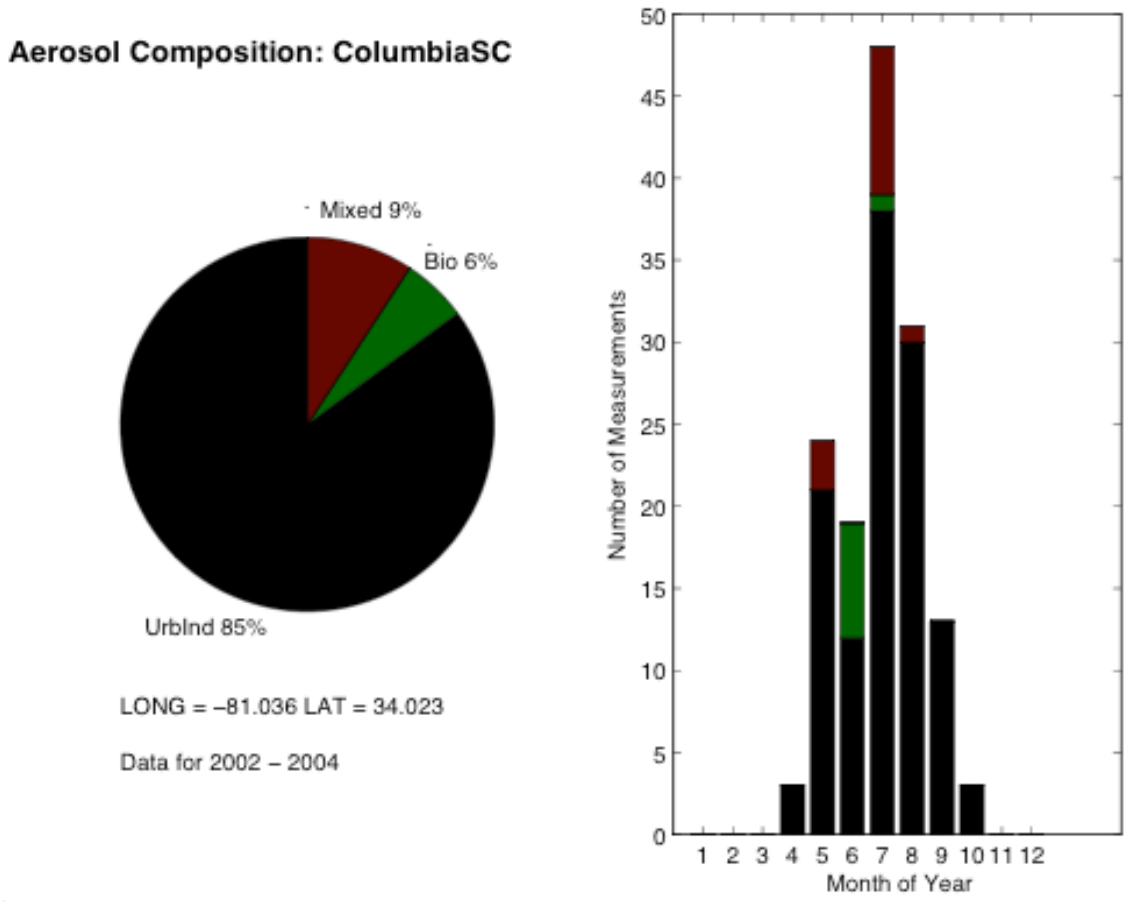
Columbia, South Carolina, USA



Columbia is a city in South Carolina, U.S.A. Columbia is in the center of a metropolitan area of about 800,000 people, although the population of Columbia itself is about 130,000. It has a number of important industries, and the aerosol is dominated by urban industrial. The site is no longer active.

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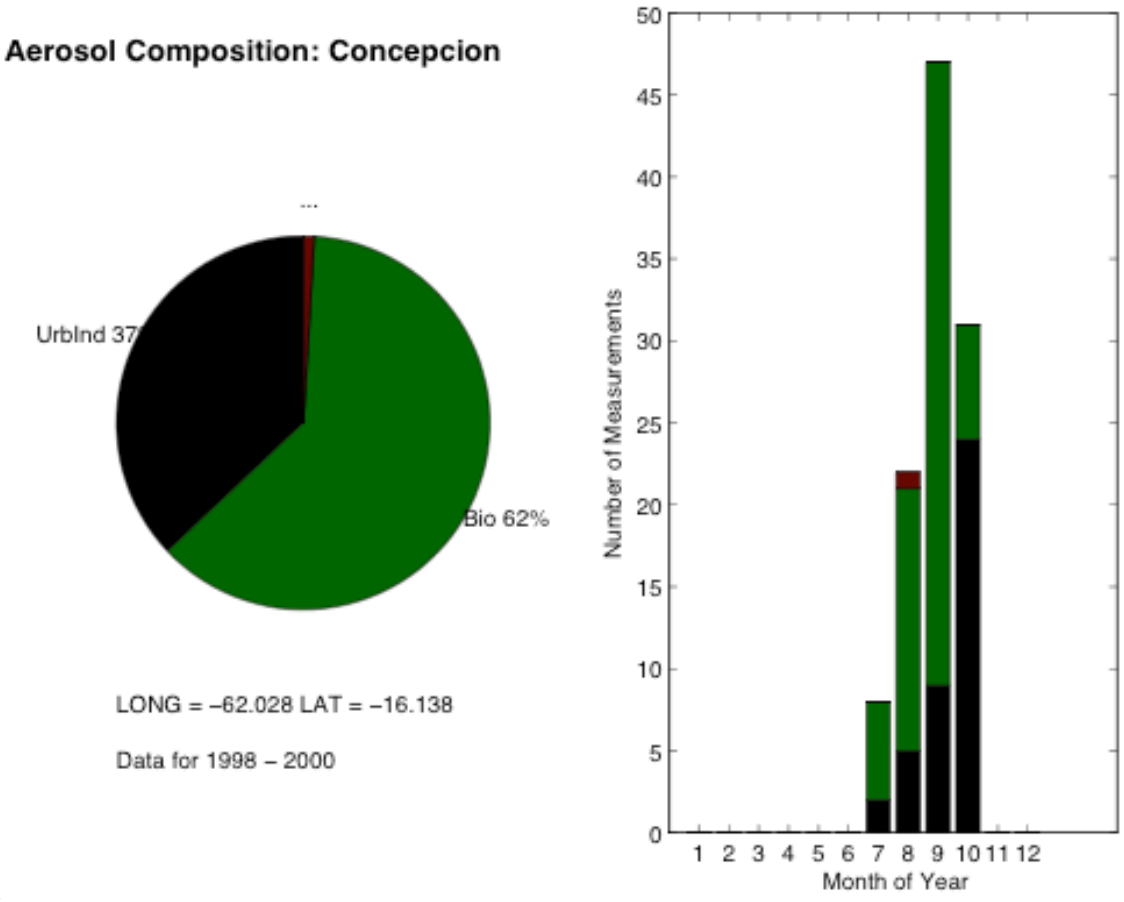
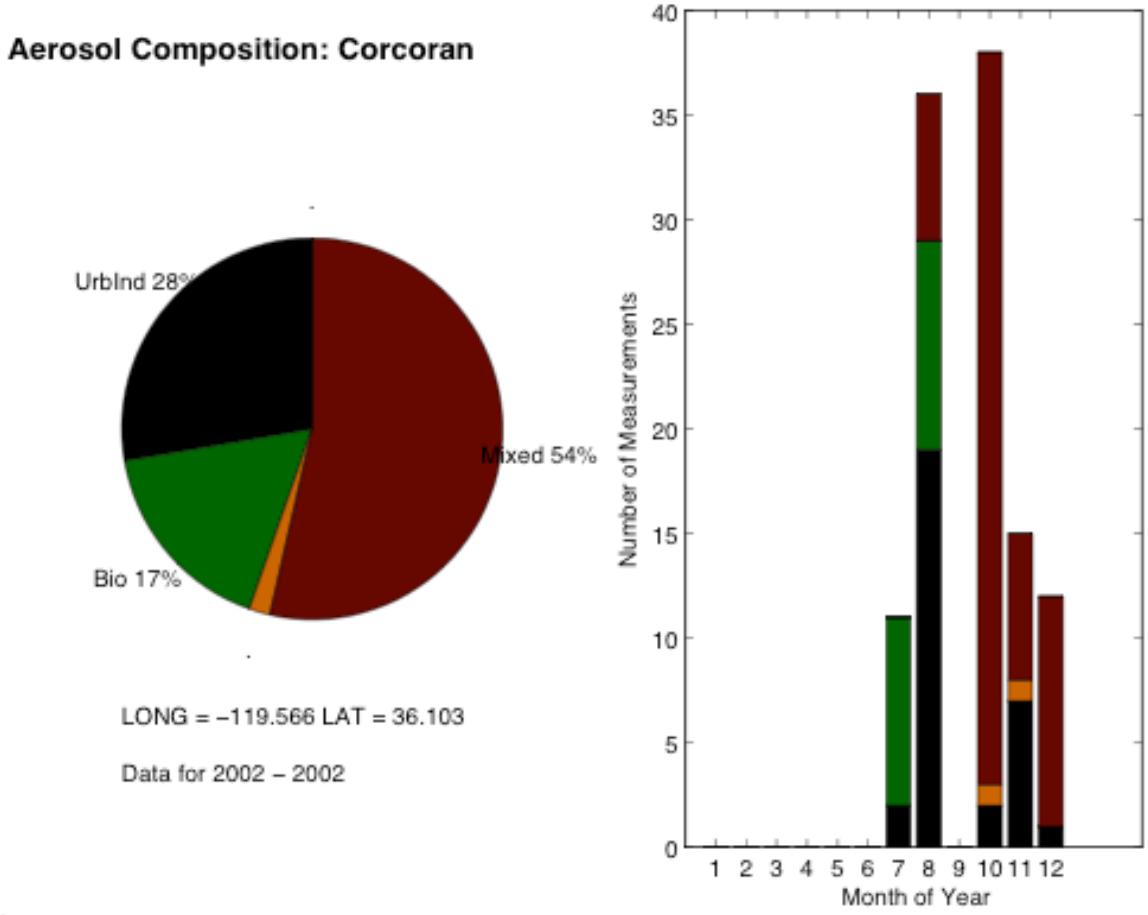
Concepcion, Bolivia



Concepcion is a town of about 8000 inhabitants in the lowlands of Eastern Bolivia. The AERONET site is no longer active. There are no nearby cities. The aerosol identified at urban industrial might be a mis-identification of biomass aerosol.

Return to Table

Corcoran, California, USA



Corcoran is a small town (population 30,000) in the central valley of California, about 80 km south of Fresno, California. It lies in an agricultural region, but the main industry in Corcoran are the correctional facilities (prisons).

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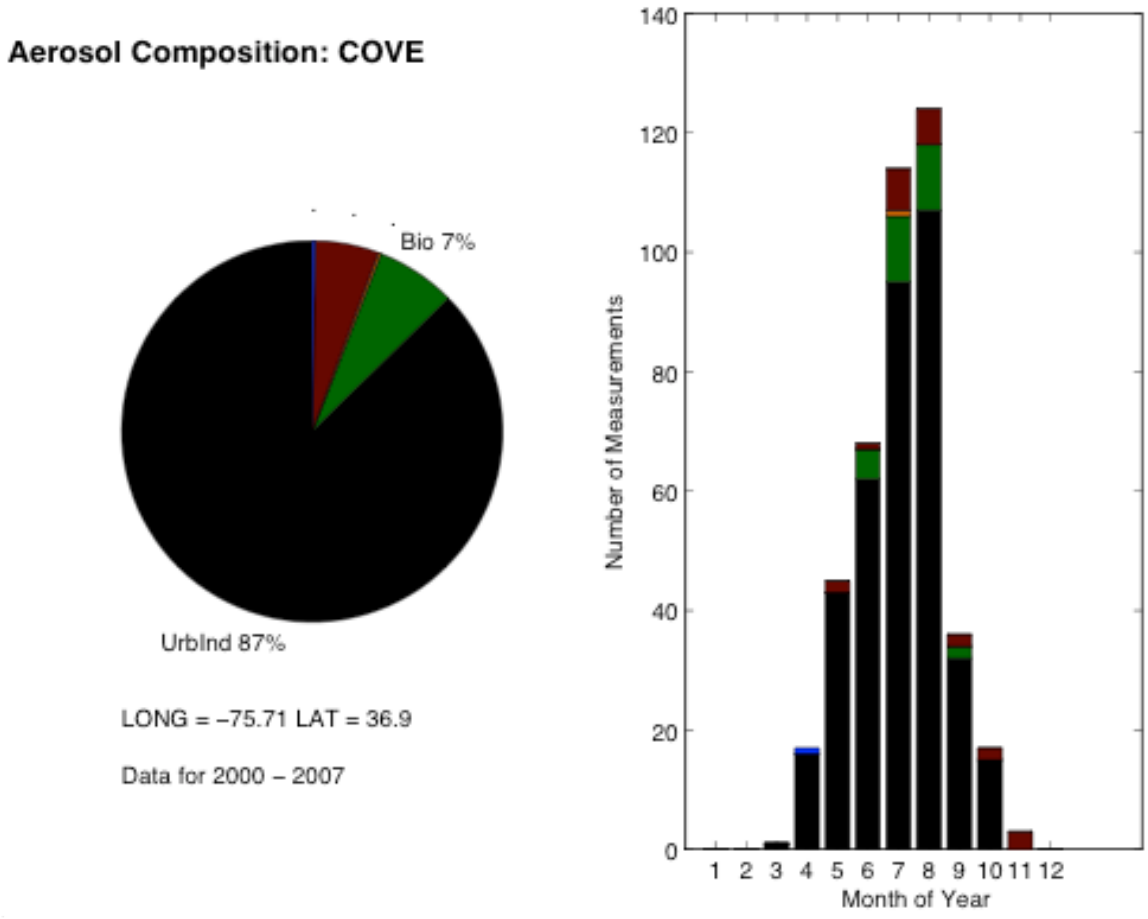
COVE (CERES Ocean Validation Experiment), Virginia, USA



The instrument is mounted on a platform about 25 km from the Virginia coast in the Atlantic Ocean. It is interesting to note that although the instrument is at sea, the aerosol appears to be primarily urban industrial.

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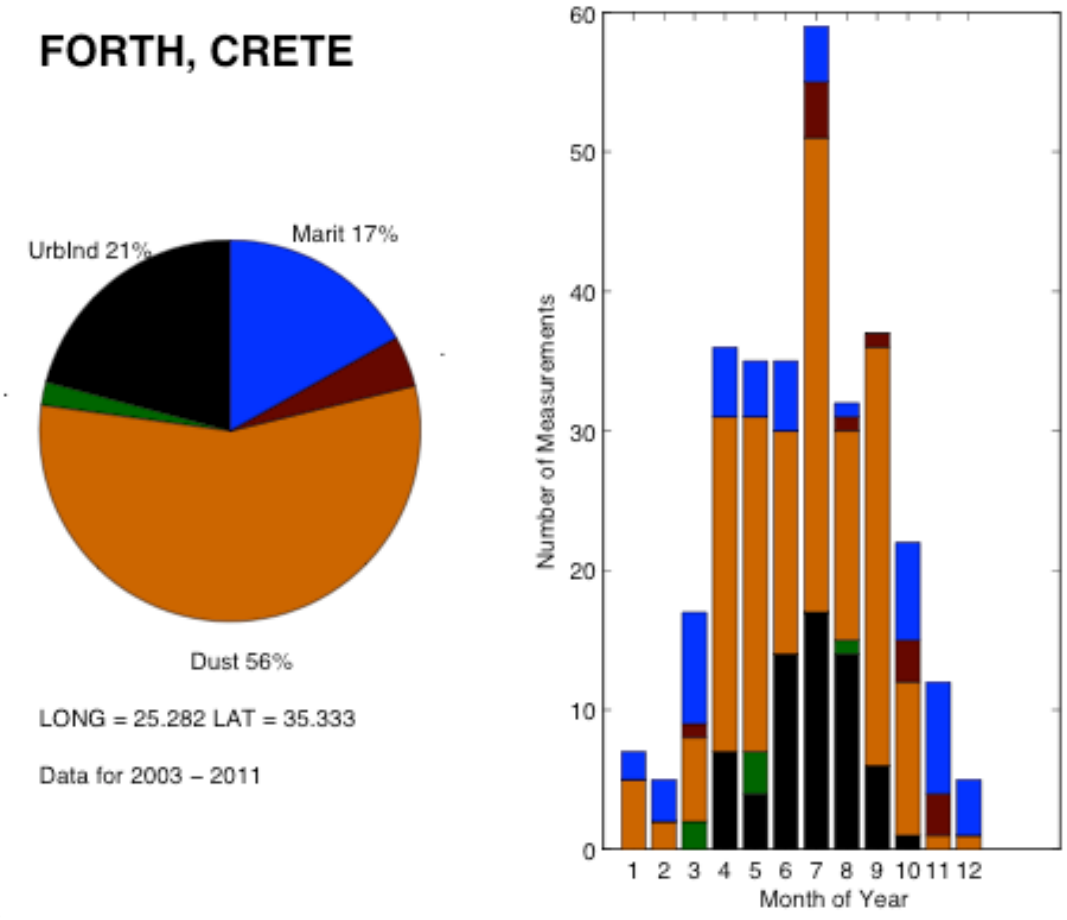
Crete, Greece (FORTH)



This instrument is on the north side of the island of Crete, approximately 500 meters from the Sea of Crete (south of the Aegean Sea). It is 12 km west of Heraklion, the main city of Crete, with a population of 180,000. The instrument is operated by Institute of Oceanography at the Hellenic Centre for Marine Research sponsored by the Foundation for Research and Technology – Hellas (FORTH). In the AERONET webpage this is listed as FORTH_CRETE.

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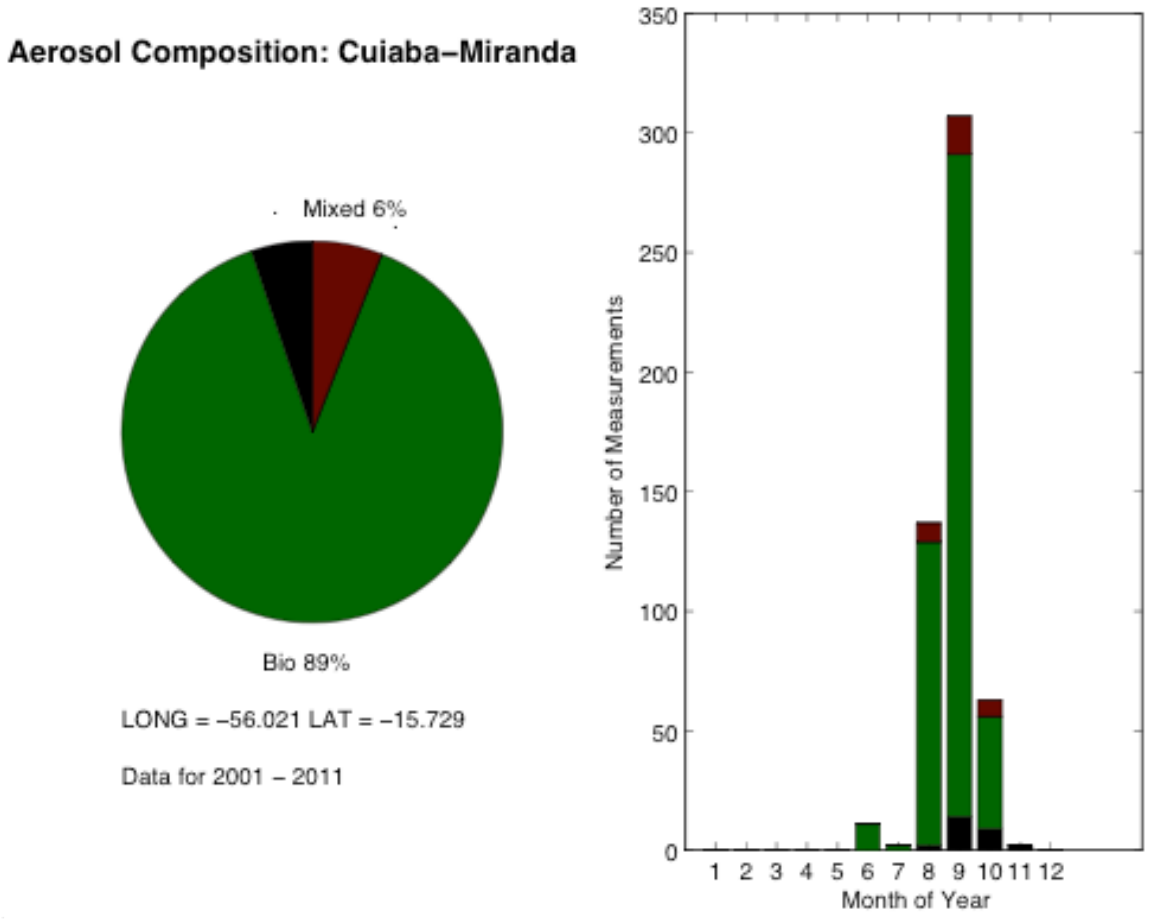
Cuiaba, Brazil



Cuiaba is a city in Western Brazil with a population of nearly one million. It claims to be located at the exact center of South America. The region is largely agricultural. The site is no longer active. In the AERONET website it is denoted CUIABA-MIRANDA.

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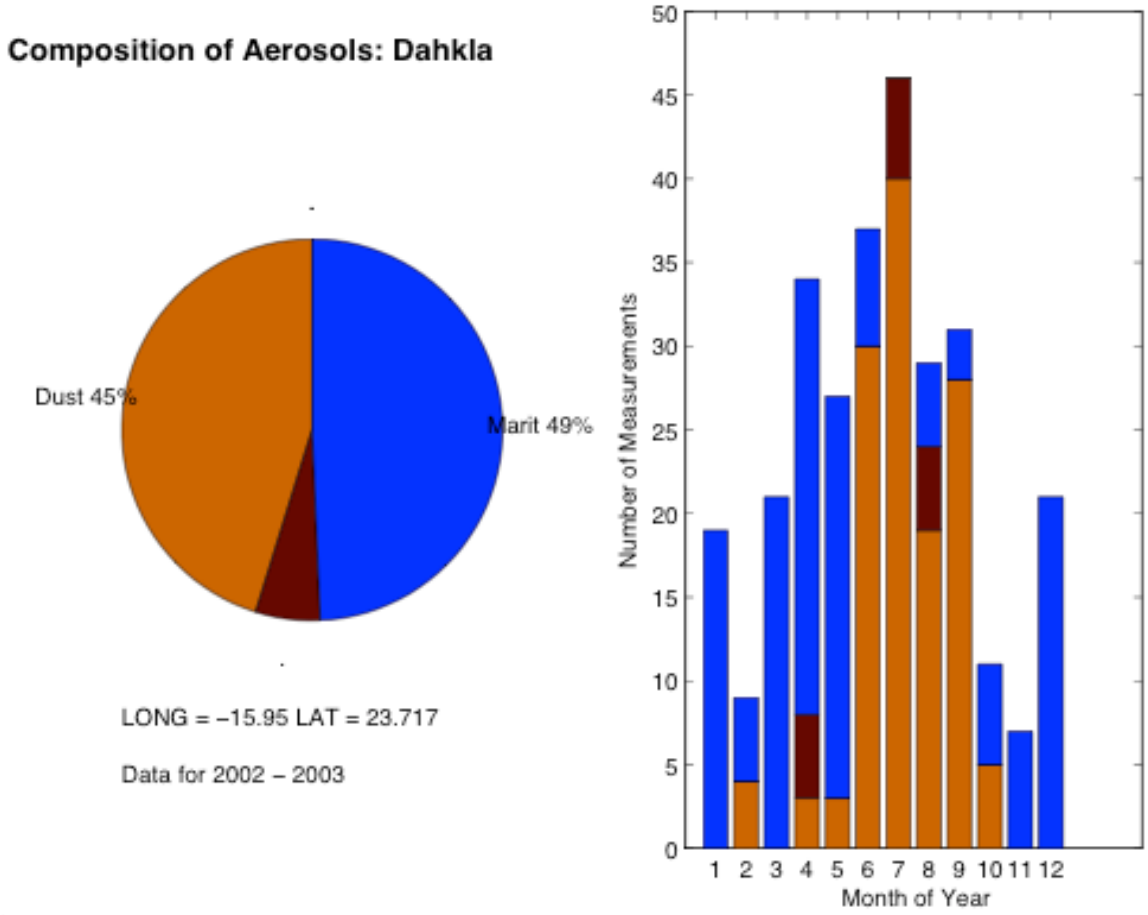
Dahkla, Morocco



Dahkla is located in the south of the Moroccan Sahara. Dakhla is on a narrow peninsula that extends along the northwestern coast of Africa into the Atlantic Ocean. The population is about 50,0000. The local aerosol is almost exclusively dust in the summer months and maritime otherwise. This location is on the far western edge of the Western Sahara desert; the vast region to the east is considered a source for dust contribution to the Saharan Air Layer.

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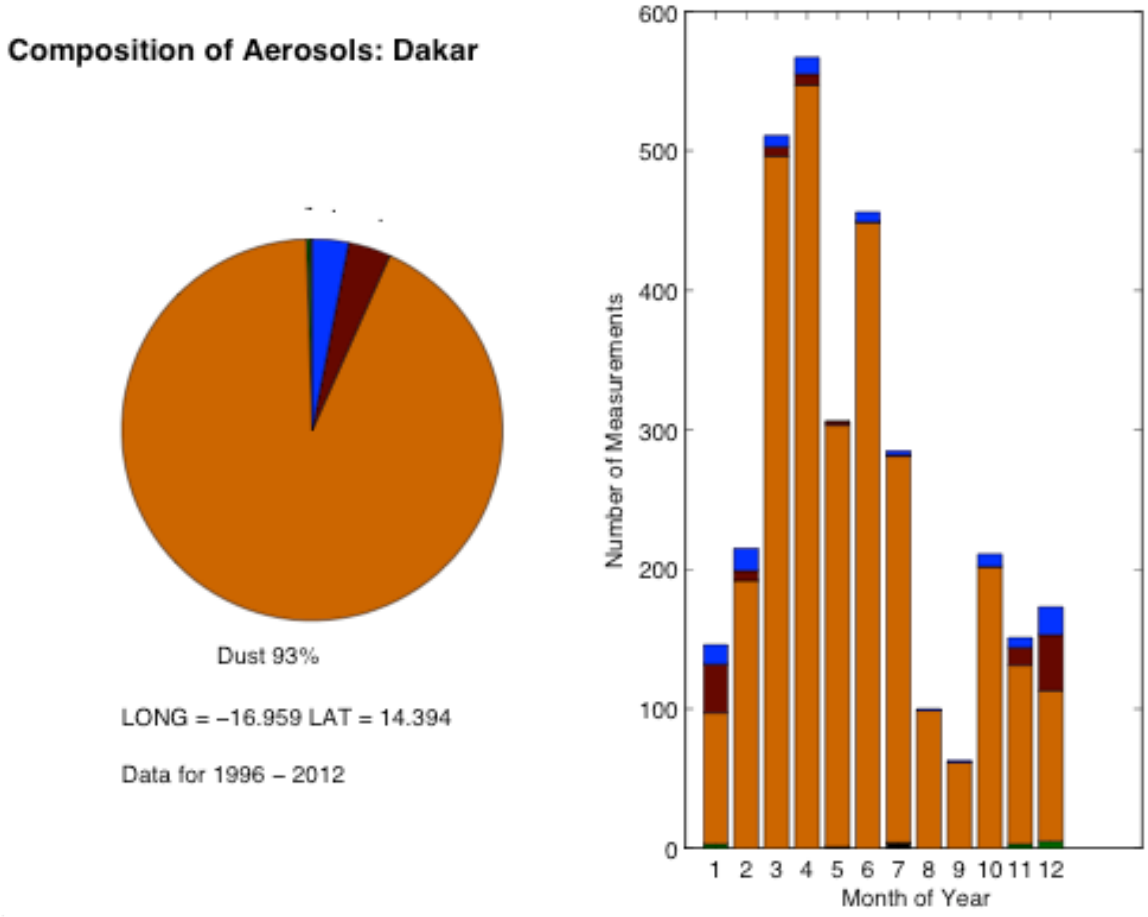
Dakar, Senegal



The sun photometer is actually at M'Bour a city of about 150,000 some 90 km south of Dakar. Although the sun photometer is on the seashore of the Atlantic Ocean, the number of maritime aerosol identifications is rather small. The region to the northeast is the vast Sahara - considered a source for dust uptake into the Saharan Air Layer, which contributes to easterly transport of dust aerosol toward Capo Verde.

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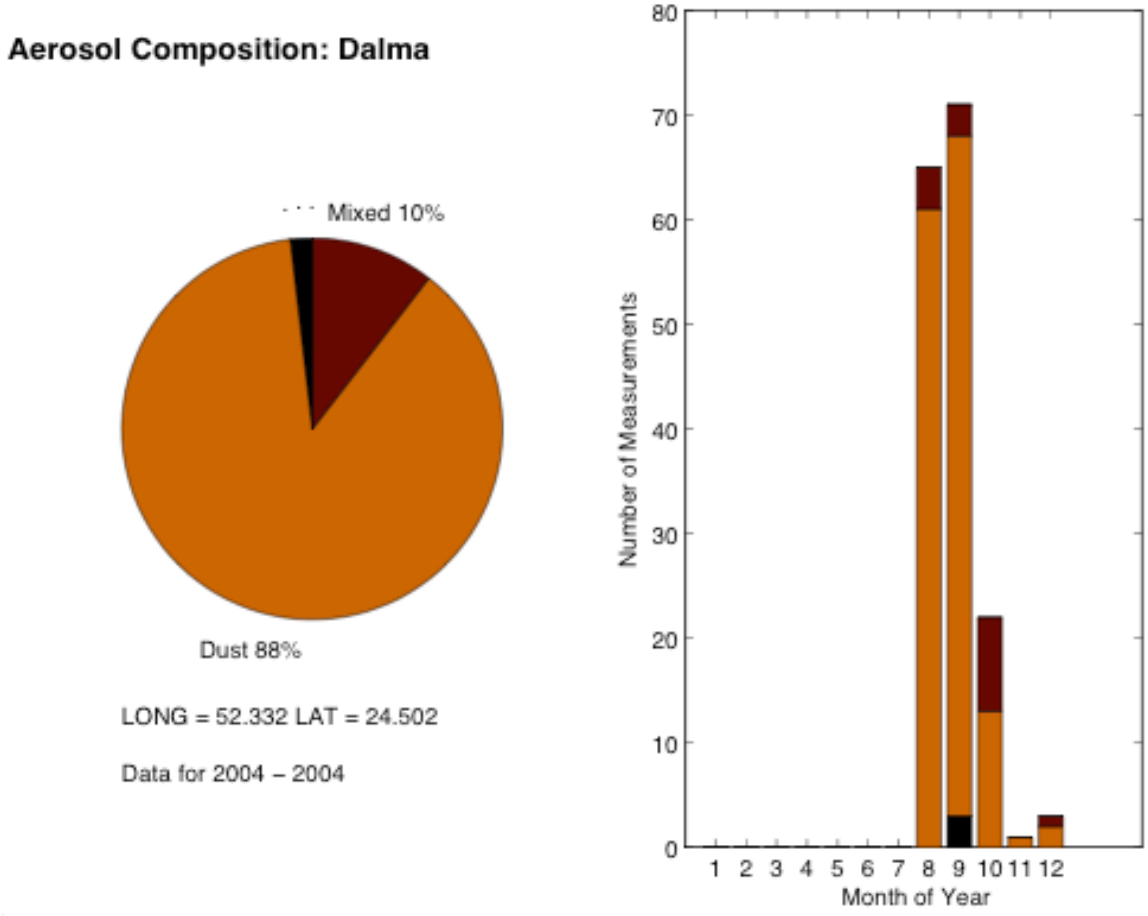
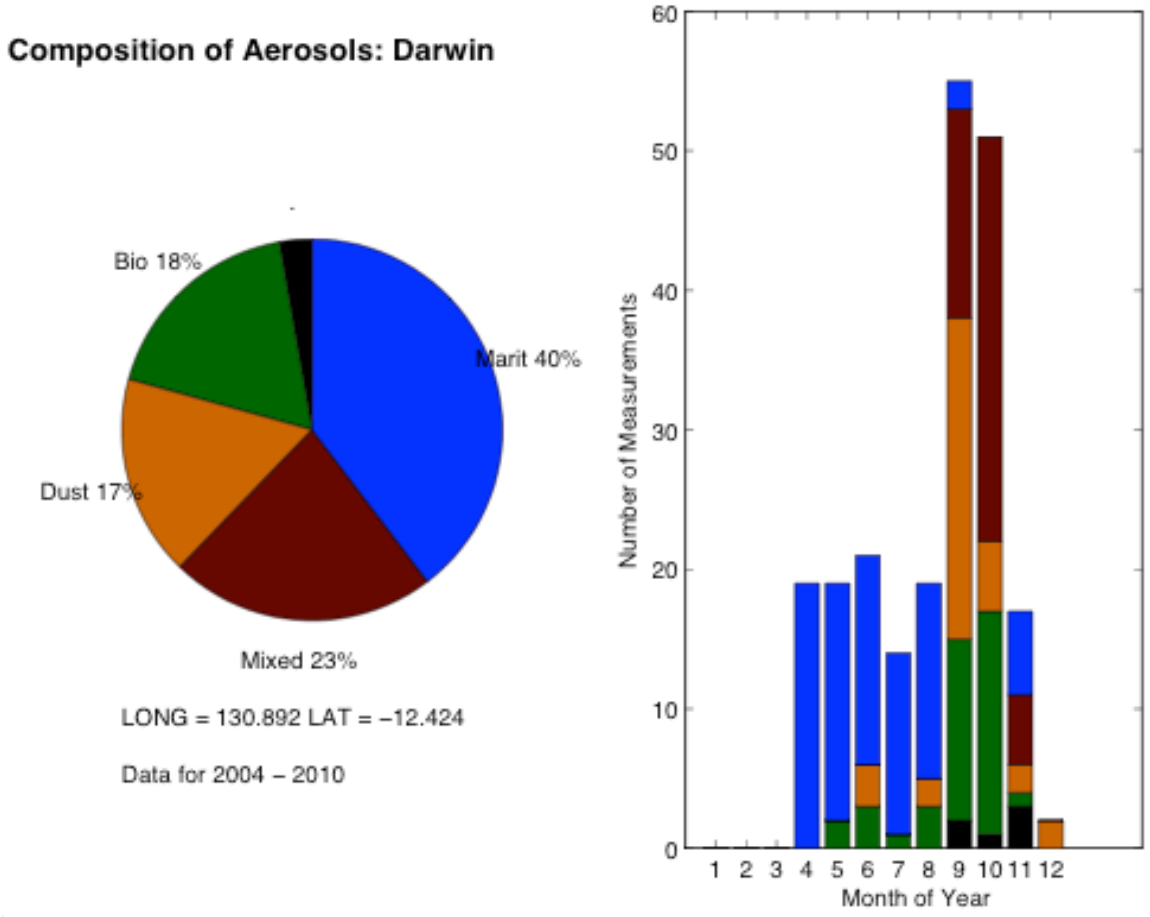
Dalma, UAE



Dalma, United Arab Emerites, is an island of the coast of Abu Dhabi in the Persian Gulf, about 30 km from the shore. The population of the island is about 10,000. Complete AERONET inversions were only carried out for the months of August to December, 2004.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008. Return to Table

Darwin, Australia



Darwin is the capital city of the Northern Territory of Australia, with a population of about 130,000. The instrument is located near Darwin International Airport and about 5 km from the shore of the Timor Sea. The instrument is deployed by the United States Department of Energy Atmospheric Radiation Measurement Program (ARM). The AERONET website lists this location as ARM_Darwin.

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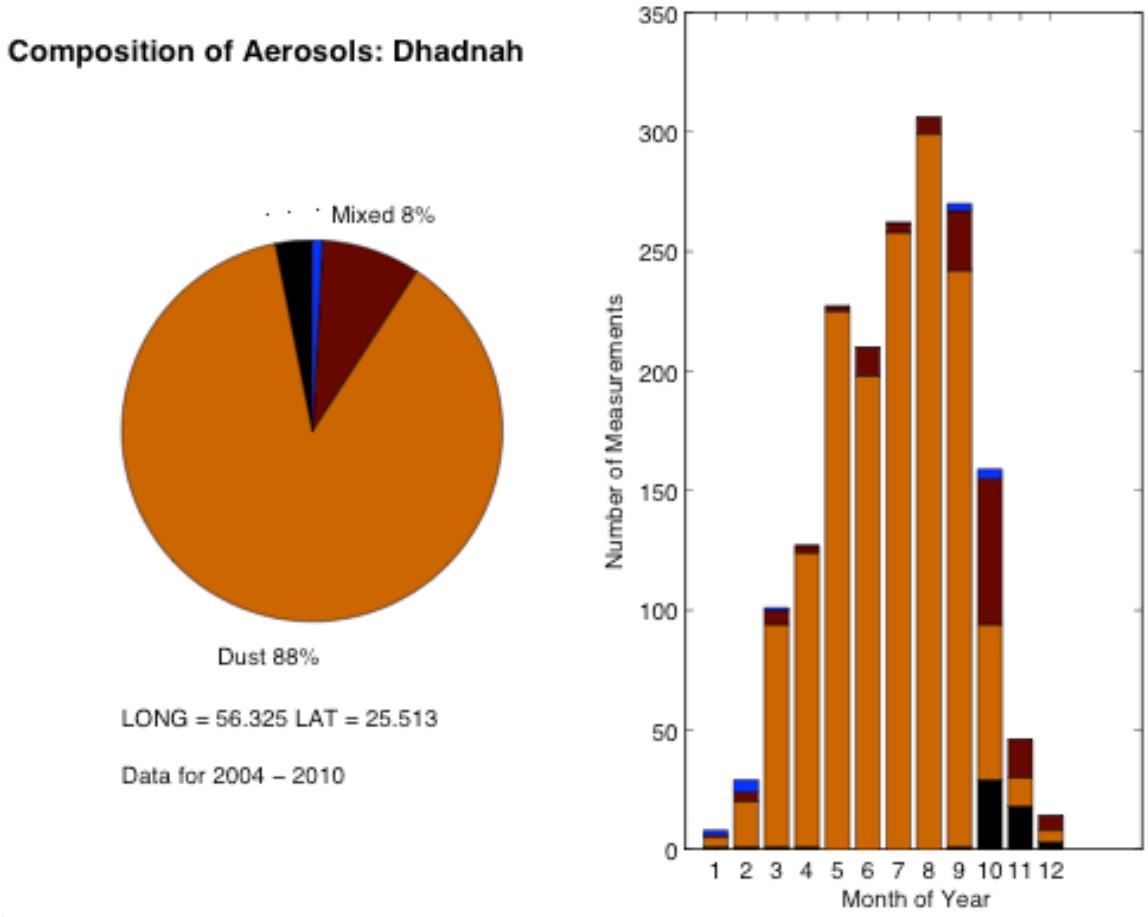
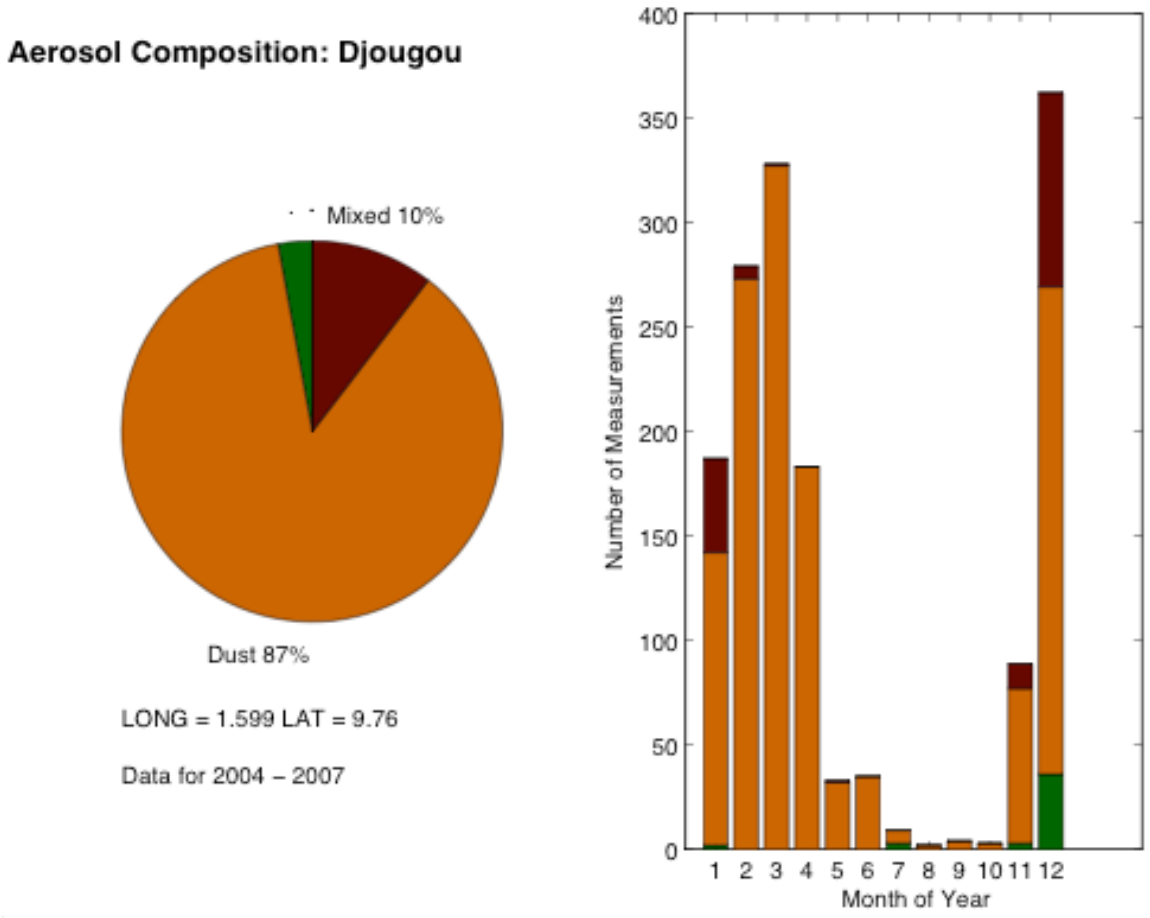
Dhadnah, UAE



Dhadnah (or Dadna) is a village in Fujairah in the UAE. It lies on the northeast side of the Arabian Peninsula, facing the Gulf of Oman. The aerosol is almost exclusively of a dust type throughout the year. There is no local industry.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008. Return to Table

Djougou, Benin



Djougou is a city of about 180,000 in northern Benin, in western Africa. The instrument is located about 10 km northwest of Djougou. The region is arid and lies about 200 km from the southern edge of the Sahara Desert.

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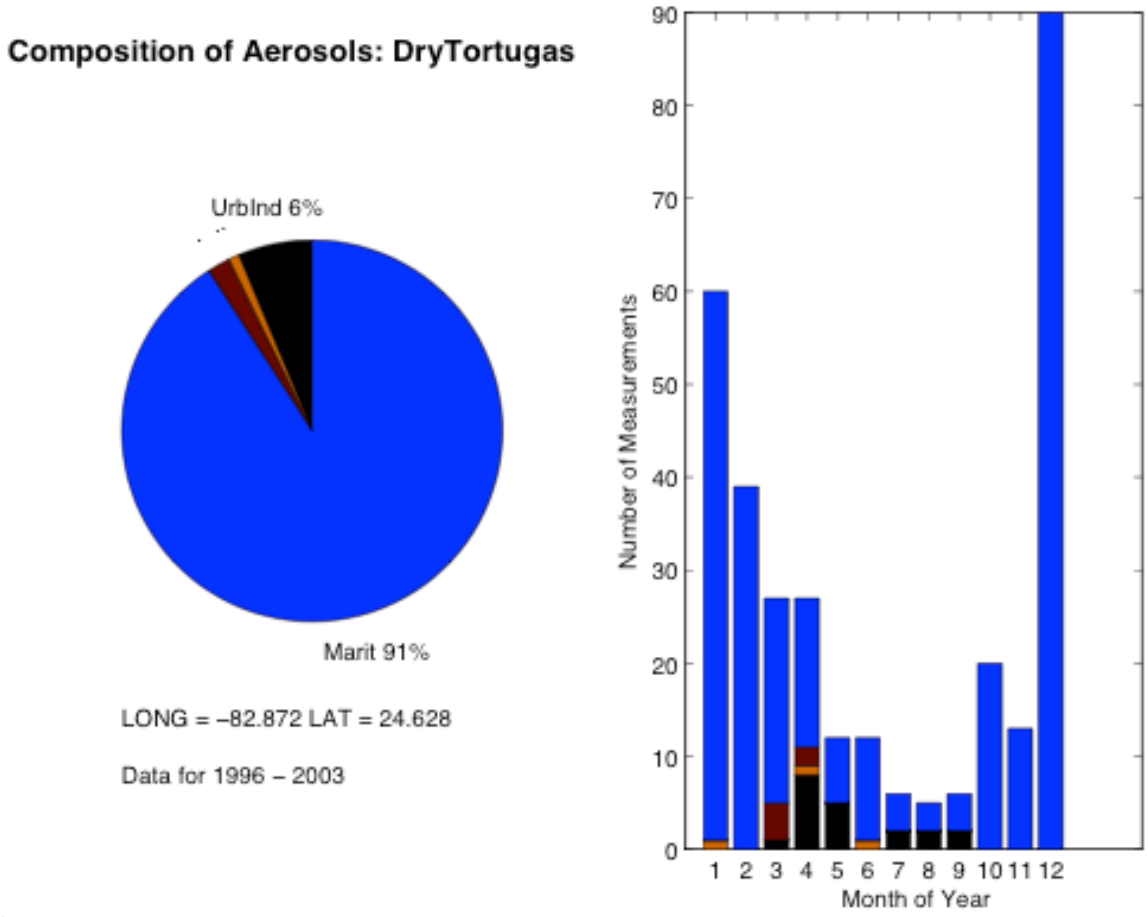
Dry Tortugas, Florida, USA



The Dry Tortugas form a group of islands located at the end of the Florida Keys, about 100 km beyond Key West. The instrument is located near the shore, on a tiny island.

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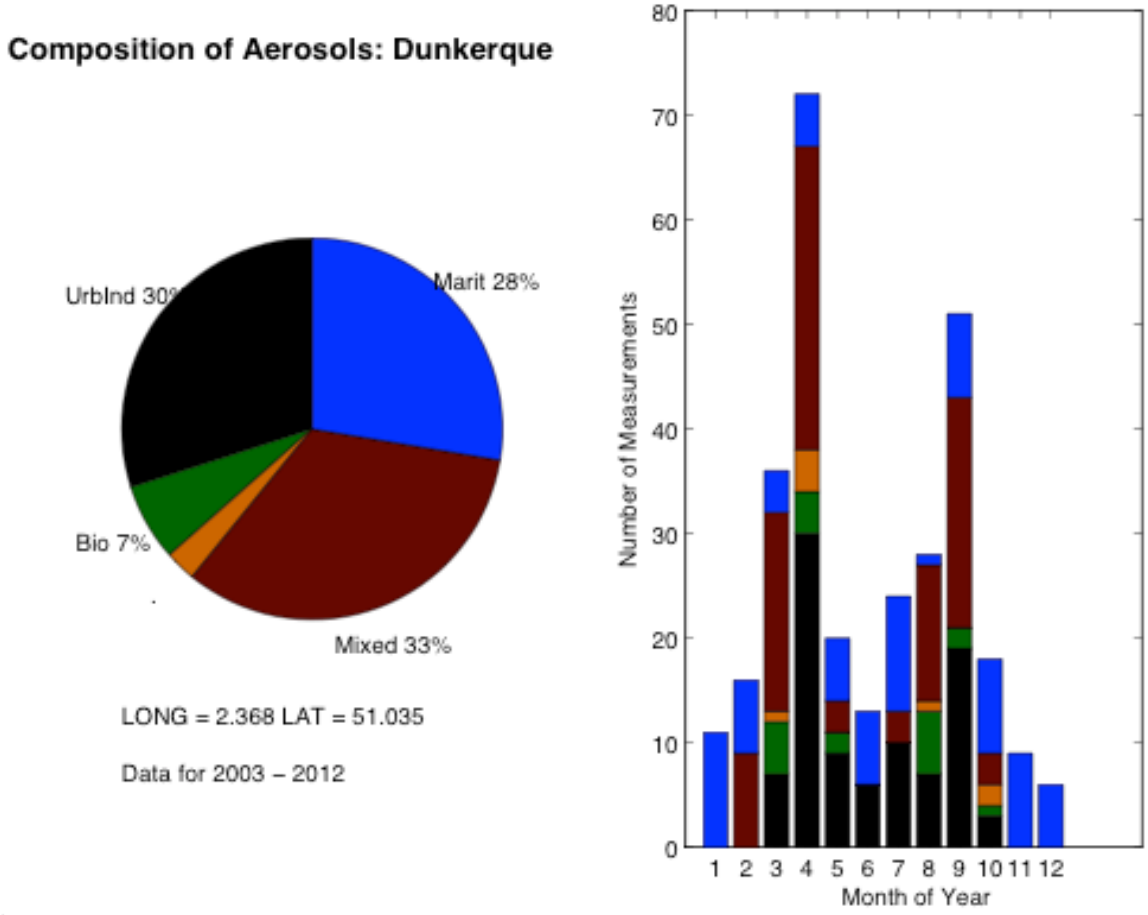
Dunkerque, France



Dunkerque is a city of about 80,000 in a metropolitan region of about 270,000. It is located on the coast of Northern France, near the Belgian border. The instrument is located near the harbor. Its climate is classified as "marine west coast." It is an important port city and an industrial center depending on steel, food processing, and chemical industries.

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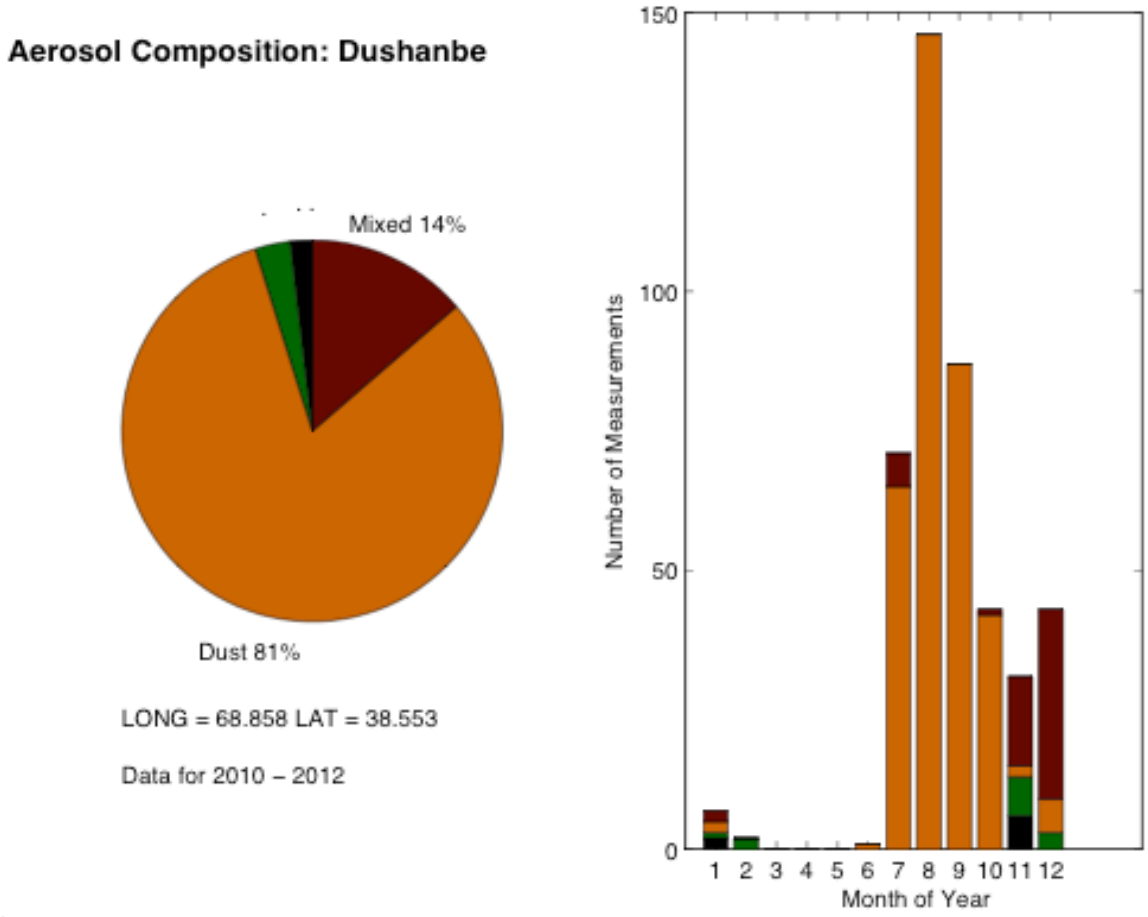
Dushanbe, Tajikistan



The sun photometer is located near the eastern edge of the city of Dushanbe (population 680,000). Tajikistan is a small landlocked country whose economy is largely agricultural. The climate of Tajikistan is described as semi-arid with some desert regions.

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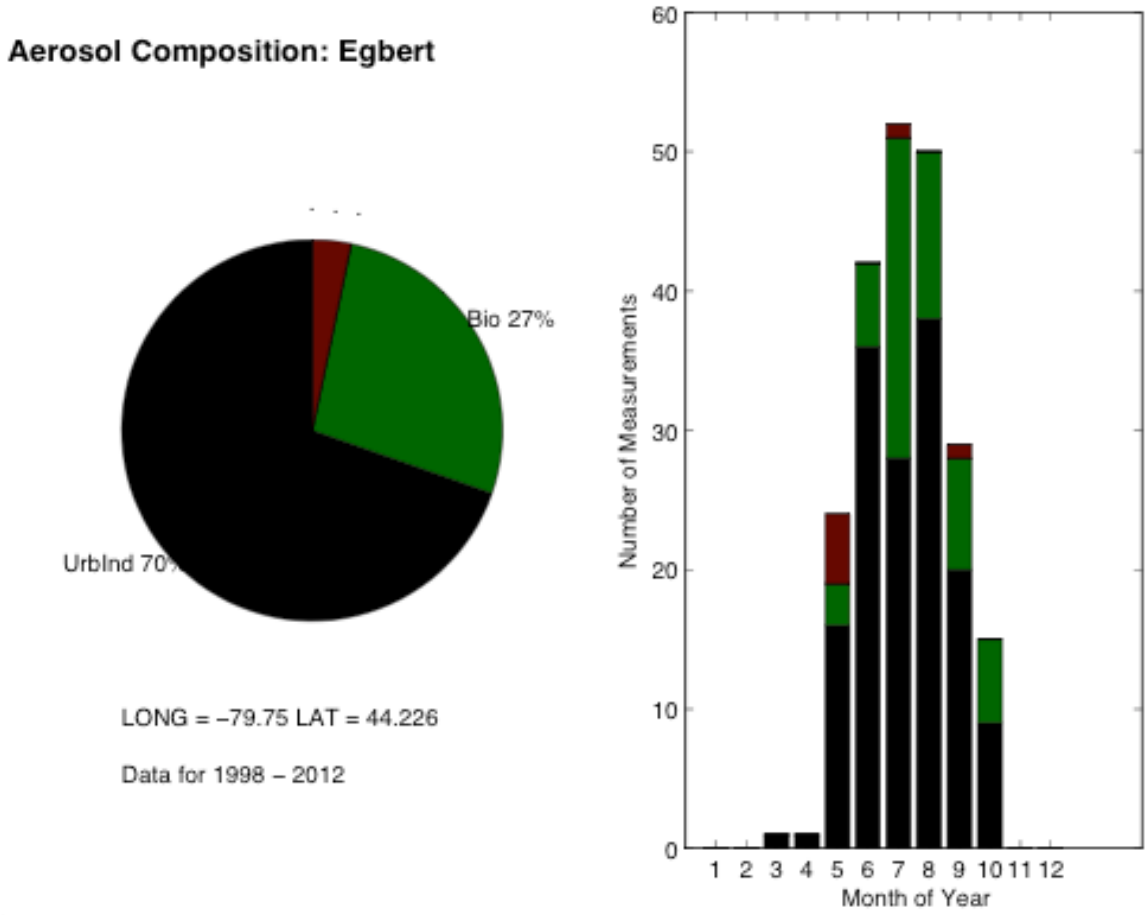
Egbert, Canada



This instrument is located at Environment Canada's CARE Facility in Egbert. The Centre for Atmospheric Experiments (CARE) was designed as an integrated multi-disciplinary facility to promote atmospheric research. (It is also classified as a 'CORE' station for meteorological, particulate matter and trace gas measurements.) Egbert is a small rural village near New Tecumseh, Ontario, between Lake Ontario and Georgian Bay of Lake Huron. The metropolitan area of Toronto lies about 80 km to the south.

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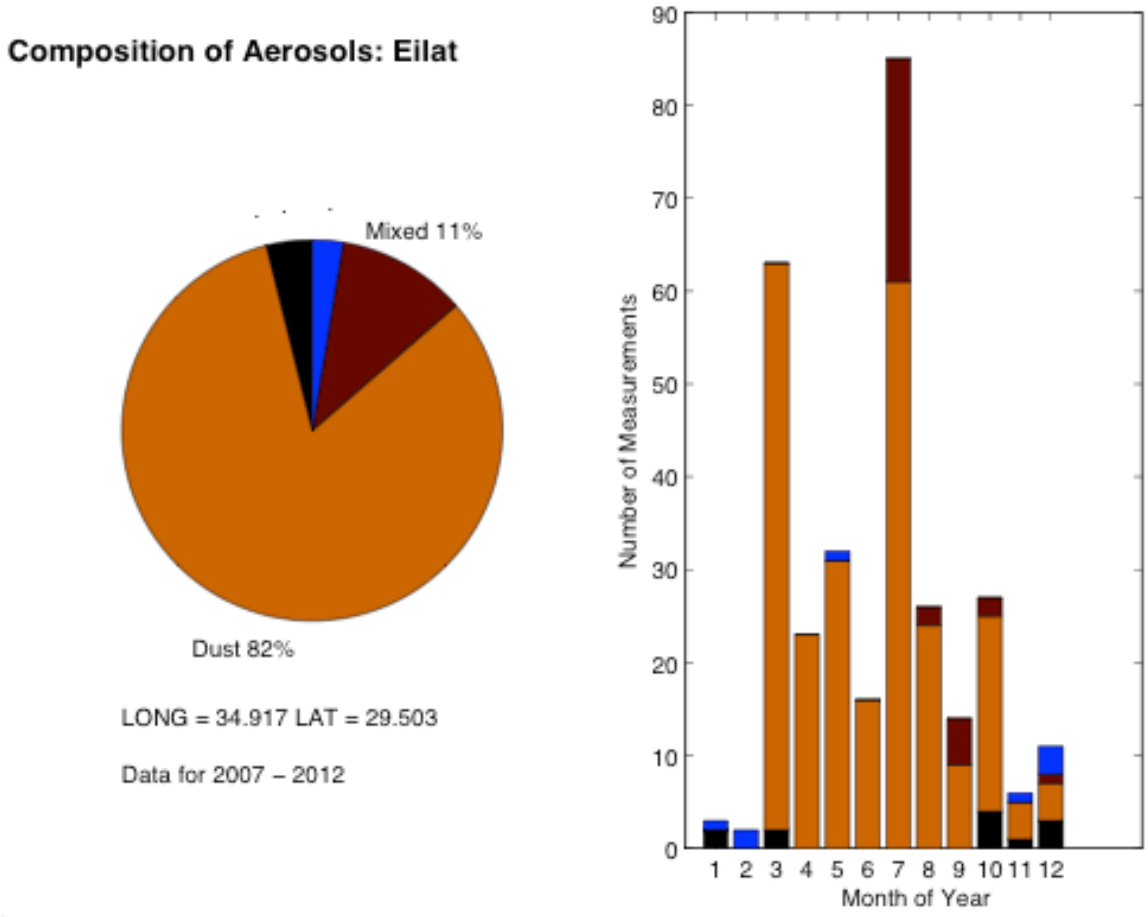
Eilat, Israel



The instrument is located on the Israel seashore of the gulf of Aqaba at the northern tip of the Red Sea. It is about 5 km south of Israel's southernmost city, Eilat, a city of 48,000. The area is largely a tourist destination with a sizeable shipping port.

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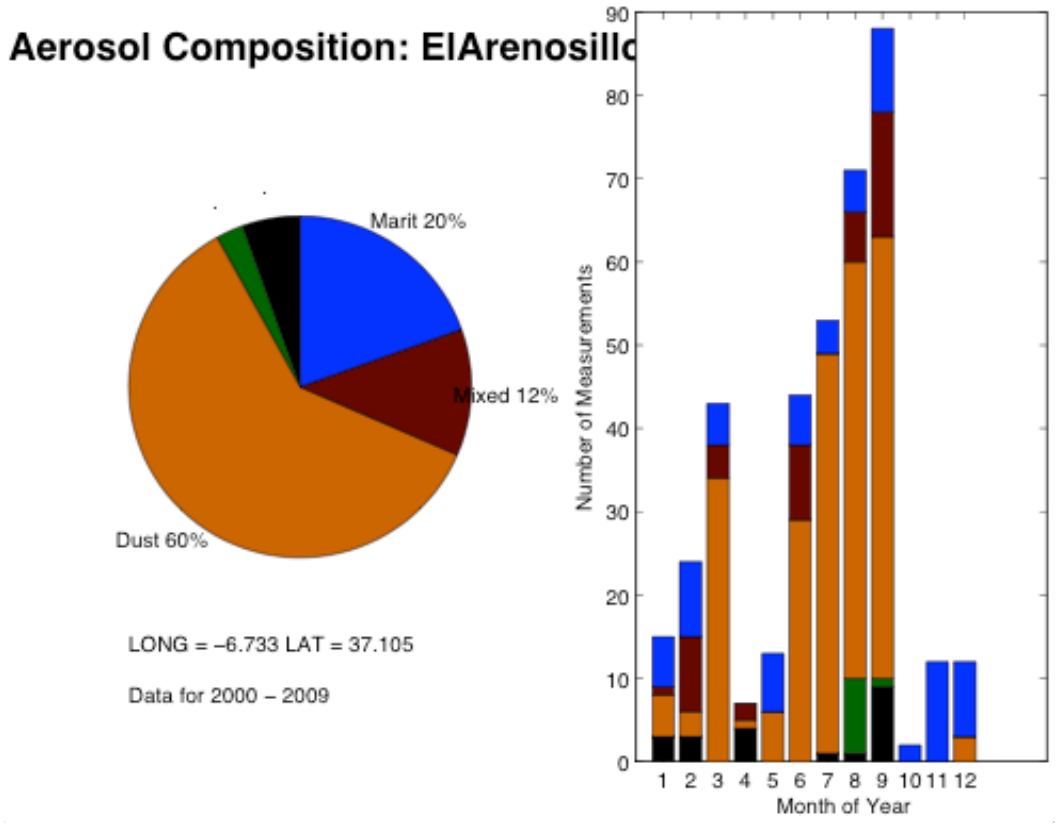
El Arenosillo, Spain



The El Arenosillo instrument is surrounded by a pine forest within Spain's *Donana National Park* (a protected coastal reserve). The location is on the Gulf of Cadiz in Spain's southern Atlantic coast. The instrument is less than a kilometer from the shore of the Atlantic Ocean.

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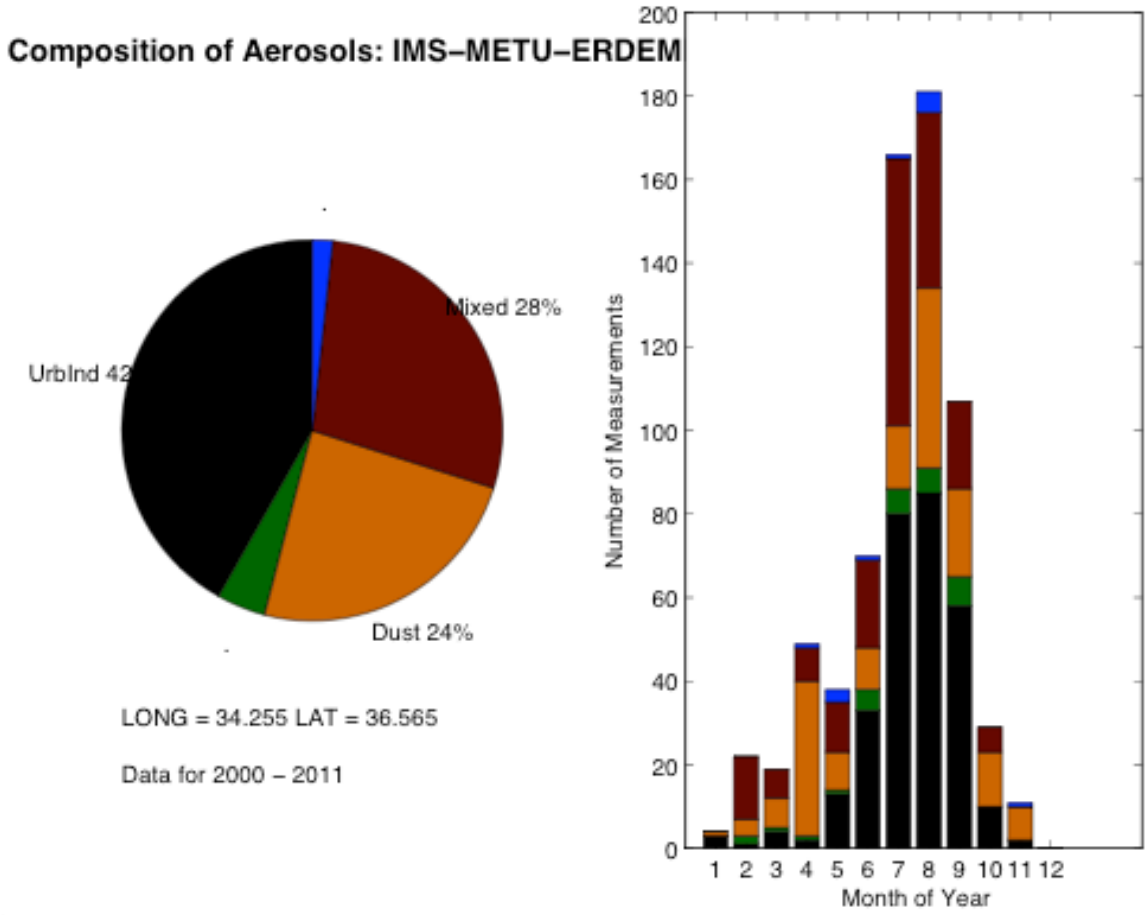
Erdemli, (IMS-METU), Turkey



The AERONET site is located near the town of Erdemli. Erdemli is a small town on the shore of the Mediterranean Sea located on the southeastern coast of Turkey. The AERONET designation for this site is IMS-METU-ERDEMLI.

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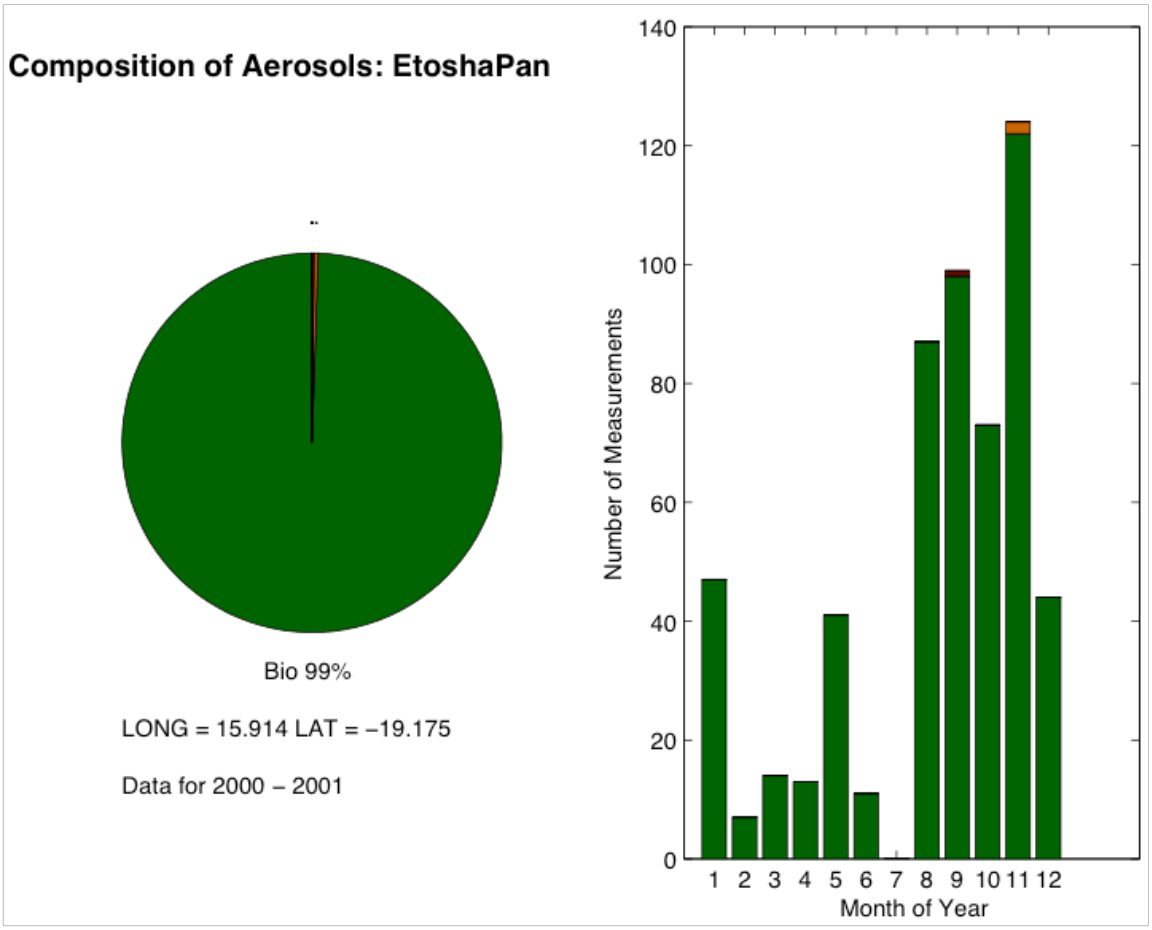
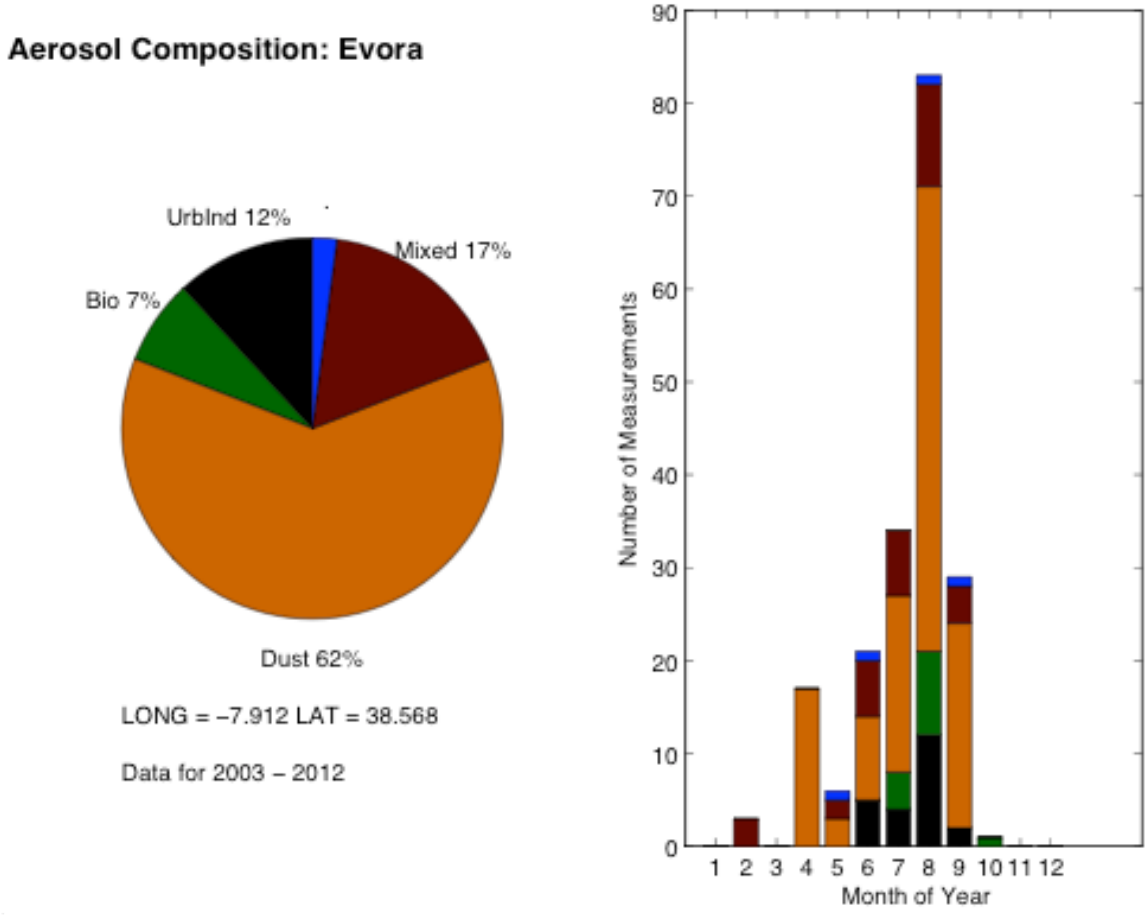
Etosha Pan, Namibia



Etosha Pan is a large salt flat, formed from a 120 km long dry lake bed in the Kalahari region of northeastern Namibia about 120 km south of the Angolan border. The instrument was located in the Okaukuejo Camp, some 2 km outside the southern Etosha National Park. The region is sparsely inhabited. The surrounding area is covered mainly with Savannah grasslands, over salt-encrusted soils.

Return to Table

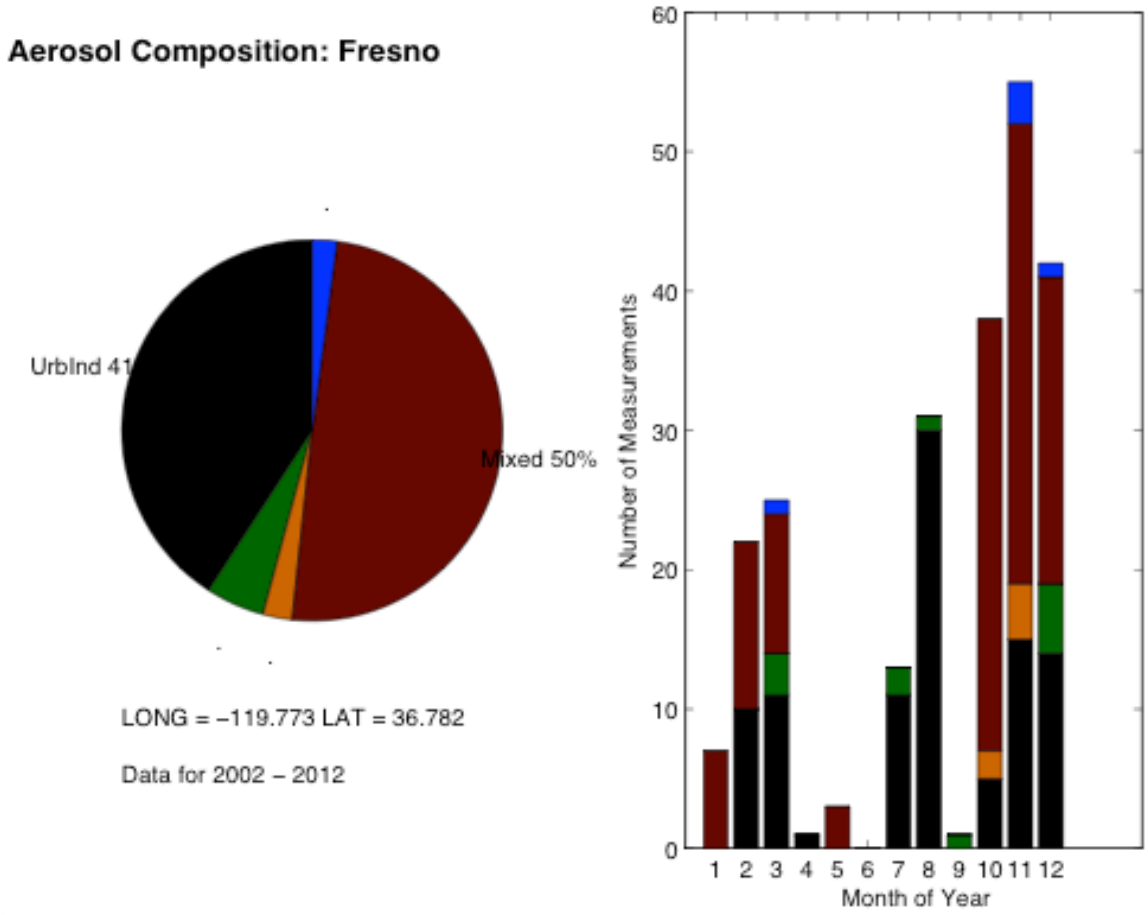
Evora, Portugal



This site is located in the southwestern part of the Iberian Peninsula. The city has about 55,000 inhabitants, while the surrounding area is rural. The instrument is over 100 km inland from the Atlantic coast. There are no local sources of industrial pollutants.

Return to Table

Fresno, California, USA



This instrument is in an urban area of downtown Fresno, California. The surrounding metropolitan area population is approximately 1 million. Fresno lies in the Great Central Valley of California – a vast agricultural region. The Central Valley of California regularly experiences a mix of rural and urban pollutants. The area frequently records high concentrations of air-borne pollutants.

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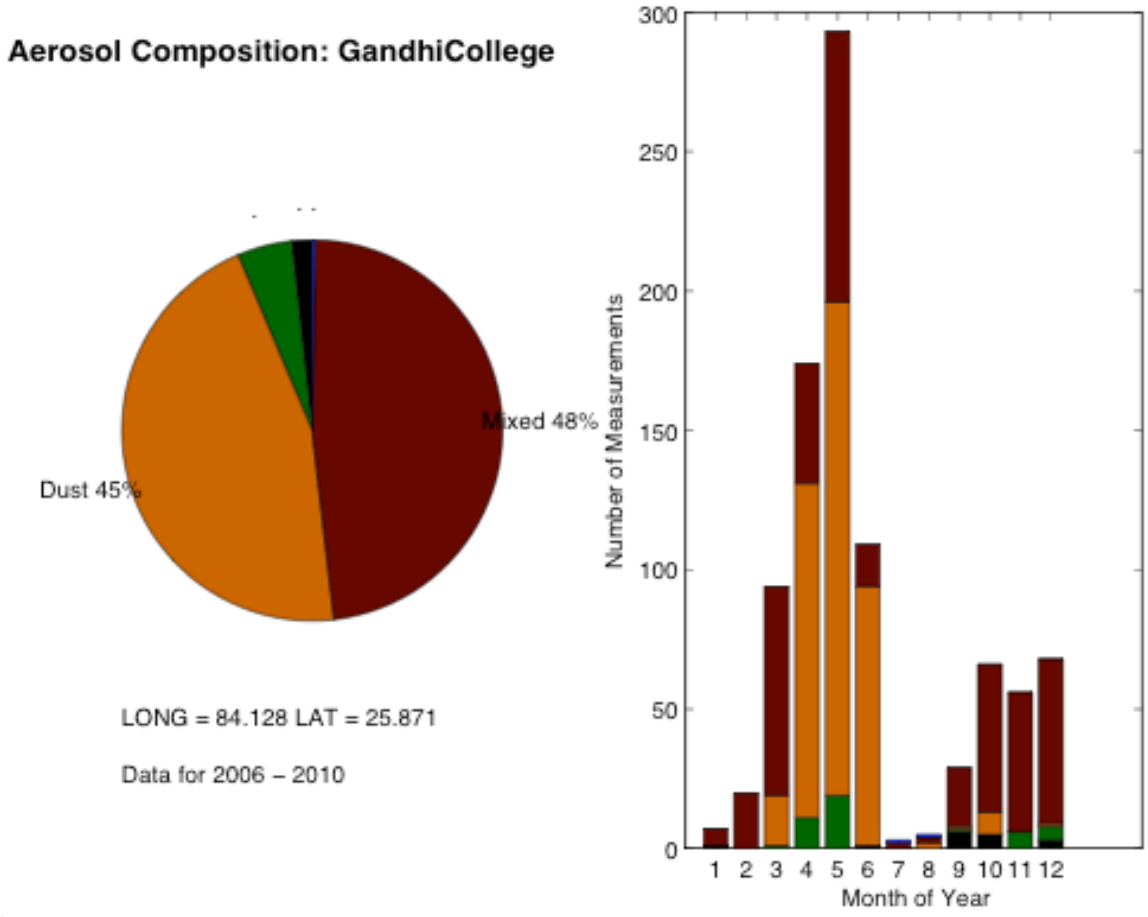
Gandhi College, India



Gandhi College is in northeastern India. The instrument is located in the village of Mirdha approximately 10 km from the city of Ballia, which has a population of 3.2 million. The surrounding area is exclusively agricultural. Both food crops and cattle are prevalent regional industries. The site is south of the Himalayas and East of the Thar Desert.

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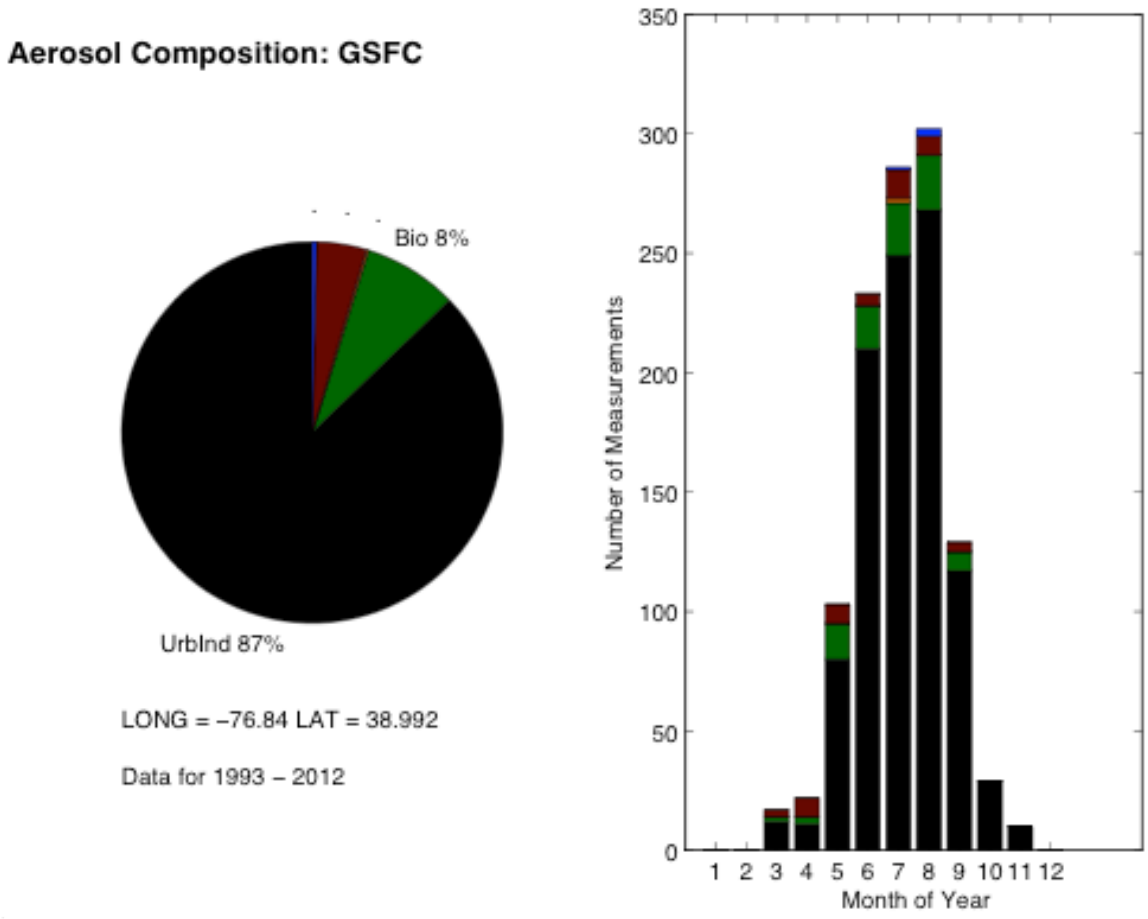
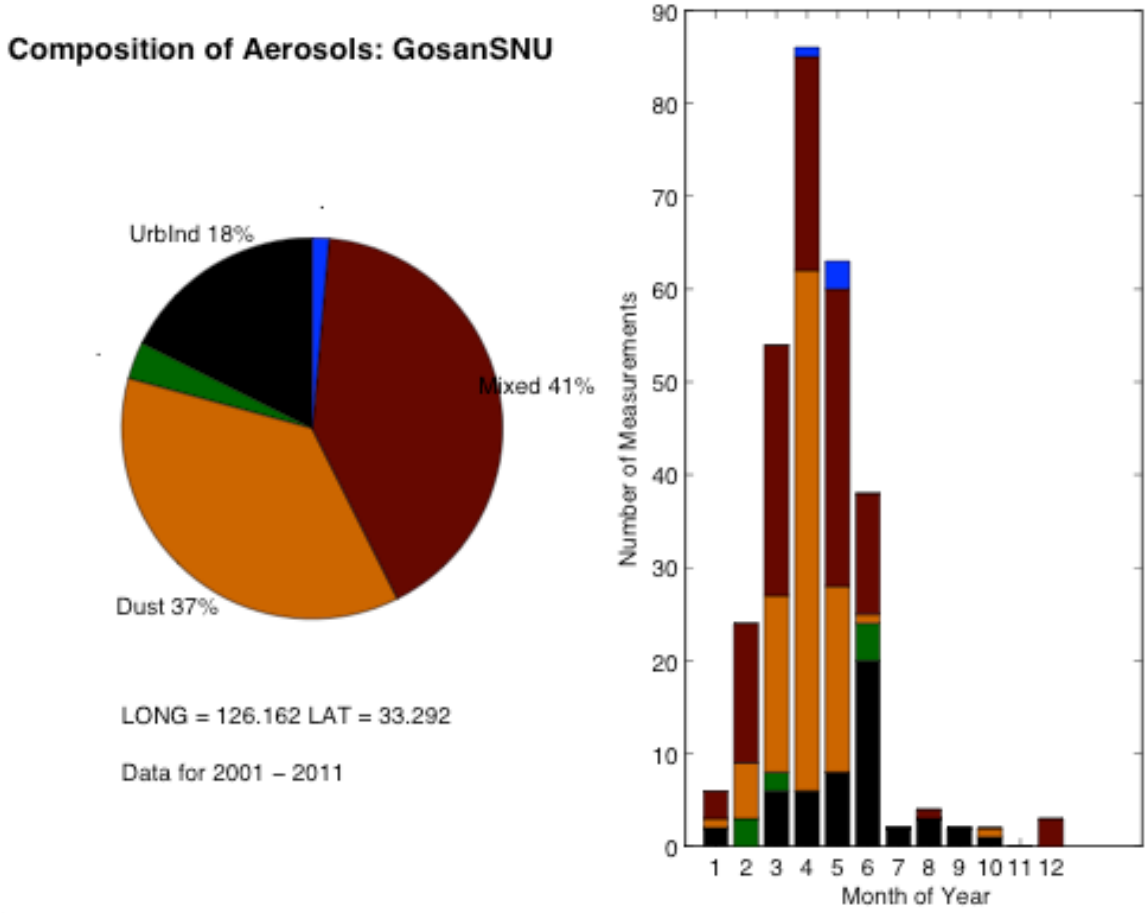
Goddard Space Flight Center (GSFC), Washington, D.C., USA



The site is at NASA's Goddard Space Flight Center, and is listed as GSFC in the AERONET site index. It is located in Greenbelt Maryland, about 20 km north east of Washington D. C., and is considered part of the Washington D.C. metropolitan area, an urban industrial region.

Return to Table

Gosan (SNU), South Korea



This site is on the western shore of Jeju island, approximately 100 km off the southern end of the Korean Peninsula, facing the East China Sea. The instrument is operated by the Seoul National University and is listed in the AERONET sites as Gosan_SNU. The island has a humid subtropical climate, warmer than that of mainland Korea. Tourism, agriculture and fishing are the major industries of the island. There are about 500,000 permanent island residents. This site also participates in WMO GAWSIS2.2 (see http://gaw.empa.ch/gawsis/reports.asp?StationID=-739518983), and the AD-NET (Asian Dust and Lidar Aerosol Observation Network at http://www-lidar.nies.go.jp/AD-Net/.

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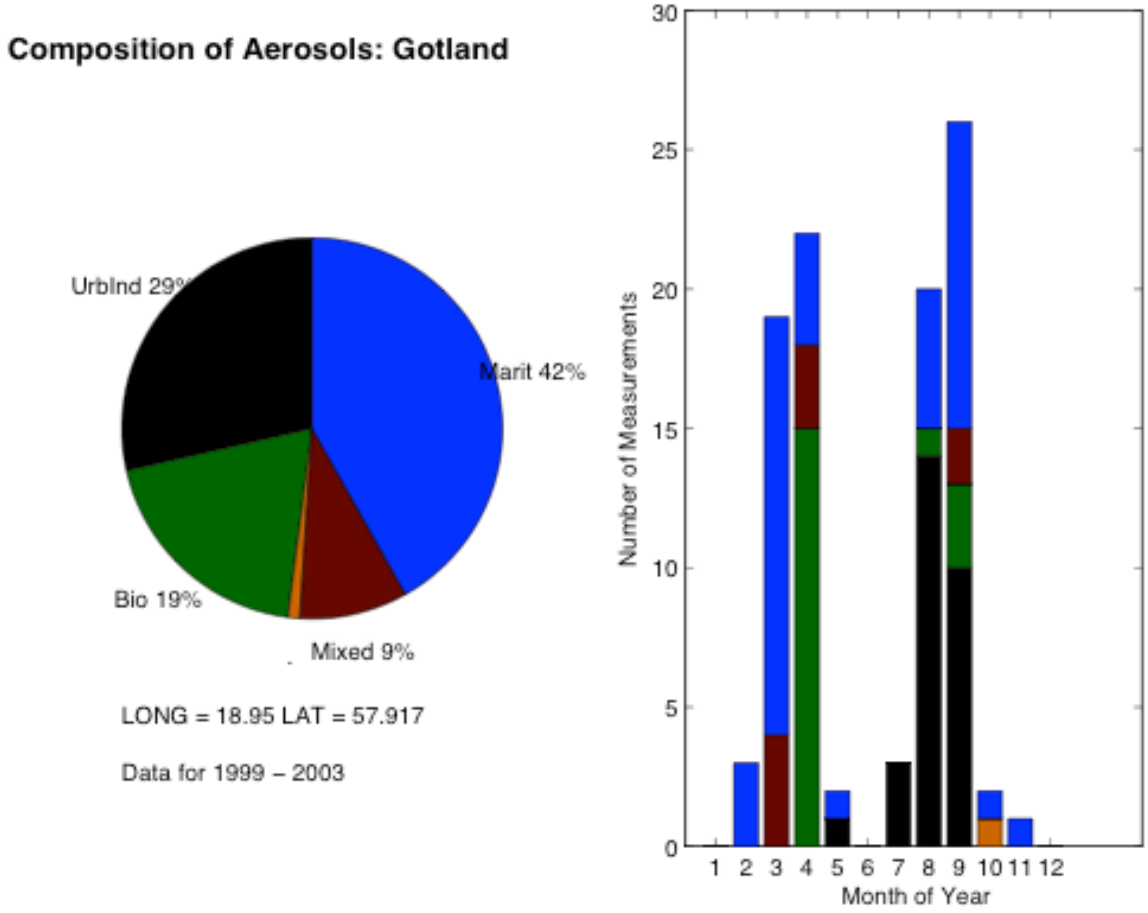
Gotland, Sweden



This site is on Gotland Island in the Baltic Sea some 65 km east of the coast of mainland Sweden. The population of the island is about 60,000. The instrument is located in a rural area on the north end of the island less than 200 m from the shore. There is little industry on the island, its economy being based on tourism, agriculture, and concrete production.

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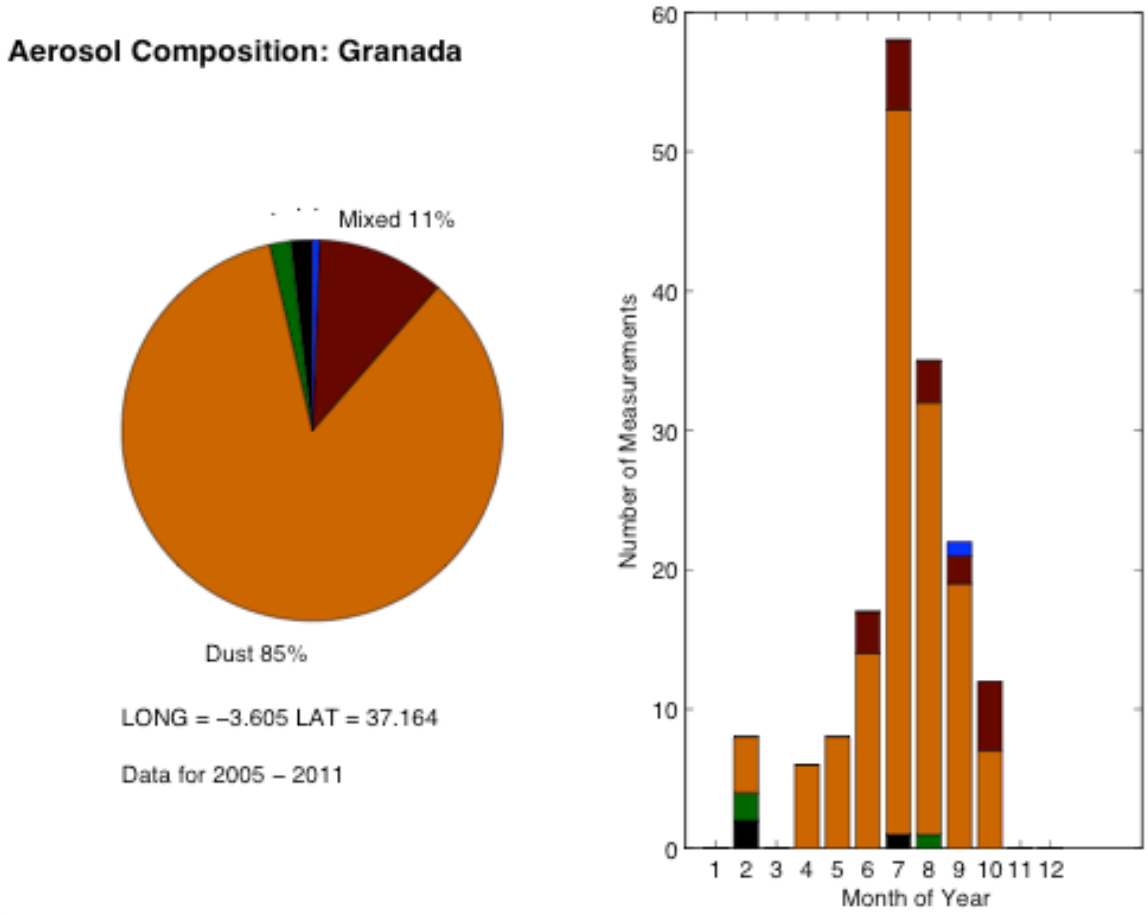
Granada, Spain



The instrument is located at the Centro Anadaluz de Medio Ambiente (Andalusian Center for Environmental Studies) south of the city of Granada. Granada is a non-industrialized, medium size city with an urban area population of some 475,000 people. To the east lies the southern end of the Sierra Nevada mountains, and to the west is a largely under populated hilly region. The climate of Granada is semi-arid.

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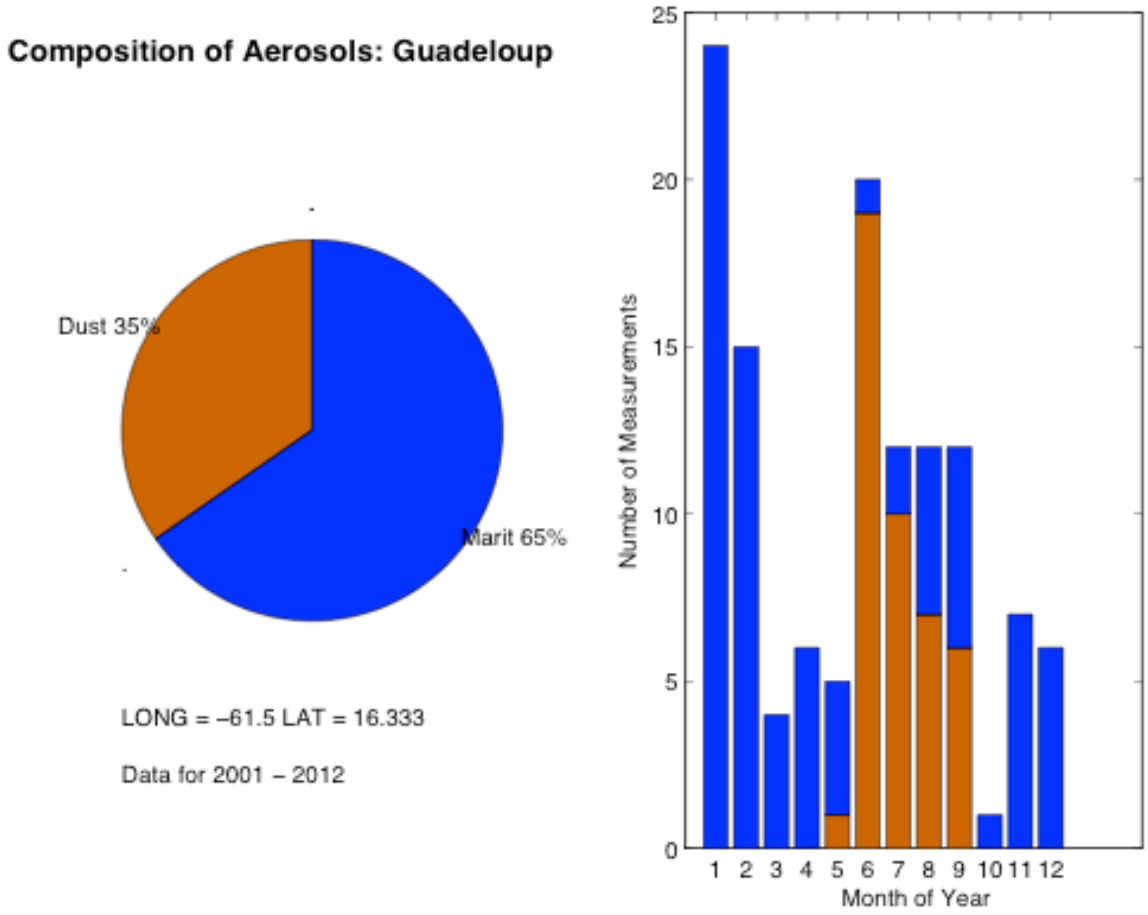
Guadeloupe, France



Guadeloupe is a group of islands in the Lesser Antilles and is an overseas region of France. The sun photometer is located on the north central part of the Caribbean island of Grande-Terre, less than 2 km from the shore. There is no major manufacturing industrial activity, only agriculture and tourism. The resident population of the set of islands is about 400,000. The AERONET website lists this location as Guadeloup. It is believed that the dust component (in the summer months) is primarily of African origin.

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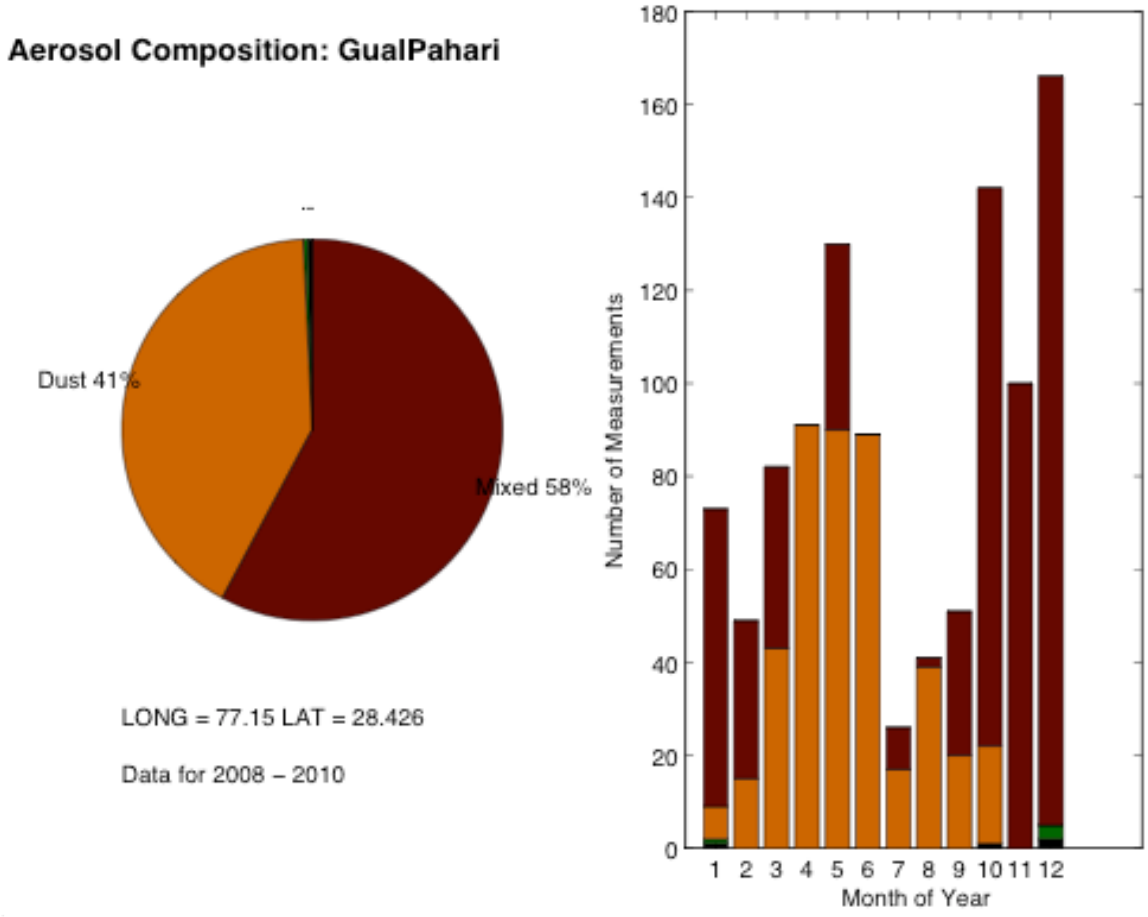
Gual Pahari, India



Gual Pahari is a small urban site surrounded by farms and fields. The instrument is located about 25 km south of New Delhi with a metropolitan population of some 22 million. The region has a humid sub-tropical climate, with high variation between summer and winter in terms of both temperature and rainfall.

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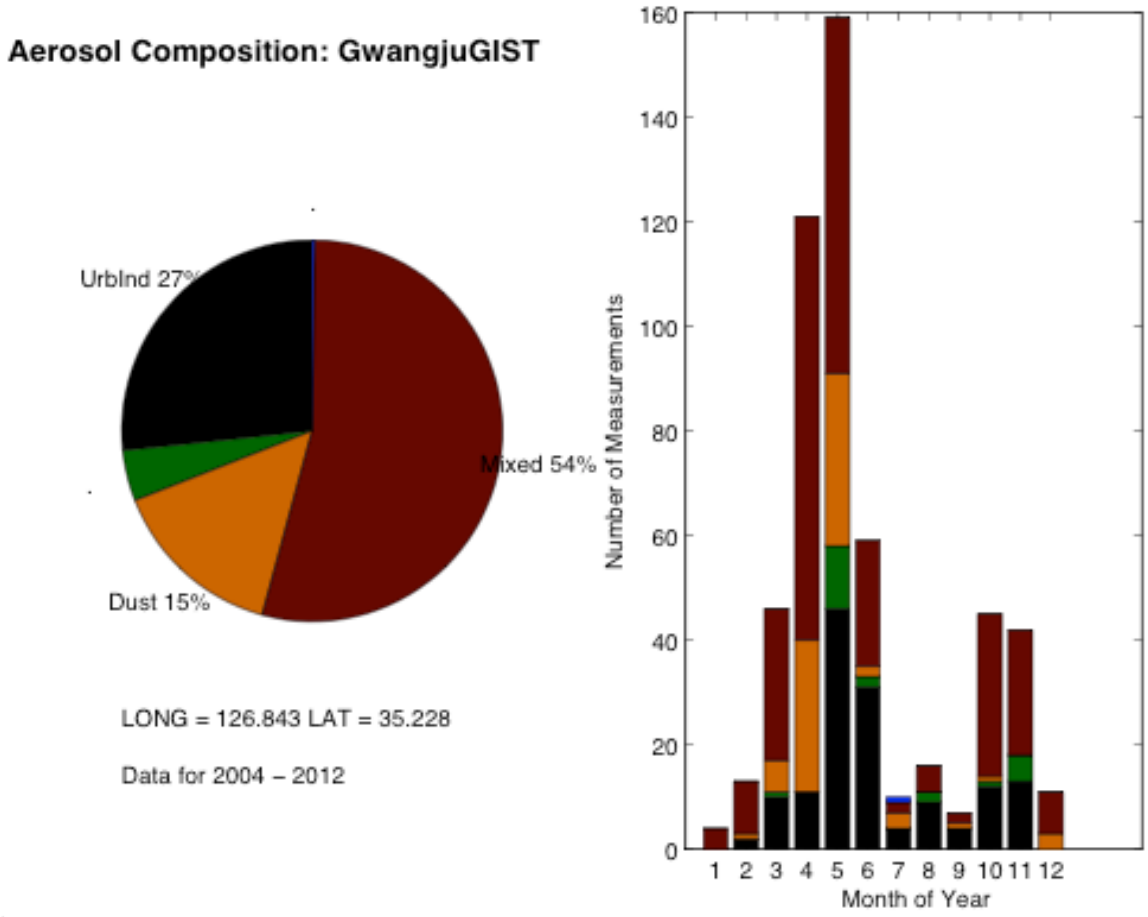
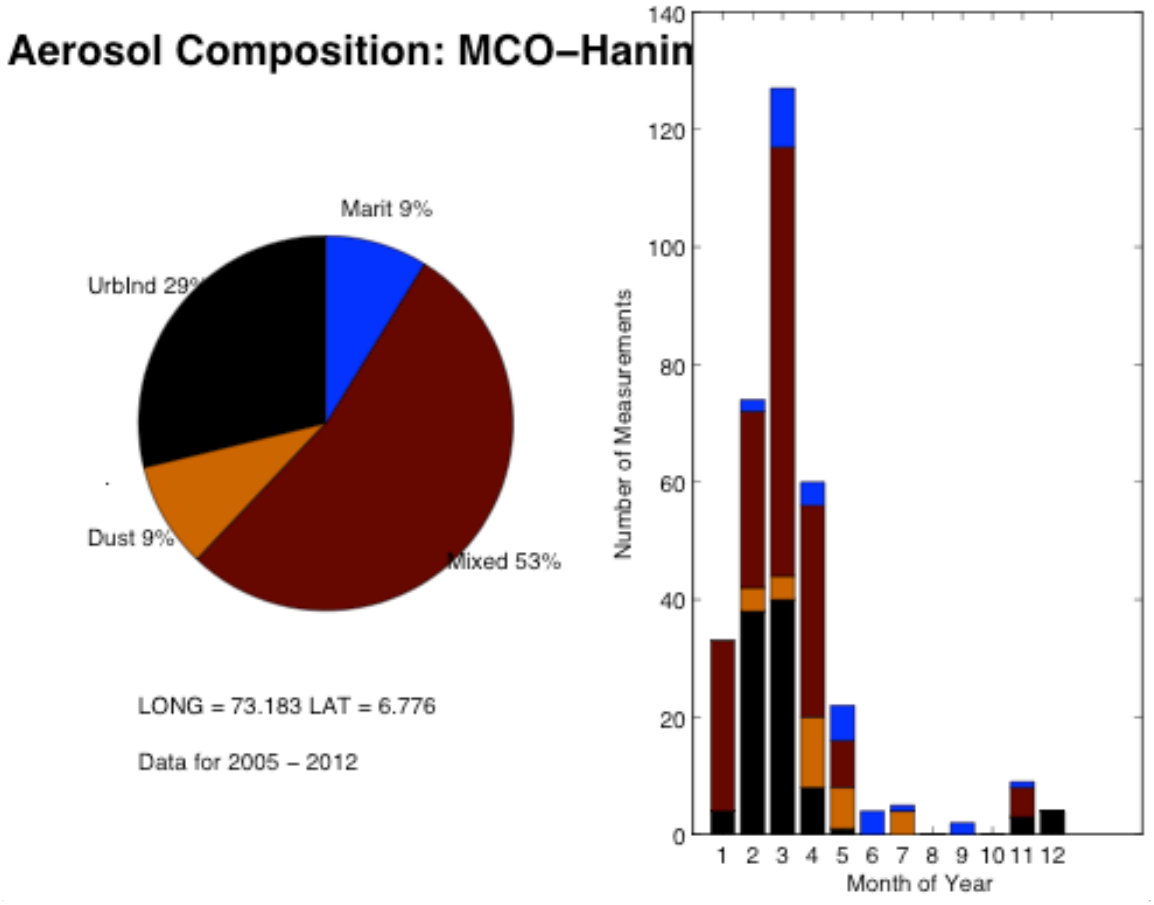
Gwangju, South Korea



The AERONET site is located at the Kwangju Institute of Science and Technology (K-JIST). The instrument is located at the northern outskirts of Gwangju (Kwangju), in the southeastern portion of the Korean peninsula. Gwangju, a transportation and industrial center, is a city of 1.47 million residents in South Korea. Most of the local manufacturing is related to automobile production and textiles, while there is some agricultural food processing as well. The AERONET site description states that the instrument is located at Gwangju_K-JIST.

Return to Table

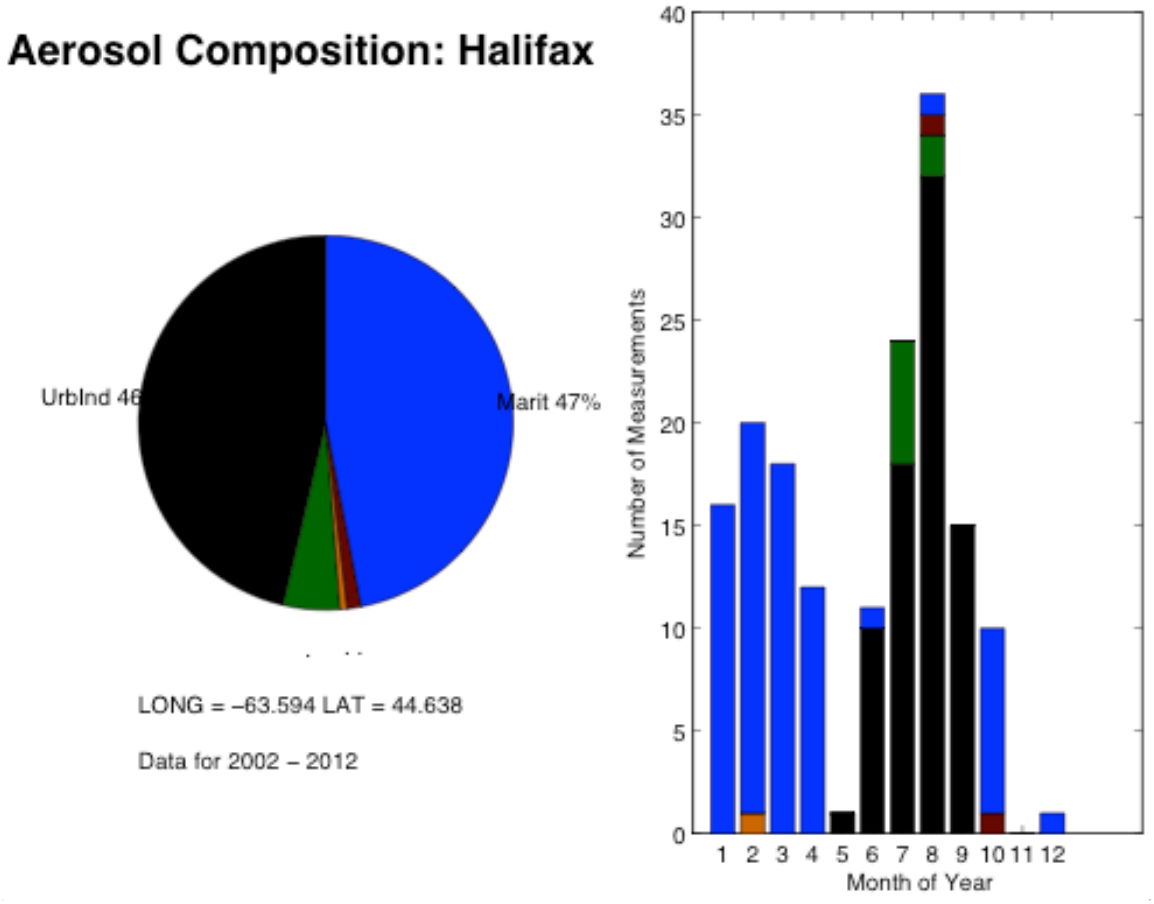
Hanimaadhoo, Maldives



Hannimadhoo is a small Island of Maldives in Indian Ocean off the southwestern tip of India. It is an inhabited island with a population of about 2,000. This station samples air outflow from South Asia during dry season, and pristine southern hemisphere air or Saharan and Arabian dust during the wet season. Except for a few Biomass Burning events, there is no local source of aerosol emissions. It is listed as MCO-Hanimaadhoo in the AERONET website.

Return to Table

Halifax,
Nova Scotia, Canada



This instrument is located on the campus of Dalhousie University in Halifax, Nova Scotia, which has a population of about 300,000. Nova Scotia is a maritime province of Canada on the Atlantic coast. The instrument is less than a kilometer from Halifax harbor and less than 10 km from the Atlantic shore. The climate is described as humid continental.

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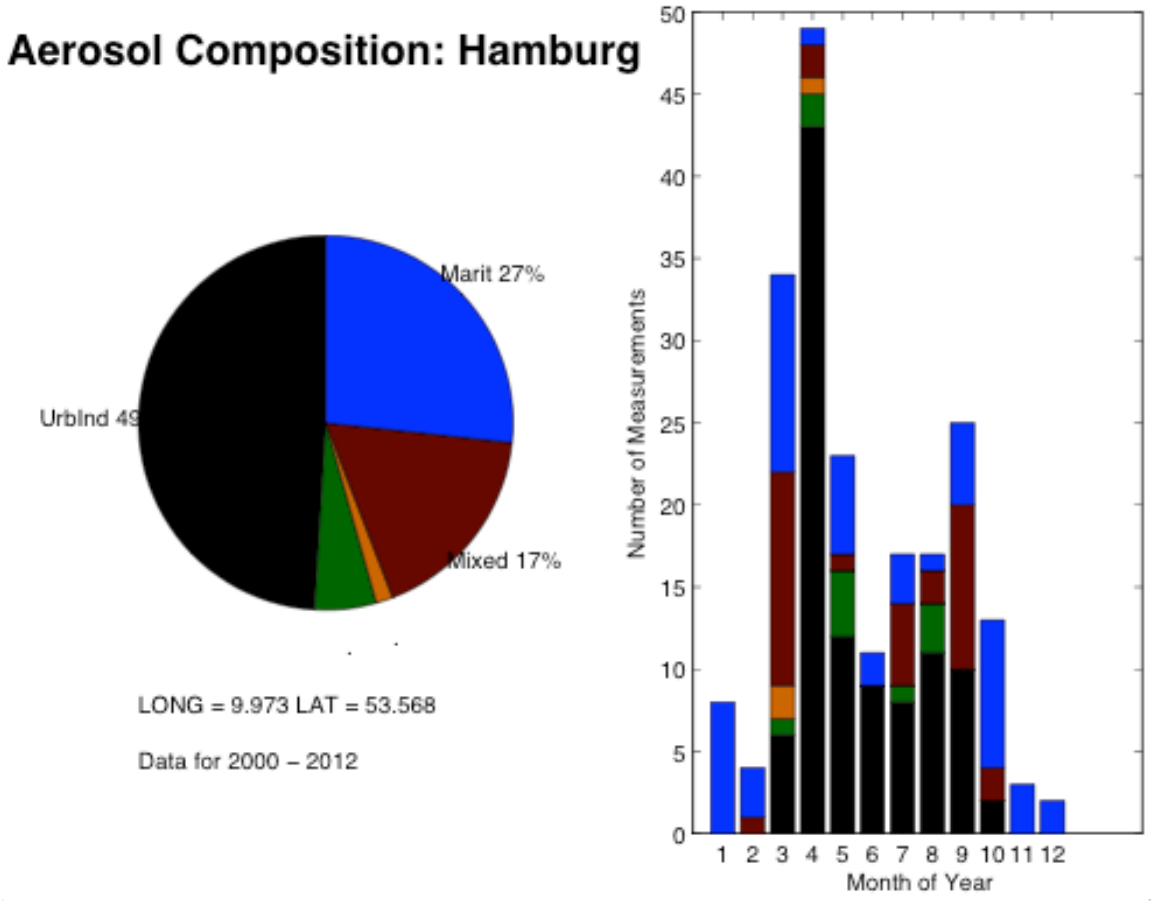
Hamburg, Germany



The sun photometer is located in the center of the city of Hamburg. Hamburg itself has a population of nearly 2 million and the metropolitan area has a population of more than 5 million people. It is an important port and a major industrial center. It has an oceanic climate influenced by its coastal location and the presence of marine air masses from the Atlantic Ocean.

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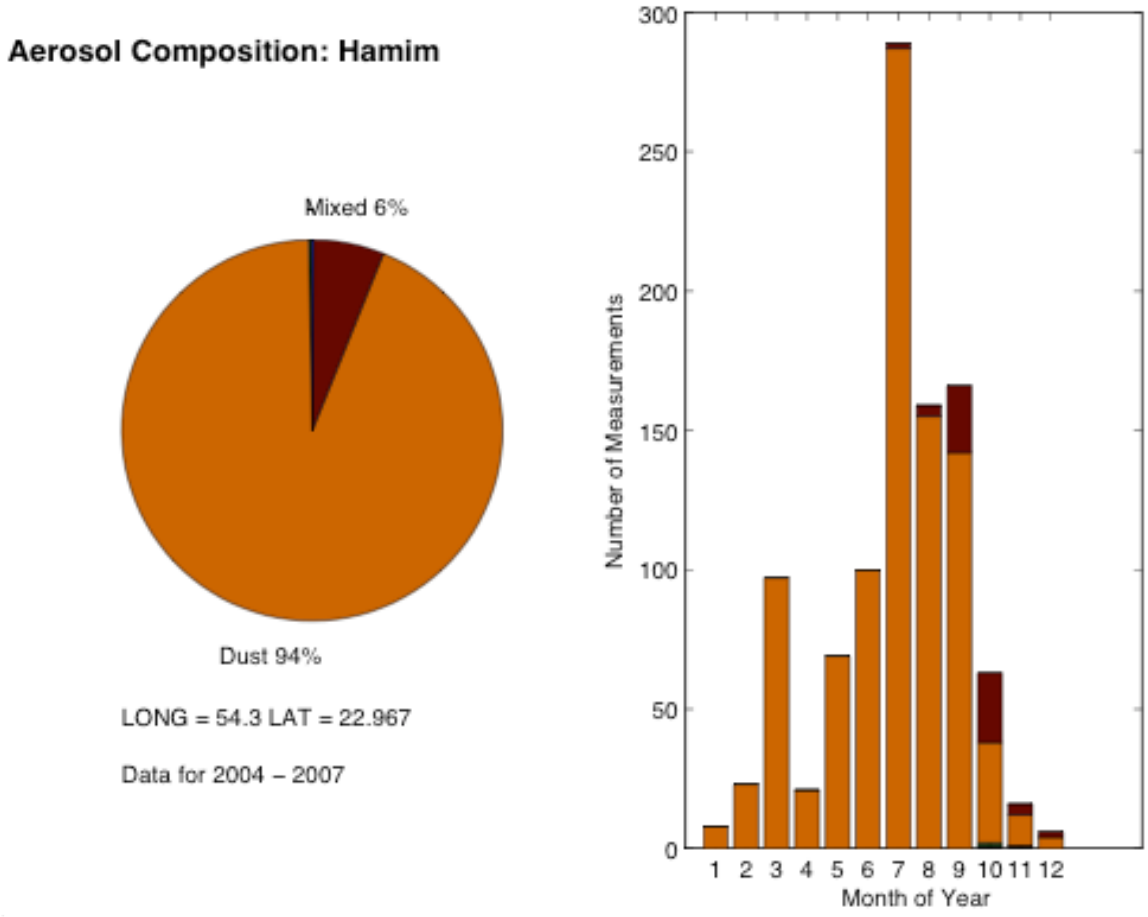
Return to Table

Hamim, UAE



This instrument is situated at a remote location in the desert in the Southern Emirate of Abu Dhabi. The location is approximately 150 km inland, and 160 km SSW of Abu Dhabi city, and about 50 km east of the Liwa Oasis. The region is on the northern edge of Rub' al Khali desert.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008.

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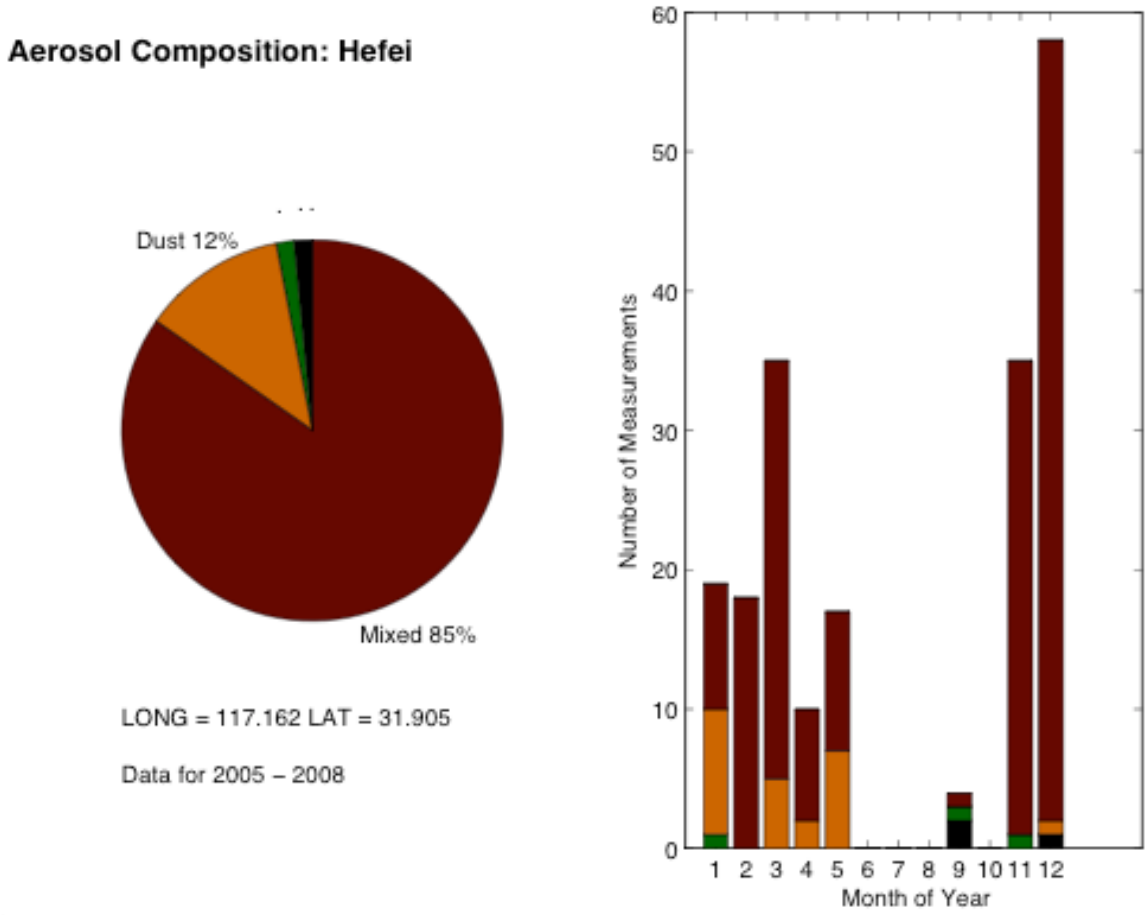
Hefei, China



This instrument is located in Hefei, Anhui province, in eastern China. The population of Hefei is about 7.5 million inhabitants. The area is about 500 km east-northeast of Shanghai and well inland of the East China Sea. The city is industrial involving the manufacture of steel, machinery and textiles.

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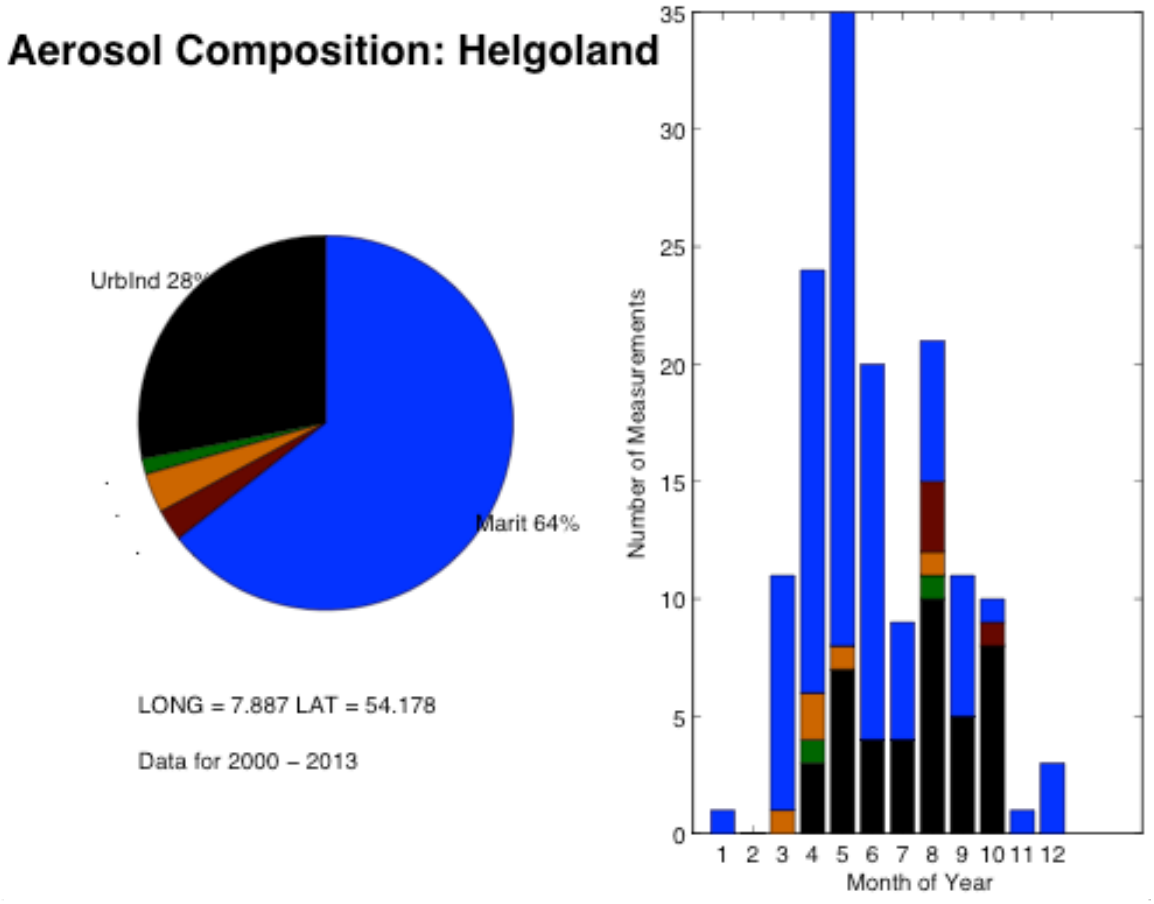
Helgoland, Germany



This instrument is located on a platform above the water on Helgoland Island. The location is some 50 km off the North coast of Germany in the North Sea. The island has some exposed surface land, and rocky cliffs of sandstone. There are few permanent residents (~ 1500) and imposes a ban on motorized vehicles except those employed in essential services. Tourism and the institute for biological and zoological research are the major island activities.

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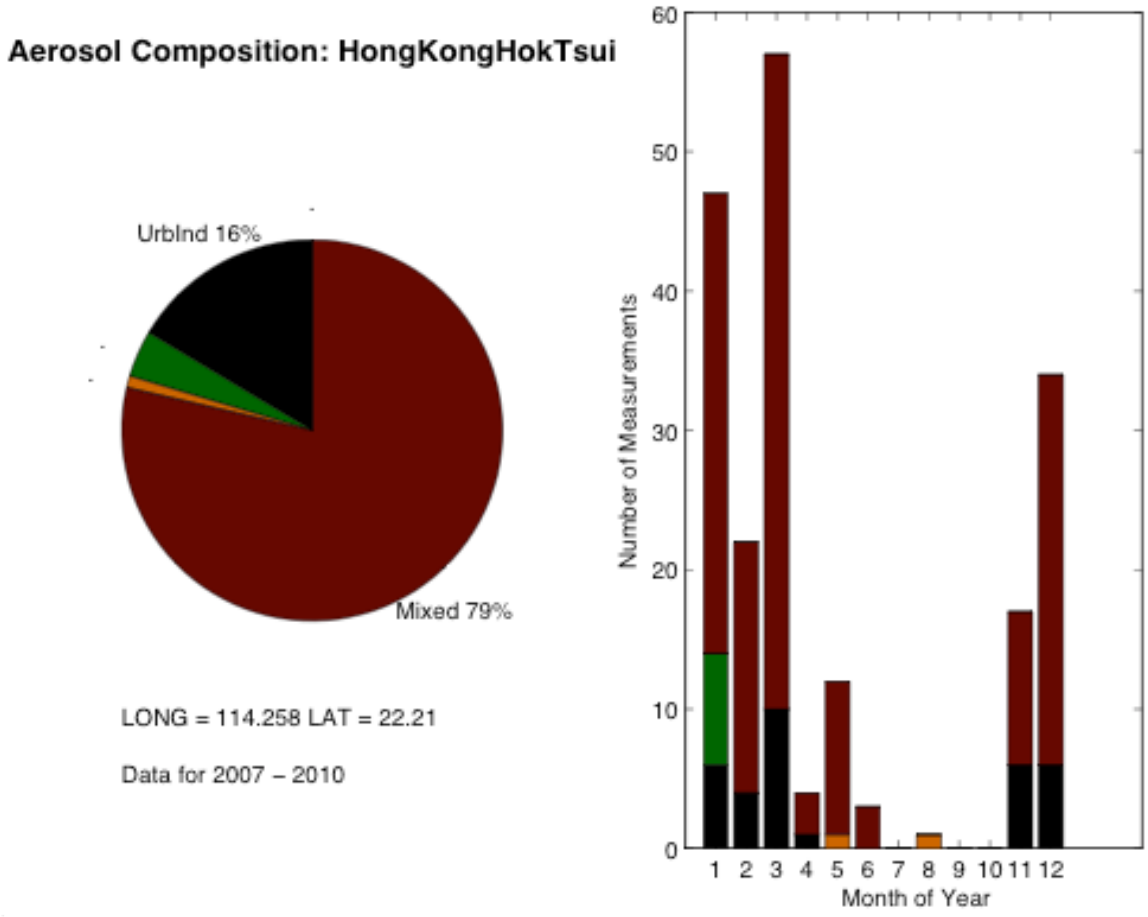
Hong Kong (Hok Tsui)



The instrument is located on a remote peninsula southeast of Hong Kong Island and is intended for measuring background and maritime aerosols. (However, only two measurements met the Sayers criterion for maritime aerosol.)

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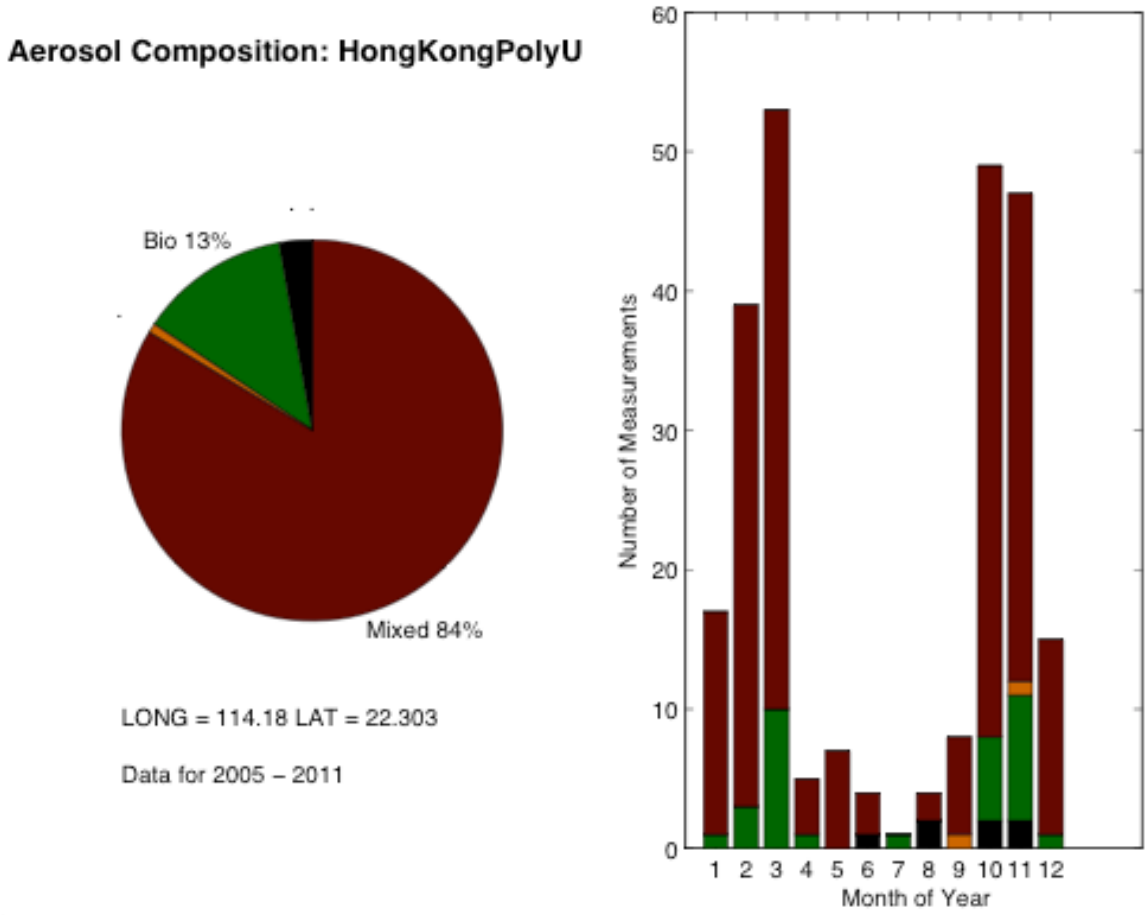
Hong Kong (Polytechnic Univ.)



This instrument is located at the Honk Kong Polytechnic University campus, less than 600 m from the shore, west of Kowloon harbor. Hong Kong is an urban location of about 7.1 million residents. The region has a humid subtropical climate. There is no local heavy industry, but a well-developed transportation infrastructure exists.

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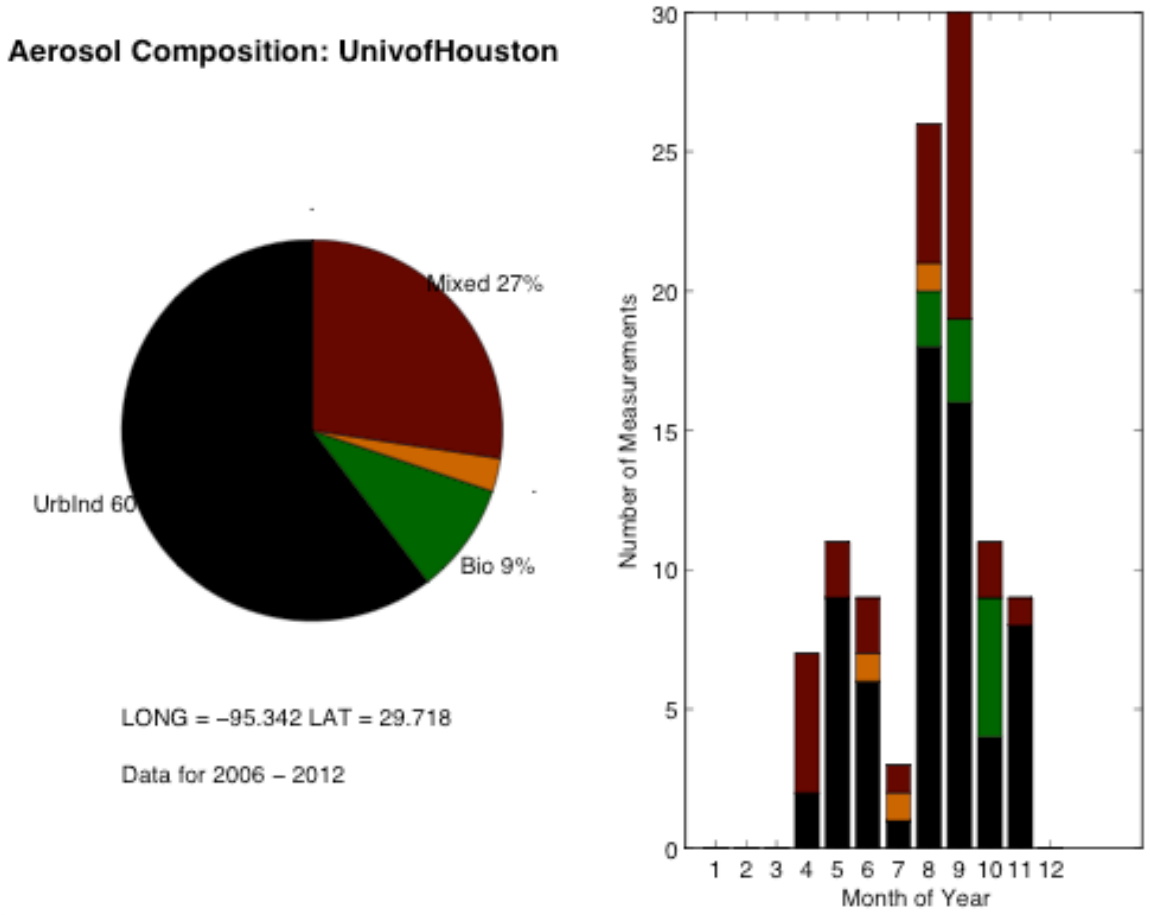
Houston, Texas, USA



This instrument is located on the campus of the University of Houston, approximately 4 km south of downtown Houston (population 2.1 million). The city is the 4th largest in the USA and the industrial port handles the second most tonnage per year. There is a local manufacturing and industrial infrastructure. The AEONET website lists this site as Univ_of_Houston.

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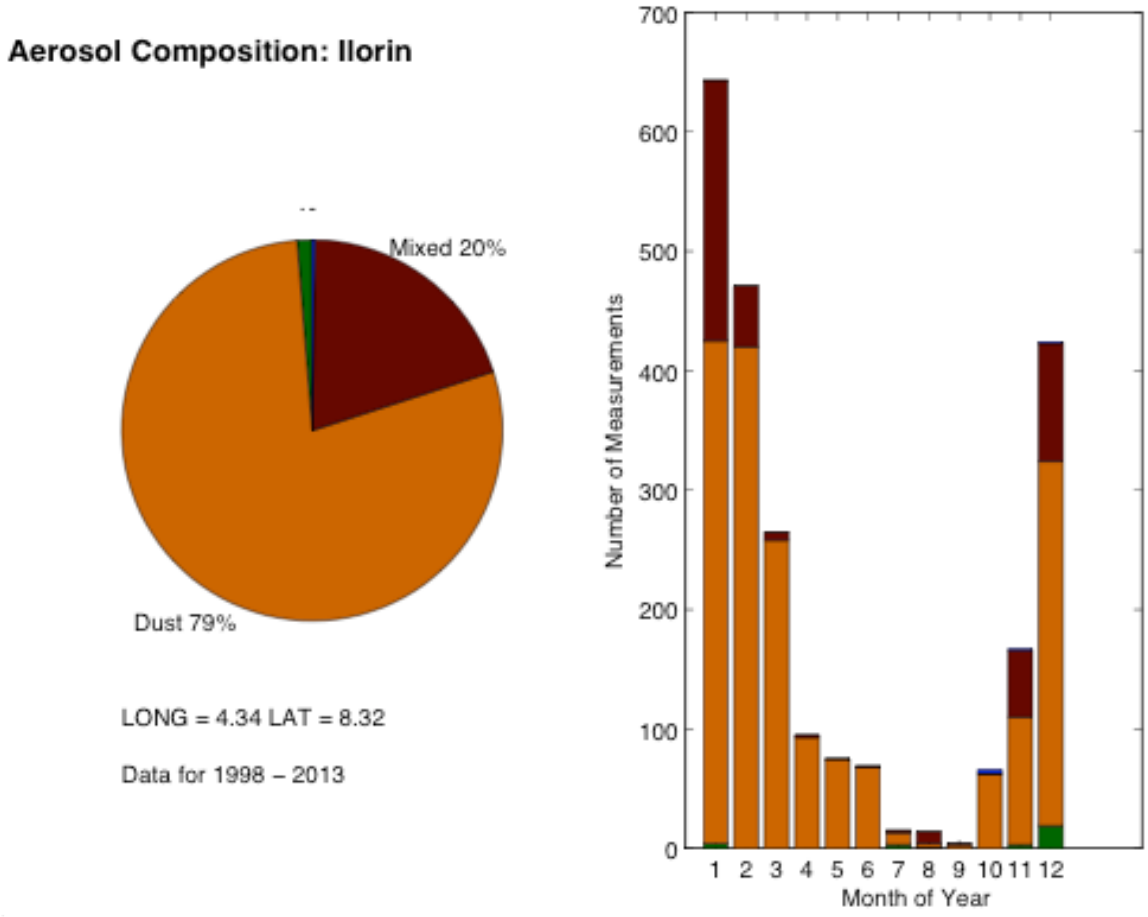
Ilorin, Nigeria



Ilorin is a city of nearly one million people in southwestern Nigeria, in Sub-Sahel Africa. The dry season extends from November through February, and the prevailing northeasterly wind (the Harmattan) carries Saharan dust to this region.

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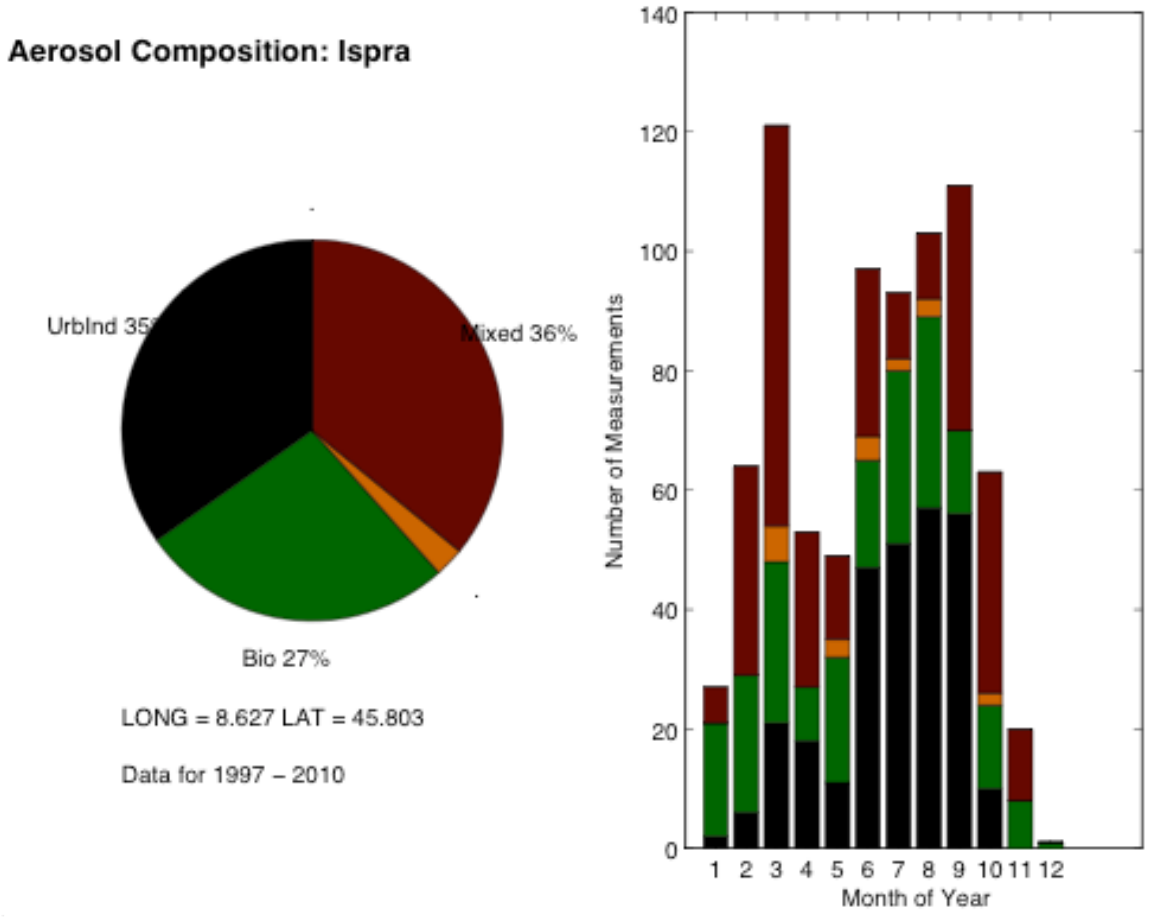
Ispra, Italy



Ispra is a small town of about 5000 people located on the shore of Lake Maggiore in northern Italy. It is about 70 km northeast of Milan.

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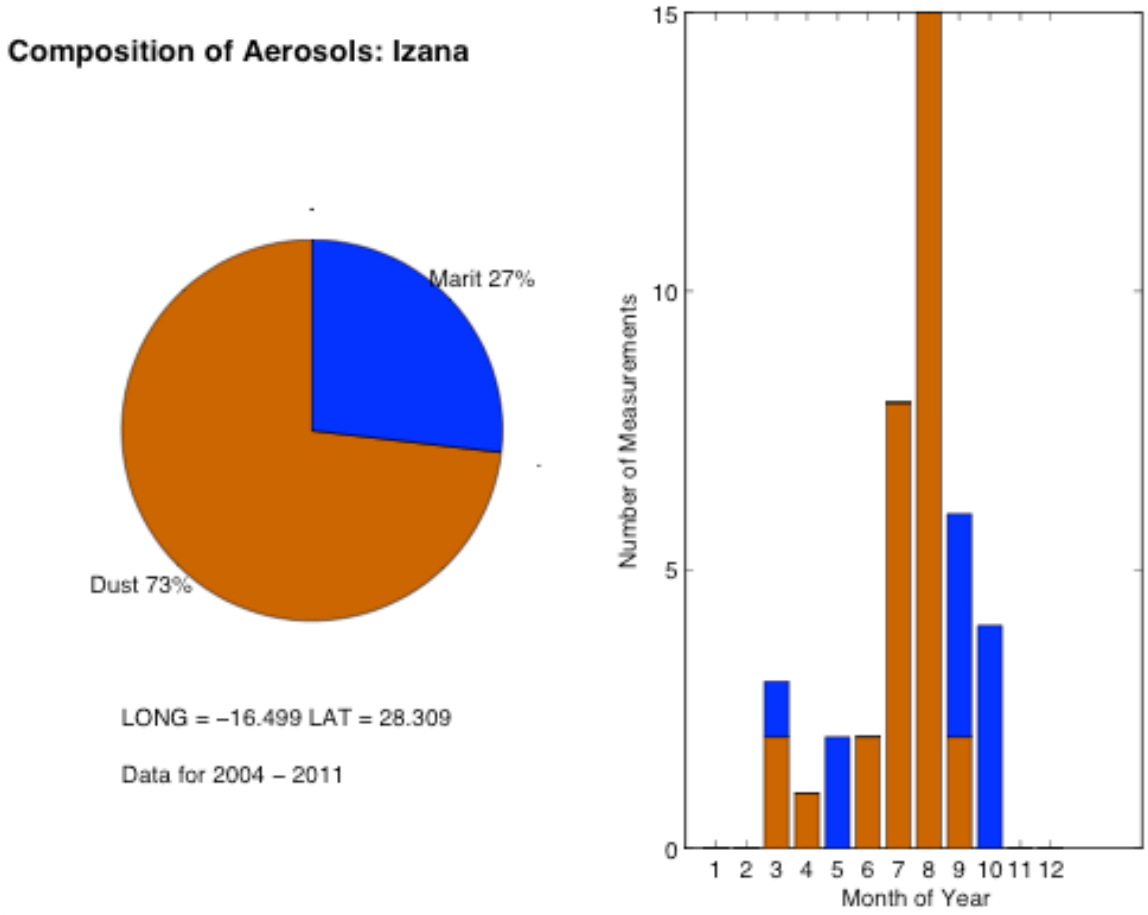
Izana (Tenerife), Spain



Izana is an observatory on top of a mountain (at 2367 meters above sea level) on the island of Tenerife (Canary Islands). This location is free from local anthropogenic aerosols and is used for calibration of the Cimel sun photometers. The summer months are dominated by dust aerosol, whereas maritime aerosol prevails during the fall. This site is in the transport path of the Saharan Air Layer, which can transport dust from African sources westward.

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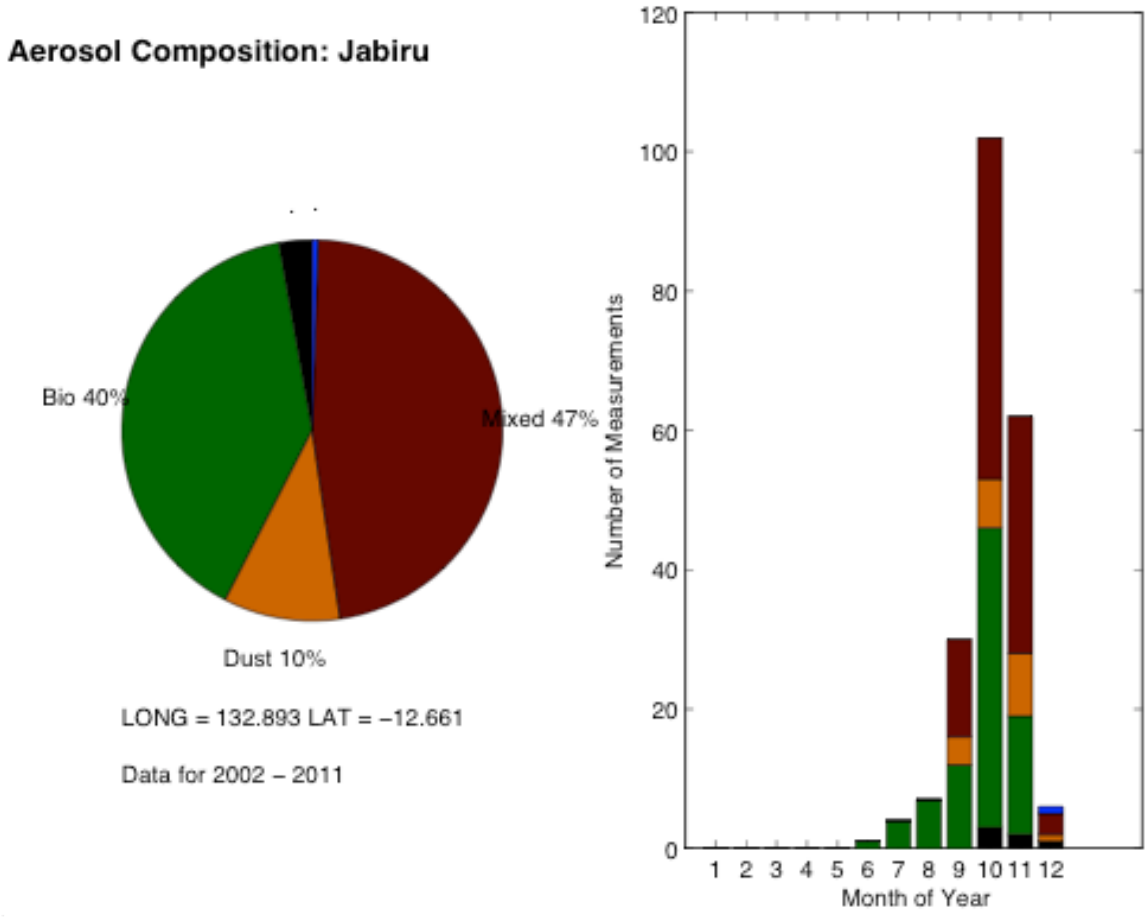
Jabiru, Australia



Jabiru is a small town (population about 1,000) in northern Australia, east of Darwin and about 50 km from the sea. It is located in the Kakadu National Park. The instrument is set up in a wooded area several kilometers east of Jabiru.

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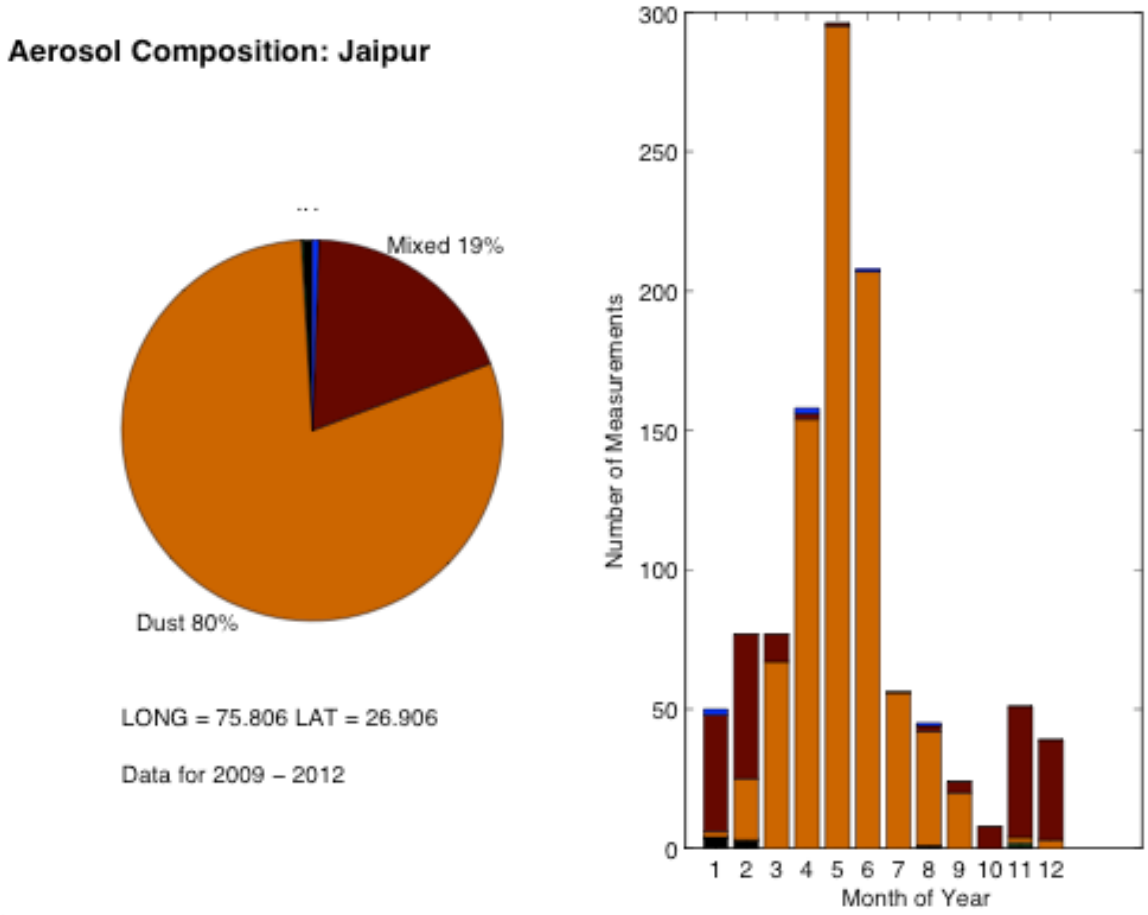
Jaipur, India



The sun photometer is located near the center of the city of Jaipur. Jaipur is a large city of about 3 million inhabitants in northern India. It lies to the east of the Thar desert and has a climate described as semi-arid.

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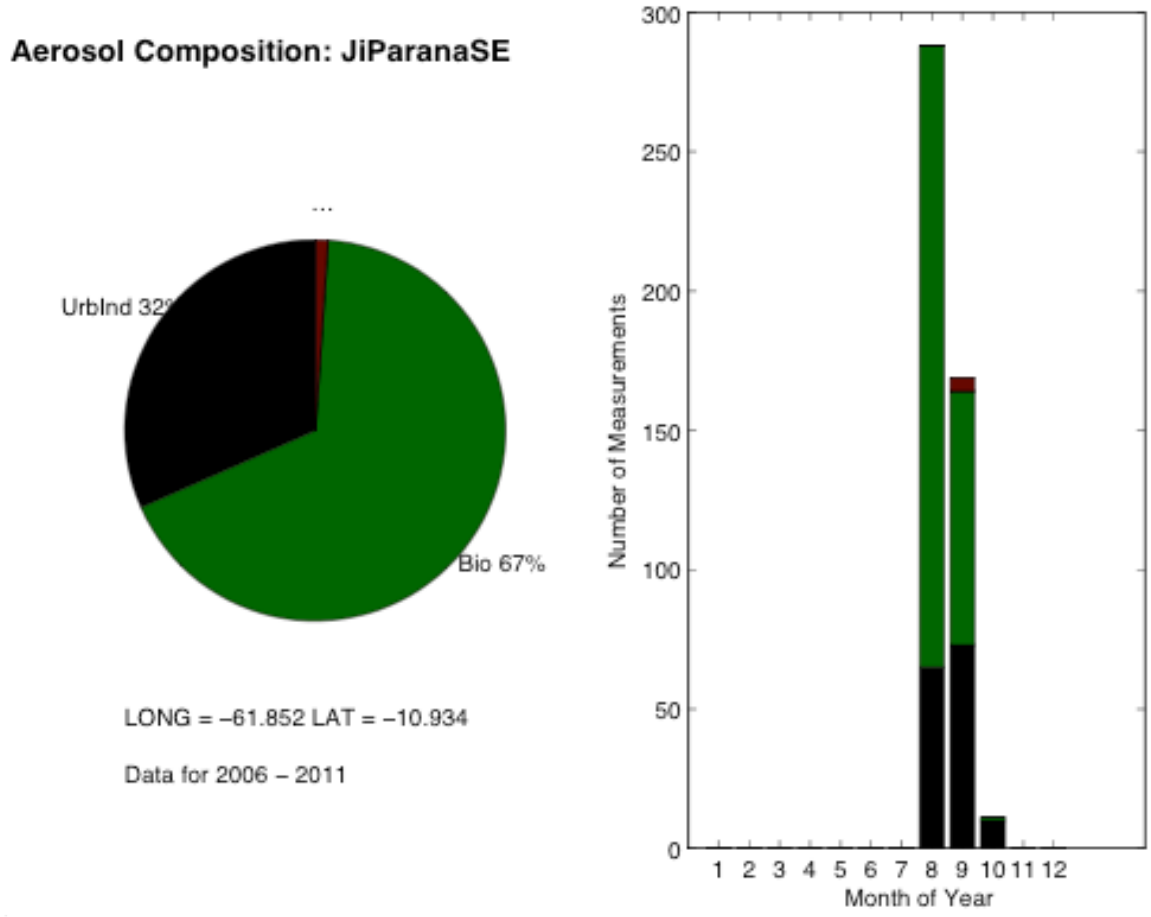
Ji-Parana, Brazil



The AERONET site is in a pasture, located about 10 km from the city of Ji-Parana. The population of Ji-Parana is about 120,000. This site is located in a region of extreme deforestation.

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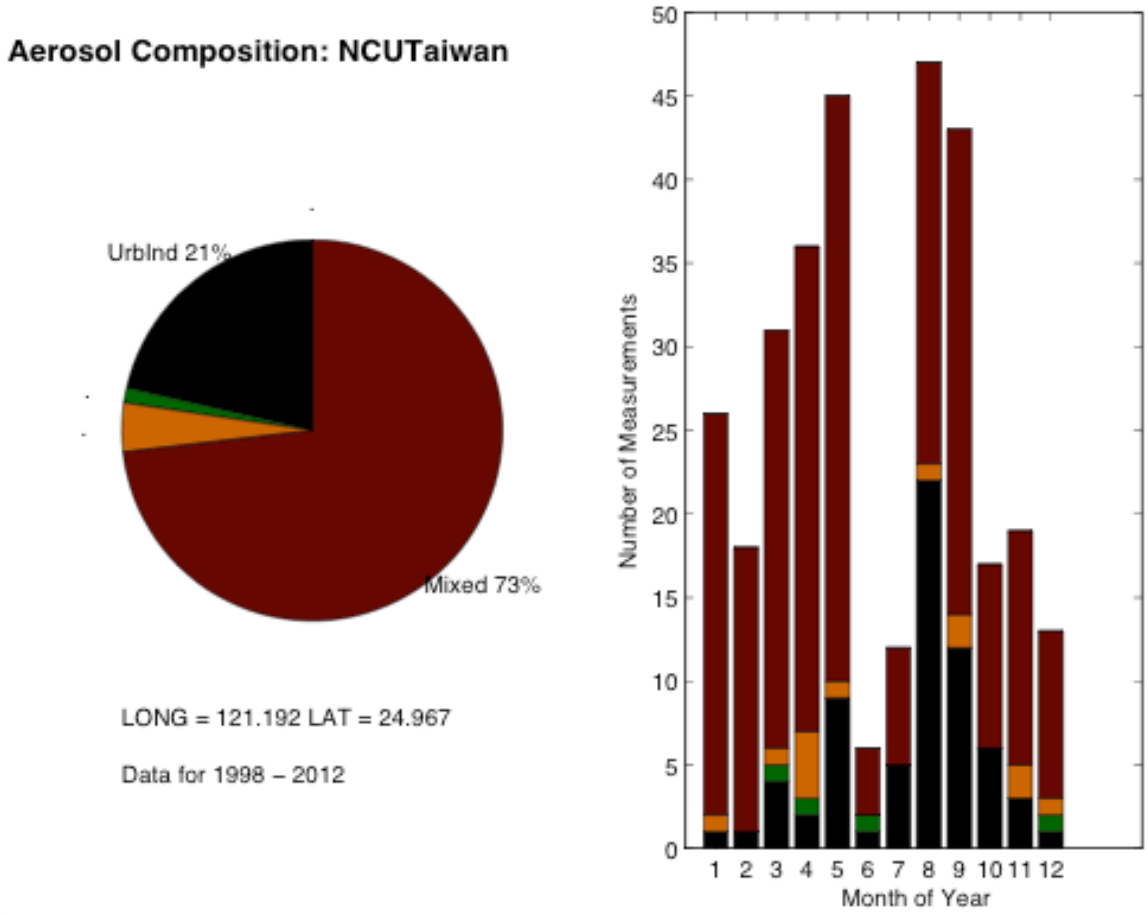
Jungli,Taiwan
(EPA_NCU), Taiwan



Jungli (Zhongli) is a city in northern Taiwan of about 400,000 people. It is quite close to Taipei (population of metropolitan area about 7 million). The local industry is described as combined multipurpose – which includes electronic, metal, chemical, mechanical, food, textile, and plastic manufacturers. The sun photometer is on the campus of National Central University (NCU) and is sponsored by the Taiwan EPA. The AERONET website lists this location as EPA_NCU.

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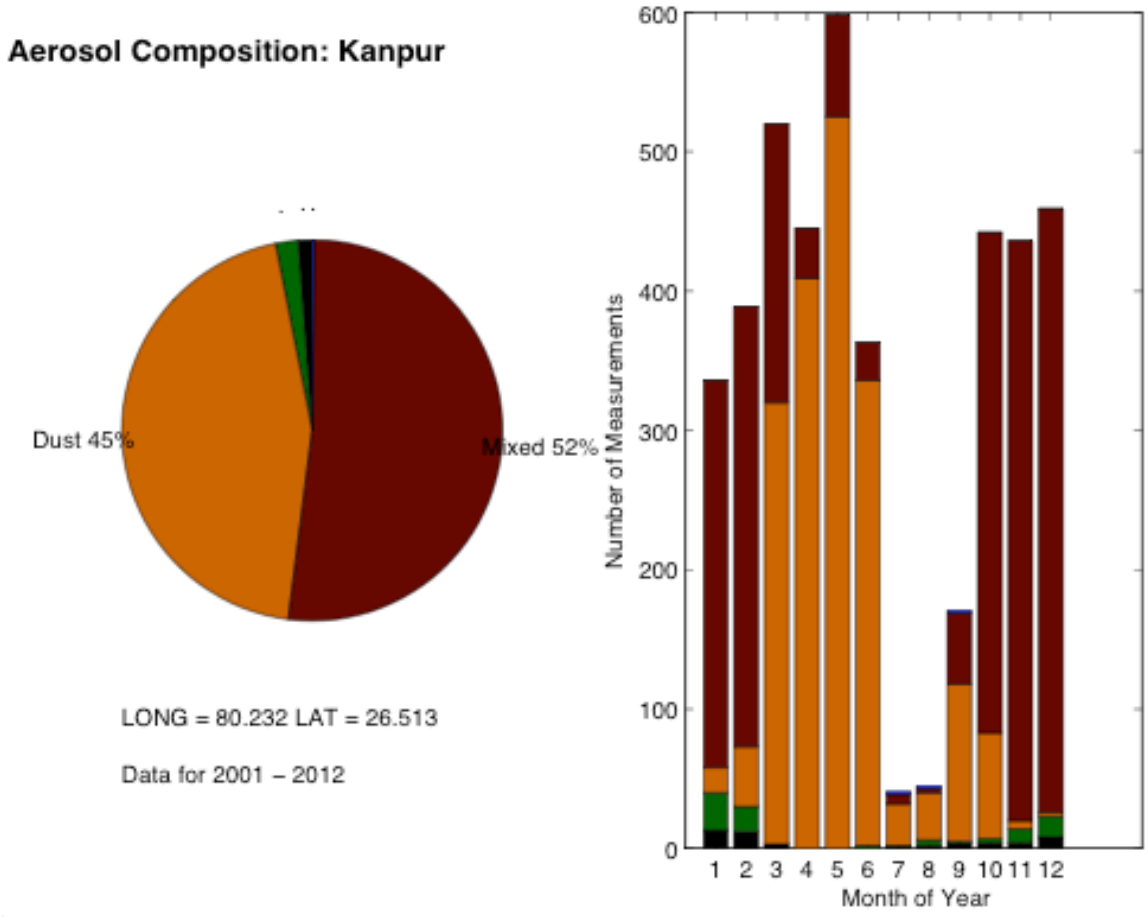
Kanpur, India



This site is on the campus of the Indian Institute of Technology, about 17 km from the industrial city of Kanpur (population approximately 2.6 million) in the northern state of Uttar Pradesh. This region is considered typical of the Ganga basin. The region is known to experience dust storms. Kanpur is one of the largest industrial cities in India and is considered one of the most polluted cities in the world.

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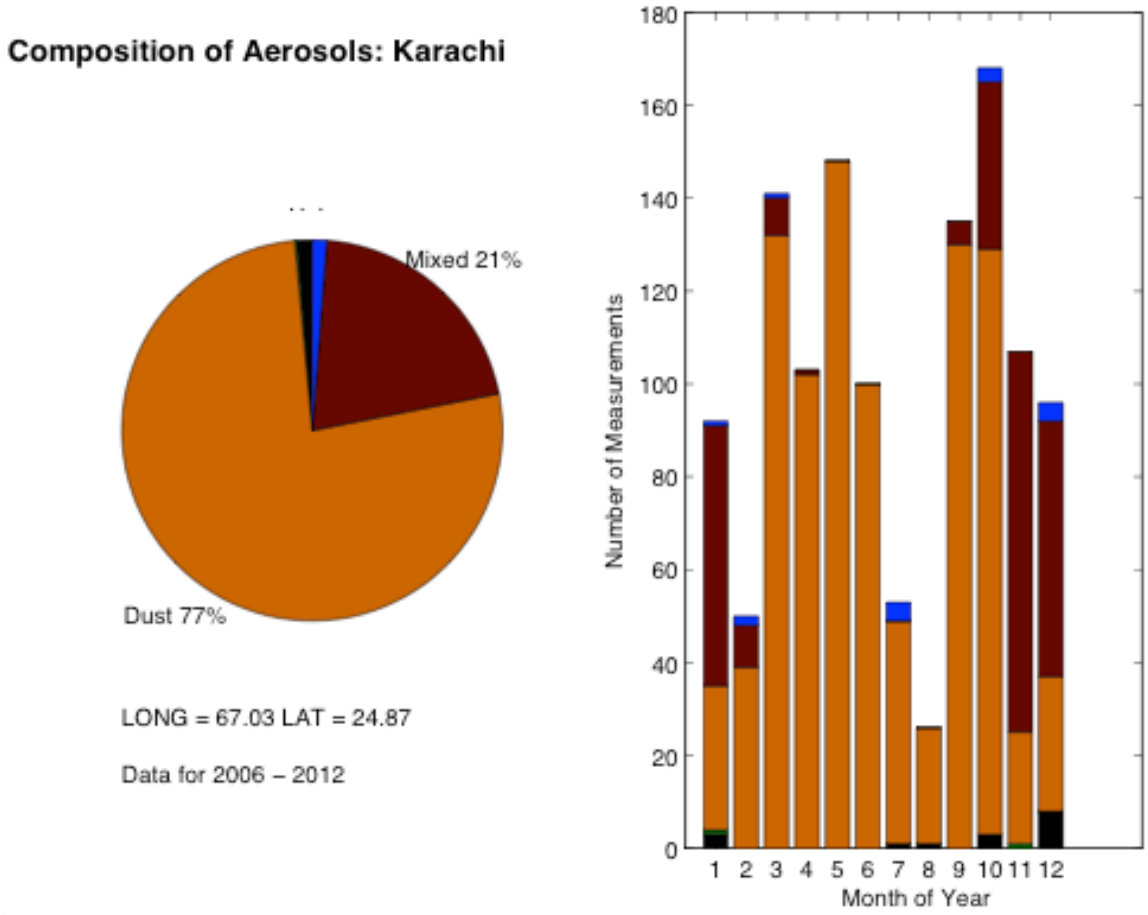
Karachi, Pakistan



The AERONET instrument is located near the University of Karachi, approximately 20 km from the coast of Arabian Sea. Karachi is a city of 23.5 million. Industries in Karachi include textiles, cement, steel, heavy machinery, and chemicals. The city suffers from serious pollution. The climate of Karachi is described as arid.

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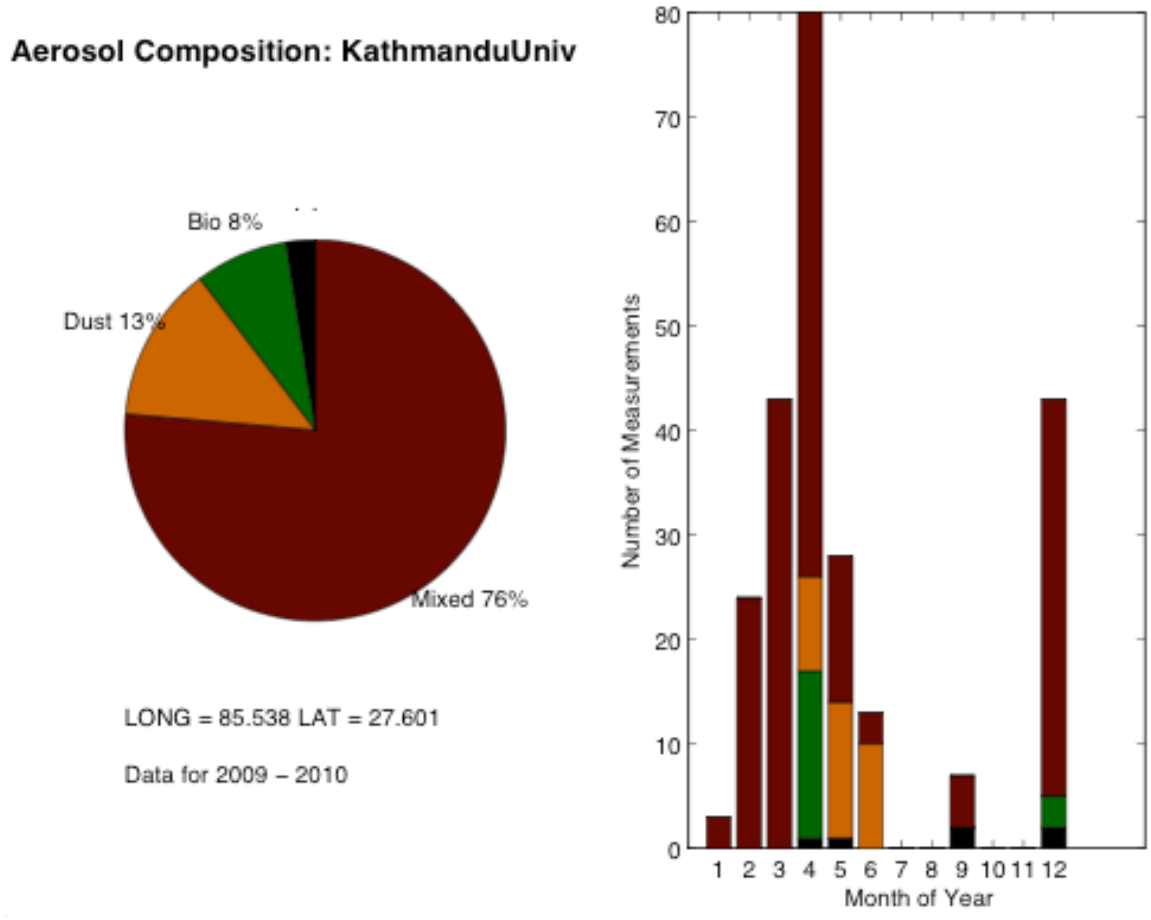
Kathmandu, Nepal



The AERONET site is located at Kathmandu University, some 20 km to the east of the city of Kathmandu. The metropolitan region of Kathmandu has a population of about 2.5 million. Kathmandu is the most important industrial city in Nepal, and manufacturing of garments and woolen carpets is a principal economic activity. The AERONET site information notes that burning often takes place near the instrument.

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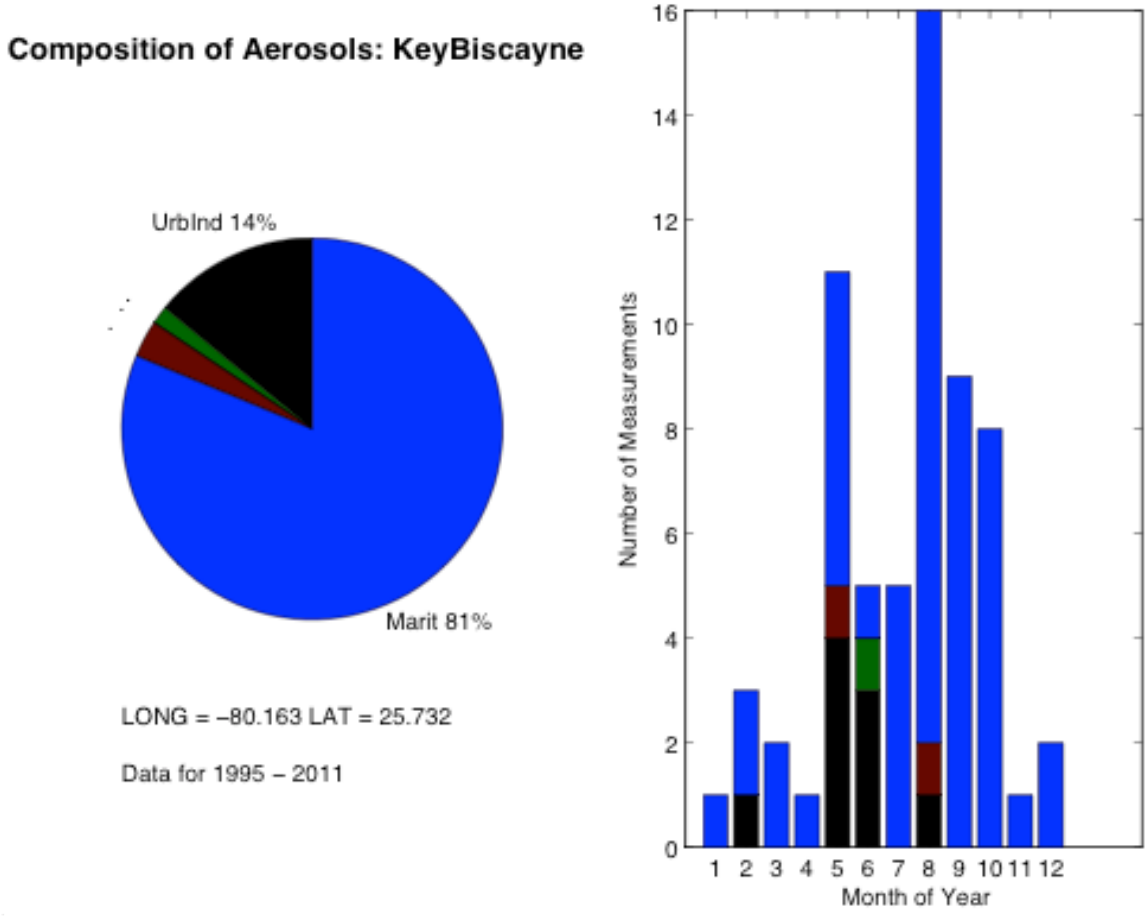
Key Biscayne, Florida, USA



Key Biscayne is an island about 3 km south of Miami Beach. The instrument is actually on another, smaller, island called Virginia Key on the campus of the Rosenstiel School of Marine and Atmospheric Science. The instrument is located about 500 m from the shore.

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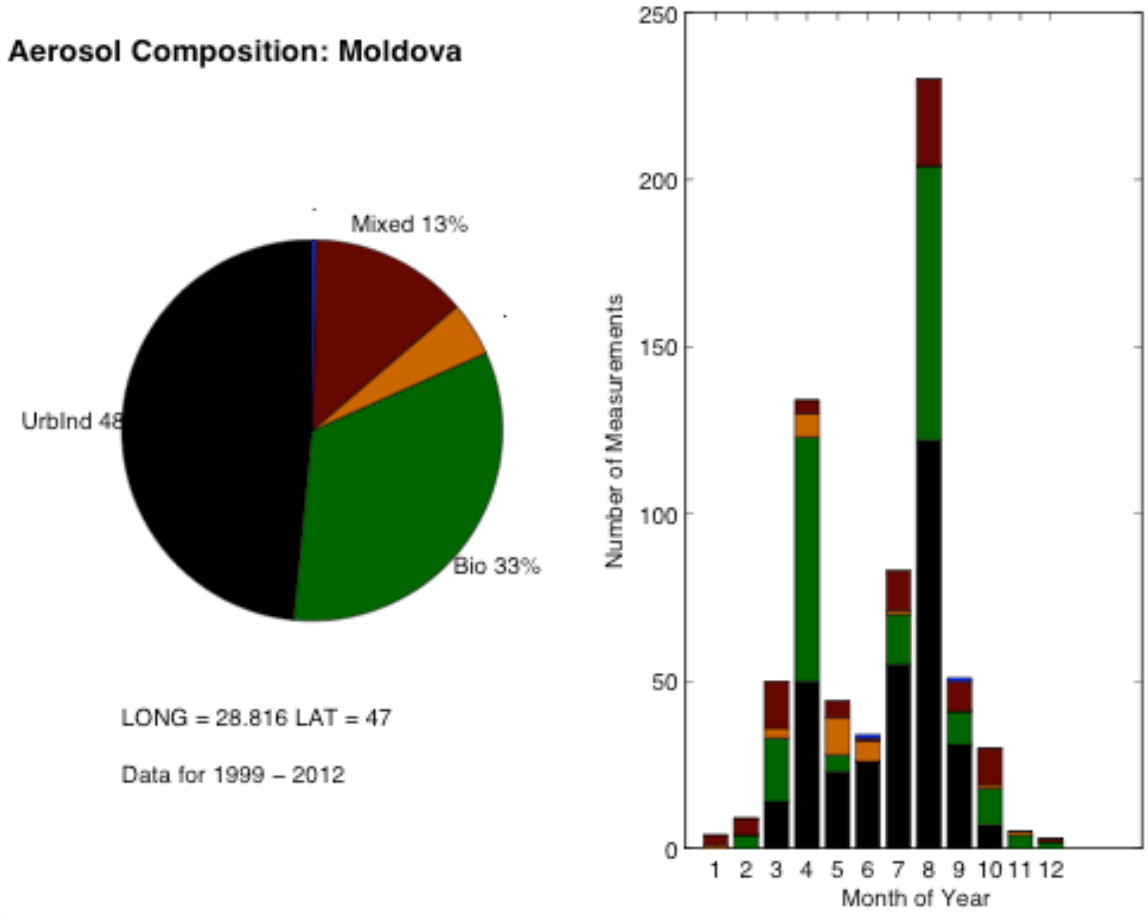
Kishinev, Moldova



This site is listed as Moldova in the AERONET website. Kishinev is the capital of Moldova, a landlocked Eastern European country between Romania and Ukraine. The Kishinev sun photometer site is located on the roof of the Institute of Applied Physics building. The surrounding area is urban commercial and industrial, with a population of about 800,000. It has a humid continental climate.

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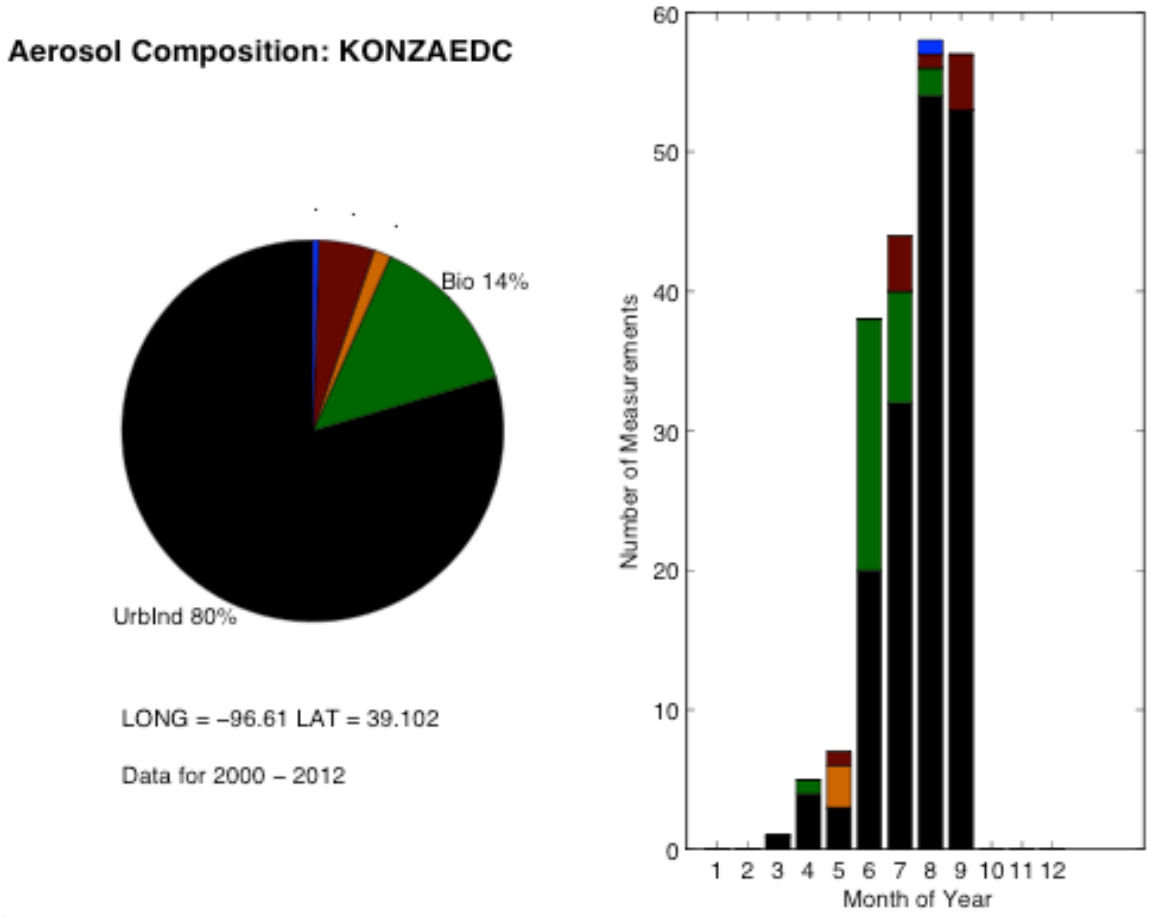
Konza Prairie Biological Station, Kansas, USA



The instrument is located at the Konza Prairie Biological Center in Kansas, USA. This preserve represents the largest unplowed region of tall prairie grass in the United States. The instrument is about 30 km south of Manhattan Kansas and 150 km east of Kansas City.

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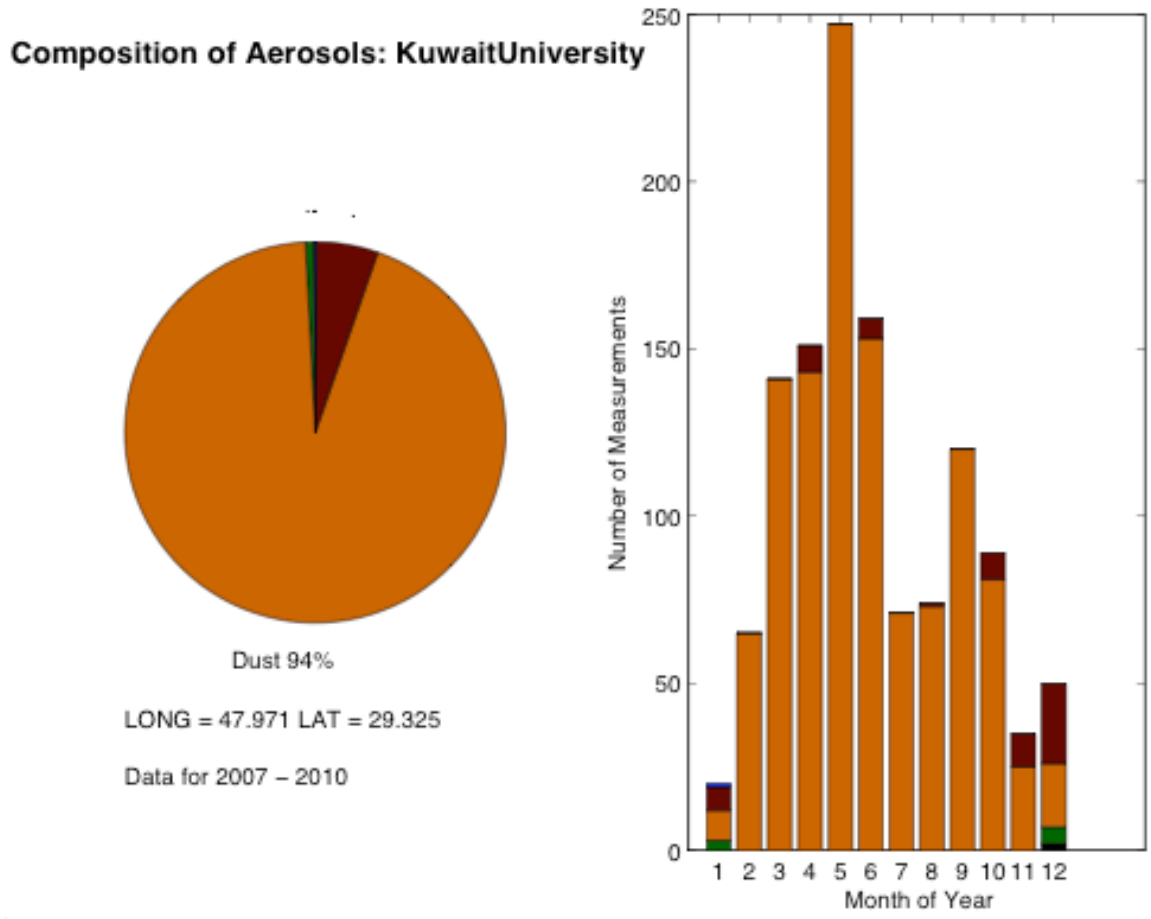
Kuwait



The sun-photometer is located at Kuwait University, Khalidiyah Campus. Khalidiyah is an urban area, approximately 4.8 km from Kuwait city, the capital of Kuwait. The instrument is about 5 km from Kuwait Bay. Kuwait is hot and dry throughout most of the year, with very little rainfall. The brief winter months bring some mild cooling. Most of Kuwait is comprised of flat land, and dry barren desert. The predominant aerosol type is dust. The AERONET webpage lists this site as Kuwait_University

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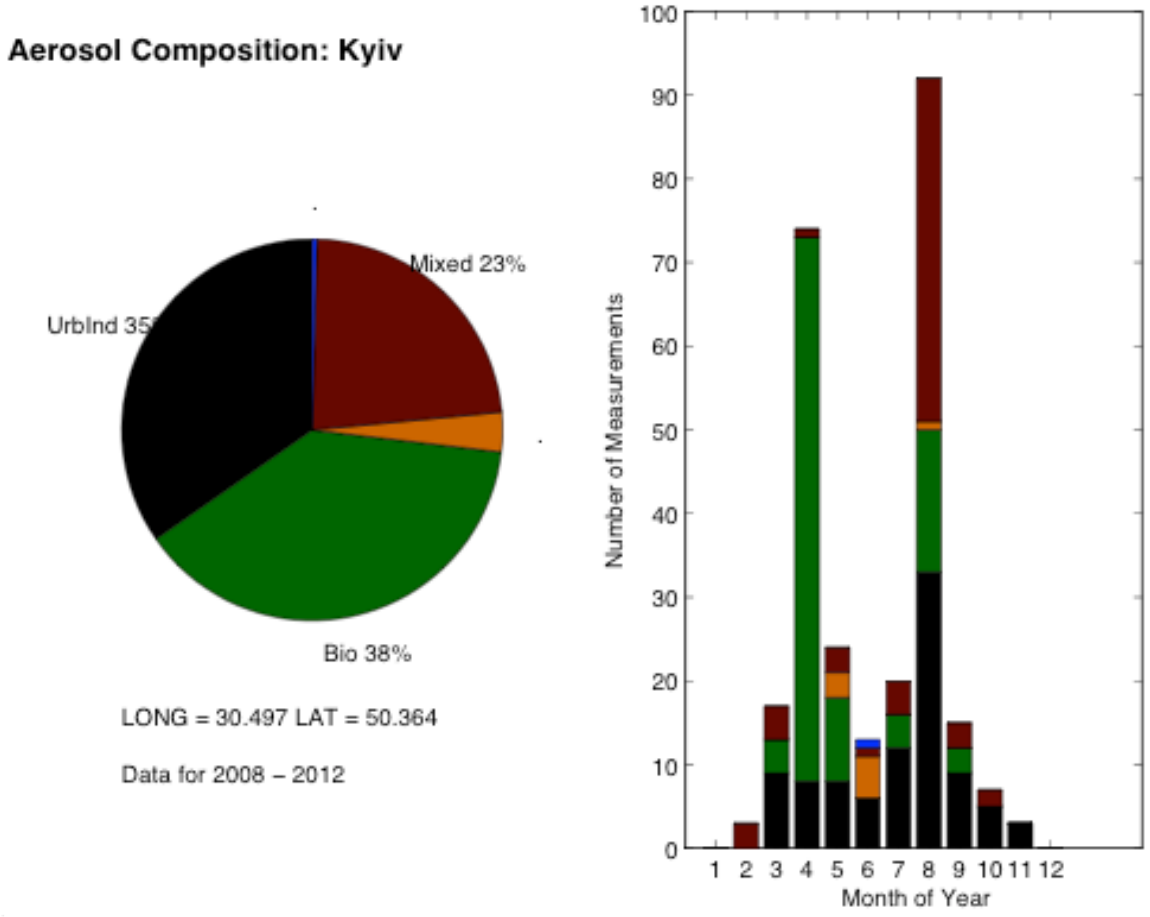
Kyiv, Ukraine



The Sun photometer is located at the Main Astronomical observatory of National Academy of Science of Ukraine. It is in a small forest south of Kyiv (Kiev), approximately 10 km from the center of the city. The population of Kyiv is almost 3 million. It has a humid continental climate. Primary industries include food, beverages, and paper products.

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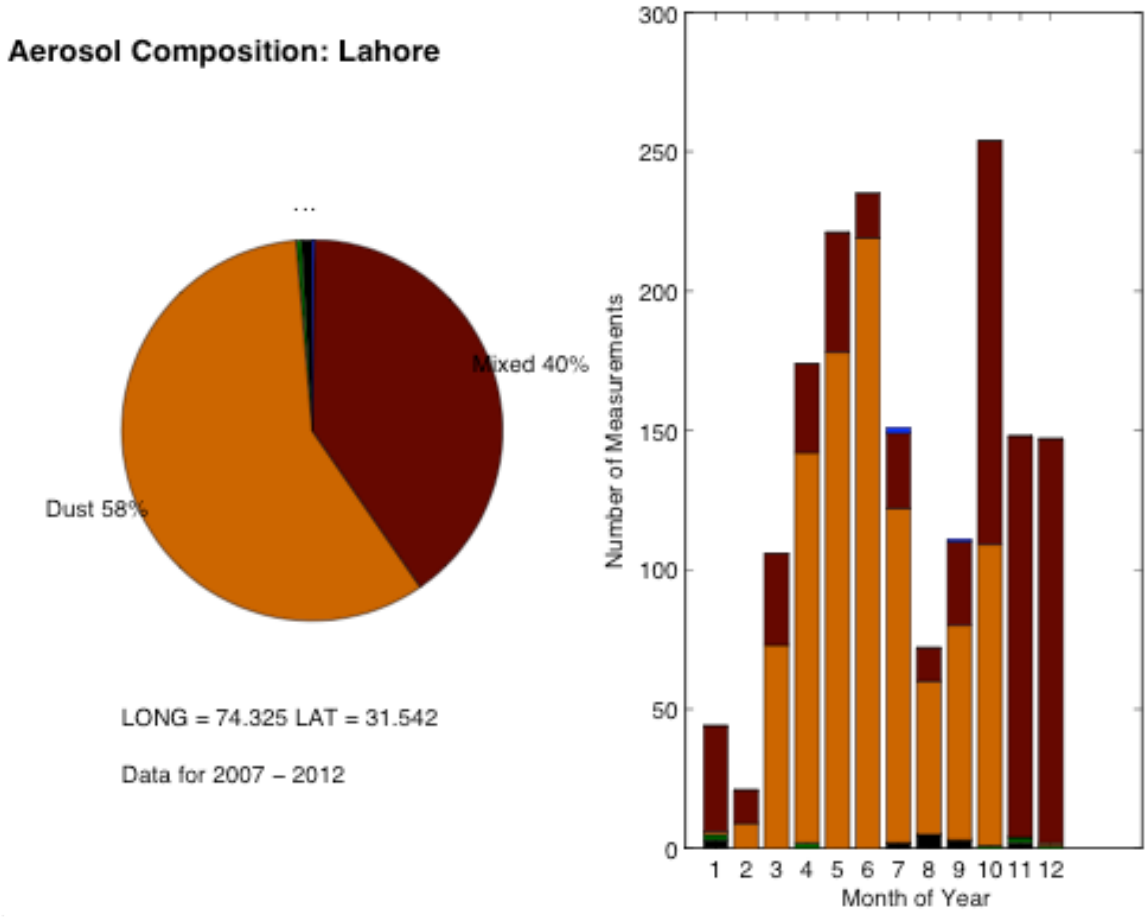
Lahore, Pakistan



The instrument is located at Space and Atmospheric Sciences Division, Institute of Space Technology, Lahore Pakistan. Lahore is one of the world's most densely populated cities. It has a population of about 10 million people and is an important economic and transportation center. Its climate is classified as semi-arid with dust storms occurring during the summer months, peaking in May and June.

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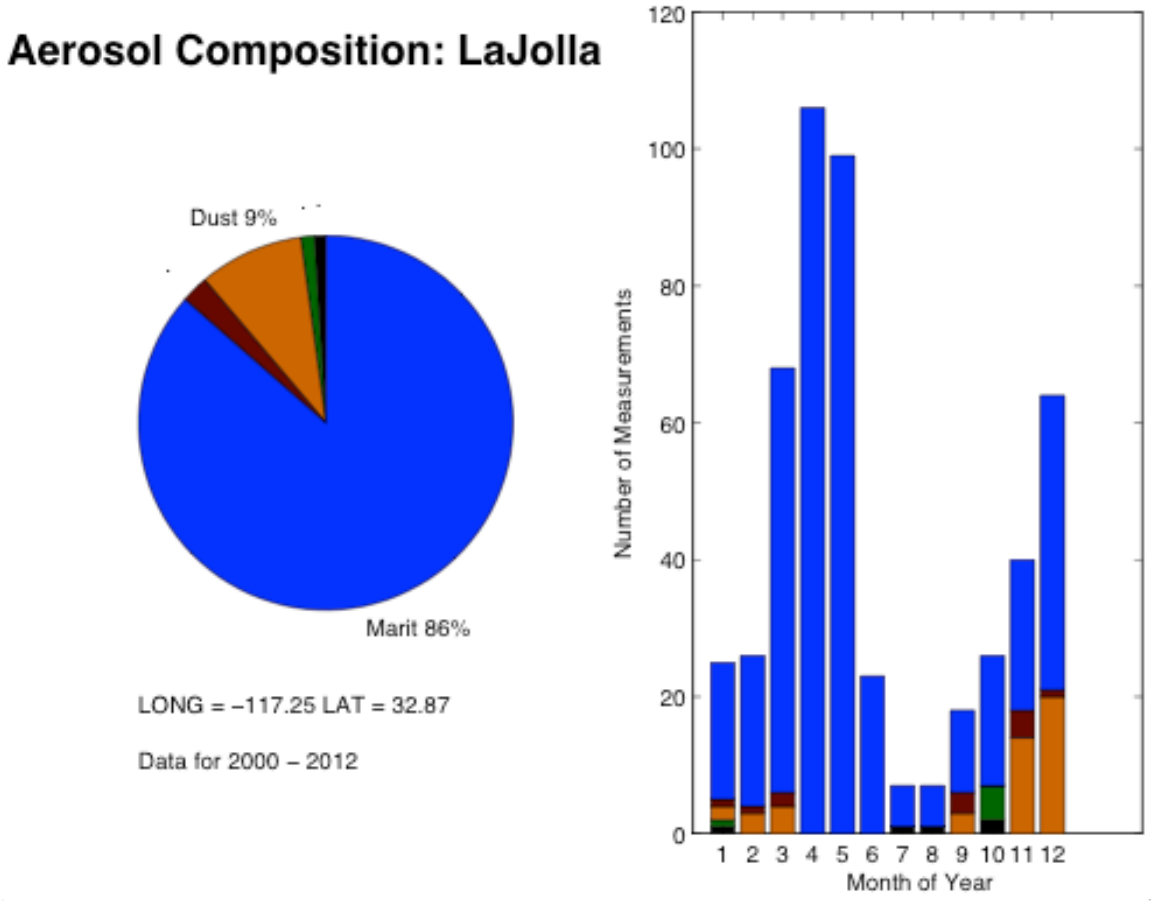
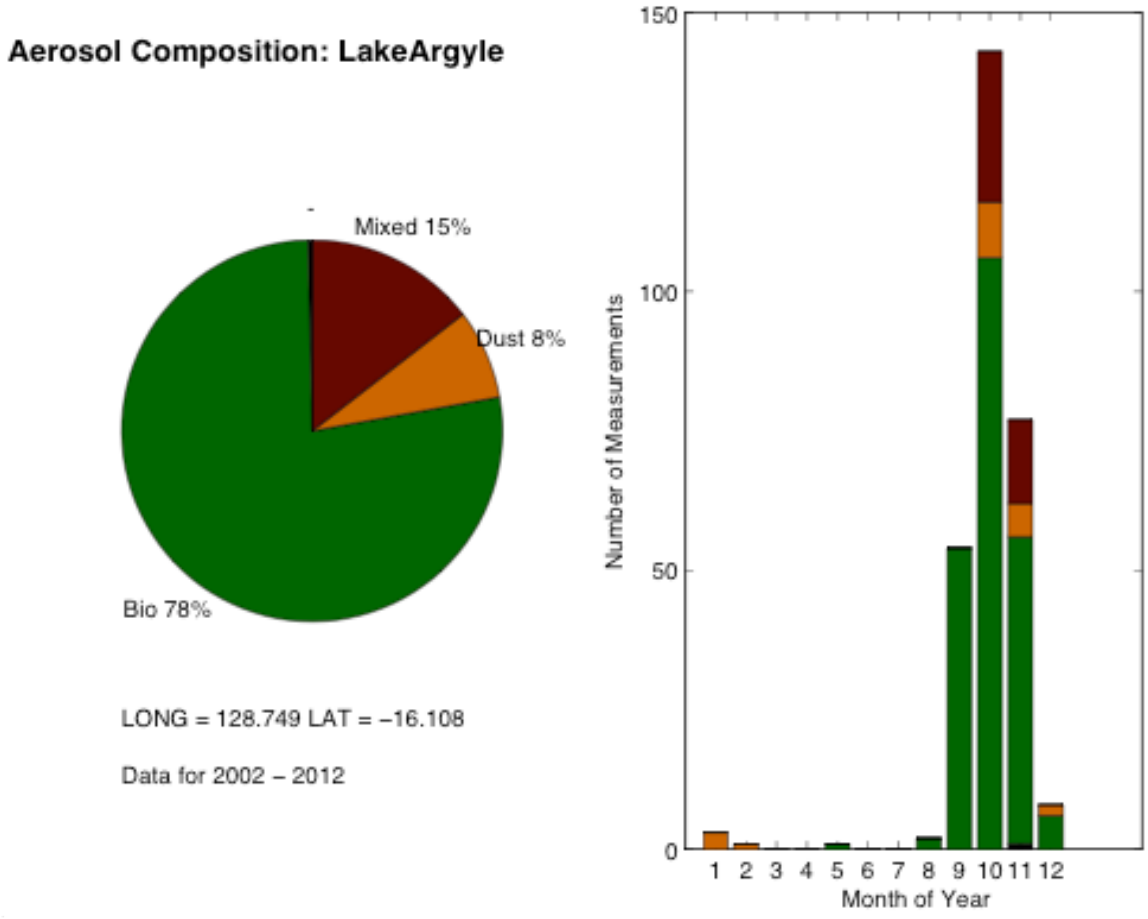
La Jolla, California, USA



This instrument is located about 500 m from shore to the west of an urban/suburban region. The city of La Jolla is in Southern California. As might be expected, maritime aerosol is predominant at this site throughout the year.

Return to Table

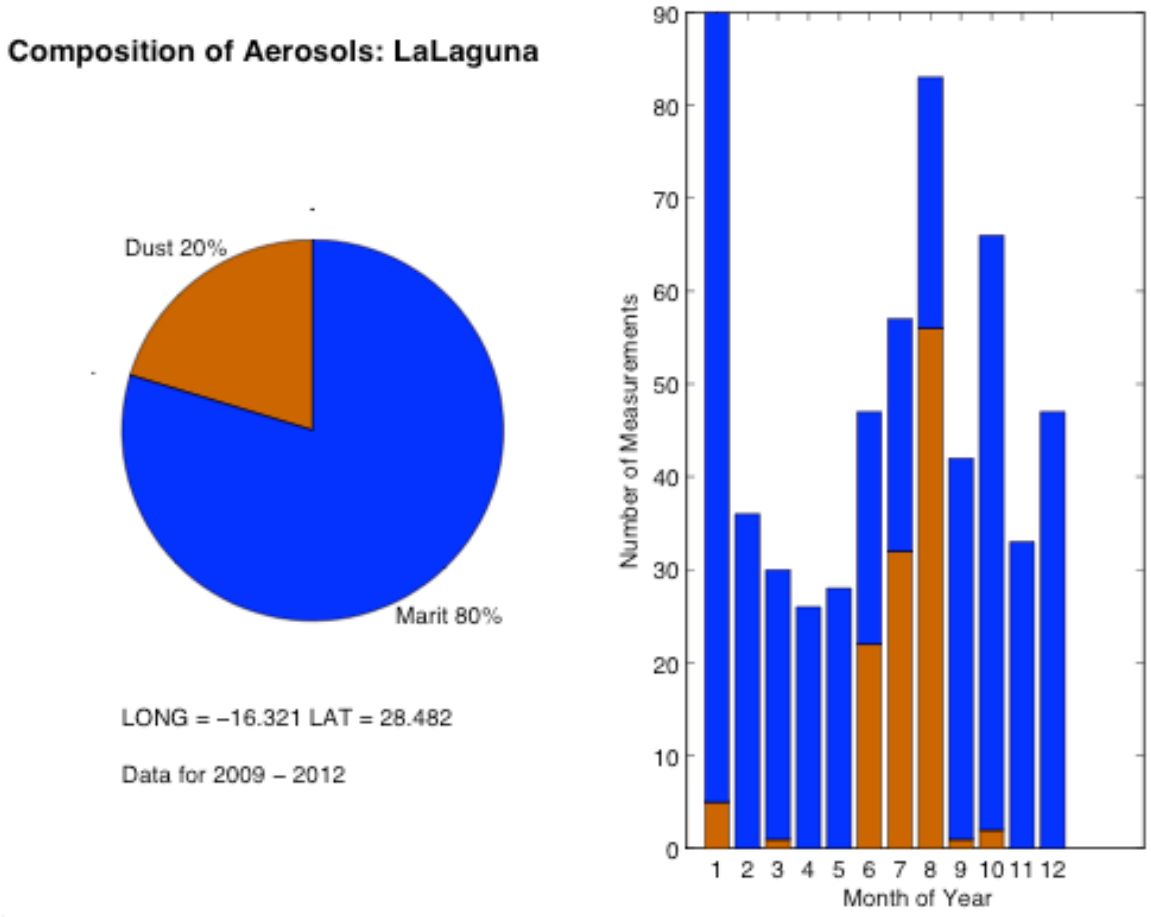
Lake Argyle, Northern Territories, Australia



Lake Argyle is a large artificial lake in Western Australia. The instrument is mounted in a field near the lake. The climate in this region is described as steppe-like.

Return to Table

La Laguna, Tenerife, Canary Islands, Spain



The instrument is placed on a roof at the University of La Laguna in Tenerife, Canary Islands, in the city of La Laguna (50,000 inhabitants). The site is very close to the Tenerife North Airport. The main sources of aerosols are natural marine spray, and mineral dust from the Sahara. Midsummer occurrences are dominantly African dust; the remainder of the year is mainly maritime aerosol.

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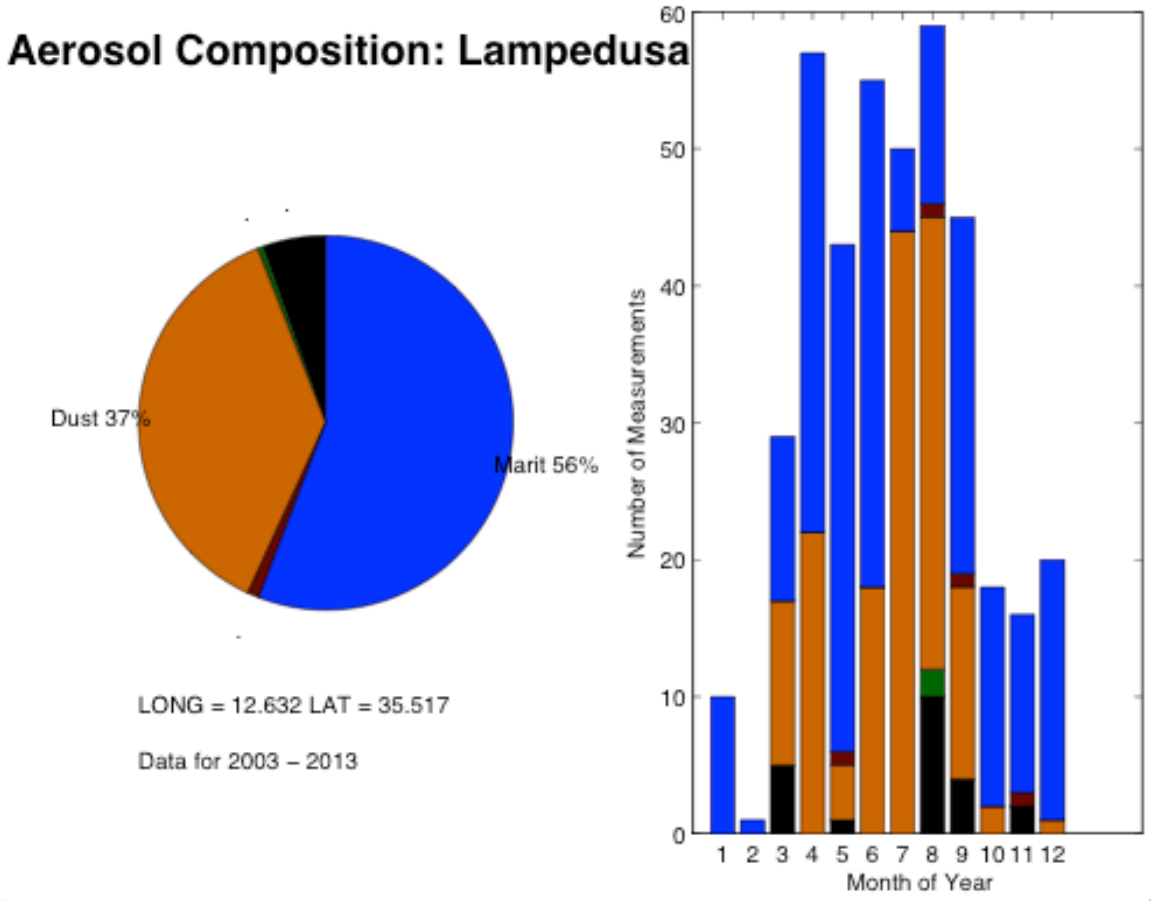
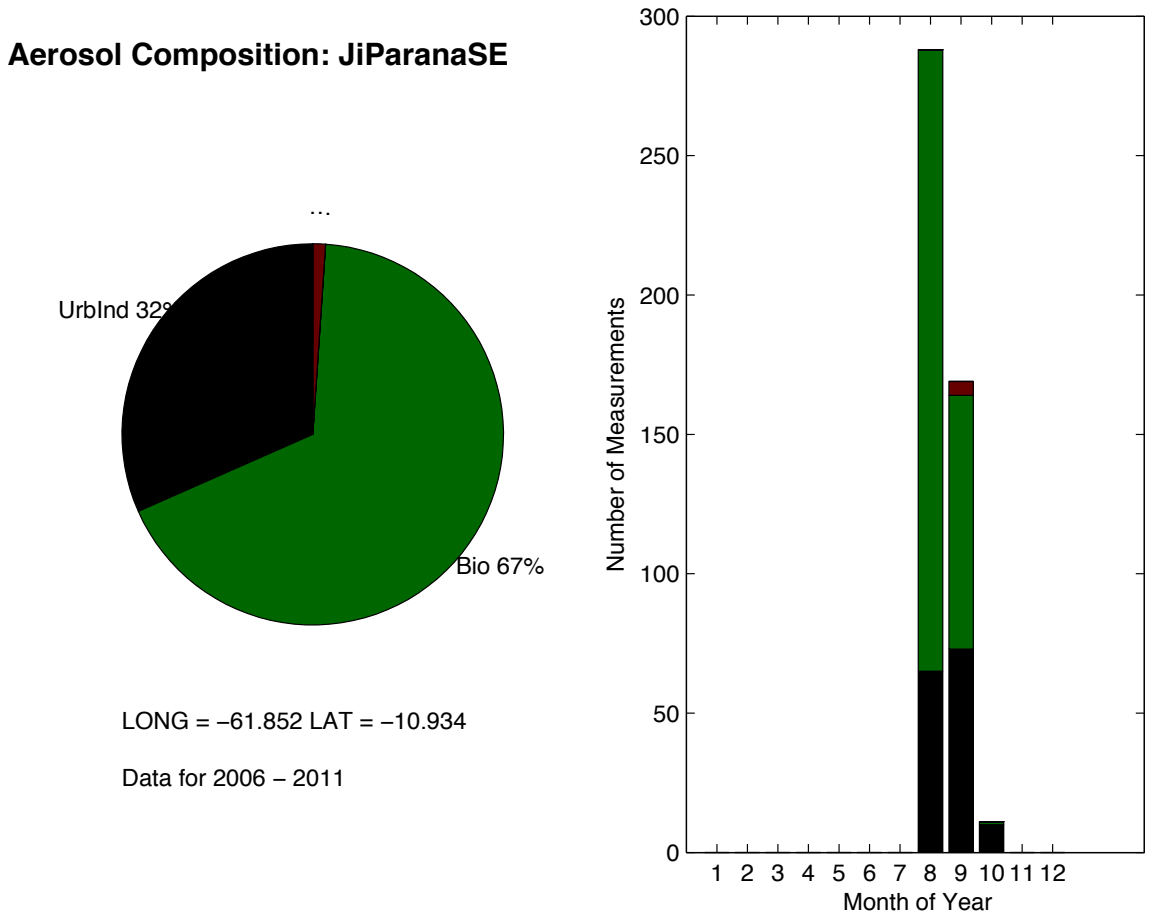
Lampedusa, Italy



Lampedusa is an Italian island quite close to the North African coast. The instrument is run by the ENEA Station for Climate Observations. Being close to the African continent, Lampedusa is a strategic location for the study of the transport and radiative effects of Saharan dust.

Return to Table

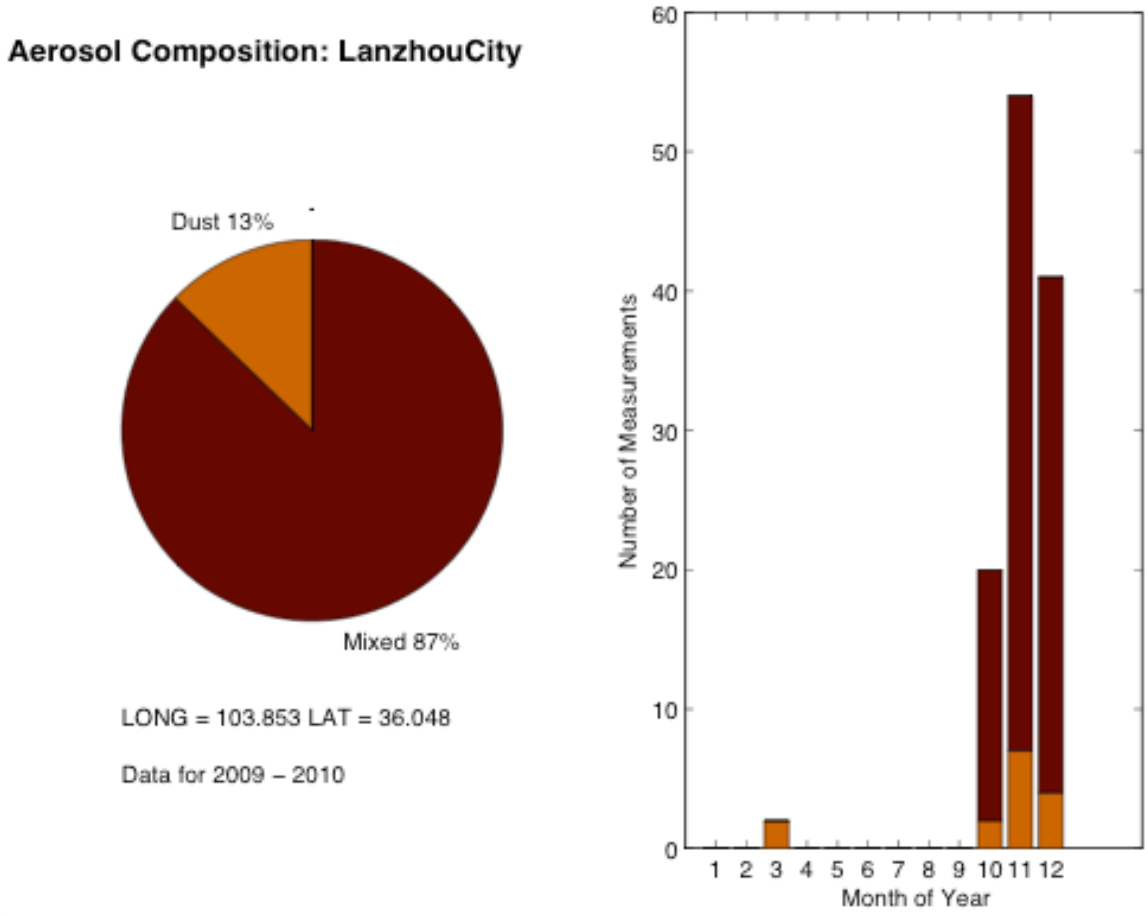
Lanai,
Hawaii, USA



This site (which is no longer active) is located near the coast in Lanai, Hawaii, on a dune approximately 200 m above the shore, at the south end of the island. Data from this instrument were used to define the optical properties of maritime aerosols used in this study.

Return to Table

Lanzhou (City), China



The city of Lanzhou is in northwestern China at an elevation of 1,600 meters (5,200 ft) above sea level. This urban area has a population of about 3.6 million people. The site is located in the urban area. Lanzhou is an industrial city with textile mills, fertilizer plants, machinery and metallurgical industries. The AERONET website lists this location as Lanzhou_City. This location was part of the 2001 ACE-ASIA mission.

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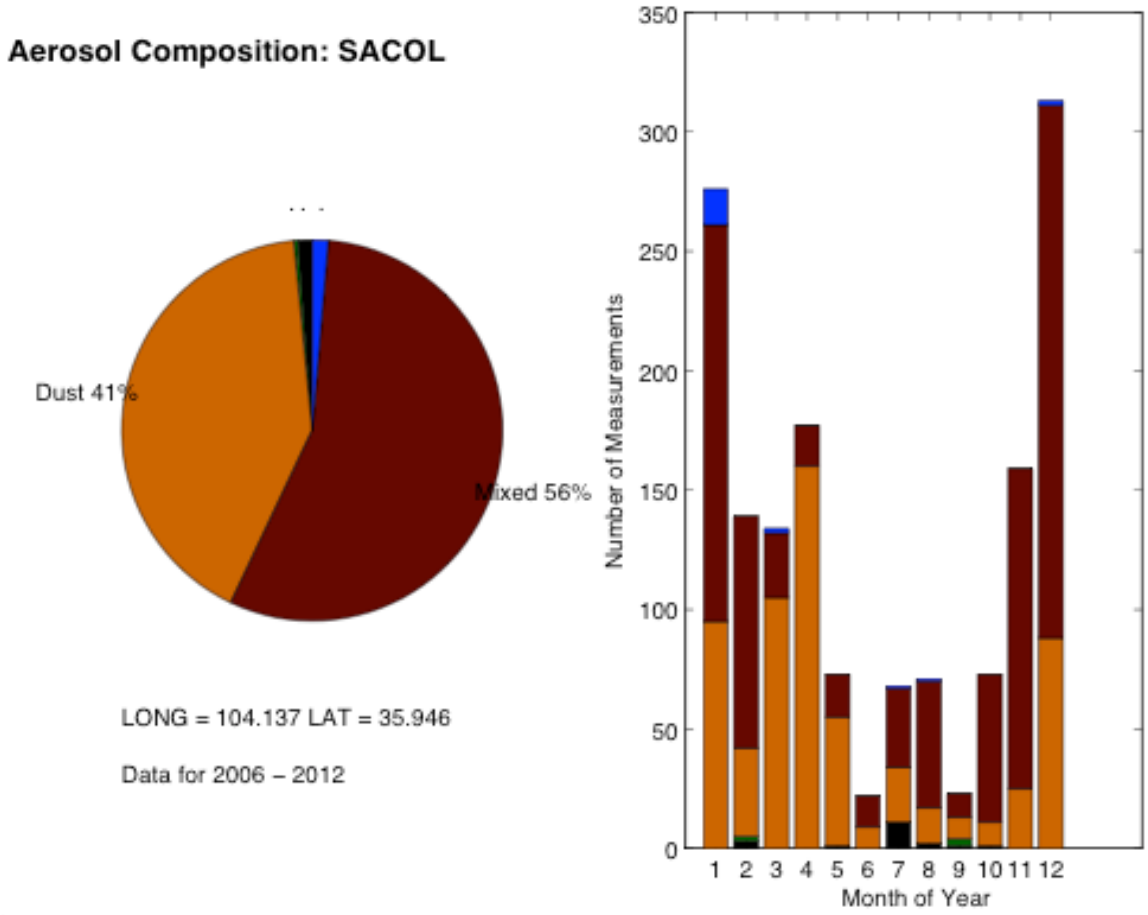
Lanzhou (SACOL), China



This site is located on the top of Cuiying Mountain about 30 km southeast of the city of Lanzhou, a city of about 3.6 million people. The site elevation is 1965.8 meters. The AERONET website lists this location as SACOL (the Semi-Arid Climate and Environment Observatory of Lanzhou University).

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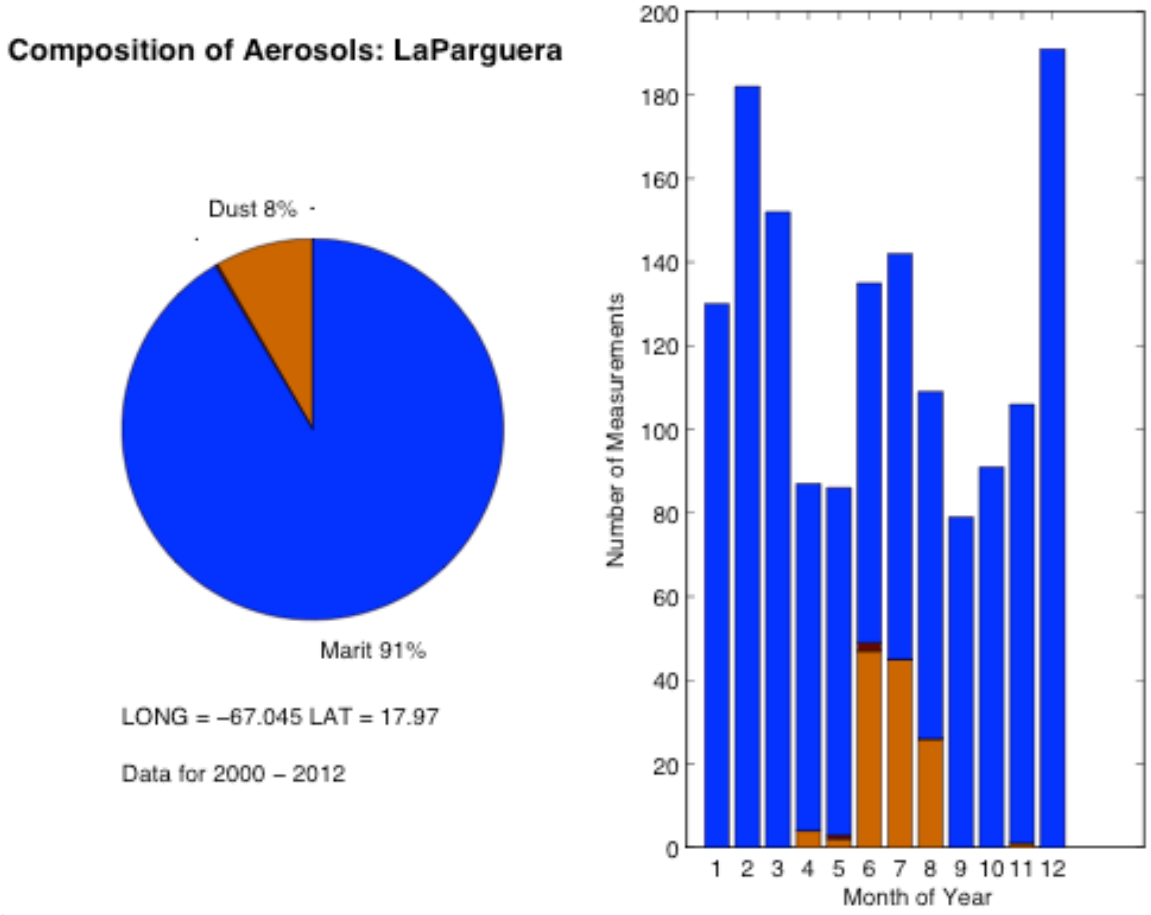
La Parguera, Puerto Rico



The sunphotometer is located at the University of Puerto Rico's Department of Marine Sciences Isla Mayaguez Field Station, in La Parguera, Southwestern Puerto Rico. The surrounding area is rural/park. Mahalanobis distance calculations for this site reflects dominant occurrence of maritime aerosol throughout the year with the usual intrusion of dust in the summer months.

The La Parguera site is also part of a long-term project involving land-based and buoy data as part of the International Coral Observatory Network (ICON). Further details on the link between African dust aerosols and Caribbean corals can be found at: http://coastal.er.usgs.gov/african_dust/. A local study of the Puerto Rican aerosol at the site is found at http://gers.uprm.edu/geol6225/pdfs/a_ramirez.pdf.

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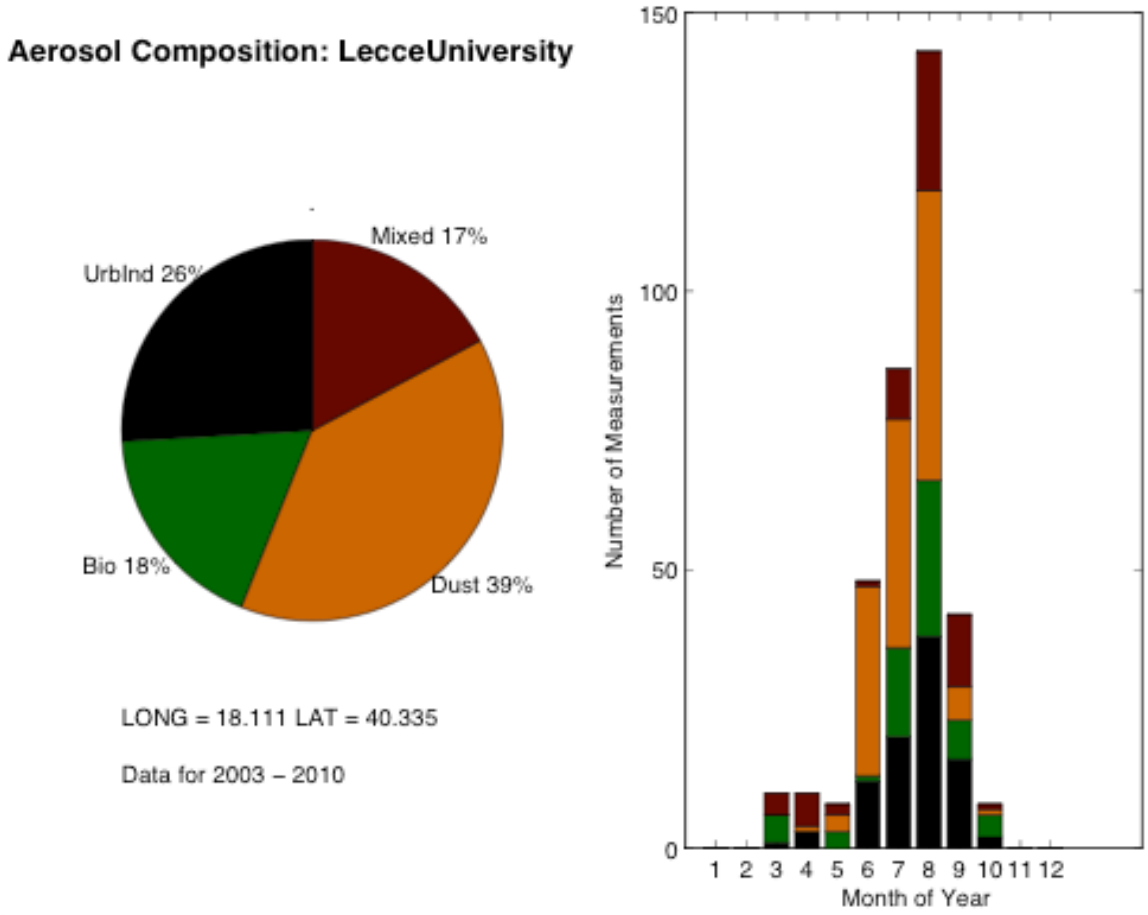
Lecce, Italy



This site is on the southern Salentine Peninsula, in the city of Lecce in southern Italy. It is approximately 20 km inland, west of the Strait of Otranto (between the Adriatic and the Ionian Sea). The surrounding urban area has a population of about 100,000. Lecce is an agricultural and industrial center. Dust aerosols predominate in the summer months. The site is denoted Lecce_University in the AERONET website.

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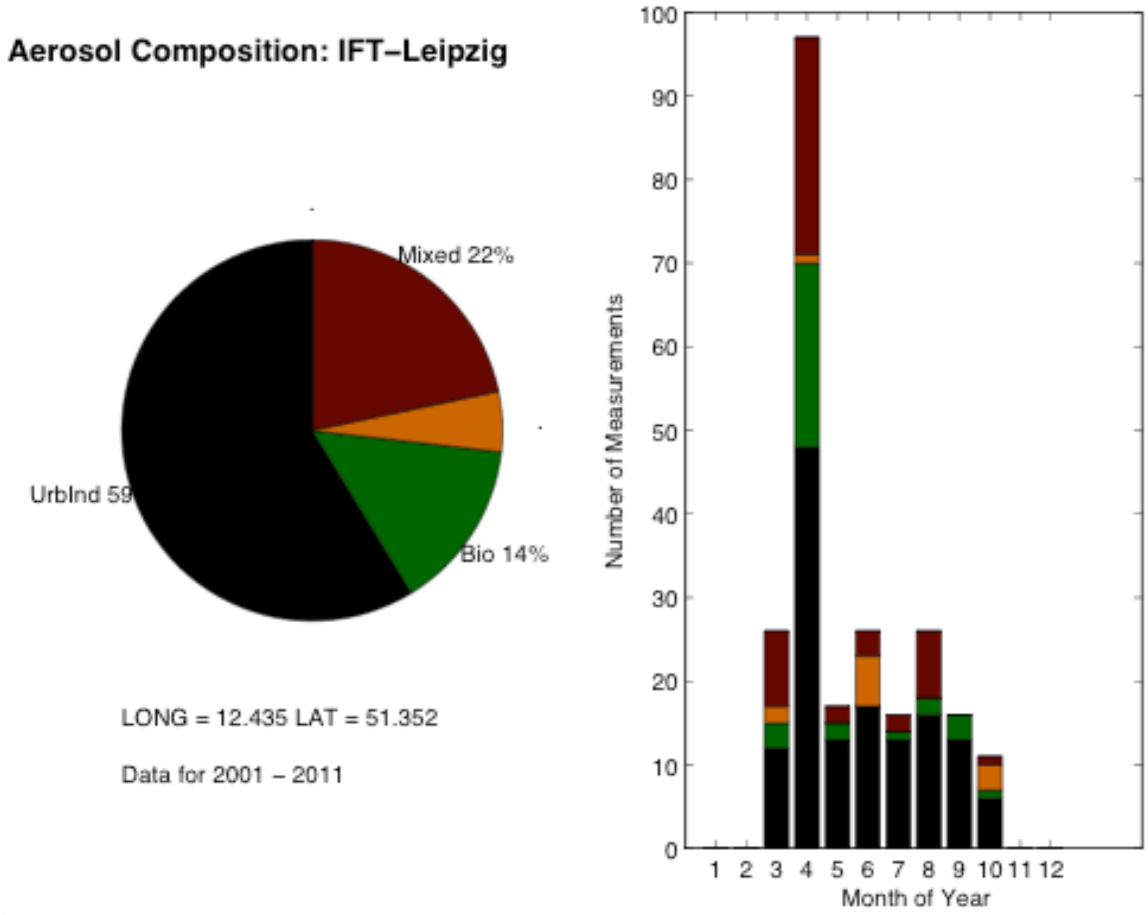
Leipzig, Germany



Leipzig is a city of about half a million some 150 km south of Berlin. The climate of Leipzig is in the transition zone between oceanic and continental. The city is a center for the manufacture of automobiles. The AERONET website lists this location as IFT-Leipzig.

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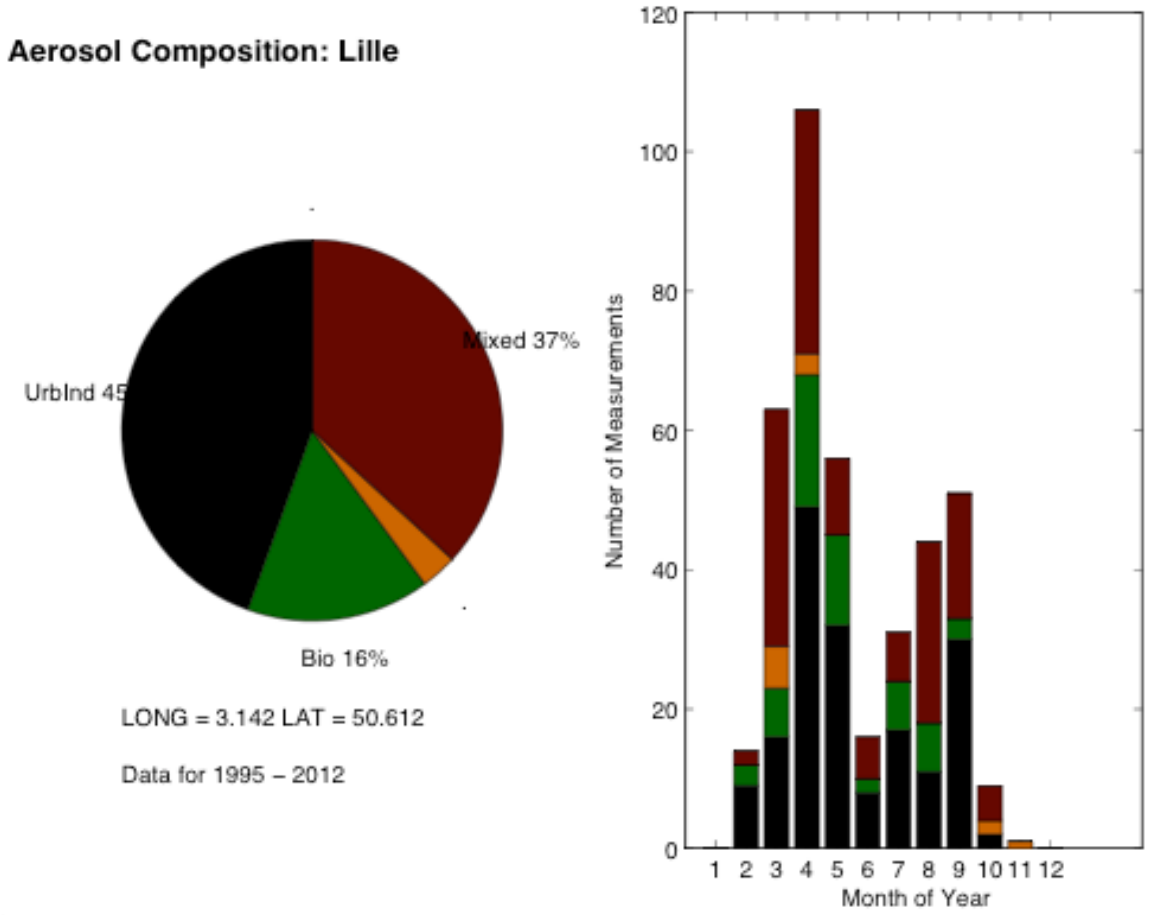
Lille, France



Lille is a city in northeastern France, very close to the Belgian border. The site is in an urban metropolitan environment having a population of about 230,000. If one includes some nearby cities in Belgium, the metropolitan area has a population of nearly 2 million. Lille (sometimes referred to as "a city of merchants") has long been an important industrial/commercial center but is presently dominated by the services sector. The climate is temperate-oceanic.

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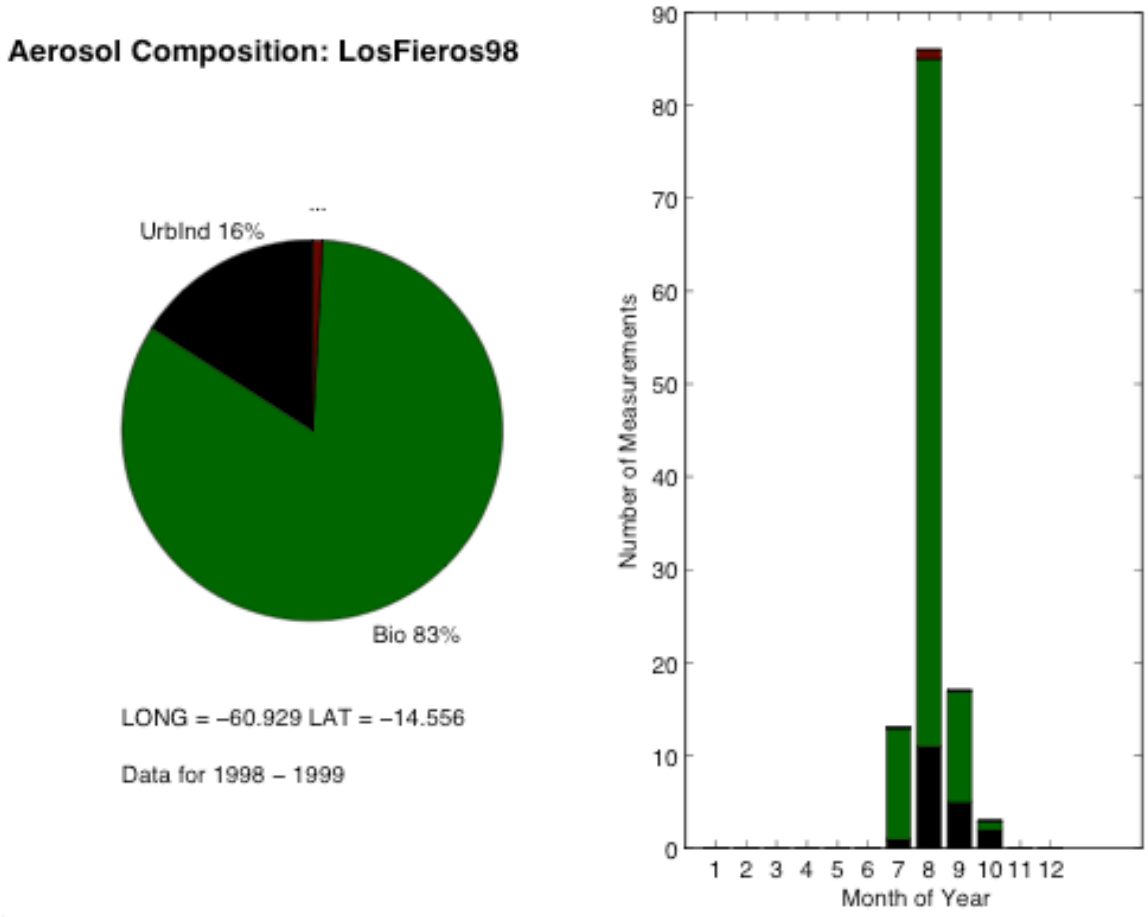
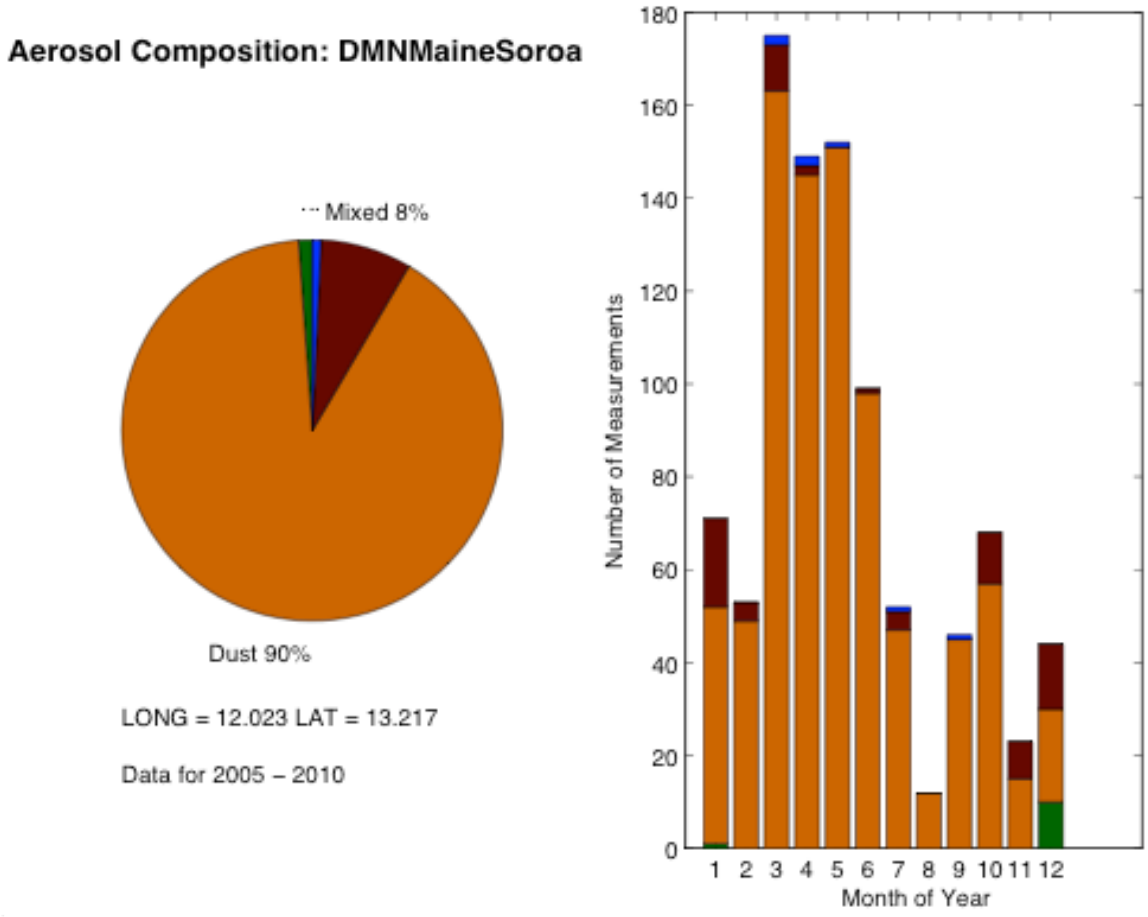
Los Fieros, Bolivia



Los Fierros is an isolated place in a national park in eastern Bolivia near the Brazilian border (across from the state of Matto Grosso). The AERONET site is no longer active.

Return to Table

Maine-Soroa, Niger



Maine-Soroa is a small town of about 10,000 people in southeastern Niger. The region is agro-pastoral. It lies in the Sahel region of Niger and consequently is under the threat of desertification. The AERONET website lists this location as DMN_Maine_Soroa.

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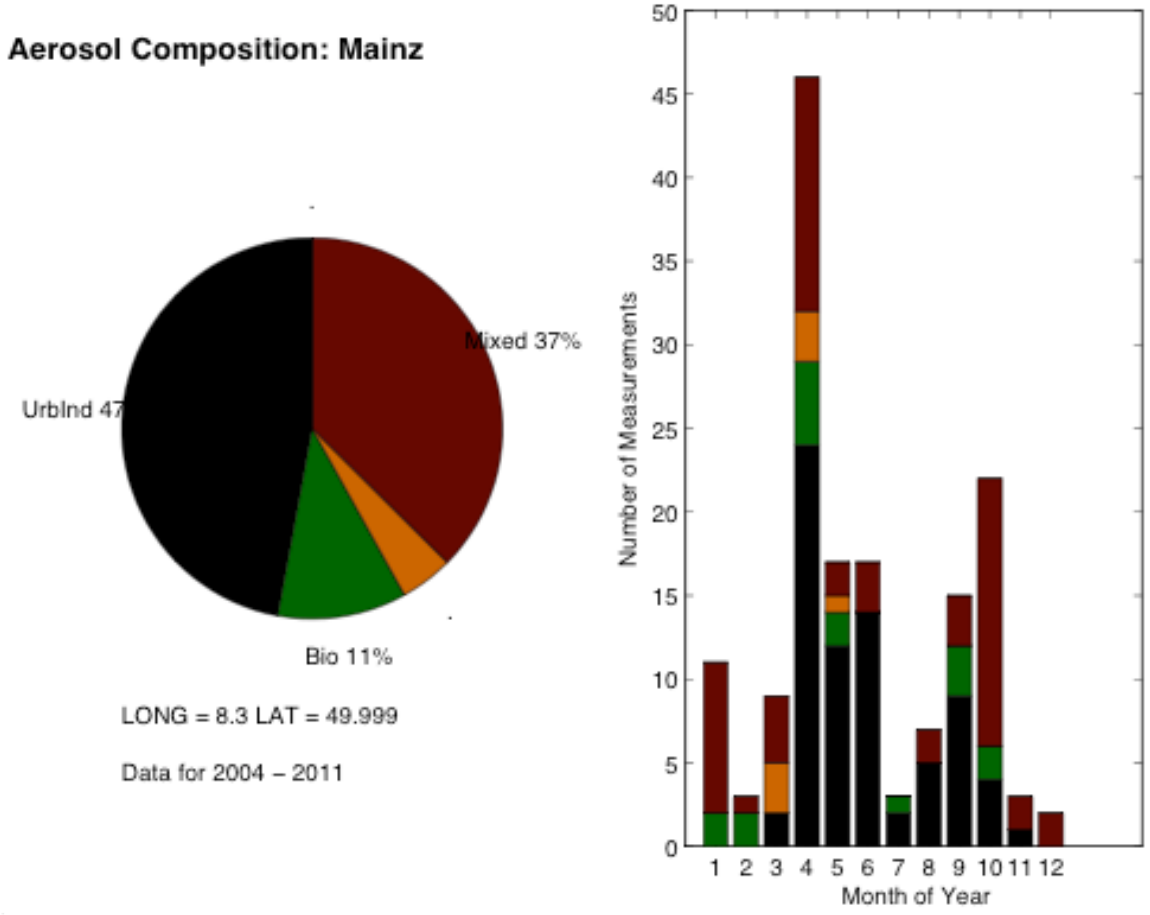
Mainz, Germany



The AERONET site is located on the roof of the Max Planck Institute for Chemistry on a university campus at the edge of the city of Mainz. This urban metropolitan city has a population of about 203,000. The site is surrounded by urban and rural land, in a moderately to highly polluted region. The city is known for its wine industry, as well as chemical industries and glass factories.

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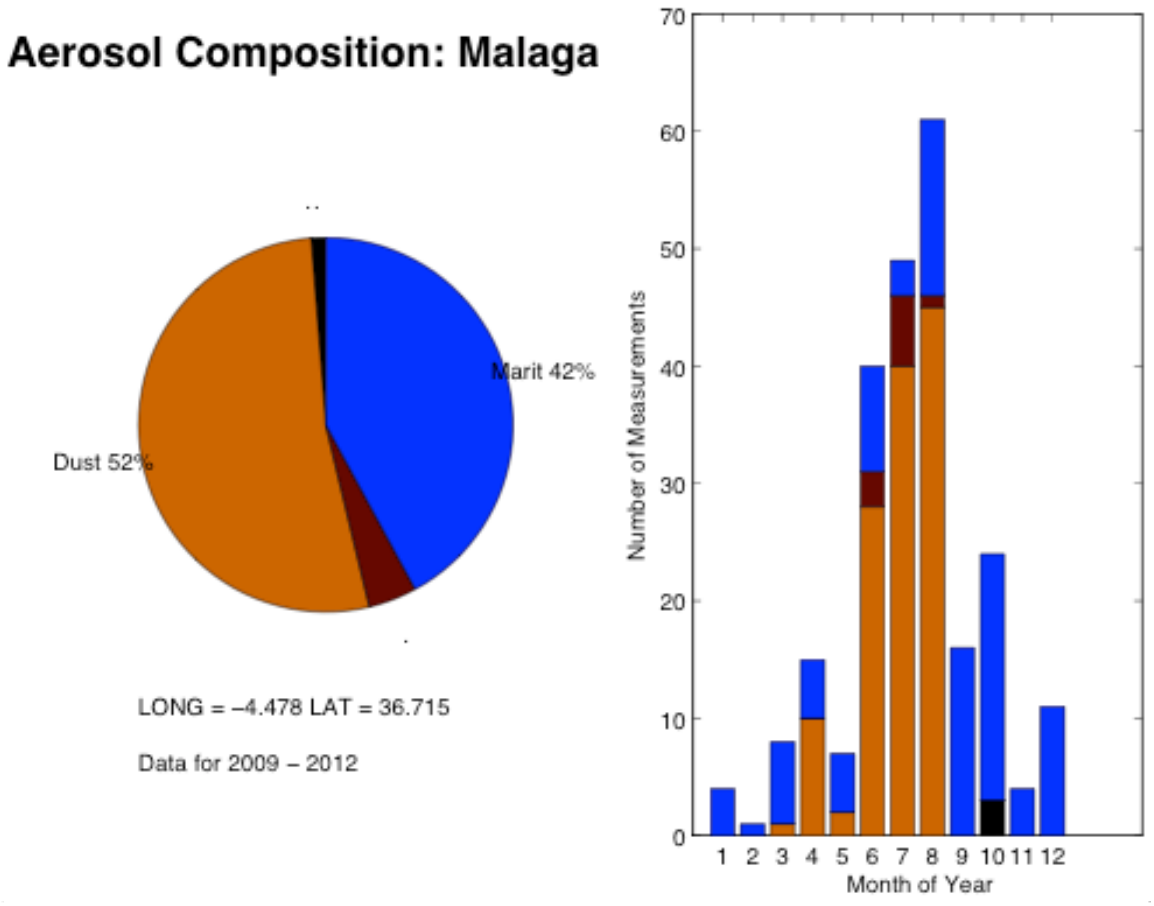
Malaga, Spain



The instrument is on the rooftop of the School of Informatics at the University of Malaga. This site is located west of the city, four kilometers from the sea. Malaga is a port city in southern Spain, with a population around 600,000. It lies about 130 km north of Africa and, as expected, receives transported Saharan dust.

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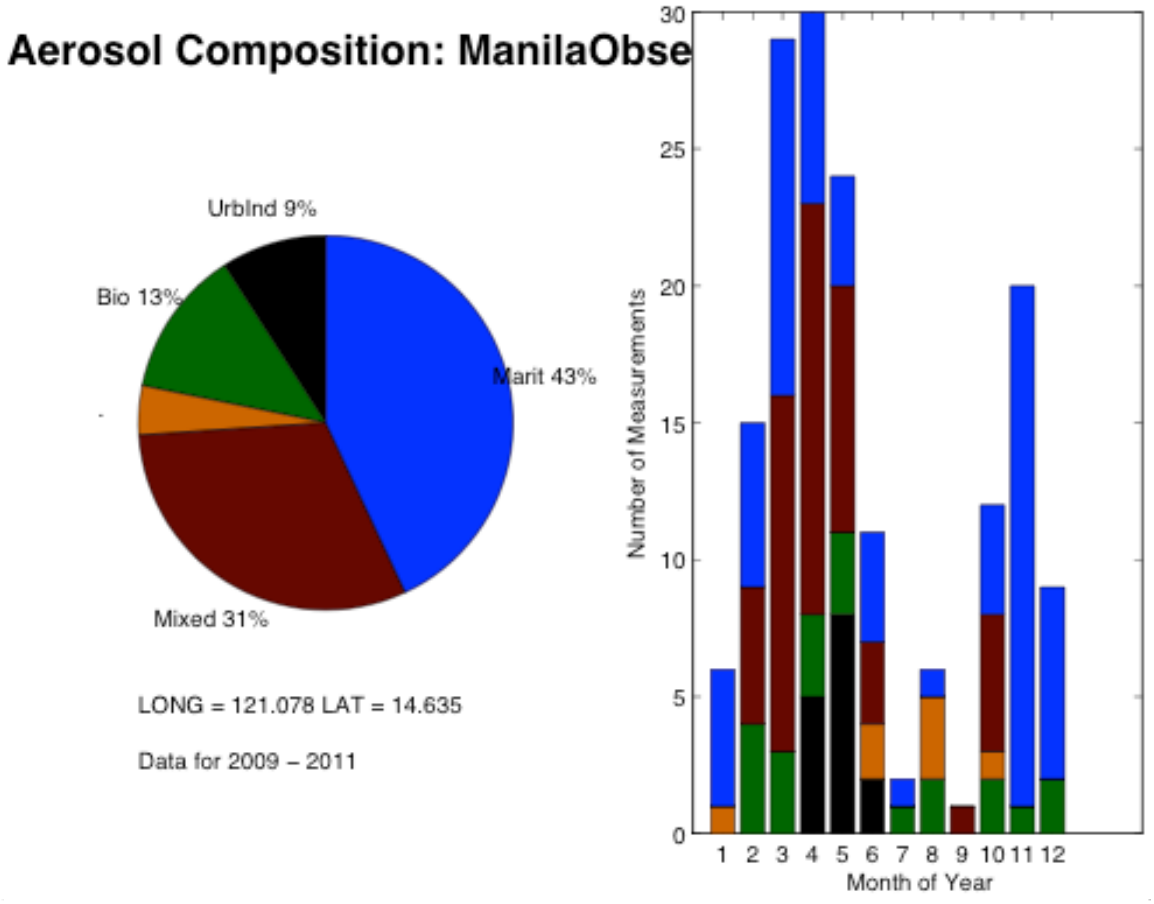
Manila (Observatory), Philippines



The instrument is installed on roof of the Climate Studies Division building of the Manila Observatory. Manila Observatory is located 15km northeast from the center of Manila, a city of 1.65 million. The site is about 20 km from Manila bay in an urban region. Manila is known to have a significant air pollution problem. This site is listed in the AERONET website as Manila_Observatory.

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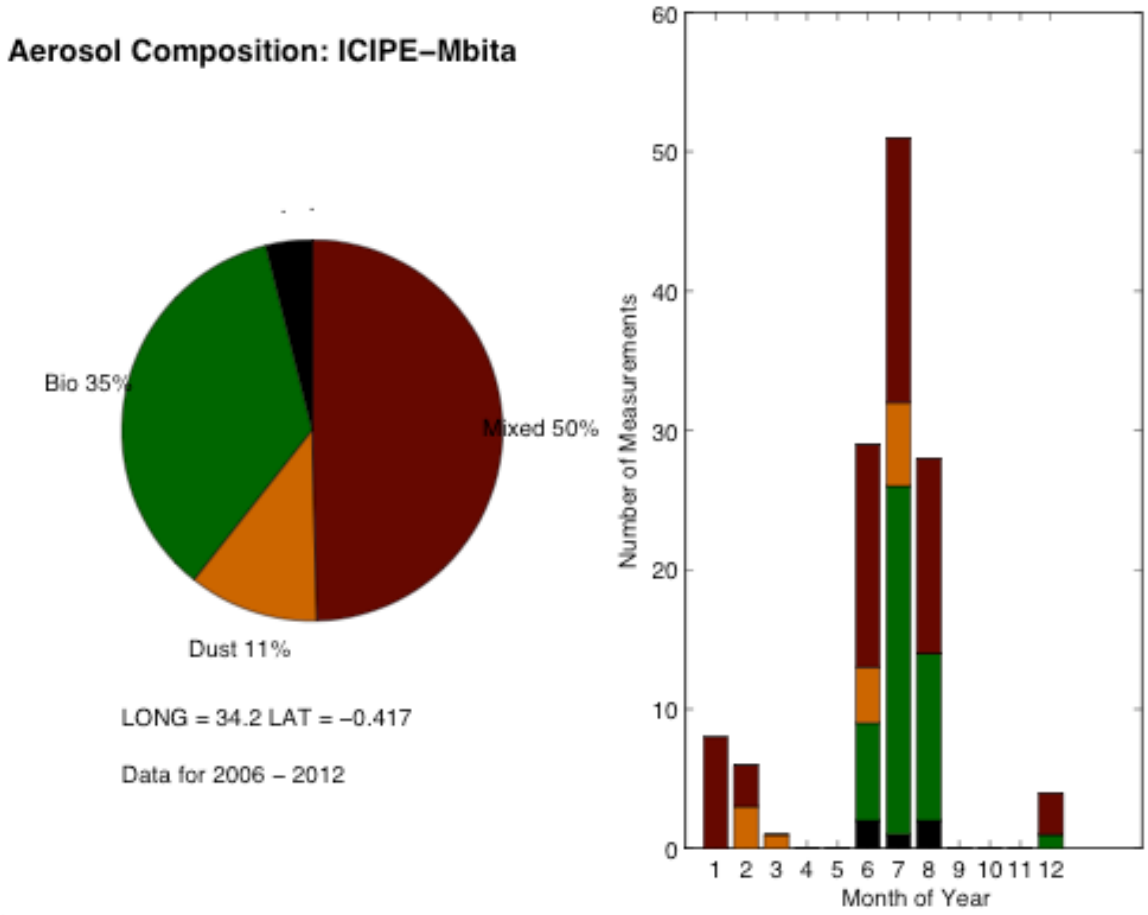
Mbita (ICIPE)
Kenya



Mbita (Mbita Point) is a rural community on the shores of Lake Victoria in Western Kenya, near the border of Uganda. The population of Mbita is less than 10,000. The site is hosted by the international centre of insect physiology and ecology (ICIPE). The AERONET website lists this location as ICIPE-Mbita.

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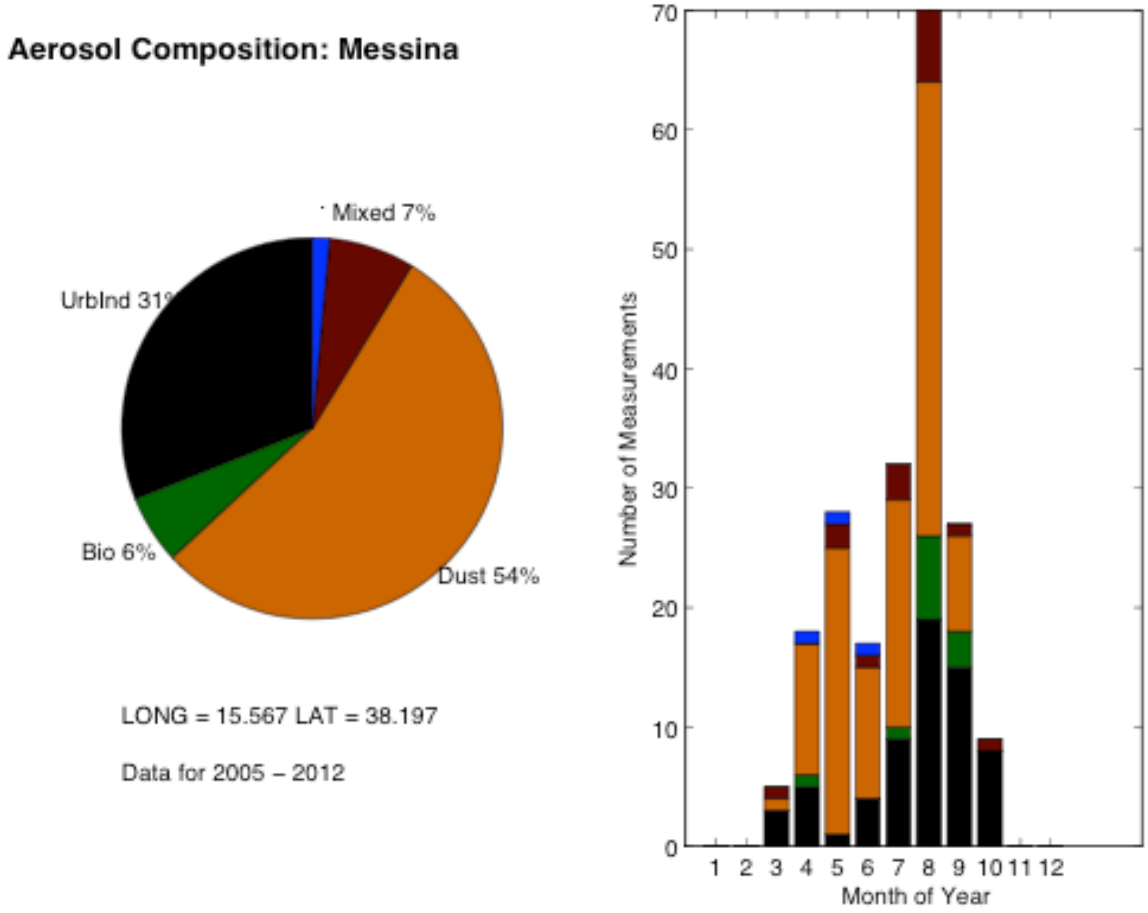
Messina, Italy



Messina is the third largest city on the island of Sicily. Messina is a port city with an urban population of 260,000 inhabitants. The Sun-photometer is located at the Institute for Coastal Marine Environment, a few meters from the seashore. Unexpectedly, our Mahalanobis calculations only yield about 1% Maritime aerosols. Messina is about 5 km from the Italian mainland, across the Straits of Messina.

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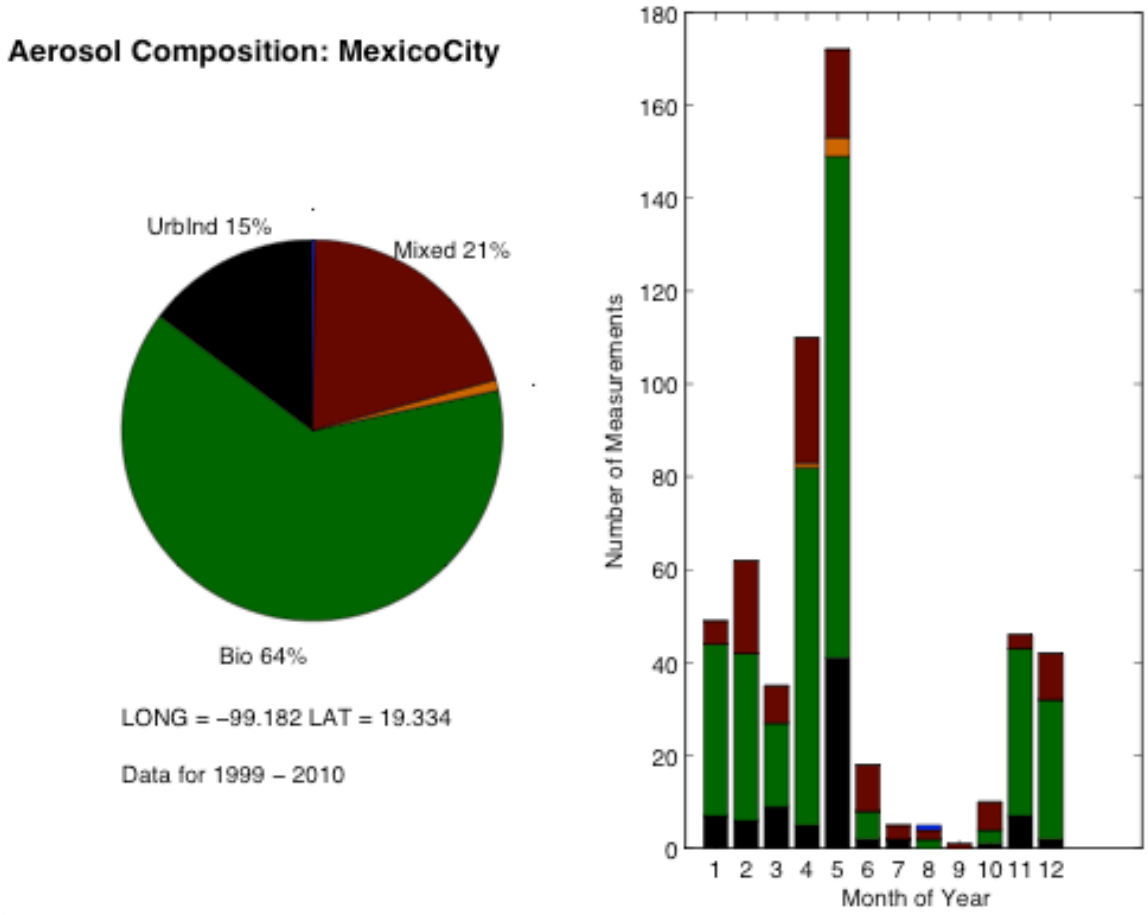
Mexico City, Mexico



The sun photometer site is located on a platform in a wooded area of Mexico City, in the southern end of the Federal District metropolitan area (population over 8.9 million). Mexico City has a serious air pollution problem, but the Mahalanobis distance analysis indicates that biomass burning aerosols are predominant. It is known that in the Mexico City region there is significant burning in the surrounding mountains, especially during the November to April dry season.

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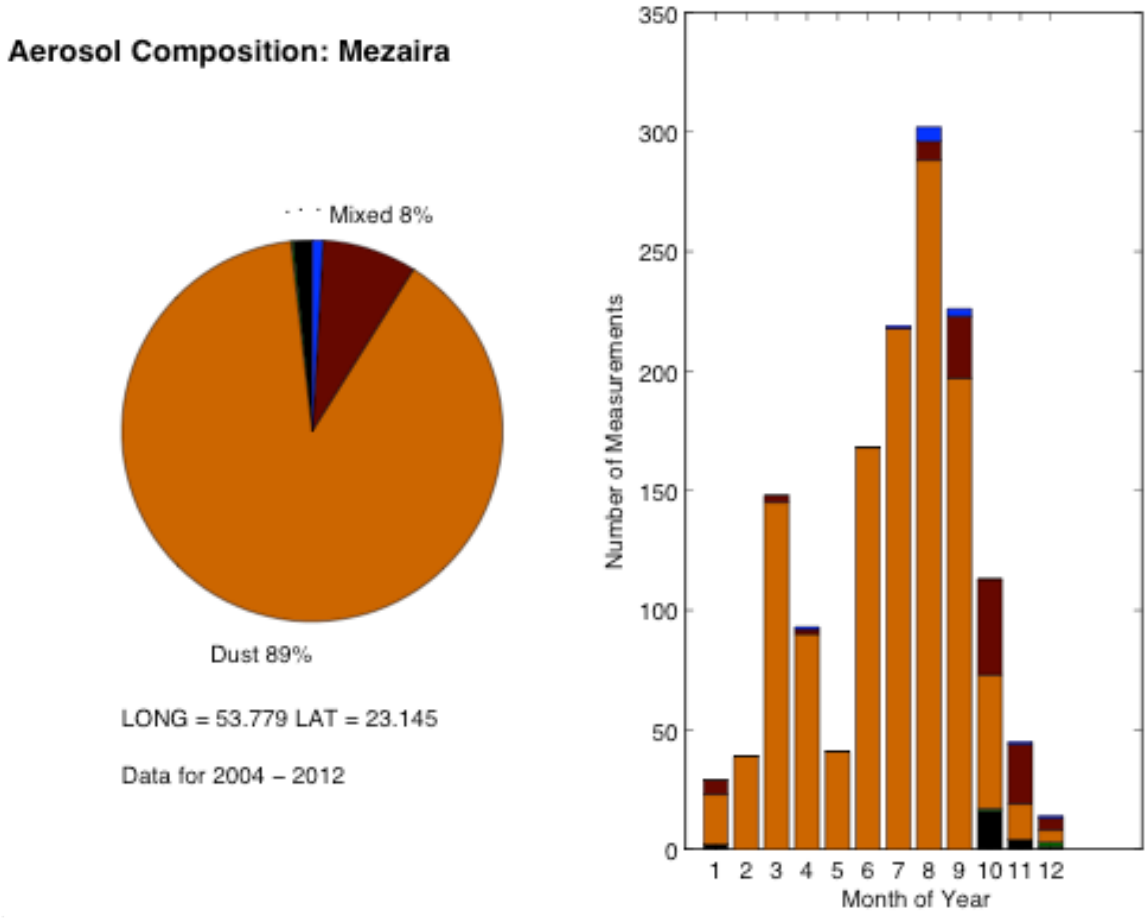
Mezaira, UAE



The instrument is on the ground in a dune field. The surrounding area is composed of small, recovered-desert agricultural development. Mezaira is about 130 km south of the Persian Gulf, deep in the desert.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008.

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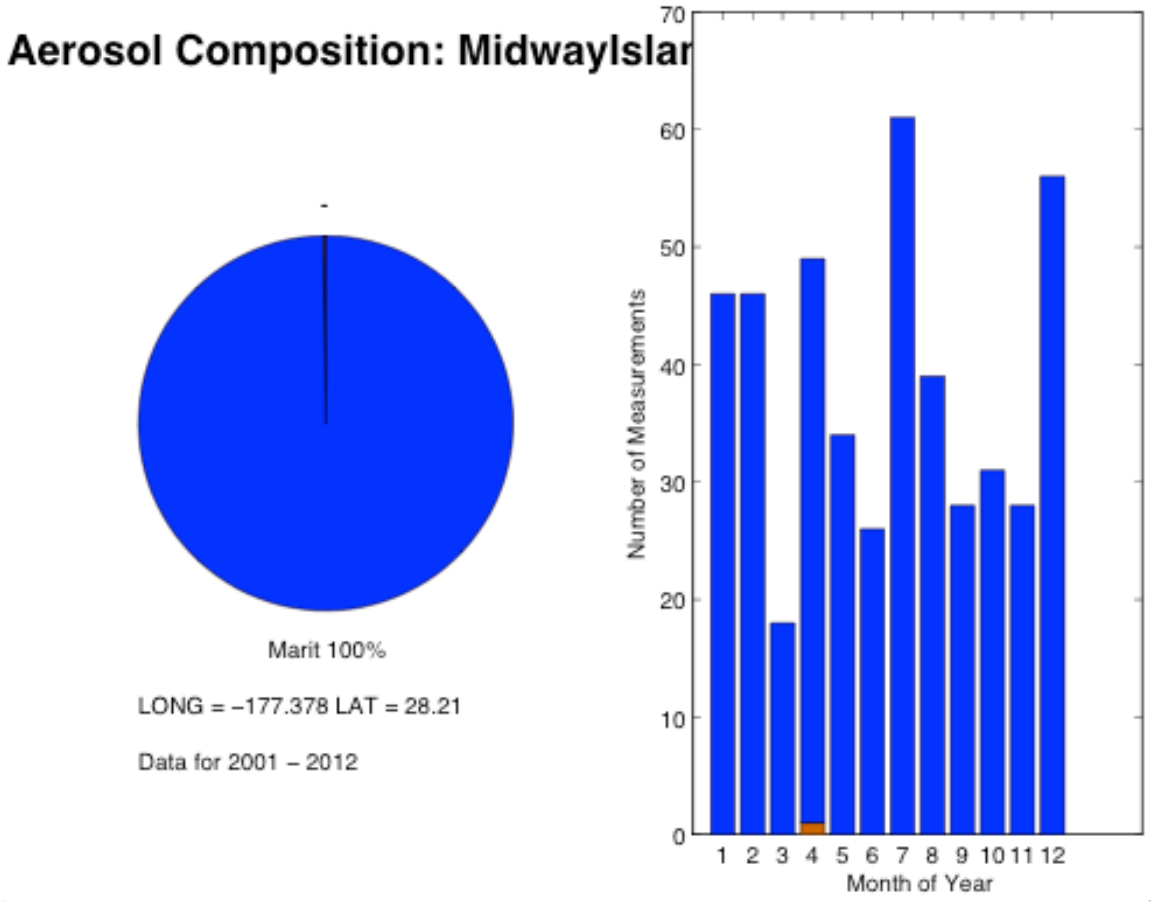
Midway Island



Midway Island is a small atoll in the north Pacific Ocean. It is near the northwestern end of the Hawaiian Archipelago. Once a populated island, it is now inhabited only by fish and wildlife workers. It is roughly equidistant between North America and Asia.

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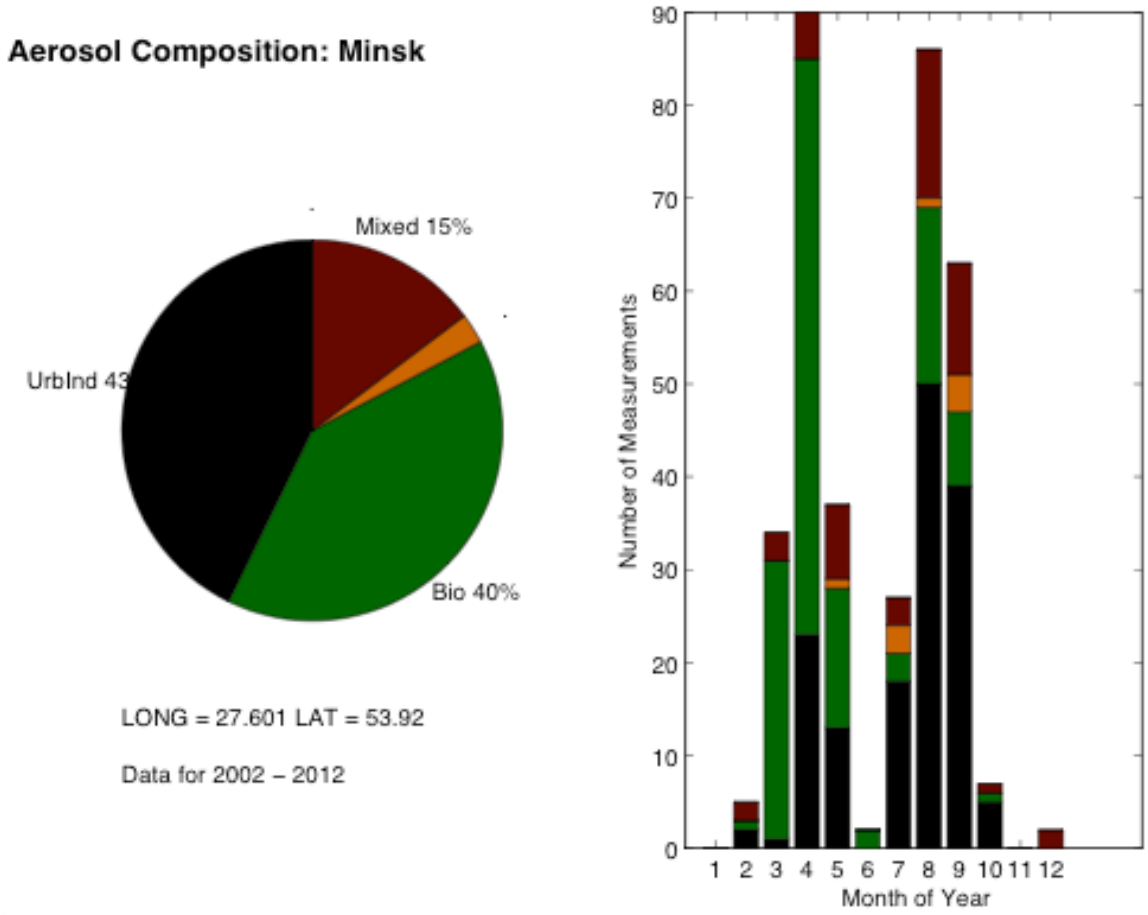
Minsk, Belarus



The instrument is located on the roof of the Institute of Physics building. The site is urban, but adjacent to two urban forest parks. The Minsk region has a population of about 2 million. It is the major industrial center of Belarus, having some 250 factories producing trucks, tractors, gears, optical equipment, refrigerators, television sets, radios, bicycles, motorcycles, watches, and metal-processing equipment.

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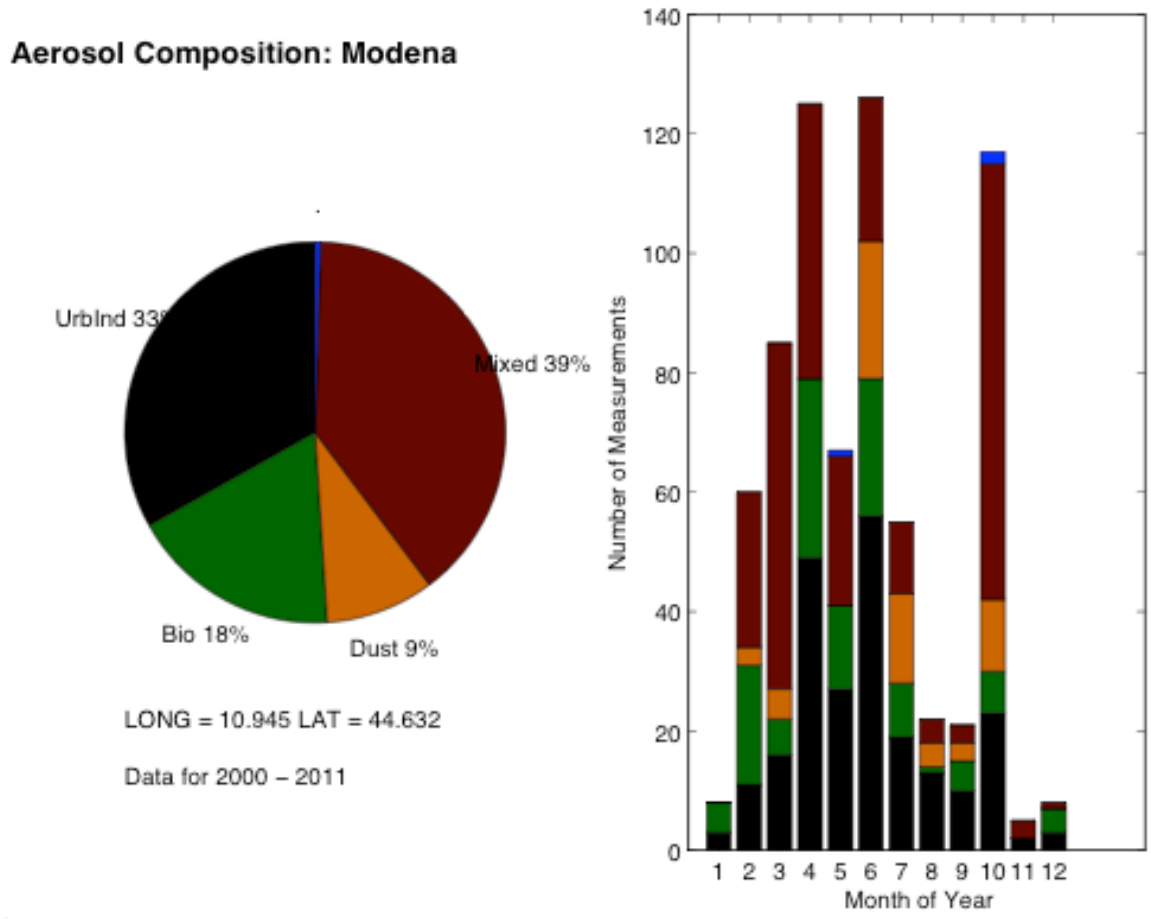
Modena, Italy



The sunphotometer is located on a roof of Modena University. Modena is a town with an approximate population of 180,000 people. It is located in the most industrialized area of Italy, about 40 km northwest of Bologna, and roughly half way between Genoa and Venice.

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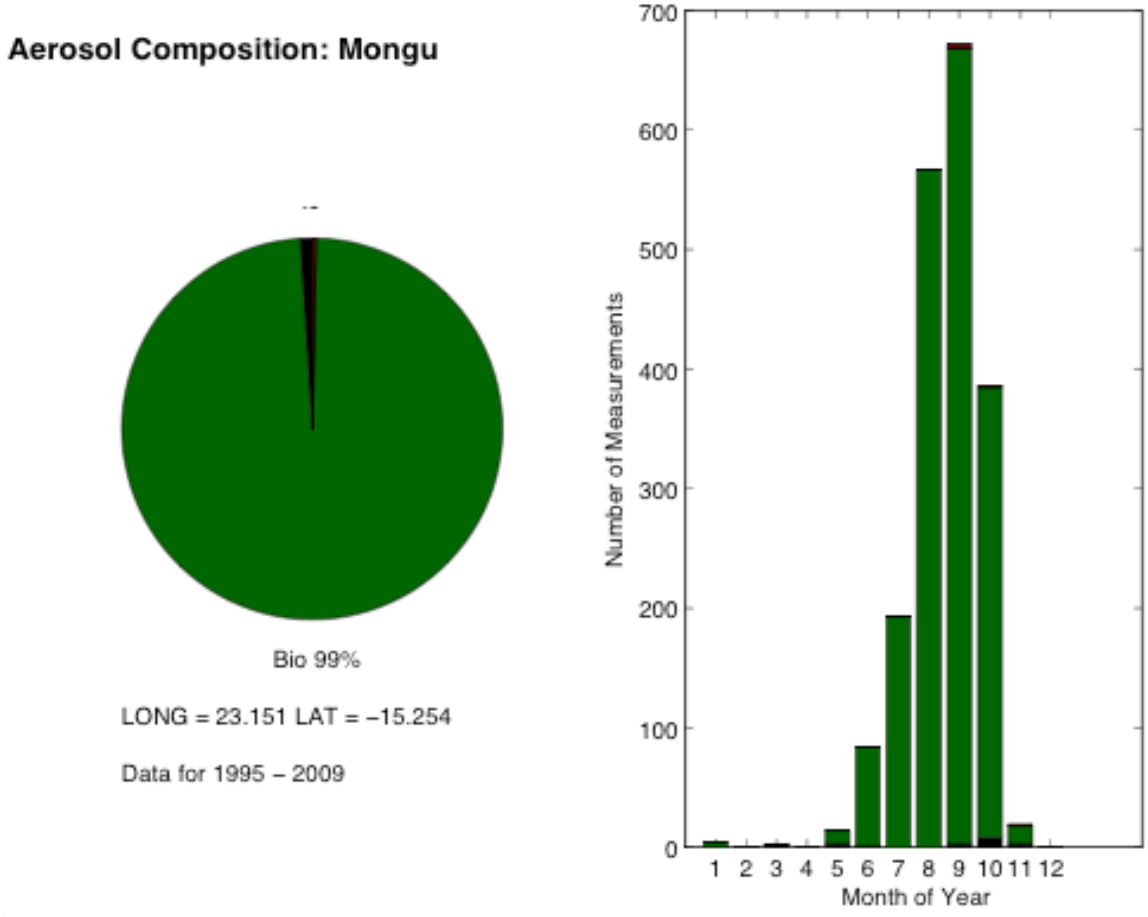
Mongu, Zambia



Mongu is a small city (population 45,0000) in Zambia, a landlocked country in Southern Africa. It is surrounded by the Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Nambia and Angola. This site is located on the rooftop of a small building, in a field adjacent to the local airport. The airport is surrounded by residential areas, but no industry. This region is characterized by sandy soils and a seasonal flood plain that is burned annually from July through November.

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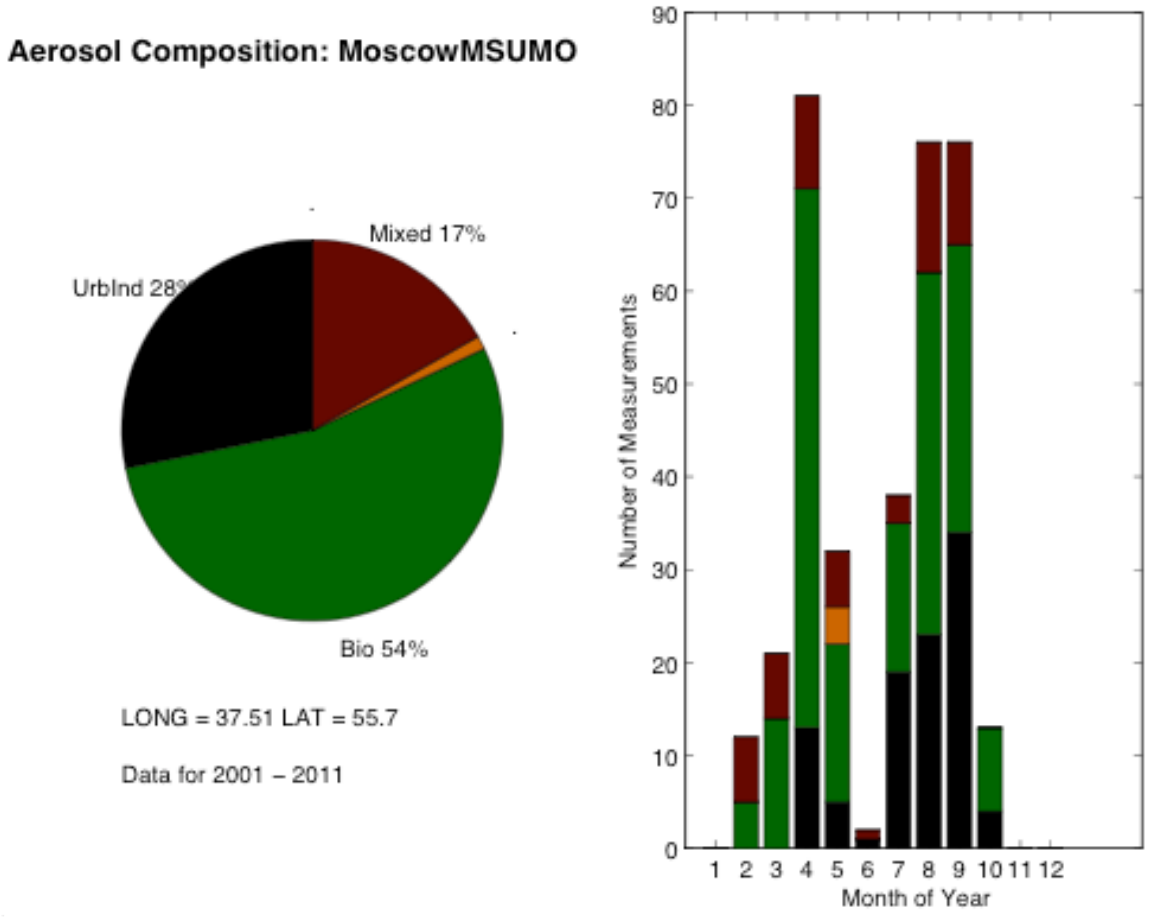
Moscow, Russia



The instrument is located at Moscow State University, which is situated in Southwest Moscow about 5 km from the city center. This highly urban area has a population of some 11.5 million inhabitants. Industry in Moscow includes chemical, metallurgy, food, textile, energy production and machinery. Air pollution in Moscow is rated as the second worst among Russian cities. This site is listed on the AERONET website as Moscow_MSU_MO.

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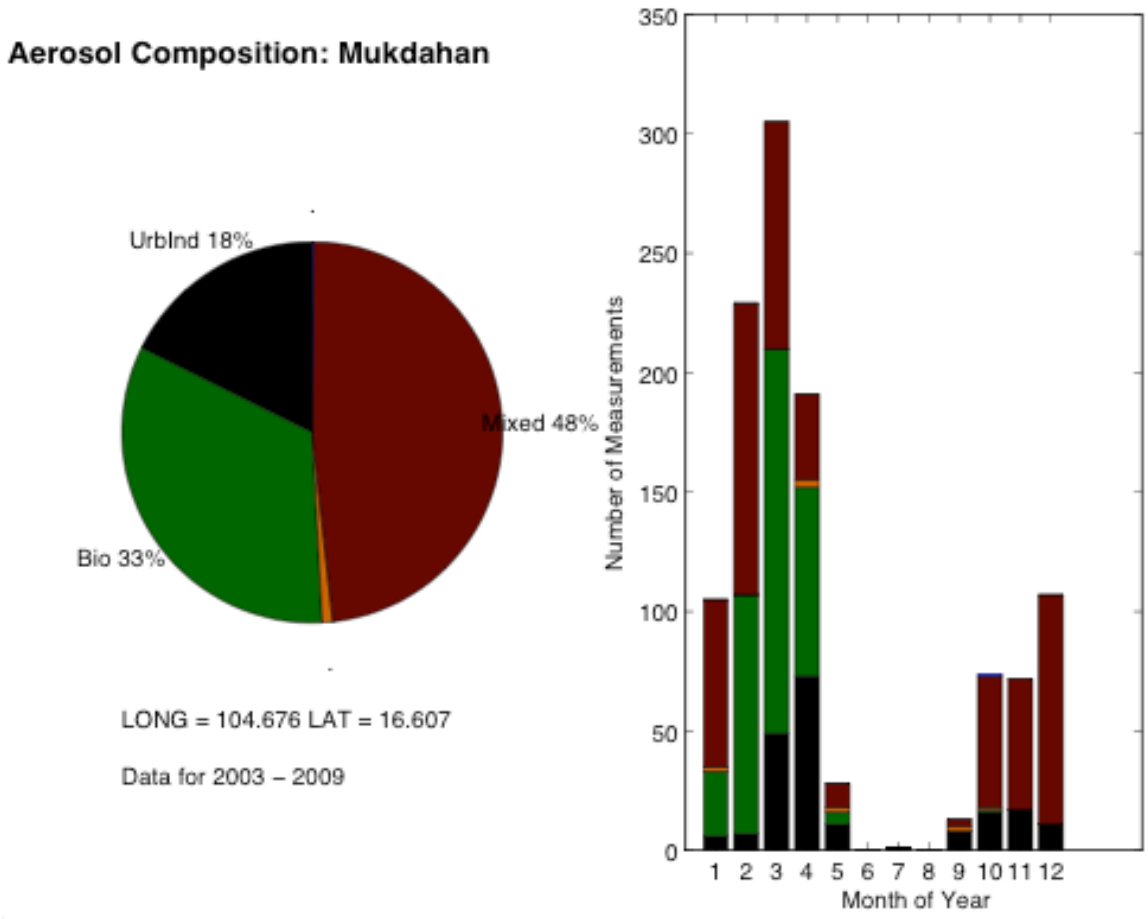
Mukdahan, Thailand



This instrument is located in a rural region about 10 km northwest of the city of Mukdahan, Thailand (population approximately 100,000). The landscape around Mukdahan is relatively flat, but some steep hills are found to the west. The land cover is a mixture of forest and agriculture, mostly dominated by rice and sugar cane fields. The climate of Mukdahan is classified as tropical savannah.

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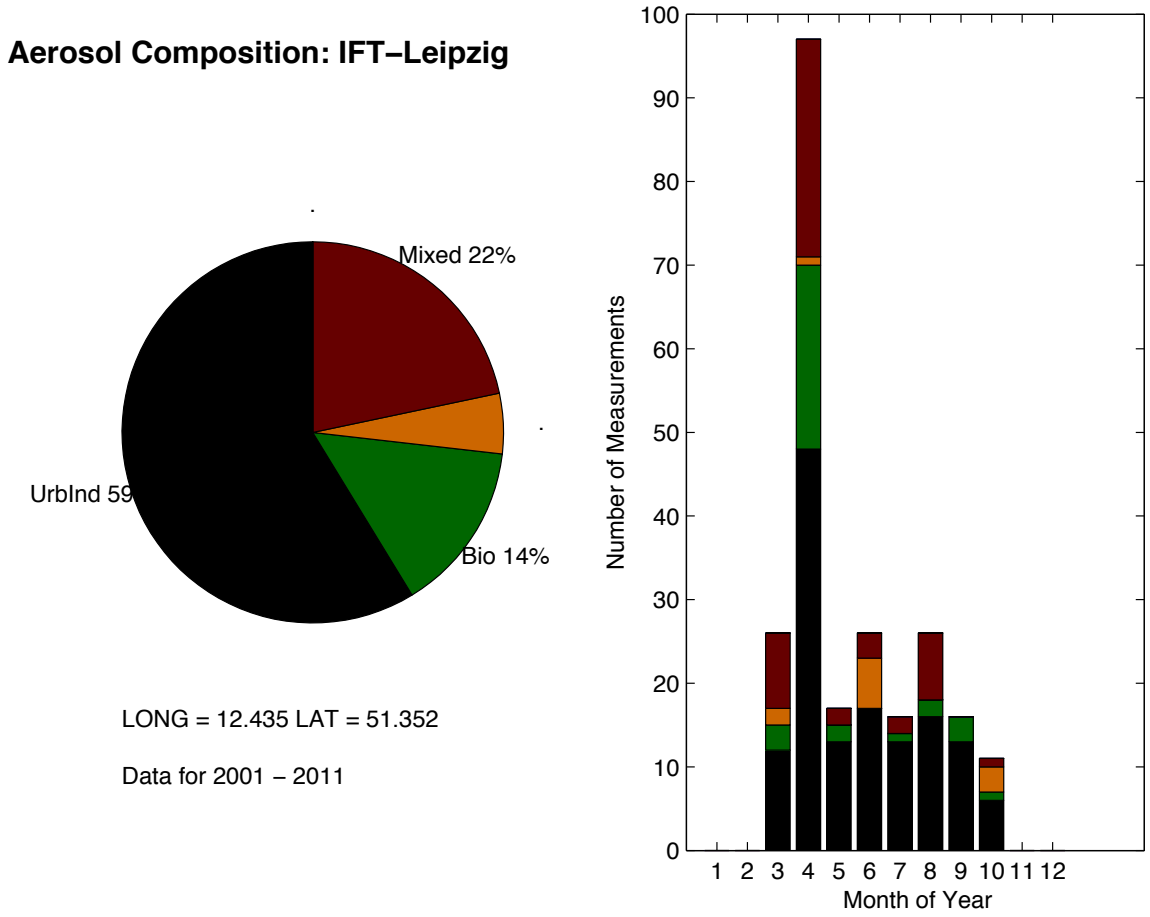
Munich, Germany



This AERONET site is located at Munich University, near the center of the city of Munich (population about 1.4 million). Munich is said to have the strongest economy of any German city and is the home of many industries, including publishing companies, electronics and automobile manufacturing. This site is listed by AERONET as Munich_University.

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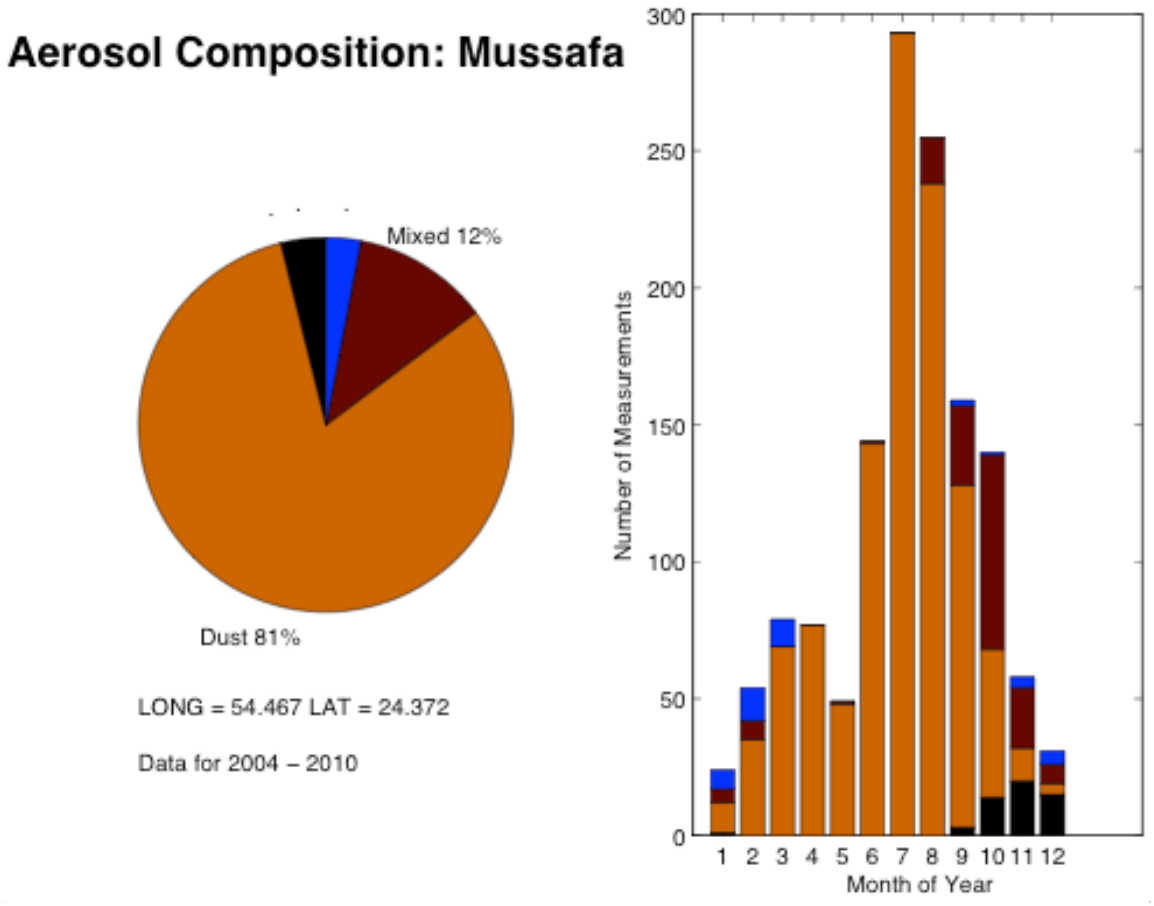
Mussafa
(Abu Dhabi) UAE



Mussafa is the name of an industrial area in Abu Dhabi, UAE. The instrument is on the south shore of the Persian Gulf. The Gulf is a few meters from the instrument and the surrounding area is industrial/commercial with about 920,000 inhabitants.

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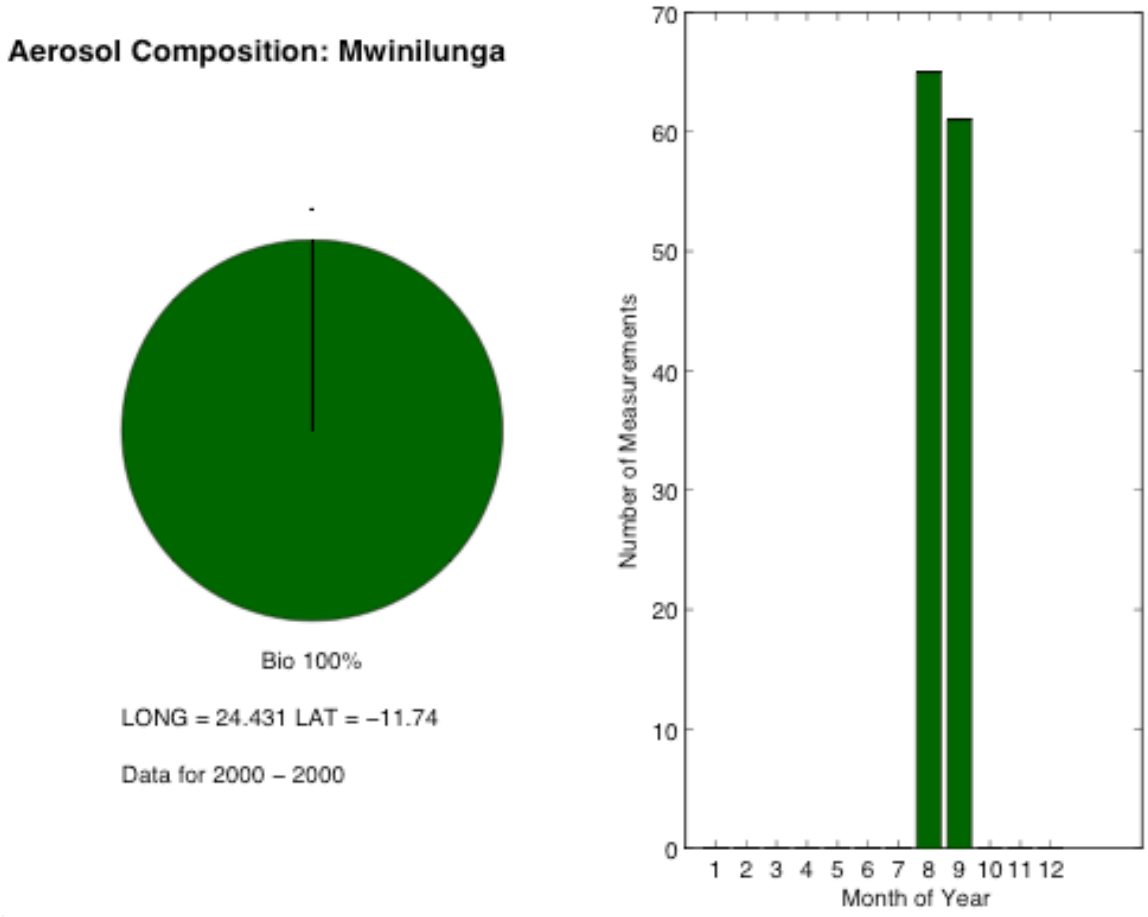
Mwinilunga, Zambia



This site is no longer active. It was located on a termite hill in the town of Mwinilunga in northwestern Zambia. The town has a population of 15,000. The region is very rainy, particularly in the period from October to May.

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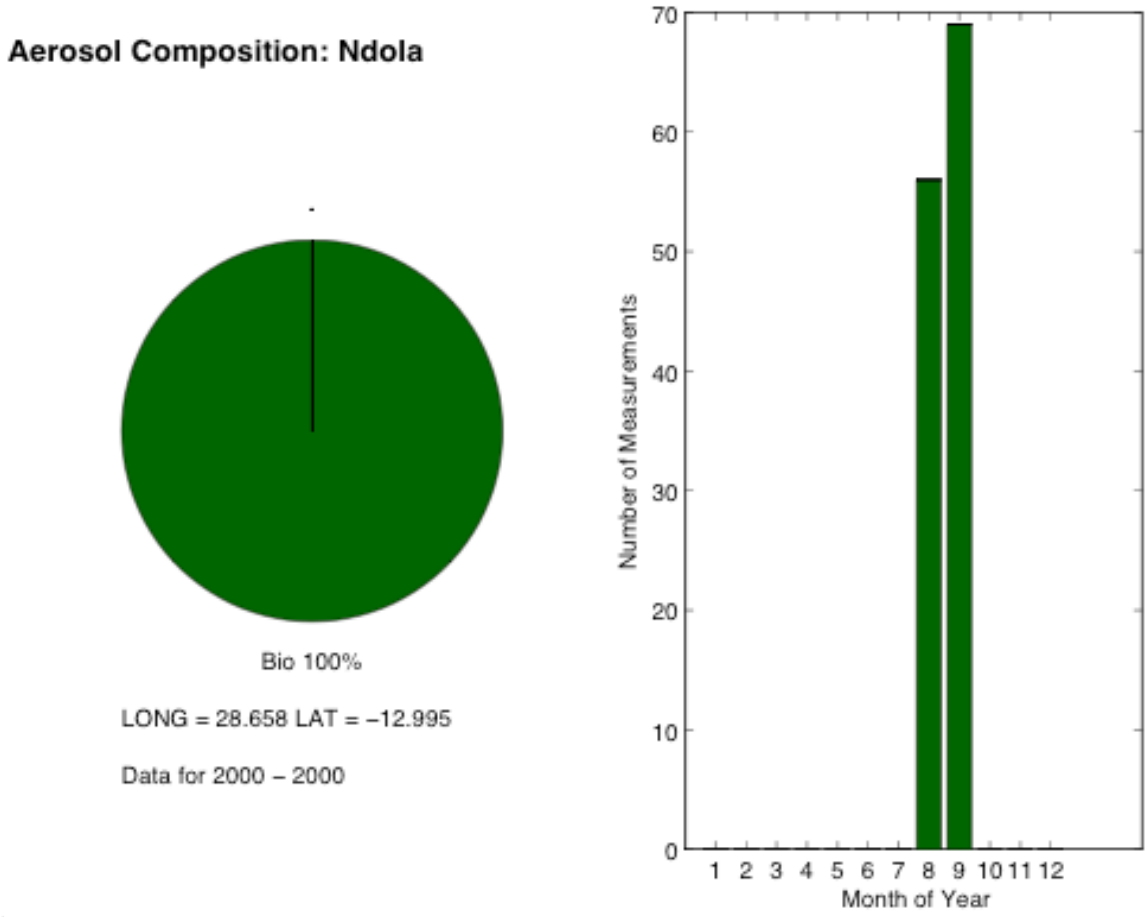
Ndola, Zambia



Ndola is in an industrial and mining region with a city population of ~ 460,000. The sun photometer is located at the airport, south and west of the city. It is an industrial and commercial center about 10 km from the border with the Congo. It has a humid subtropical climate. This site is no longer active.

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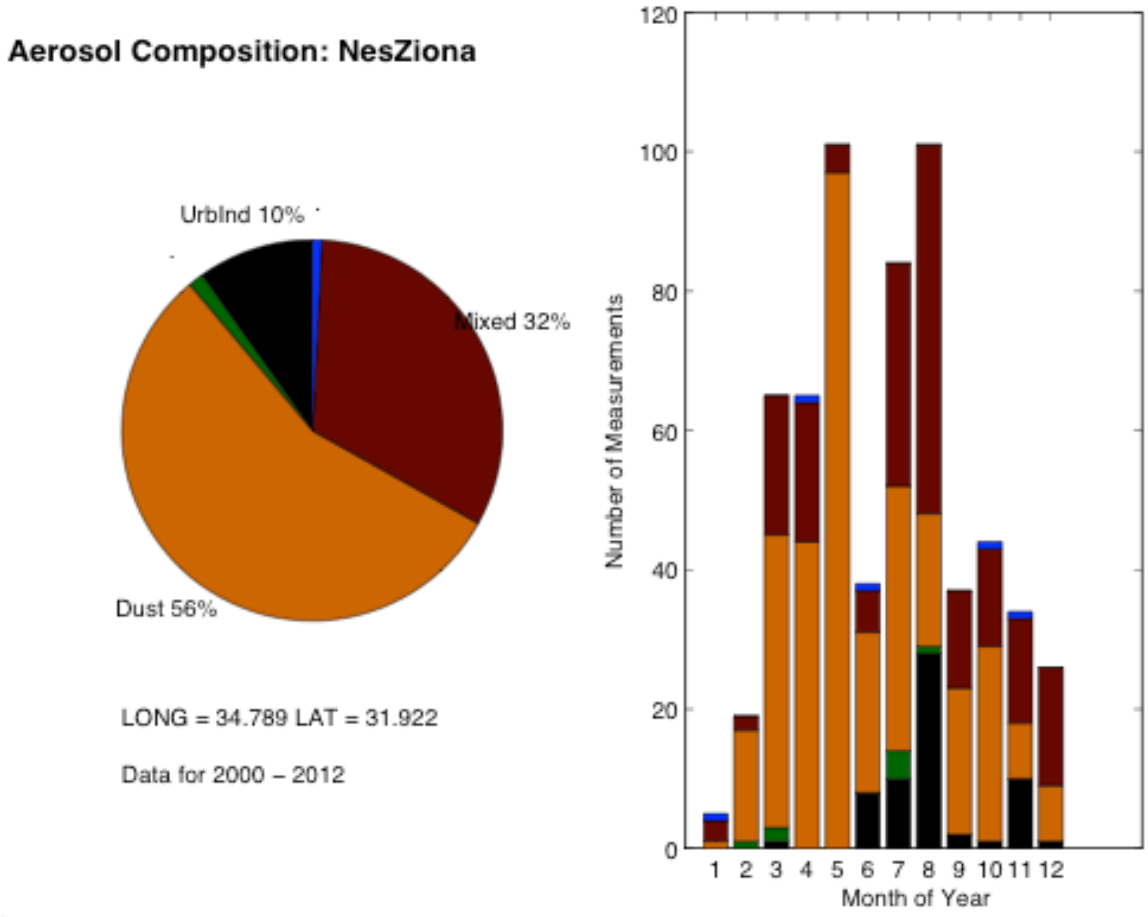
Nes Ziona, Israel



Nes Ziona is a city of about 40,000 a few km south of the Tel Aviv metropolitan area, which has a population of about 3.5 million. Nes Ziona lies about 10 km from the sea.

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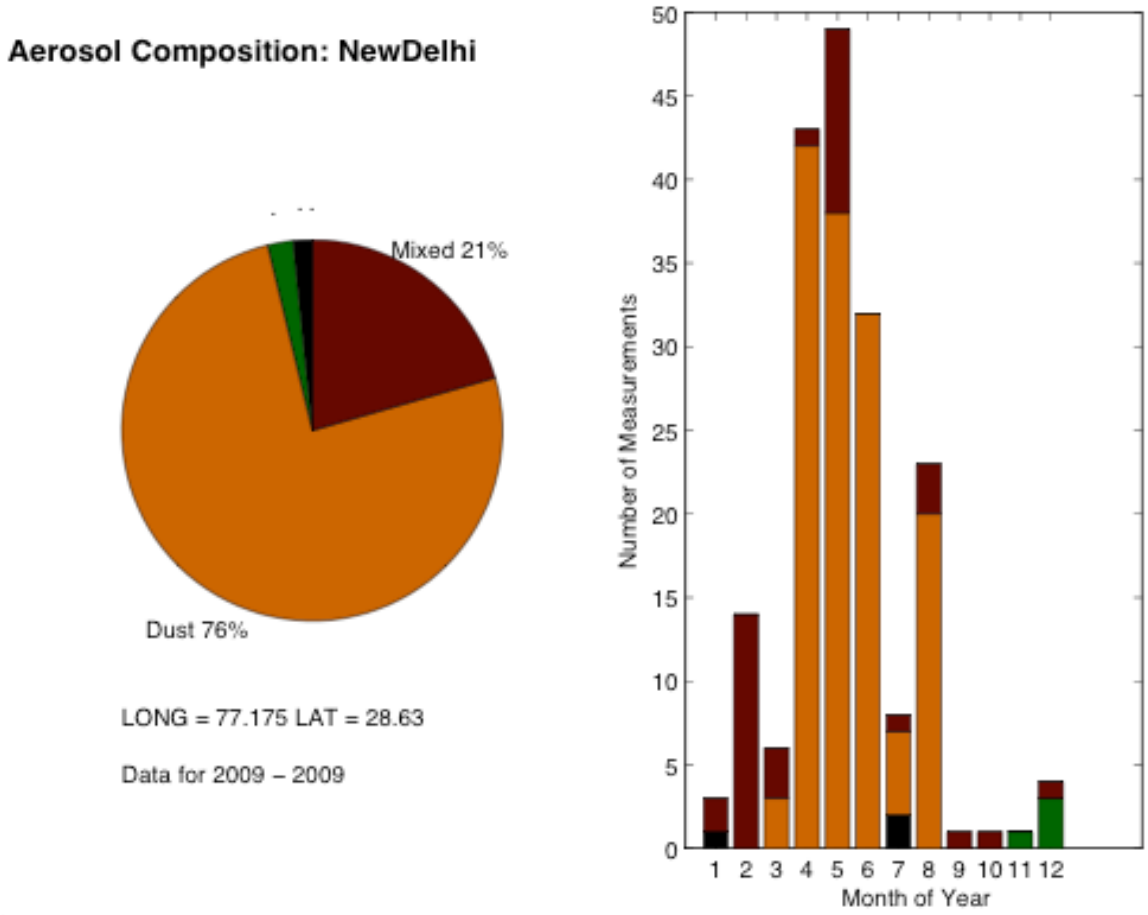
New Delhi, India



The site is close to the western edge of the New Delhi metropolitan area which has a population of nearly 22 million. New Delhi lies east of the Thar Desert and south of the Himalayas in the Indo-Gangetic plain.

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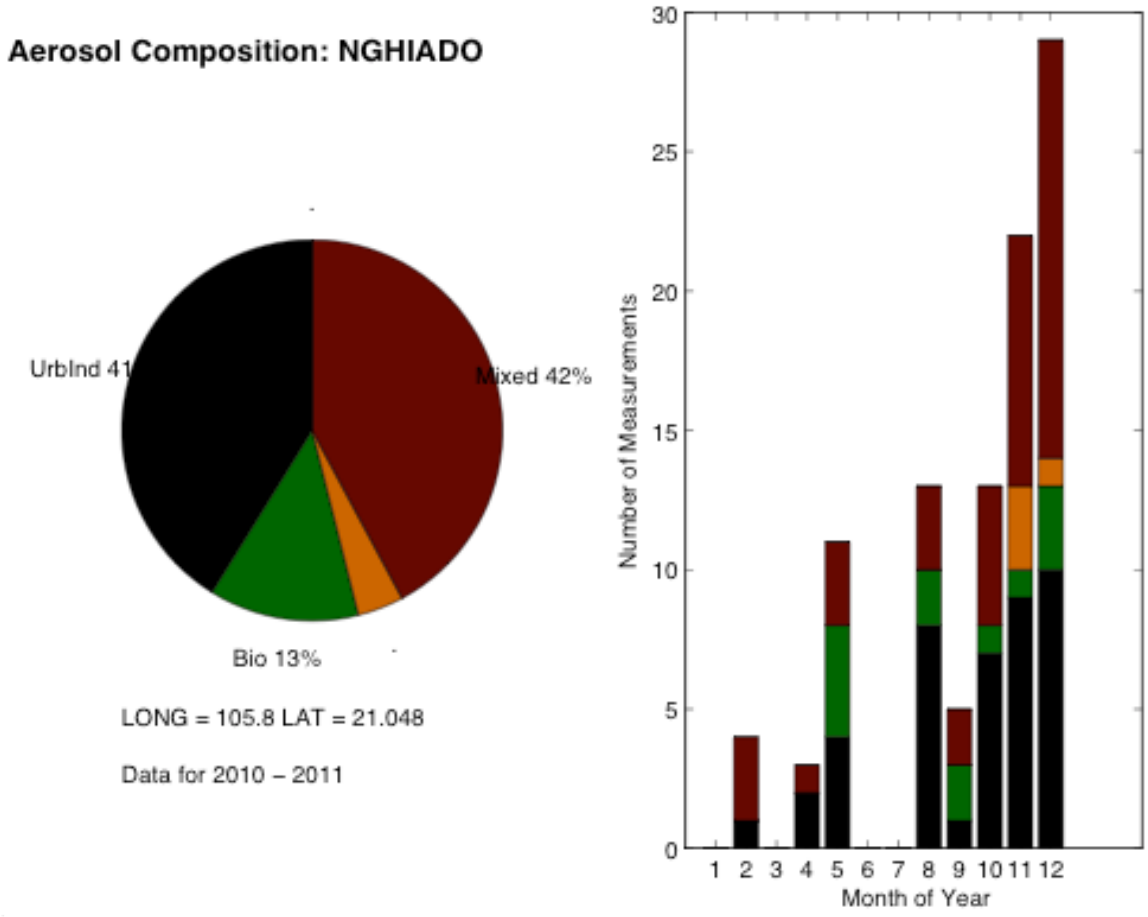
Nghia Do, Vietnam



Nghia Do is a region in Hanoi, the capital of Vietnam, which has a population of about 6.5 million. The instrument is located at the Vietnam Academy of Science and Technology in the northern part of the city.

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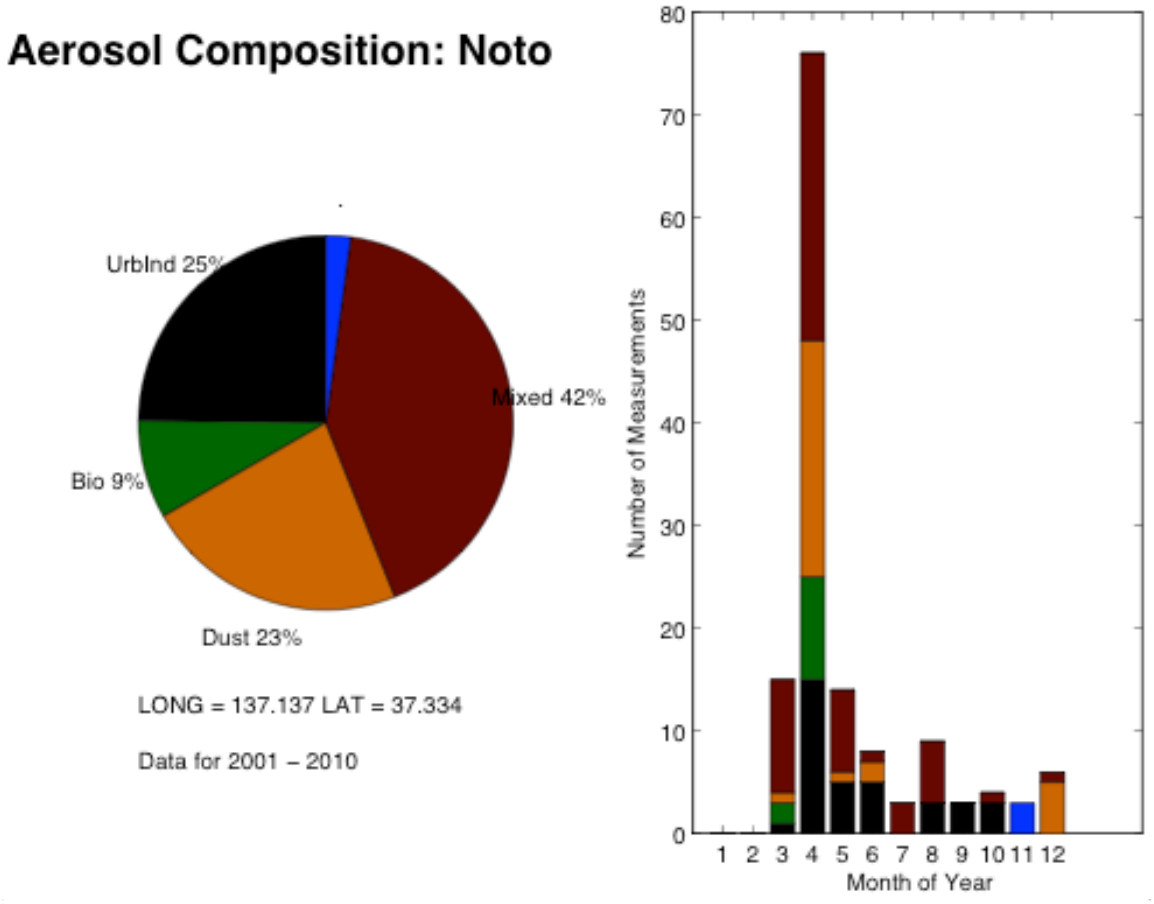
Noto, Japan



This site is in a rural area on the eastern portion of the Noto Peninsula on the northwestern side of Japan. It is less than 5 km inland from the Sea of Japan. The instrument is at an elevation of ~ 200 meters.

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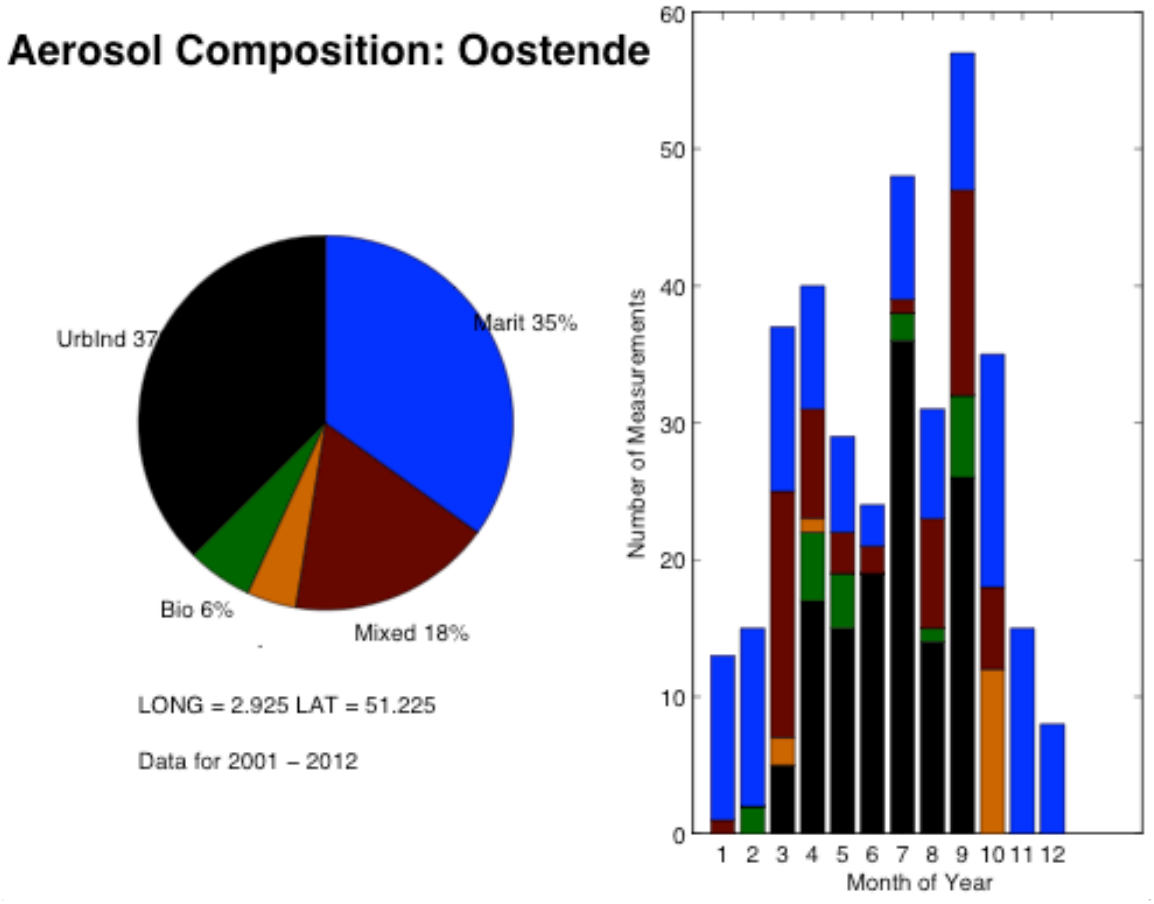
Oostende, Belgium



This instrument is about a kilometer from the shore on a roof platform in Oostende, Belgium, a city of some 80,000 inhabitants. Oostende (or Ostende) is a port city on the coast of the North Sea. Its climate is described as maritime temperate.

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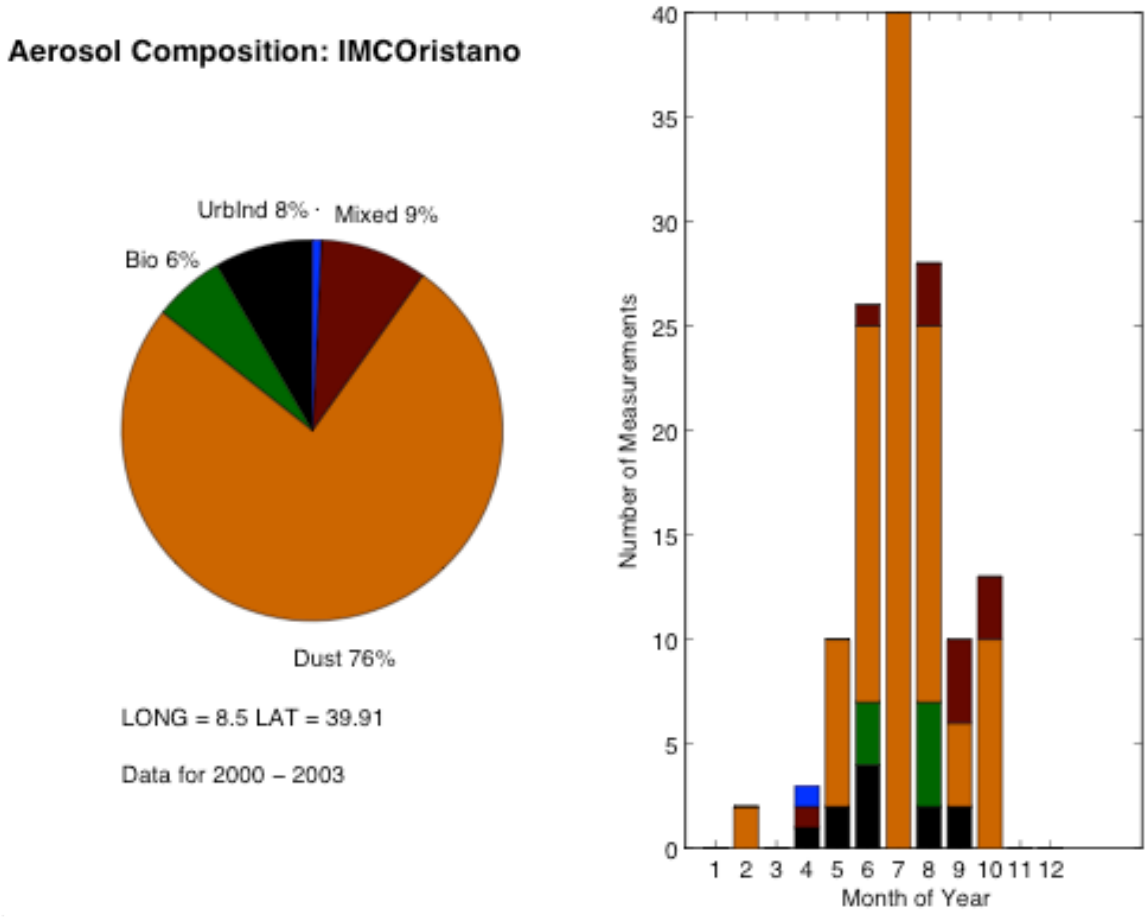
Oristano, Sardinia, Italy



The AERONET sun photometer is located on the shore about 6 km from the city of Oristano (population 32,000) on the island of Sardinia, off the west coast of Italy. It is on the site of the International Marine Center. AERONET list this site as IMC_Oristano.

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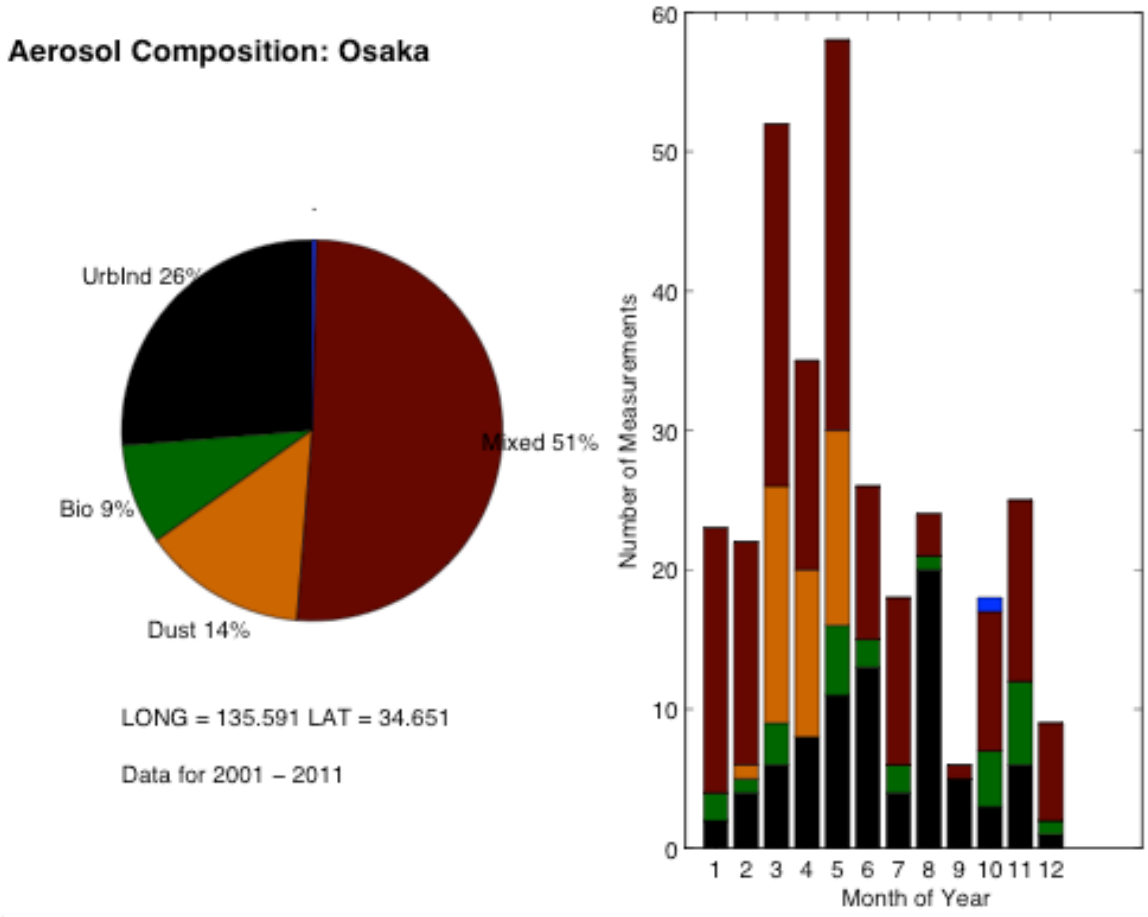
Osaka, Japan



The instrument is located in the heart of the metropolitan urban area of about 19 million people. Osaka is the second largest city in Japan. Commerce, service and manufacturing are the three major activities of Osaka. The city lies on the shore of Osaka Bay.

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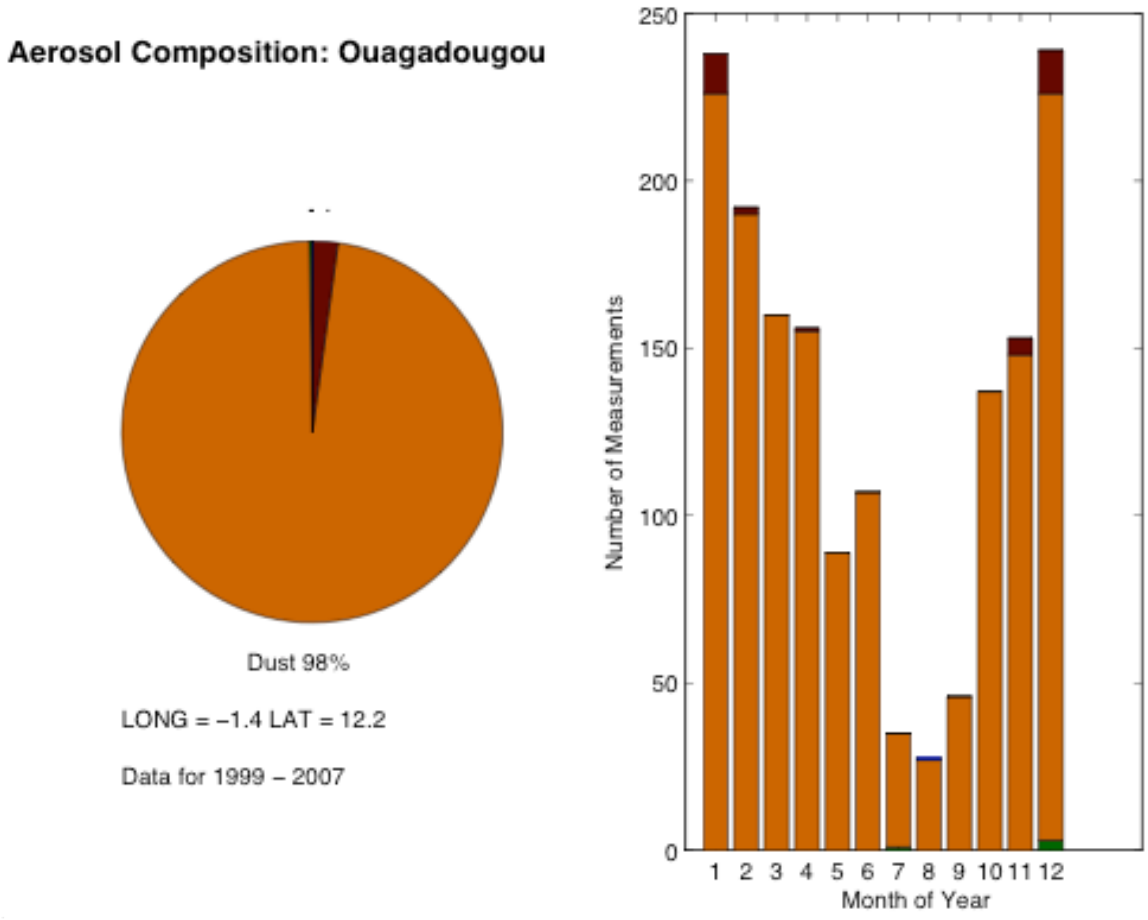
Ougadougou, Burkina Faso



This site is well inland in western Africa. Ouagadougou is the capital of Burkina Faso (or Burkina) a landlocked country just south of the Sahara Desert. Ouagadougou (often referred to as Ouaga) has a population of nearly 1.5 million.

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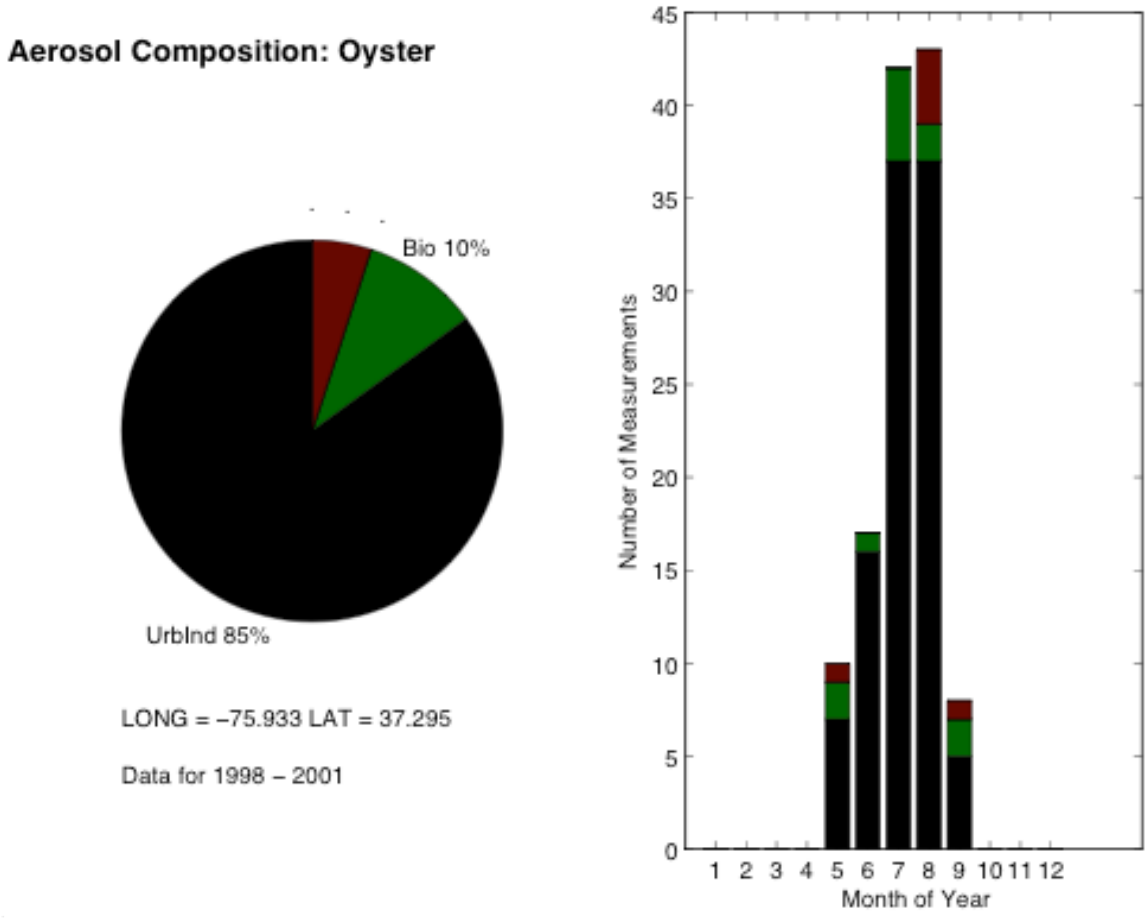
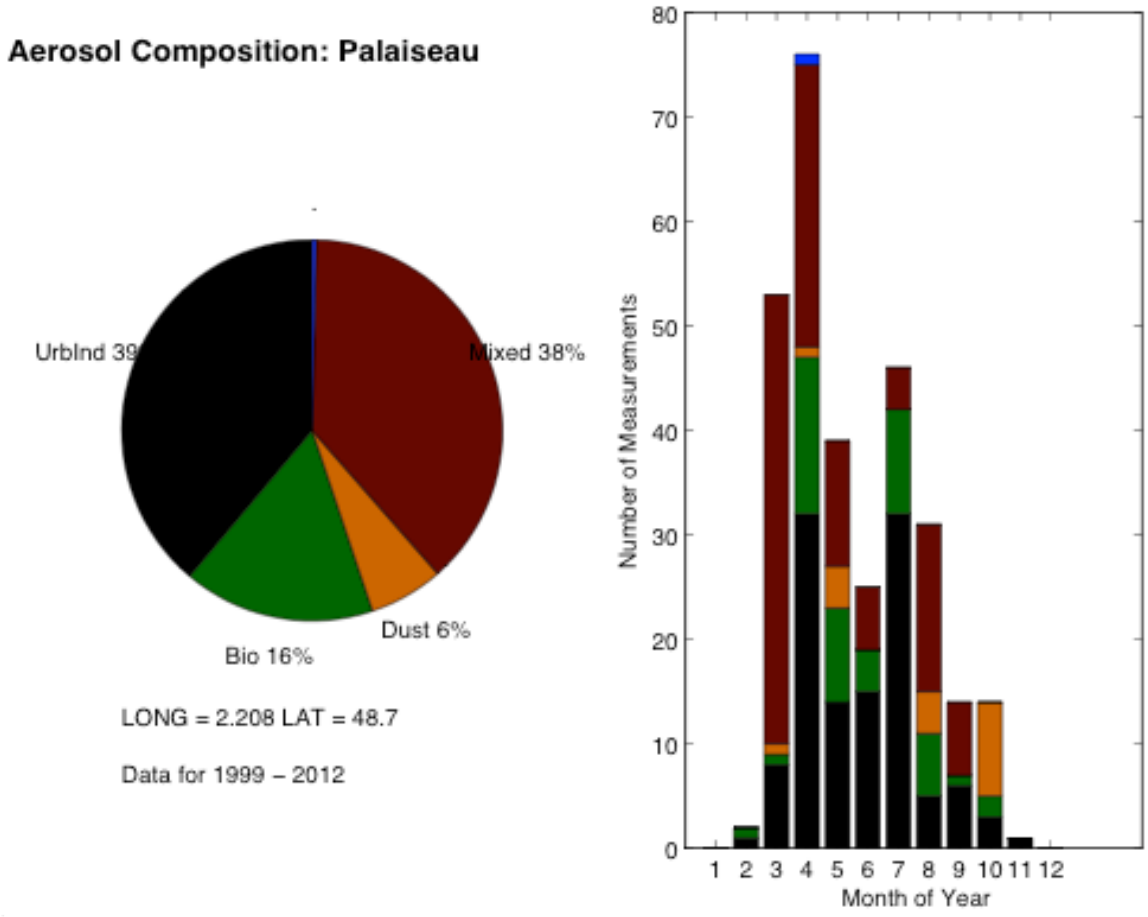
Oyster, Virginia, USA



This site is no longer active. Oyster is a small unincorporated community on the Atlantic Coast of the Eastern Shore of the U.S. state of Virginia. The instrument was located in a field about 1 km east of Brockenberry Bay, not far from the Hampton Roads area.

Return to Table

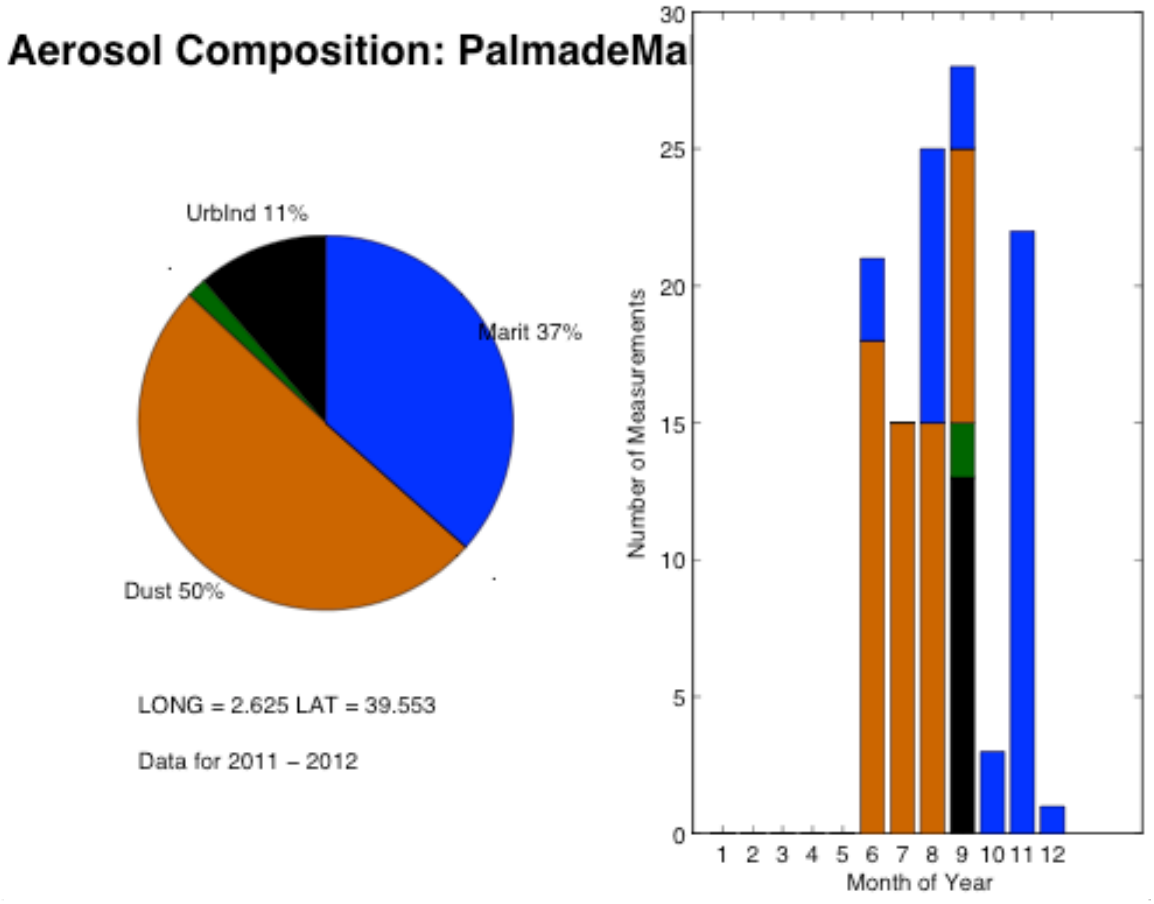
Palaiseau, France



The instrument is on a roof of the Ecole Polytechnique campus near Palaiseau, a city in the southwest suburbs of Paris. The aerosol is probably similar to that of Paris.

Return to Table

Palma de Mallorca, Spain



The photometer is near the harbor of the city of Palma in Mallorca. Mallorca is an island in the eastern Mediterranean and Palma is its biggest city with a population around 420,000. It is a major tourist center.

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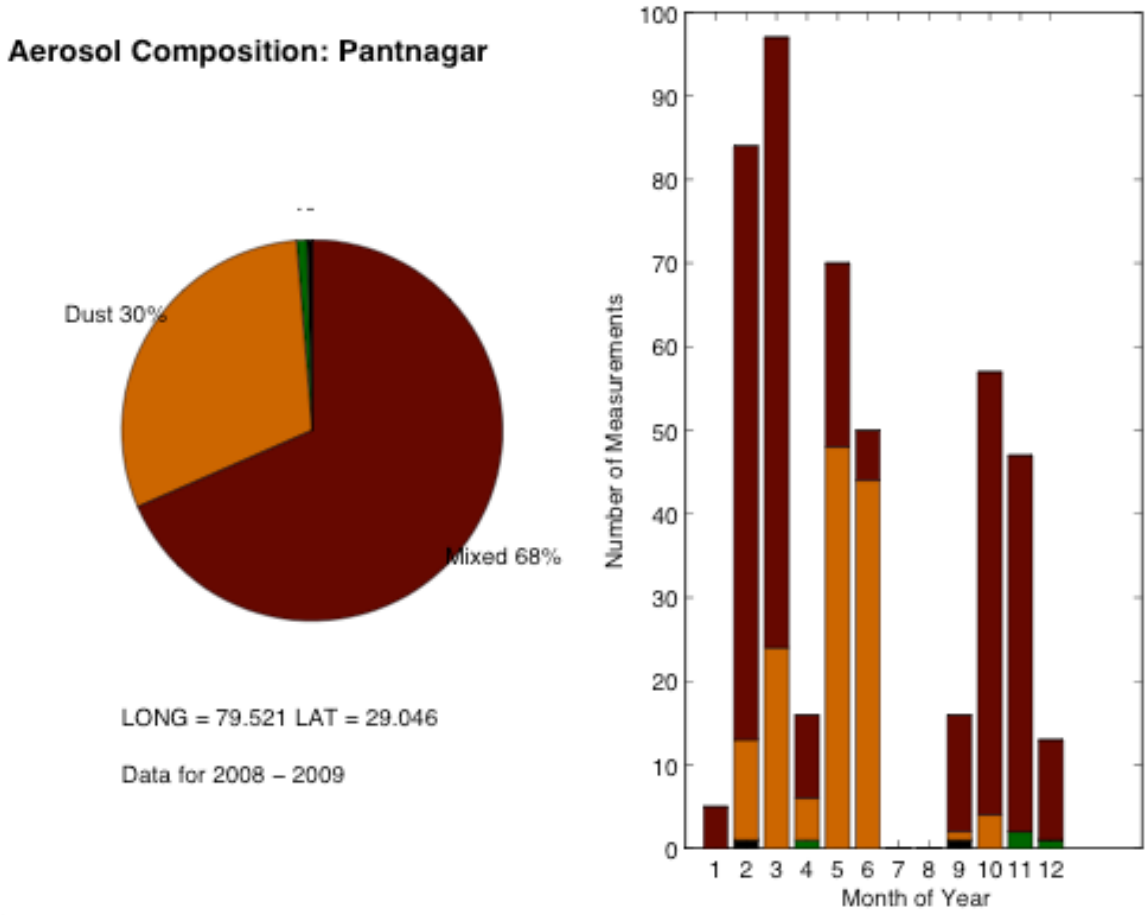
Return to Table

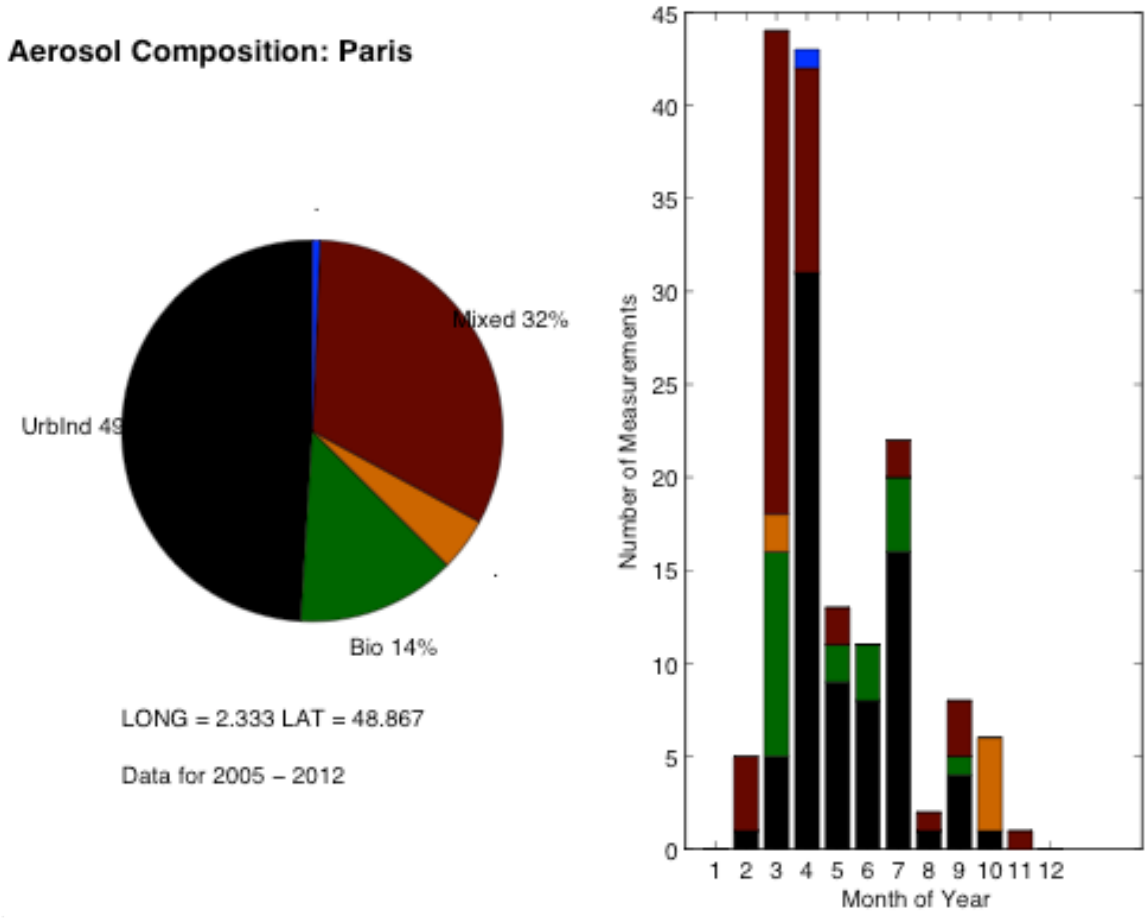
Pantnagar, India



Pantnagar is a city of about 35,000 in the new state of Uttarakhand in Northern India. The surrounding region is rather sparsely populated. It lies on a plain at the foot of the Himalaya mountains.

Return to Table

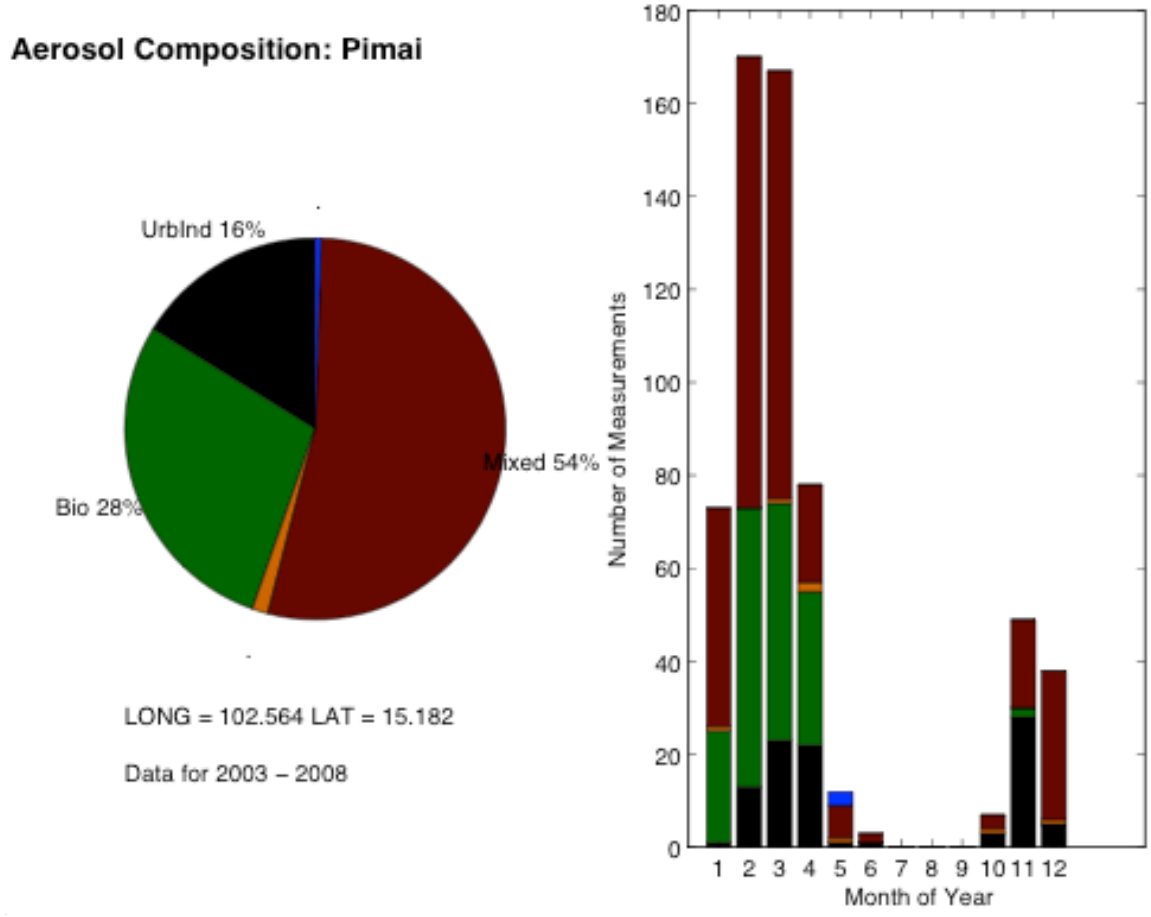
Paris, France



The population of the metropolitan Paris region is about 12 million. The sun photometer is located very near the Louvre Museum, in the heart of the city. Paris is a major transportation, merchandising, manufacturing and administrative center.

Return to Table

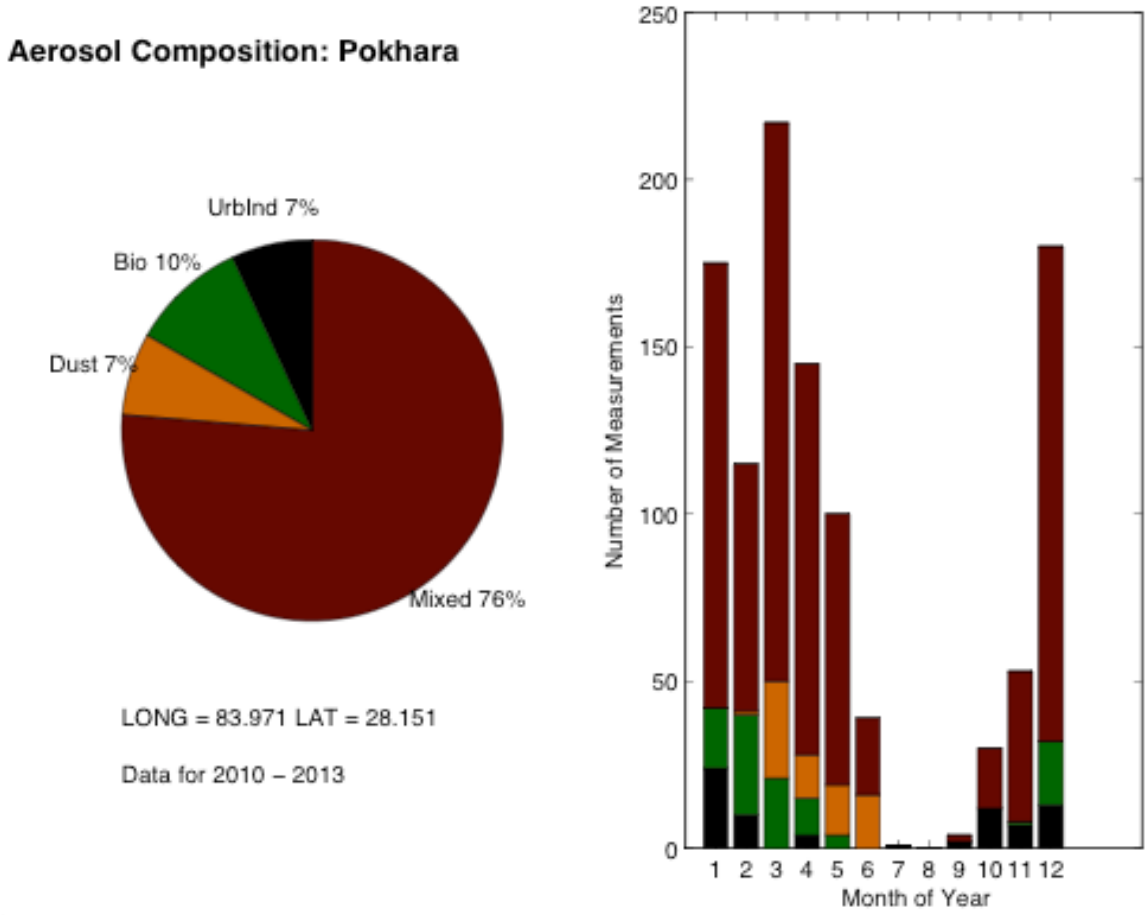
Pimai (Phi Mai), Thailand



The site at Pimai (Phi Mai) is surrounded by an agricultural region with a rather low population density, in central Thailand.

Return to Table

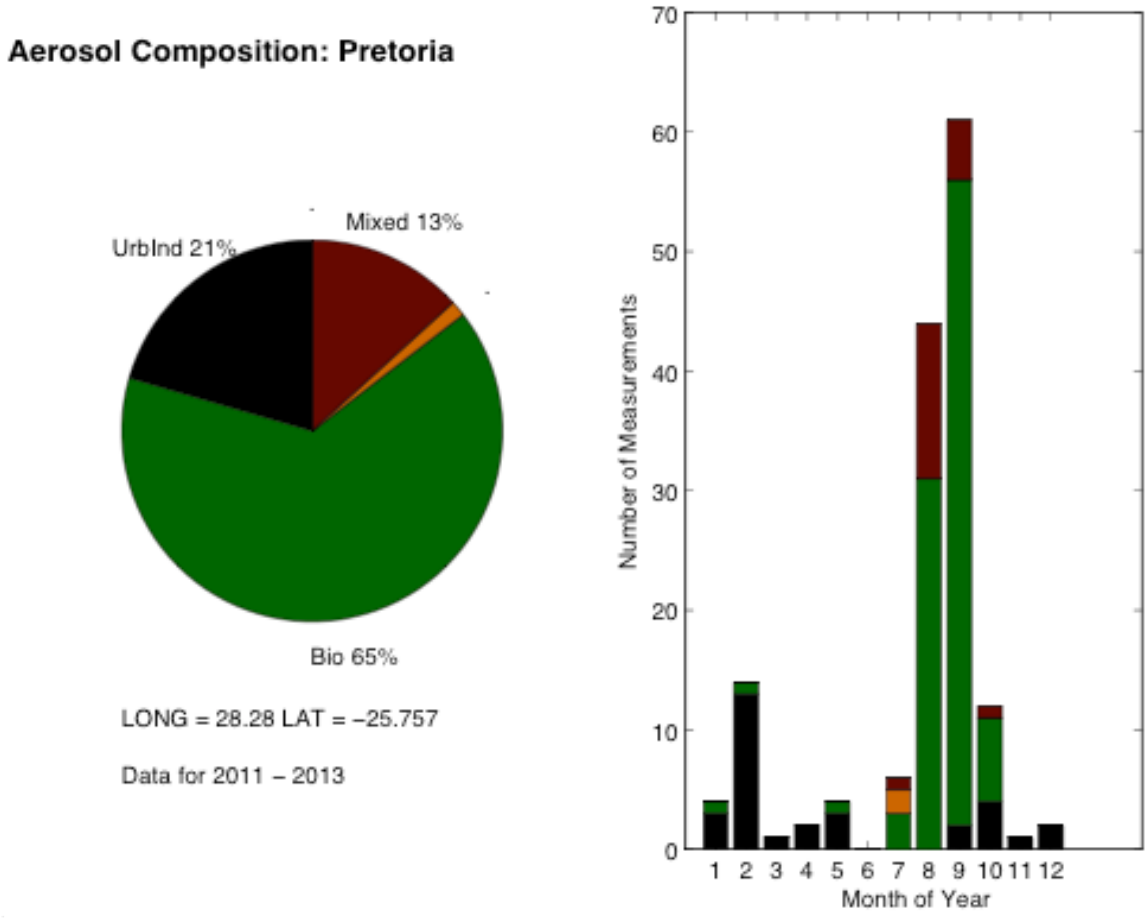
Pokhara, Nepal



Pokhara is a city of about 250,000 people in a flat valley, less than 40 km south of Mount Annapurna in the Himalayas. The Pokhara area sees some of the strongest monsoon convection in Nepal, with up to more than 5 meters of rainfall per year. The elevation of this station is 807.0 meters.

Return to Table

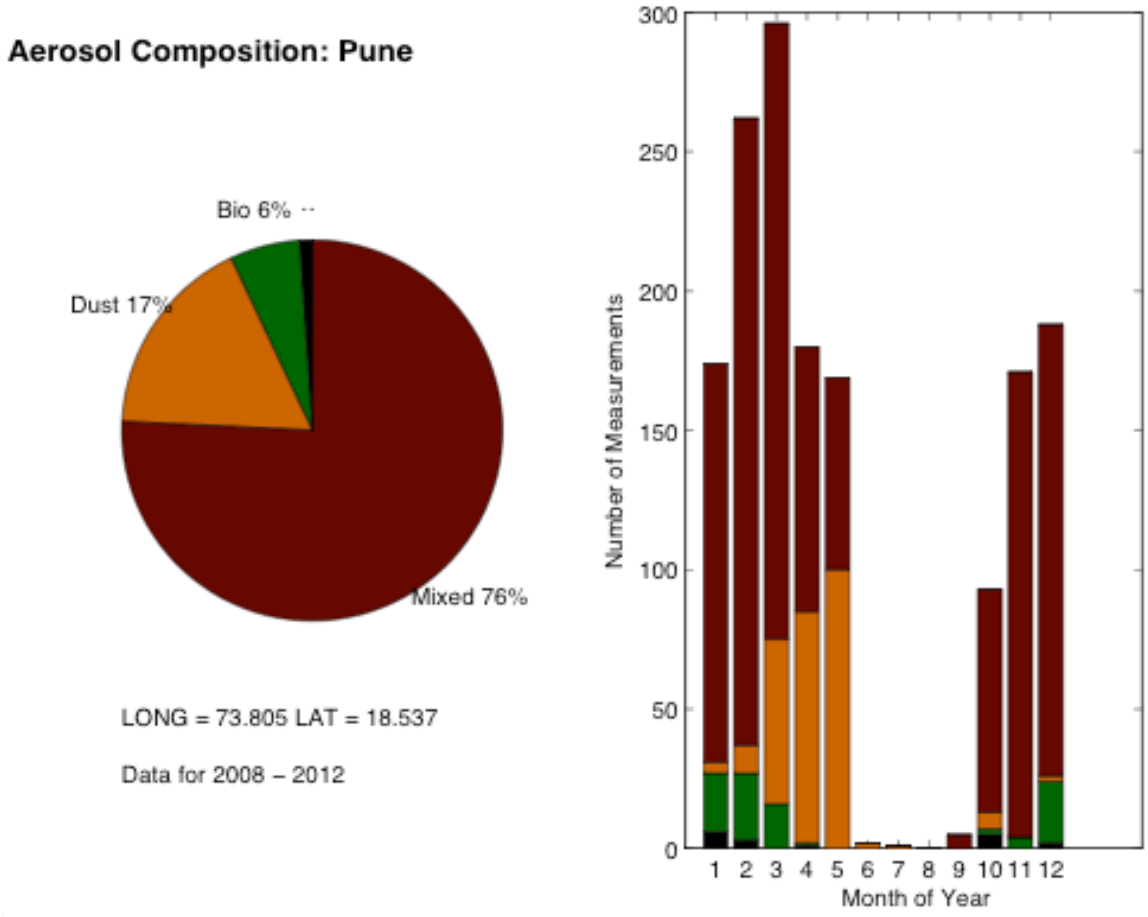
Pretoria, South Africa (CSIR-DPSS)



This station is located to the north of the Pretoria – Johannesburg metropolitan area which has about 5 million inhabitants. This site is listed in the AERONET website as Pretoria_CSIR-DPSS.

Return to Table

Pune (Poona), India



Pune (also spelled Poona) is an inland city in the northwestern part of India. The instrument is located on the western edge of the city. The metropolitan region has a population of about 6 million people. Pune is an important industrial city with automobile manufacturing and other industries.

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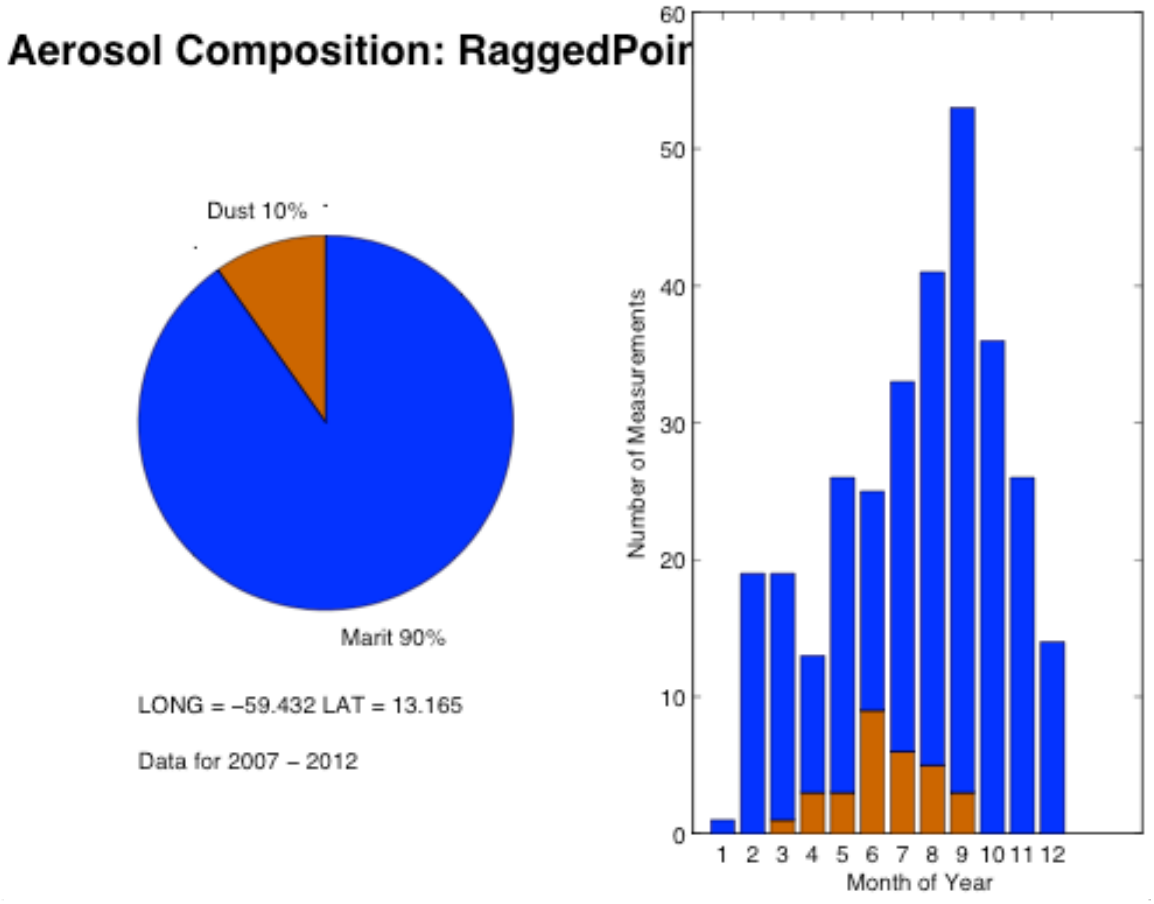
Ragged Point, Barbados



The site is located at the end of a promontory on the east coast of Barbados, at Ragged Point (also known as East Point). The instrument is located on the top of a 17 m tower on a 22 m high bluff on the edge of sea. The only city on Barbados is Bridgetown, located roughly across the island from Ragged Point, about 22 km distant. Barbados is an island in the Lesser Antilles island chain in the western North Atlantic Ocean, about 100 km east of the Caribbean Sea. It is located north of Venezuela and Trinidad. The aerosol is predominantly maritime with dust during the summer months, due to transport from the Sahara.

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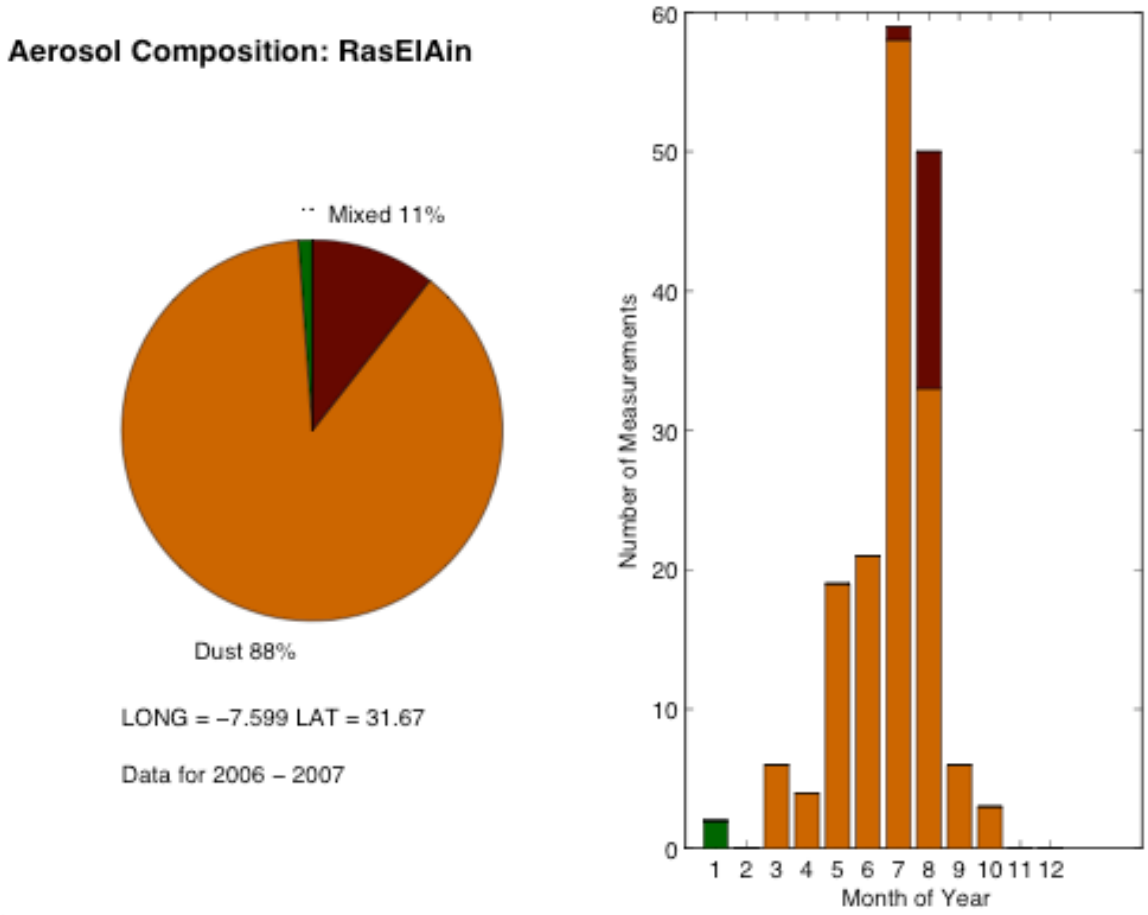
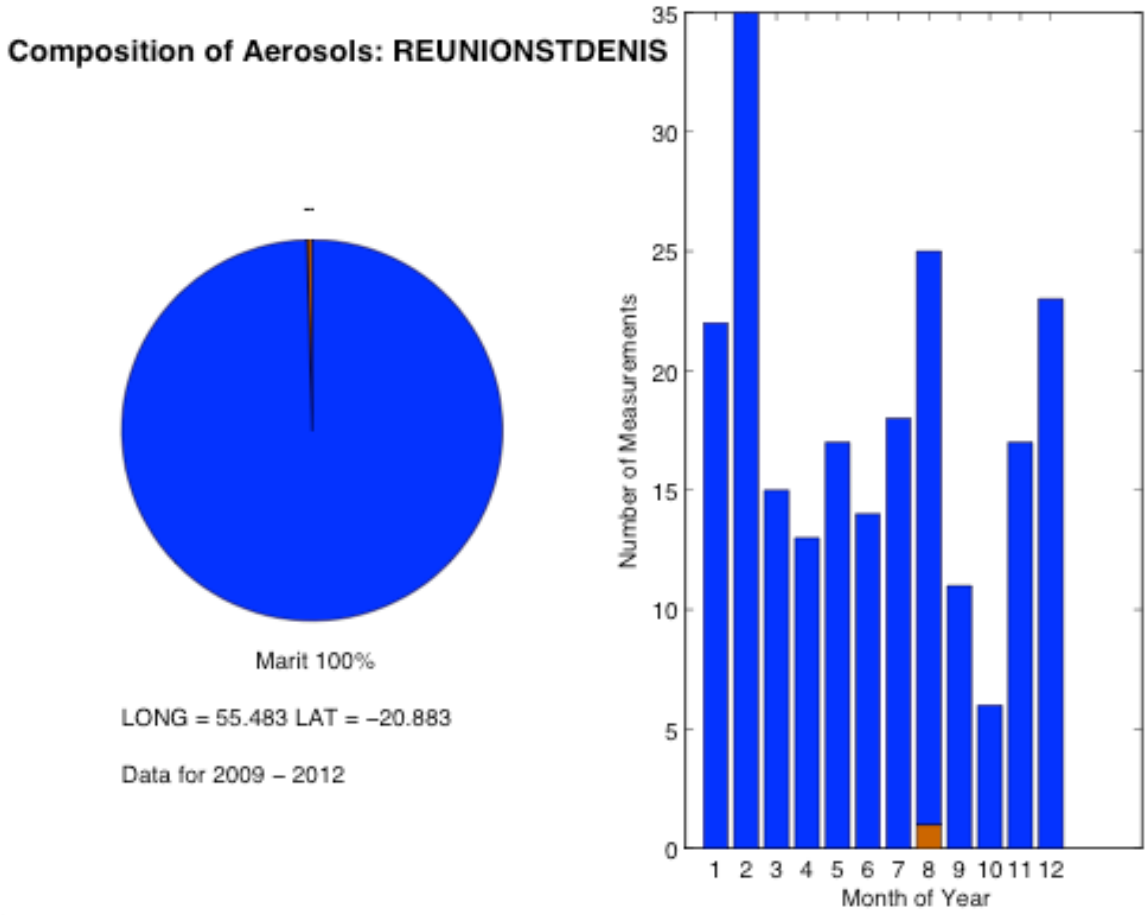
Ras El Ain, Morocco



Ras El Ain is a small town in Morocco, far from the sea. As expected, the aerosol is primarily dust. This location is considered a source site for dust contribution to the Saharan Air Layer.

Return to Table

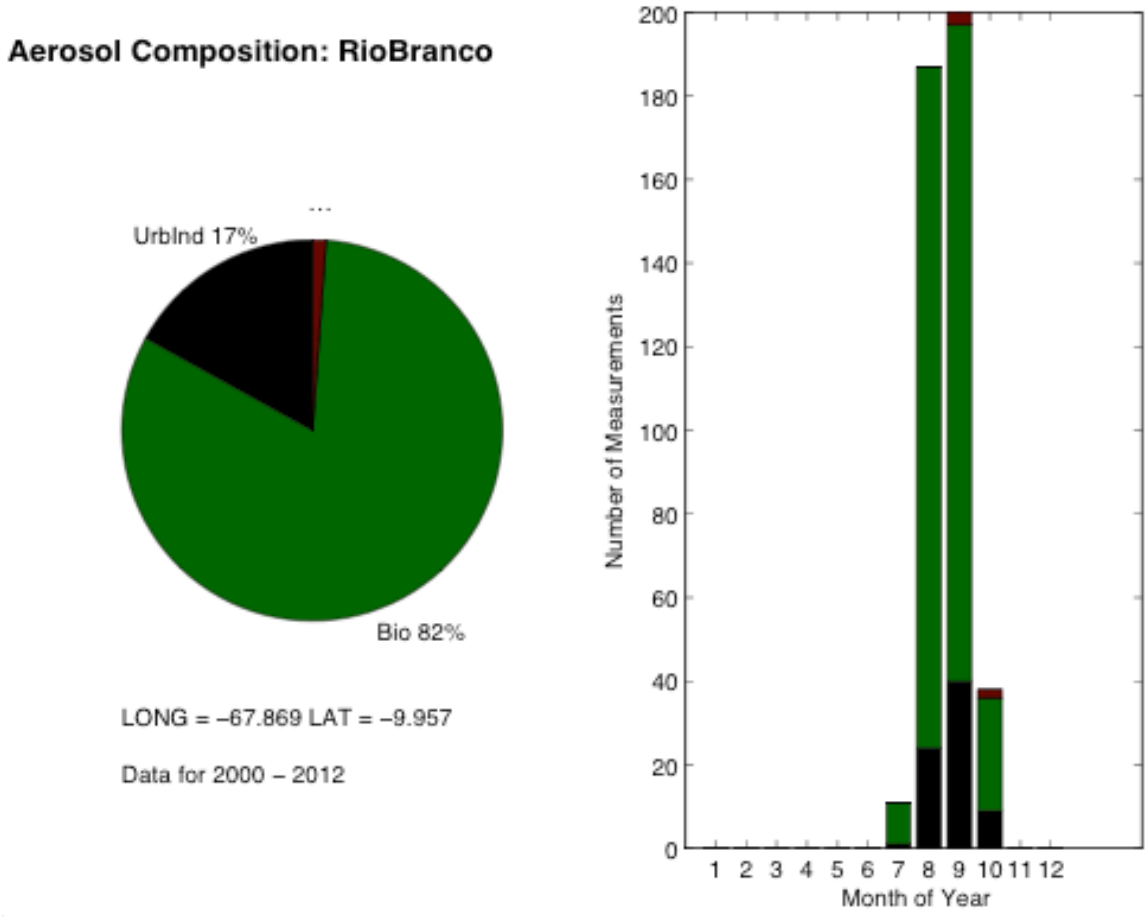
Reunion-Saint-Denis, France



This site is located on the roof of the University of Reunion in the city of Saint-Denis, very near the seashore. Reunion is a French Island located in the Indian Ocean, east of Madagascar. The population of the island is about 840,000 and the population of St. Dennis is approximately160,000.

Return to Table

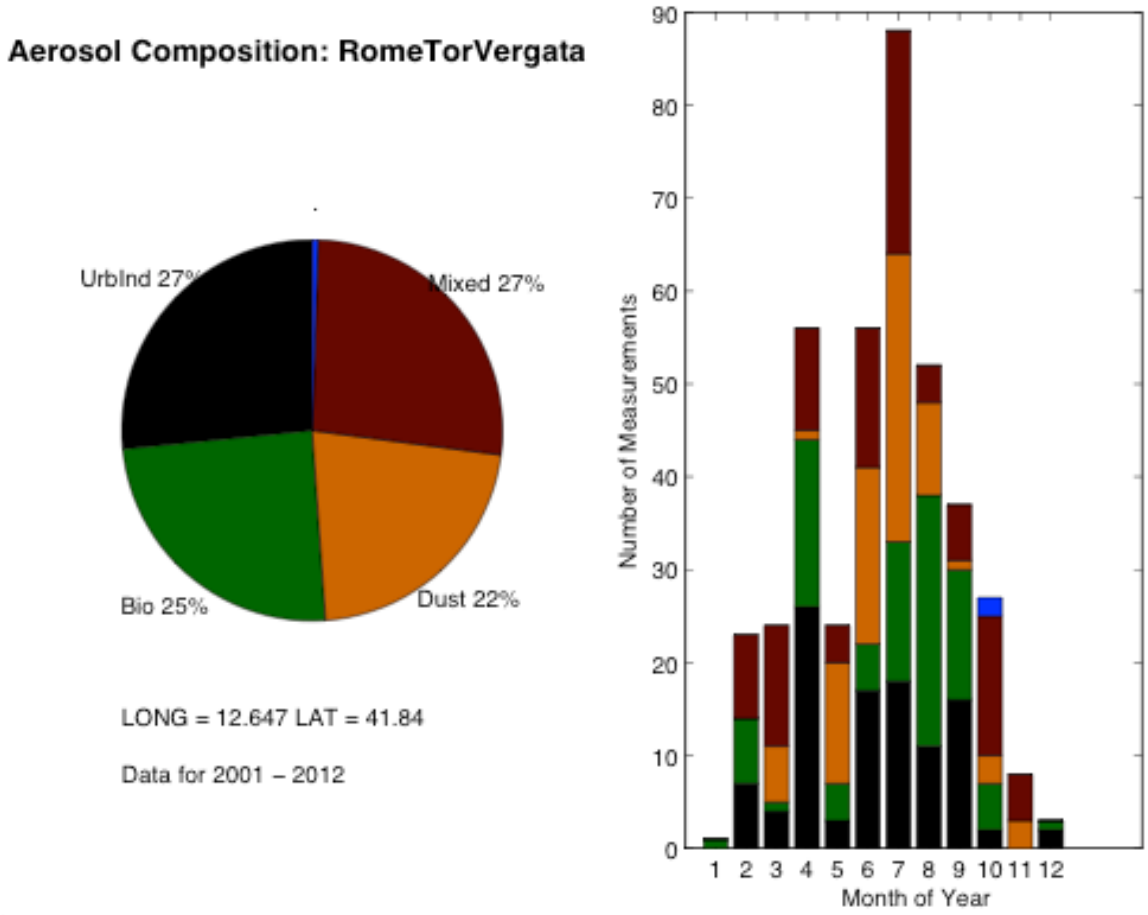
Rio Branco, Brazil



This site is located at a university west of the city of Rio Branco, Acre, Brazil. The site is in Western Brazil, not too far from the Bolivian and Peruvian borders. The local municipal population is ~ 310,000 people.

Return to Table

Rome (Tor Vergata), Italy



This instrument is located on a roof of the CNR institute near the University of Rome, Tor Vergata campus. This lies in the southern suburbs of Rome about 15 km from the city center, and 30 km inland from the Mediterranean. Rome has a metropolitan population of nearly 4 million. It is an important industrial, political and cultural center. This site is listed in the AERONET website as Rome_Tor_Vergata.

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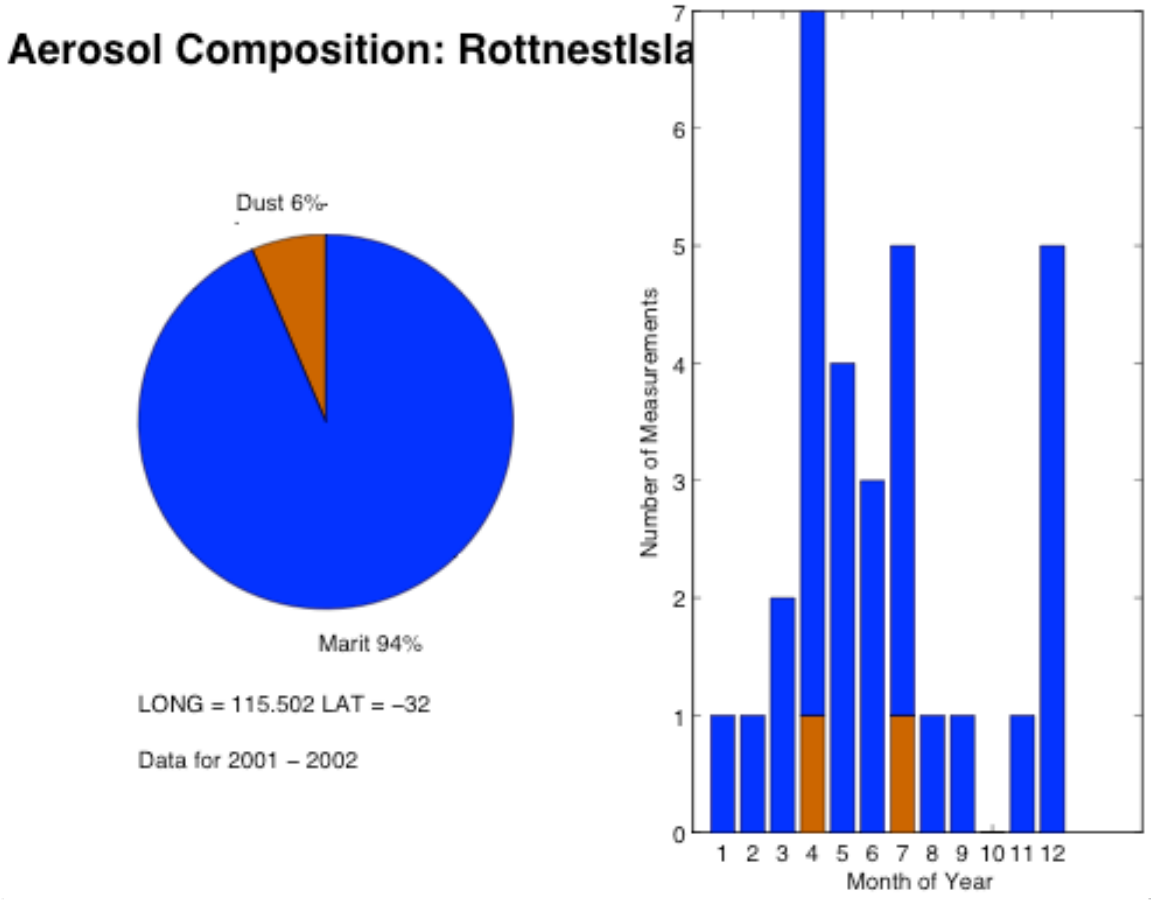
Rottnest Island, Australia



The instrument is located in a field near a lighthouse on the shore of the Indian Ocean. Rottnest Island lies about 20 km to the west of the Australian coast and the mainland city of Perth. Rottnest Island is an A-class Reserve.

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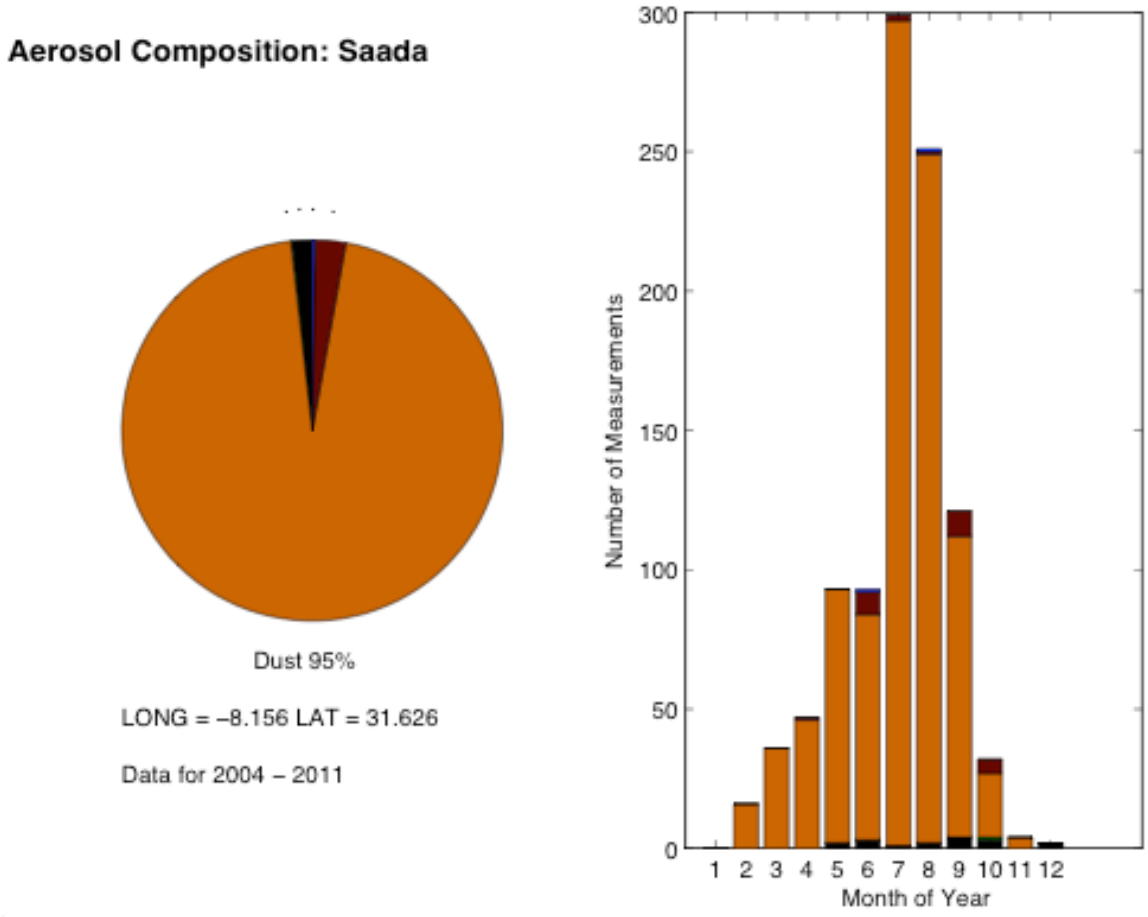
Saada (Marakesh), Morocco



The Saada site is 10 km west of the city of Marakesh, in a rural region. The metropolitan Marakesh region has over 1 million inhabitants.

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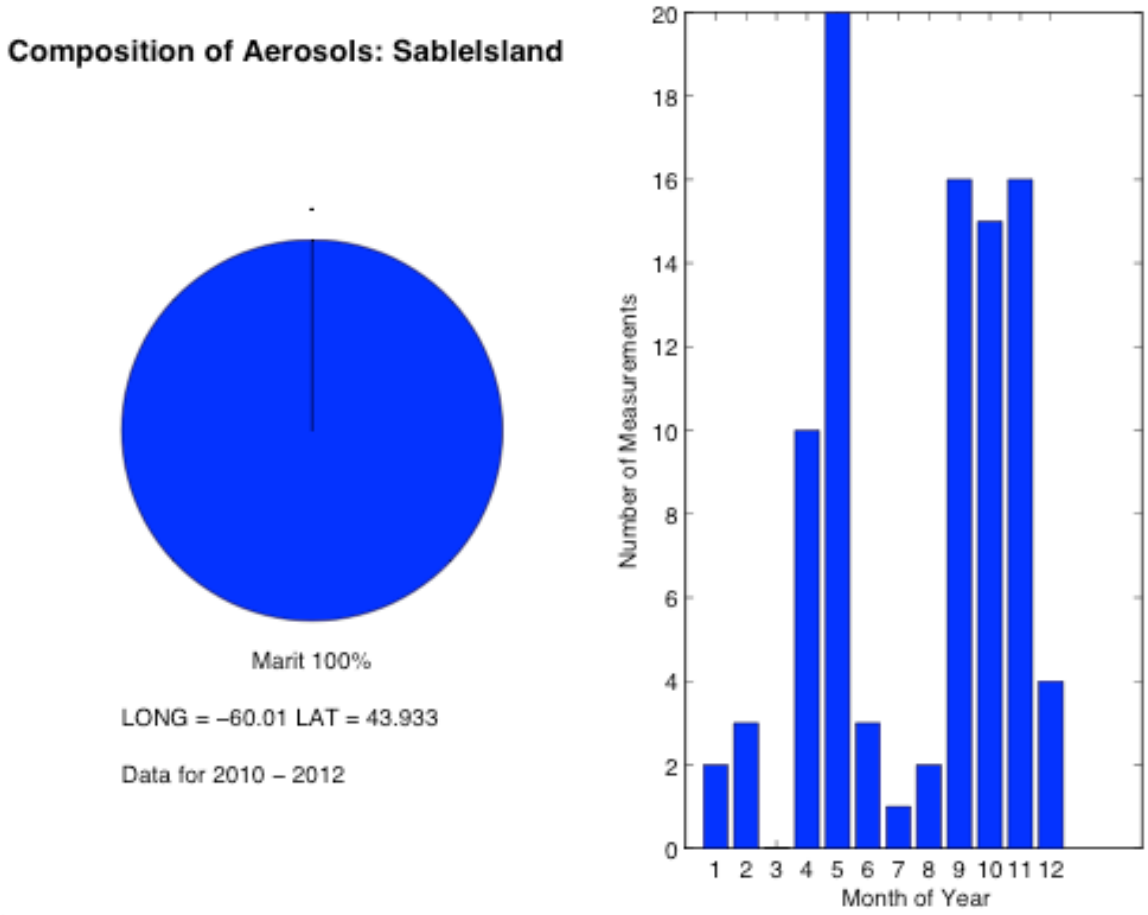
Sable Island, Nova Scotia, Canada



Sable Island is an island in the North Atlantic Ocean approximately 300 km east-southeast of the Nova Scotia shore. It is a protected National Park Reserve of Canada. Sable Island has a permanent population of 5, but tourists and scientists visit in the summer. It is approximately 45 km long and 1 km wide and composed entirely of sand.

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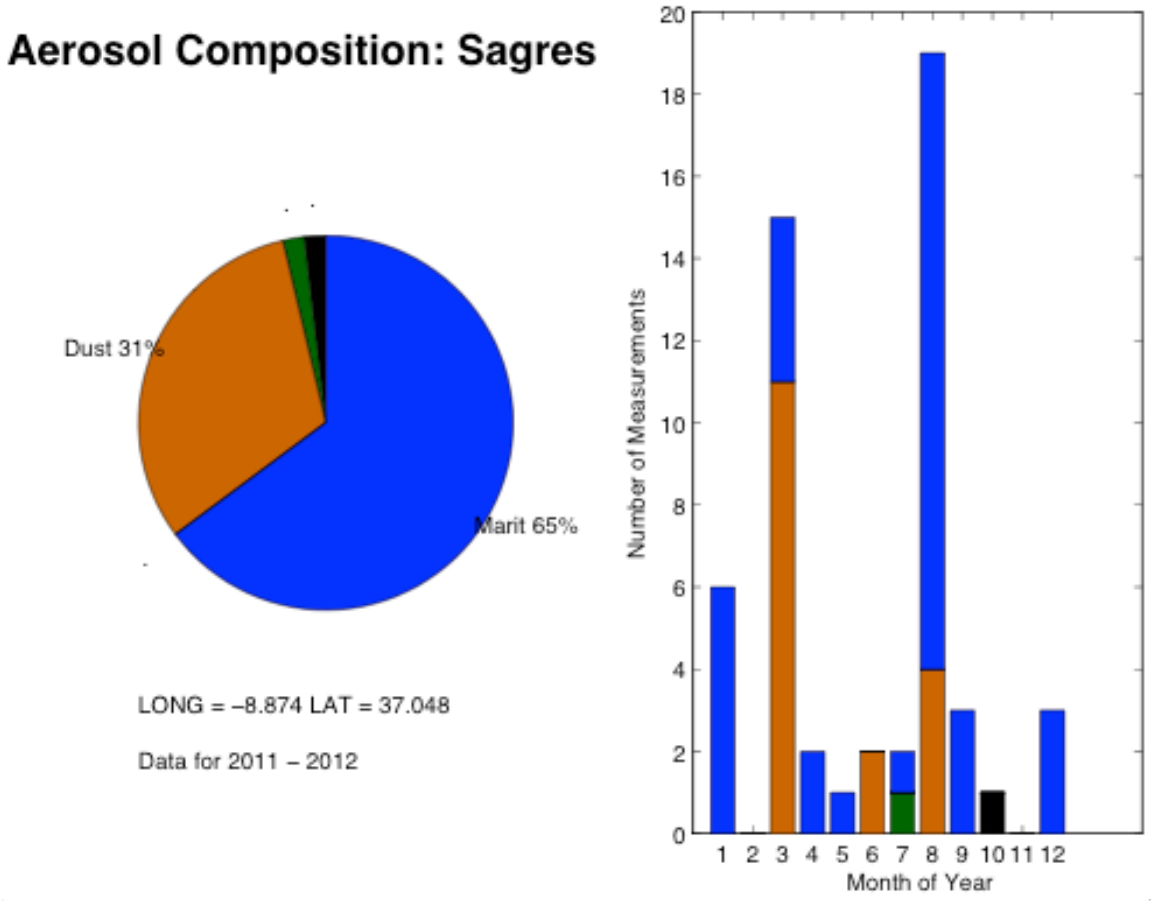
Sagres, Portugal



This site is located near the town of Sagres in southwestern Portugal. The instrument is on the shore.

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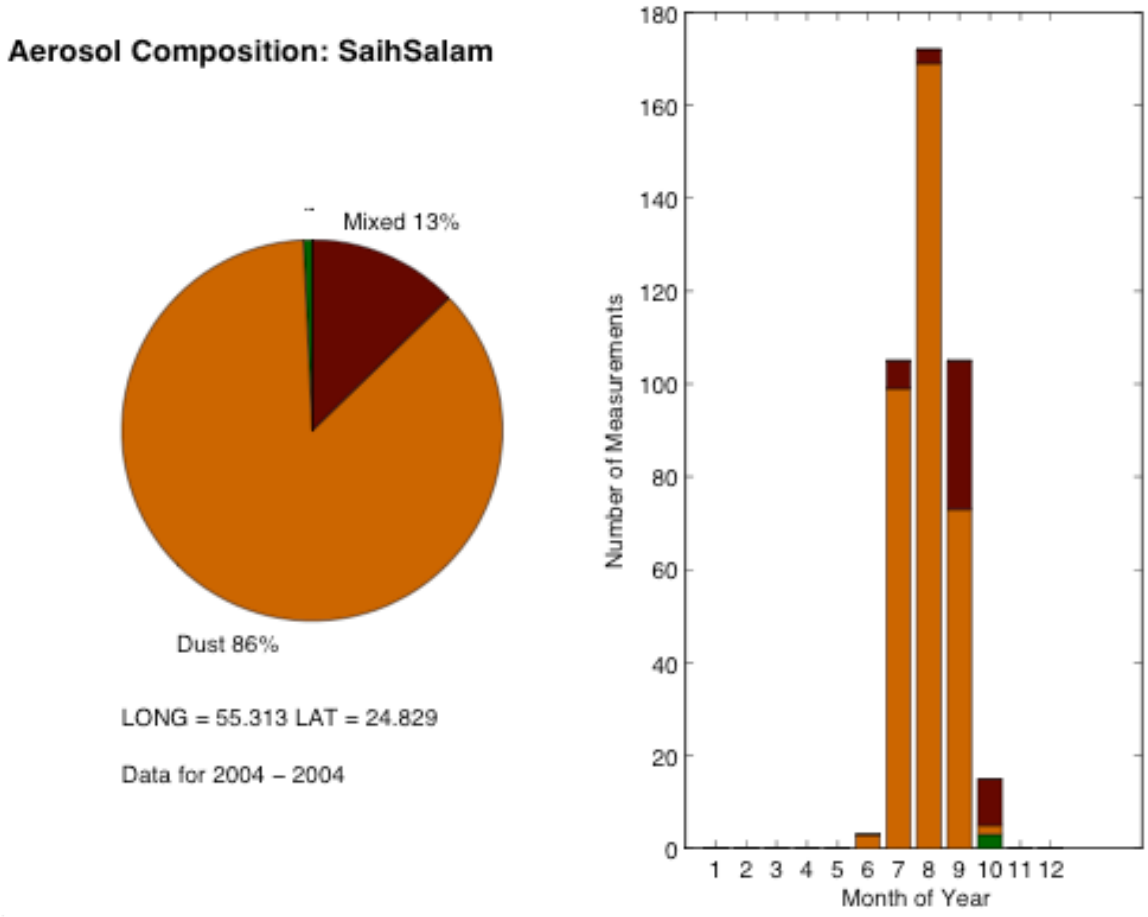
Saih Salam, UAE



This site is inland some 30 km from the shore of the Persian gulf. The site is north of Abu Dhabi and south of Dubai in the desert.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008.

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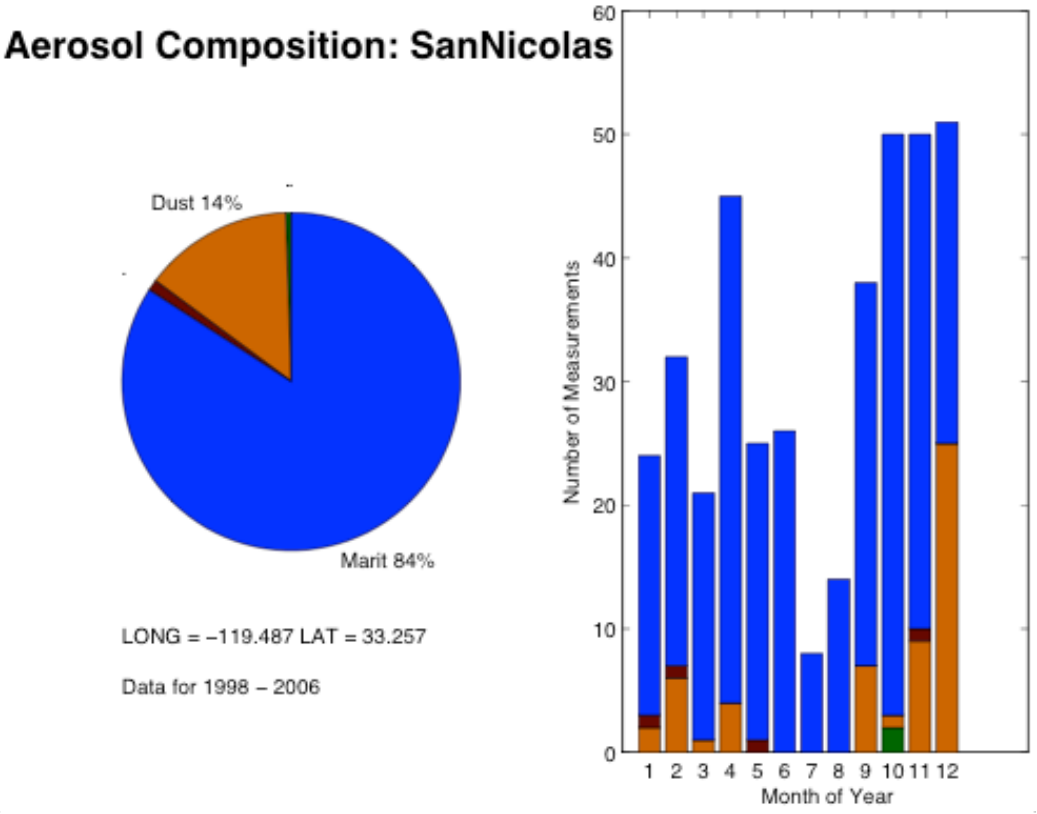
San Nicolas, California, USA



San Nicolas Island is the most remote of the Channel Islands, about 100 km off the coast of California. The instrument is located on the east side of the island, about 1 km from the ocean. The island is uninhabited.

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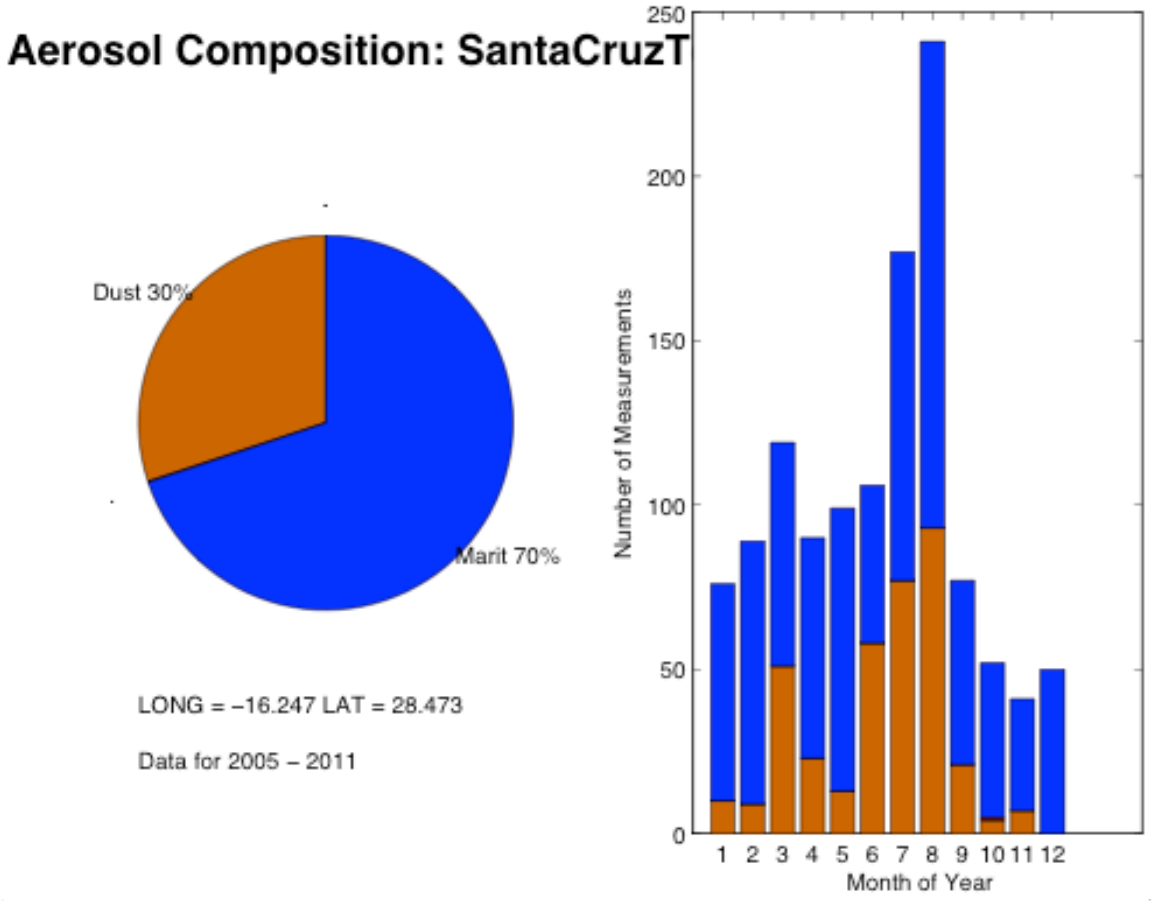
Santa Cruz de Tenerife, Spain



The instrument is located at the Santa Cruz de Tenerife Observatory very near the city harbor. Santa Cruz is the capital of Tenerife, one of the Canary Islands, belonging to Spain and situated off the coast of Africa, west of the Sahara desert. The population of the island of Tenerife is nearly 1 million. The AERONET website lists this location as Santa_Cruz_Tenerife.

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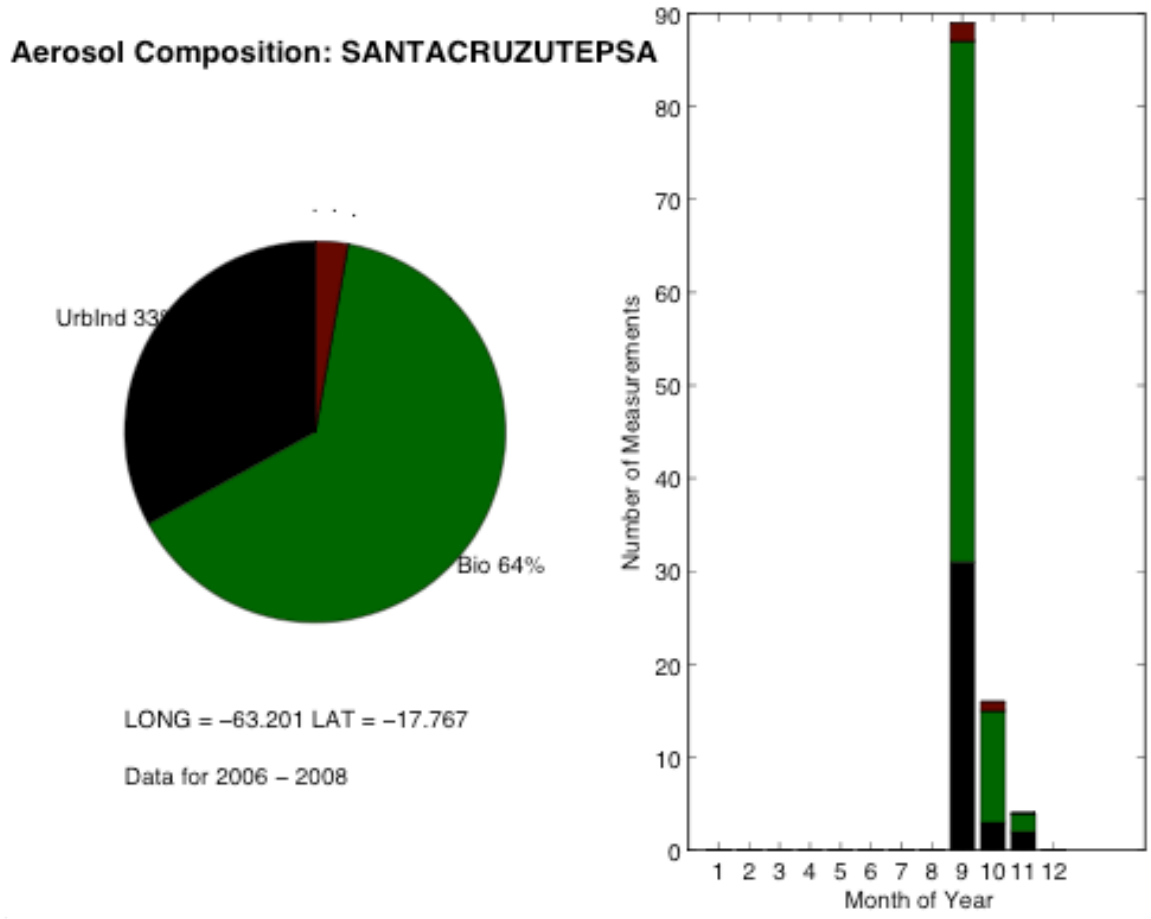
Santa Cruz, Bolivia (UTEPSA)



The site is located on the meteorological grounds of the El Trompillo Airport in the urban area of Santa Cruz de la Sierra, Bolivia. Santa Cruz is a rapidly growing urban metropolitan area of about 1.6 million residents in the eastern Bolivian lowlands. The name UTEPSA stands for Universidad Tecnologica Privada de Santa Cruz. The AERONET website lists this location as SANTA_CRUZ_UTEPSA.

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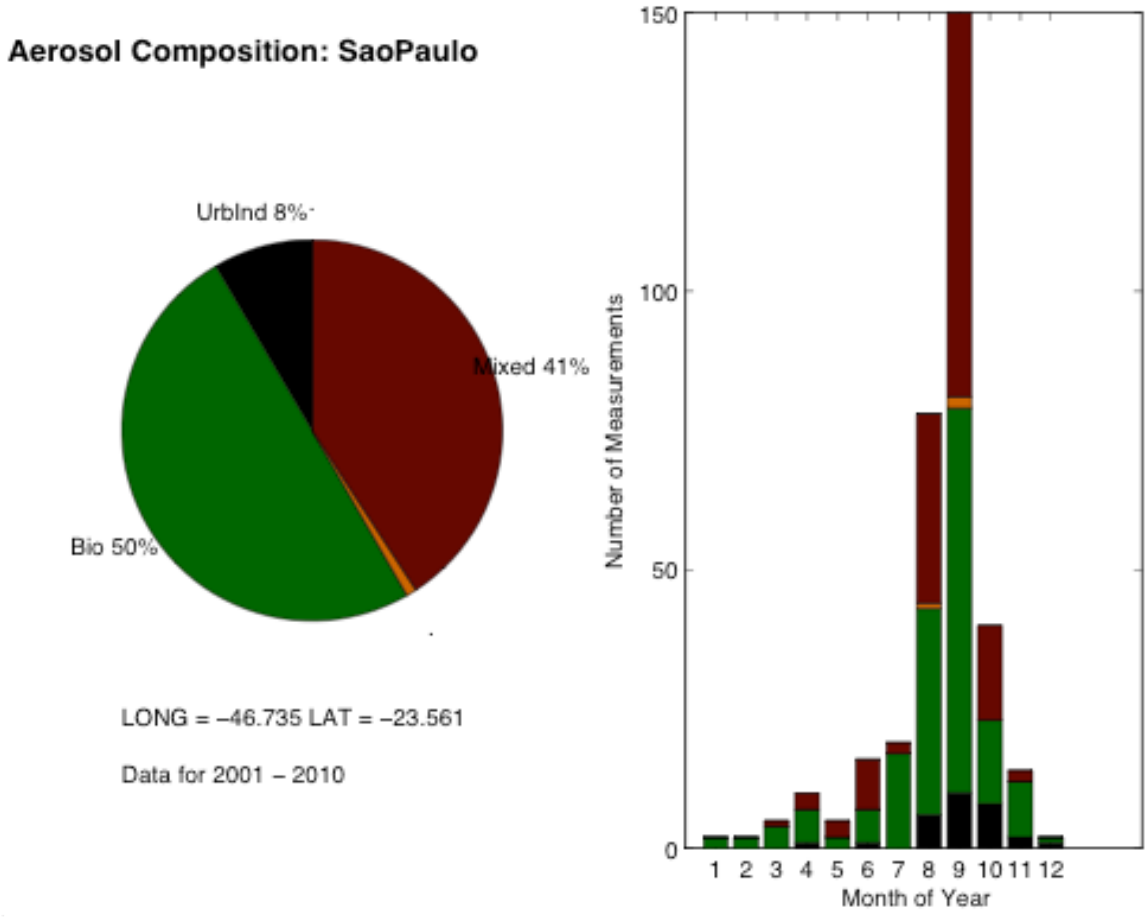
Sao Paolo, Brazil



This instrument is located in the western part of the city of Sao Paulo in Southeastern Brazil near the Atlantic Ocean. Sao Paulo is a large urban area of about 12 million people in a metropolitan region of nearly 20 million. It is the largest city in Brazil, and an important financial and industrial center.

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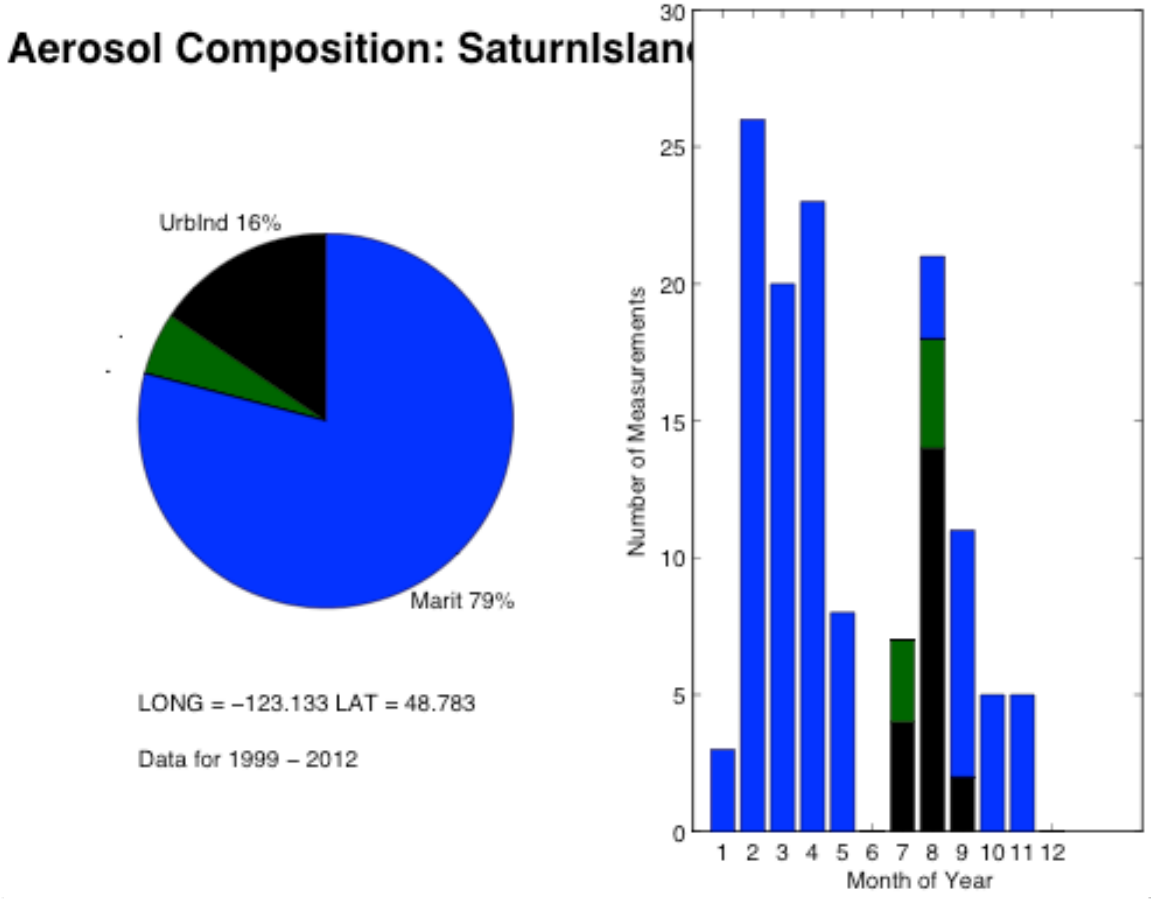
Saturna Island
British Columbia
Canada



Saturna Island lies to the south of Vancouver to the north of Victoria. It is the second largest and the least populated of the Gulf Islands in British Columbia. The AERONET website lists this site as Saturn_Island.

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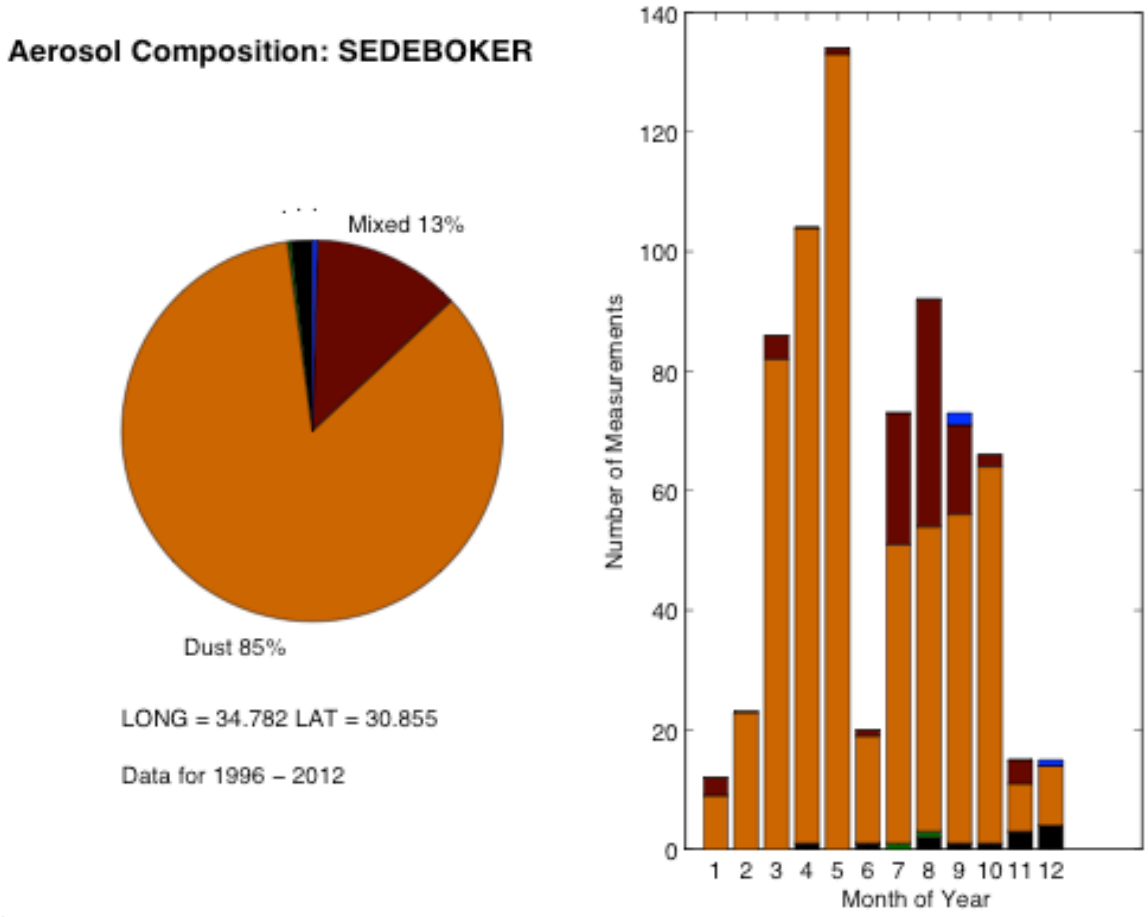
Sede Boker, Israel



This instrument is located in a small agricultural kibbutz in the Negev desert of southern Israel, well inland.

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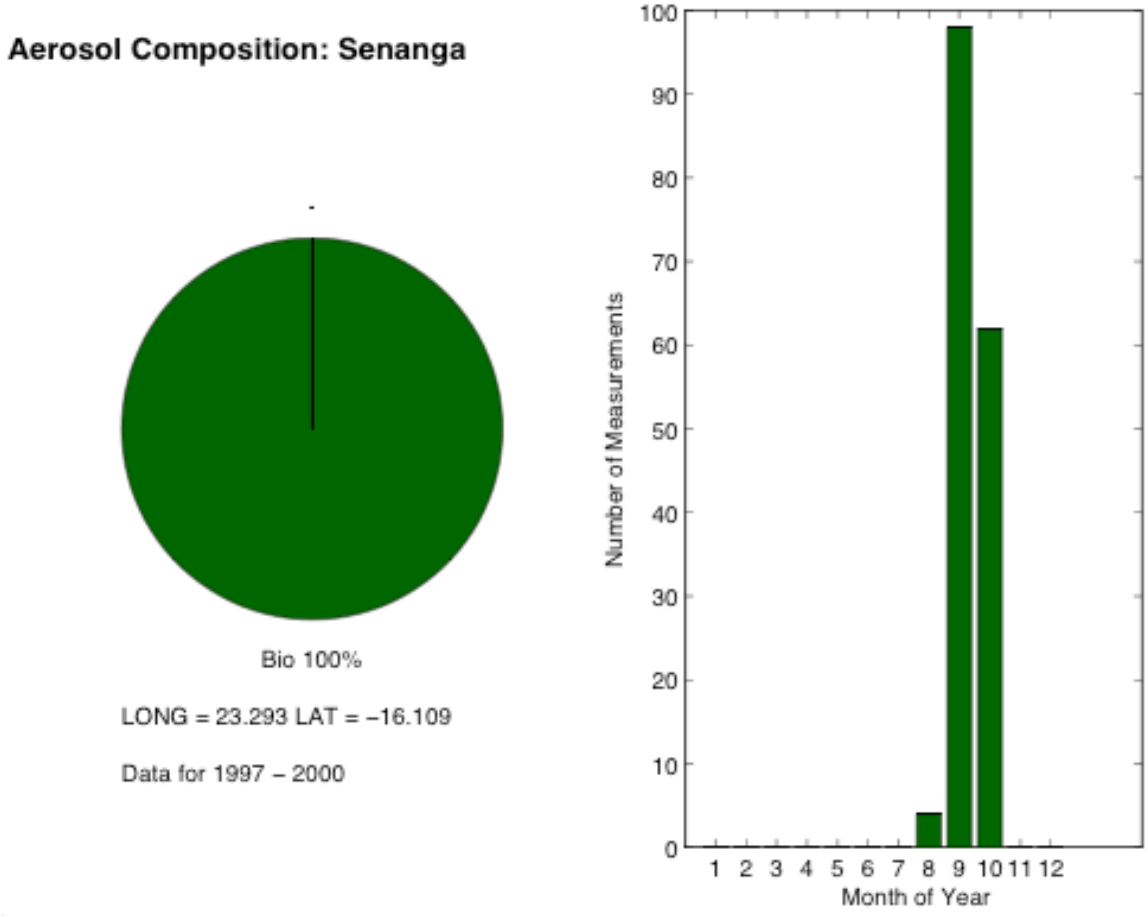
Senanga, Zambia



Senanga is a small town in Eastern Zambia. The AERONET site is no longer active, but during its tenure it recorded biomass burning aerosol.

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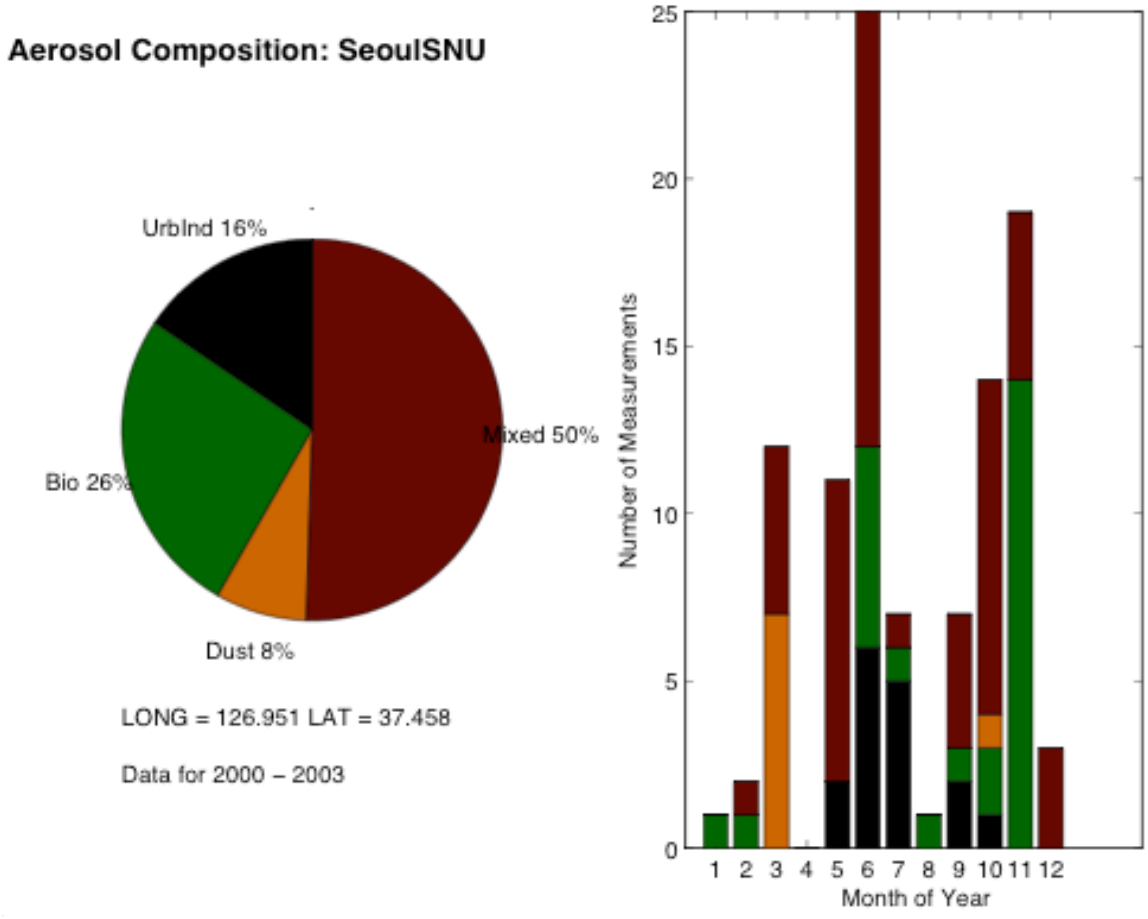
Seoul, South Korea (SNU)



This instrument is installed on the campus of Seoul National University (SNU) in the southern part of Seoul, Korea. Seoul is a large urban center with a population of more than 10 million. Regional traffic, and industry from the surrounding regions are suspected to be major contributors to the aerosol. The AERONET website lists this location as Seoul_SNU.

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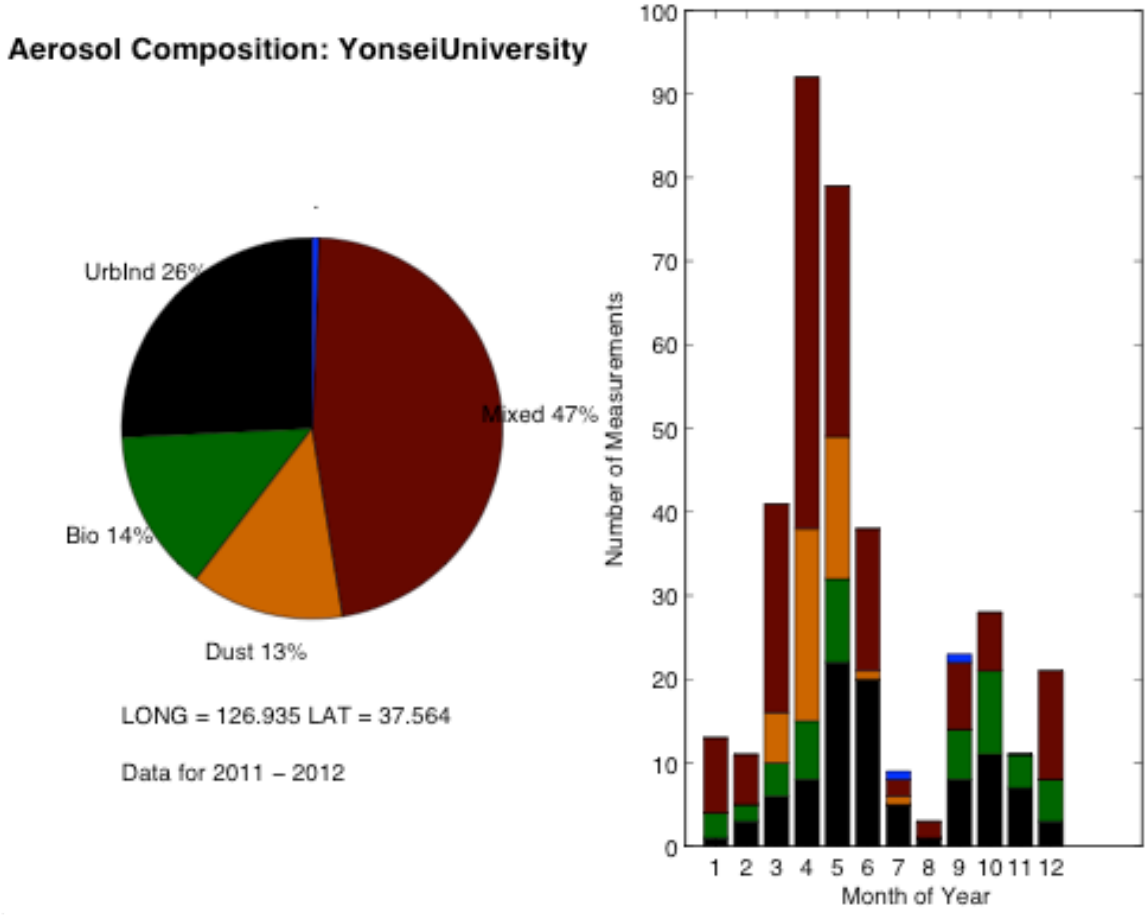
Seoul, South Korea (Yonsei University)



The instrument is installed at the Yonsei University, which is located in the Seoul Metropolitan megacity (population about 25 million). The university is about 3 km west of the city center, and about 40 km east of Inchon Bay. The AERONET website lists this location as Yonsei_University.

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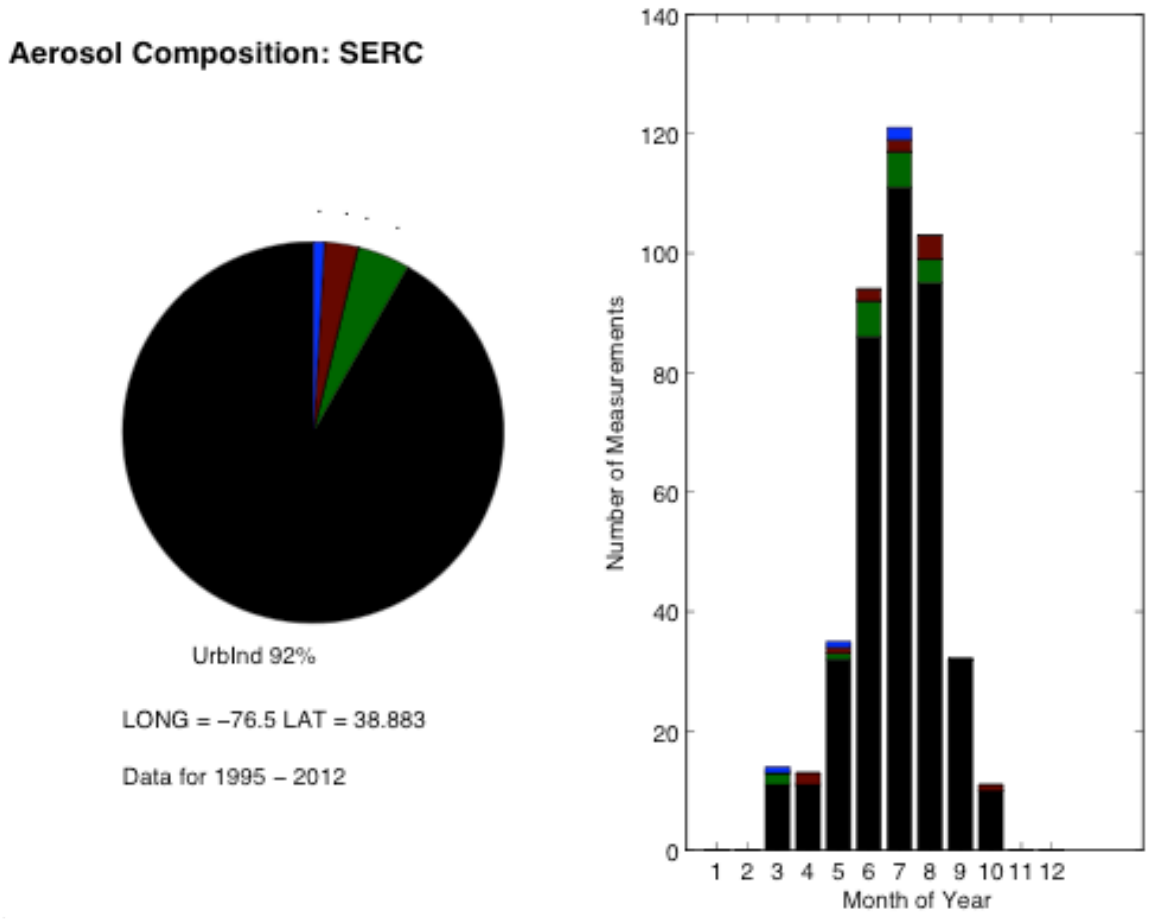
SERC, Annapolis, Maryland, USA



This site is on the campus of the Smithsonian Environmental Research Center (SERC) along the estuary of the Chesapeake Bay. The instrument is tower mounted on the western side of the north end of the bay. It sits some 500 m from the shore and lies 15 km south of Annapolis, Maryland. Although the surroundings are rural, SERC is less than 40 km east of Washington D.C., a major metropolitan region with a population of about 5.7 million.

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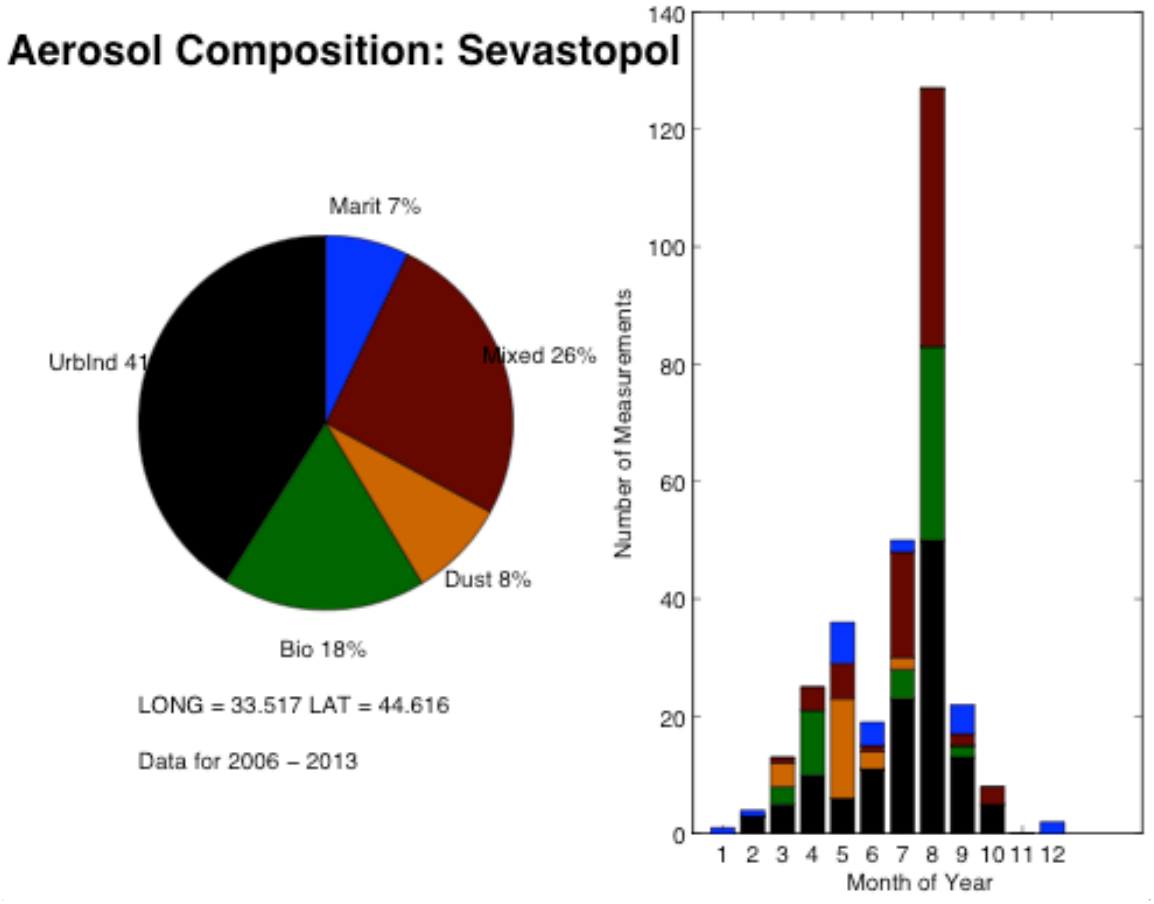
Sevastopol, Ukraine



The instrument is located on the roof of the institute on the south bank of the Sevastopol Fjord, close to the mouth of the fjord. Sevastopol lies on the Black Sea and the instrument is very near the shore. Sevastopol is the second largest shipping port in Ukraine, and has associated ship servicing and building, as well as industrial activity. The population is approximately 380,000.

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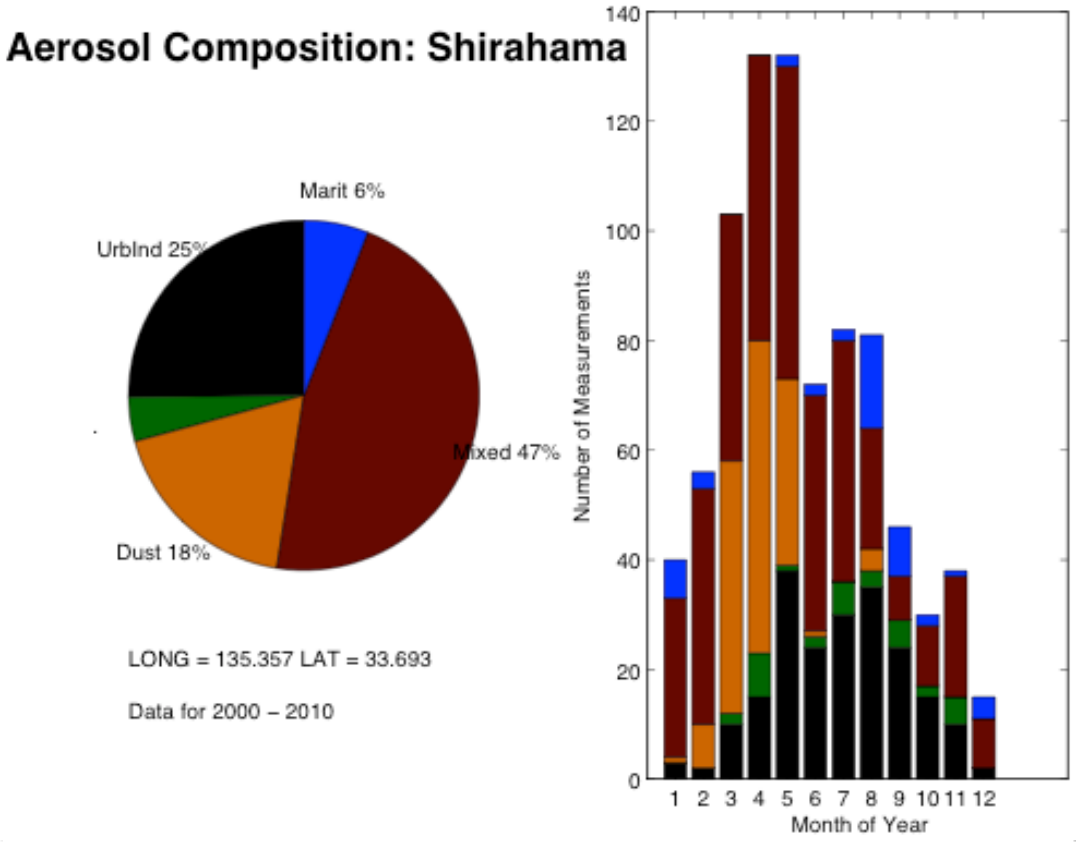
Shirahama, Japan



This instrument is mounted on a deck platform at an elevation of 10 meters, above the surrounding water. This location is on a peninsula on the southern end of the main island. This tourist region has about 25,000 permanent residents. Shirahama is a resort town, well known for its beaches.

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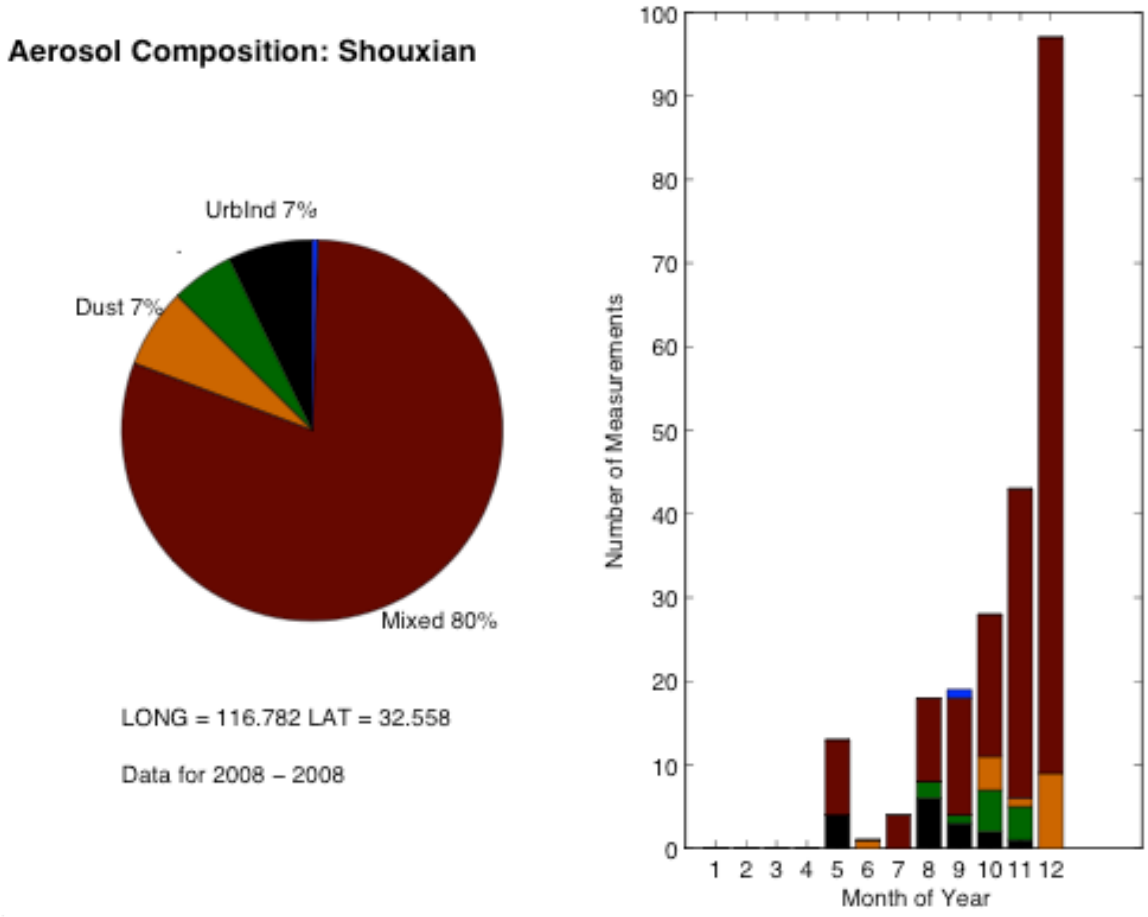
Shouxian, China



The Shouxian National Climate Observatory is located about 500 km east of Shanghai. Shou Xian County has a population of about 1.3 million people. It is a national cultural and historical city.

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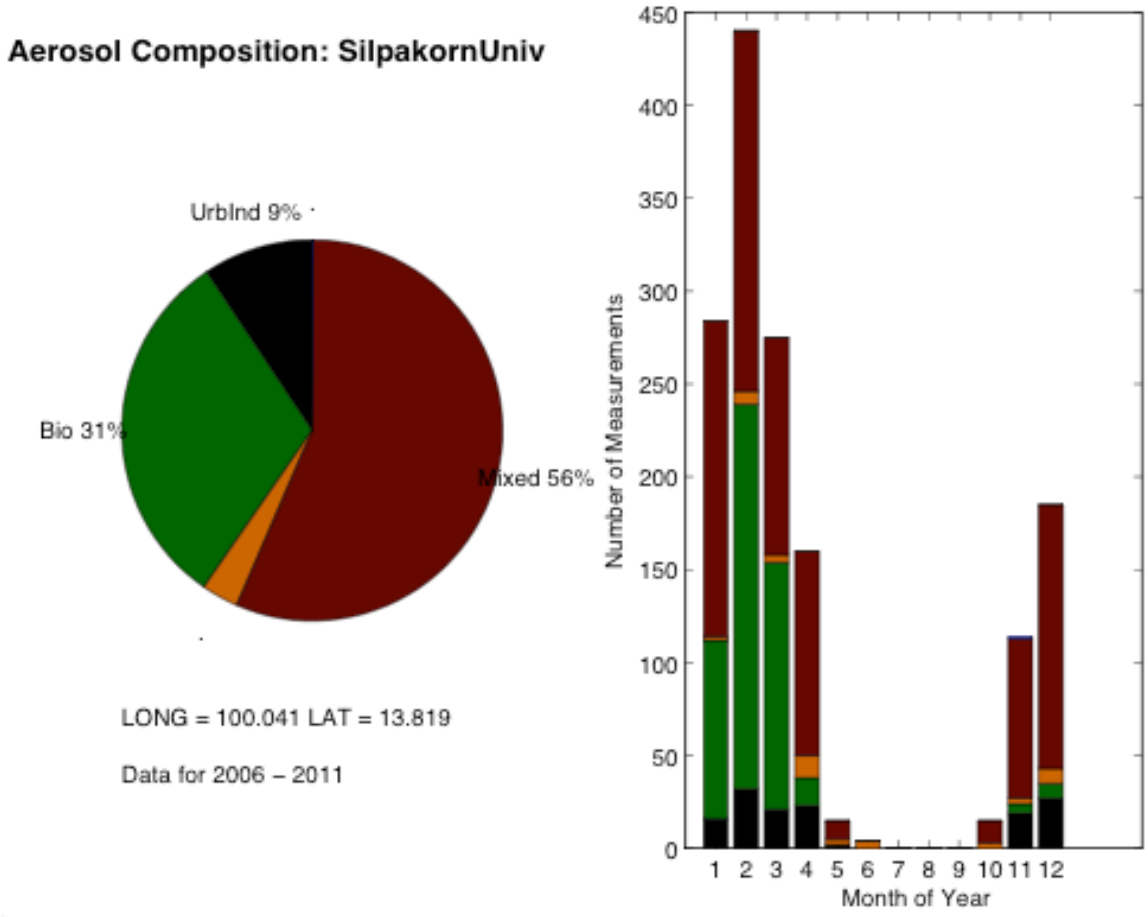
Silpakorn University (Nakhon Pathom), Thailand



Silpakorn University, the national university of Thailand, is located some 60 km east of Bangkok in the province of Nakhon Pathom. The region has been urbanized and is near the outskirts of Bangkok.

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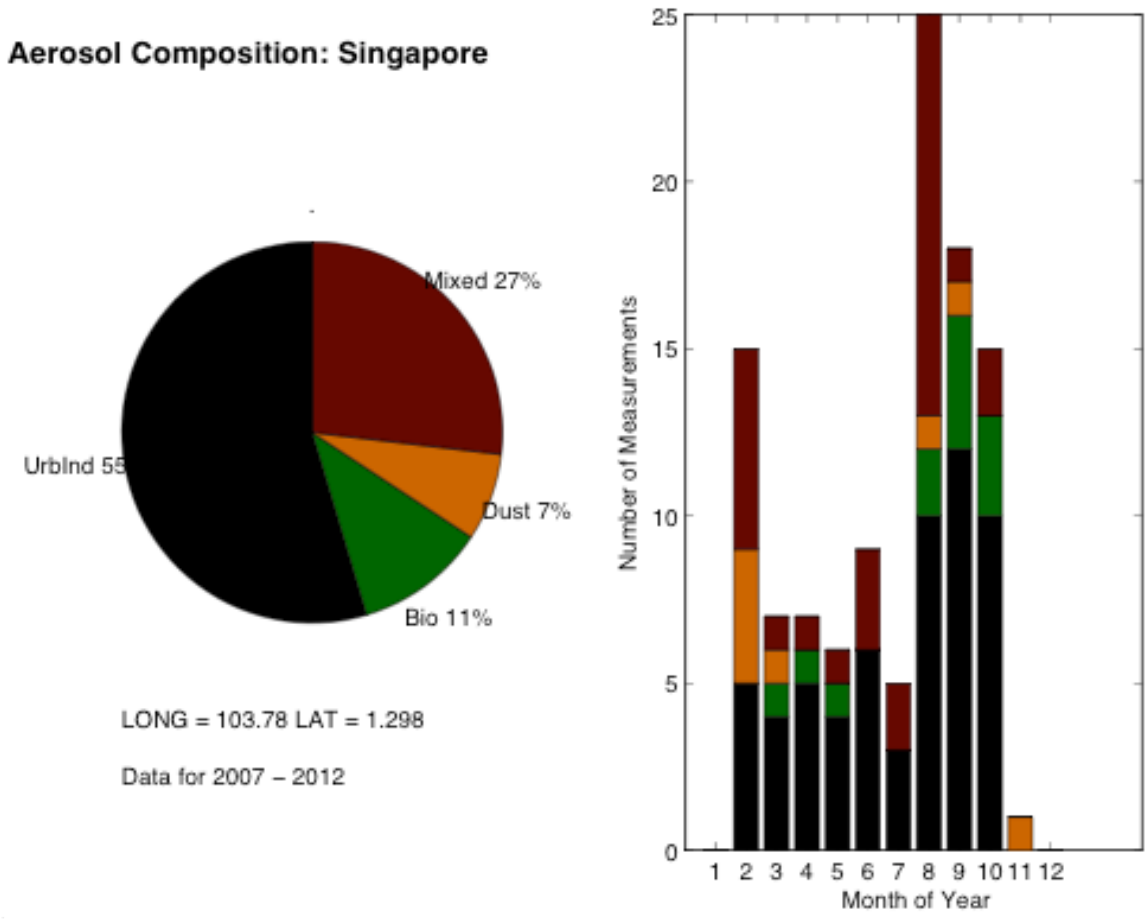
Singapore



This instrument is within 2 km of the harbor on Singapore Straight. Singapore lies at the southern tip of the Malay Peninsula. Shipping is a major industry in this city of over 5 million people.

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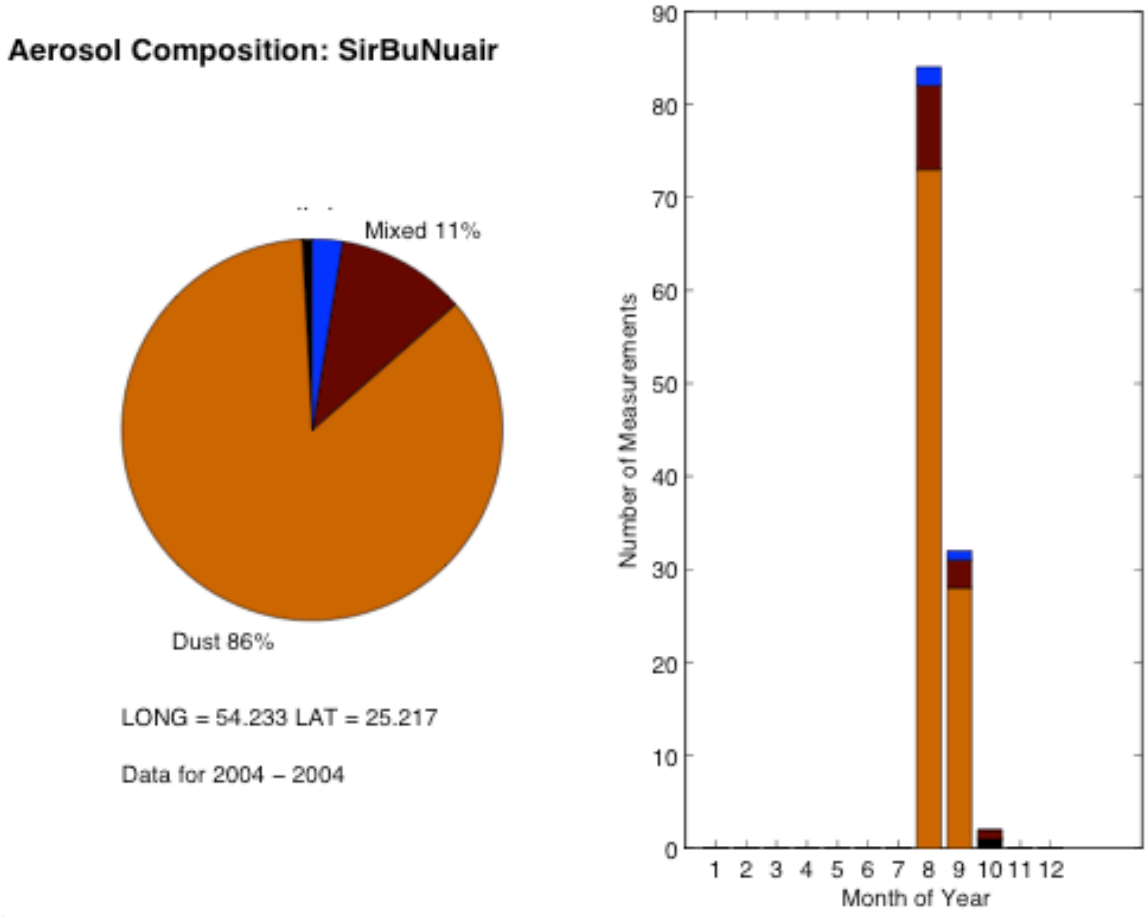
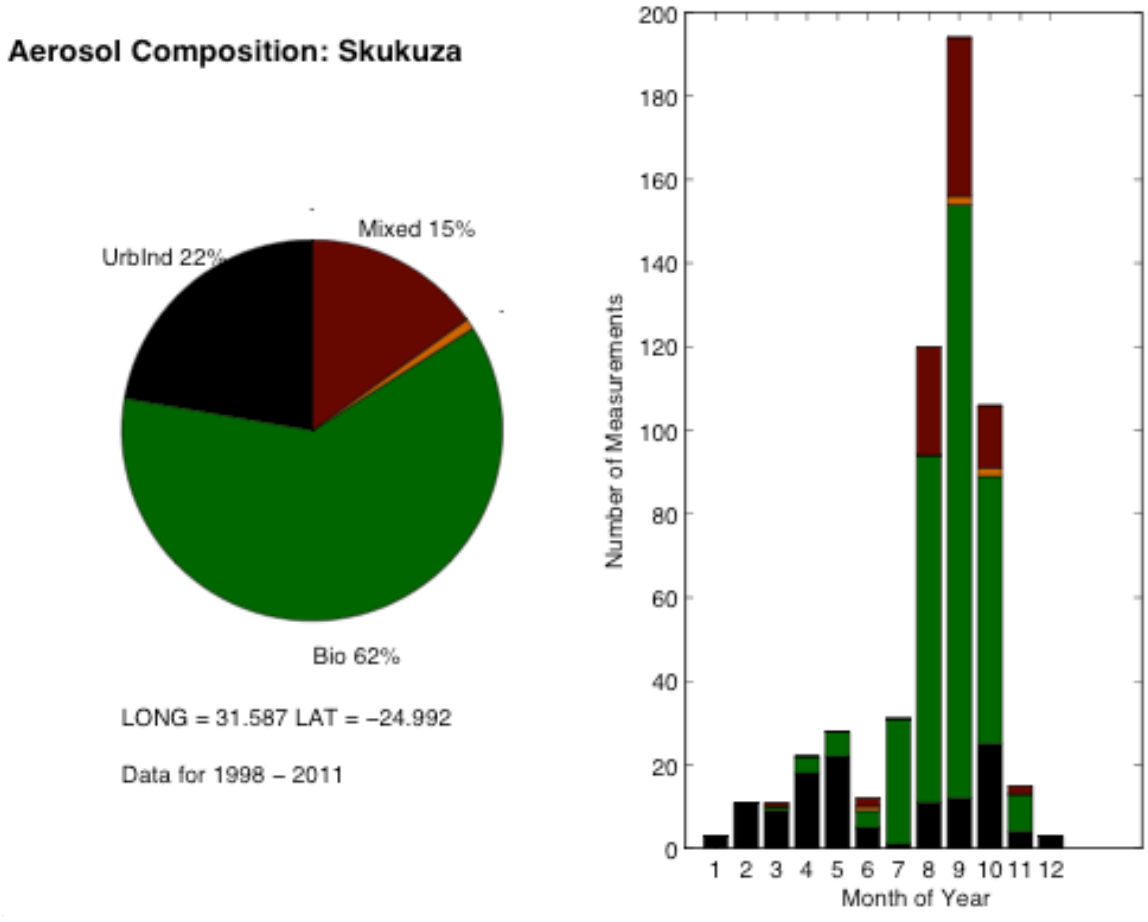
Sir Bu Nuair, United Arab Emirates



Sir Bu Nuair is a remote island located 65 km off the West UAE coastline, in the middle of the Persian Gulf. The island is roughly 13 square kilometers in area and is uninhabited.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008. Return to Table

Skukuza,
South Africa



This instrument is located at the Skukuza weather station in Kruger National Park. It is surrounded by Sabi River thicket, and is within 25 km of densely populated settlements lying to the east (outside the National Park). The Skukuza airport serves over 2.3 million tourist per year who visit the Kruger National Park.

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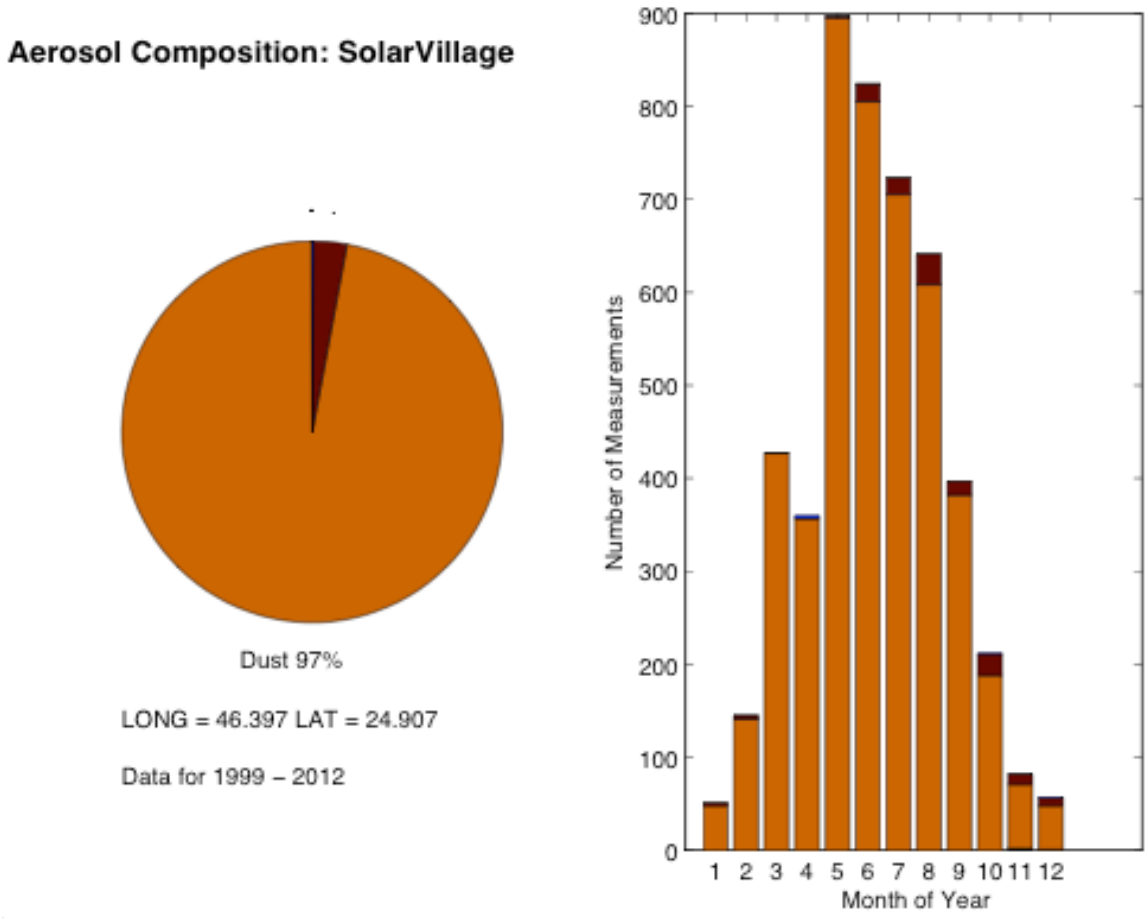
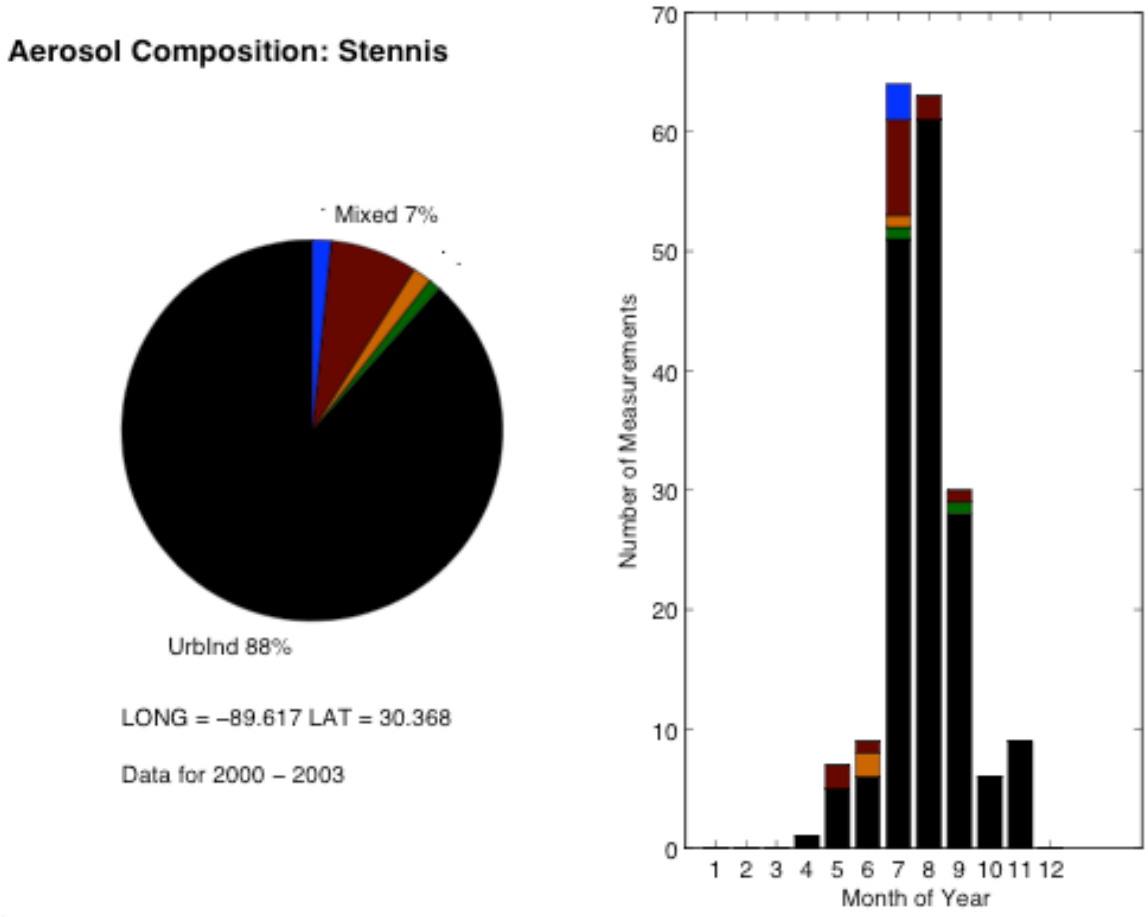
Solar Village, Saudi Arabia



This instrument is located at Solar Village in Saudi Arabia, approximately 50 km northwest of Riyadh. The installation is an experimental site for generating solar power. It is near the village of Uyaynah. The location is considered typical of a Saudi Arabian desert site, exhibiting a dust aerosol.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008. Return to Table

Stennis, Mississippi, USA



This instrument is located near Highway 43, approximately 3 km east of the Louisiana – Mississippi border and within the confines of the NASA Stennis Space Center. The surrounding region is mostly rural. The site is the home of NASA's rocket testing facility.

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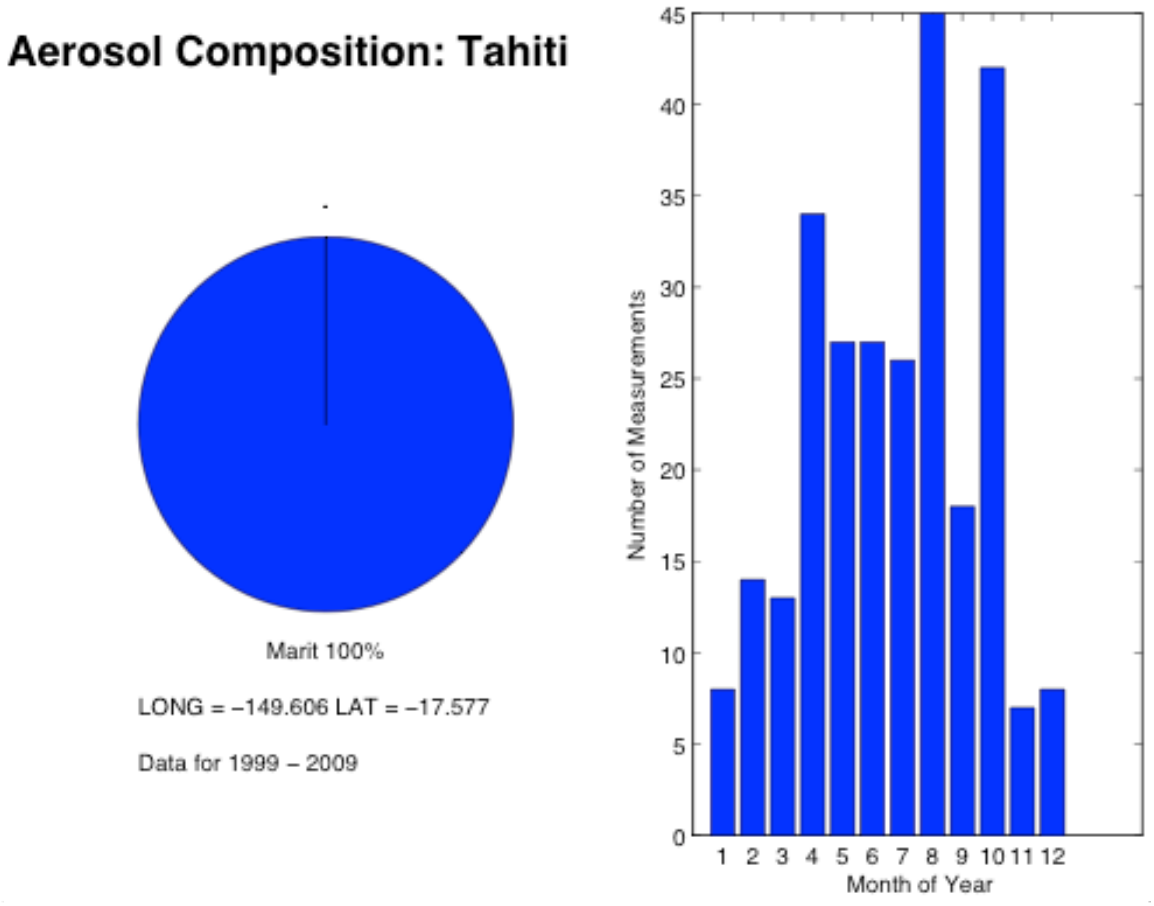
Tahiti,
French Polynesia



Tahiti is an island in the Southern Pacific Ocean. The population of the island is somewhat less than 200,000. The instrument is located in Papeetee, the largest city, within 2 km of the shore.

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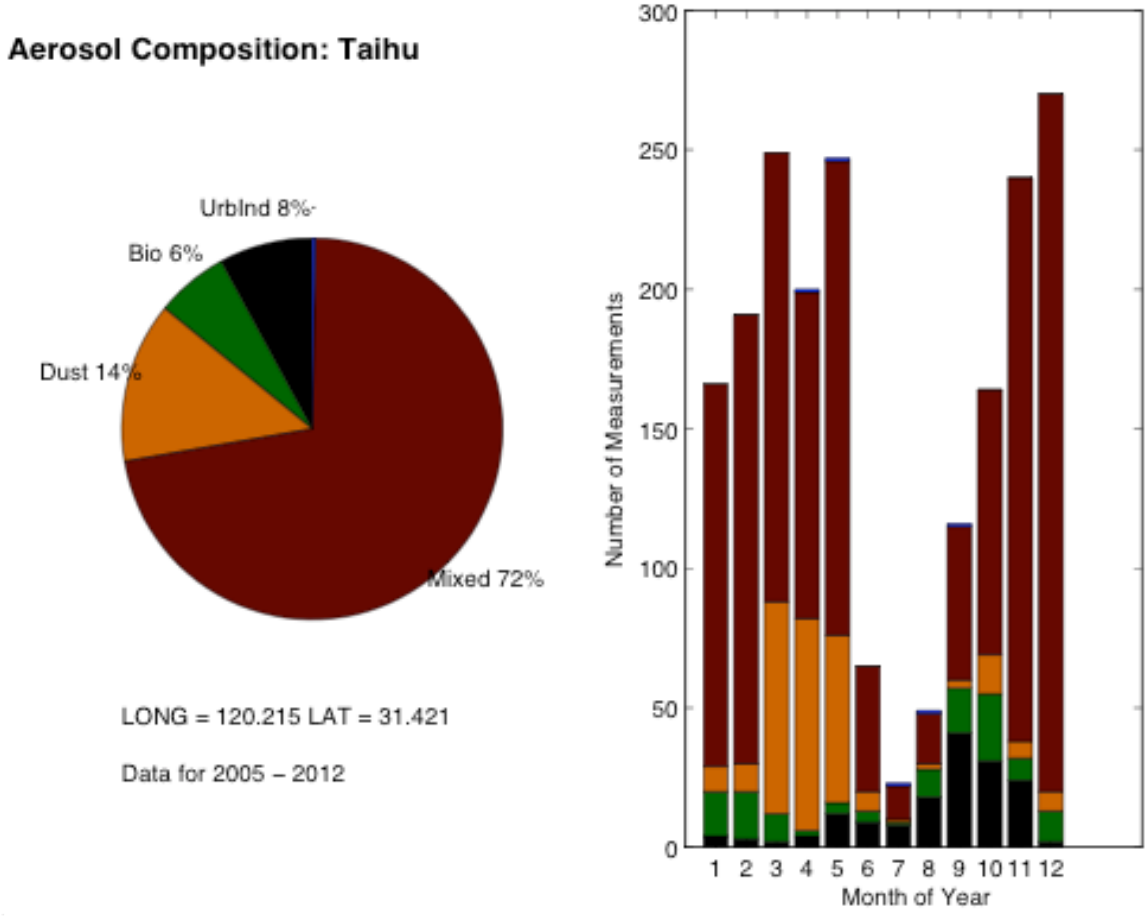
Taihu, China



This site is located less than 100 m from the shore of Taihu Lake on a small peninsula near the north shore of the lake. This venue is between Changzhou prefecture with some 4.5 million people to the northwest, and Suzhou prefecture with 8.5 million people to the southeast. The region is west of Shanghai. Emerging industries include food processing and some heavy industry.

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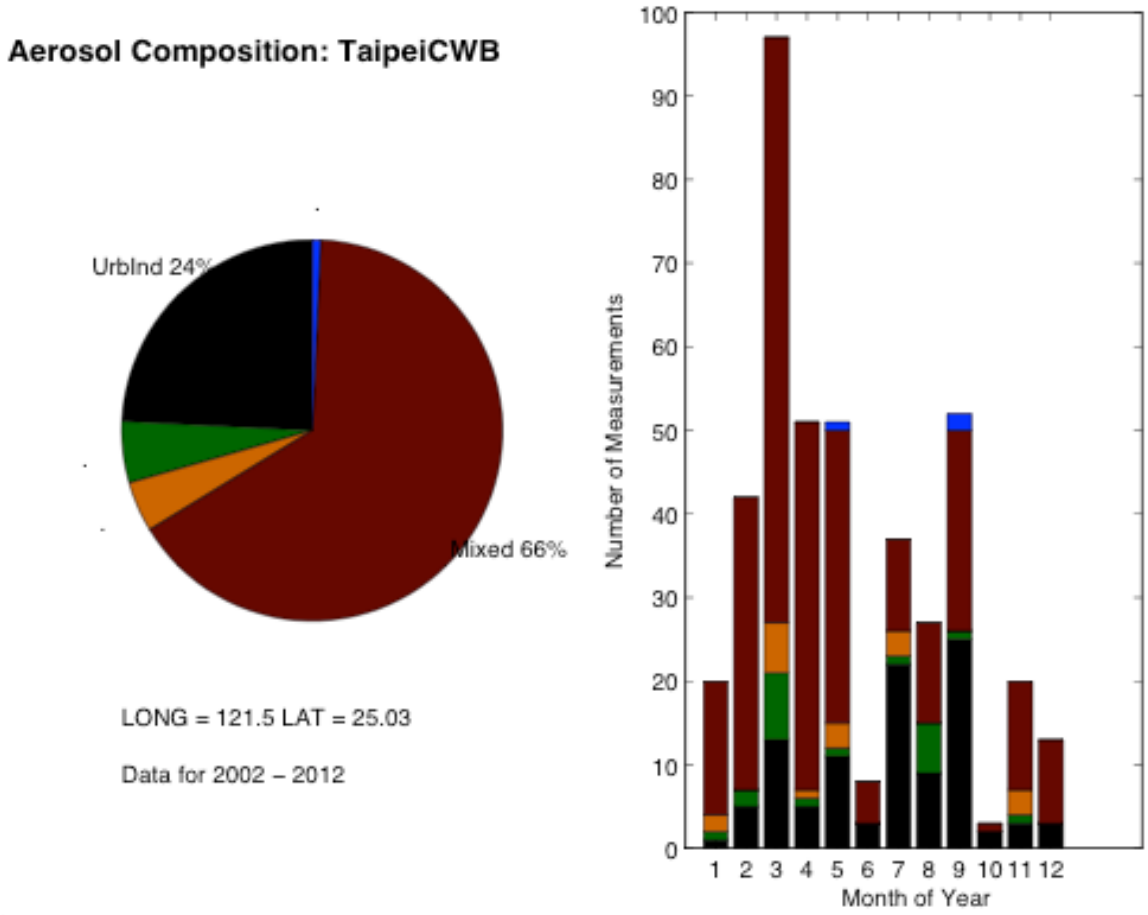
Taipei,(CWB)
Taiwan



This instrument is located in an urban location in Taipei City (population about 8 million people), on the northern end of the island. The AERONET website lists this location as Taipei_CWB, the initials standing for "Central Weather Bureau."

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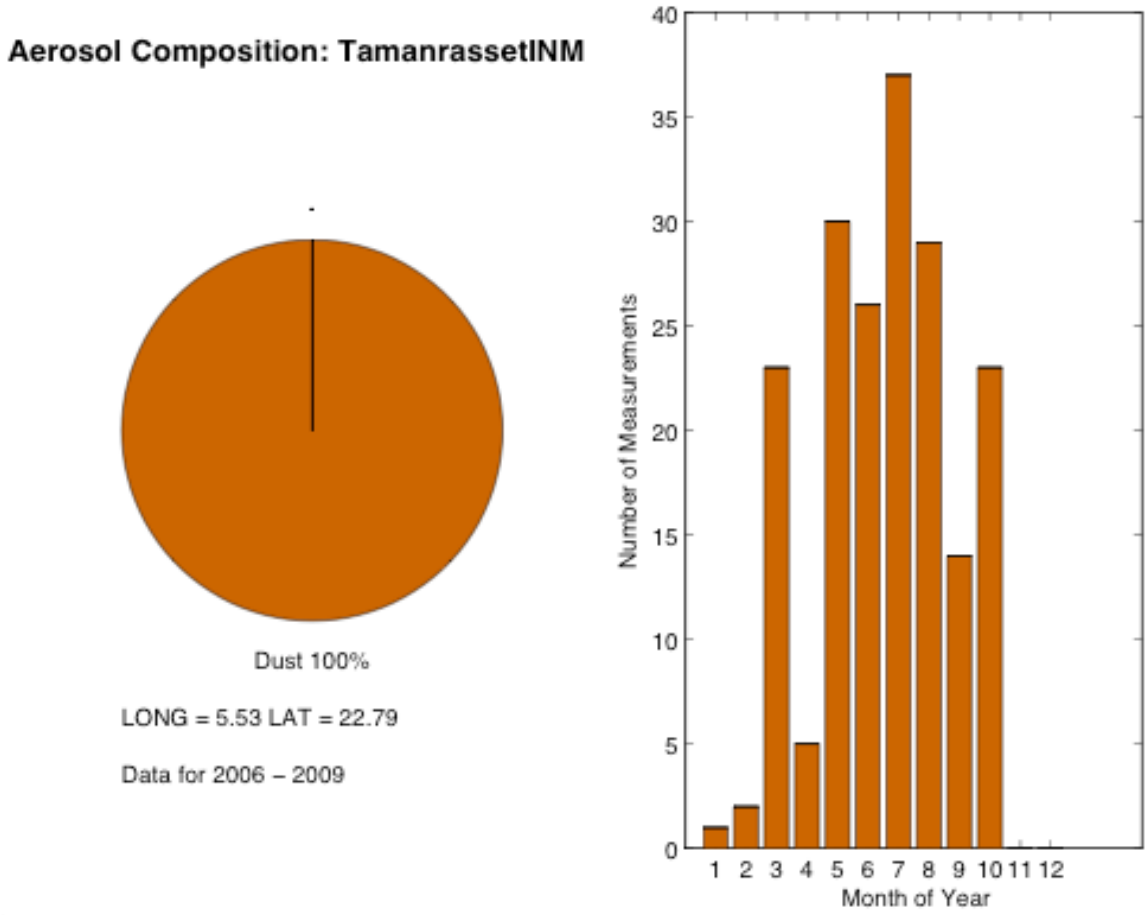
Tamanrasset, Algeria (INM)



The sunphotometer is located in the highlands of the Algerian Sahara. There are no industries in the vicinity of this location. The site is in a city with a population of approximately 90,000 completely surrounded by a vast desert region. The AERONET website denotes this site as Tamanrasset_INM. A reference for how data from this site has been incorporated into transport models of Asian and Saharan dust can be found in Su and Toon, *Atmos. Chem. Phys.*, 11, 3263–3280, 2011.

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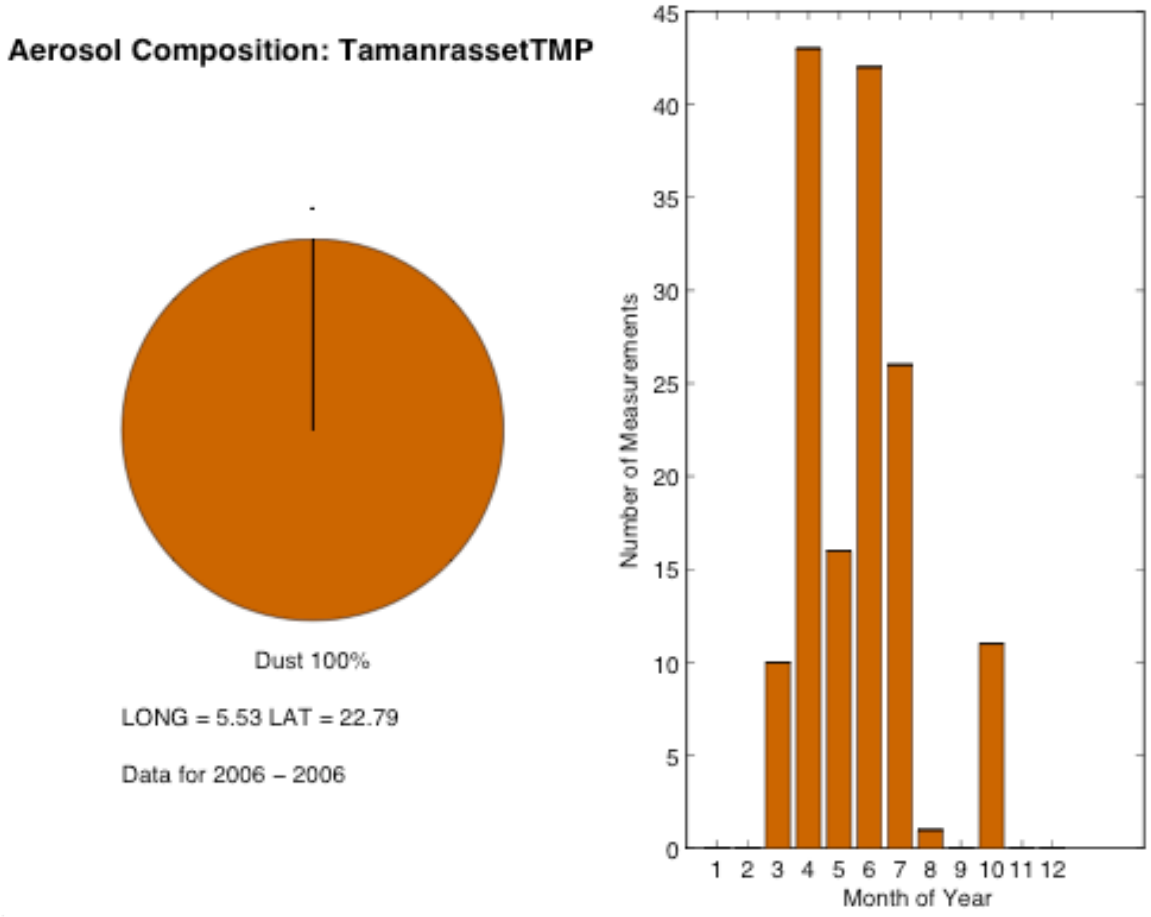
Tamanrasset, Algeria (TMP)



The sunphotometer is located in the highlands of the Algerian Sahara. There are no industries in the vicinity of this location. The site is in a city with a population of approximately 90,000 completely surrounded by a vast desert region. Data from this site and five other northern Sahara venues were incorporated into a study on tropospheric dust that was summarized in Carrier et al., which can be found in: International Geoscience and Remote Sensing Symposium 2011 paper FR1.T07.1 IGARSS IEEE pp 4014-4017. This temporary experiment ran only during the calendar year of 2006.

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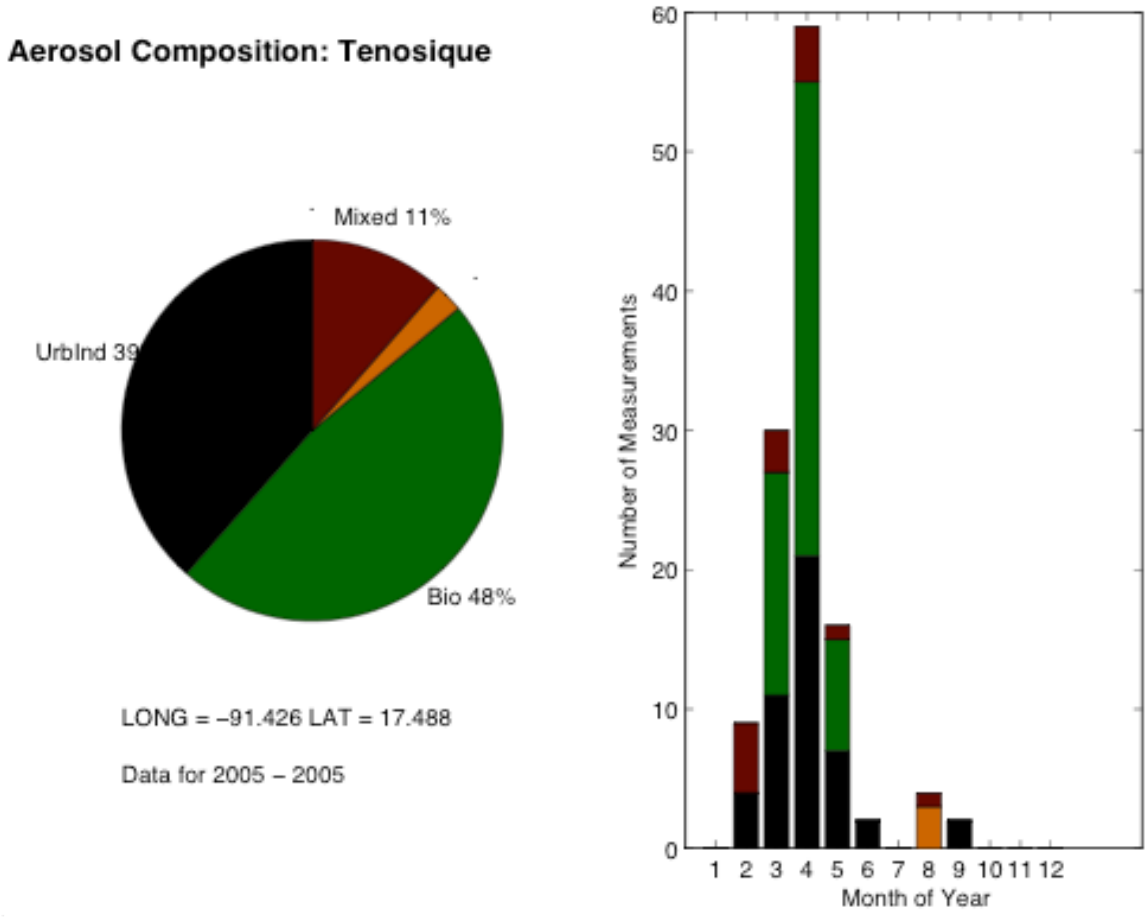
Tenosique, Mexico



This site is in southeastern Mexico in the sate of Tabasco near the Guatemala border. The region is rural/agricultural with a population of ~ 35, 000. Data is available only for the year 2005.

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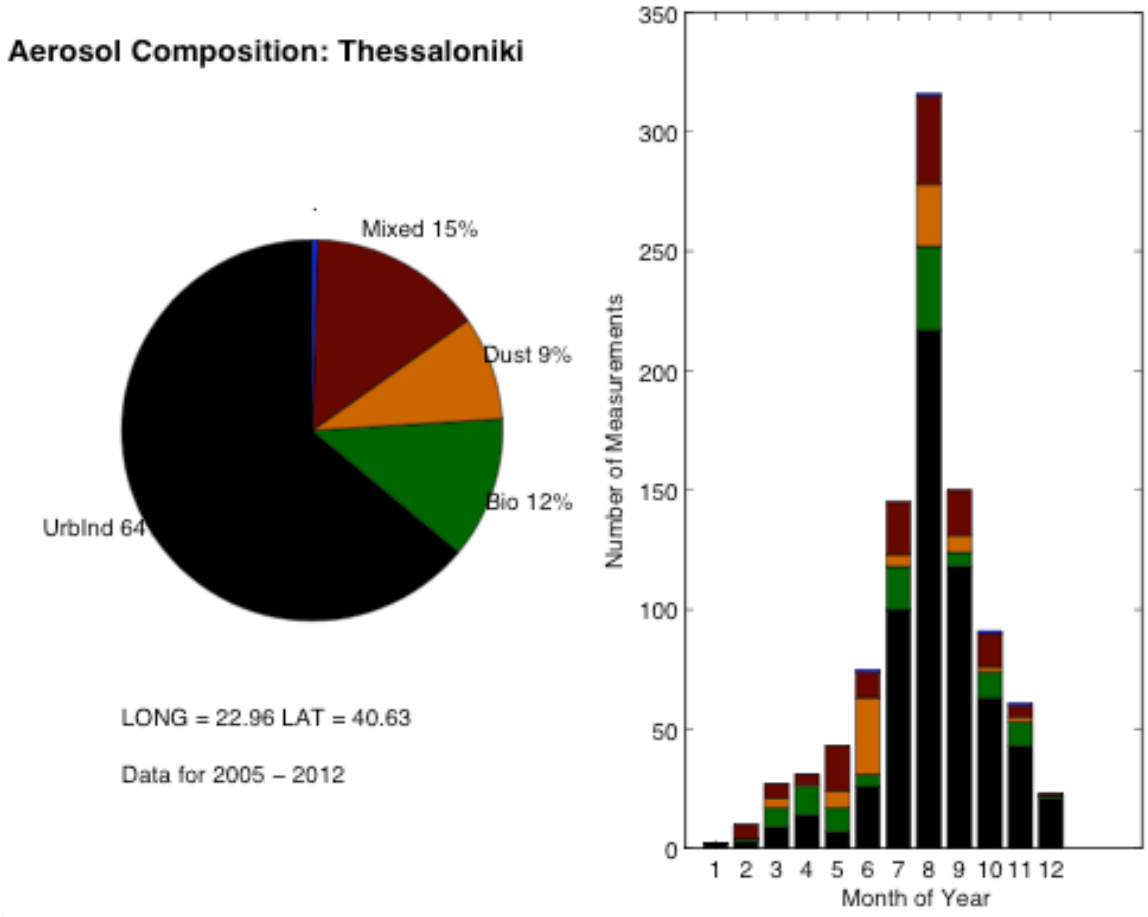
Thessaloniki, Greece



The instrument is located at the Aristotle University of Thessaloniki. The campus is located in the city center some 500 m from the Aegean sea. Thessaloniki is the second largest city of Greece with about 1 million inhabitants. It is an important port city and an industrial center.

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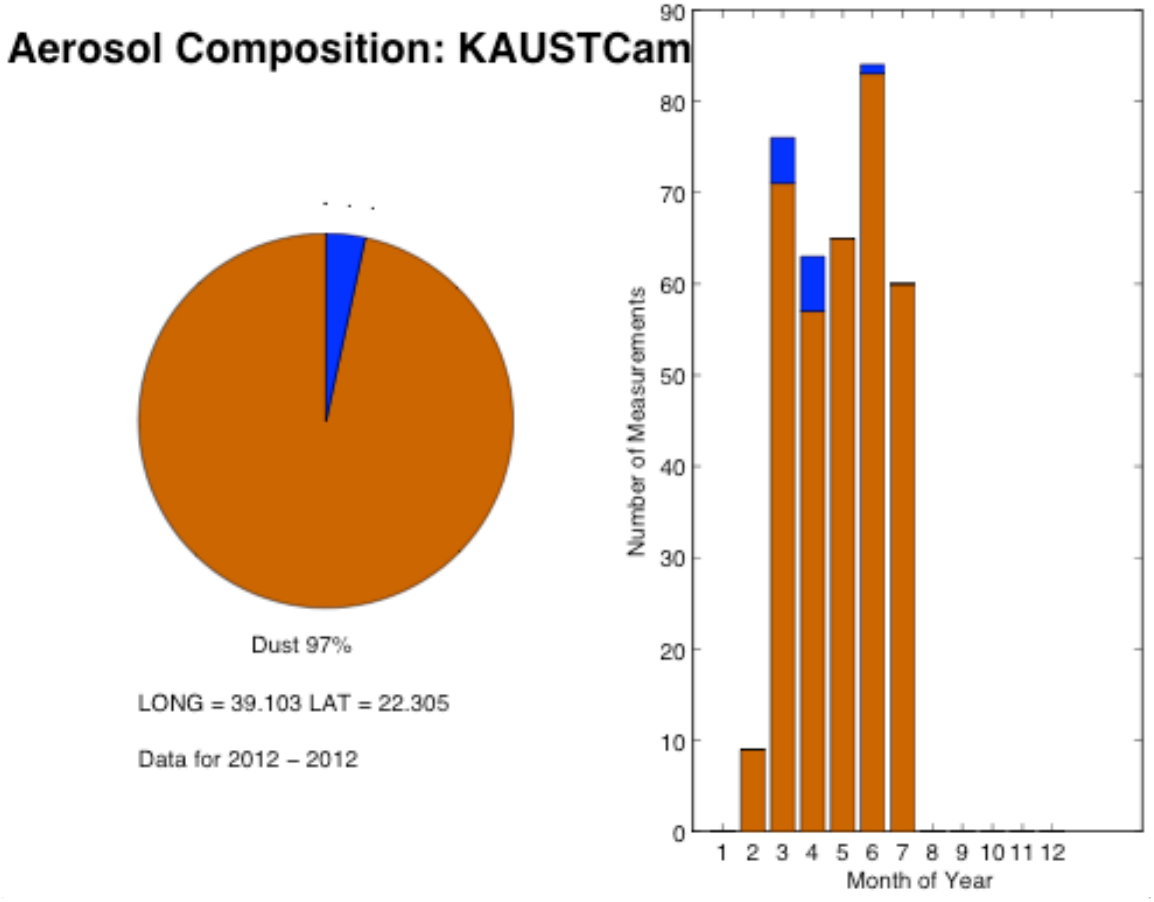
Thuwal, Saudi Arabia [KAUST]



Thuwal is a small town on the Red Sea, about 80 km north of Jedda. To the west of Thuwal lies the Red Sea, and to the east lies the Arabian desert. Thuwal is the home of the King Abdullah University of Science and Technology (KAUST). This location is listed in the AERONET website as KAUST_Campus.

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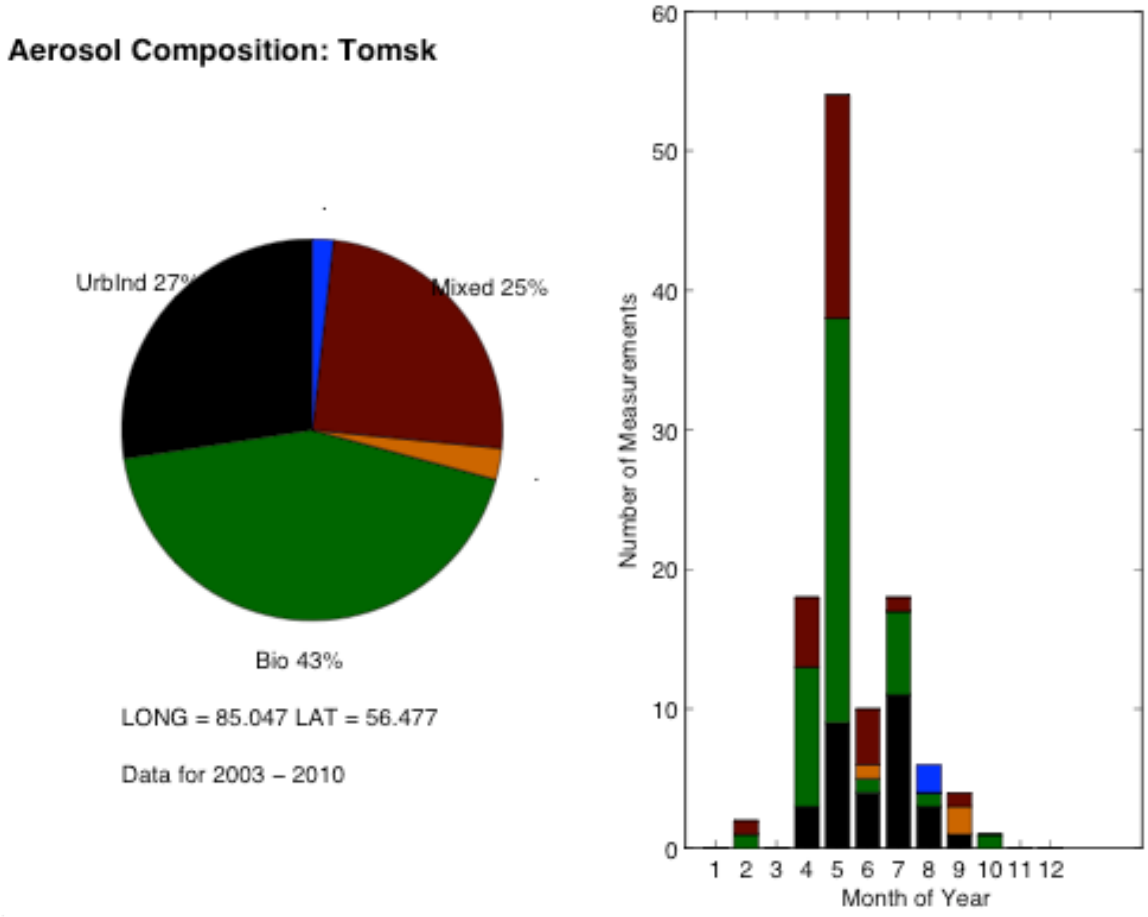
Tomsk, Russia



This instrument site is at the eastern edge of the city, which is located in the central Asian portion of Russian Siberia. The city of approximately 500,000 people has three local power generating plants. The climate of Tomsk is described as humid continental.

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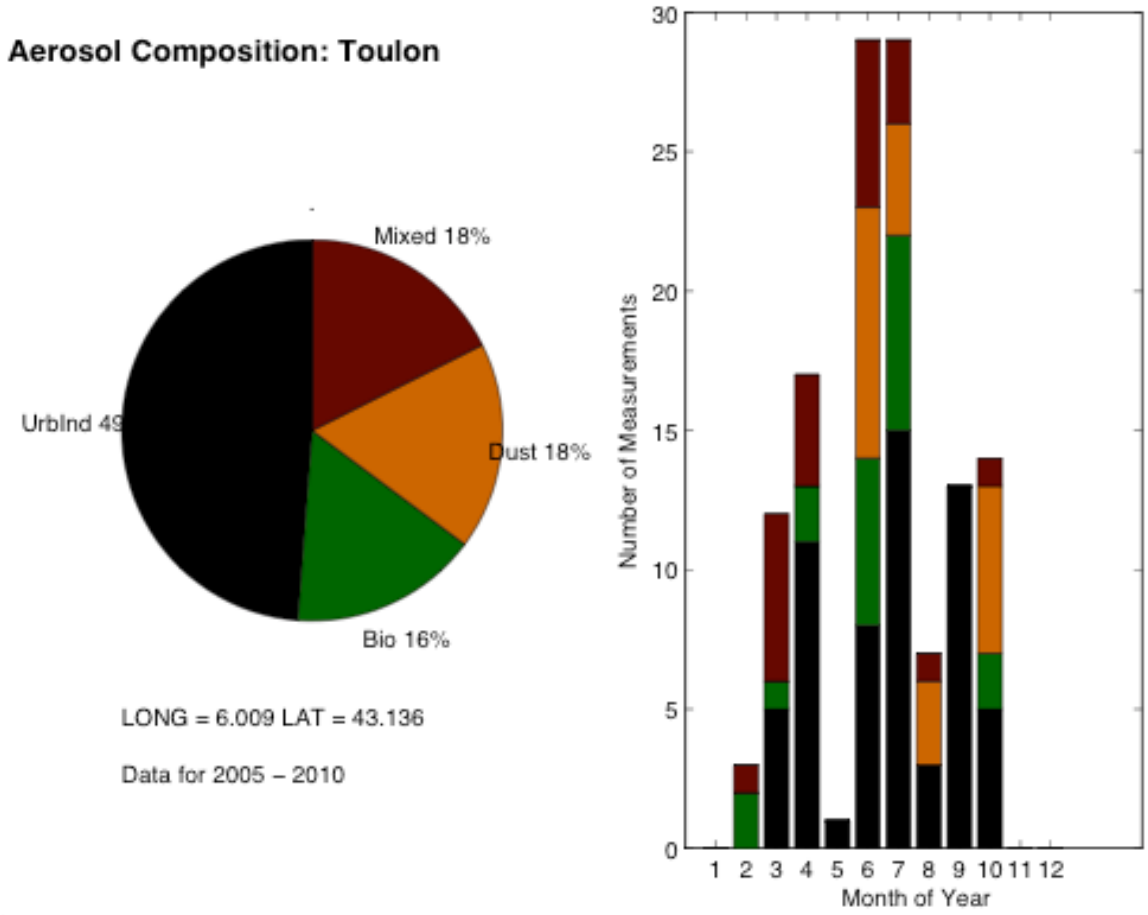
Toulon, France



Toulon is city of about 170,000 in Provence, Southern France. The instrument is on a hill at the east edge of the nearby town of La Vallette-du-bar, approximately 5 km from the Mediterranean coast.

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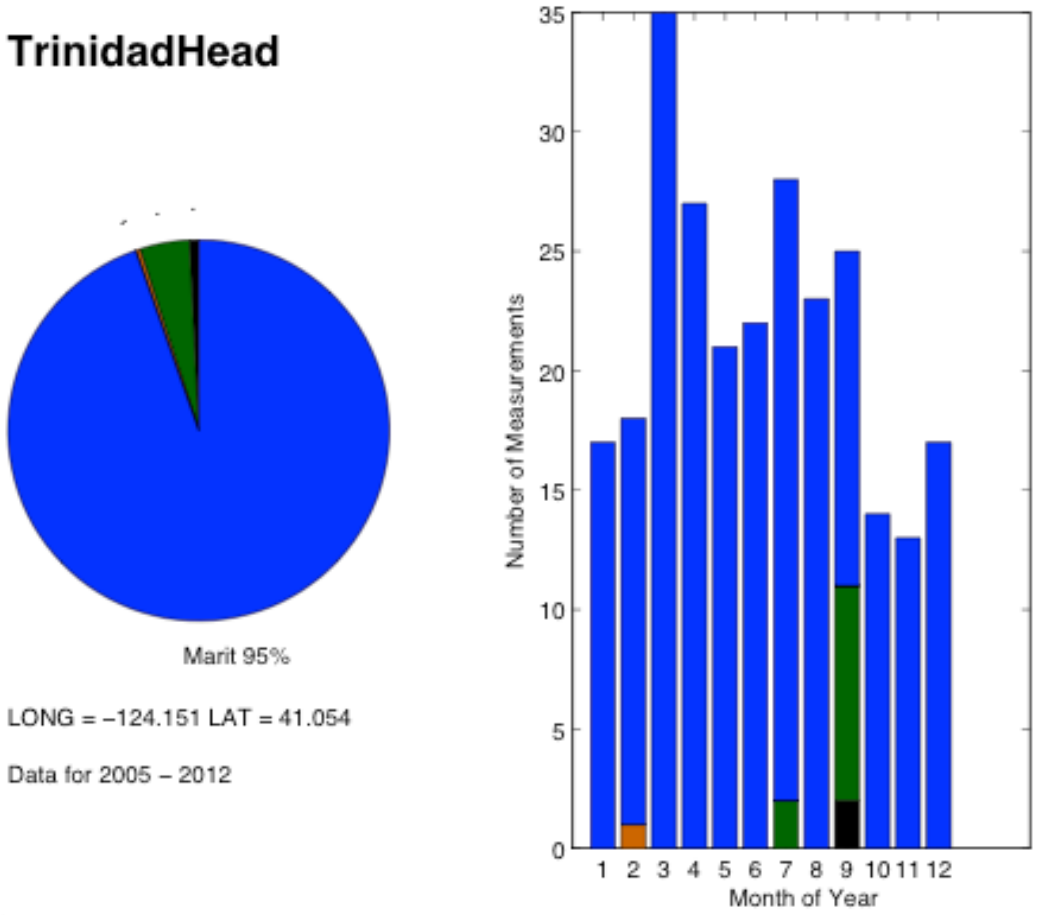
Trinidad Head, California, USA



The instrument is on a bluff approximately 100 m above the shore of the Pacific Ocean, at a site located on a point jutting into the ocean along the remote north coast of California. The closest municipality is a small community of Trinidad (population less than 500) about 1 km to the Northeast, and Arcata with a population of 18,000 about 24 km Southeast. Trinidad Head has a complete meteorological station and a set of ground-based aerosol samplers operated by Humboldt State University.

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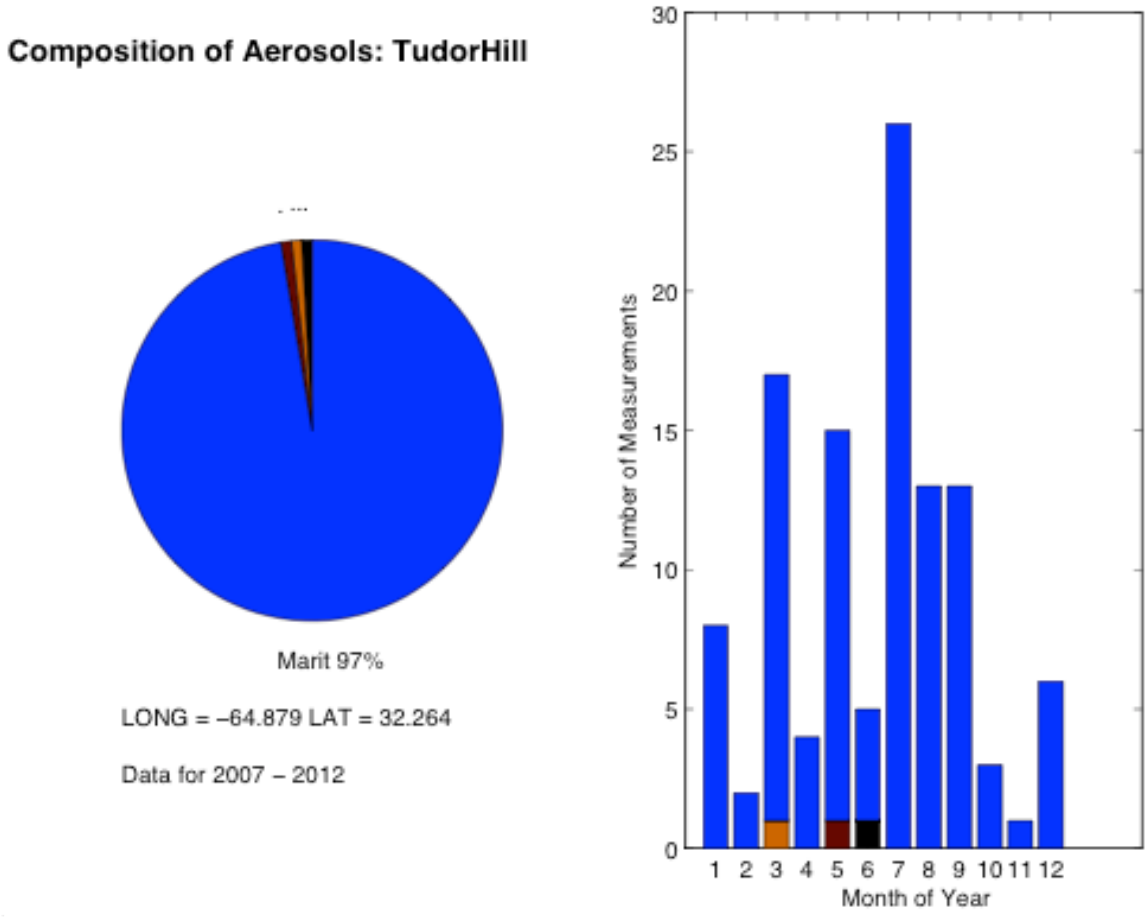
Tudor Hill, Bermuda



This site is adjacent to the shore on southwest coast of the island of Bermuda. Bermuda has a population of about 60,000. It is located in the Atlantic Ocean some 1000 km from the North American mainland.

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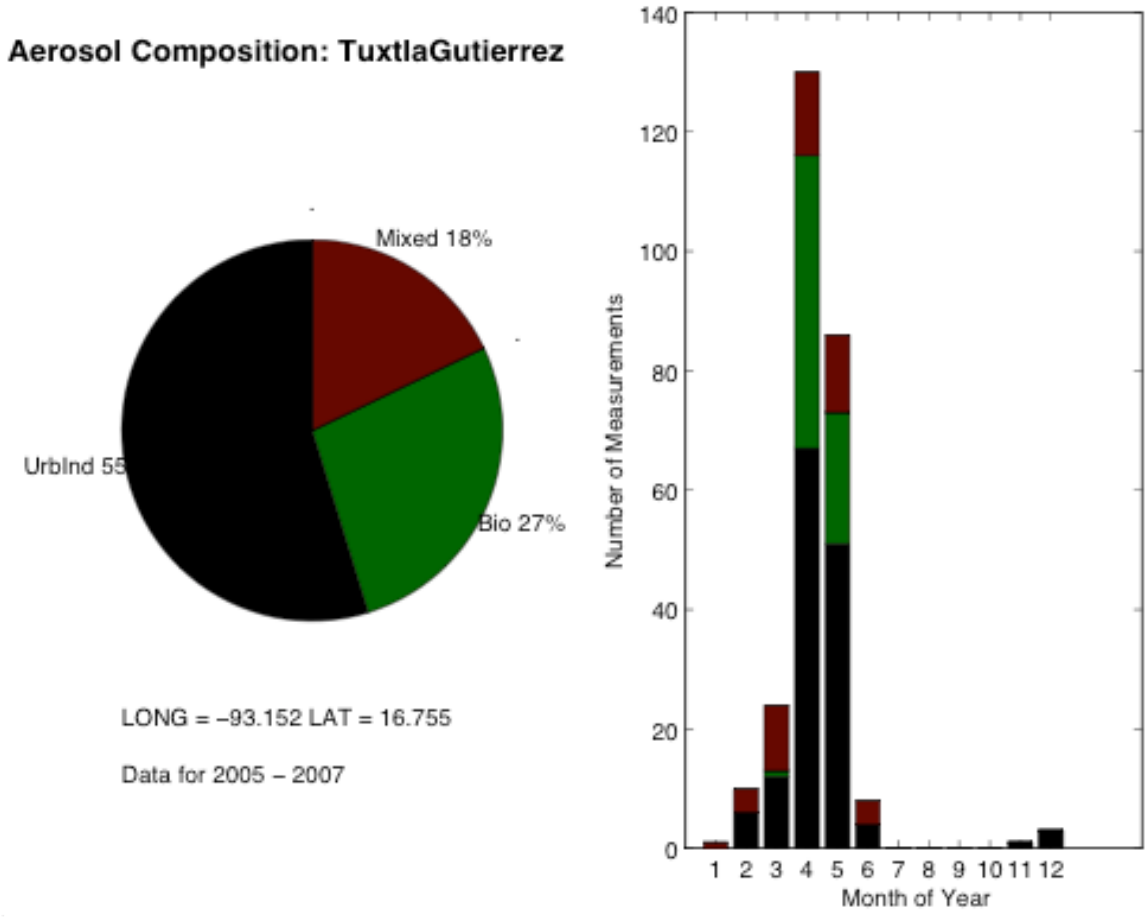
Tuxtla Gutierrez, Mexico



This instrument is located in a central urban site within a city of approximately 500,000 people. Tuxtla is the capital of the Chiapas state in southeast Mexico, and is not industrial, but is a transportation center with a regional airport and bus terminal. To the north of the city is a forested national park.

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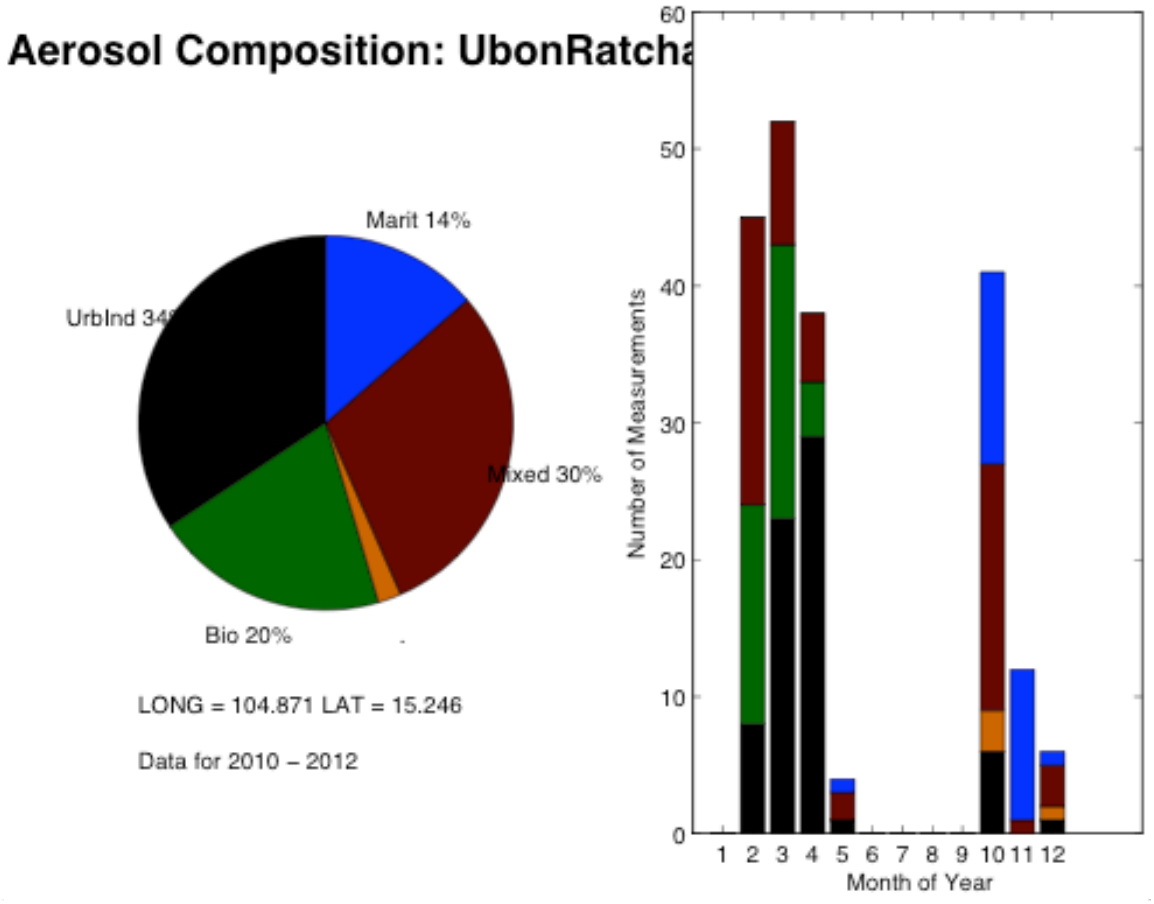
Ubon Ratchathani, Thailand



This instrument is adjacent to the airport in the city of Ubon Ratchathani which has approximately 85,000 inhabitants. Ubon is in Eastern Thailand.

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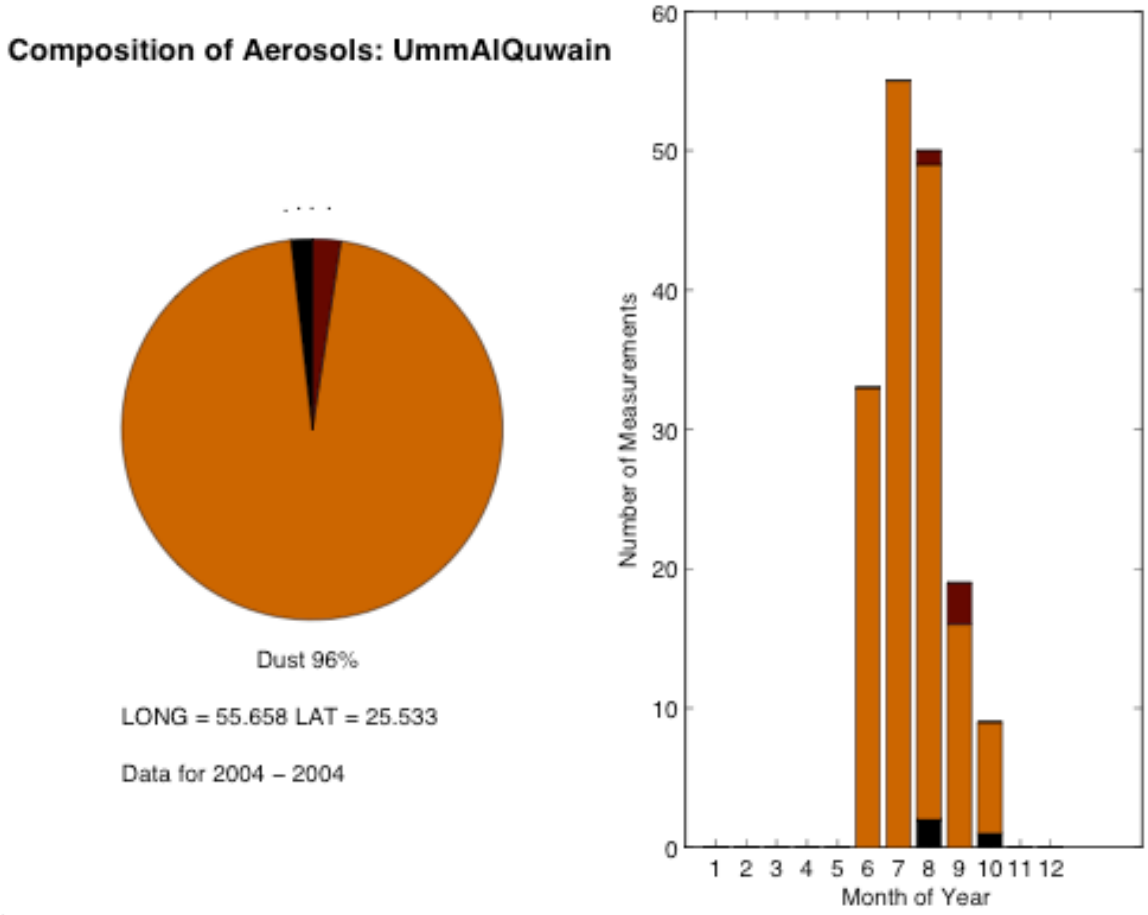
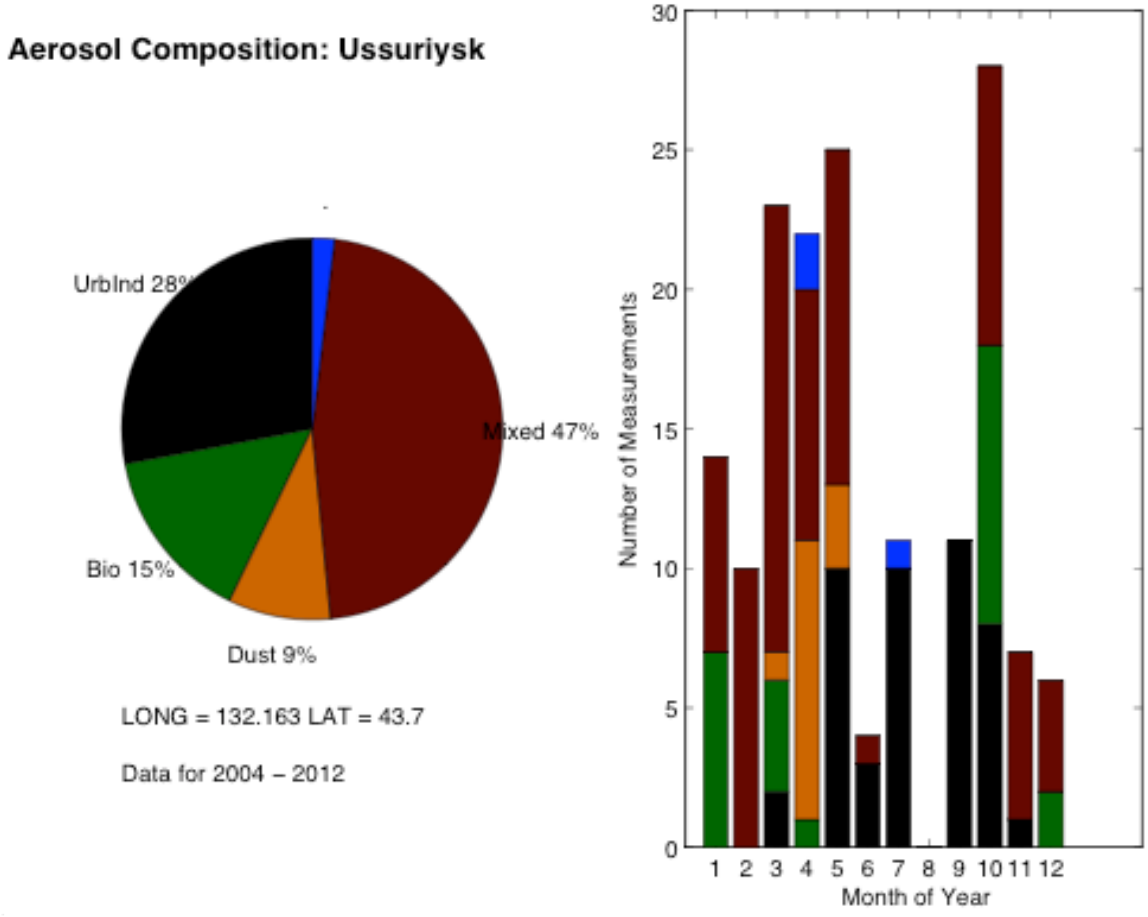
Umm Al Quwain, UAE



This site is north of Dubai and is surrounded by sand. It is located on the western side of the peninsula facing the Persian Gulf, approximately 5 km from the shore There is a nearby highway and an industrial park to the north. It is ~ 65 km directly west of the Dhadnah AERONET site

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE^2) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these aerosols might affect climate change. More details of the mission can be found at http://uae2.gsfc.nasa.gov. Eck et al.; *J Geophys. Res.*, *113*, D01204, doi:10.1029/ 2007 JD008944, 2008. Return to Table

Ussuriysk, Russia



This instrument is located in a rural site in Russian Siberia about 25 km southeast of Ussuriysk (population 158,000) at the astrophysics observatory. The city is about 98 kilometers north of Vladivostok and about 60 kilometers from both the China–Russia border and the Pacific Ocean.

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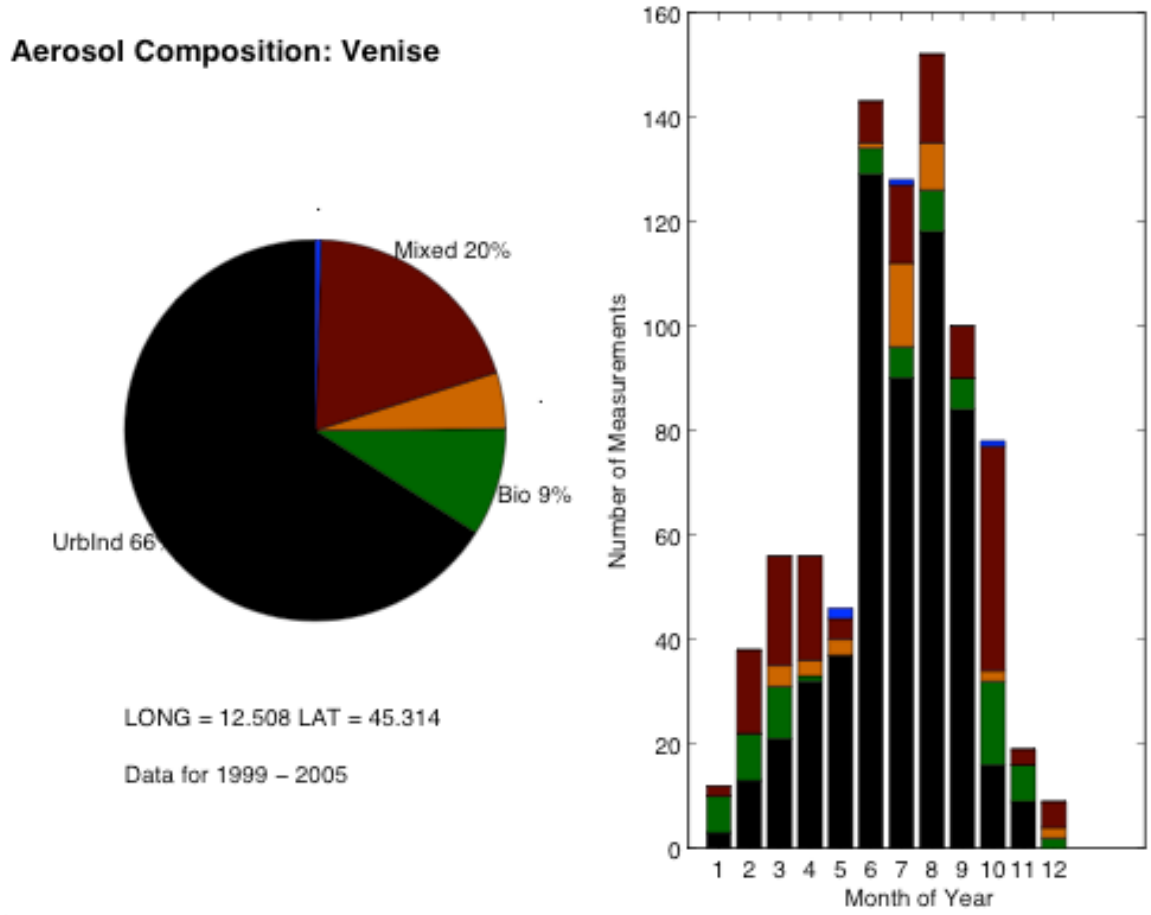
Venice (Lagoon AAOT), Italy



This instrument is located on the Acqua Alta Oceanographic Tower (AAOT) in the northern Adriatic Sea, 8 nautical miles offshore in the Venice Lagoon. Although the population of Venice is only about 280,000 the surrounding mainland area has a population of about 1.6 million. The AERONET website lists this location as Venise.

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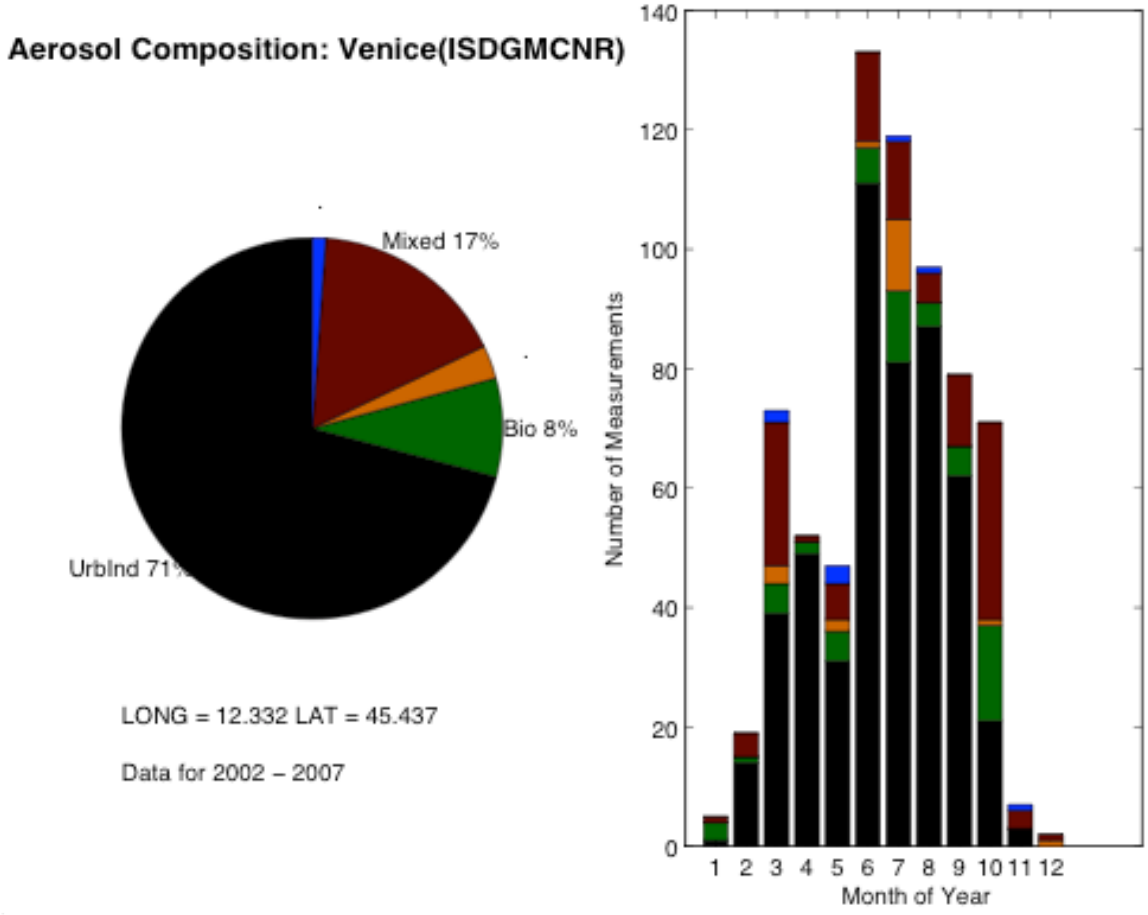
Venice, (ISDGM-CNR) Italy



The sun photometer is located in the center of Venice, in front of the Grand Canal. Venice is a major port (as well as a most visited tourist destination). The port handles coal, coke, sulfur, sand, iron, steel products, etc. Porto Marghera and the city of Maestre on the mainland are huge industrial areas. Measured sulfur dioxide levels are high. In the AERONET website this location is listed as ISDGM-CNR.

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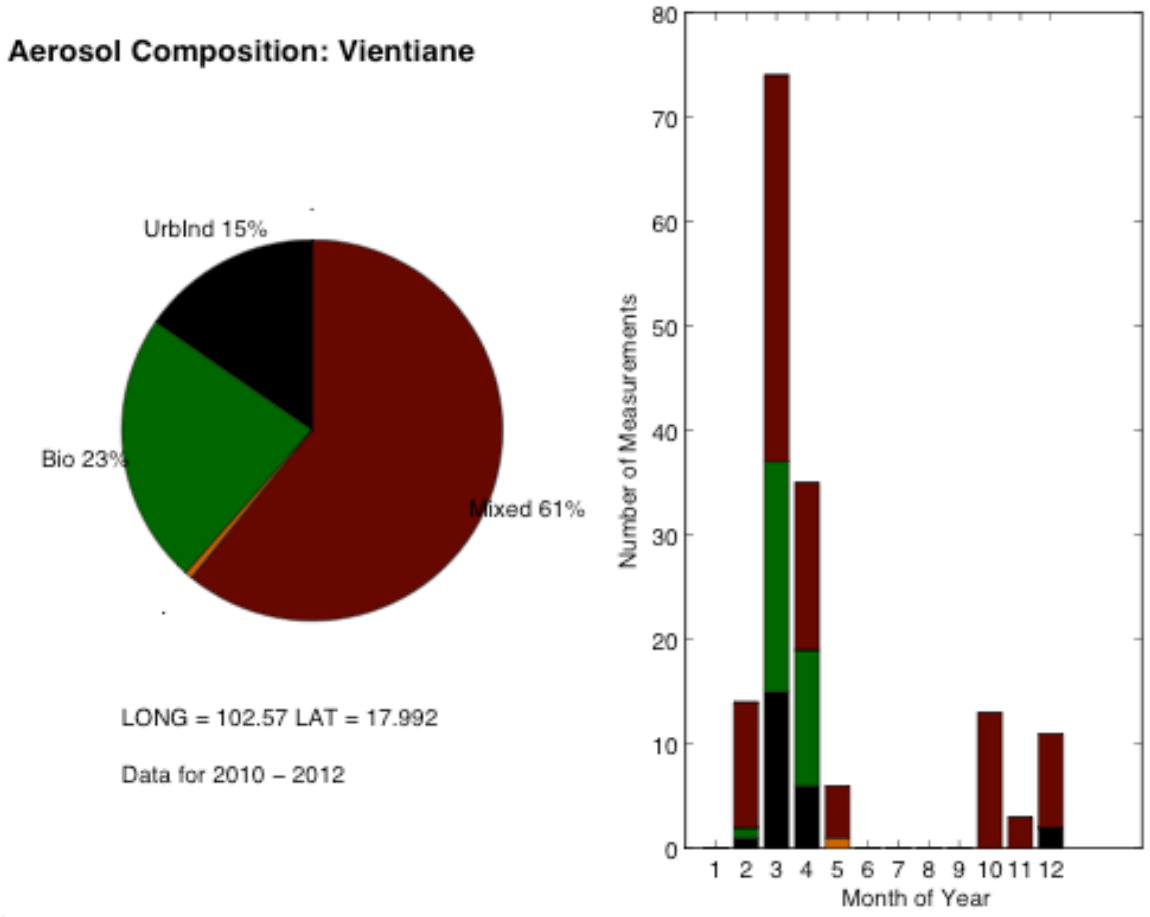
Vientiane, Laos



This instrument is located in Vientiane, adjacent to the Wattay International Airport. It is about two kilometers north of the Mekong river border. The urban population is about 750,000 and the city is developing rapidly.

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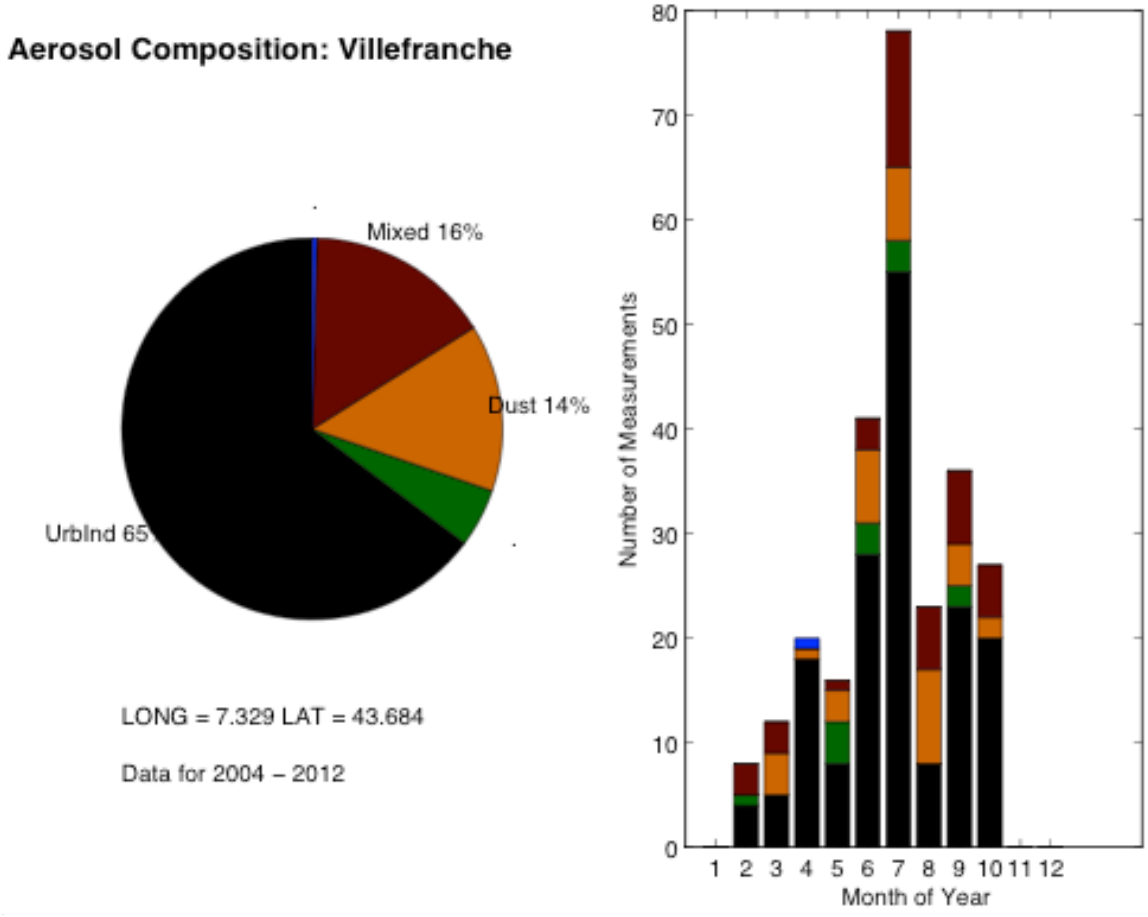
Villefranche, France



This instrument site is located on a hill in the center of a small peninsula above and between the bays of Villefranche and Baulieu. The site is less than 3 km east of the city of Nice, which has a population of about 1 million. The site is directly across the harbor from the airport.

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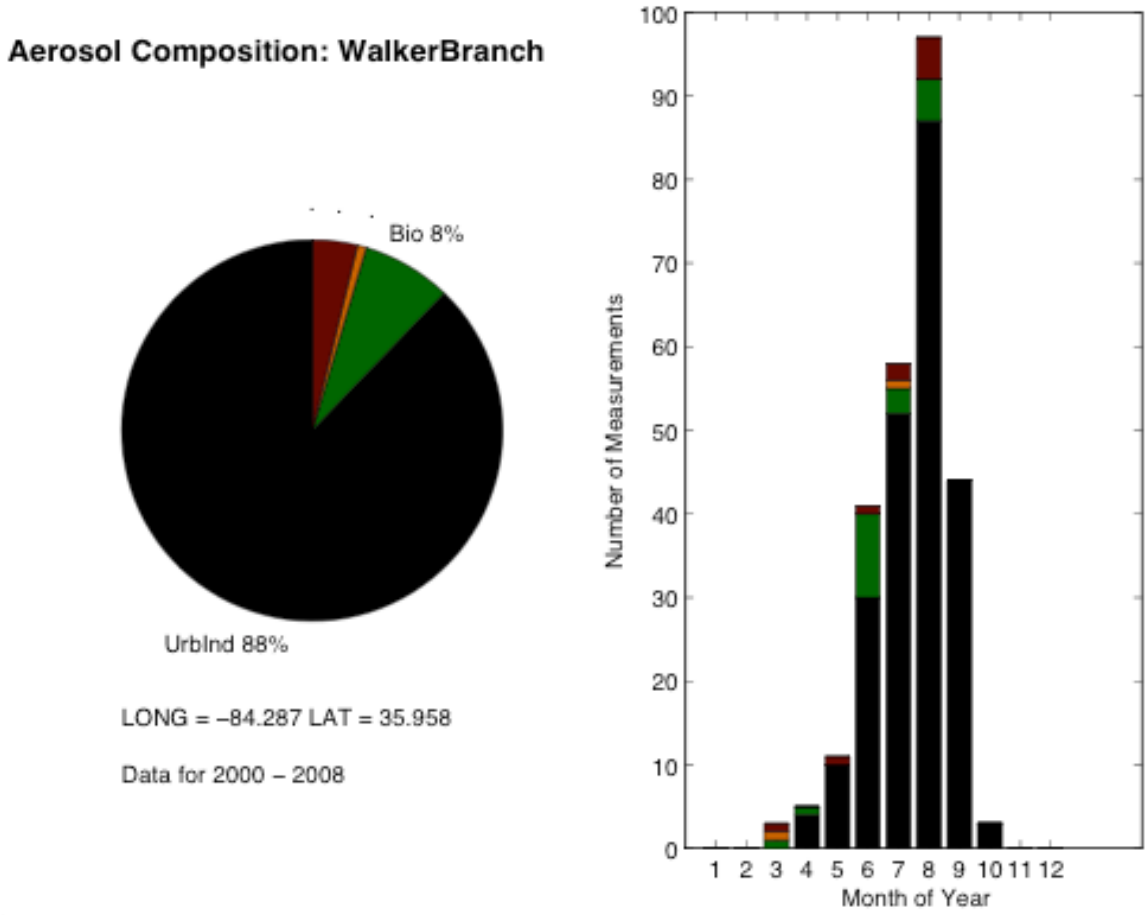
Walker Branch, Tennessee, USA



This instrument is located on a tower in a forested area approximately 2 km west of Oak Ridge National Laboratory. Oak ridge itself is about 35 km west of the Knoxville metropolitan area (population approximately 700,000). The area is home to a substantial nuclear research facility and power generating facilities.

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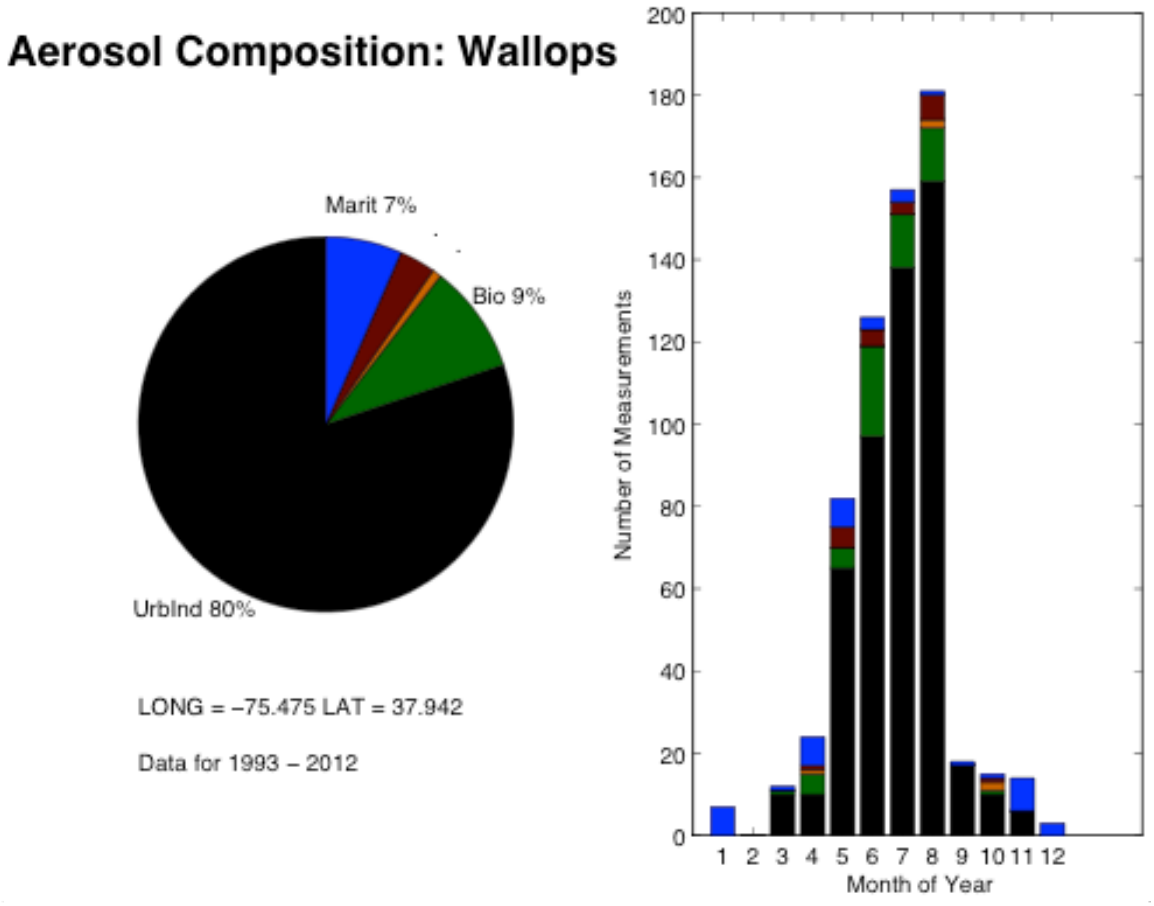
Wallops Island, Virginia, USA



This instrument is located adjacent the runway at the NASA Wallops Flight Facility. The location is near the south end of the Chincoteague Bay on the Atlantic coast. The site is some 270 km southeast of the Baltimore and the Washington D.C metropolitan areas, and 300 km south of New York City.

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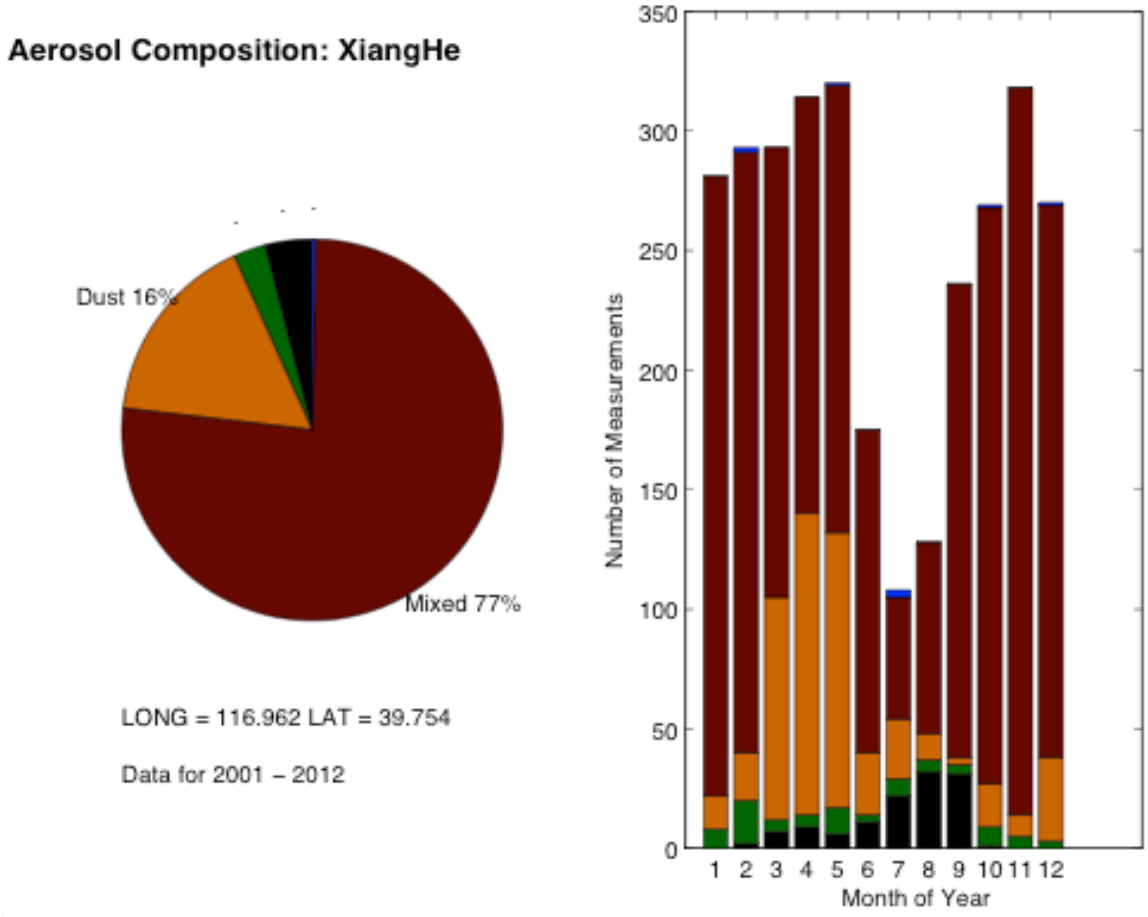
Xiang He, China



The sun photometer is installed at the Xianghe Observatory, Institute of Atmospheric Physics. The site is surrounded by a small city (less than 300,000) to the east and by agricultural fields in remaining the directions. The location is less than 50 km from central Beijing. It is the home of a growing industry is that related to the manufacture of computers and components.

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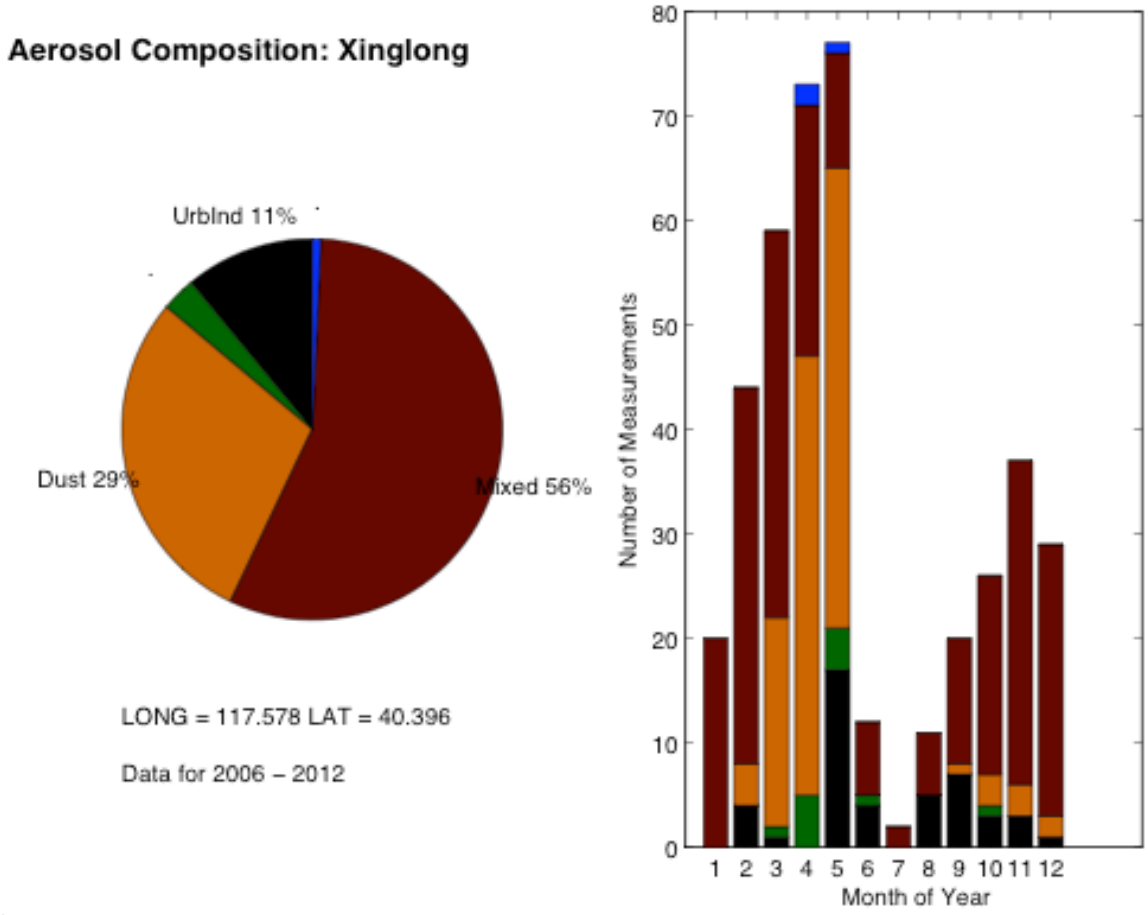
Xinglong, China



This site is 960 meters above sea level and located south of the main peak of Yanshan mountains, at the National Astronomical Observatory of China. It is less than 2 km south of the Great Wall. The city of Xinglong is about 10 km west of the site.

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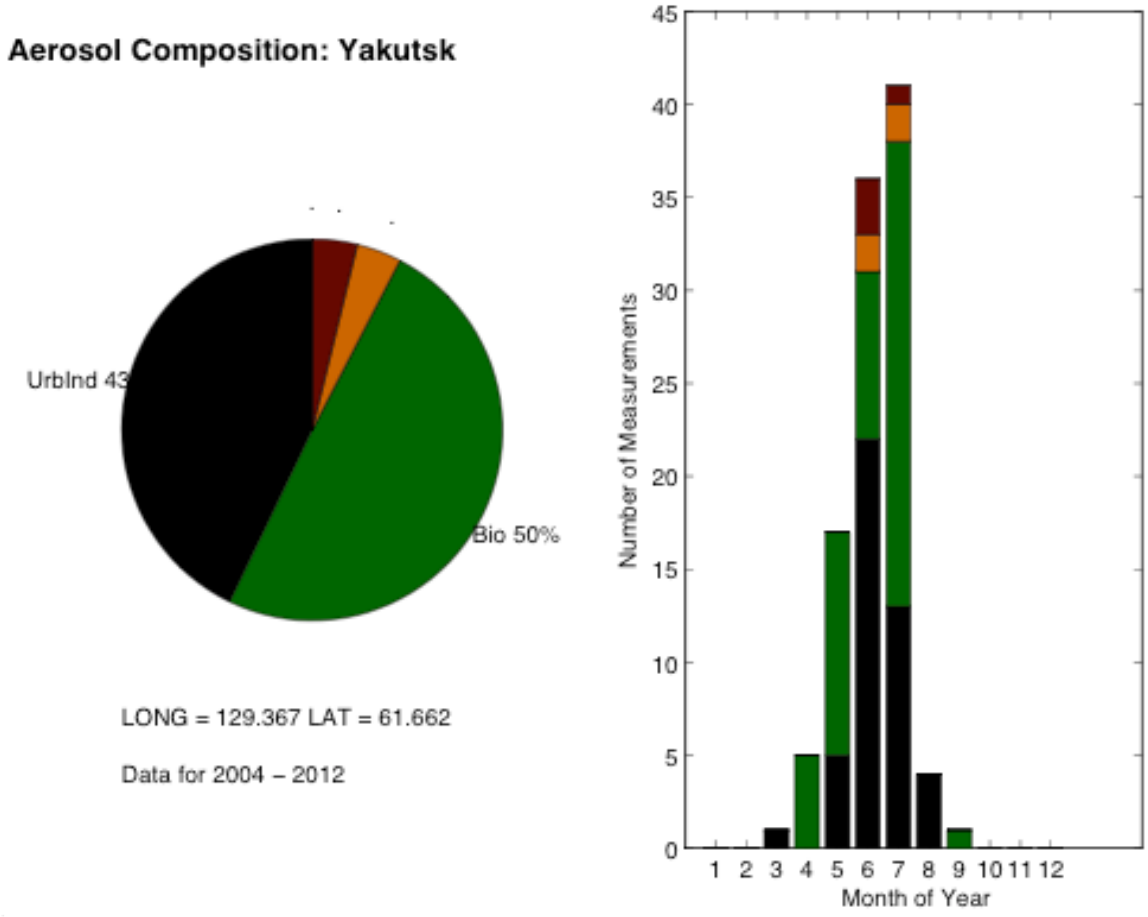
Yakutsk, Russia



The instrument is located at the Institute of Cosmophysical Research and Aeronomy in Siberia. The site is some 50 km south of Yakutsk (population about 270,000) on the west bank of the Lena River. Yakuktsk is a center for mining, food processing, and the manufacturing of building materials.

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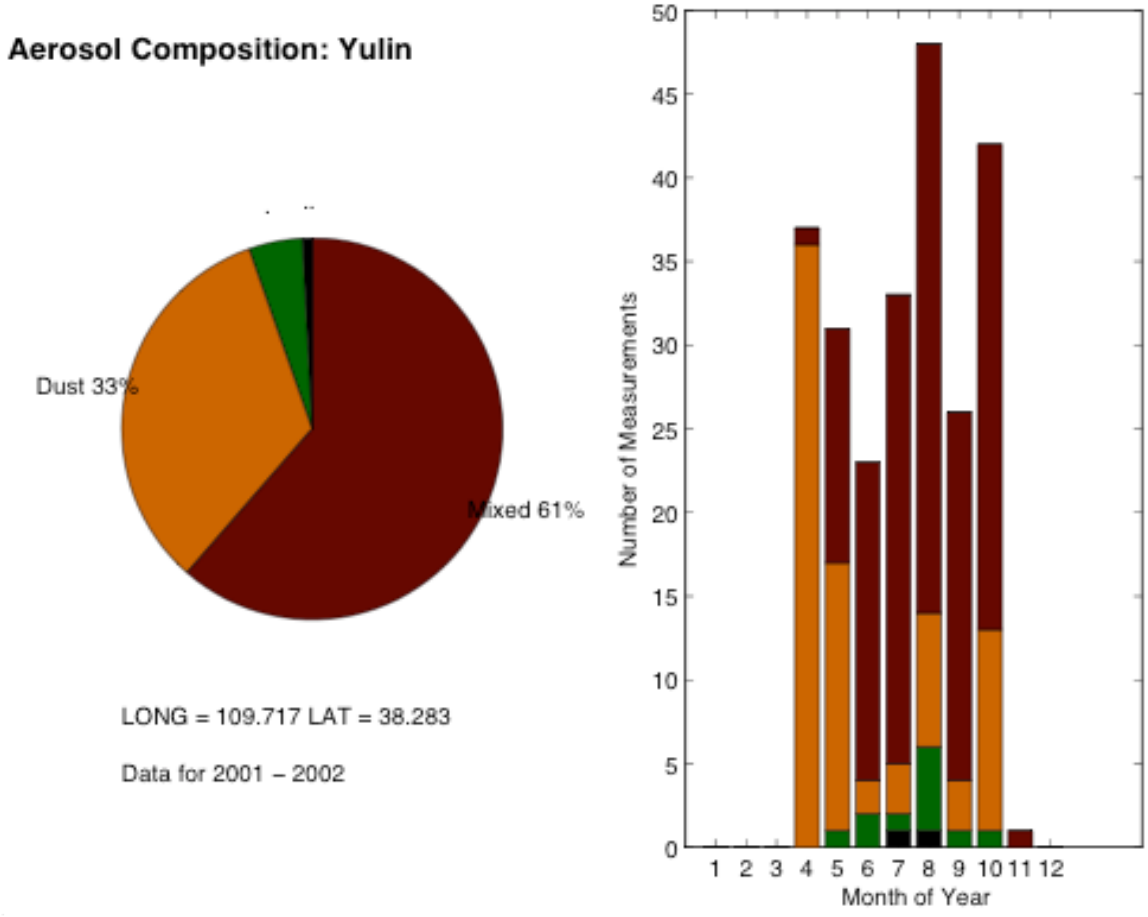
Yulin, China



The instrument was roof mounted at the Shaanxi Desert Institute in Yulin, a city of approximately 3.8 million. The surrounding area is the Ordos desert. This site is no longer active.

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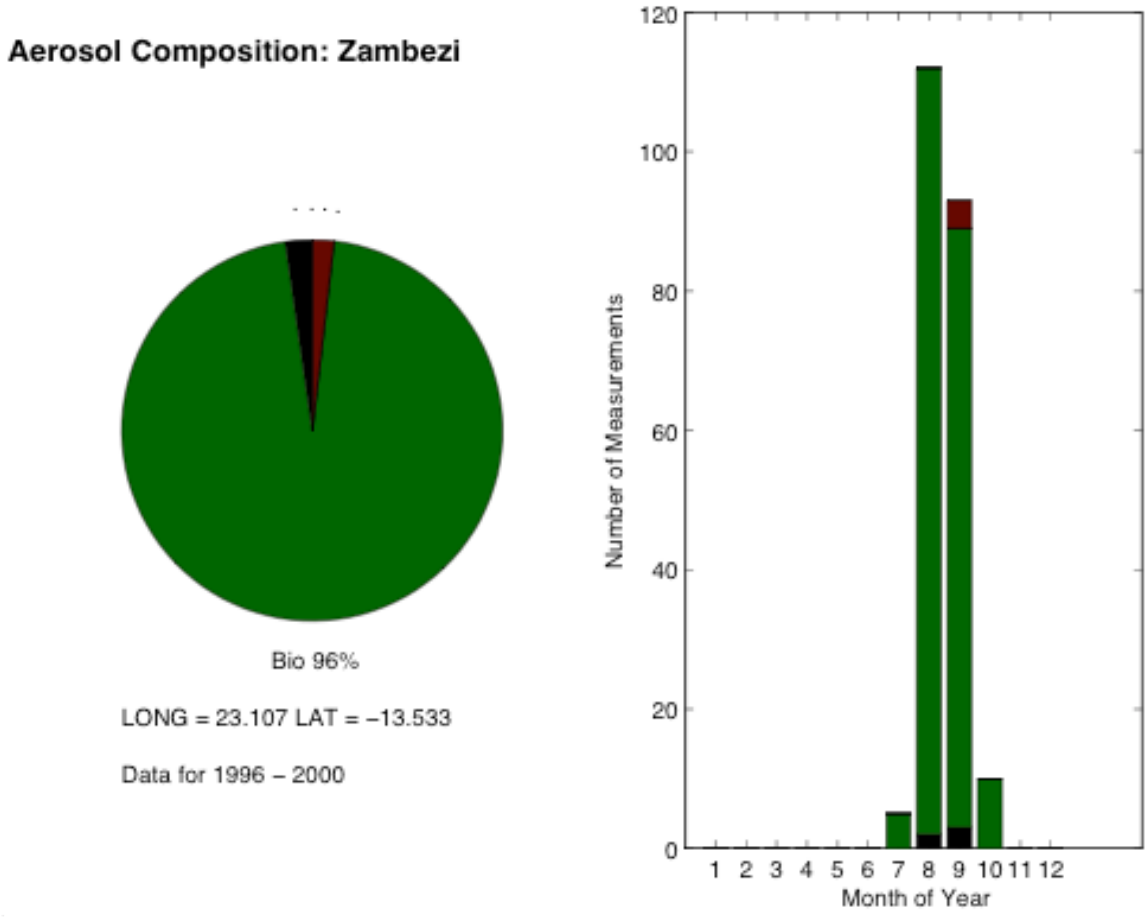
Zambezi, Zambia



This site (which is no longer active) was located at the airport in Zambezi, a town in western Zambia. The aerosol over the extended AERONET sampling time period was presumably predominantly burning biomass in origin.

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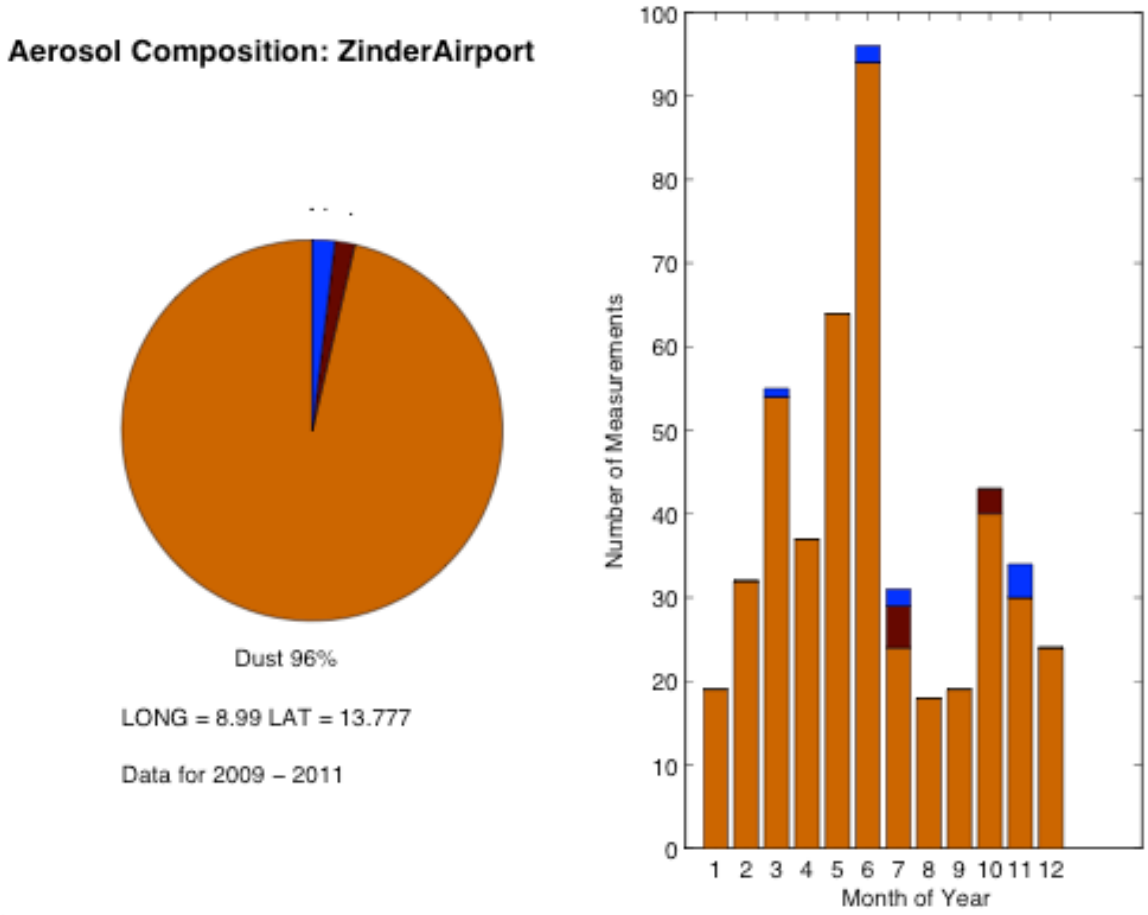
Zinder, Niger



The instrument is located in a field adjacent to the airport of the city of Zinder. The city has a population of about 300,000 inhabitants and lies is the semi-arid Sahelian Zone. There are two AERONET records of aerosols at Zinder. The one shown is listed in the AERONET website as Zinder_Airport. The other site is no longer active. This site is approximately 850 km east of the Banizoumbou AERONET site.

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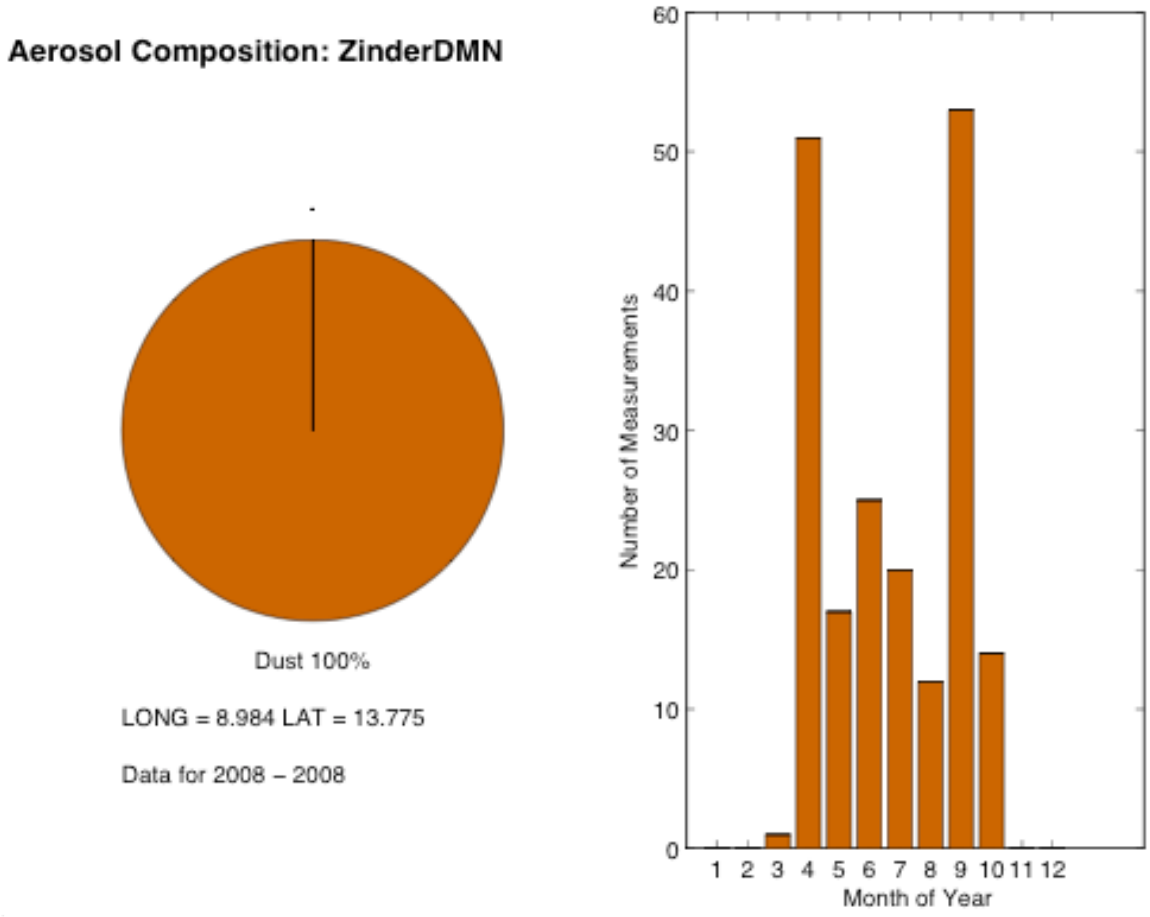
Zinder (DMN), Niger



The instrument was located in a field adjacent to the airport of the city of Zinder. The city has a population of about 300,000 inhabitants and lies is the semi-arid Sahelian Zone. There are two AERONET records of aerosols at Zinder. This site is no longer active.

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