

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

By

Marco E. Giordano

Caroline S. Ward

Patrick J. Hamill

San Jose State University
San Jose, CA

Table of Contents

AERONET site name	Alternate site name	page
<u>Abracos Hill</u>	<u>Brazil, Abracos Hill</u>	20
<u>Abu Dhabi</u>	<u>UAE, Dhabi</u>	21
<u>Agoufou</u>	<u>Mali, Agoufou</u>	22
<u>Al Khaznah</u>	<u>UAE, Al Khaznah</u>	23
<u>Al Qlaa</u>	<u>UAE, Al Qlaa</u>	24
<u>Alta Floresta</u>	<u>Brazil, Alta Floresta</u>	25
<u>Anmyon</u>	<u>South Korea, Anmyondo</u>	26
<u>Arica</u>	<u>Chile, Arica</u>	27
<u>ARM Darwin</u>	<u>Australia, Darwin</u>	79
<u>Ascension Island</u>	<u>United Kingdom, Ascension Island</u>	28
<u>ATHENS-NOA</u>	<u>Greece, Athens</u>	29
<u>Avignon</u>	<u>France, Avignon</u>	30
<u>Bac Giang</u>	<u>Vietnam, Bac Giang</u>	31
<u>Bach Long Vy</u>	<u>Vietnam, Bach Long Vy</u>	32
<u>Baengnyeong</u>	<u>South Korea, Baengnyeong Island</u>	33
<u>Bahrain</u>	<u>Bahrain</u>	34
<u>Bambey-ISRA</u>	<u>Senegal, Bambey</u>	37
<u>Bandung</u>	<u>Indonesia, Bandung</u>	38
<u>Banizoumbou</u>	<u>Niger, Banizoumbou</u>	30
<u>Barcelona</u>	<u>Spain, Barcelona</u>	40
<u>Bari University</u>	<u>Italy, Bari</u>	41
<u>Beijing</u>	<u>China, Beijing</u>	42
<u>Belsk</u>	<u>Poland, Belsk</u>	43
<u>Belterra</u>	<u>Brazil, Belterra</u>	44
<u>Billerica</u>	<u>USA, Billerica, Massachusetts</u>	45

AERONET site name	Alternate site name	page
<u>Blida</u>	<u>Algeria, Blida</u>	47
<u>Bonanza_Creek</u>	<u>USA, Bonanza Creek, Alaska</u>	48
<u>BONDVILLE</u>	<u>USA, Bondville, Illinois</u>	49
<u>Bratts_Lake</u>	<u>Canada, Bratt's Lake, SK</u>	50
<u>Brookhaven</u>	<u>USA, Brookhaven New York</u>	51
<u>Brussels</u>	<u>Belgium, Brussels</u>	52
<u>Bucharest_Inoe</u>	<u>Romania, Bucharest (INOE institute)</u>	53
<u>Burjassot</u>	<u>Spain, Valencia</u>	54
<u>Cabauw</u>	<u>Netherlands, Cabauw</u>	55
<u>Cabo_da_Roca</u>	<u>Portugal, Cabo da Roca</u>	56
<u>Cairo_EMA</u>	<u>Egypt, Cairo EMA</u>	57
<u>Cairo_University</u>	<u>Egypt, Cairo University</u>	58
<u>Camaguey</u>	<u>Cuba, Camaguey</u>	59
<u>Campo_Grande_SONDA</u>	<u>Brazil, Campo Grande</u>	60
<u>Cape_San_Juan</u>	<u>Puerto Rico, San Juan Nature Reserve</u>	61
<u>Capo_Verde</u>	<u>Cape Verde Islands</u>	62
<u>Carpentras</u>	<u>France, Carpentras</u>	63
<u>Cart_Site</u>	<u>USA, Billings, Oklahoma</u>	46
<u>CARTEL</u>	<u>Canada, Sherbrooke, QC</u>	64
<u>CCNY</u>	<u>USA, New York, New York</u>	65
<u>Chen-Kung_Univ</u>	<u>Taiwan, Cheng-Kung</u>	66
<u>Chiang_Mai_Met_Sta</u>	<u>Thailand, Chiang Mai</u>	67
<u>CLUJ_UBB</u>	<u>Romania, Cluj- Napoca</u>	69
<u>Columbia_SC</u>	<u>USA, Columbia, South Carolina</u>	70
<u>Concepcion</u>	<u>Bolivia, Concepcion</u>	71
<u>Corcoran</u>	<u>USA, Corcoran California</u>	72

AERONET site name	Alternate site name	page
<u>COVE</u>	<u>USA, Virginia, Atlantic Coast</u>	73
<u>CUIABA-MIRANDA</u>	<u>Brazil, Cuiaba</u>	75
<u>Dahkla</u>	<u>Morocco, Dahkla</u>	76
<u>Dakar</u>	<u>Senegal, Dakar</u>	77
<u>Dalma</u>	<u>UAE, Dalma</u>	78
<u>Dhabi</u>	<u>UAE, Abu Dhabi</u>	21
<u>Dhadnah</u>	<u>UAE, Dhadnah</u>	80
<u>Djougou</u>	<u>Benin, Djougou</u>	81
<u>DMN_Maine_Soroa</u>	<u>Niger, Maine-Soroa</u>	137
<u>Dry_Tortugas</u>	<u>USA, Florida Keys</u>	82
<u>Dunkerque</u>	<u>France, Dunkerque</u>	83
<u>Dushanbe</u>	<u>Tajikistan, Dushanbe</u>	84
<u>Egbert</u>	<u>Canada, Egbert, ON</u>	85
<u>Eilat</u>	<u>Israel, Eilat</u>	86
<u>El_Arenosillo</u>	<u>Spain, El_Arenosillo</u>	87
<u>EPA-NCU</u>	<u>Taiwan, Jungli</u>	115
<u>Etosha_Pan</u>	<u>Namibia, Etosha Pan</u>	89
<u>Evora</u>	<u>Portugal, Evora</u>	90
<u>FORTH_CRETE</u>	<u>Greece, Crete</u>	74
<u>Fresno</u>	<u>USA, Fresno, California</u>	91
<u>Gandhi_College</u>	<u>India, Gandhi College</u>	92
<u>Gosan_SNU</u>	<u>South Korea, Gosan Jeju Island</u>	94
<u>Gotland</u>	<u>Sweden, Gotland Island</u>	95
<u>Granada</u>	<u>Spain, Granada</u>	96
<u>GSFC</u>	<u>USA, Goddard, Washington DC</u>	93
<u>Guadeloup</u>	<u>France, Guadeloupe, Lesser Antilles</u>	97

AERONET site name	Alternate site name	page
<u>Gual_Pahari</u>	<u>India, Gual Pahari</u>	98
<u>Gwangju_GIST</u>	<u>South Korea, Gwangju K-JIST</u>	99
<u>Halifax</u>	<u>Canada, Halifax, NS</u>	101
<u>Hamburg</u>	<u>Germany, Hamburg</u>	102
<u>Hamim</u>	<u>UAE, Hamim</u>	94
<u>Hefei</u>	<u>China, Hefei</u>	95
<u>Helgoland</u>	<u>Germany, Helgoland</u>	96
<u>Hong_Kong_Hok_Tsui</u>	<u>Hong Kong (Hok Tsui)</u>	97
<u>Hong_Kong_PolyU</u>	<u>Hong Kong (Poly. U.)</u>	98
<u>ICPE-Mbita</u>	<u>Kenya, Mbita</u>	141
<u>IER_Cinzana</u>	<u>Mali, Cinzana</u>	68
<u>IFT-Leipzig</u>	<u>Germany, Leipzig</u>	134
<u>Ilorin</u>	<u>Nigeria, Ilorin</u>	102
<u>IMC_Oristano</u>	<u>Italy, Oristano, Sardinia</u>	160
<u>IMS-METU-ERDEMLI</u>	<u>Turkey, Erdemli</u>	88
<u>ISDGM_CNR</u>	<u>Italy, Venice</u>	218
<u>Ispra</u>	<u>Italy, Ispra</u>	110
<u>Izana</u>	<u>Spain, Izana, Tenerife</u>	111
<u>Jabiru</u>	<u>Australia, Jabiru</u>	112
<u>Jaipur</u>	<u>India, Jaipur</u>	113
<u>Ji_Parana</u>	<u>Brazil, Ji-Parana</u>	114
<u>Kanpur</u>	<u>India, Kanpur</u>	116
<u>Karachi</u>	<u>Pakistan, Karachi</u>	117
<u>Kathmandu</u>	<u>Nepal, Kathmandu</u>	116
<u>KAUST_Campus</u>	<u>Saudi Arabia, Thuwal</u>	208
<u>Key_Biscayne</u>	<u>USA, Key Biscayne, Florida</u>	119

AERONET site name	Alternate site name	page
Kishinev	Moldova, Kishinev	120
KONZA_EDC	USA, KONZA Prairie Station, Kansas	121
Kuwait_University	Kuwait, Khalidiyah University Campus	122
Kyiv	Ukraine, Kyiv	123
La_Jolla	USA, La Jolla, California	125
La_Laguna	Spain, La Laguna de Tenerife	127
La_Parguera	Puerto Rico, La Parguera	142
Lahore	Pakistan, Lahore	124
Lake_Argyle	Australia, Lake Argyle	126
Lampedusa	Italy, Lampedusa	128
Lanai	USA, Lanai, Hawaii	129
Lanzhou_City	China, Lanzhou (city)	130
Lecce_University	Italy, Lecce	133
Lille	France, Lille	135
Los_Fieros_98	Bolivia, Los Fieros	136
Mainz	Germany, Mainz	138
Malaga	Spain, Malaga	139
Manila_Observatory	Philippines, Manila	140
MCO-Hanimaadhoo	Maldives, Hanimaadhoo	100
MD_Science_Center	USA, MDSC, Baltimore, Maryland	35
Messina	Italy, Messina	142
Mexico_City	Mexico, Mexico City DF	143
Mezaira	UAE, Mezaira	144
Midway_Island	USA, Midway Island Hawaii	145
Minsk	Belarus, Minsk	146
Modena	Italy, Modena	147

AERONET site name	Alternate site name	page
<u>Mongu</u>	<u>Zambia, Mongu</u>	138
<u>Moscow_MSU_MO</u>	<u>Russia, Moscow</u>	149
<u>Mukdahan</u>	<u>Thailand, Mukdahan</u>	150
<u>Munich_University</u>	<u>Germany, Munich University</u>	151
<u>Mussafa</u>	<u>UAE, Mussafa (Abu Dhabi)</u>	152
<u>Mwinilunga</u>	<u>Zambia, Mwinilunga</u>	153
<u>Ndola</u>	<u>Zambia, Ndola</u>	154
<u>Nes_Ziona</u>	<u>Israel, Nes Ziona</u>	155
<u>New_Delhi</u>	<u>India, New Delhi</u>	156
<u>NGHIA_DO</u>	<u>Vietnam, Nghia Do</u>	157
<u>Noto</u>	<u>Japan, Noto</u>	158
<u>Oostende</u>	<u>Belgium, Oostende</u>	159
<u>Osaka</u>	<u>Japan, Osaka</u>	161
<u>Ouagadougou</u>	<u>Burkina Faso, Ouaga</u>	162
<u>Oyster</u>	<u>USA, Oyster, Virginia</u>	163
<u>Palaiseau</u>	<u>France, Palaiseau</u>	164
<u>Palma_de_Mallorca</u>	<u>Spain, Palma de Mallorca</u>	165
<u>Pantnagar</u>	<u>India, Pantnagar</u>	166
<u>Paris</u>	<u>France, Paris</u>	167
<u>Pimai</u>	<u>Thailand, Pimai (Phi Mai)</u>	168
<u>Pokhara</u>	<u>Nepal, Pokhara</u>	169
<u>Pretoria_CSIR-DPSS</u>	<u>South Africa, Pretoria</u>	170
<u>Pune</u>	<u>India, Pune (Poona)</u>	171
<u>Ragged_Point</u>	<u>Barbados, Ragged Point</u>	172
<u>Ras_El_Ain</u>	<u>Morocco, Ras El Ain</u>	173
<u>REUNION_ST_DENIS</u>	<u>France, Reunion, Saint-Denis</u>	174

AERONET site name	Alternate site name	page
<u>Rio Branco</u>	<u>Brazil, Rio Branco</u>	175
<u>Rome Tor Vergata</u>	<u>Italy, Rome Tor Vergata</u>	176
<u>Rottnest Island</u>	<u>Australia, Rottnest Island</u>	177
<u>Saada</u>	<u>Morocco, Saada (Marakkesh)</u>	178
<u>Sable Island</u>	<u>Canada, Sable Island, NS</u>	179
<u>SACOL</u>	<u>China, Lanzhou SACOL</u>	131
<u>SAGRES</u>	<u>Portugal, Sagres</u>	180
<u>Saih Salam</u>	<u>UAE, Saih Salam</u>	181
<u>San Nicolas</u>	<u>USA, San Nicolas, California</u>	182
<u>Santa Cruz Tenerife</u>	<u>Spain, Santa Cruz de Tenerife</u>	183
<u>SANTA CRUZ UTEPSA</u>	<u>Bolivia, Santa Cruz</u>	184
<u>Sao Paulo</u>	<u>Brazil, Sao Paulo</u>	185
<u>Saturn Island</u>	<u>Canada, Saturna Island, BC</u>	186
<u>SEDE BOKER</u>	<u>Israel, Sede Boker</u>	187
<u>Senanga</u>	<u>Zambia, Senanga</u>	188
<u>Seoul SNU</u>	<u>South Korea, Seoul National University</u>	189
<u>SERC</u>	<u>USA, Annapolis, Maryland</u>	191
<u>Sevastopol</u>	<u>Ukraine, Sevastopol</u>	192
<u>Shirahama</u>	<u>Japan, Shirahama</u>	193
<u>Shouxian</u>	<u>China, Shouxian</u>	194
<u>Silpakorn Univ</u>	<u>Thailand, Nakhon Pathom</u>	195
<u>Singapore</u>	<u>Singapore</u>	196
<u>Sir Bu Nuair</u>	<u>UAE, Sir Bu Nuair</u>	197
<u>Skukuza</u>	<u>South Africa, Skukuza</u>	198
<u>Solar Village</u>	<u>Saudi Arabia, Solar Village</u>	199
<u>Stennis</u>	<u>USA, Stennis Space Center, MS</u>	200

AERONET site name	Alternate site name	page
<u>Tahiti</u>	<u>French Polynesia, Tahiti</u>	201
<u>Taihu</u>	<u>China, Taihu</u>	202
<u>Taipei_CWB</u>	<u>Taiwan Weather Bureau</u>	203
<u>Tamanrasset_INM</u>	<u>Algeria, Tamanrasset (IMN)</u>	204
<u>Tamranrasset_TMP</u>	<u>Algeria, Tamanrasset (TMP)</u>	205
<u>Tenosique</u>	<u>Mexico, Tenosique</u>	206
<u>Thessaloniki</u>	<u>Greece, Thessaloniki</u>	207
<u>Tomsk</u>	<u>Russia, Tomsk</u>	209
<u>Toulon</u>	<u>France, Toulon</u>	210
<u>Trinidad_Head</u>	<u>USA, Trinidad, California</u>	211
<u>Tudor_Hill</u>	<u>Bermuda, Tudor Hill</u>	212
<u>Tuxtla_Gutierrez</u>	<u>Mexico, Tuxtla Gutierrez</u>	213
<u>Ubon_Ratchathani</u>	<u>Thailand, Ubon_Ratchathani</u>	214
<u>UMBC</u>	<u>USA, Baltimore, Maryland</u>	36
<u>Umm_Al_Quwain</u>	<u>UAE, Umm_Al_Quwain</u>	215
<u>Univ_of_Houston</u>	<u>USA, Houston, Texas</u>	99
<u>Ussuriysk</u>	<u>Russia, Ussuriysk</u>	216
<u>Venise</u>	<u>Italy, Venice Lagoon AAOT</u>	217
<u>Vientiane</u>	<u>Laos, Vientiane</u>	219
<u>Villefranche</u>	<u>France, Villefranche</u>	220
<u>Walker_Branch</u>	<u>USA, Walker Branch Tennessee</u>	221
<u>Wallops</u>	<u>USA, Wallops Island Virginia</u>	222
<u>XiangHe</u>	<u>China, XiangHe</u>	223
<u>Xinglong</u>	<u>China, Xinglong</u>	224
<u>Yakutsk</u>	<u>Russia, Yakutsk</u>	225
<u>Yonsei_University</u>	<u>South Korea, Seoul Yonsei</u>	190

AERONET site name	Alternate site name	page
<u>Yulin</u>	<u>China, Yulin</u>	226
<u>Zambezi</u>	<u>Zambia, Zambezi</u>	227
<u>Zinder Airport</u>	<u>Niger, Zinder Airport</u>	228
<u>Zinder DMN</u>	<u>Niger, Zinder</u>	229

NOTES:

Table of Contents Alphabetical by Country

Alternate site name	AERONET site name	page
Algeria, Blida	Blida	47
Algeria, Tamanrasset (IMN)	Tamanrasset_INM	204
Algeria, Tamanrasset (TMP)	Tamranrasset_TMP	205
Australia, Darwin	ARM_Darwin	79
Australia, Jabiru	Jabiru	112
Australia, Lake Argyle	Lake_Argyle	126
Australia, Rottnest Island	Rottnest_Island	177
Bahrain	Bahrain	34
Barbados, Ragged Point	Ragged_Point	172
Belarus, Minsk	Minsk	146
Belgium, Brussels	Brussels	52
Belgium, Oostende	Oostende	159
Benin, Djougou	Djougou	81
Bermuda, Tudor Hill	Tudor_Hill	212
Bolivia, Concepcion	Concepcion	71
Bolivia, Los Fieros	Los_Fieros_98	136
Bolivia, Santa Cruz	SANTA_CRUZ_UTEPSA	184
Brazil, Alta Floresta	Alta_Floresta	25
Brazil, Abracos Hill	Abracos_Hill	20
Brazil, Belterra	Belterra	44
Brazil, Campo Grande	Campo_Grande_SONDA	60
Brazil, Cuiaba	CUIABA-MIRANDA	75
Brazil, Ji-Parana	Ji_Parana	114
Brazil, Rio Branco	Rio_Branco	175
Brazil, Sao Paulo	Sao_Paulo	185

Alternate site name	AERONET site name	page
Burkina Faso, Ouaga	Ouagadougou	162
Canada, Bratt's Lake, SK	Bratts_Lake	50
Canada, Egbert, ON	Egbert	85
Canada, Halifax, NS	Halifax	101
Canada, Sable Island, NS	Sable_Island	179
Canada, Saturna Island, BC	Saturn_Island	186
Canada, Sherbrooke, QC	CARTEL	64
Cape Verde Islands	Capo_Verde	62
Chile, Arica	Arica	27
China, Beijing	Beijing	42
China, Hefei	Hefei	95
China, Lanzhou (city)	Lanzhou_City	130
China, Lanzhou SACOL	SACOL	131
China, Shouxian	Shouxian	194
China, Taihu	Taihu	202
China, XiangHe	XiangHe	223
China, Xinglong	Xinglong	224
China, Yulin	Yulin	226
Cuba, Camaguey	Camaguey	59
Egypt, Cairo EMA	Cairo_EMA	57
Egypt, Cairo University	Cairo_University	58
France, Avignon	Avignon	30
France, Carpentras	Carpentras	63
France, Dunkerque	Dunkerque	83
France, Guadeloupe, Lesser Antilles	Guadeloup	97
France, Lille	Lille	135

Alternate site name	AERONET site name	page
France, Palaiseau	Palaiseau	164
France, Paris	Paris	167
France, Reunion, Saint-Denis	REUNION_ST_DENIS	174
France, Toulon	Toulon	210
France, Villefranche	Villefranche	220
French Polynesia, Tahiti	Tahiti	201
Germany, Hamburg	Hamburg	102
Germany, Helgoland	Helgoland	96
Germany, Leipzig	IFT-Leipzig	134
Germany, Mainz	Mainz	138
Germany, Munich University	Munich_University	151
Greece, Athens	ATHENS-NOA	29
Greece, Crete	FORTH_CRETE	74
Greece, Thessaloniki	Thessaloniki	207
Hong Kong (Hok Tsui)	Hong_Kong_Hok_Tsui	97
Hong Kong (Poly. U.)	Hong_Kong_PolyU	98
India, Gandhi College	Gandhi_College	92
India, Gual Pahari	Gual_Pahari	98
India, Jaipur	Jaipur	113
India, Kanpur	Kanpur	116
India, New Delhi	New_Delhi	156
India, Pantnagar	Pantnagar	166
India, Pune (Poona)	Pune	171
Indonesia, Bandung	Bandung	38
Israel, Eilat	Eilat	86
Israel, Nes Ziona	Nes_Ziona	155

Alternate site name	AERONET site name	page
Israel, Sede Boker	SEDE_BOKER	187
Italy, Bari	Bari_University	41
Italy, Ispra	Ispra	110
Italy, Lampedusa	Lampedusa	128
Italy, Lecce	Lecce_University	133
Italy, Messina	Messina	142
Italy, Modena	Modena	147
Italy, Oristano, Sardinia	IMC_Oristano	160
Italy, Rome Tor Vergata	Rome_Tor_Vergata	176
Italy, Venice	ISDGM_CNR	218
Italy, Venice Lagoon AAOT	Venise	217
Japan, Noto	Noto	158
Japan, Osaka	Osaka	161
Japan, Shirahama	Shirahama	193
Kenya, Mbita	ICPE-Mbita	141
Kuwait, Khalidiyah University Campus	Kuwait_University	122
Laos, Vientiane	Vientiane	219
Maldives, Hanimaadhoo	MCO-Hanimaadhoo	100
Mali, Agoufou	Agoufou	22
Mali, Cinzana	IER_Cinzana	68
Mexico, Mexico City DF	Mexico_City	143
Mexico, Tenosique	Tenosique	206
Mexico, Tuxtla Gutierrez	Tuxtla_Gutierrez	213
Moldova, Kishinev	Kishinev	120
Morocco, Dahkla	Dahkla	76
Morocco, Ras El Ain	Ras_El_Ain	173

Alternate site name	AERONET site name	page
Morocco, Saada (Marakkesh)	Saada	178
Namibia, Etosha Pan	Etosha_Pan	89
Nepal, Kathmandu	Kathmandu	116
Nepal, Pokhara	Pokhara	169
Netherlands, Cabauw	Cabauw	55
Niger, Banizoumbou	Banizoumbou	30
Niger, Maine-Soroa	DMN_Maine_Soroa	137
Niger, Zinder	Zinder_DMN	229
Niger, Zinder Airport	Zinder_Airport	228
Nigeria, Ilorin	Ilorin	102
Pakistan, Karachi	Karachi	117
Pakistan, Lahore	Lahore	124
Philippines, Manila	Manila_Observatory	140
Poland, Belsk	Belsk	43
Portugal, Cabo da Roca	Cabo_da_Roca	56
Portugal, Evora	Evora	90
Portugal, Sagres	SAGRES	180
Puerto Rico, La Parguera	La_Parguera	142
Puerto Rico, San Juan Nature Reserve	Cape_San_Juan	61
Romania, Bucharest (INOE institute)	Bucharest_Inoe	53
Romania, Cluj- Napoca	CLUJ_UBB	69
Russia, Moscow	Moscow_MSU_MO	149
Russia, Tomsk	Tomsk	209
Russia, Ussuriysk	Ussuriysk	216
Russia, Yakutsk	Yakutsk	225
Saudi Arabia, Solar Village	Solar_Village	199

Alternate site name	AERONET site name	page
Saudi Arabia, Thuwal	KAUST Campus	208
Senegal, Bambey	Bambey-ISRA	37
Senegal, Dakar	Dakar	77
Singapore	Singapore	196
South Africa, Pretoria	Pretoria CSIR-DPSS	170
South Africa, Skukuza	Skukuza	198
South Korea, Anmyondo	Anmyon	26
South Korea, Baengnyeong Island	Baengnyeong	33
South Korea, Gosan Jeju Island	Gosan SNU	94
South Korea, Gwangju K-JIST	Gwangju GIST	99
South Korea, Seoul National University	Seoul SNU	189
South Korea, Seoul Yonsei	Yonsei University	190
Spain, Barcelona	Barcelona	40
Spain, El Arenosillo	El Arenosillo	87
Spain, Granada	Granada	96
Spain, Izana, Tenerife	Izana	111
Spain, La Laguna de Tenerife	La Laguna	127
Spain, Malaga	Malaga	139
Spain, Palma de Mallorca	Palma de Mallorca	165
Spain, Santa Cruz de Tenerife	Santa Cruz Tenerife	183
Spain, Valencia	Burjassot	54
Sweden, Gotland Island	Gotland	95
Taiwan Weather Bureau	Taipei CWB	203
Taiwan, Cheng-Kung	Chen-Kung Univ	66
Taiwan, Jungli	EPA-NCU	115
Tajikistan, Dushanbe	Dushanbe	84

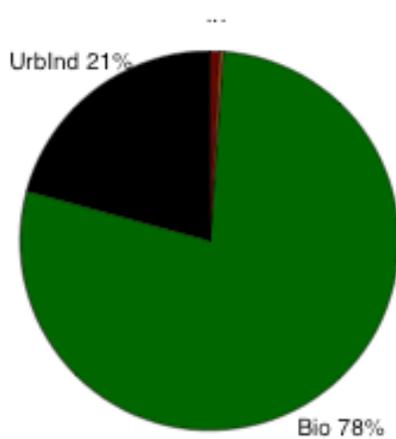
Alternate site name	AERONET site name	page
Thailand, Chiang Mai	Chiang_Mai_Met_Sta	67
Thailand, Mukdahan	Mukdahan	150
Thailand, Nakhon Pathom	Silpakorn_Univ	195
Thailand, Pimai (Phi Mai)	Pimai	168
Thailand, Ubon Ratchathani	Ubon_Ratchathani	214
Turkey, Erdemli	IMS-METU-ERDEMLI	88
UAE, Abu Dhabi	Dhabi	21
UAE, Al Khaznah	Al_Khaznah	23
UAE, Al Qlaa	Al_Qlaa	24
UAE, Dalma	Dalma	78
UAE, Dhabi	Abu_Dhabi	21
UAE, Dhadnah	Dhadnah	80
UAE, Hamim	Hamim	94
UAE, Mezaira	Mezaira	144
UAE, Mussafa (Abu Dhabi)	Mussafa	152
UAE, Saih Salam	Saih_Salam	181
UAE, Sir Bu Nuair	Sir_Bu_Nuair	197
UAE, Umm Al Quwain	Umm_Al_Quwain	215
Ukraine, Kyiv	Kyiv	123
Ukraine, Sevastopol	Sevastopol	192
United Kingdom, Ascension Island	Ascension_Island	28
USA, Annapolis, Maryland	SERC	191
USA, Baltimore, Maryland	UMBC	36
USA, Billerica, Massachusetts	Billerica	45
USA, Billings, Oklahoma	Cart_Site	46
USA, Bonanza Creek, Alaska	Bonanza_Creek	48

Alternate site name	AERONET site name	page
USA, Bondville, Illinois	BONDVILLE	49
USA, Brookhaven New York	Brookhaven	51
USA, Columbia, South Carolina	Columbia_SC	70
USA, Corcoran California	Corcoran	72
USA, Florida Keys	Dry_Tortugas	82
USA, Fresno, California	Fresno	91
USA, Goddard, Washington DC	GSFC	93
USA, Houston, Texas	Univ_of_Houston	99
USA, Key Biscayne, Florida	Key_Biscayne	119
USA, KONZA Prairie Station, Kansas	KONZA_EDC	121
USA, La Jolla, California	La_Jolla	125
USA, Lanai, Hawaii	Lanai	129
USA, MDSC, Baltimore, Maryland	MD_Science_Center	35
USA, Midway Island Hawaii	Midway_Island	145
USA, New York, New York	CCNY	65
USA, Oyster, Virginia	Oyster	163
USA, San Nicolas, California	San_Nicolas	182
USA, Stennis Space Center, MS	Stennis	200
USA, Trinidad, California	Trinidad_Head	211
USA, Virginia, Atlantic Coast	COVE	73
USA, Walker Branch Tennessee	Walker_Branch	221
USA, Wallops Island Virginia	Wallops	222
Vietnam, Bac_Giang	Bac_Giang	31
Vietnam, Bach_Long_Vy	Bach_Long_Vy	32
Vietnam, Nghia Do	NGHIA_DO	157
Zambia, Mongu	Mongu	138

Alternate site name	AERONET site name	page
<u>Zambia, Mwinilunga</u>	<u>Mwinilunga</u>	153
<u>Zambia, Ndola</u>	<u>Ndola</u>	154
<u>Zambia, Senanga</u>	<u>Senanga</u>	188
<u>Zambia, Zambezi</u>	<u>Zambezi</u>	227

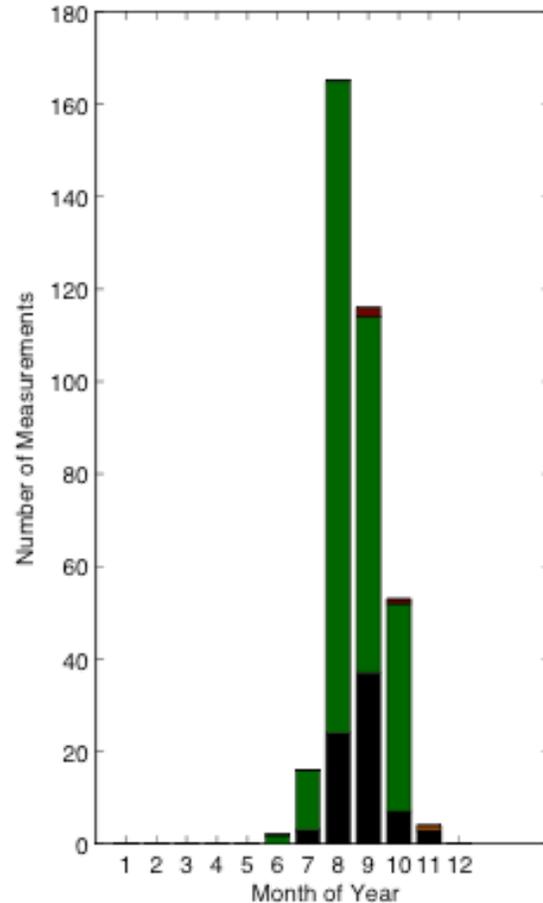
Abracos Hill, Brazil

Aerosol Composition: AbracosHill



LONG = -62.358 LAT = -10.76

Data for 1999 - 2005

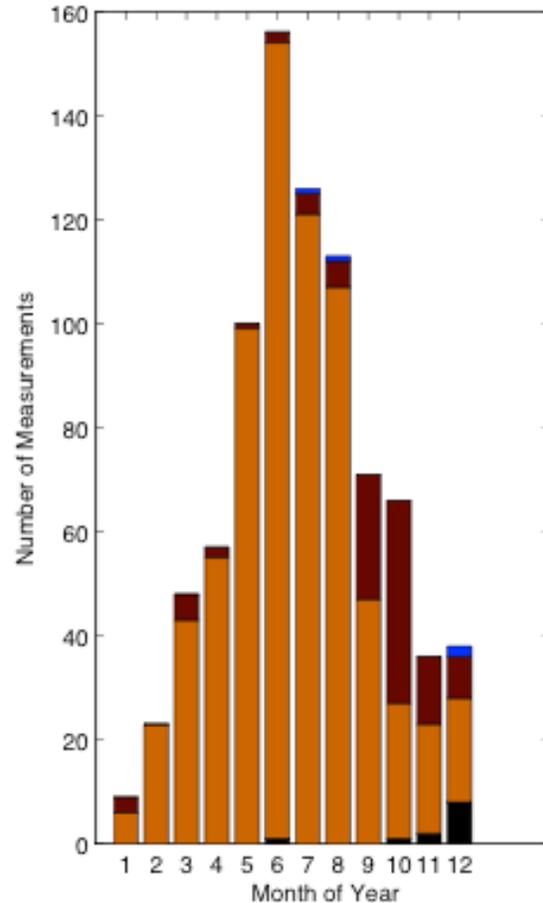
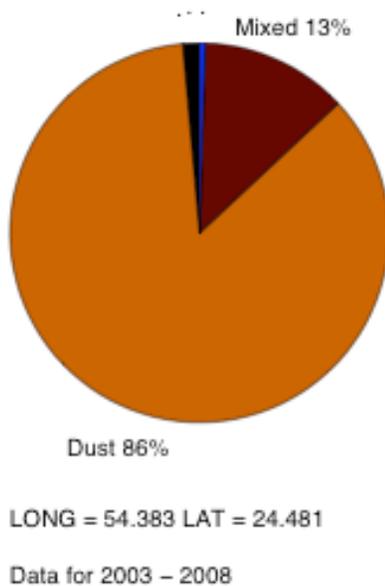


The Abracos Hill sun photometer is located in Western Brazil near the Bolivian border. The nearest town is Ouro Preto Do Oeste (population 40,000) located 5 km east of the site. The area where the site is located is primarily grassland with jungle nearby. The aerosol is biomass with some urban pollution.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

[Return to Table](#)

Abu Dhabi, UAE

Aerosol Composition: Dhabi



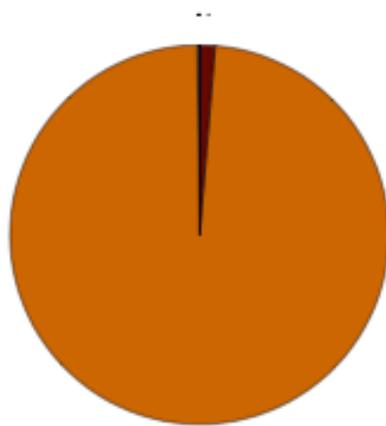
Abu Dhabi is an island city in the Persian Gulf with a population of about one million. The AERONET website lists this location as Dhabi. The AERONET location is on the west coast of the Arabia Peninsula, facing the Persian Gulf.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008.

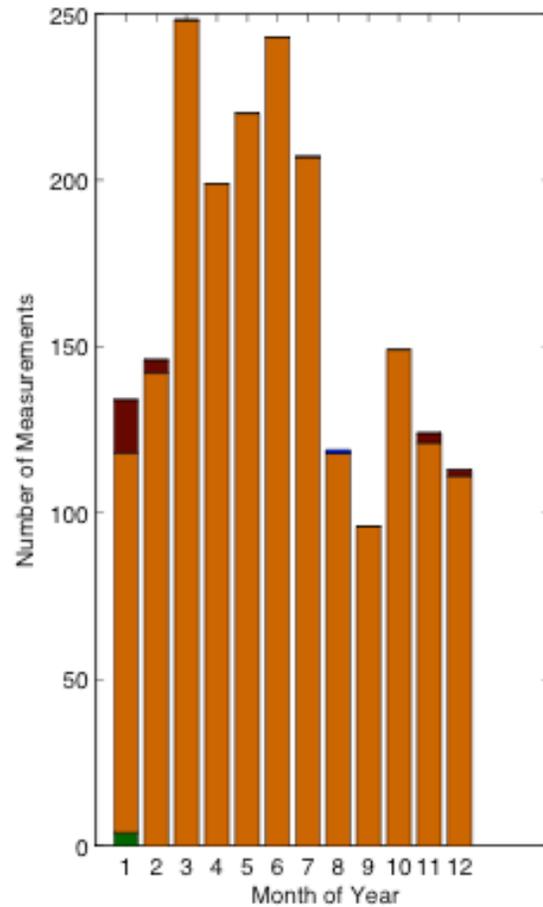
[Return to Table](#)

Agoufou, Mali

Aerosol Composition: Agoufou



LONG = -1.479 LAT = 15.345
Data for 2003 - 2009

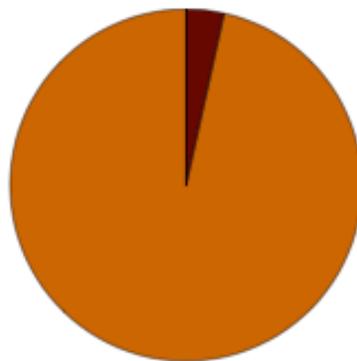


The sun photometer site is located on a sand dune near the village of Agoufou in Mali. Our Mahalanobis calculations used more than a thousand inversions over a seven-year period and indicated that the aerosol is nearly all dust.

[Return to Table](#)

Al Khaznah, UAE

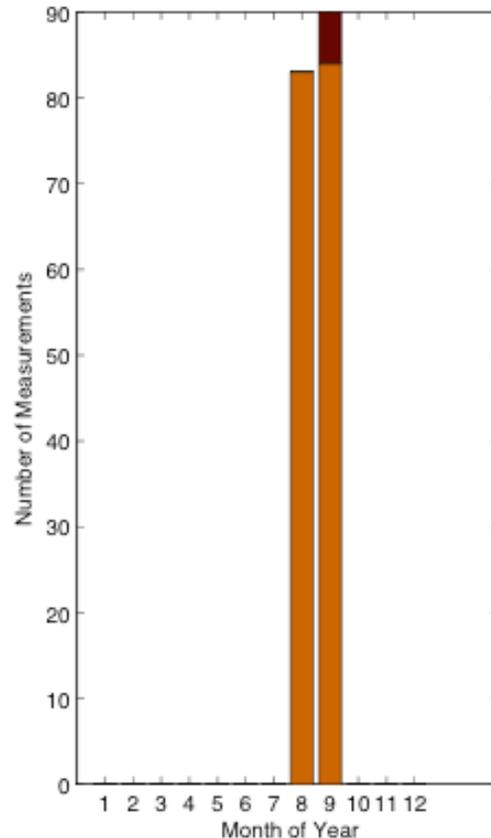
Aerosol Composition: SMART



Dust 97%

LONG = 55.612 LAT = 24.249

Data for 2004 - 2004



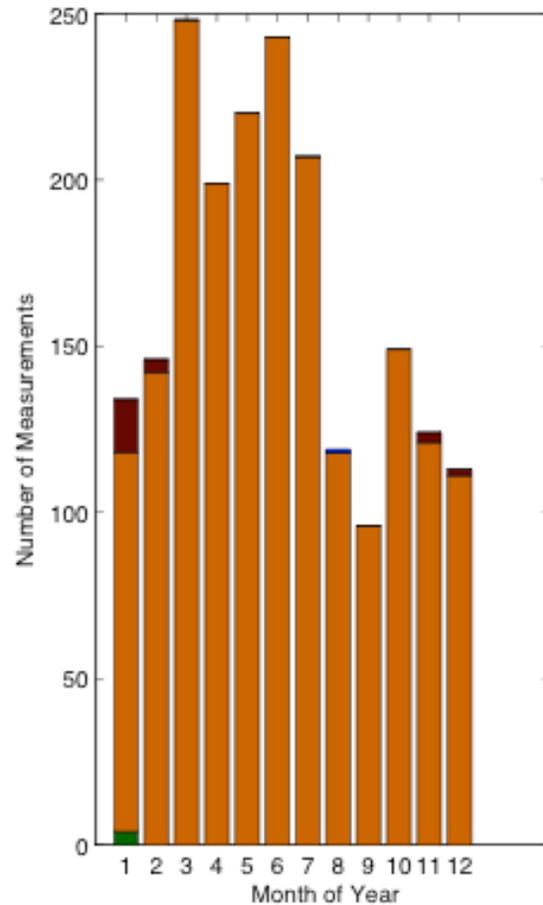
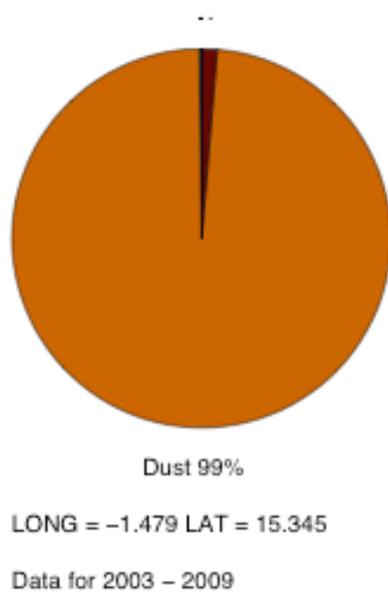
Al Khaznah is located 100 km east of the Persian Gulf in the United Arab Emirates. Sun photometer measurements were made in June through September. Our MD calculations show all dust with the exception of September containing a small amount of mixed aerosol. Data are only available for 2004.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008.

[Return to Table](#)

Al Qlaa, UAE

Aerosol Composition: Agoufou



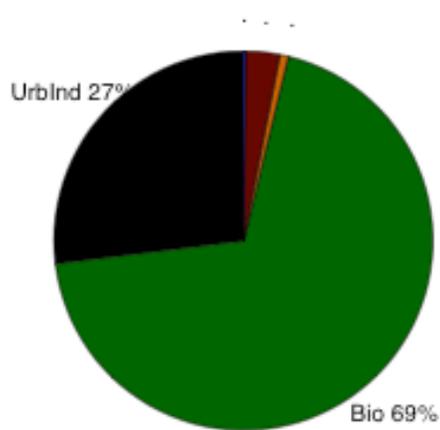
The Al Qlaa site (Ras Al Qlaa) is on the Trucial Coast of the Al Gharbia region of the emirate of Abu Dhabi in the United Arab Emirates, about 210 km west of Abu Dhabi. The data is only available for a three-month period from June through August of 2004.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008.

[Return to Table](#)

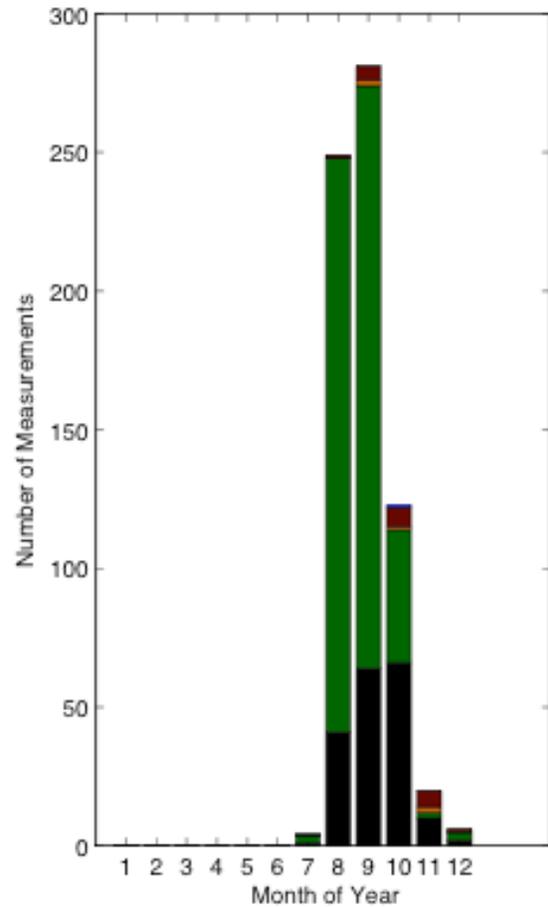
Alta Floresta, Brazil

Aerosol Composition: AltaFloresta



LONG = -56.104 LAT = -9.871

Data for 1993 - 2011

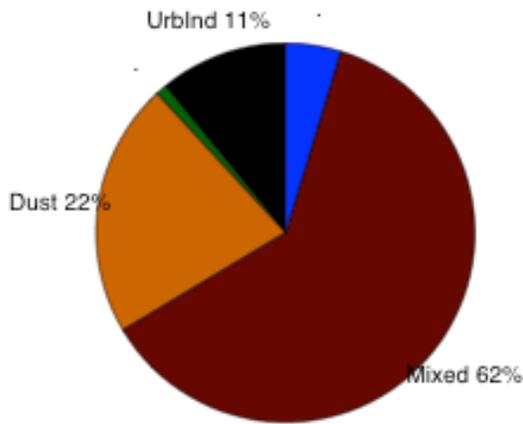


The site is in the Mato Grosso, Brazil (Western Brazil). The population of Alta Floresta is approximately 50,000. The aerosol data shows mostly biomass with some urban industrial aerosol. Data are given for the months June through December.

[Return to Table](#)

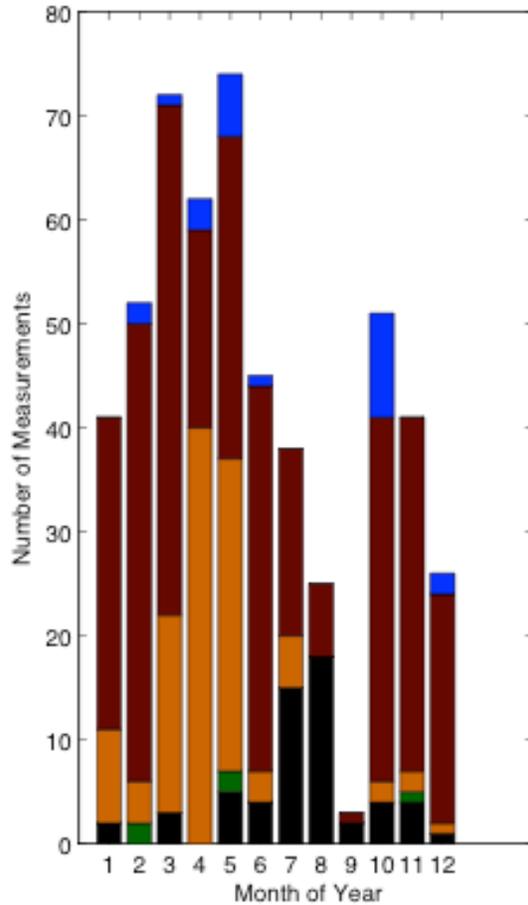
Anmyon, South Korea

Composition of Aerosols: Anmyon



LONG = 126.33 LAT = 36.539

Data for 1999 – 2007

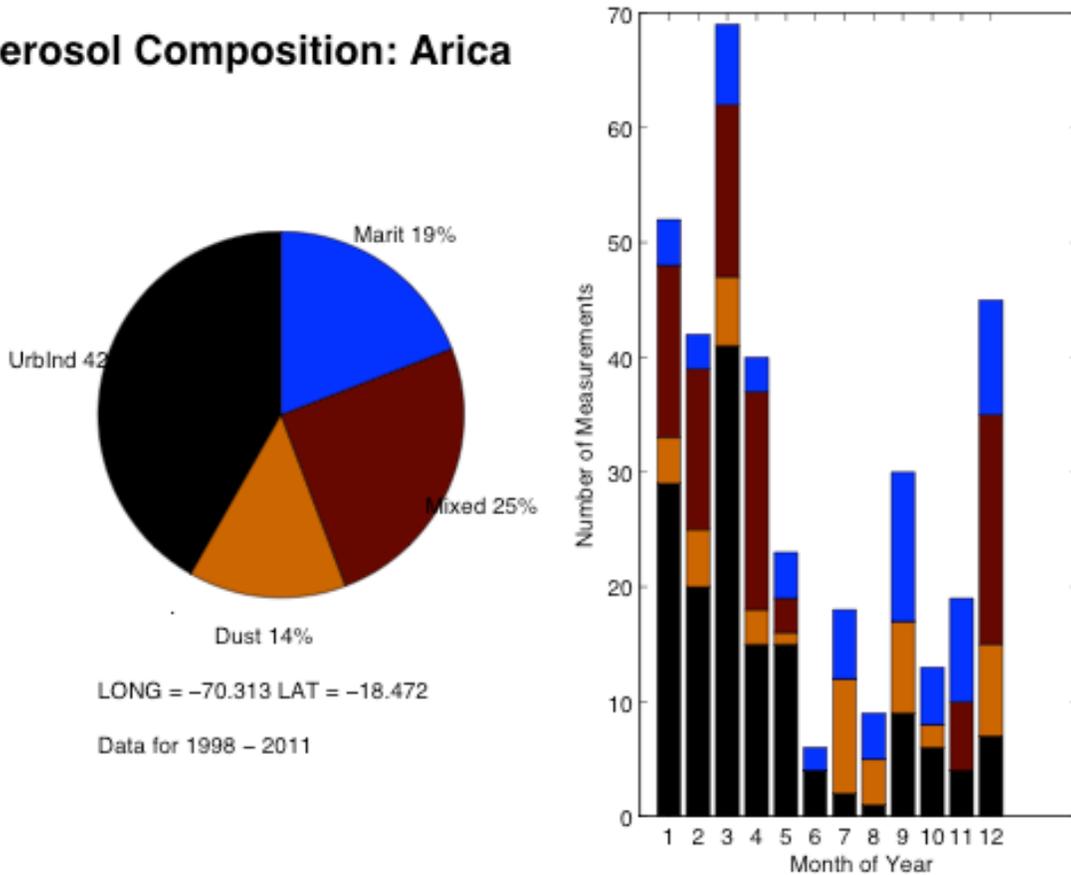


Anmyon (Anmeyondo) is an island on the west coast of South Korea. The sun photometer is located on a hill 47 meters above the sea. This is also a long-term site participating in the WMO Global Atmosphere Watch (GAW). Meteorological data may be obtained through GAW SIS2.2 at: <http://gaw.empa.ch/gawsis/reports.asp>. 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>.

[Return to Table](#)

Arica, Chile

Aerosol Composition: Arica

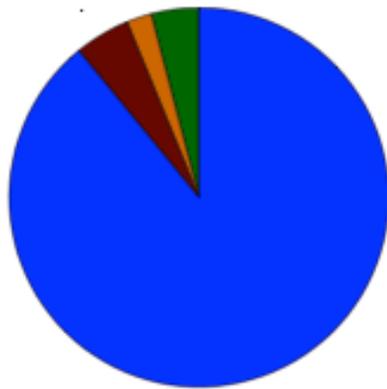


Arica is located in Northern Chile on the Pacific Ocean near the Peruvian border. It is an industrial city and an important port, having a population near 200,000. It is near two lush valleys that dissect the Atacama Desert, which surrounds the city. Arica is known as the driest inhabited place on Earth.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

[Return to Table](#)

Ascension Island

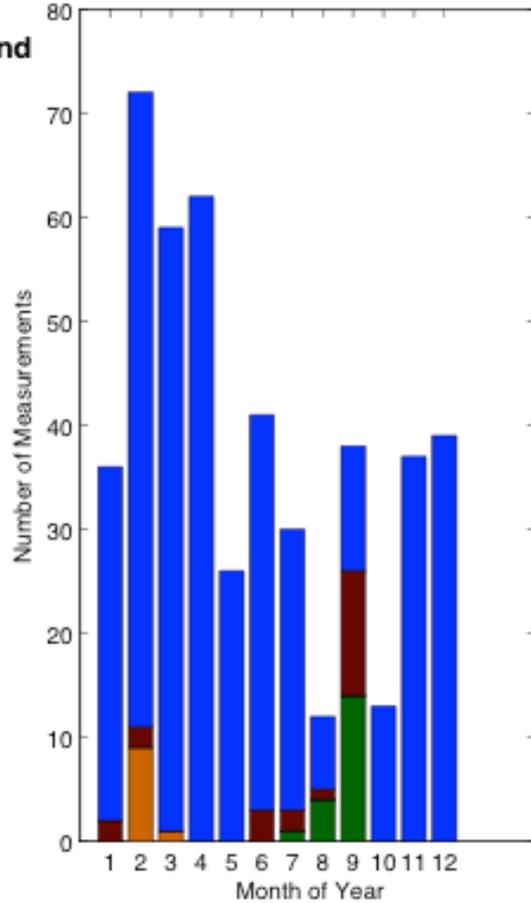
Composition of Aerosols: AscensionIsland



Marit 89%

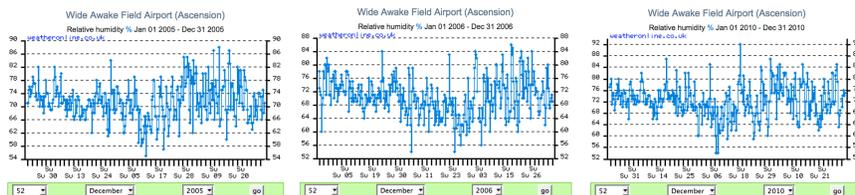
LONG = -14.415 LAT = -7.976

Data for 1999 - 2009



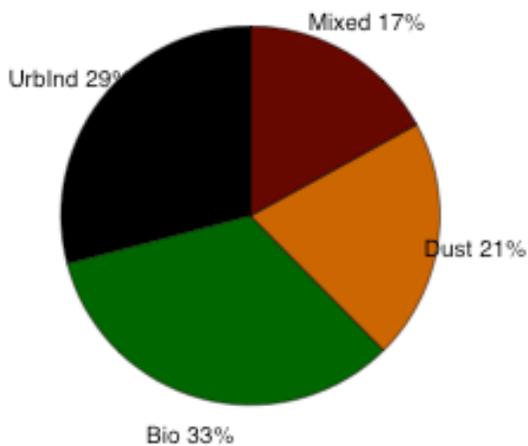
Ascension Island is located in the middle of the South Atlantic Ocean. The island is inhabited by less than 1000 people. It has a maritime tropical climate. It is the home of a British RAF installation, and has a substantial airport complex. The AERONET instrument site is on the northeast corner of the 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](#)



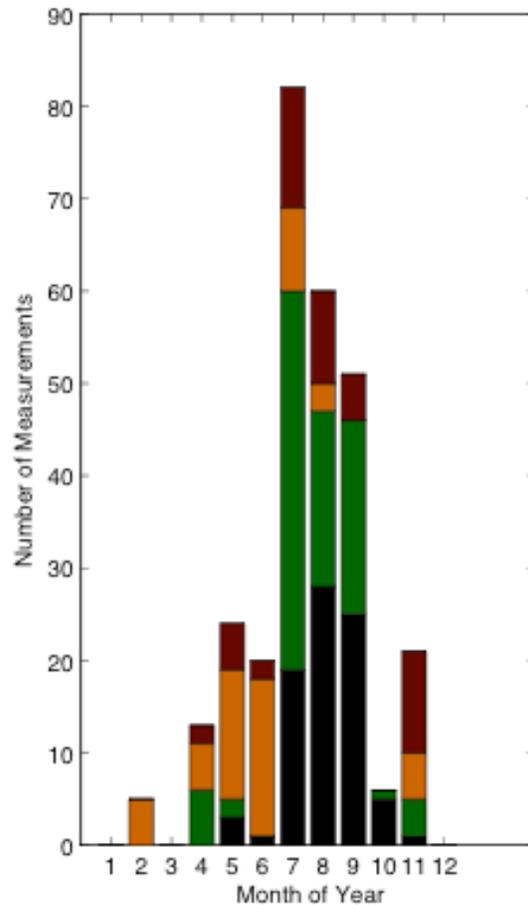
Athens, Greece

Aerosol Composition: Athens



LONG = 23.775 LAT = 37.988

Data for 2008 - 2012

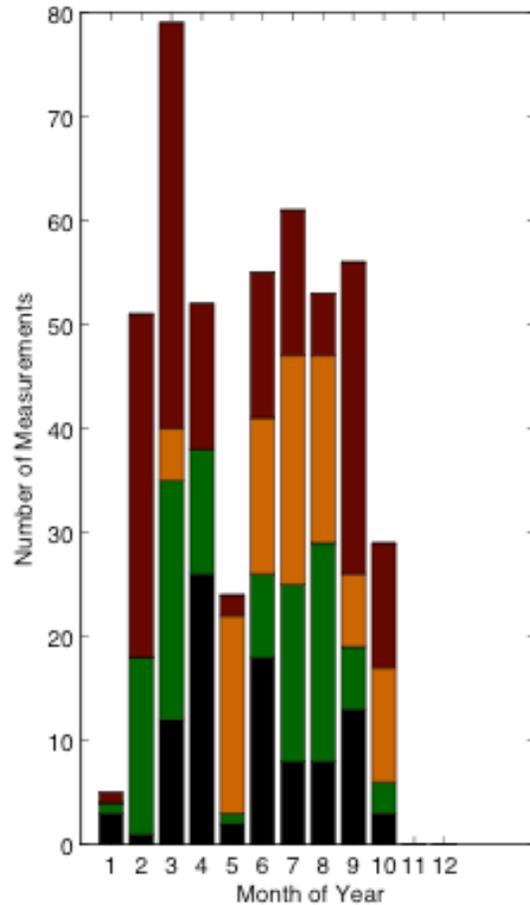
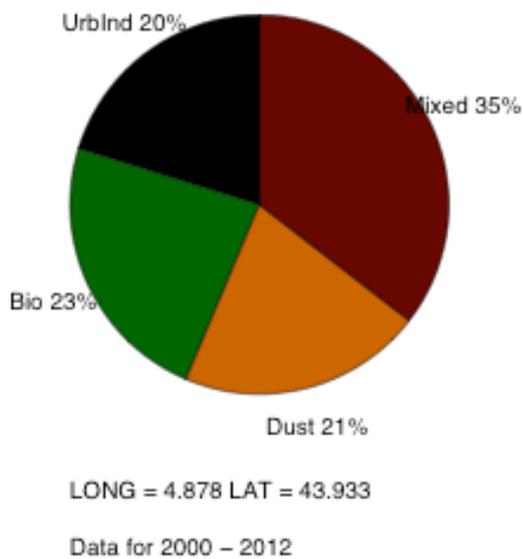


Athens has a population of over 3 million people in the urban area. The city itself has a population of about 700,000. The aerosol distribution is roughly evenly distributed among urban industrial, mixed, biomass, and dust. The AERONET site is about 10 km from the Mediterranean but the MD algorithm did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

[Return to Table](#)

Avignon, France

Aerosol Composition: Avignon

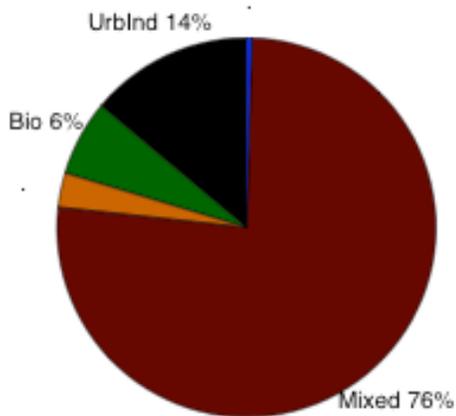


Avignon is a city of 95,000 people located in Southern France. The sun photometer is located in an agricultural region, some 10 km to the east of the city. The city attracts a large number of tourists.

[Return to Table](#)

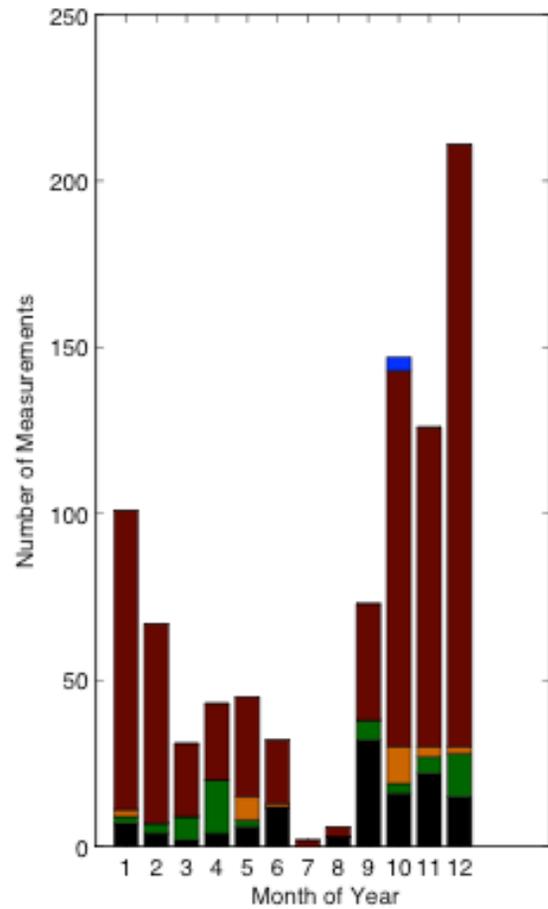
Bac Giang, Vietnam

Aerosol Composition: BacGiang



LONG = 106.225 LAT = 21.291

Data for 2003 – 2009

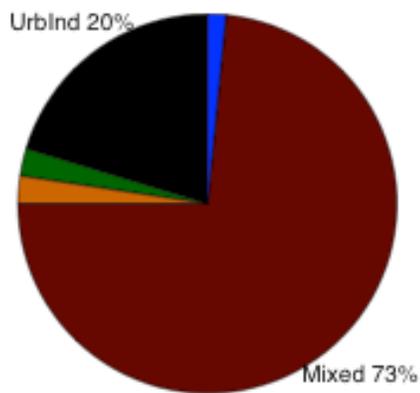


Bac Giang is a city in northern Vietnam with a population of about 130,000. The Bac Giang province is primarily agricultural.

[Return to Table](#)

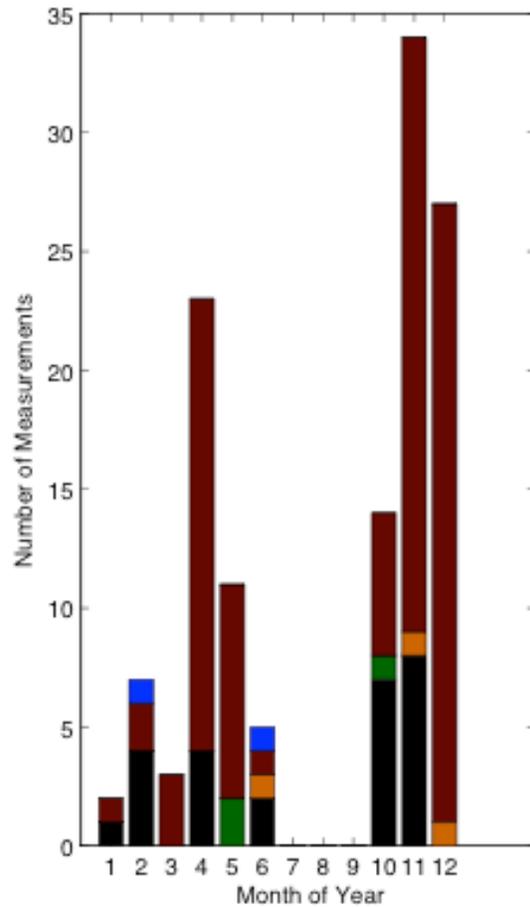
Bach Long Vy, Vietnam

Aerosol Composition: BachLongVy



LONG = 107.733 LAT = 20.133

Data for 2010 - 2011

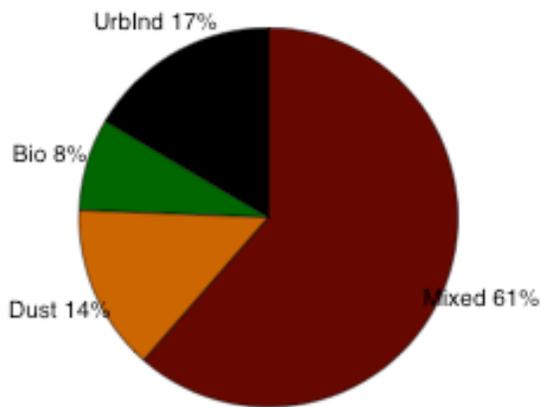


Bach Long Vy is an island off the coast of Vietnam in the Gulf of Tonkin. The aerosol is primarily mixed but has a significant amount of urban industrial. We do not find much maritime aerosol in the data record.

[Return to Table](#)

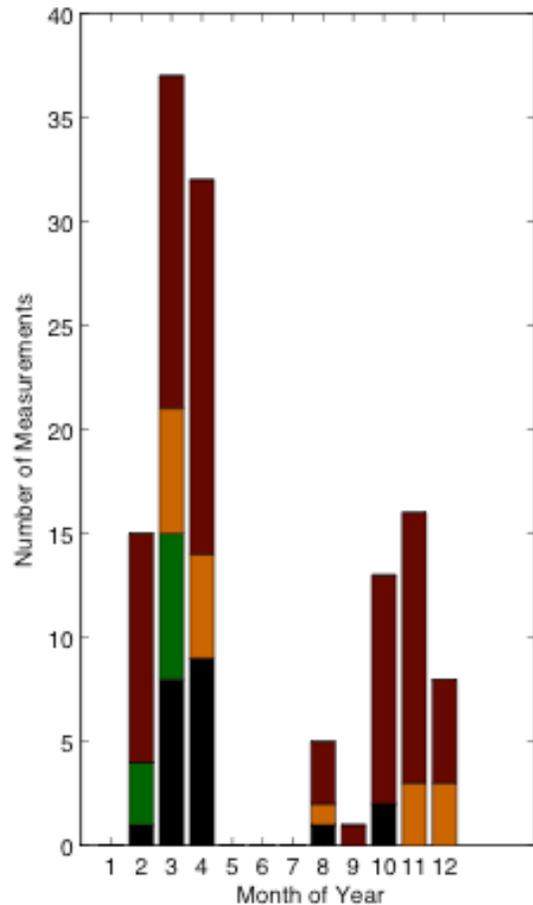
Baengnyeong Island, South Korea

Composition of Aerosols: Baengnyeong



LONG = 124.63 LAT = 37.966

Data for 2010 - 2011

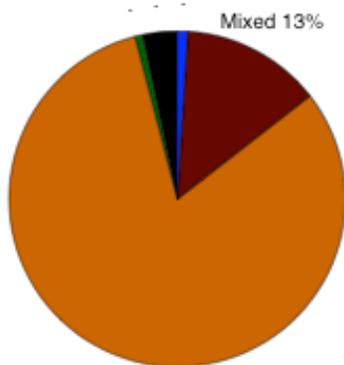


Baengnyeong Island is on the boundary between North and South Korea. The island is primarily forested and has no significant sources of pollution. It lies about 20 km from the mainland. We expected maritime aerosol at this site, but the Mahalanobis distance algorithm (and relative humidity data) did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

[Return to Table](#)

Bahrain

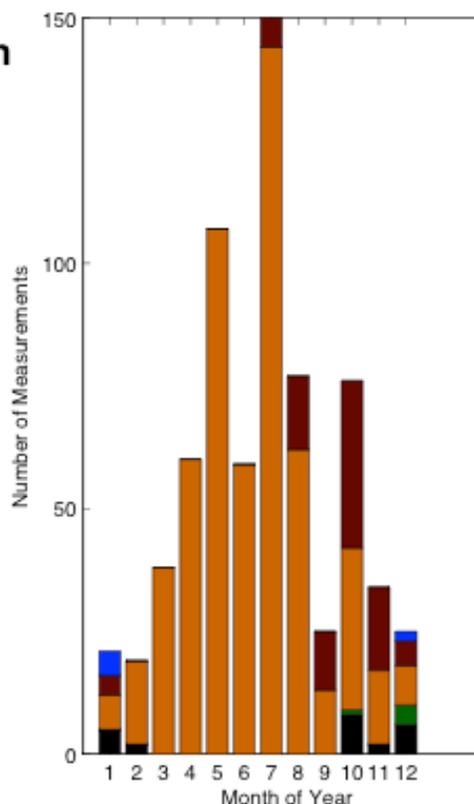
Aerosol Composition: Bahrain



Dust 81%

LONG = 50.609 LAT = 26.208

Data for 1998 – 2006



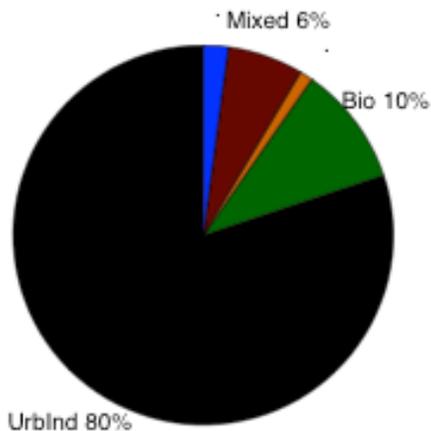
Bahrain is a small island country located in the Persian Gulf with a population of 1.2 million. The site ran from 1998 to 2006 and is no longer operational. The aerosol distribution is primarily dust with maritime and mixed aerosol also present. It is a financial center and also an important exporter 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* (UAE²) 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:10.1029/2007JD008944, 2008.

[Return to Table](#)

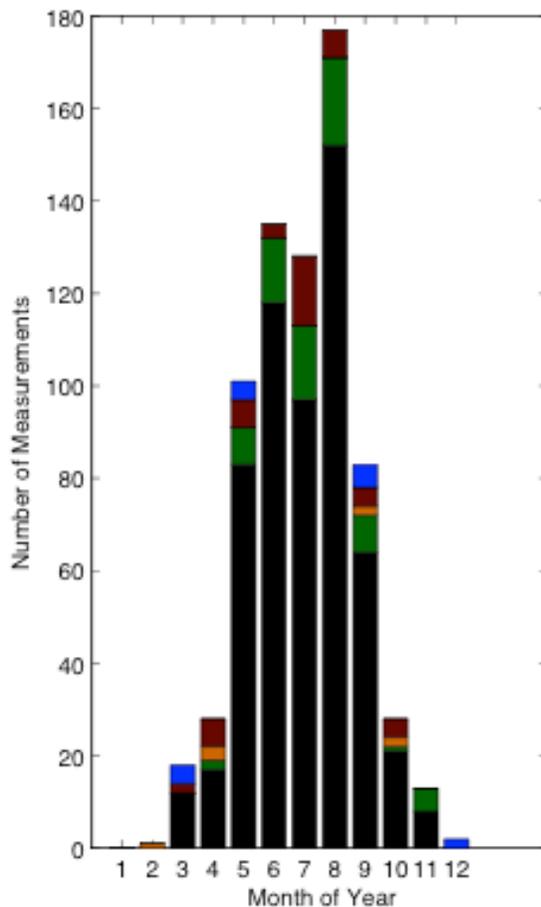
Baltimore, Maryland, USA (MD Science Center)

MDScienceCenter



LONG = -76.617 LAT = 39.283

Data for 1999 – 2011

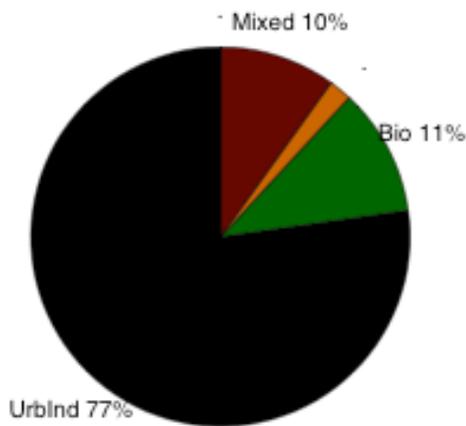


This instrument is located on the roof of the Maryland Science center, next to the Inner Harbor in Baltimore, Maryland. The surrounding area is metropolitan urban with a population of 2.7 million. Baltimore's inner harbor was a major port and a major manufacturing center, which has shifted to a service-oriented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

[Return to Table](#)

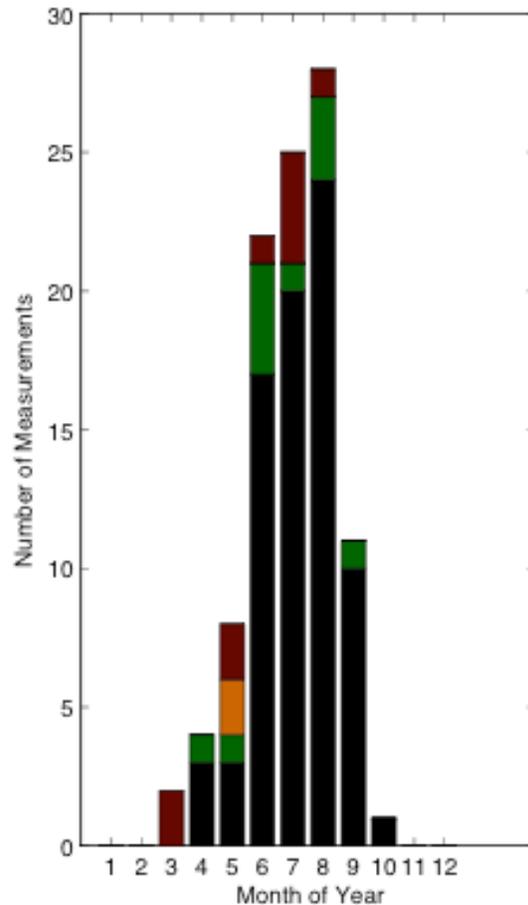
Baltimore, Maryland, USA (UMBC)

Aerosol Composition: UMBC



LONG = -76.709 LAT = 39.255

Data for 2009 - 2012

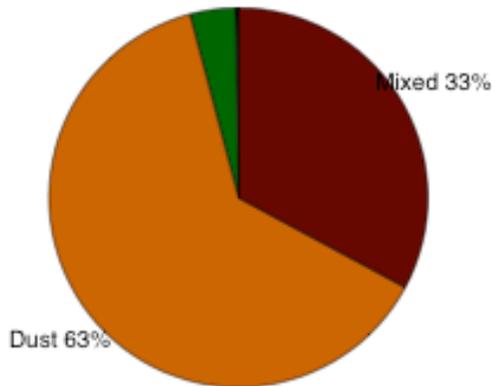


This instrument is located at the University of Maryland, Baltimore County (and specified in the AERONET sites as UMBC). It is 10 km distant from Baltimore proper (i.e., the inner harbor). The metropolitan area has a population of ~ 2.6 million. There is no industry and little manufacturing, but it is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

[Return to Table](#)

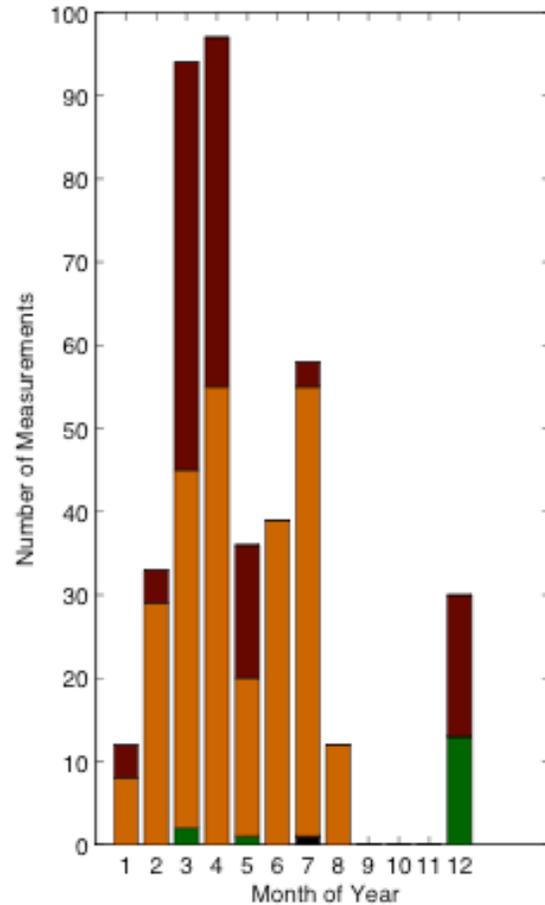
Bambey (ISRA), Senegal

Aerosol Composition: Bambey



LONG = -16.477 LAT = 14.709

Data for 2010 - 2011

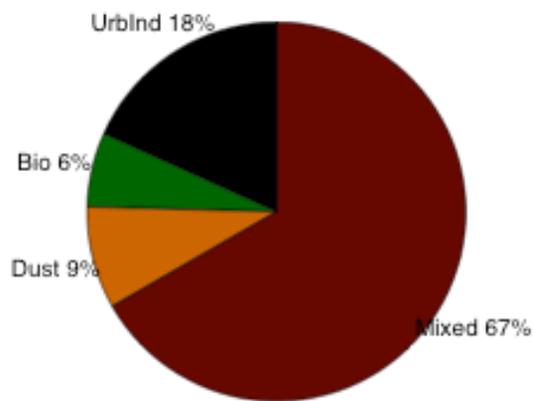


Bambey is in the western part of Senegal about 60 km from the Atlantic coast. It is a small city of about 25,000 inhabitants which lies south of the Sahara desert. The sun photometer is in a field belonging to ISRA (Institut Senegalais de Recherche Agricole). The region is known for dust transport from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

[Return to Table](#)

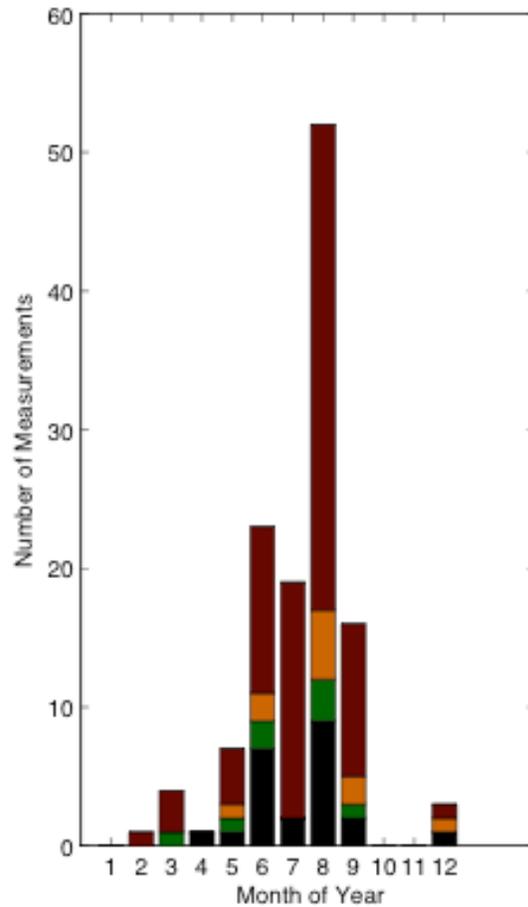
Bandung, Indonesia

Aerosol Composition: Bandung



LONG = 107.61 LAT = -6.888

Data for 2009 - 2011

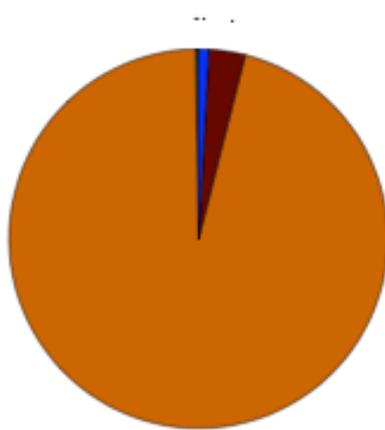


Bandung is located in West Java province of Indonesia. It is the second largest metropolitan area and third largest city of the country; it has a population of 2.4 million. It lies in a river basin and is surrounded by volcanoes. It is about 100 km from the sea.

[Return to Table](#)

Banizoumbou, Niger

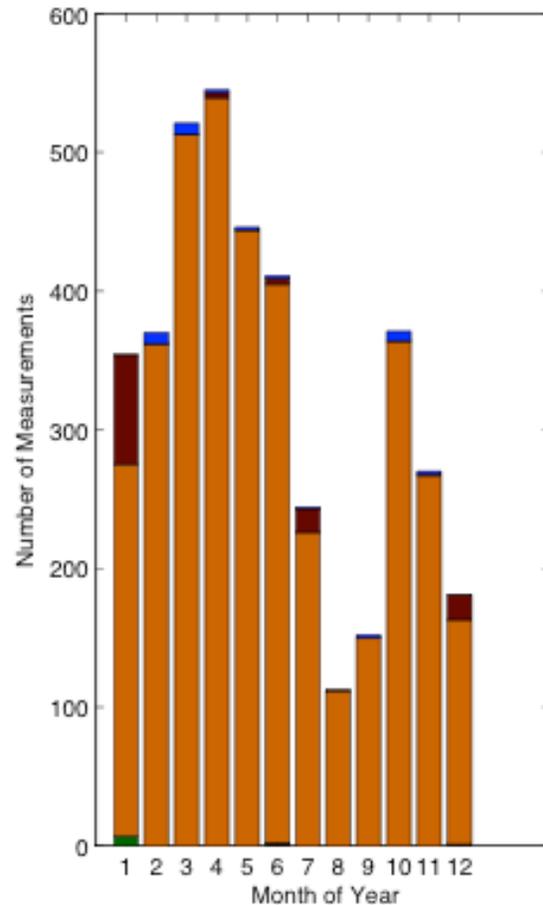
Aerosol Composition: Banizoumbou



Dust 96%

LONG = 2.665 LAT = 13.541

Data for 1995 - 2011

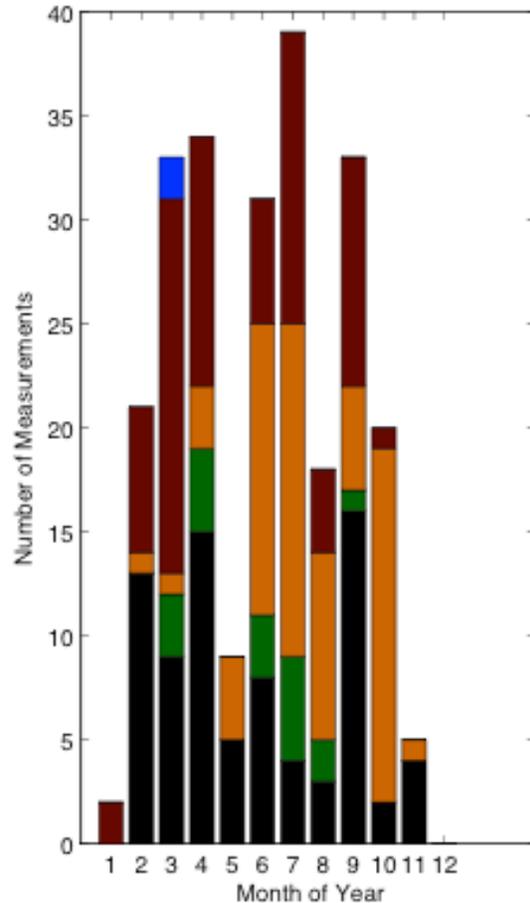
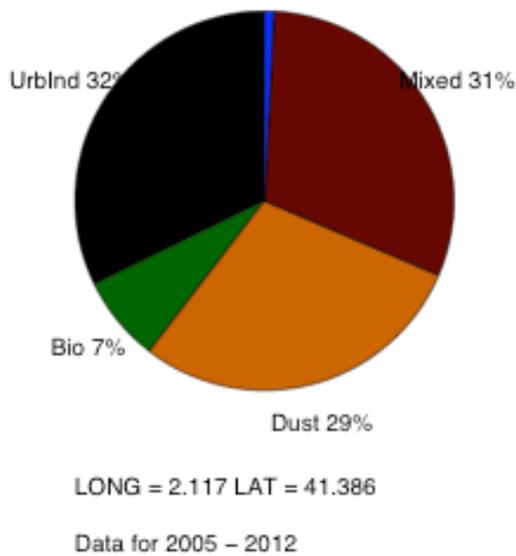


Banizoumbou, Niger is located at the southern end of the Sahara desert. The nearest town to Banizoumbou is Niamey, 50 km to the north. The aerosol is almost exclusively dust. The regions north of this site are considered source locations for the so-called Saharan Air Layer, which often transports dust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

[Return to Table](#)

Barcelona, Spain

Aerosol Composition: Barcelona

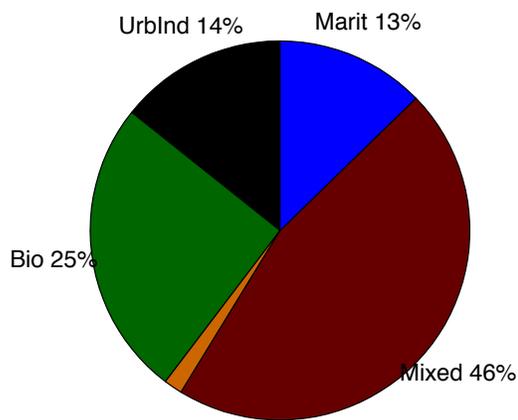


Barcelona is the second largest city in Spain. The population of the city is 1.6 million and of the urban area is 4.5 million. The sun photometer is located in the city, about 5 km from the city center and 6 km from the sea. Barcelona is an industrial city. The dust component (which is most prevalent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

[Return to Table](#)

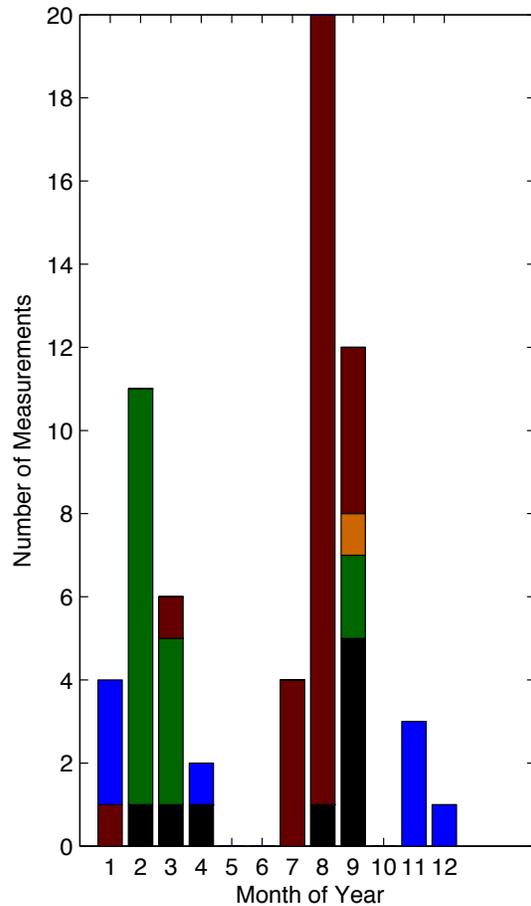
Bari, (University) Italy

Composition of Aerosols: BariUniversity



LONG = 16.884 LAT = 41.108

Data for 2010 – 2012

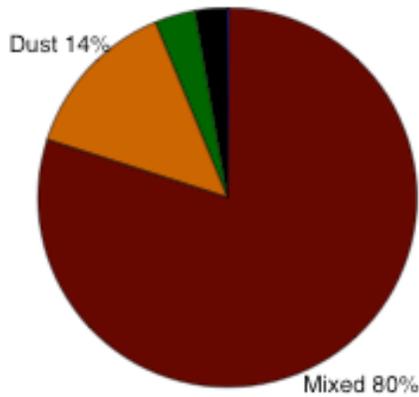


Bari is a city in southern Italy on the Adriatic Sea. The city has a population of 320,000, and the metropolitan area has a population of about one million. The site is denoted Bari_University in the AERONET website.

[Return to Table](#)

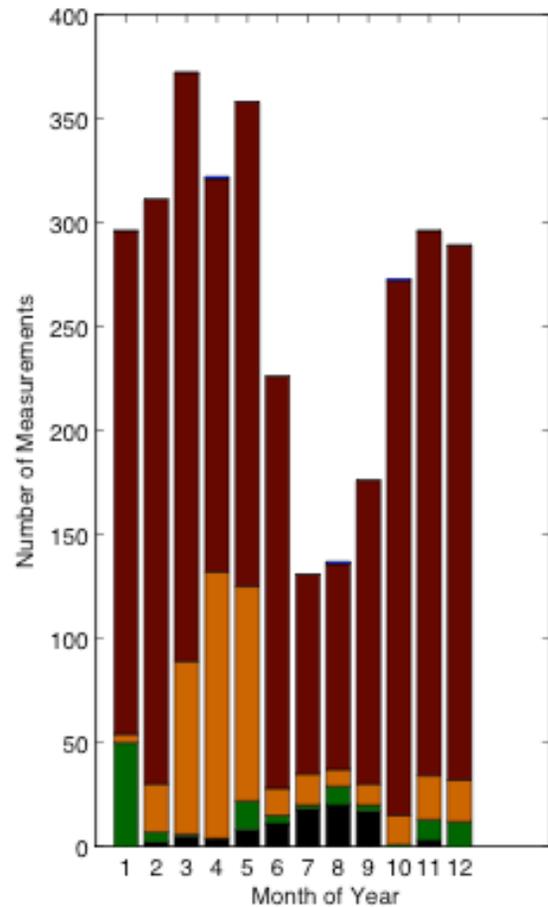
Beijing, China

Aerosol Composition: Beijing



LONG = 116.381 LAT = 39.977

Data for 2001 – 2012

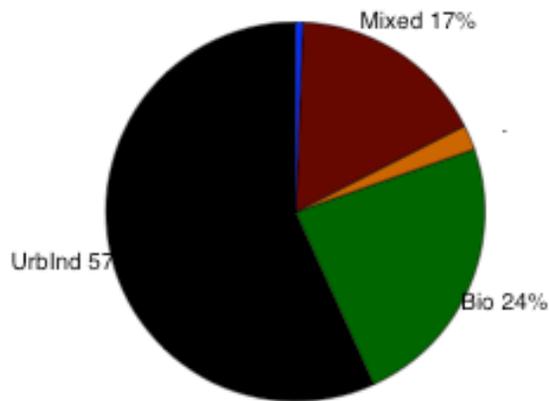


Beijing has a population of about 21 million. The aerosol loading in Beijing is frequently extremely high. The aerosol has been chemically typed by numerous investigators. Our MD calculations characterize it as primarily mixed aerosol, but there is a significant amount of dust in spring and urban industrial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

[Return to Table](#)

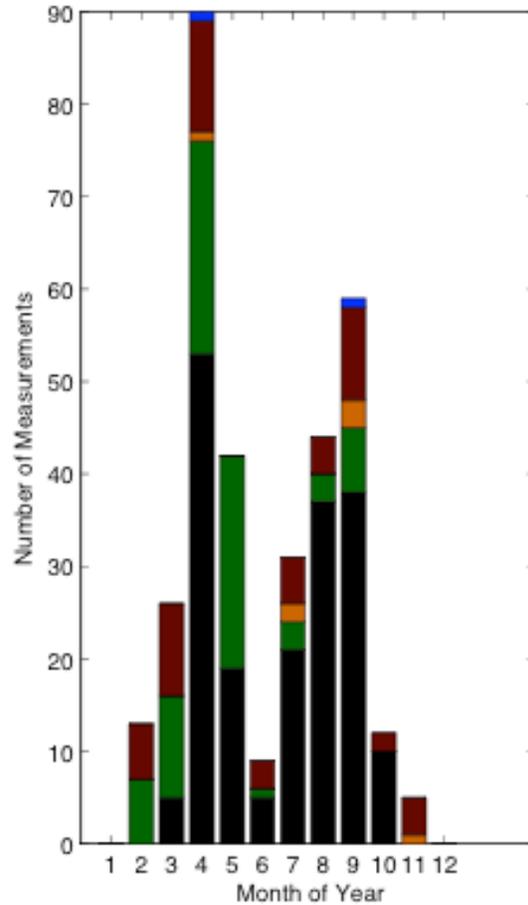
Belsk, Poland

Aerosol Composition: Belsk



LONG = 20.792 LAT = 51.837

Data for 2002 - 2012

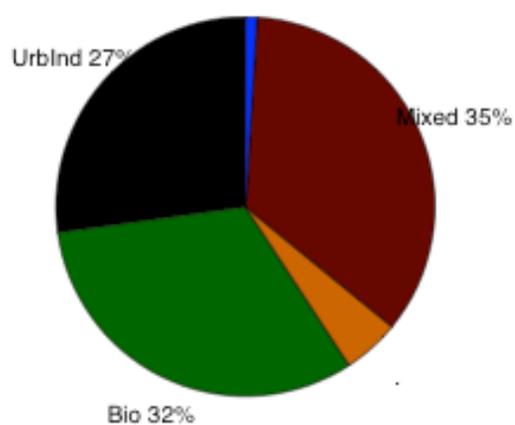


Belsk is a village in a rural region of Poland, about 50 km south of Warsaw. It is probable that urban industrial aerosol is transported from Warsaw. Biomass aerosols are prevalent in Spring.

[Return to Table](#)

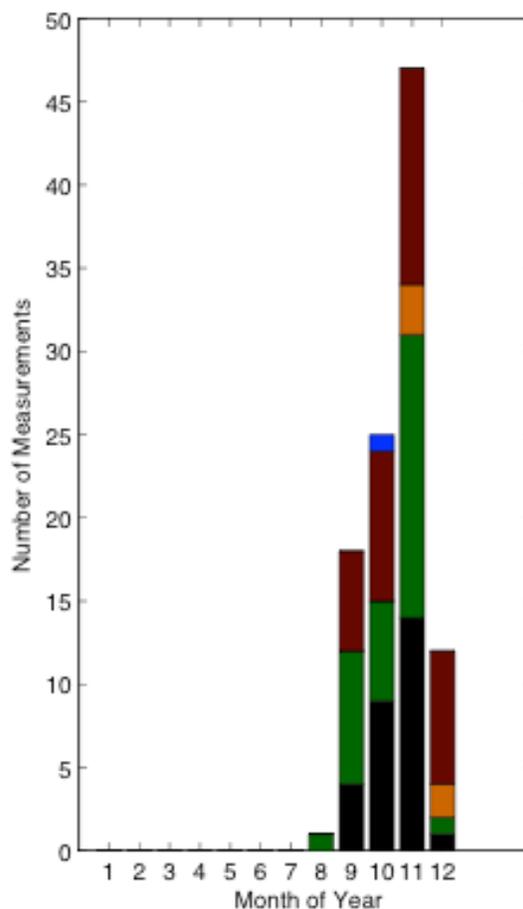
Belterra, Brazil

Aerosol Composition: Belterra



LONG = -54.952 LAT = -2.648

Data for 1999 - 2004

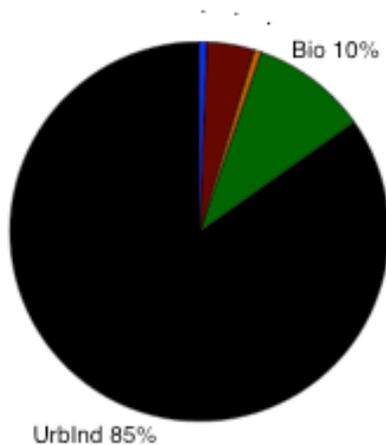


Belterra is a small town some 40 km from Santarem, Brazil, at the confluence of the Tapajos and Amazon rivers. Santarem has a population of nearly 300,000 people and is an important port city. The region is known for soybean production, which, it is claimed, has led to deforestation.

[Return to Table](#)

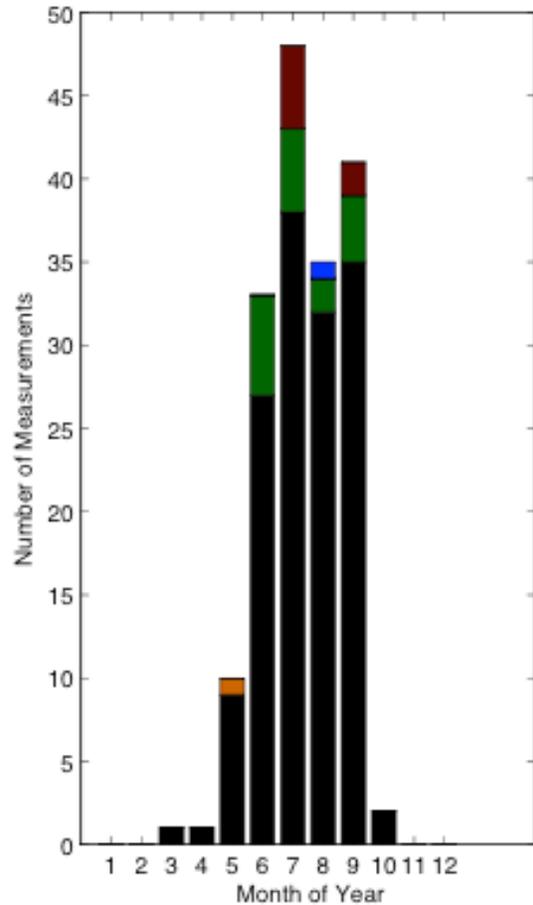
Billerica, Massachusetts, USA

Aerosol Composition: Billerica



LONG = -71.269 LAT = 42.528

Data for 2003 - 2011

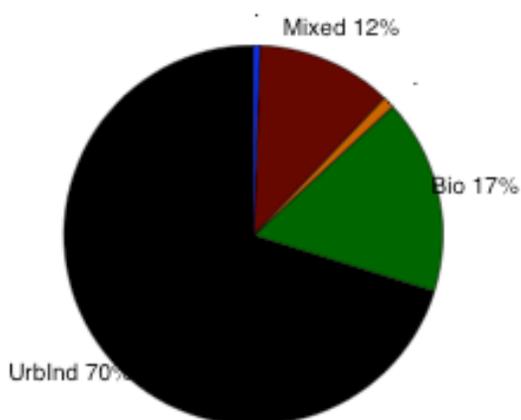


Billerica, Massachusetts is near Boston with a population of 40,000 people. It is probable that the aerosol at Billerica is the same as the Boston aerosol. Boston is a major commercial and industrial city with a population of 636,000, but Greater Boston has a population of 4.5 million and the Greater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

[Return to Table](#)

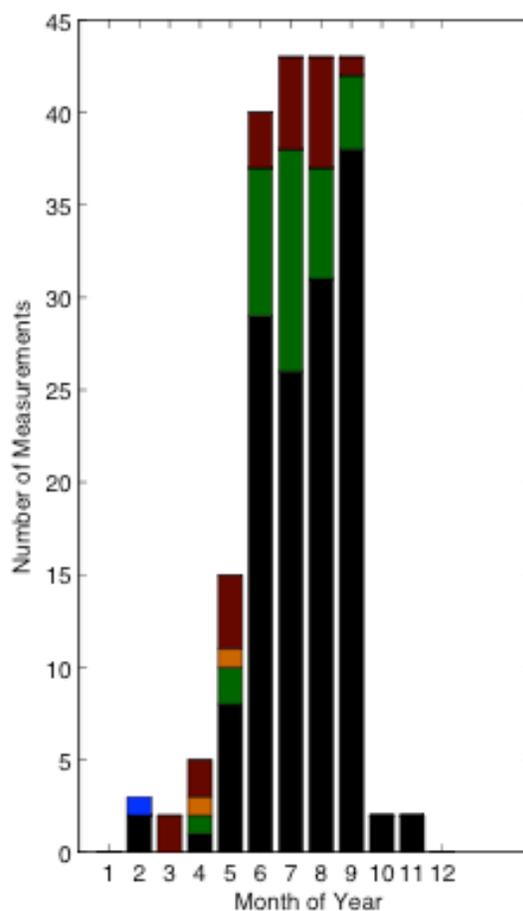
Billings, Oklahoma, USA (CART Site)

Aerosol Composition: CartSite



LONG = -97.486 LAT = 36.607

Data for 1996 - 2012

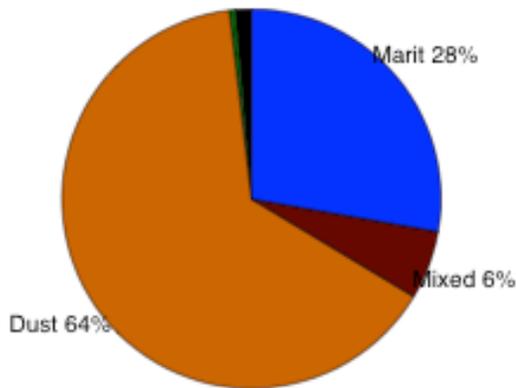


The CART site, near Billings, Oklahoma, USA is about 50 km west of Ponca City, Oklahoma. CART stands for the Cloud and Radiation Testbed and is part of the Department of Energy's atmospheric radiation measurement program. The site is on the Southern Great Plains of the United States, far from any urban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

[Return to Table](#)

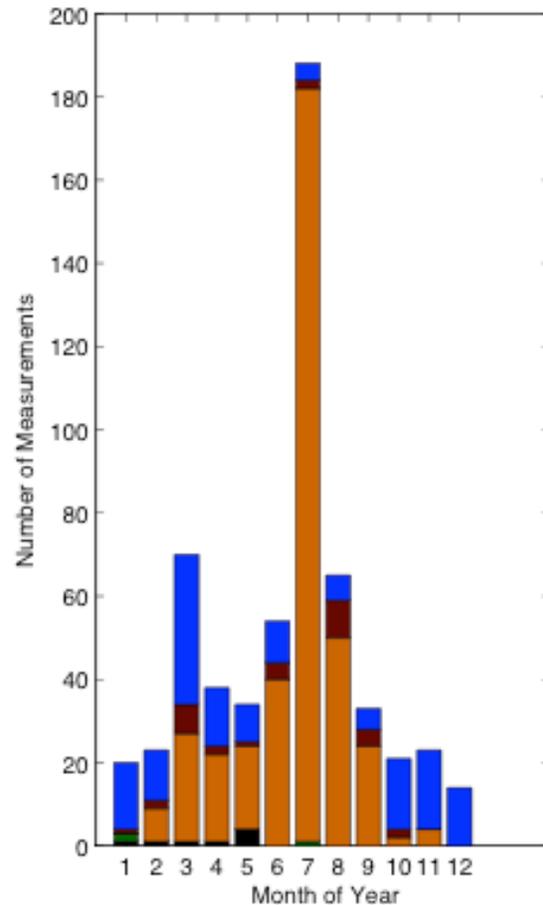
Blida, Algeria

Composition of Aerosols: Blida



LONG = 2.881 LAT = 36.508

Data for 2003 – 2012

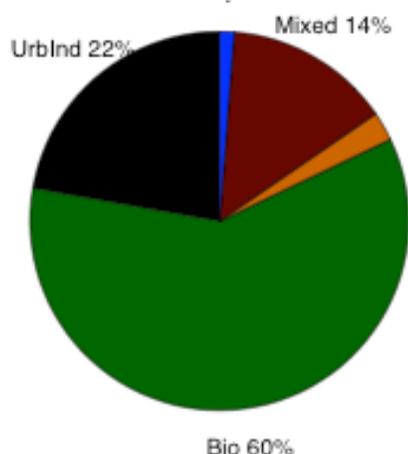


Blida, Algeria is located at the northern edge of the Sahara dessert. The AERONET site is about 30 km from the sea and is located on the campus of Blida University in the city. Blida lies in a fertile plane at the base of the Atlas Mountains, and is surrounded by orchards and gardens. The Sahara desert 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.

[Return to Table](#)

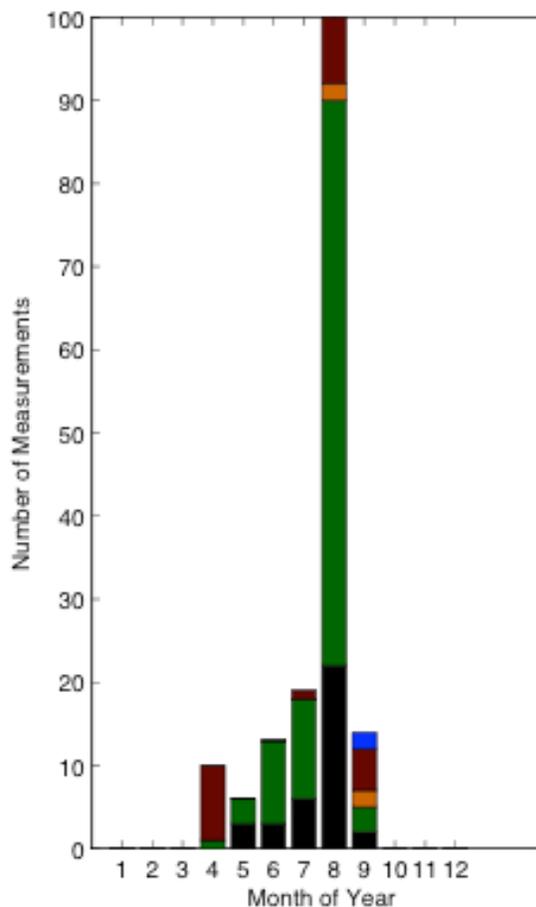
Bonanza Creek, Alaska, USA

Aerosol Composition: BonanzaCreek



LONG = -148.316 LAT = 64.743

Data for 1994 - 2012

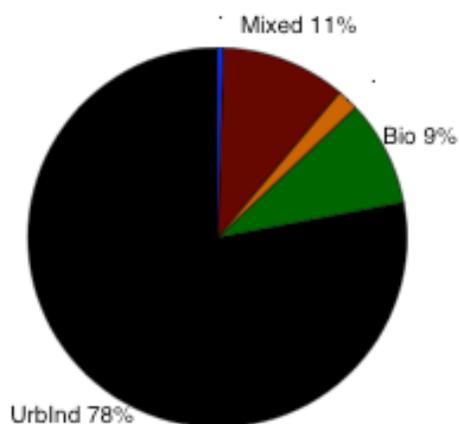


Bonanza Creek is a rural region about 30 km downwind from Fairbanks Alaska. The aerosol is mainly biomass burning. The prevailing winds in August are towards or away from Fairbanks, perhaps due to the fact that the instrument at Bonanza Creek is in a valley oriented towards Fairbanks. In August 2004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

[Return to Table](#)

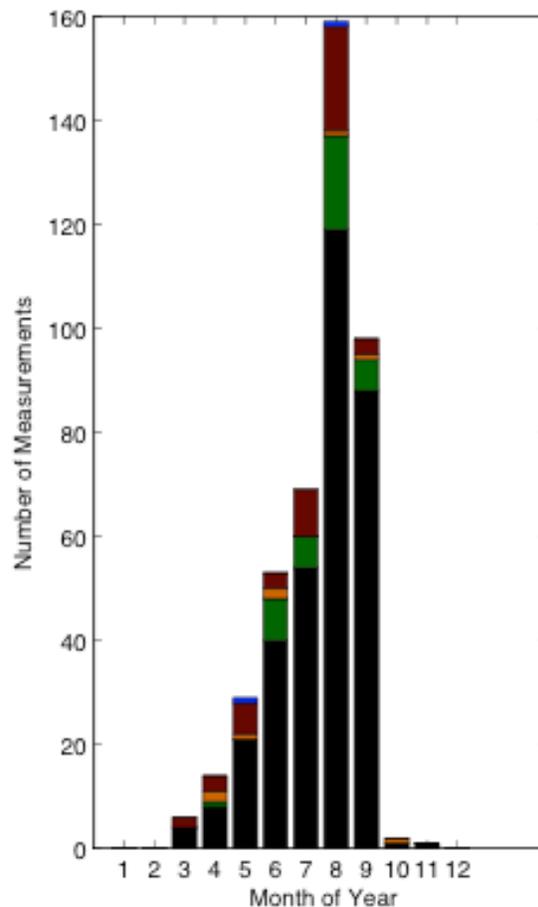
Bondville, Illinois USA

Aerosol Composition: Bondville



LONG = -88.372 LAT = 40.053

Data for 1996 - 2012

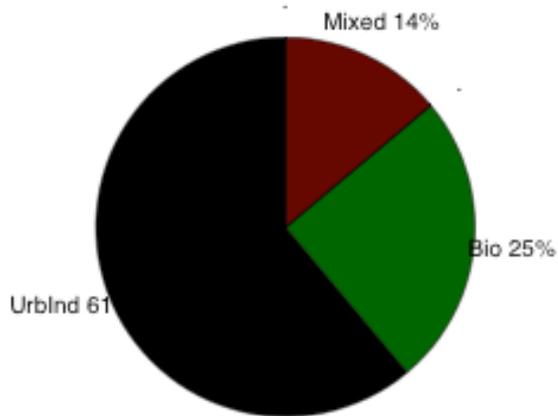


Bondville, Illinois is a village with a population of 440 people. It is 3 km from the western edge of Champaign, Illinois and about 220 km south of Chicago. Champaign and its sister city Urbana have a population of about 120,000. It is probable that the aerosol at Bondville is characteristic of the aerosol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

[Return to Table](#)

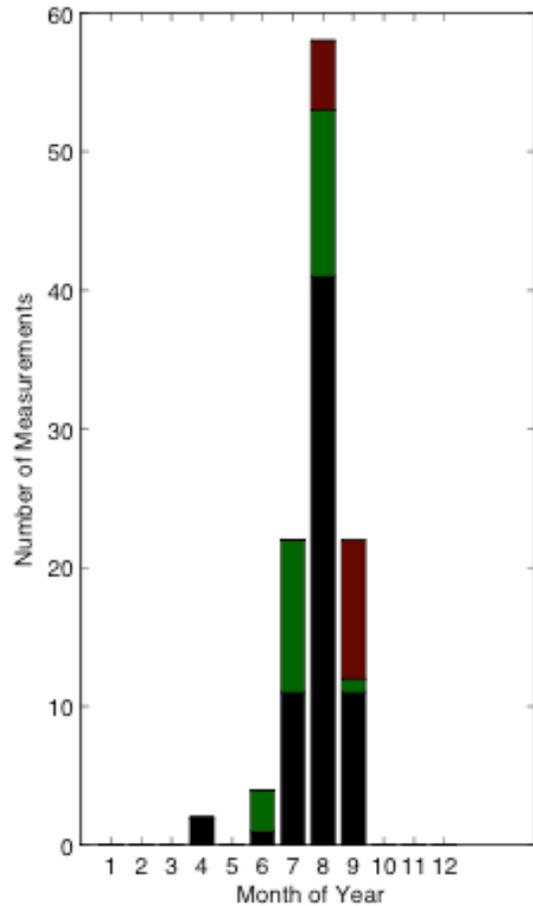
Bratt's Lake, Canada

Aerosol Composition: BrattsLake



LONG = -104.7 LAT = 50.28

Data for 2000 - 2012

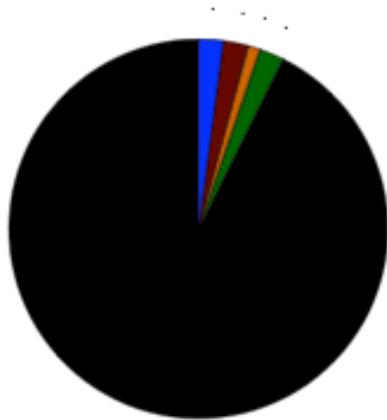


Bratts Lake is on the Canadian Prairie, about 30 km south-southwest of Regina. Regina has a population of about 200,000. This instrument at this site also contributes to the AEROCAN Network [<http://www.aerocanonline.com/templates/nature/index.html>], a branch of the Meteorological Service of Canada.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

[Return to Table](#)

Brookhaven National Laboratory, Upton, New York, USA

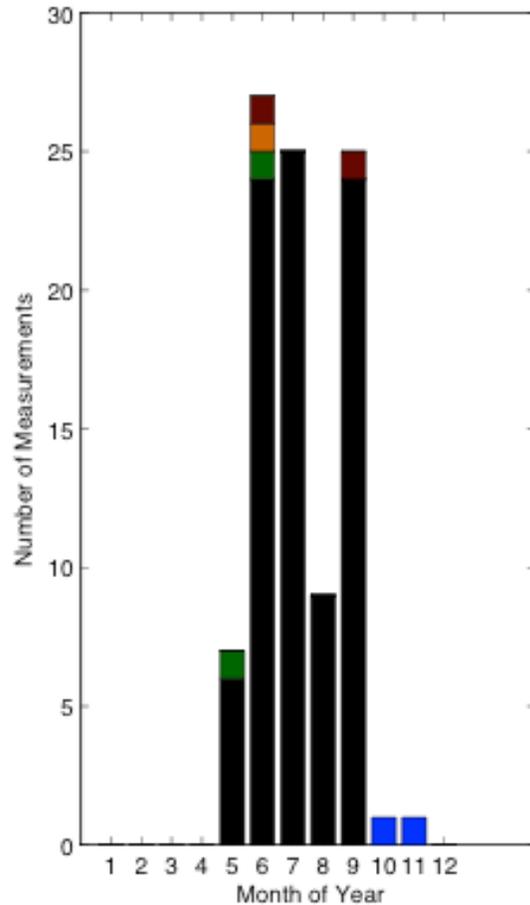
Composition of Aerosols: Brookhaven



Urblnd 93%

LONG = -72.889 LAT = 40.87

Data for 2002 - 2011

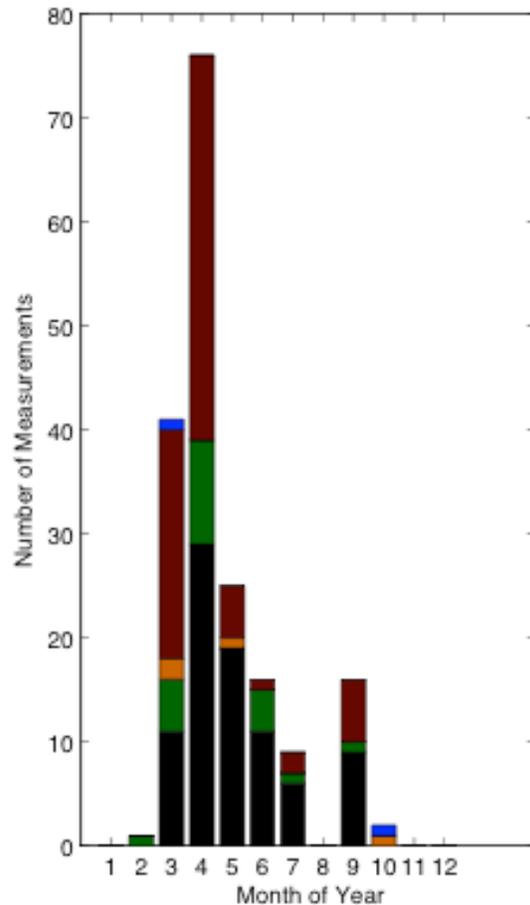
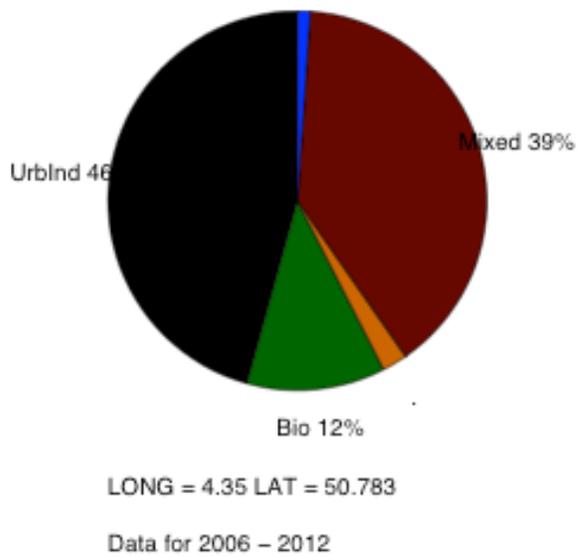


The Brookhaven National Laboratory is located on Long Island, New York. The aerosol is primarily urban industrial with a very small amount of maritime in the winter months. The sun photometer is located in an area that is a mix of grassy area and wooded area. The lab is located in the center of Long 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.

[Return to Table](#)

Brussels, Belgium

Aerosol Composition: Brussels

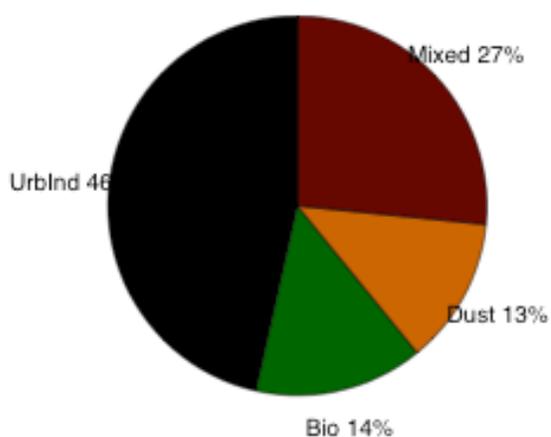


Brussels, the capital of Belgium, is a city of about 1.2 million. Its economy is largely service oriented, with some industry. The AERONET sun photometer is located in the city of Uccle (population 90,000), a part of the Brussels municipal area.

[Return to Table](#)

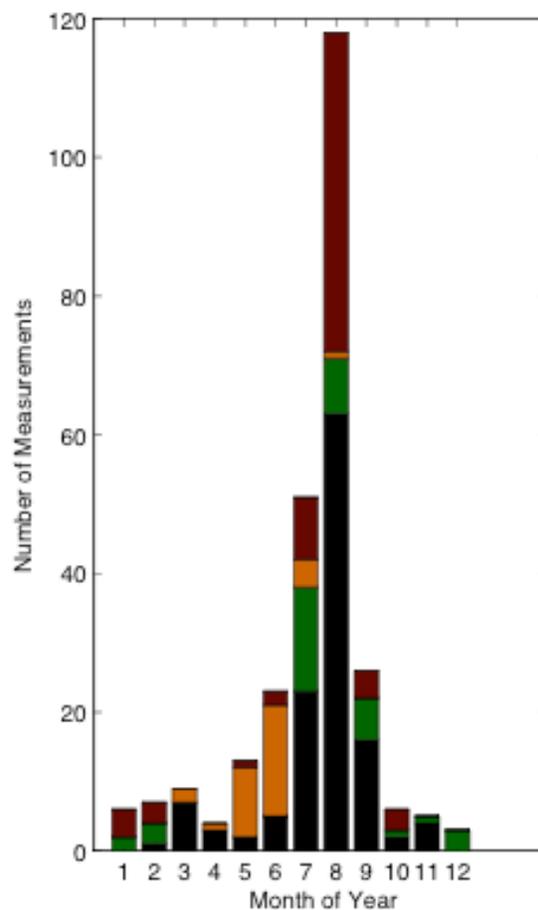
Bucharest, Romania

Aerosol Composition: Bucharest



LONG = 26.03 LAT = 44.348

Data for 2007 – 2012

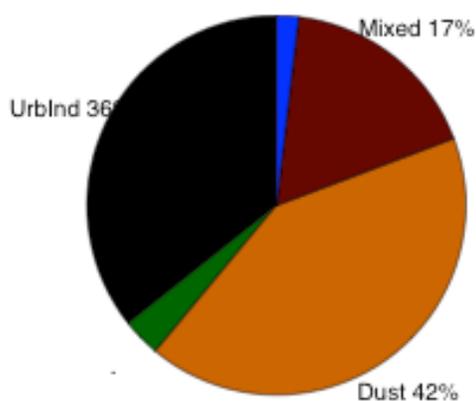


The sun photometer in Bucharest, Romania is located at the National Institute of R&D for Optoelectronics (INOE) and the AERONET website lists the data under the name “Bucharest_Inoe.” The site is 6 km outside of the city of Bucharest. Bucharest has nearly 2 million inhabitants. It is the capital of Romania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

[Return to Table](#)

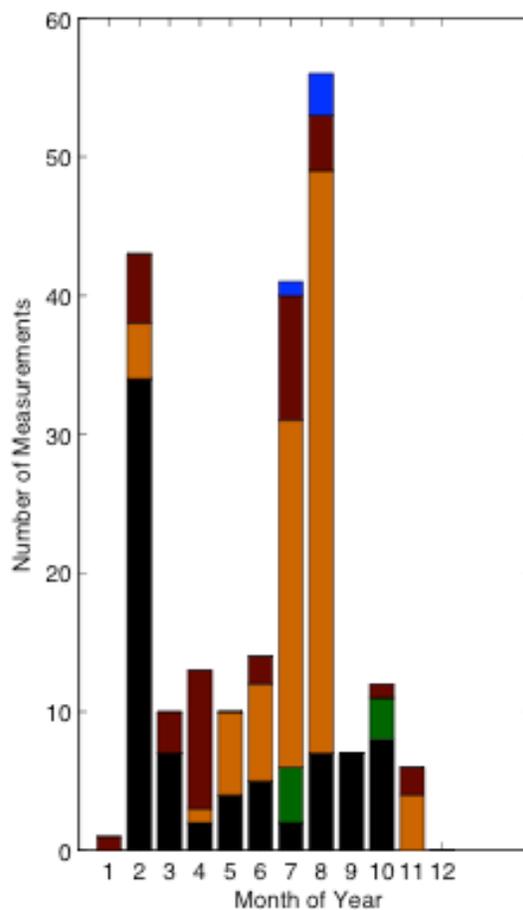
Burjassot (Valencia, Spain)

Aerosol Composition: Burjassot



LONG = -0.418 LAT = 39.508

Data for 2007 - 2012

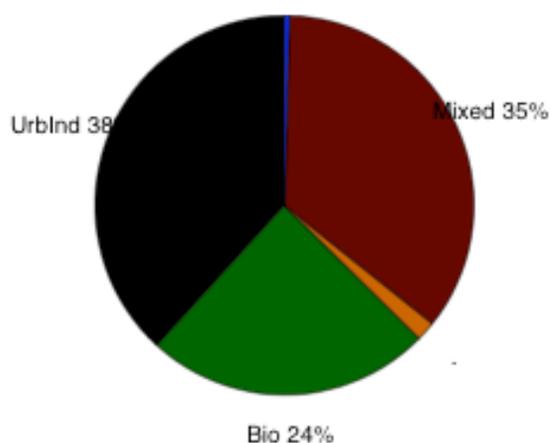


The sun photometer is located in the small city of Burjassot (population 35,000) about 5 km northwest of Valencia, a city whose metropolitan area has a population of 1.4 million. The site is about 10 km west of the Mediterranean coast. The region has light industry. The dust is probably African in origin.

[Return to Table](#)

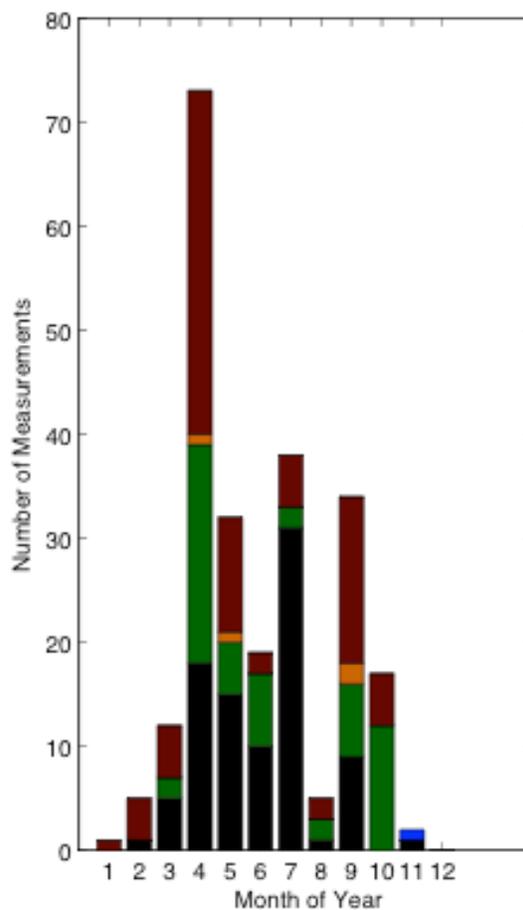
Cabauw, The Netherlands

Aerosol Composition: Cabauw



LONG = 4.927 LAT = 51.971

Data for 2003 – 2012

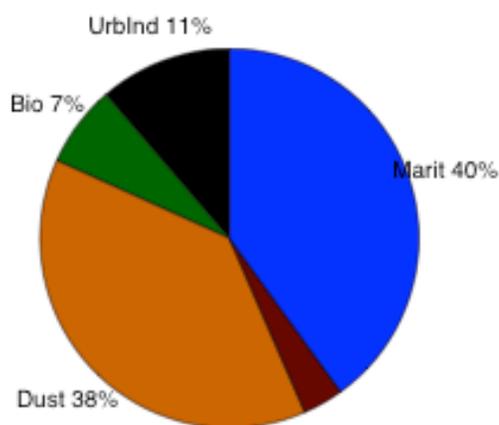


This site is located in the western part of the Netherlands in a polder 0.7 m below average sea level. This site is approximately 60 km south of Amsterdam and 60 km east of the port city of The Hague. The immediate area is agricultural, with an adjacent residential community about 600 m to its east,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

[Return to Table](#)

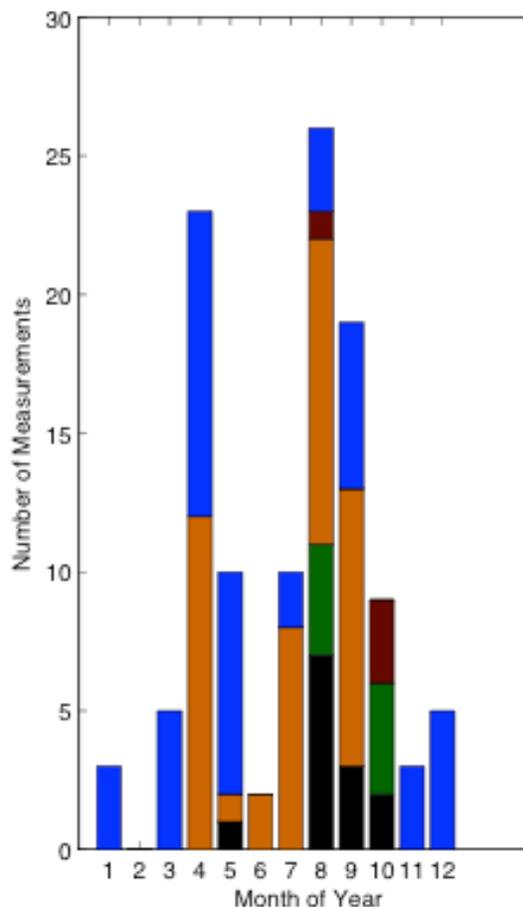
Cabo da Roca, Portugal

Composition of Aerosols: CabodaRoca



LONG = -9.5 LAT = 38.783

Data for 2004 – 2011

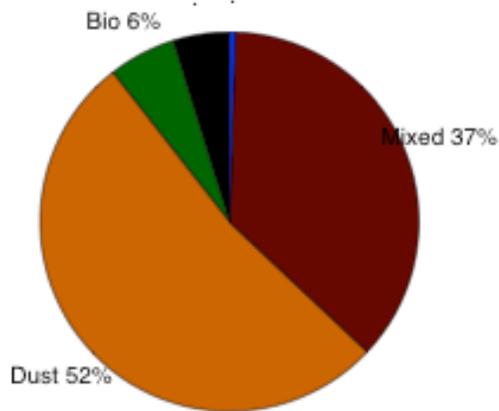


The site is located at the westernmost point of the European continent, on the Atlantic coast of Portugal. The site is some 30 km northwest of Lisbon. The instrument is installed within the facilities of Cabo da Roca Lighthouse, which is on a cliff promontory 140 m above the ocean. The adjacent area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

[Return to Table](#)

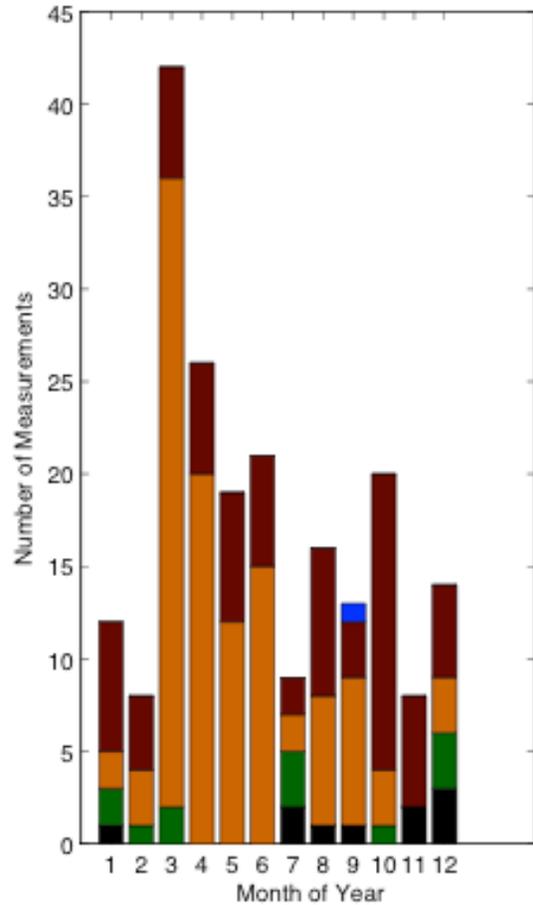
Cairo (EMA), Egypt

Aerosol Composition: CairoEMA



LONG = 31.29 LAT = 30.081

Data for 2005 - 2006

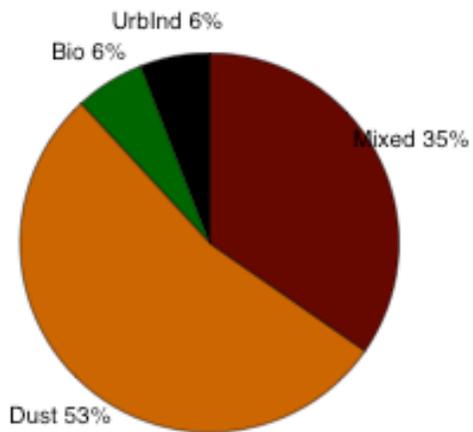


There are three AERONET sites in Cairo, two are at EMA, the Egyptian Meteorological Authority. The other AERONET site is at the University. The EMA site is to the East of the Nile about 4 km from the center of the city. Metropolitan Cairo has a population of about 10 million

[Return to Table](#)

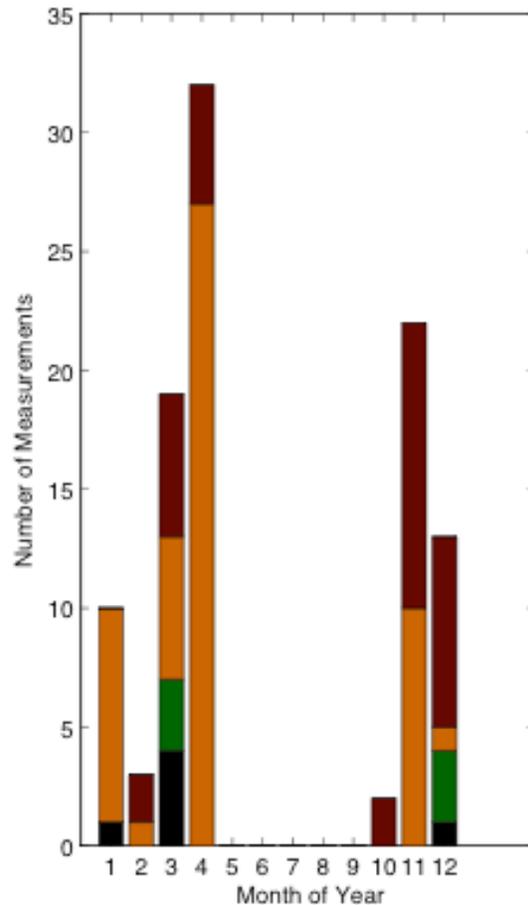
Cairo University, Egypt

Aerosol Composition: CairoUniversity



LONG = 31.207 LAT = 30.026

Data for 2004 – 2005

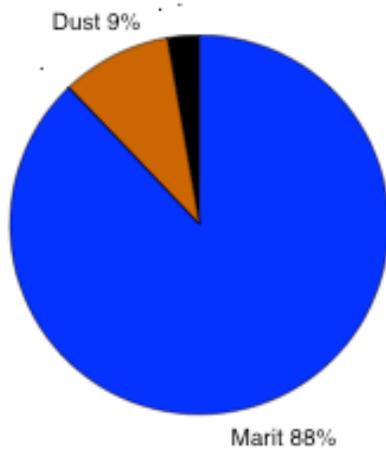


The AERONET sun photometer is located on the campus of Cairo University (Giza) near the west bank of the Nile. Giza is part of metropolitan Cairo, a few kilometers southwest of central Cairo. As might be expected, the aerosol distribution is quite similar to that of Cairo EMA.

[Return to Table](#)

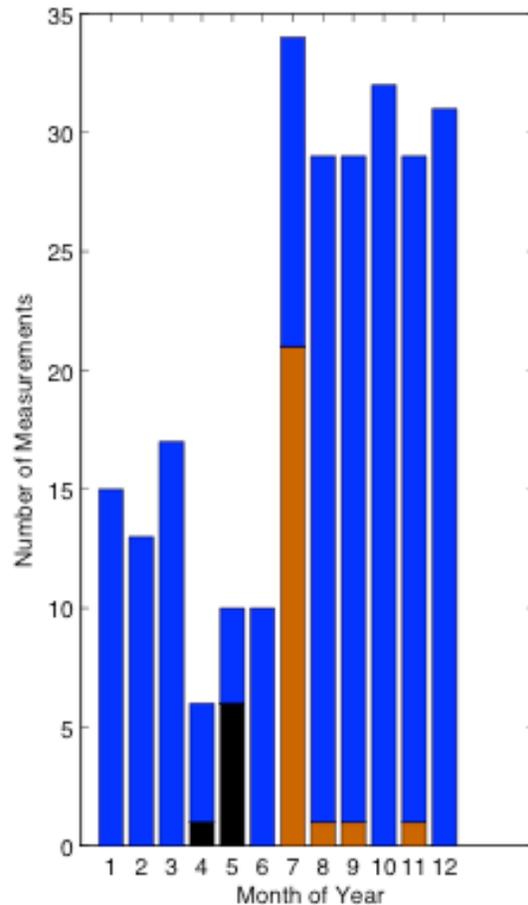
Camaguey, Cuba

Composition of Aerosols: Camaguey



LONG = -77.85 LAT = 21.422

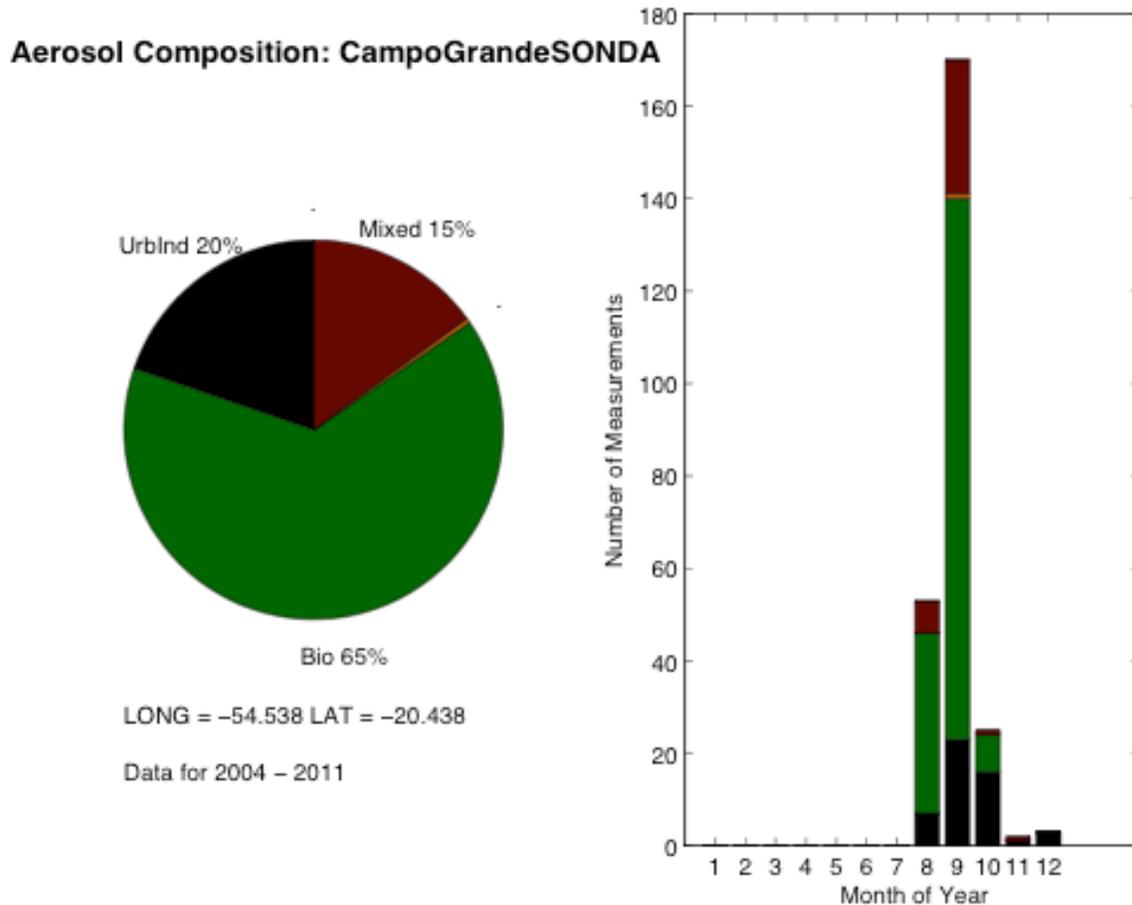
Data for 2008 - 2012



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.

[Return to Table](#)

Campo Grande, Brazil

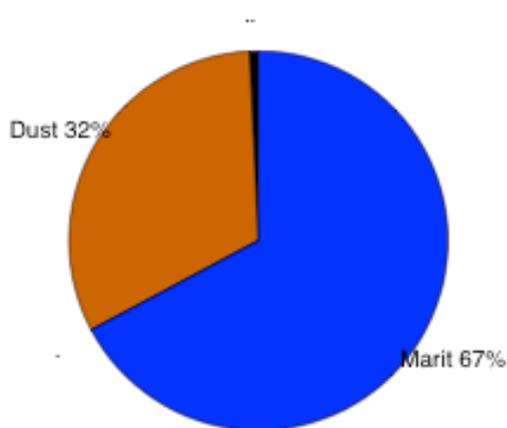


Campo Grande (denoted Campo_Grande_SONDA in the AERONET webpage) is a city of about one million located in the center-west region of Brazil. SONDA stands for Systema de Organicao Nacional de Dados Ambientais (System of the National Organization of Environmental Data). The AERONET site is located in a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

[Return to Table](#)

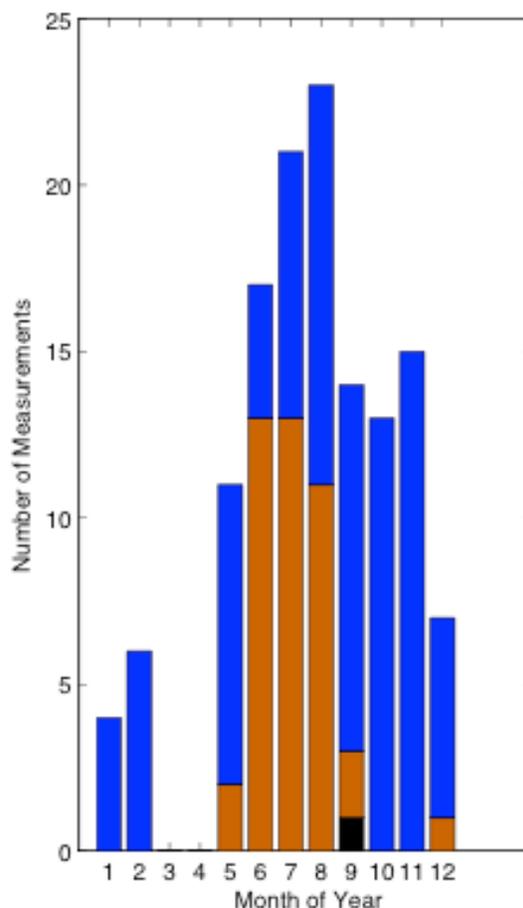
Cape San Juan, Puerto Rico, USA

Composition of Aerosols: CapeSanJuan



LONG = -65.62 LAT = 18.384

Data for 2005 - 2007

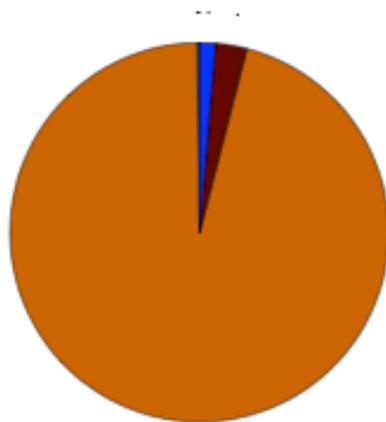


The sun photometer is located on the eastern edge of the island of Puerto Rico in the nature reserve of Cabezas de San Juan. The sea is within half a kilometer in three directions. As expected, most of the aerosol is maritime except for Saharan dust during the summer months. Further details on the link 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.

[Return to Table](#)

Capo Verde

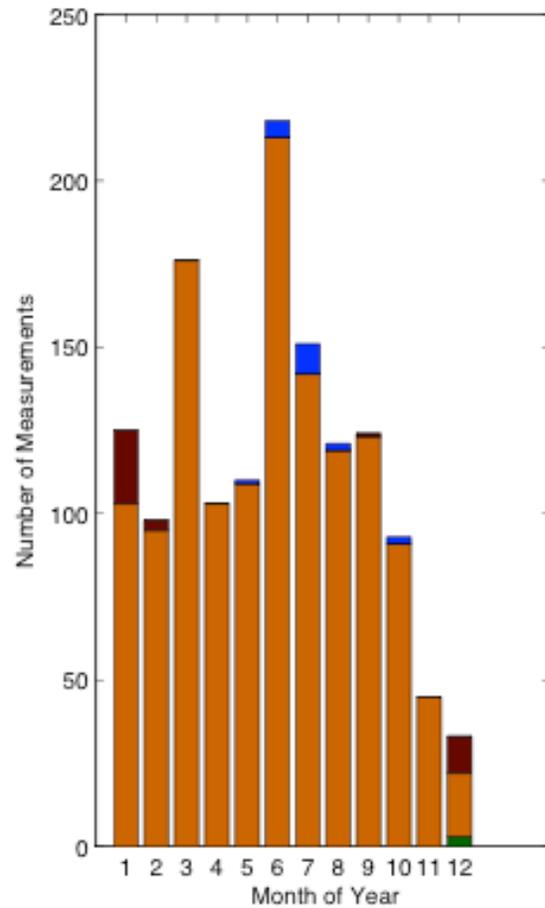
Aerosol Composition: Capo Verde



Dust 96%

LONG = -22.935 LAT = 16.733

Data for 1996 - 2012

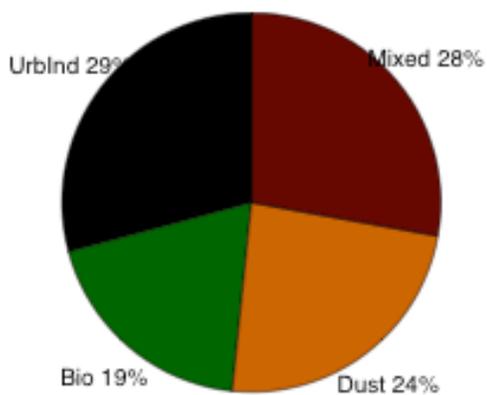


Capo Verde (Cape Verde) is an island republic comprised of an archipelago of ten islands in the Atlantic Ocean, off the coast of Africa. The instrument is located at the Instituto Nacional de Meteorologia e Geofisica on Sal Island. The region is subjected to strong north-eastern winds that transport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

[Return to Table](#)

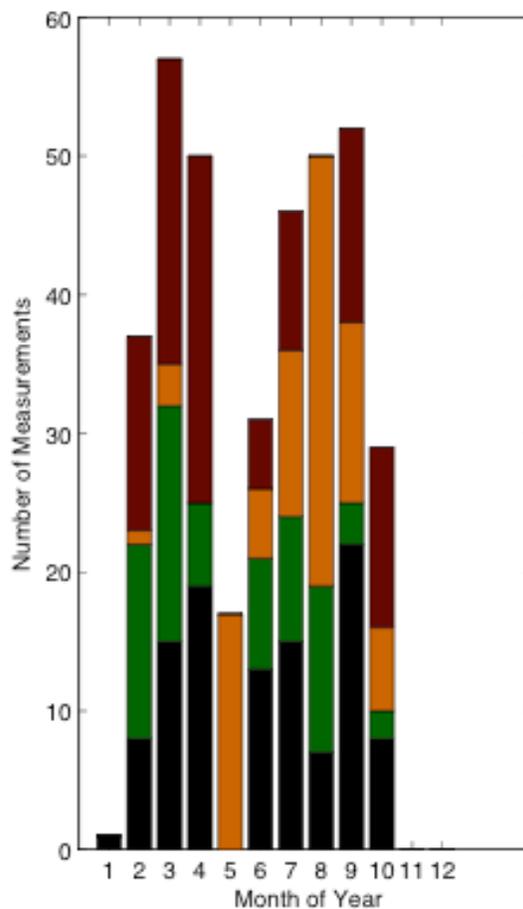
Carpentras, France

Aerosol Composition: Carpentras



LONG = 5.058 LAT = 44.083

Data for 2003 – 2012



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.

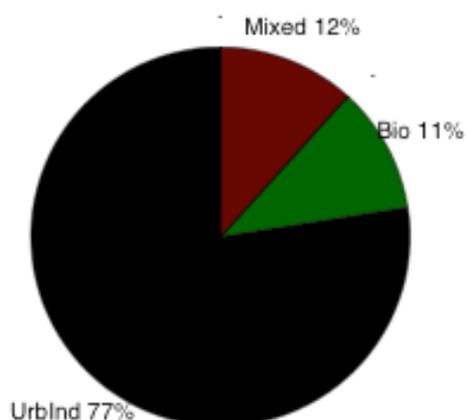
[Return to Table](#)

CARTEL

Sherbrooke, Quebec

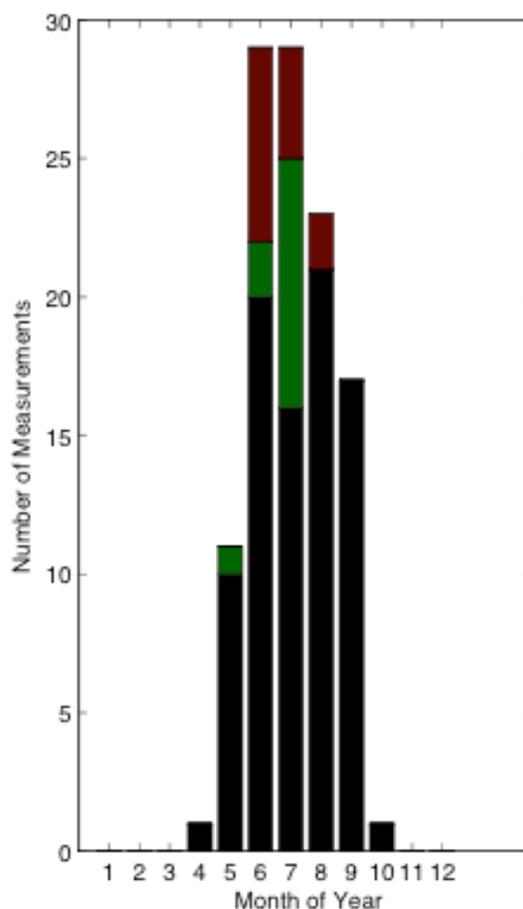
Canada

Aerosol Composition: CARTEL



LONG = -71.931 LAT = 45.379

Data for 1995 - 2010

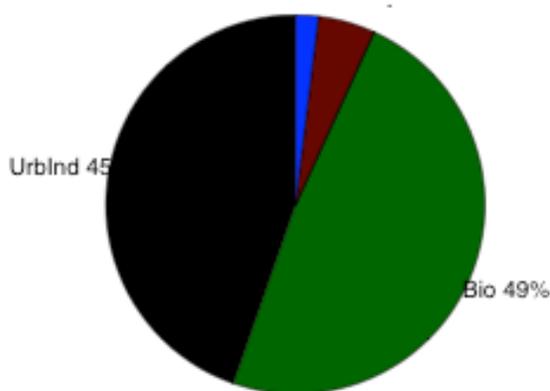


The instrument is located on the campus of the University of Sherbrooke. The city of Sherbrooke has a population of about 200,000. The instrument is part of the AEROCAN network, under the directorate of the Centre d'Applications et de Recherches en Teledetection (CARTEL). The site is listed as "CARTEL" 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>,

[Return to Table](#)

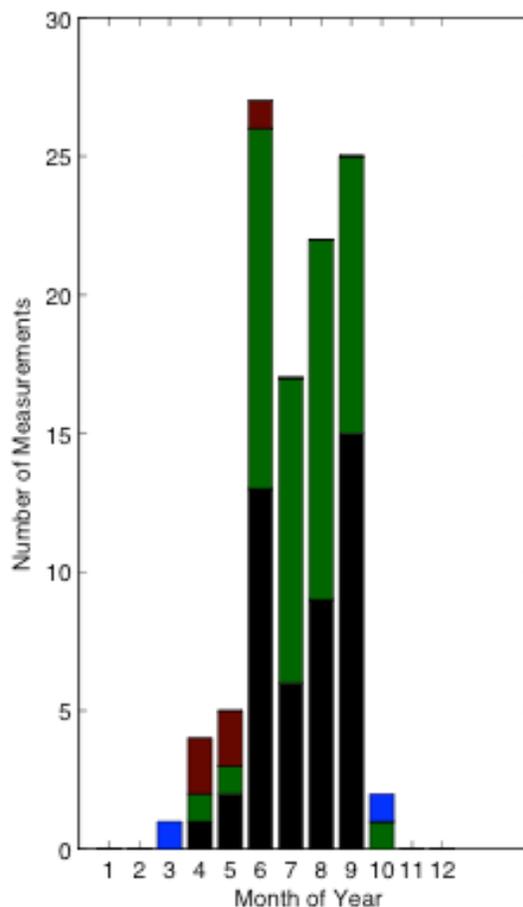
CCNY (New York City), USA

Aerosol Composition: CCNY

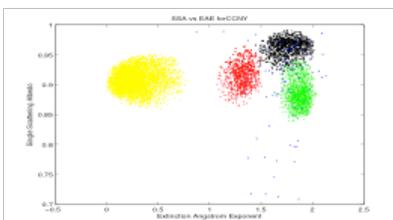


LONG = -73.949 LAT = 40.821

Data for 2002 - 2008



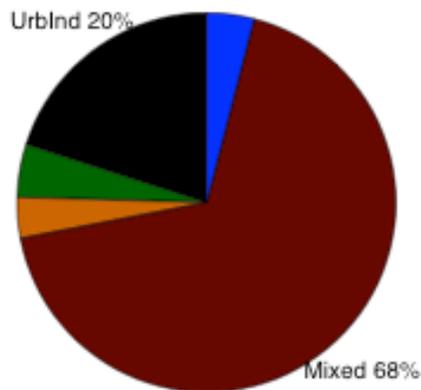
CCNY stands for City College of New York. The instrument is located on top of a building in New York City. This is in a heavily urbanized area. The identification of biomass burning aerosol is difficult to explain. Scatterplots of SSA vs EAE indicate the presence of a significant number of observations 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.



[Return to Table](#)

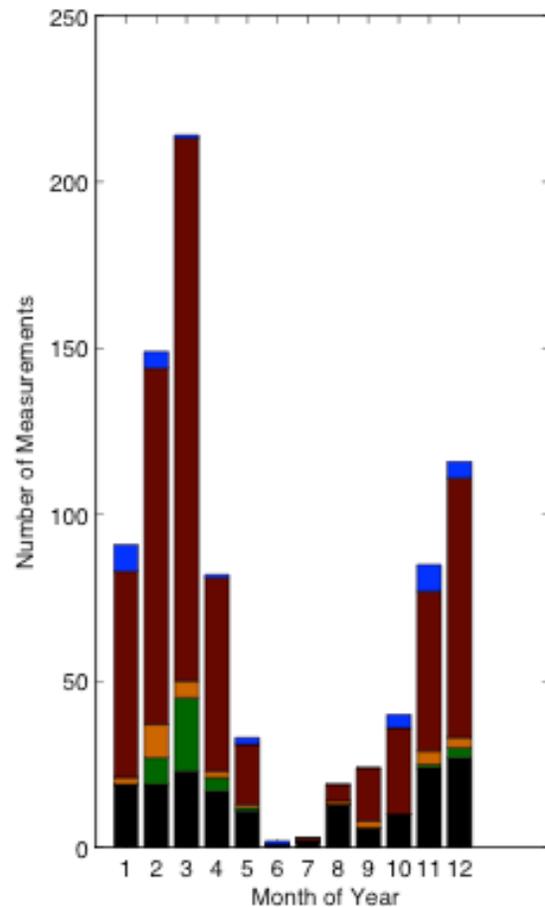
Chen-Kung University Taiwan

Aerosol Composition: Chen-KungUniv



LONG = 120.217 LAT = 23

Data for 2002 – 2012

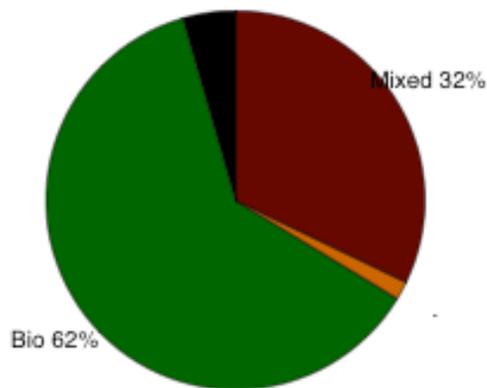


This instrument is located in the southern part of the historic Tainan City metropolitan area [population ~ 1.8 million]. The site is urban, it lies less than 12 km from the western shore on the southwest portion of the island of Taiwan. Similar to many large Asian cities, the seasonal aerosol is of 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.

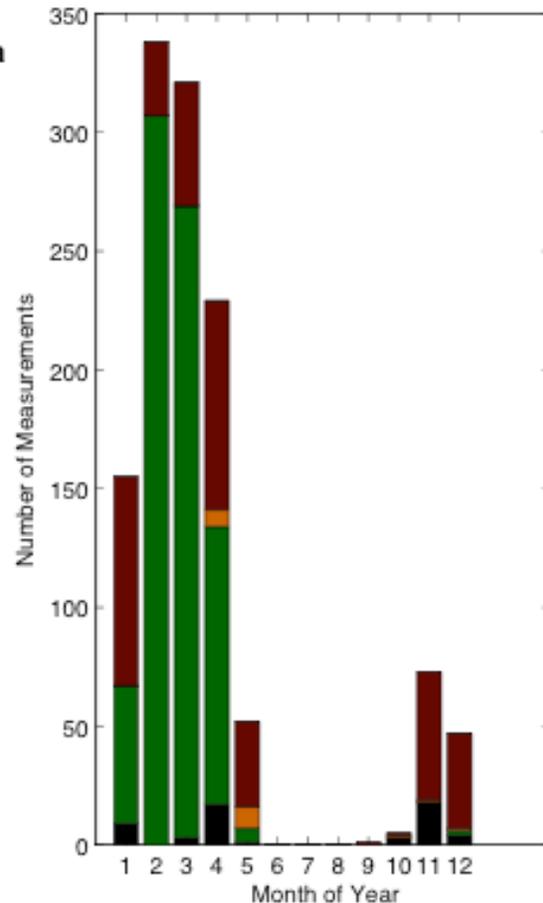
[Return to Table](#)

Chiang Mai, Thailand (Chiang Mai Met Station)

Aerosol Composition: ChiangMaiMetSta



LONG = 98.972 LAT = 18.771
Data for 2008 - 2011

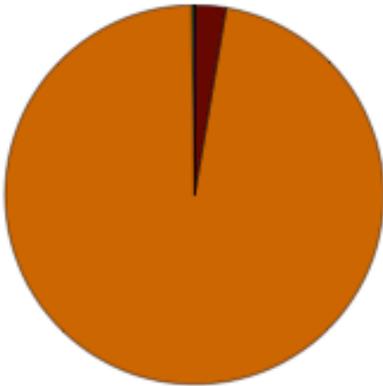


The instrument is located on the roof of the meteorological station near the airport at Chiang Mai, Thailand. Chiang Mai, with a population of about 150,000 (Metropolitan area population near one million) is the largest city in northern Thailand. Chiang Mai has acknowledged serious air pollution problems, 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.

[Return to Table](#)

Cinzana, Mali

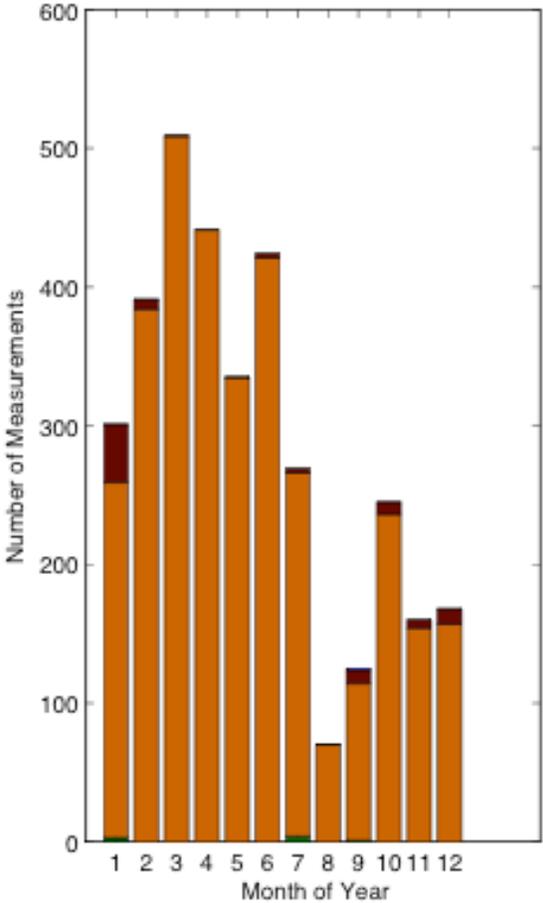
Aerosol Composition: IERCinzana



Dust 97%

LONG = -5.934 LAT = 13.278

Data for 2004 - 2012

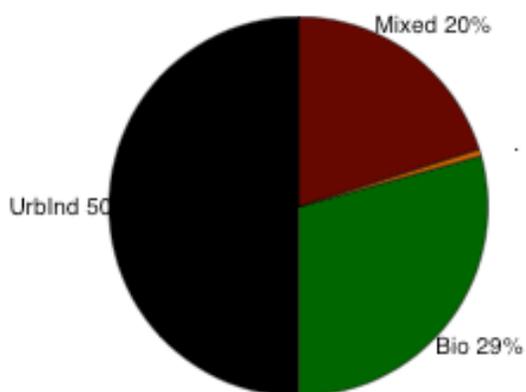


The instrument is located in a small, cultivated region near the village of Cinzana-Gare. Cinzana is a rural commune with a population of about 36,000. The region is characterized as semi-arid. The instrument is located at the IER research station. The AERONET website lists this site as IER-Cinzana.

[Return to Table](#)

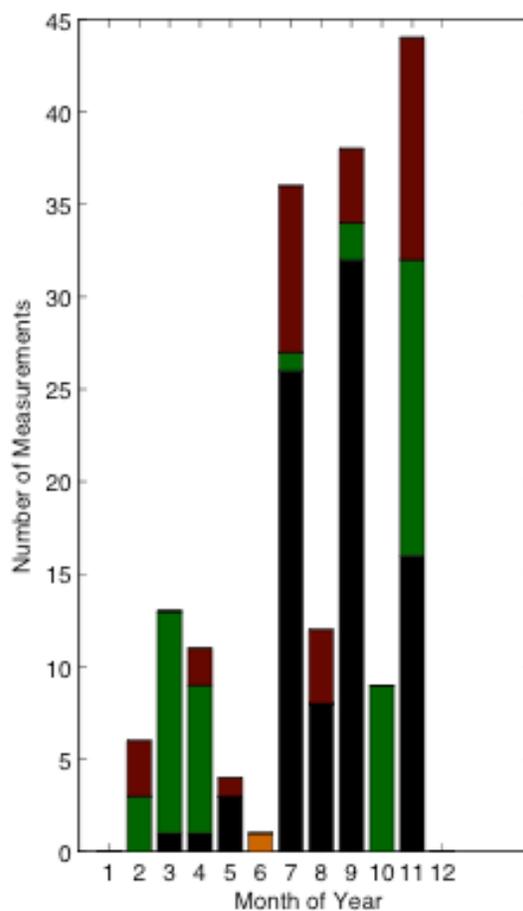
Cluj-Napoca, Romania

Aerosol Composition: Cluj



LONG = 23.551 LAT = 46.768

Data for 2010 - 2012

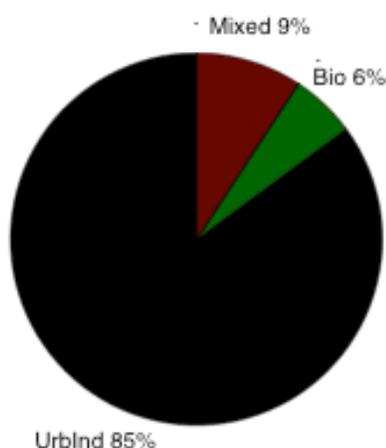


Cluj-Napoca is a city in Romania of about 330,000 inhabitants. The instrument is near the eastern boundary of the city. AERONET lists this site as CLUJ_UBB where the last three letters represent the institute that is in charge of the sun photometer.

[Return to Table](#)

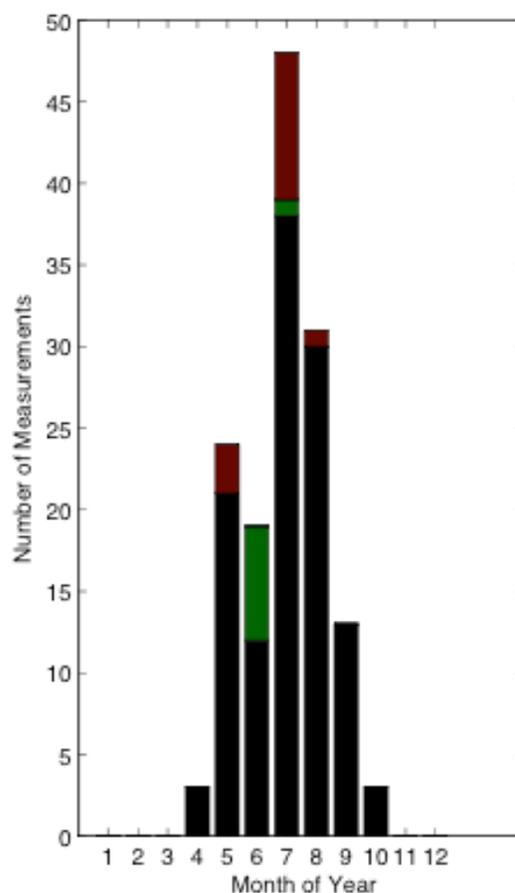
Columbia, South Carolina, USA

Aerosol Composition: ColumbiaSC



LONG = -81.036 LAT = 34.023

Data for 2002 - 2004

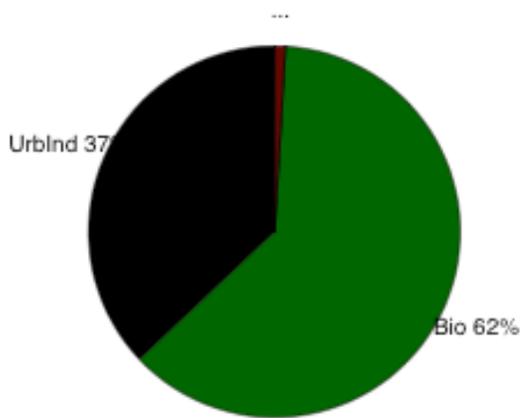


Columbia is a city in South Carolina, U.S.A. Columbia is in the center of a metropolitan area of about 800,000 people, although the population of Columbia itself is about 130,000. It has a number of important industries, and the aerosol is dominated by urban industrial. The site is no longer active.

[Return to Table](#)

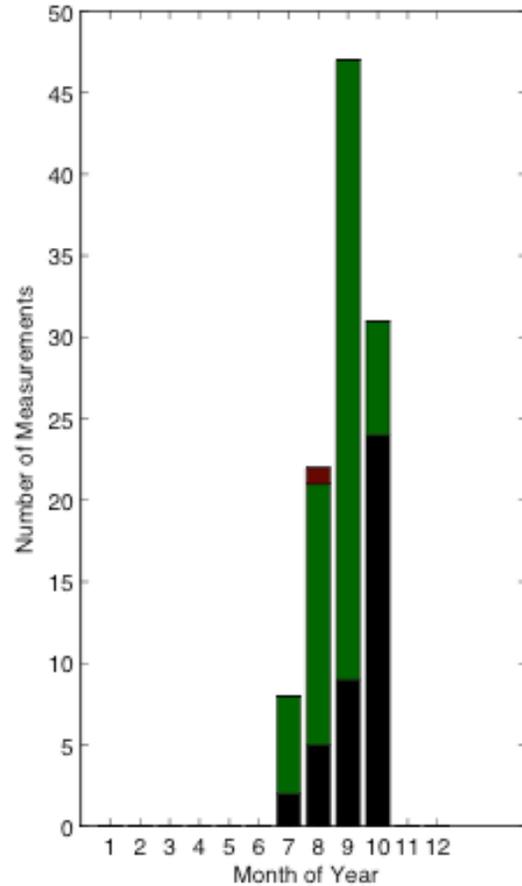
Concepcion, Bolivia

Aerosol Composition: Concepcion



LONG = -62.028 LAT = -16.138

Data for 1998 - 2000

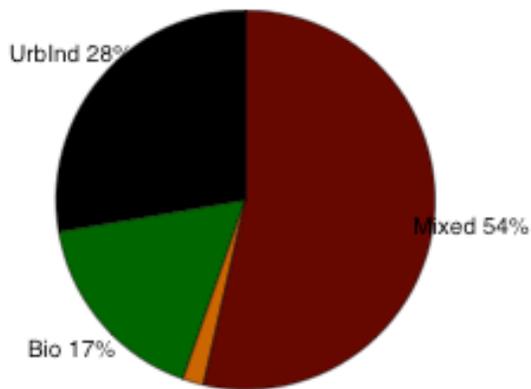


Concepcion is a town of about 8000 inhabitants in the lowlands of Eastern Bolivia. The AERONET site is no longer active. There are no nearby cities. The aerosol identified at urban industrial might be a mis-identification of biomass aerosol.

[Return to Table](#)

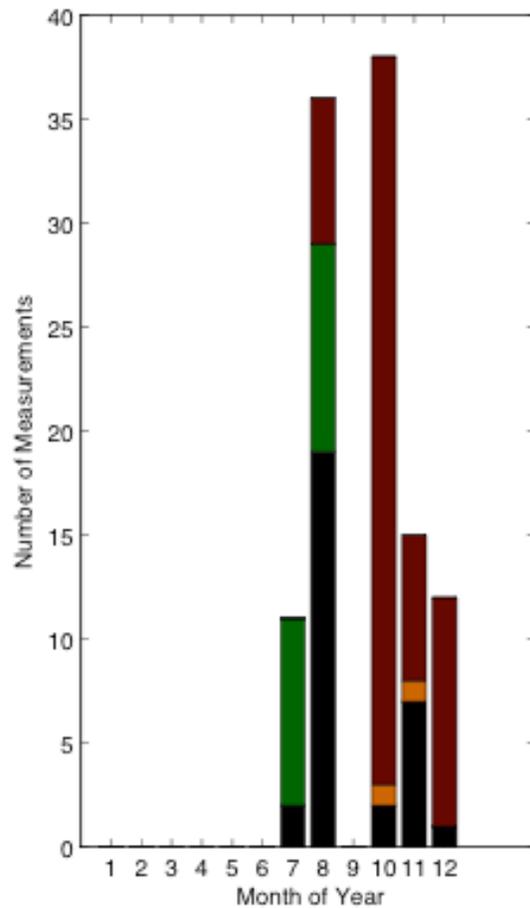
Corcoran, California, USA

Aerosol Composition: Corcoran



LONG = -119.566 LAT = 36.103

Data for 2002 - 2002

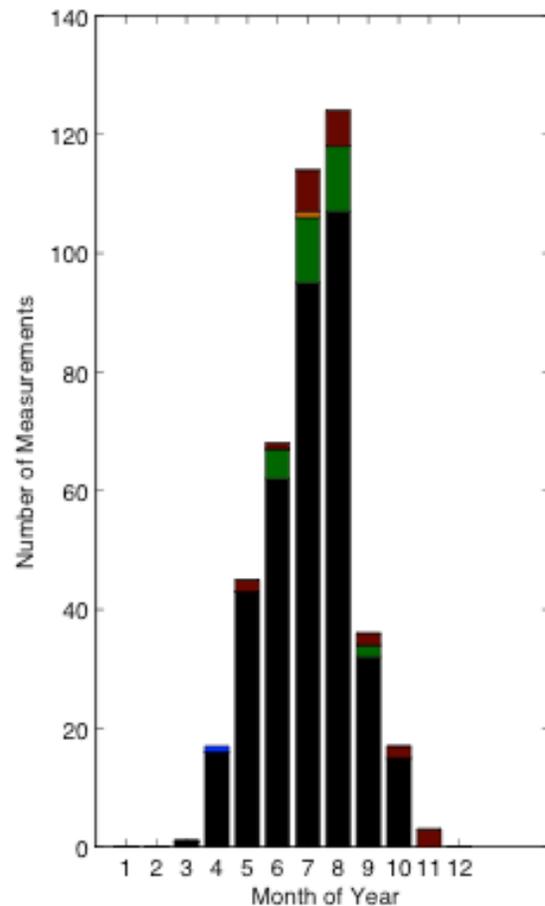
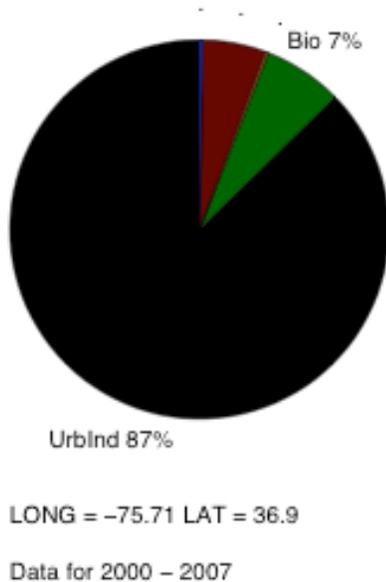


Corcoran is a small town (population 30,000) in the central valley of California, about 80 km south of Fresno, California. It lies in an agricultural region, but the main industry in Corcoran are the correctional facilities (prisons).

[Return to Table](#)

COVE (CERES Ocean Validation Experiment), Virginia, USA

Aerosol Composition: COVE

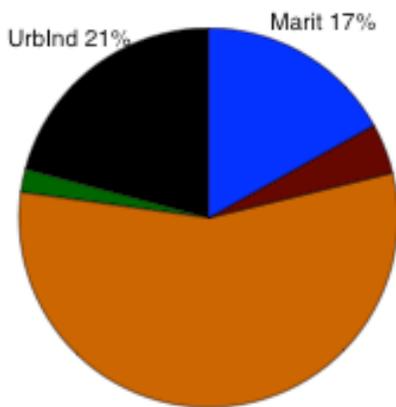


The instrument is mounted on a platform about 25 km from the Virginia coast in the Atlantic Ocean. It is interesting to note that although the instrument is at sea, the aerosol appears to be primarily urban industrial.

[Return to Table](#)

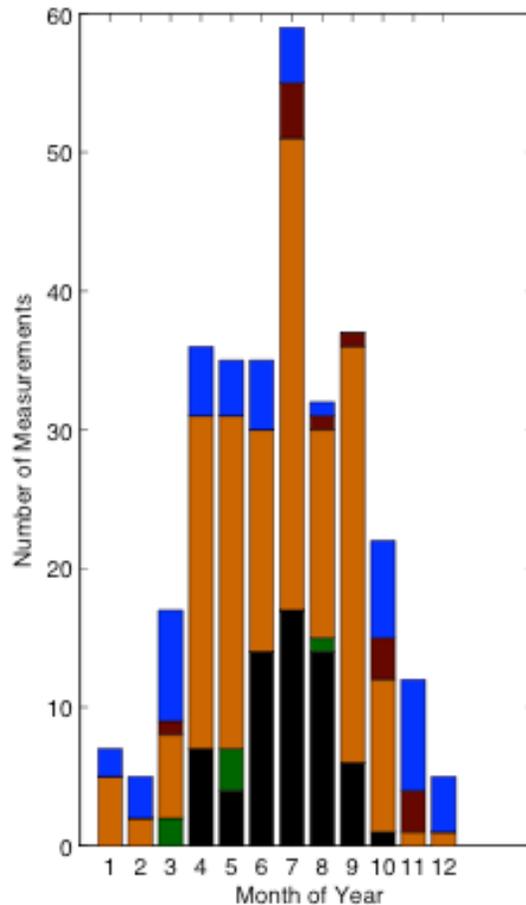
Crete, Greece (FORTH)

FORTH, CRETE



LONG = 25.282 LAT = 35.333

Data for 2003 – 2011

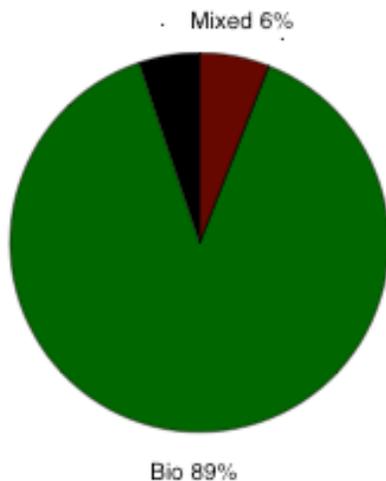


This instrument is on the north side of the island of Crete, approximately 500 meters from the Sea of Crete (south of the Aegean Sea). It is 12 km west of Heraklion, the main city of Crete, with a population of 180,000. The instrument is operated by Institute of Oceanography at the Hellenic Centre for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

[Return to Table](#)

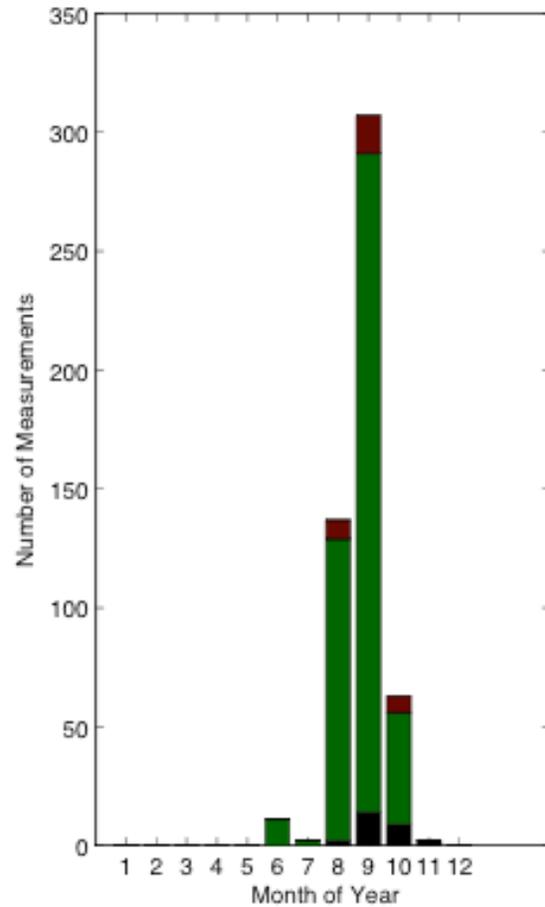
Cuiaba, Brazil

Aerosol Composition: Cuiaba-Miranda



LONG = -56.021 LAT = -15.729

Data for 2001 - 2011

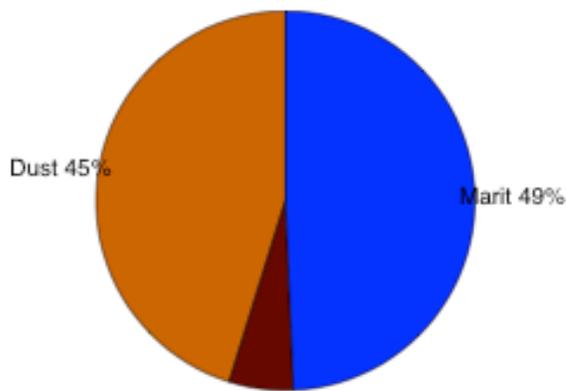


Cuiaba is a city in Western Brazil with a population of nearly one million. It claims to be located at the exact center of South America. The region is largely agricultural. The site is no longer active. In the AERONET website it is denoted CUIABA-MIRANDA.

[Return to Table](#)

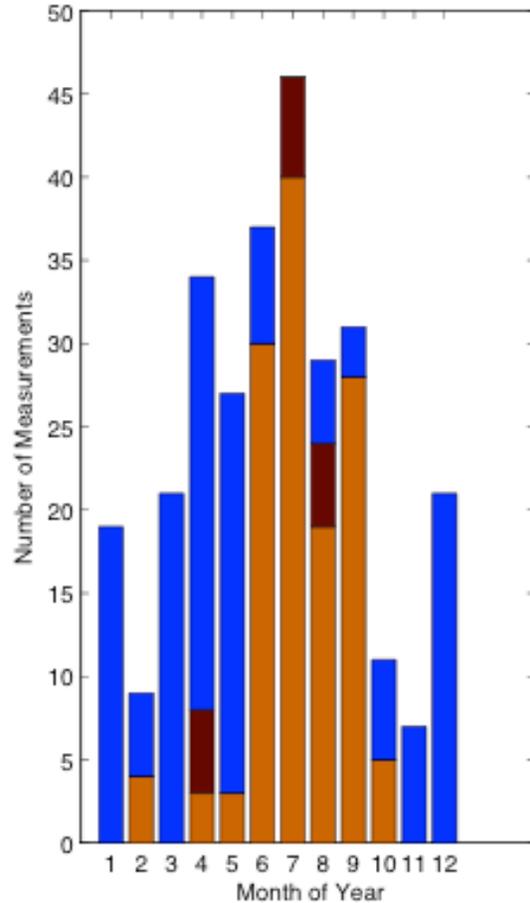
Dahkla, Morocco

Composition of Aerosols: Dahkla



LONG = -15.95 LAT = 23.717

Data for 2002 - 2003

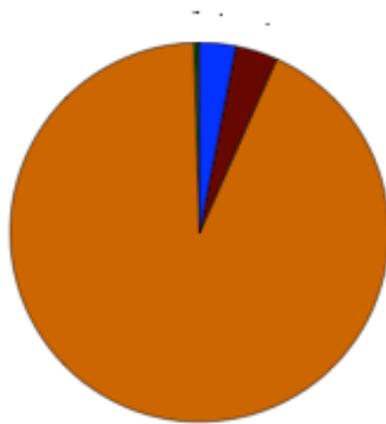


Dahkla is located in the south of the Moroccan Sahara. Dakhla is on a narrow peninsula that extends along the northwestern coast of Africa into the Atlantic Ocean. The population is about 50,000. The local aerosol is almost exclusively dust in the summer months and maritime otherwise. This location is 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.

[Return to Table](#)

Dakar, Senegal

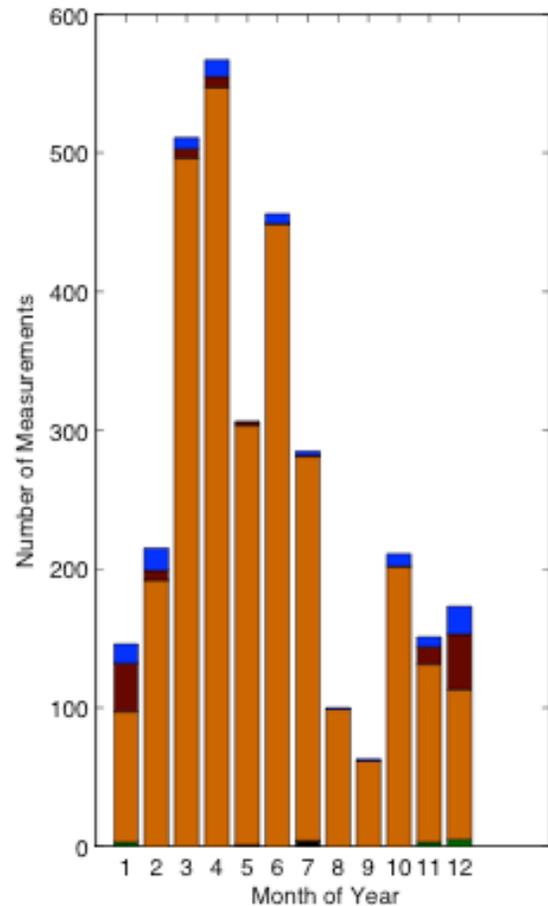
Composition of Aerosols: Dakar



Dust 93%

LONG = -16.959 LAT = 14.394

Data for 1996 - 2012

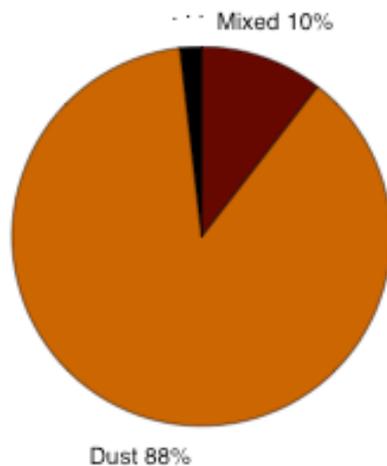


The sun photometer is actually at M'Bour a city of about 150,000 some 90 km south of Dakar. Although the sun photometer is on the seashore of the Atlantic Ocean, the number of maritime aerosol identifications is rather small. The region to the northeast is the vast Sahara - considered a source for dust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

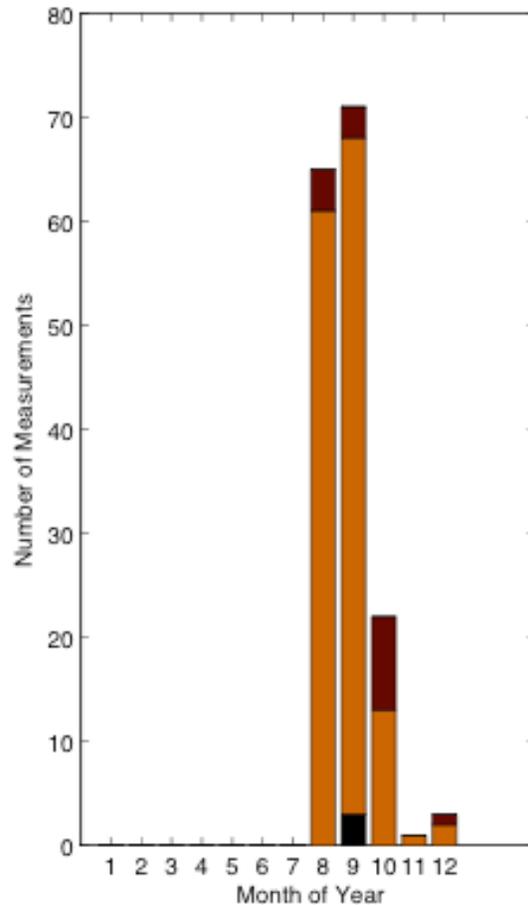
[Return to Table](#)

Dalma, UAE

Aerosol Composition: Dalma



LONG = 52.332 LAT = 24.502
Data for 2004 – 2004

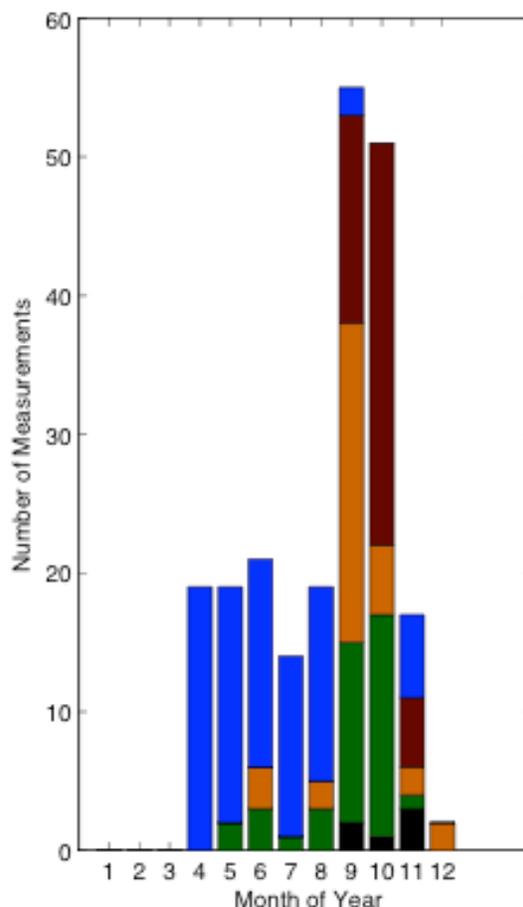
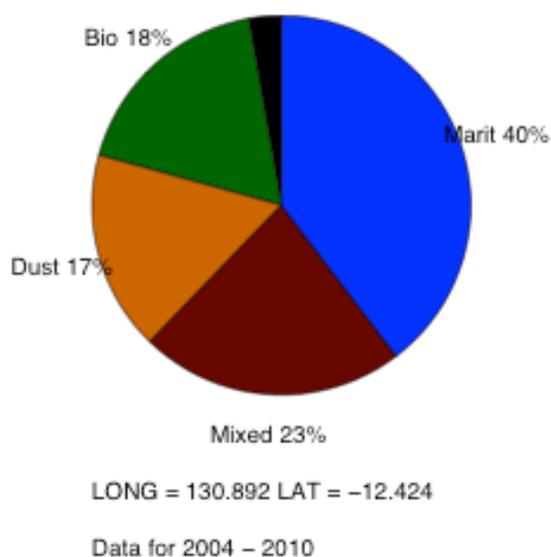


Dalma, United Arab Emirates, is an island of the coast of Abu Dhabi in the Persian Gulf, about 30 km from the shore. The population of the island is about 10,000. Complete AERONET inversions were only carried out for the months of August to December, 2004.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008. [Return to Table](#)

Darwin, Australia

Composition of Aerosols: Darwin

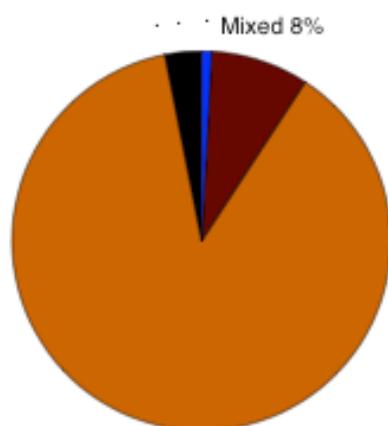


Darwin is the capital city of the Northern Territory of Australia, with a population of about 130,000. The instrument is located near Darwin International Airport and about 5 km from the shore of the Timor Sea. The instrument is deployed by the United States Department of Energy Atmospheric Radiation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

[Return to Table](#)

Dhadnah, UAE

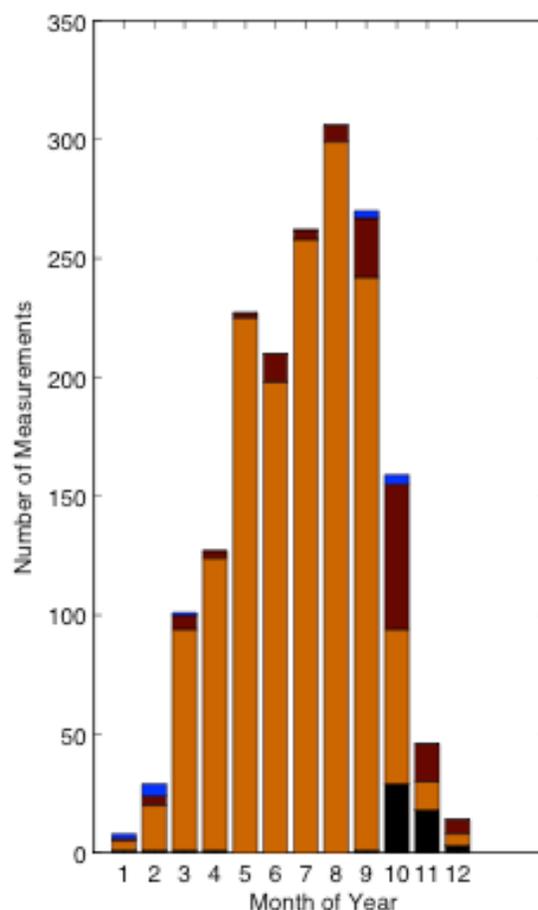
Composition of Aerosols: Dhadnah



Dust 88%

LONG = 56.325 LAT = 25.513

Data for 2004 – 2010

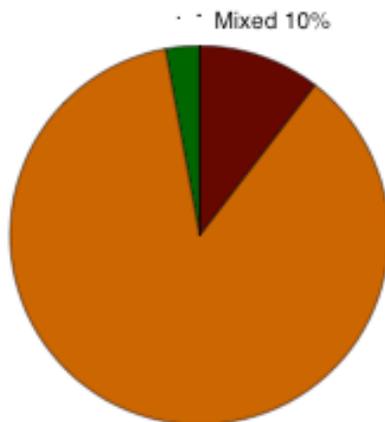


Dhadnah (or Dadna) is a village in Fujairah in the UAE. It lies on the northeast side of the Arabian Peninsula, facing the Gulf of Oman. The aerosol is almost exclusively of a dust type throughout the year. There is no local industry.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008. [Return to Table](#)

Djougou, Benin

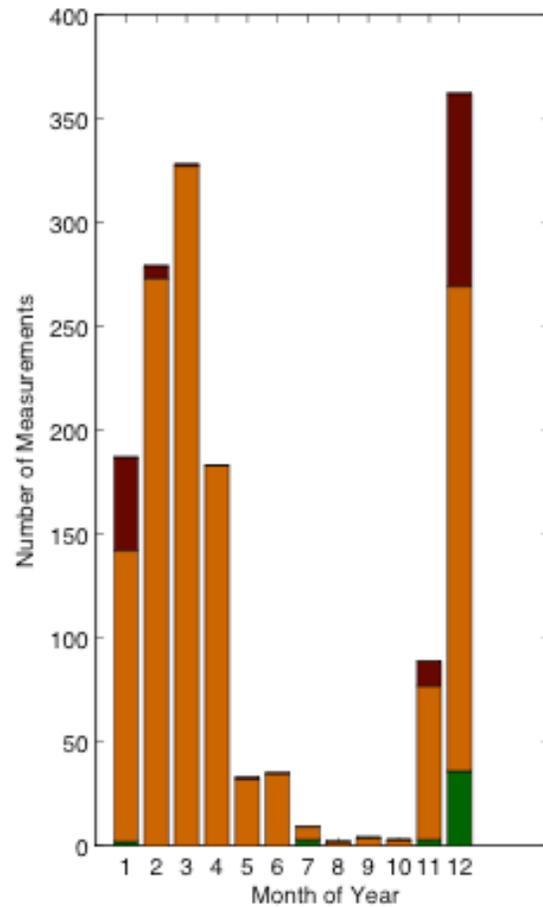
Aerosol Composition: Djougou



Dust 87%

LONG = 1.599 LAT = 9.76

Data for 2004 - 2007

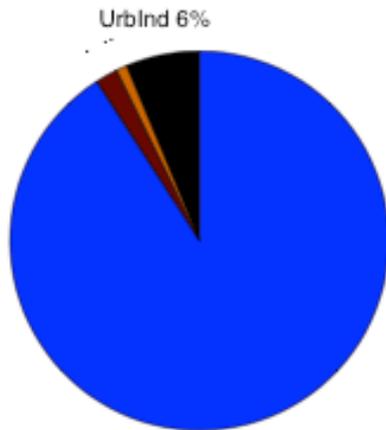


Djougou is a city of about 180,000 in northern Benin, in western Africa. The instrument is located about 10 km northwest of Djougou. The region is arid and lies about 200 km from the southern edge of the Sahara Desert.

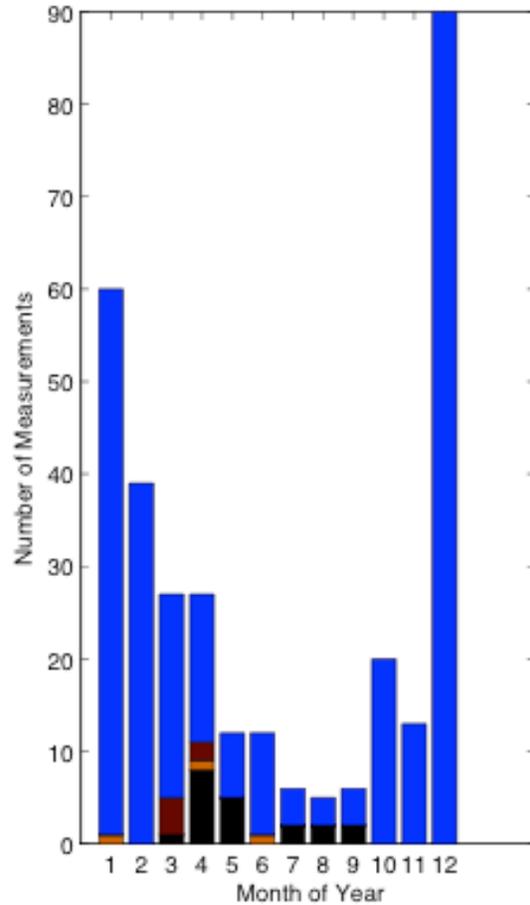
[Return to Table](#)

Dry Tortugas, Florida, USA

Composition of Aerosols: DryTortugas



LONG = -82.872 LAT = 24.628
Data for 1996 - 2003

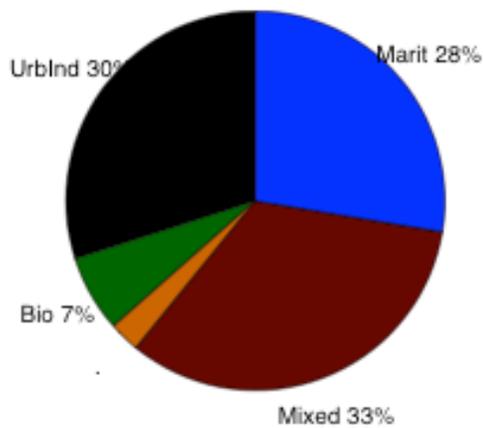


The Dry Tortugas form a group of islands located at the end of the Florida Keys, about 100 km beyond Key West. The instrument is located near the shore, on a tiny island.

[Return to Table](#)

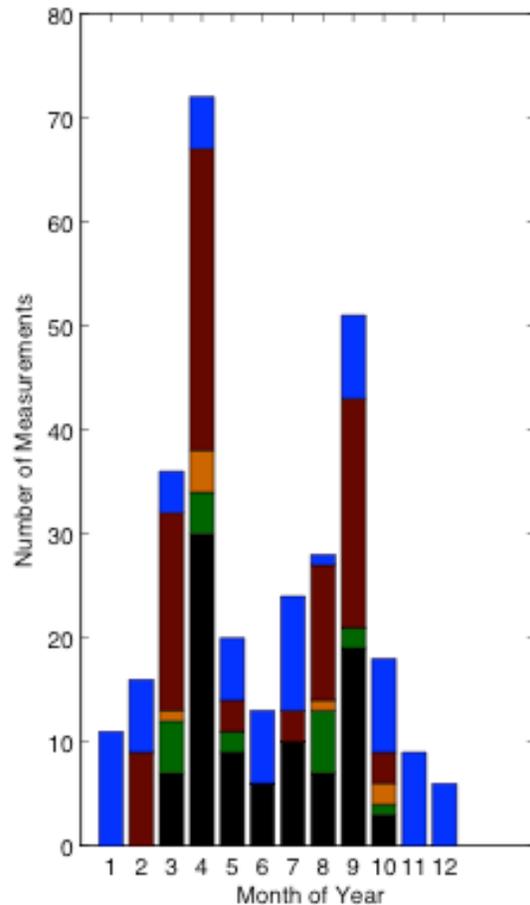
Dunkerque, France

Composition of Aerosols: Dunkerque



LONG = 2.368 LAT = 51.035

Data for 2003 – 2012

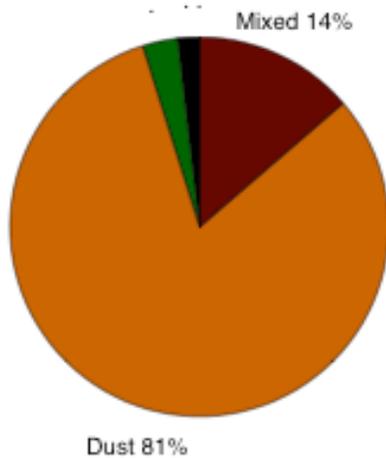


Dunkerque is a city of about 80,000 in a metropolitan region of about 270,000. It is located on the coast of Northern France, near the Belgian border. The instrument is located near the harbor. Its climate is classified as “marine west coast.” It is an important port city and an industrial center depending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

[Return to Table](#)

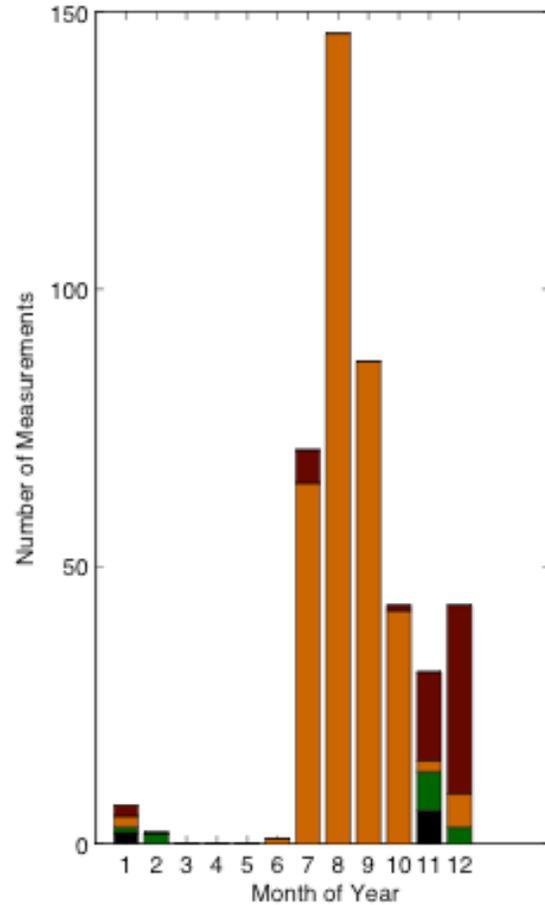
Dushanbe, Tajikistan

Aerosol Composition: Dushanbe



LONG = 68.858 LAT = 38.553

Data for 2010 – 2012

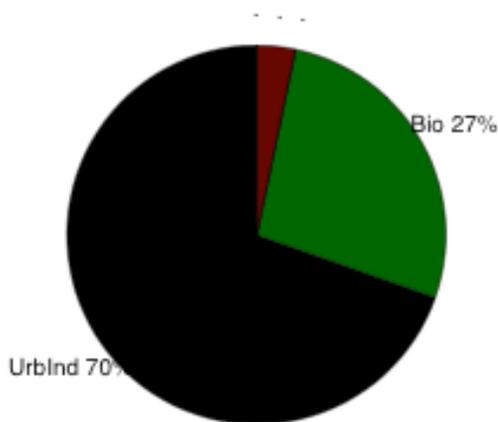


The sun photometer is located near the eastern edge of the city of Dushanbe (population 680,000). Tajikistan is a small landlocked country whose economy is largely agricultural. The climate of Tajikistan is described as semi-arid with some desert regions.

[Return to Table](#)

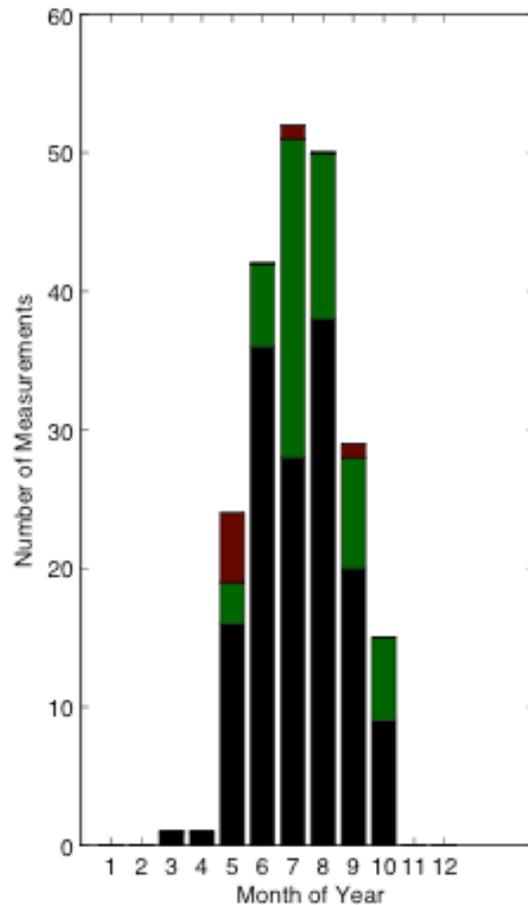
Egbert, Canada

Aerosol Composition: Egbert



LONG = -79.75 LAT = 44.226

Data for 1998 - 2012

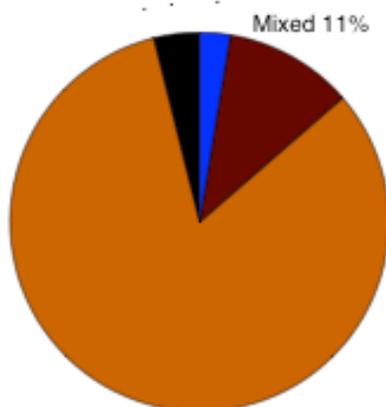


This instrument is located at Environment Canada's CARE Facility in Egbert. The Centre for Atmospheric Experiments (CARE) was designed as an integrated multi-disciplinary facility to promote atmospheric research. (It is also classified as a 'CORE' station for meteorological, particulate matter and trace 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.

[Return to Table](#)

Eilat, Israel

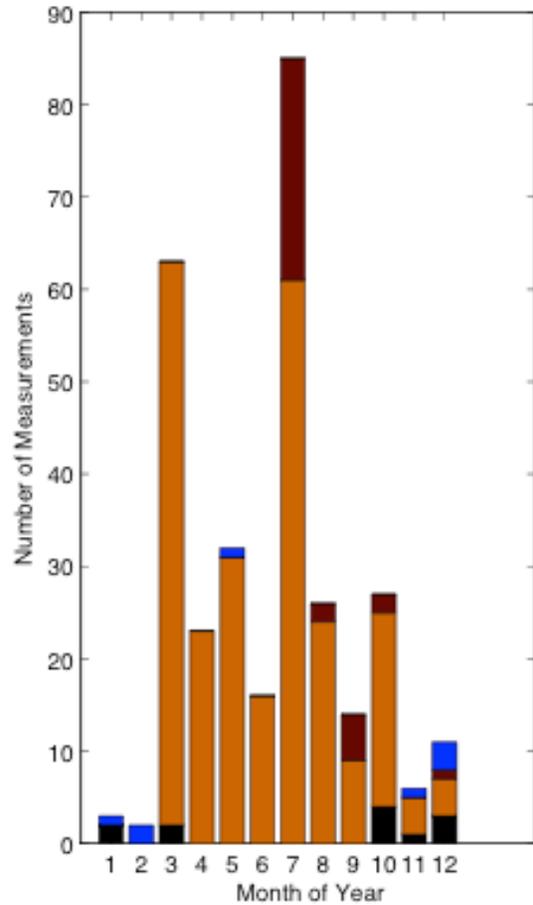
Composition of Aerosols: Eilat



Dust 82%

LONG = 34.917 LAT = 29.503

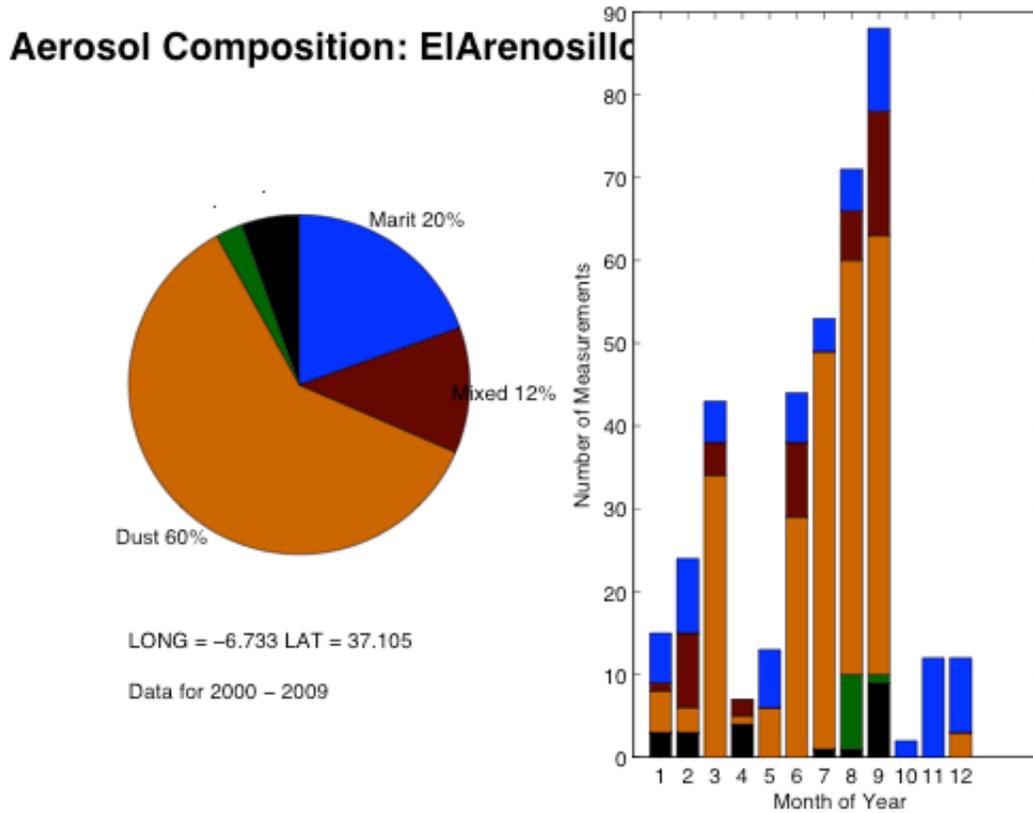
Data for 2007 – 2012



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.

[Return to Table](#)

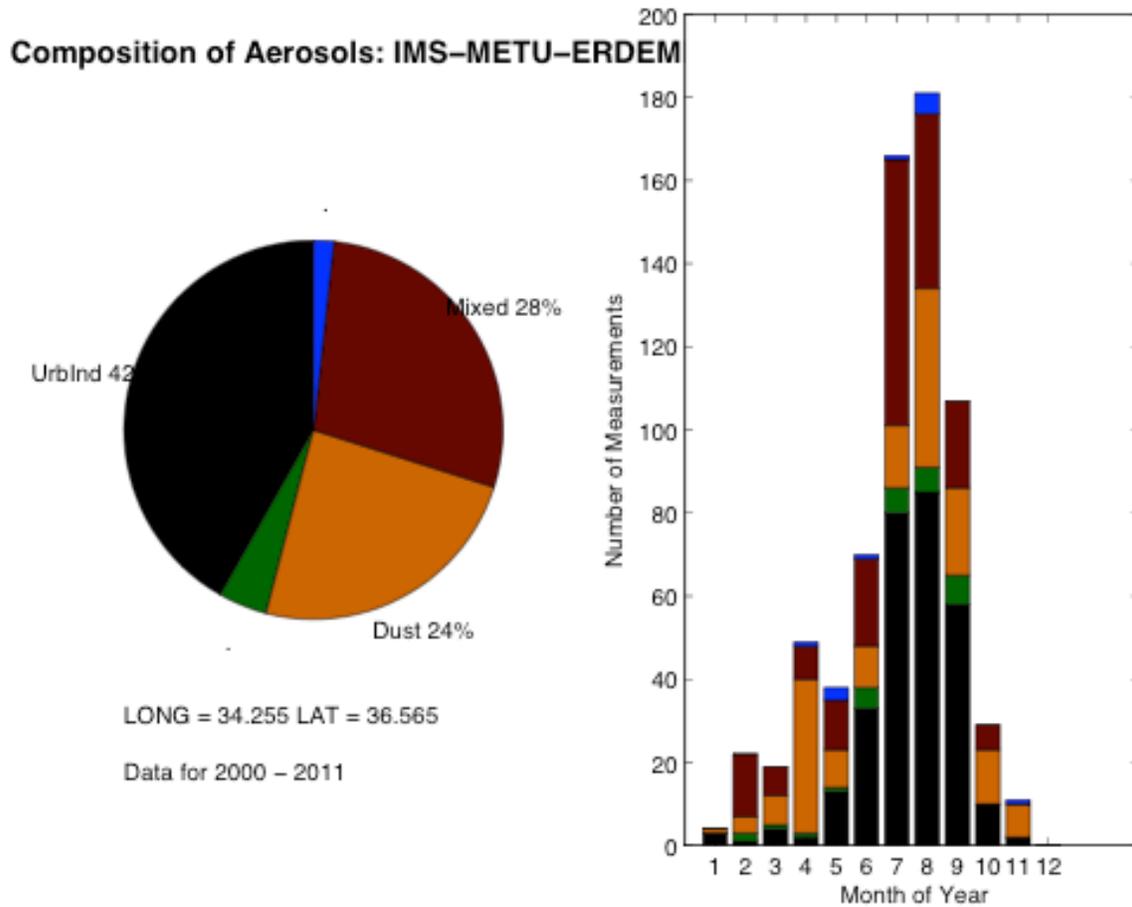
El Arenosillo, Spain



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.

[Return to Table](#)

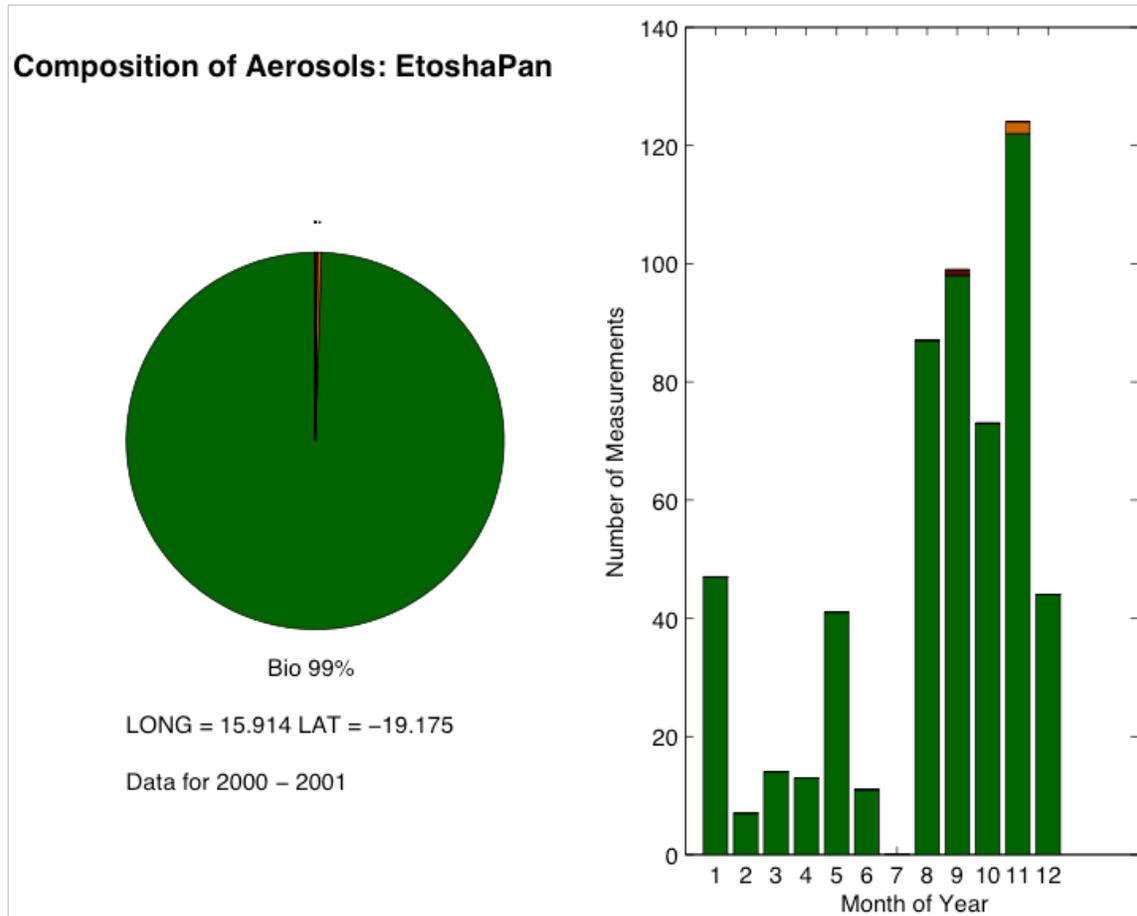
Erdemli, (IMS-METU), Turkey



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.

[Return to Table](#)

Etosha Pan, Namibia

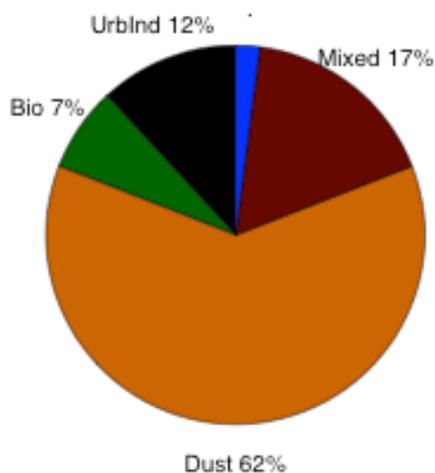


Etosha Pan is a large salt flat, formed from a 120 km long dry lake bed in the Kalahari region of northeastern Namibia about 120 km south of the Angolan border. The instrument was located in the Okaukuejo Camp, some 2 km outside the southern Etosha National Park. The region is sparsely inhabited. The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

[Return to Table](#)

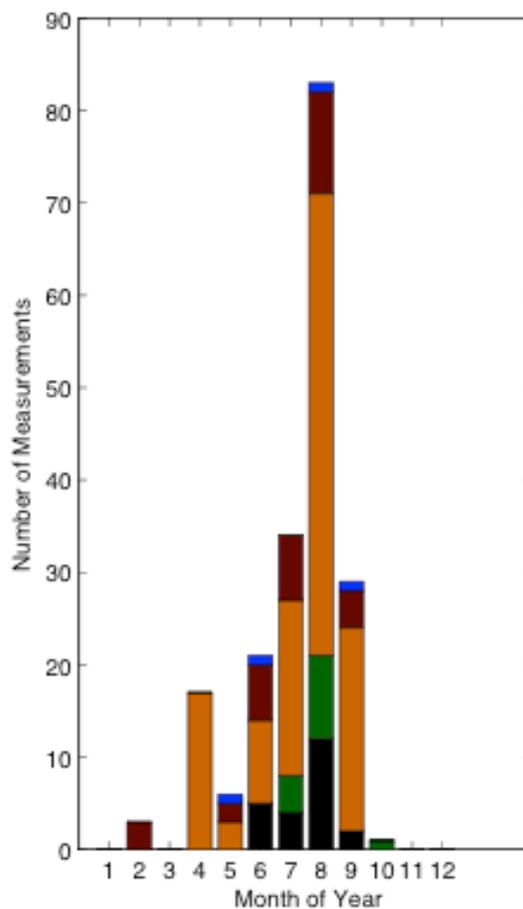
Evora, Portugal

Aerosol Composition: Evora



LONG = -7.912 LAT = 38.568

Data for 2003 - 2012

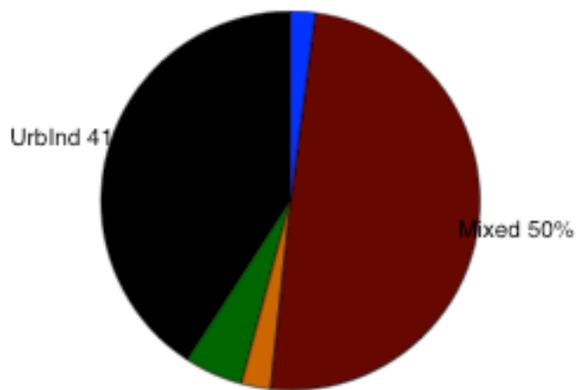


This site is located in the southwestern part of the Iberian Peninsula. The city has about 55,000 inhabitants, while the surrounding area is rural. The instrument is over 100 km inland from the Atlantic coast. There are no local sources of industrial pollutants.

[Return to Table](#)

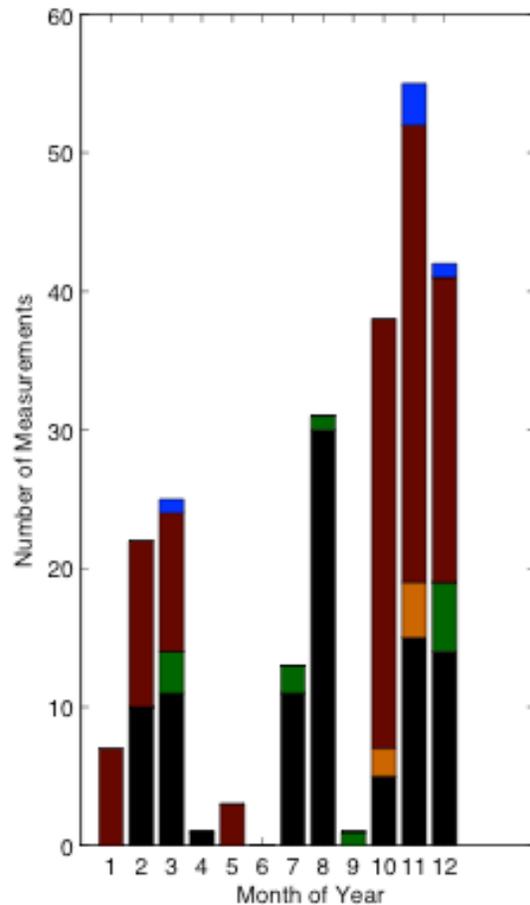
Fresno, California, USA

Aerosol Composition: Fresno



LONG = -119.773 LAT = 36.782

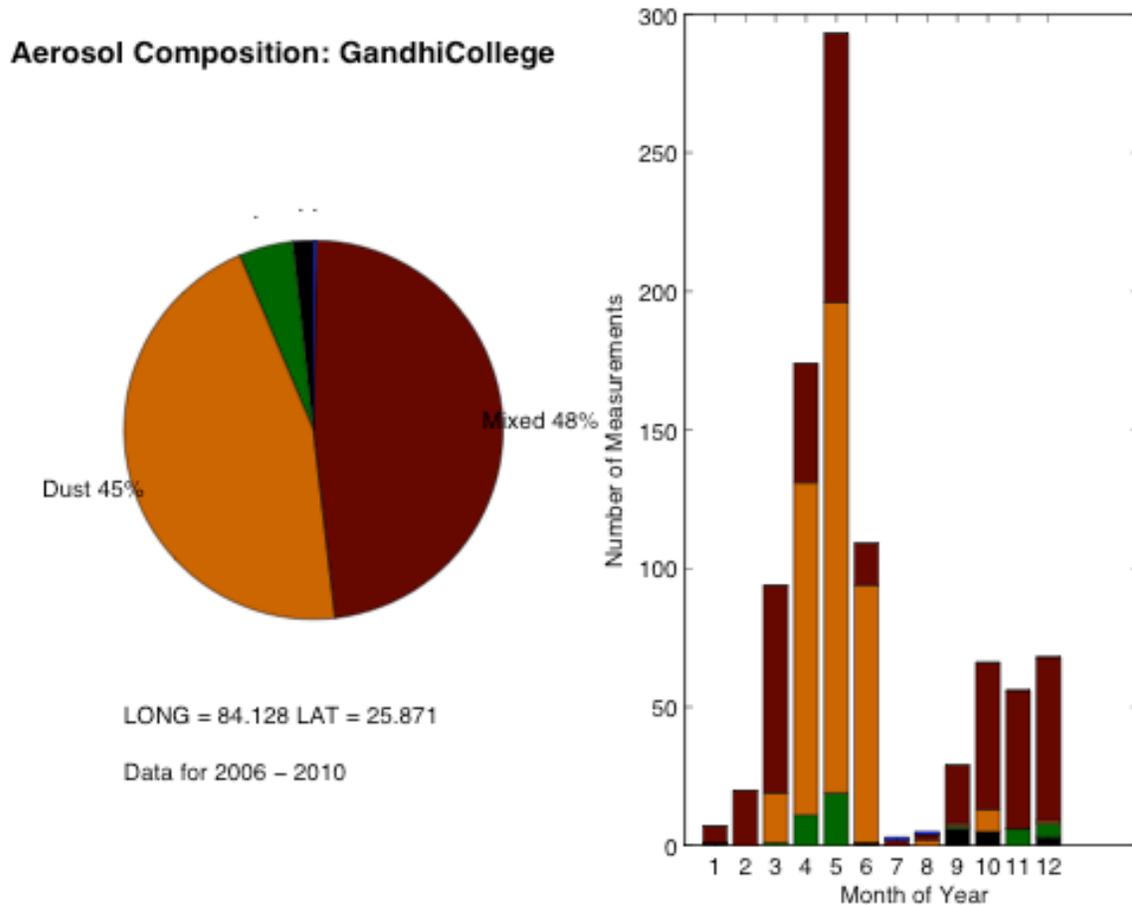
Data for 2002 - 2012



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.

[Return to Table](#)

Gandhi College, India

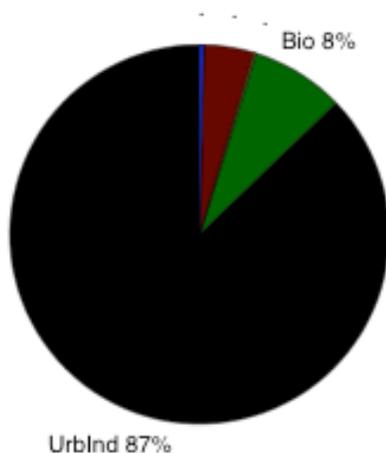


Gandhi College is in northeastern India. The instrument is located in the village of Mirdha approximately 10 km from the city of Ballia, which has a population of 3.2 million. The surrounding area is exclusively agricultural. Both food crops and cattle are prevalent regional industries. The site is south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

[Return to Table](#)

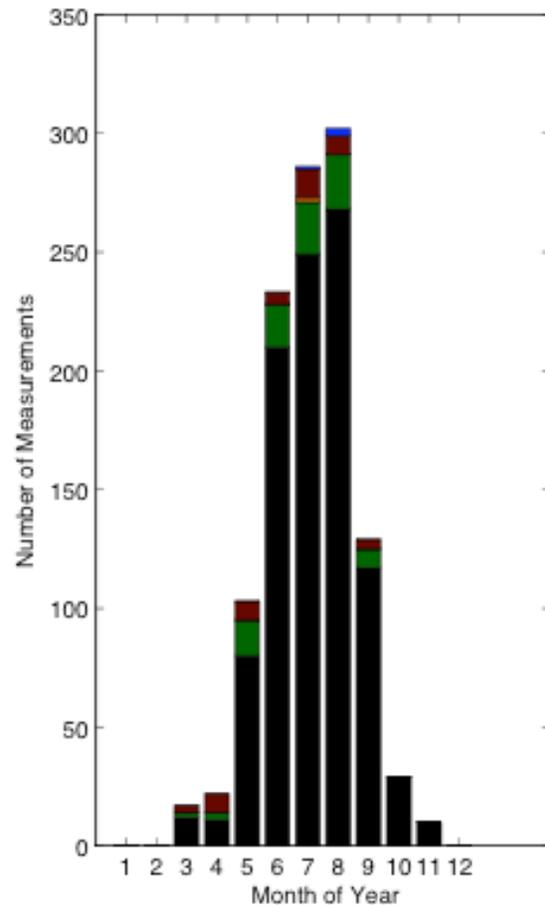
Goddard Space Flight Center (GSFC), Washington, D.C., USA

Aerosol Composition: GSFC



LONG = -76.84 LAT = 38.992

Data for 1993 - 2012

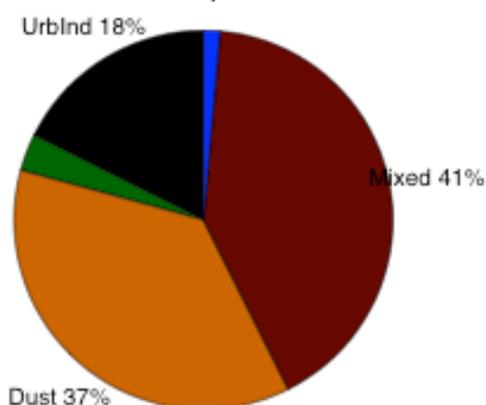


The site is at NASA's Goddard Space Flight Center, and is listed as GSFC in the AERONET site index. It is located in Greenbelt Maryland, about 20 km north east of Washington D. C., and is considered part of the Washington D.C. metropolitan area, an urban industrial region.

[Return to Table](#)

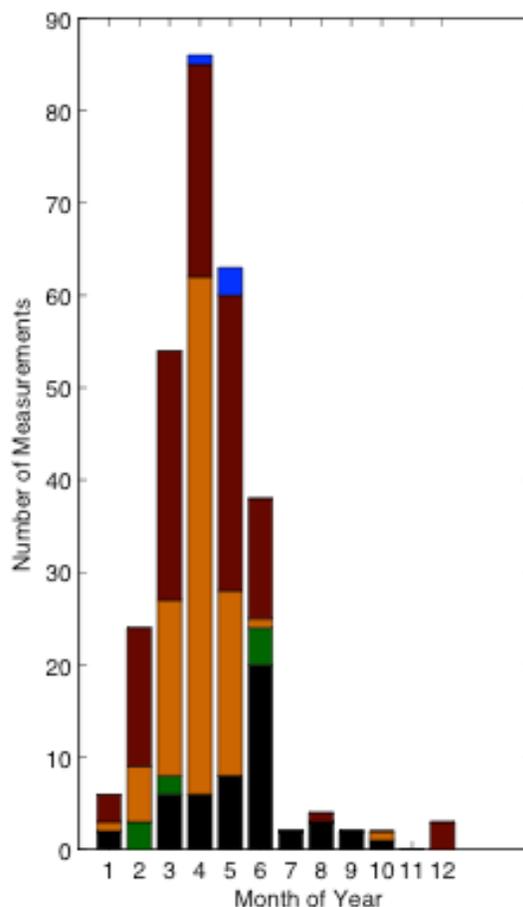
Gosan (SNU), South Korea

Composition of Aerosols: GosanSNU



LONG = 126.162 LAT = 33.292

Data for 2001 – 2011

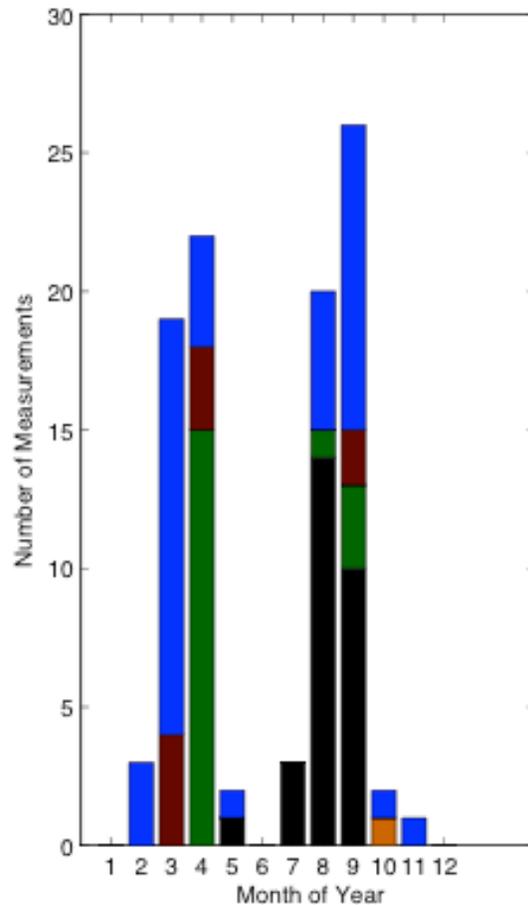
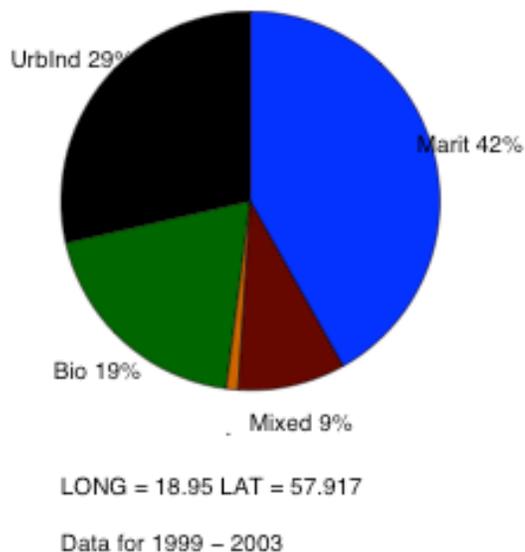


This site is on the western shore of Jeju island, approximately 100 km off the southern end of the Korean Peninsula, facing the East China Sea. The instrument is operated by the Seoul National University and is listed in the AERONET sites as Gosan_SNU. The island has a humid subtropical climate, warmer 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/>).

[Return to Table](#)

Gotland, Sweden

Composition of Aerosols: Gotland

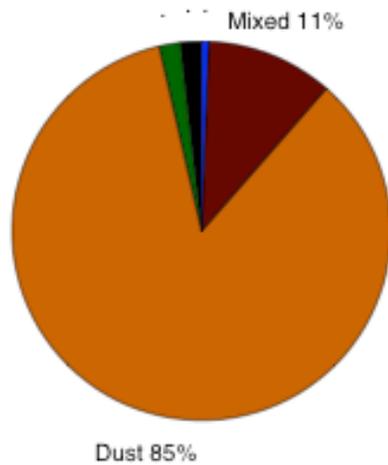


This site is on Gotland Island in the Baltic Sea some 65 km east of the coast of mainland Sweden. The population of the island is about 60,000. The instrument is located in a rural area on the north end of the island less than 200 m from the shore. There is little industry on the island, its economy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

[Return to Table](#)

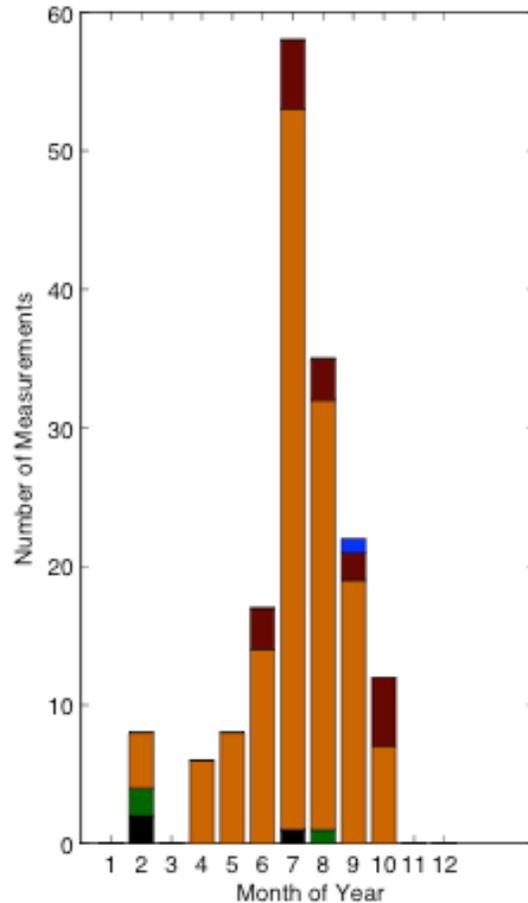
Granada, Spain

Aerosol Composition: Granada



LONG = -3.605 LAT = 37.164

Data for 2005 - 2011

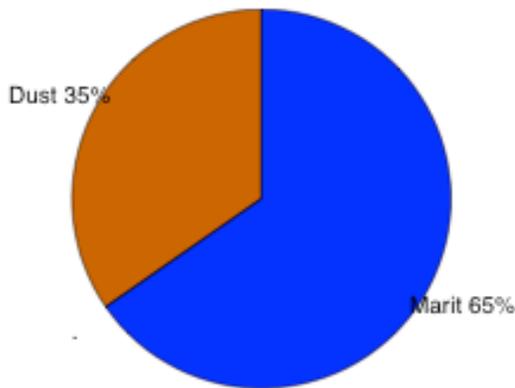


The instrument is located at the Centro Andaluz de Medio Ambiente (Andalusian Center for Environmental Studies) south of the city of Granada. Granada is a non-industrialized, medium size city with an urban area population of some 475,000 people. To the east lies the southern end of the Sierra Nevada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

[Return to Table](#)

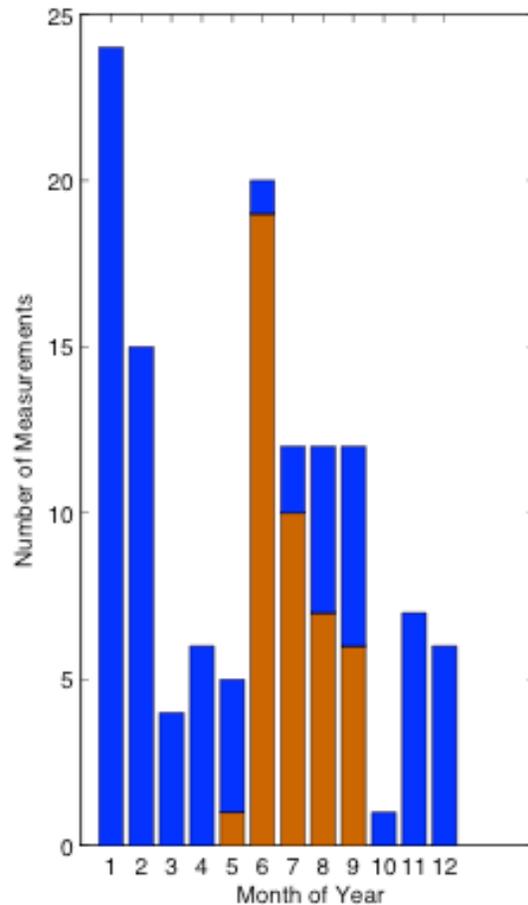
Guadeloupe, France

Composition of Aerosols: Guadeloupe



LONG = -61.5 LAT = 16.333

Data for 2001 - 2012

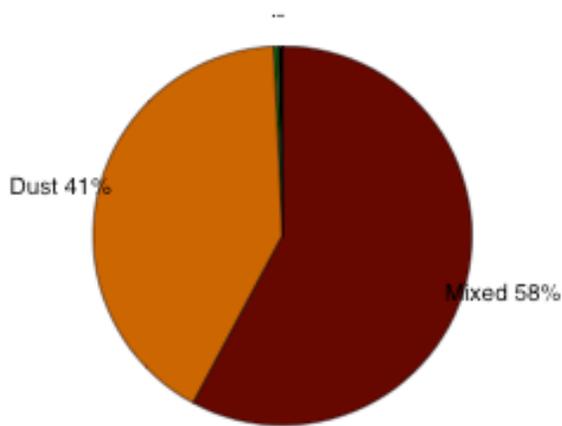


Guadeloupe is a group of islands in the Lesser Antilles and is an overseas region of France. The sun photometer is located on the north central part of the Caribbean island of Grande-Terre, less than 2 km from the shore. There is no major manufacturing industrial activity, only agriculture and tourism.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

[Return to Table](#)

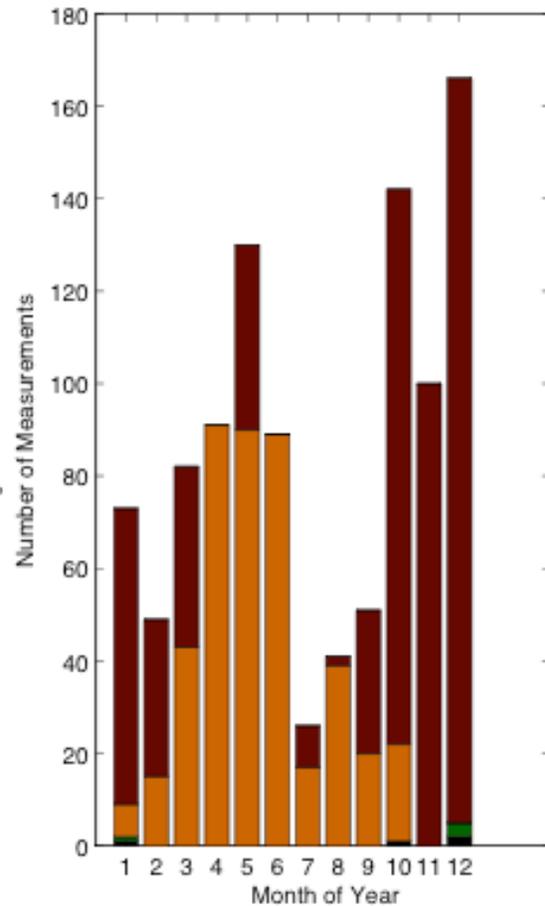
Gual Pahari, India

Aerosol Composition: GualPahari



LONG = 77.15 LAT = 28.426

Data for 2008 – 2010

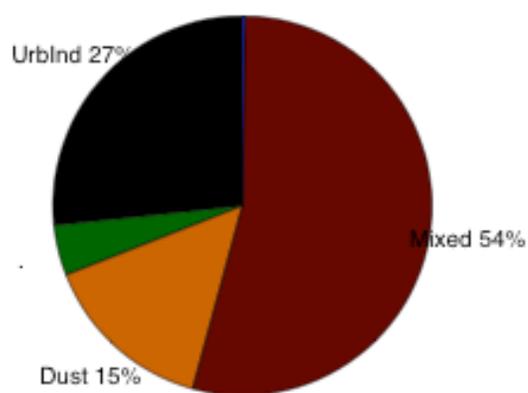


Gual Pahari is a small urban site surrounded by farms and fields. The instrument is located about 25 km south of New Delhi with a metropolitan population of some 22 million. The region has a humid sub-tropical climate, with high variation between summer and winter in terms of both temperature and rainfall.

[Return to Table](#)

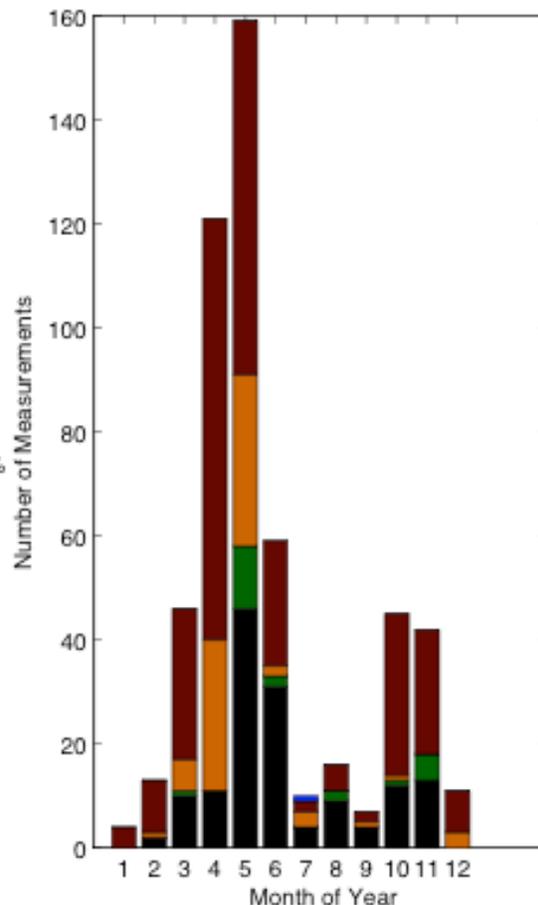
Gwangju, South Korea

Aerosol Composition: GwangjuGIST



LONG = 126.843 LAT = 35.228

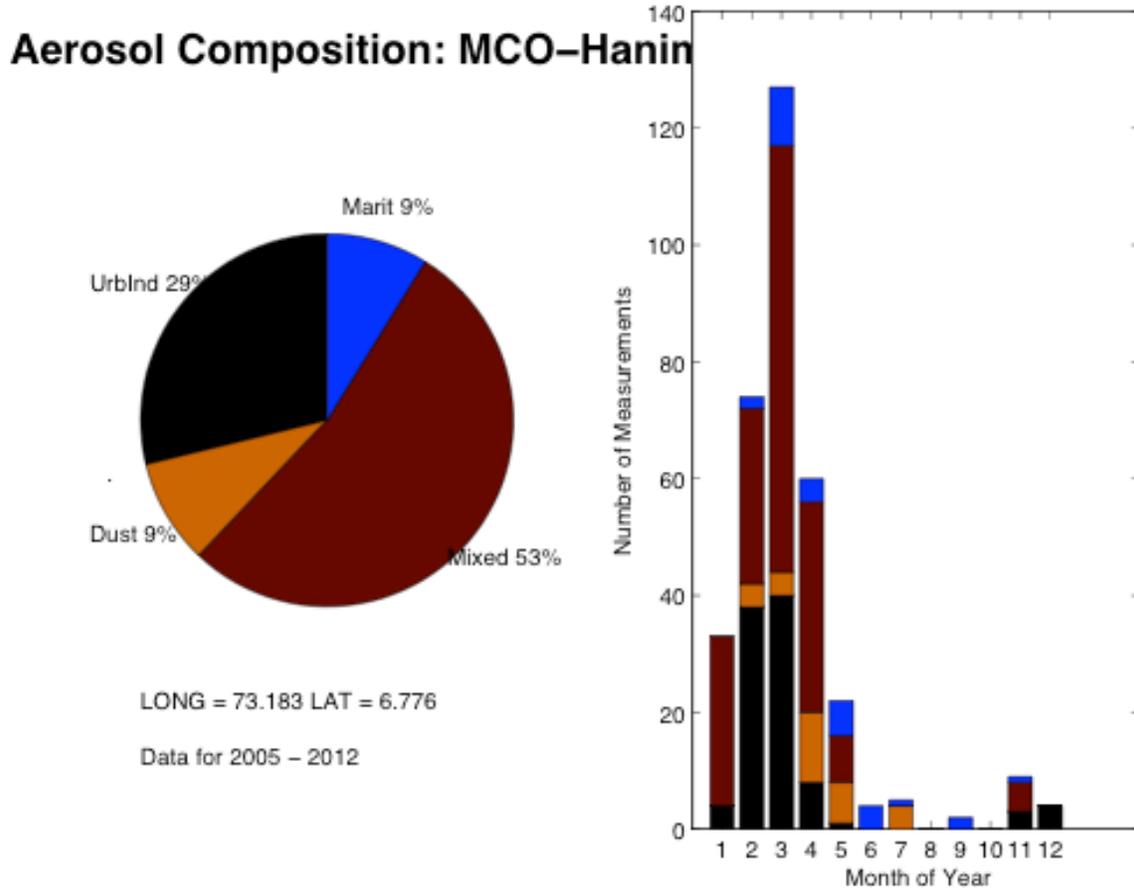
Data for 2004 – 2012



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

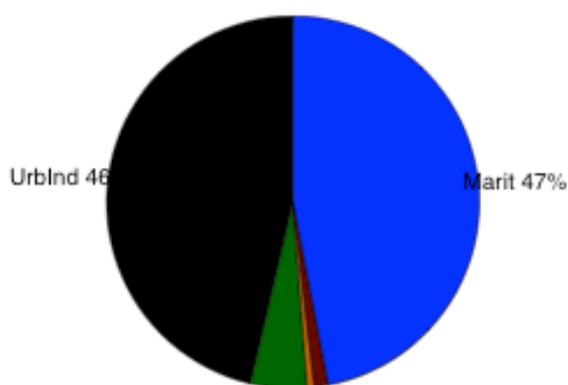


Hanimadhoo is a small Island of Maldives in Indian Ocean off the southwestern tip of India. It is an inhabited island with a population of about 2,000. This station samples air outflow from South Asia during dry season, and pristine southern hemisphere air or Saharan and Arabian dust during the wet season. 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](#)

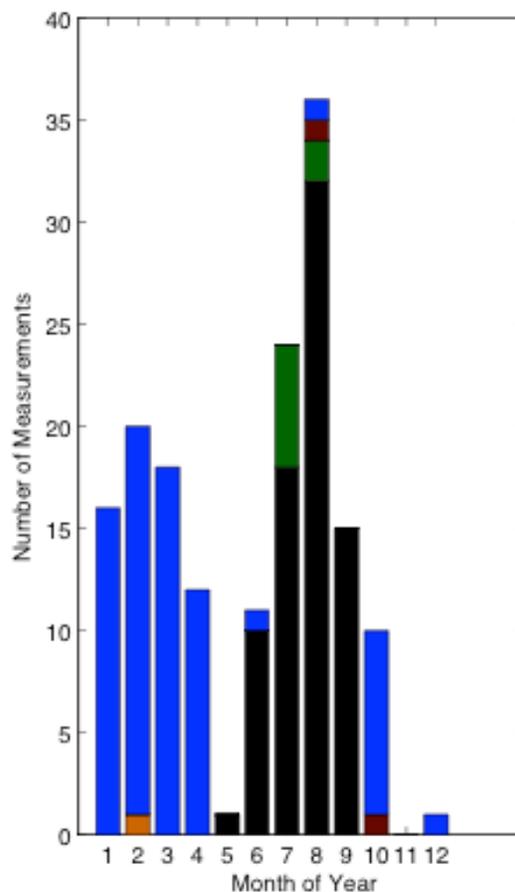
Halifax, Nova Scotia, Canada

Aerosol Composition: Halifax



LONG = -63.594 LAT = 44.638

Data for 2002 - 2012

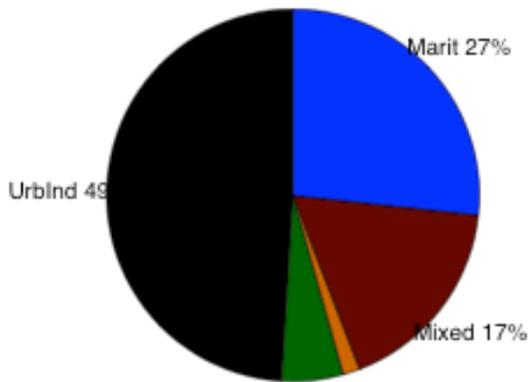


This instrument is located on the campus of Dalhousie University in Halifax, Nova Scotia, which has a population of about 300,000. Nova Scotia is a maritime province of Canada on the Atlantic coast. The instrument is less than a kilometer from Halifax harbor and less than 10 km from the Atlantic shore.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

[Return to Table](#)

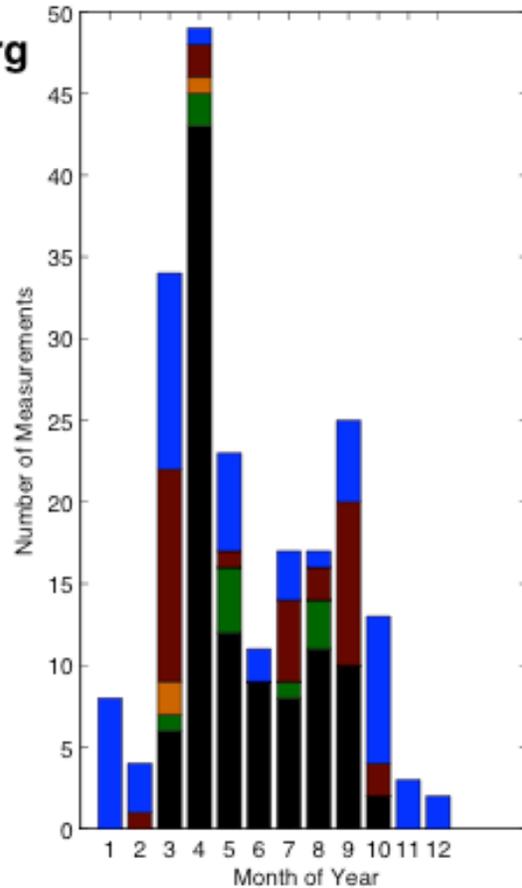
Hamburg, Germany

Aerosol Composition: Hamburg



LONG = 9.973 LAT = 53.568

Data for 2000 – 2012

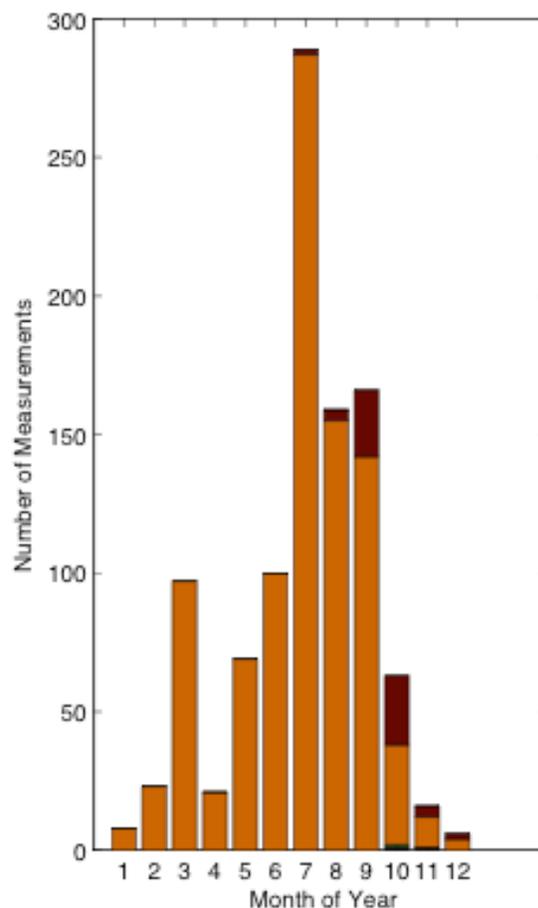
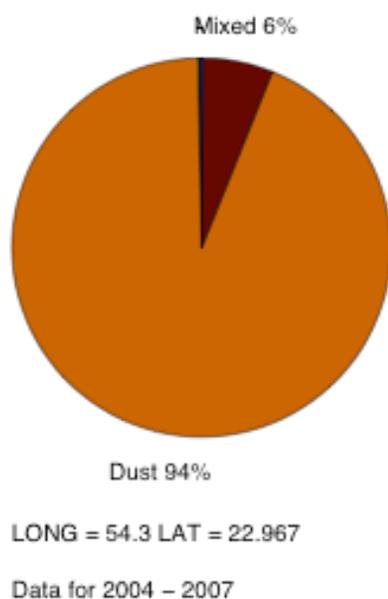


The sun photometer is located in the center of the city of Hamburg. Hamburg itself has a population of nearly 2 million and the metropolitan area has a population of more than 5 million people. It is an important port and a major industrial center. It has an oceanic climate influenced by its coastal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

[Return to Table](#)

Hamim, UAE

Aerosol Composition: Hamim



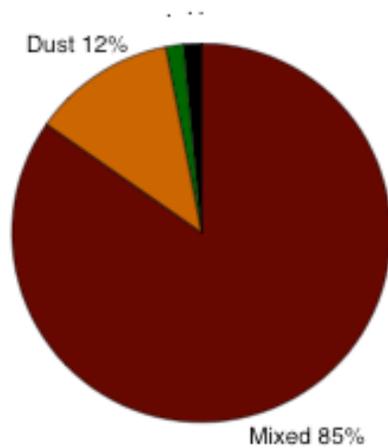
This instrument is situated at a remote location in the desert in the Southern Emirate of Abu Dhabi. The location is approximately 150 km inland, and 160 km SSW of Abu Dhabi city, and about 50 km east of the Liwa Oasis. The region is on the northern edge of Rub' al Khali desert.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008.

[Return to Table](#)

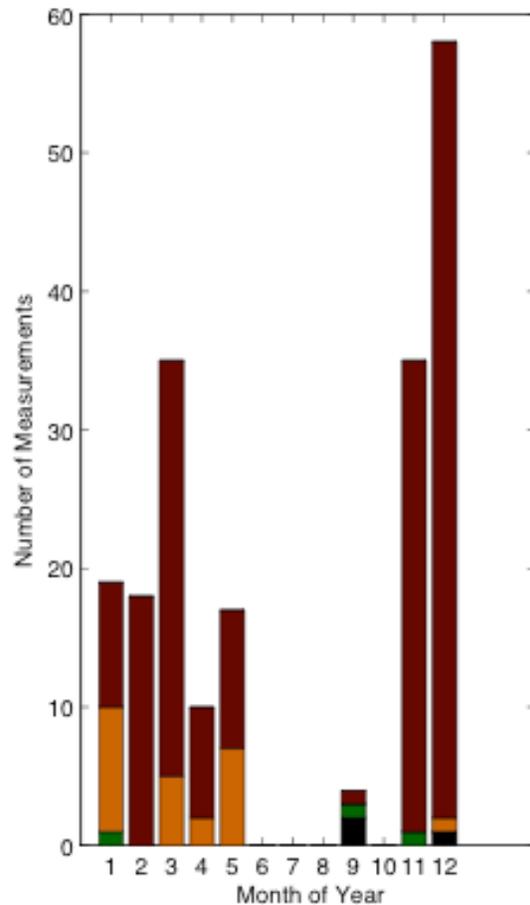
Hefei, China

Aerosol Composition: Hefei



LONG = 117.162 LAT = 31.905

Data for 2005 – 2008

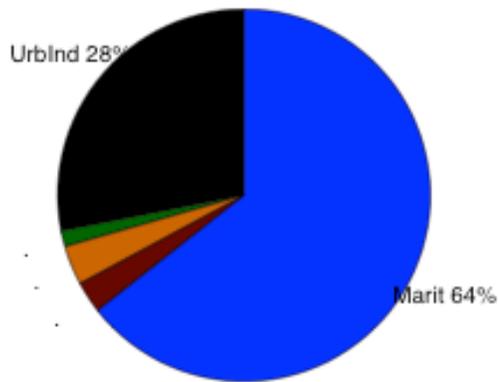


This instrument is located in Hefei, Anhui province, in eastern China. The population of Hefei is about 7.5 million inhabitants. The area is about 500 km east-northeast of Shanghai and well inland of the East China Sea. The city is industrial involving the manufacture of steel, machinery and textiles.

[Return to Table](#)

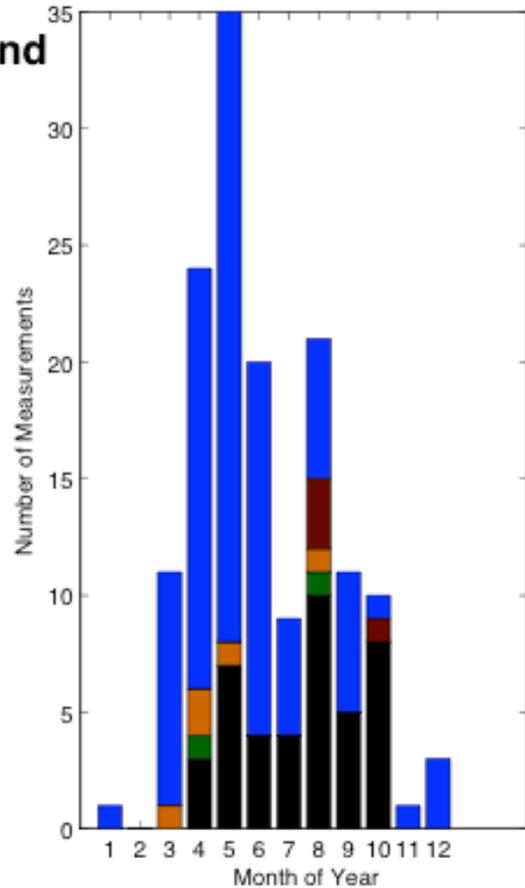
Helgoland, Germany

Aerosol Composition: Helgoland



LONG = 7.887 LAT = 54.178

Data for 2000 – 2013

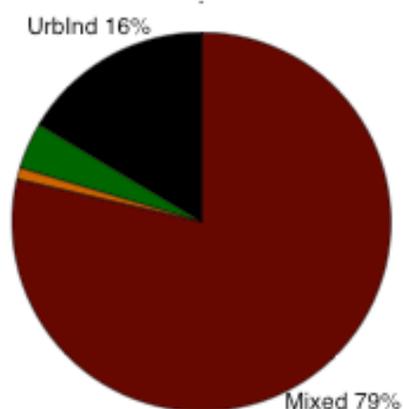


This instrument is located on a platform above the water on Helgoland Island. The location is some 50 km off the North coast of Germany in the North Sea. The island has some exposed surface land, and rocky cliffs of sandstone. There are few permanent residents (~ 1500) and imposes a ban on motorized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

[Return to Table](#)

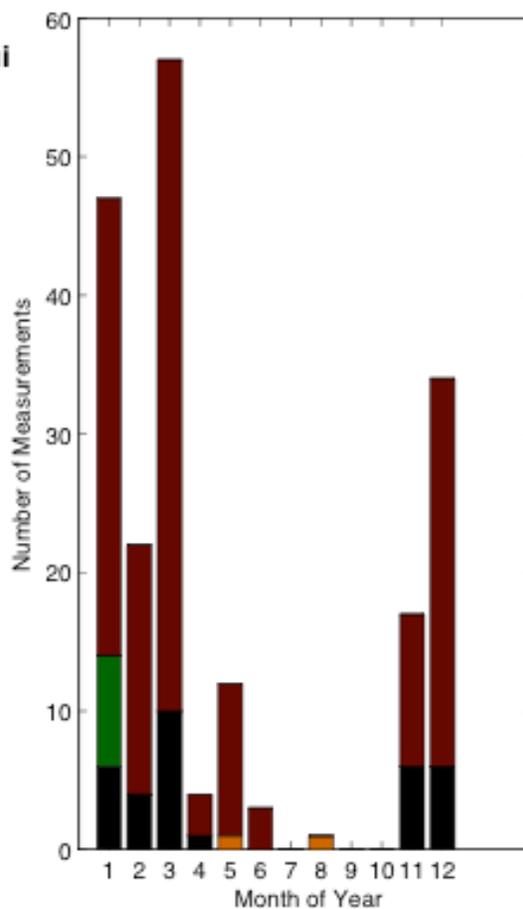
Hong Kong (Hok Tsui)

Aerosol Composition: HongKongHokTsui



LONG = 114.258 LAT = 22.21

Data for 2007 – 2010

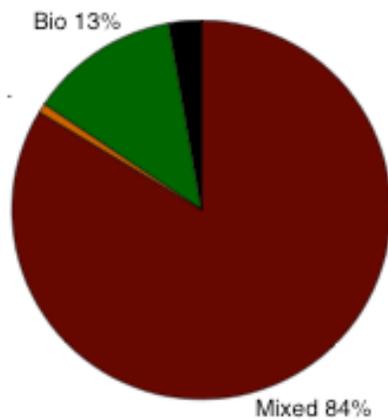


The instrument is located on a remote peninsula southeast of Hong Kong Island and is intended for measuring background and maritime aerosols. (However, only two measurements met the Sayers criterion for maritime aerosol.)

[Return to Table](#)

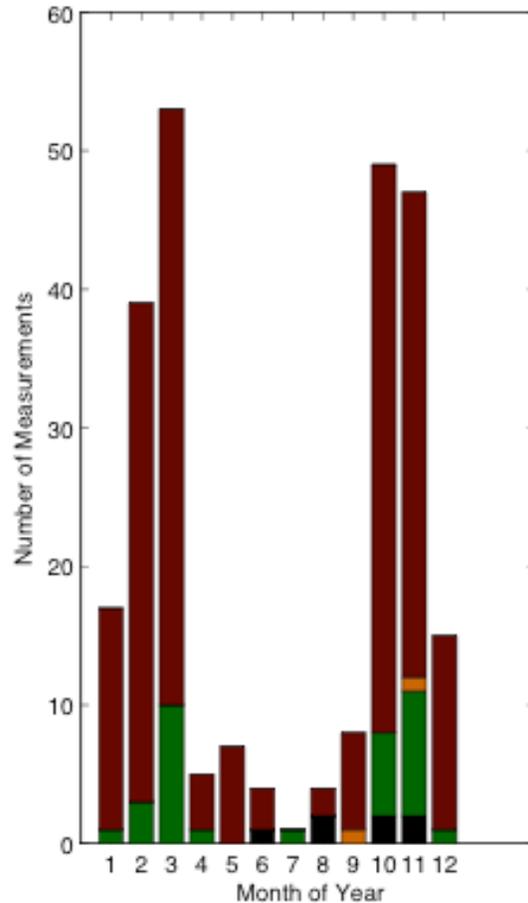
Hong Kong (Polytechnic Univ.)

Aerosol Composition: HongKongPolyU



LONG = 114.18 LAT = 22.303

Data for 2005 - 2011

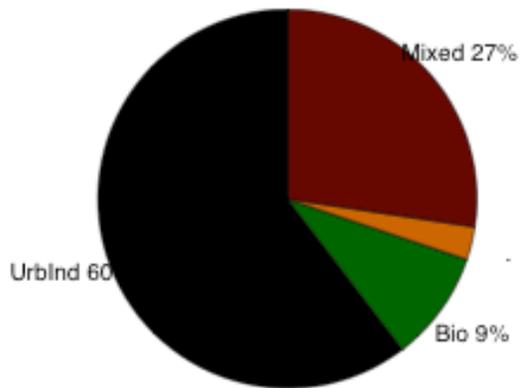


This instrument is located at the Honk Kong Polytechnic University campus, less than 600 m from the shore, west of Kowloon harbor. Hong Kong is an urban location of about 7.1 million residents. The region has a humid subtropical climate. There is no local heavy industry, but a well-developed transportation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

[Return to Table](#)

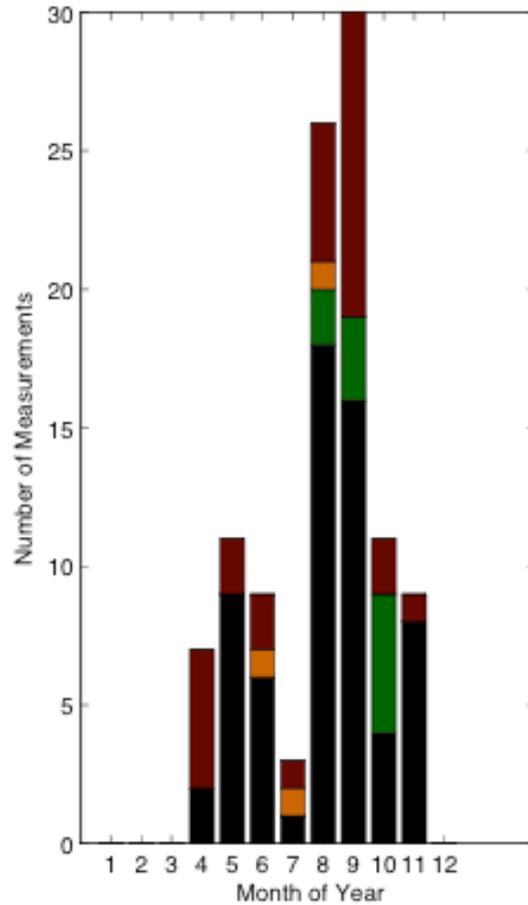
Houston, Texas, USA

Aerosol Composition: UnivofHouston



LONG = -95.342 LAT = 29.718

Data for 2006 - 2012

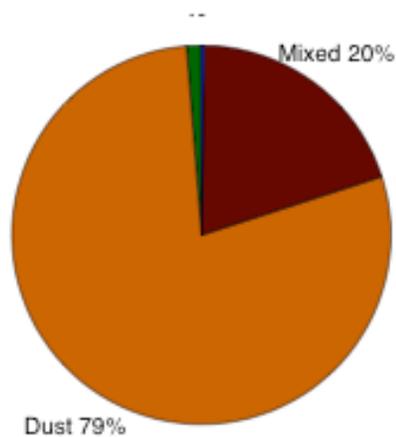


This instrument is located on the campus of the University of Houston, approximately 4 km south of downtown Houston (population 2.1 million). The city is the 4th largest in the USA and the industrial port handles the second most tonnage per year. There is a local manufacturing and industrial infrastructure.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

[Return to Table](#)

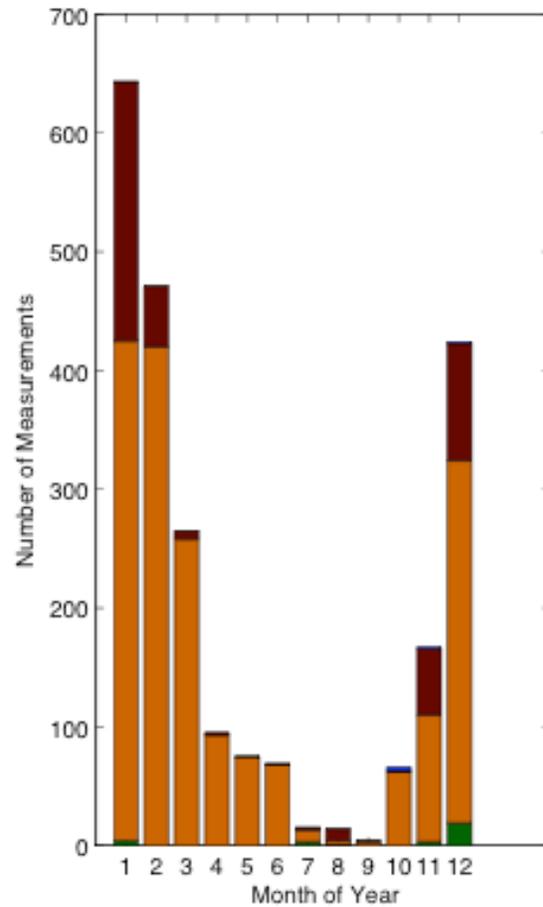
Ilorin, Nigeria

Aerosol Composition: Ilorin



LONG = 4.34 LAT = 8.32

Data for 1998 - 2013

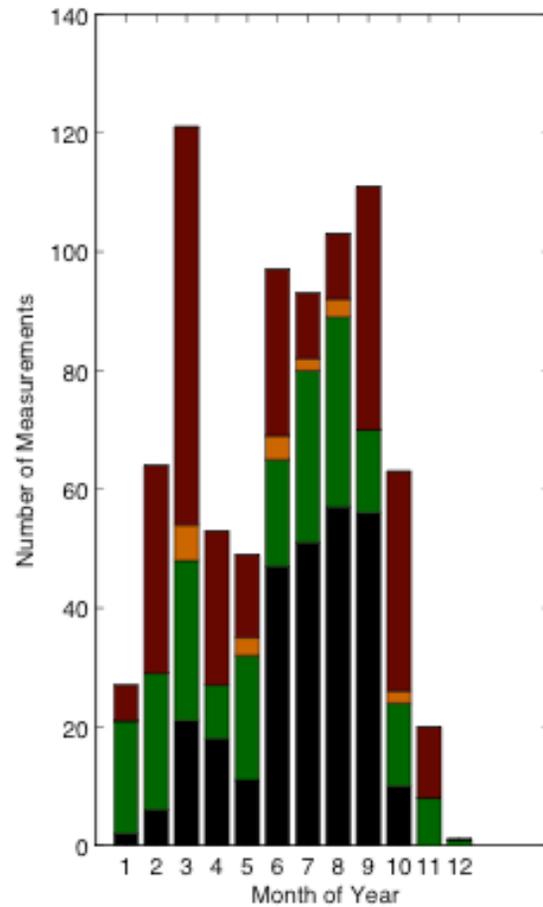
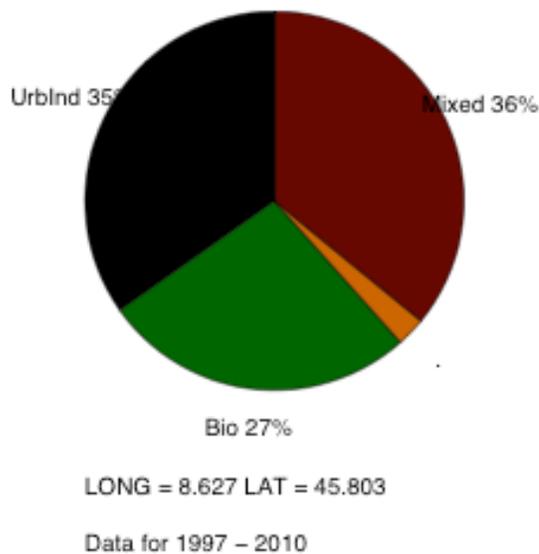


Ilorin is a city of nearly one million people in southwestern Nigeria, in Sub-Sahel Africa. The dry season extends from November through February, and the prevailing northeasterly wind (the Harmattan) carries Saharan dust to this region.

[Return to Table](#)

Ispra, Italy

Aerosol Composition: Ispra

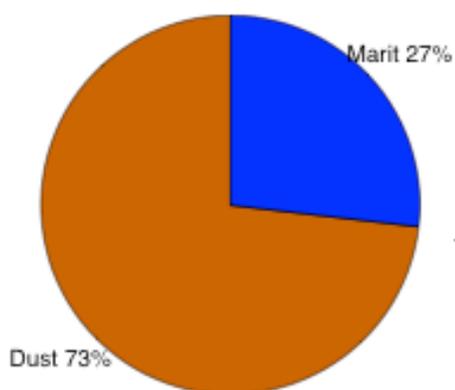


Ispra is a small town of about 5000 people located on the shore of Lake Maggiore in northern Italy. It is about 70 km northeast of Milan.

[Return to Table](#)

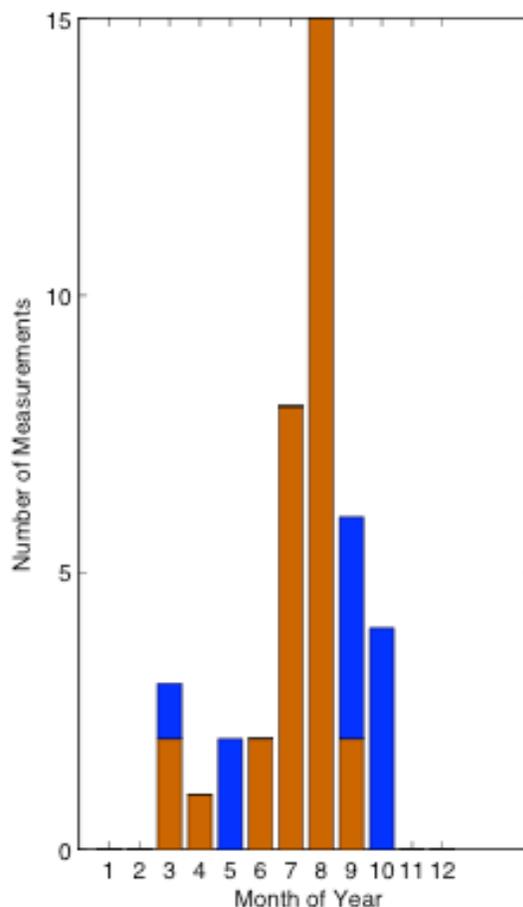
Izana (Tenerife), Spain

Composition of Aerosols: Izana



LONG = -16.499 LAT = 28.309

Data for 2004 - 2011

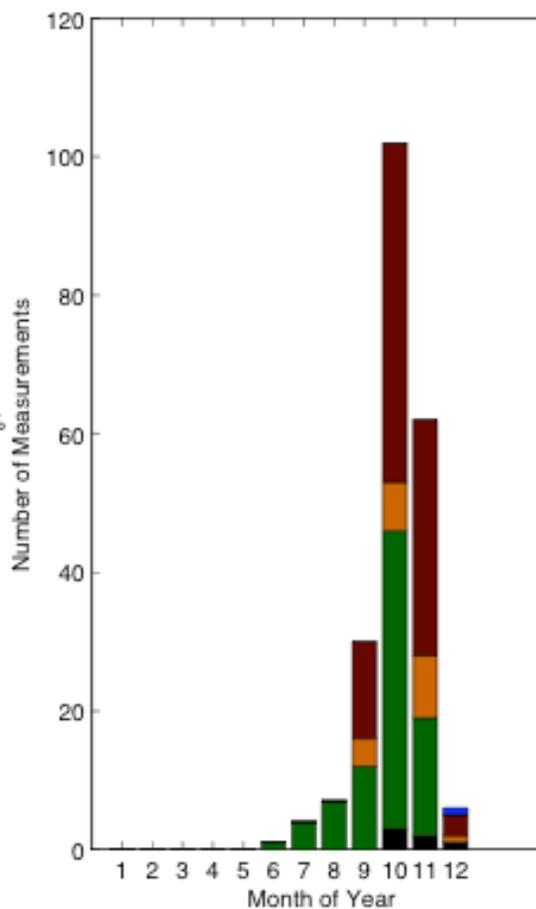
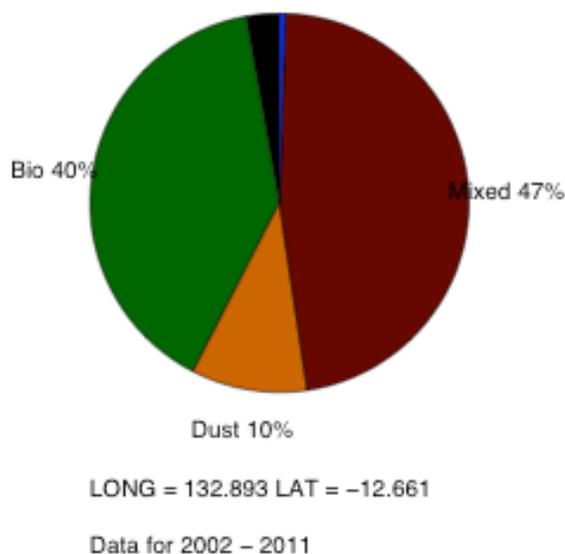


Izana is an observatory on top of a mountain (at 2367 meters above sea level) on the island of Tenerife (Canary Islands). This location is free from local anthropogenic aerosols and is used for calibration of the Cimel sun photometers. The summer months are dominated by dust aerosol, whereas maritime 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.

[Return to Table](#)

Jabiru, Australia

Aerosol Composition: Jabiru

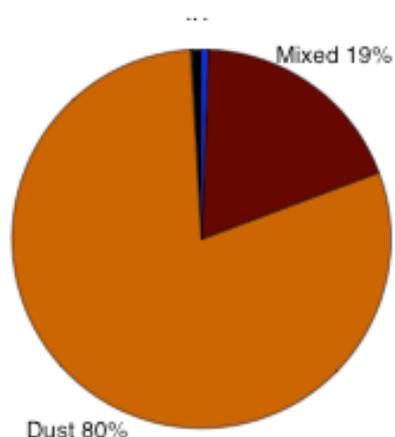


Jabiru is a small town (population about 1,000) in northern Australia, east of Darwin and about 50 km from the sea. It is located in the Kakadu National Park. The instrument is set up in a wooded area several kilometers east of Jabiru.

[Return to Table](#)

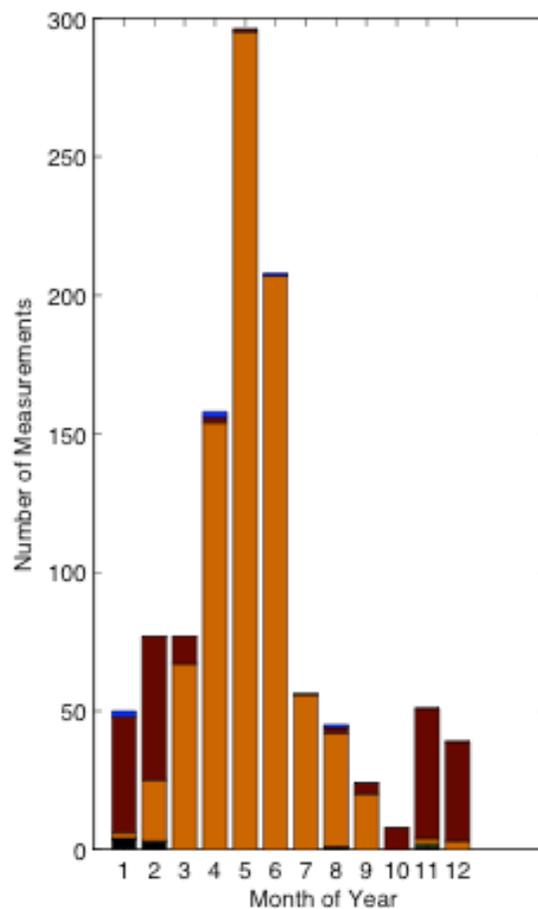
Jaipur, India

Aerosol Composition: Jaipur



LONG = 75.806 LAT = 26.906

Data for 2009 – 2012

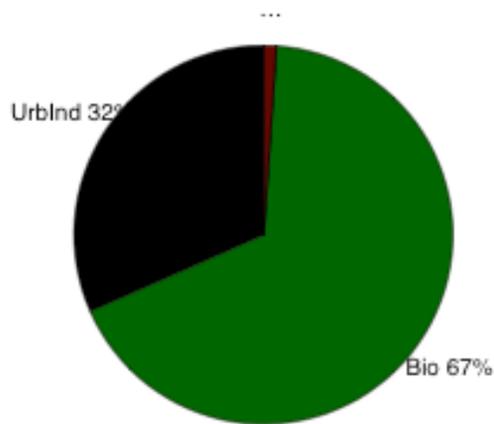


The sun photometer is located near the center of the city of Jaipur. Jaipur is a large city of about 3 million inhabitants in northern India. It lies to the east of the Thar desert and has a climate described as semi-arid.

[Return to Table](#)

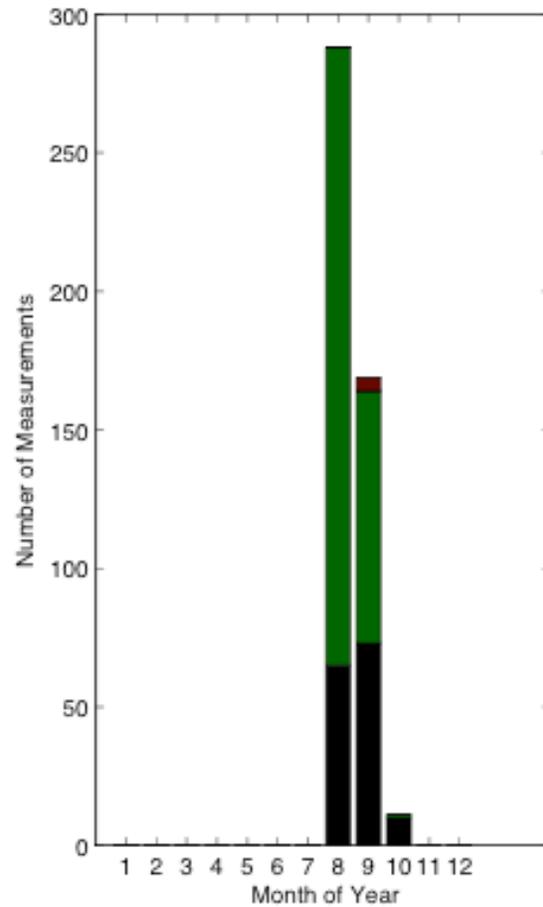
Ji-Parana, Brazil

Aerosol Composition: JiParanaSE



LONG = -61.852 LAT = -10.934

Data for 2006 - 2011

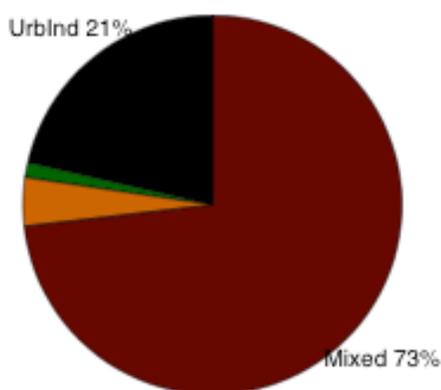


The AERONET site is in a pasture, located about 10 km from the city of Ji-Parana. The population of Ji-Parana is about 120,000. This site is located in a region of extreme deforestation.

[Return to Table](#)

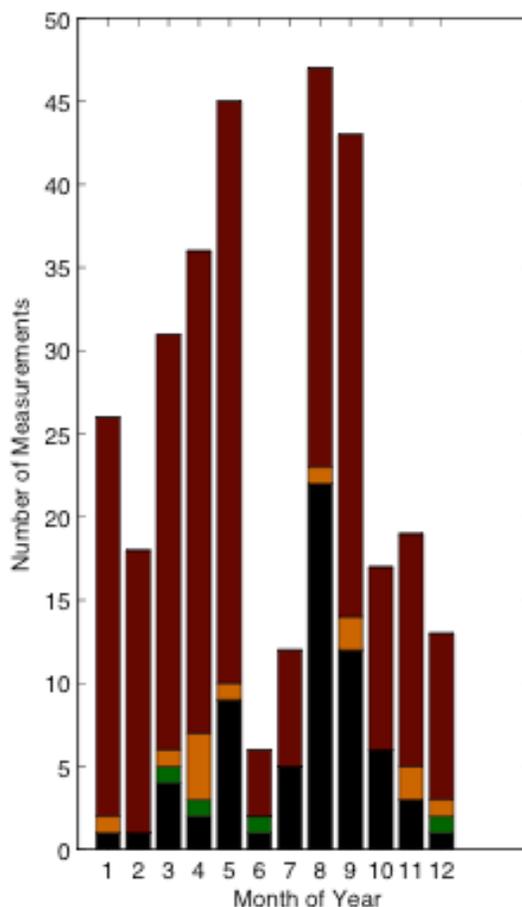
Jungli, Taiwan (EPA_NCU), Taiwan

Aerosol Composition: NCUTaiwan



LONG = 121.192 LAT = 24.967

Data for 1998 - 2012

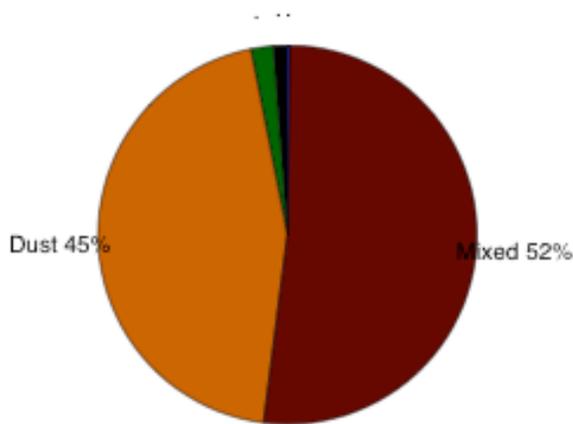


Jungli (Zhongli) is a city in northern Taiwan of about 400,000 people. It is quite close to Taipei (population of metropolitan area about 7 million). The local industry is described as combined multipurpose – which includes electronic, metal, chemical, mechanical, food, textile, and plastic manufacturers. 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.

[Return to Table](#)

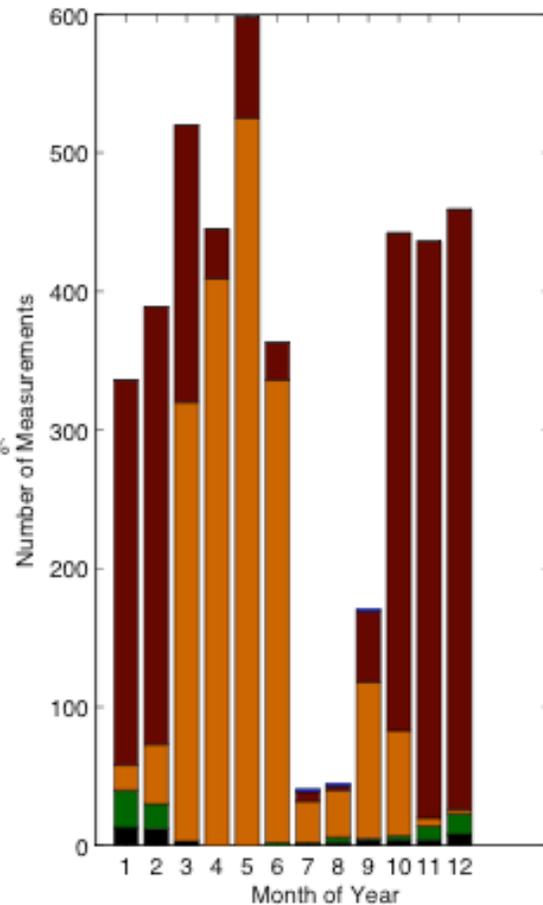
Kanpur, India

Aerosol Composition: Kanpur



LONG = 80.232 LAT = 26.513

Data for 2001 - 2012

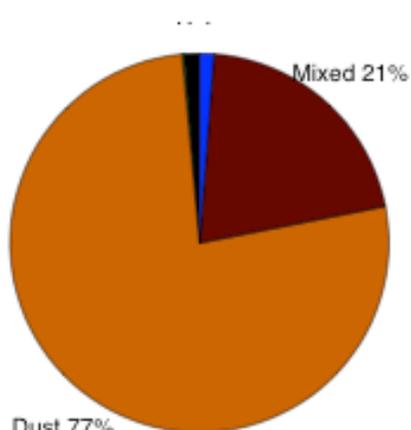


This site is on the campus of the Indian Institute of Technology, about 17 km from the industrial city of Kanpur (population approximately 2.6 million) in the northern state of Uttar Pradesh. This region is considered typical of the Ganga basin. The region is known to experience dust storms. Kanpur is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

[Return to Table](#)

Karachi, Pakistan

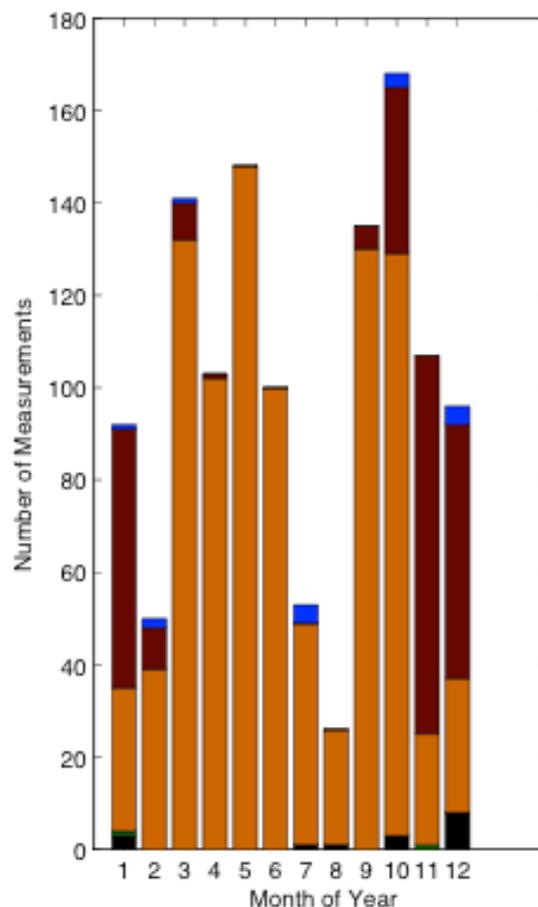
Composition of Aerosols: Karachi



Dust 77%

LONG = 67.03 LAT = 24.87

Data for 2006 - 2012

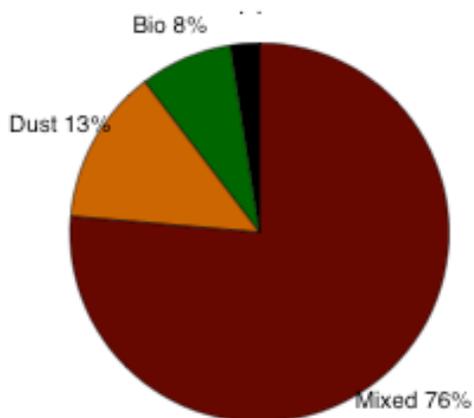


The AERONET instrument is located near the University of Karachi, approximately 20 km from the coast of Arabian Sea. Karachi is a city of 23.5 million. Industries in Karachi include textiles, cement, steel, heavy machinery, and chemicals. The city suffers from serious pollution. The climate of Karachi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

[Return to Table](#)

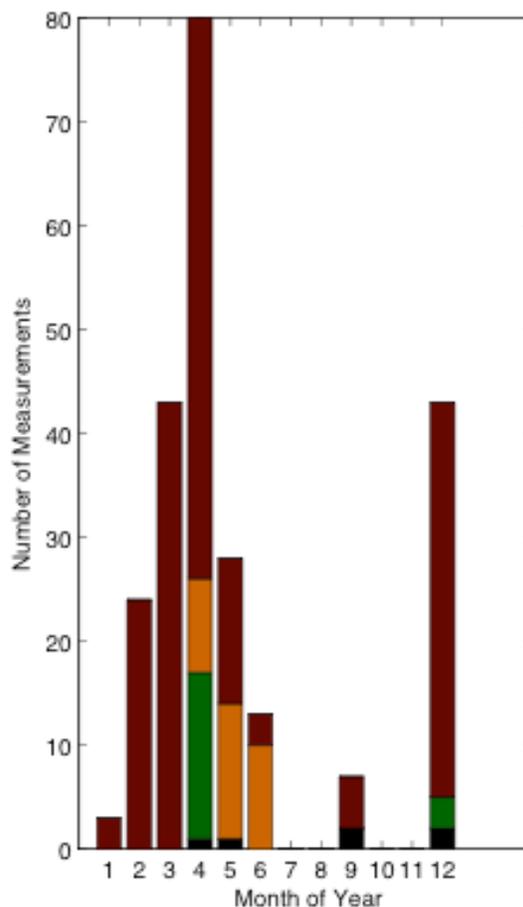
Kathmandu, Nepal

Aerosol Composition: KathmanduUniv



LONG = 85.538 LAT = 27.601

Data for 2009 – 2010

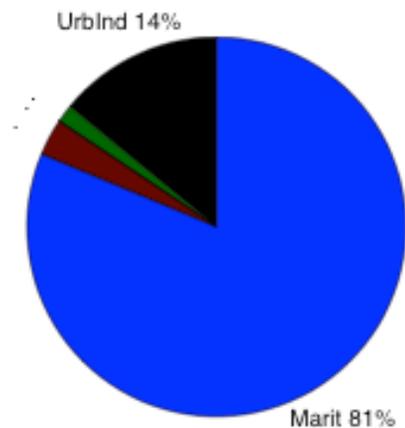


The AERONET site is located at Kathmandu University, some 20 km to the east of the city of Kathmandu. The metropolitan region of Kathmandu has a population of about 2.5 million. Kathmandu is the most important industrial city in Nepal, and manufacturing of garments and woolen carpets is a principal economic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

[Return to Table](#)

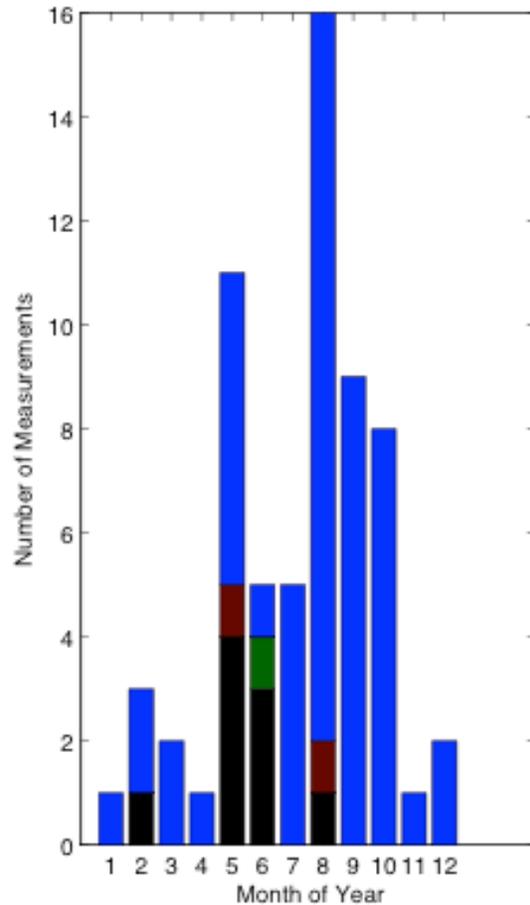
Key Biscayne, Florida, USA

Composition of Aerosols: KeyBiscayne



LONG = -80.163 LAT = 25.732

Data for 1995 - 2011

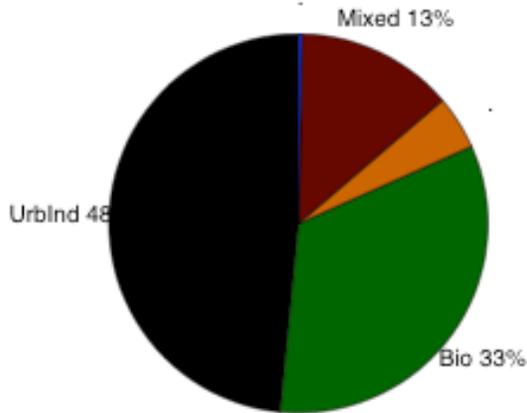


Key Biscayne is an island about 3 km south of Miami Beach. The instrument is actually on another, smaller, island called Virginia Key on the campus of the Rosenstiel School of Marine and Atmospheric Science. The instrument is located about 500 m from the shore.

[Return to Table](#)

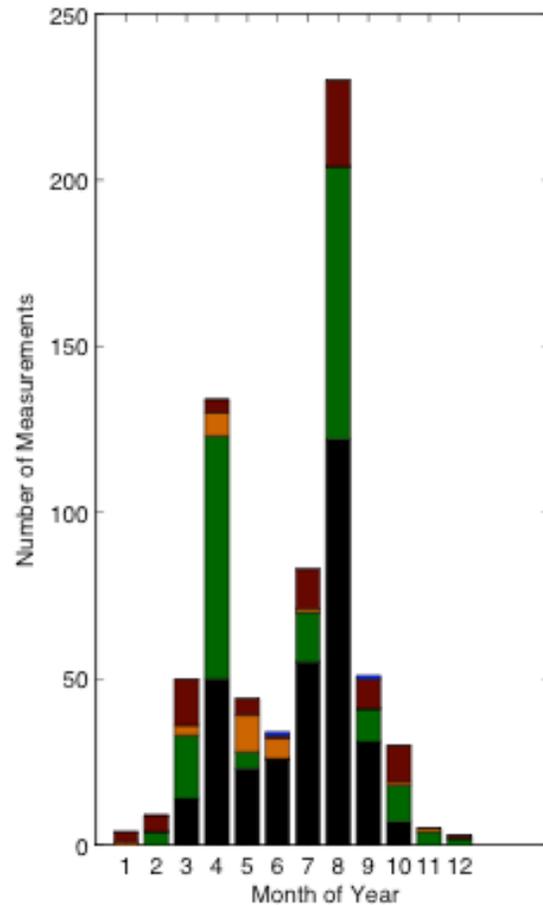
Kishinev, Moldova

Aerosol Composition: Moldova



LONG = 28.816 LAT = 47

Data for 1999 - 2012

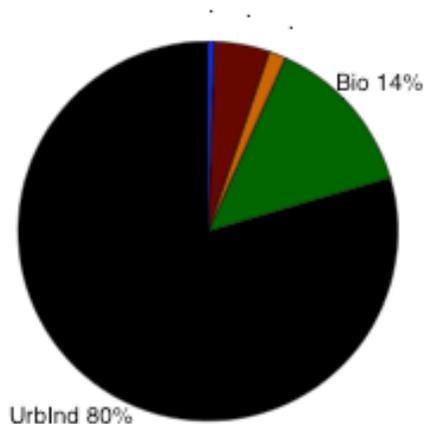


This site is listed as Moldova in the AERONET website. Kishinev is the capital of Moldova, a landlocked Eastern European country between Romania and Ukraine. The Kishinev sun photometer site is located on the roof of the Institute of Applied Physics building. The surrounding area is urban commercial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

[Return to Table](#)

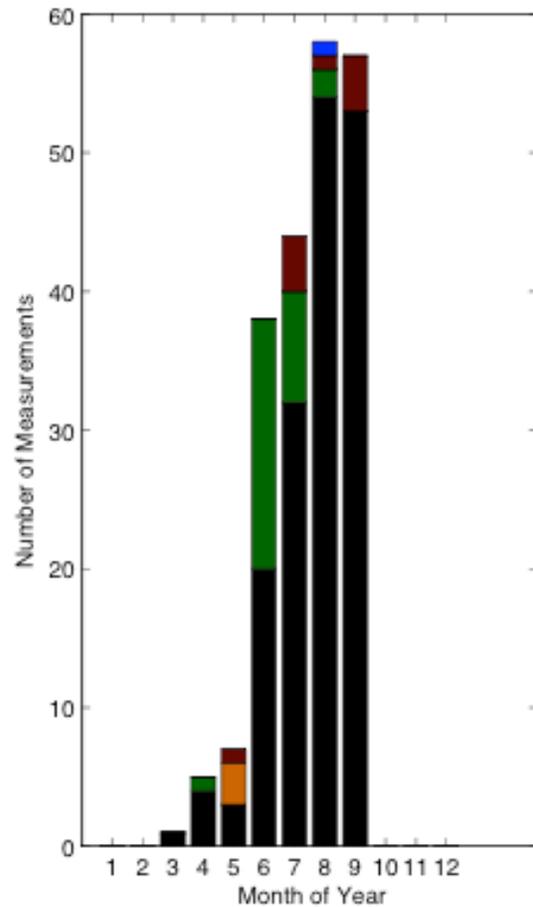
Konza Prairie Biological Station, Kansas, USA

Aerosol Composition: KONZAEDC



LONG = -96.61 LAT = 39.102

Data for 2000 - 2012

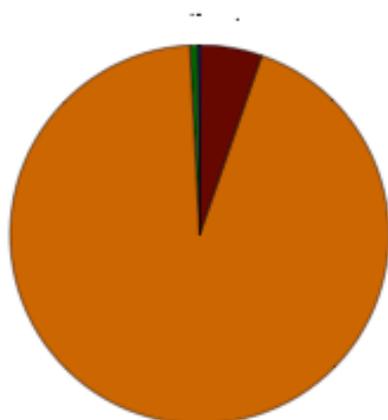


The instrument is located at the Konza Prairie Biological Center in Kansas, USA. This preserve represents the largest unplowed region of tall prairie grass in the United States. The instrument is about 30 km south of Manhattan Kansas and 150 km east of Kansas City.

[Return to Table](#)

Kuwait

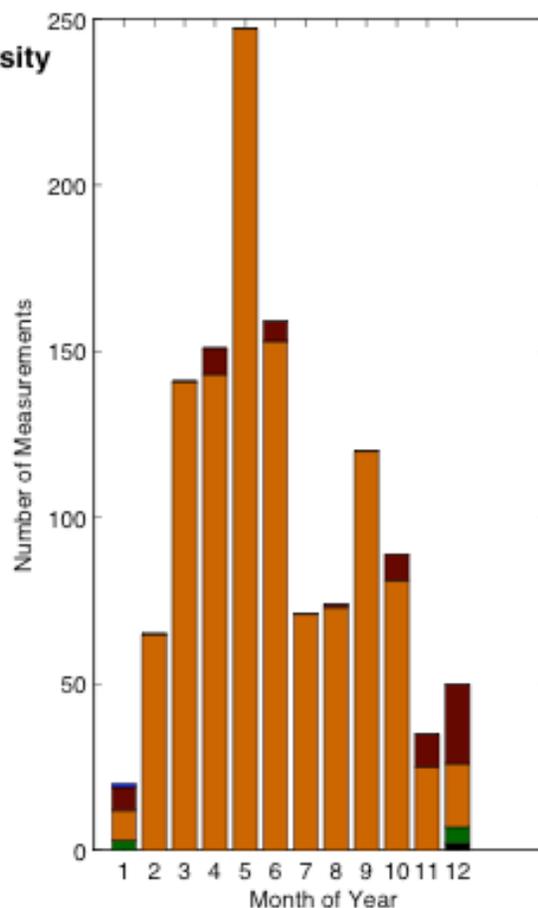
Composition of Aerosols: KuwaitUniversity



Dust 94%

LONG = 47.971 LAT = 29.325

Data for 2007 – 2010

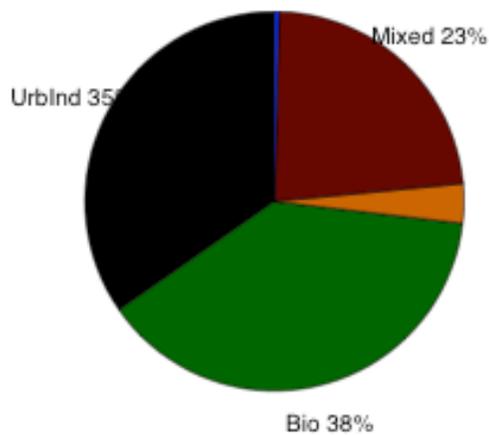


The sun-photometer is located at Kuwait University, Khalidiyah Campus. Khalidiyah is an urban area, approximately 4.8 km from Kuwait city, the capital of Kuwait. The instrument is about 5 km from Kuwait Bay. Kuwait is hot and dry throughout most of the year, with very little rainfall. The brief winter 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

[Return to Table](#)

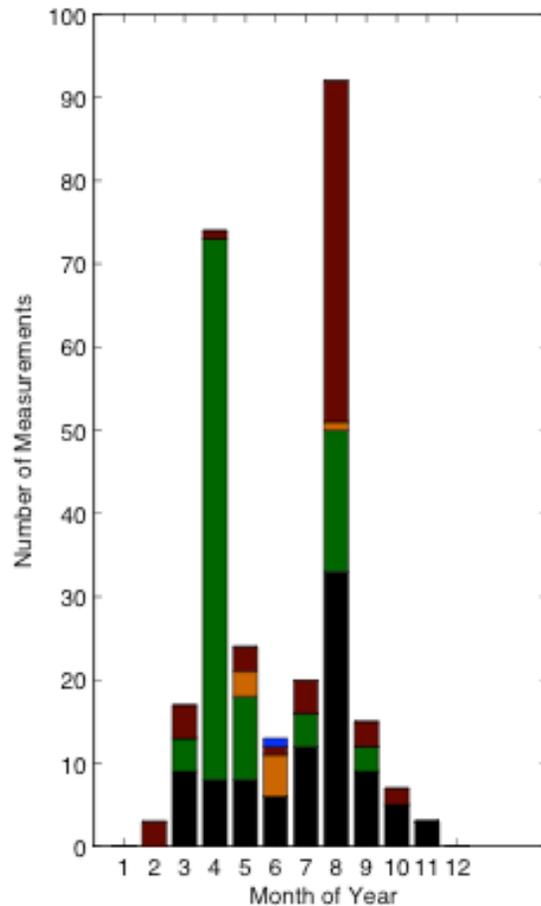
Kyiv, Ukraine

Aerosol Composition: Kyiv



LONG = 30.497 LAT = 50.364

Data for 2008 – 2012

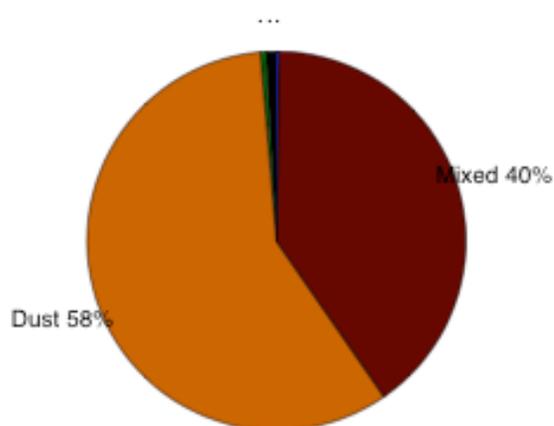


The Sun photometer is located at the Main Astronomical observatory of National Academy of Science of Ukraine. It is in a small forest south of Kyiv (Kiev), approximately 10 km from the center of the city. The population of Kyiv is almost 3 million. It has a humid continental climate. Primary industries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

[Return to Table](#)

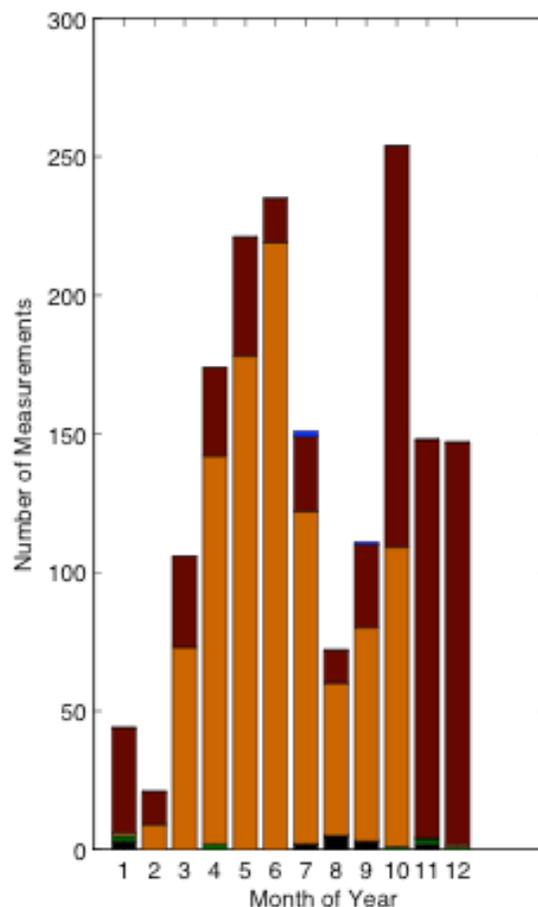
Lahore, Pakistan

Aerosol Composition: Lahore



LONG = 74.325 LAT = 31.542

Data for 2007 – 2012

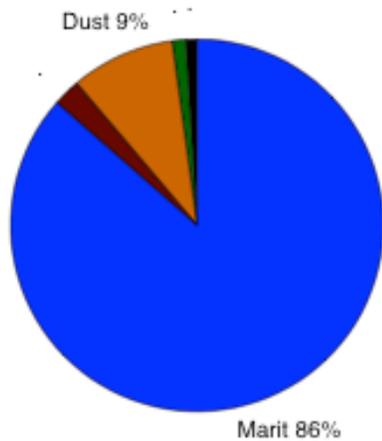


The instrument is located at Space and Atmospheric Sciences Division, Institute of Space Technology, Lahore Pakistan. Lahore is one of the world's most densely populated cities. It has a population of about 10 million people and is an important economic and transportation center. Its climate is classified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

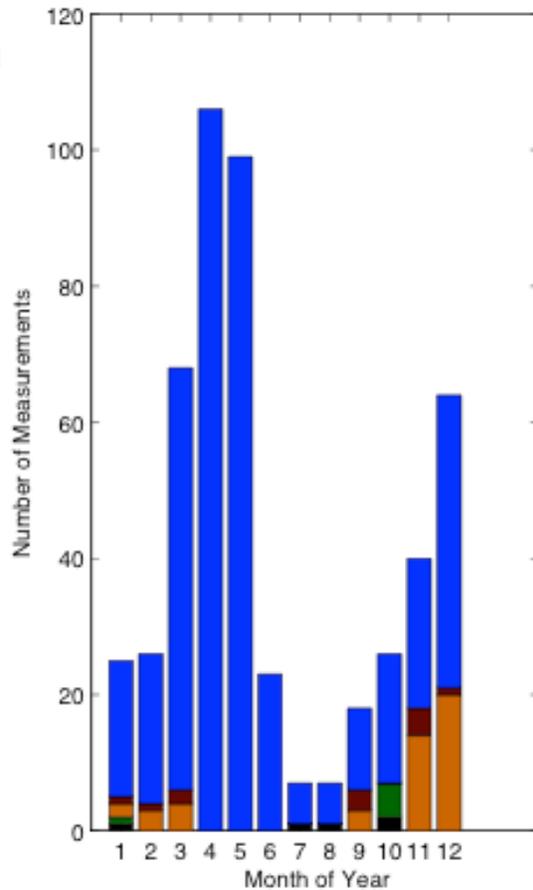
[Return to Table](#)

La Jolla, California, USA

Aerosol Composition: LaJolla



LONG = -117.25 LAT = 32.87
Data for 2000 - 2012

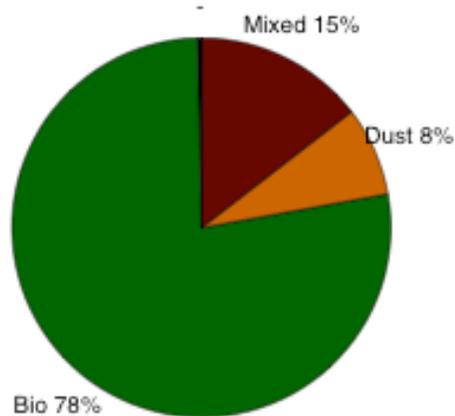


This instrument is located about 500 m from shore to the west of an urban/suburban region. The city of La Jolla is in Southern California. As might be expected, maritime aerosol is predominant at this site throughout the year.

[Return to Table](#)

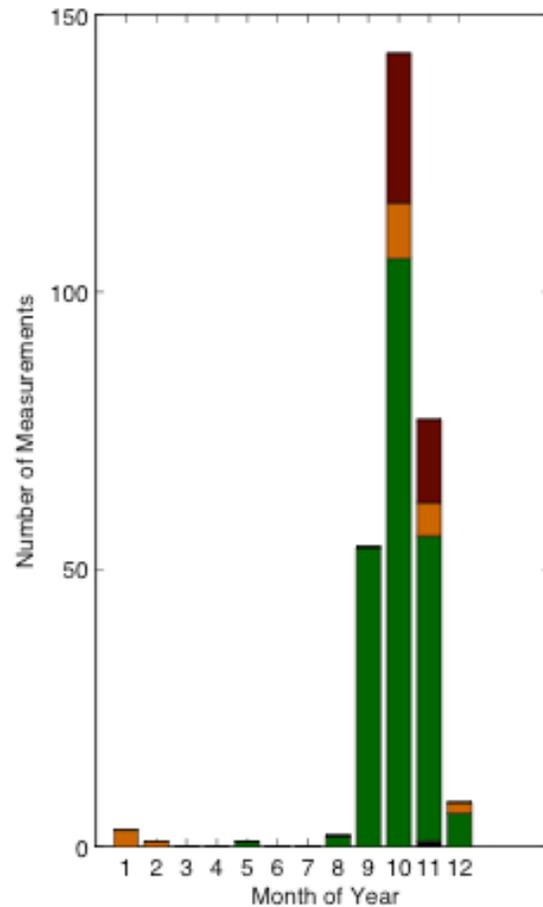
Lake Argyle, Northern Territories, Australia

Aerosol Composition: LakeArgyle



LONG = 128.749 LAT = -16.108

Data for 2002 - 2012

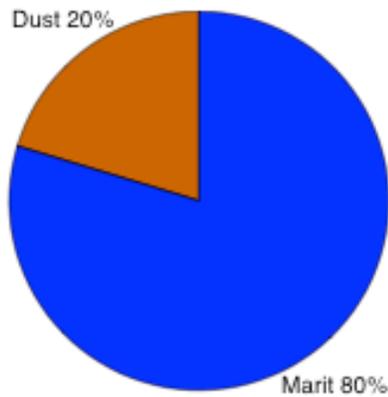


Lake Argyle is a large artificial lake in Western Australia. The instrument is mounted in a field near the lake. The climate in this region is described as steppe-like.

[Return to Table](#)

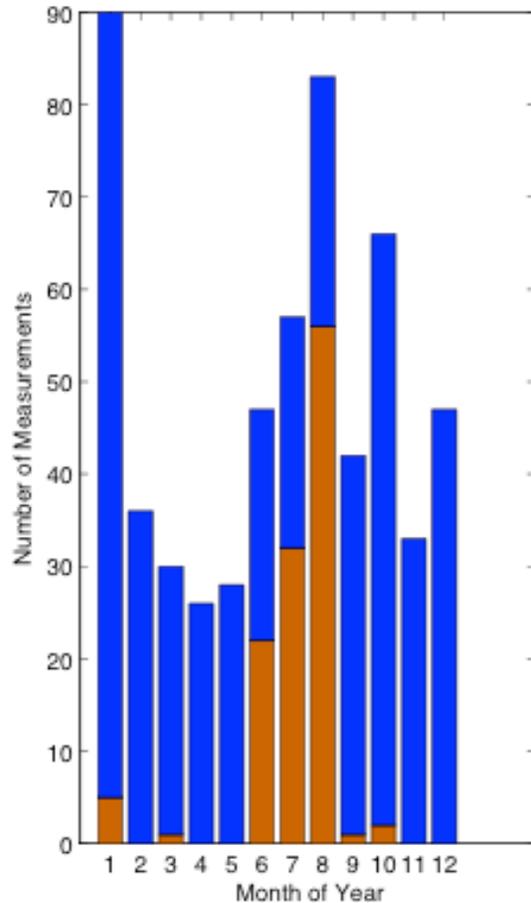
La Laguna, Tenerife, Canary Islands, Spain

Composition of Aerosols: LaLaguna



LONG = -16.321 LAT = 28.482

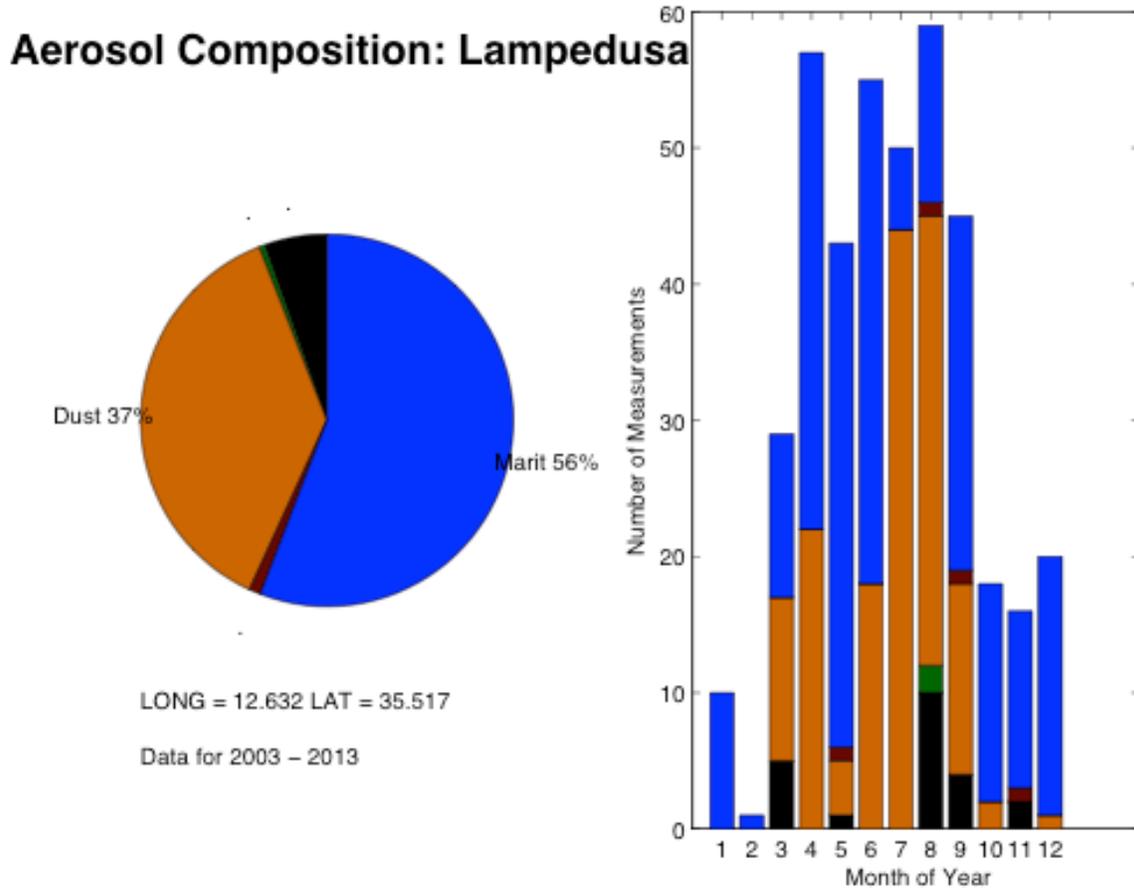
Data for 2009 - 2012



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.

[Return to Table](#)

Lampedusa, Italy

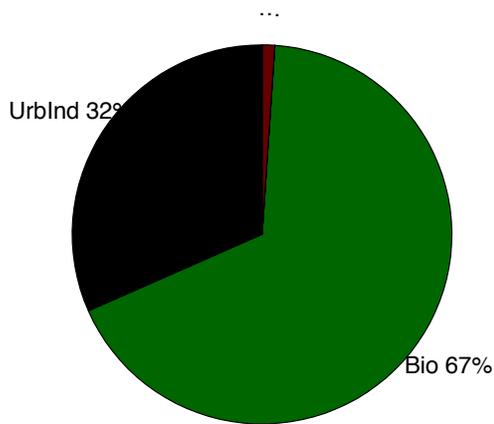


Lampedusa is an Italian island quite close to the North African coast. The instrument is run by the ENEA Station for Climate Observations. Being close to the African continent, Lampedusa is a strategic location for the study of the transport and radiative effects of Saharan dust.

[Return to Table](#)

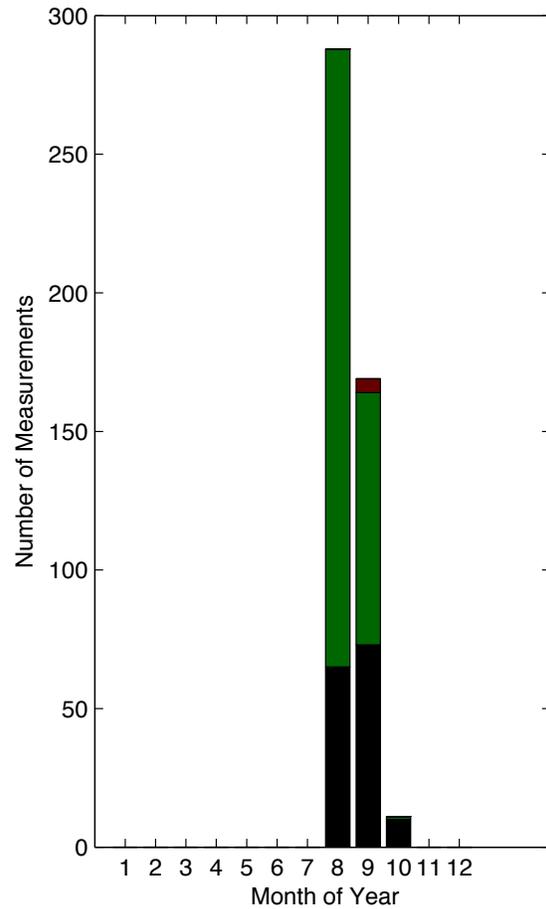
Lanai, Hawaii, USA

Aerosol Composition: JiParanaSE



LONG = -61.852 LAT = -10.934

Data for 2006 – 2011

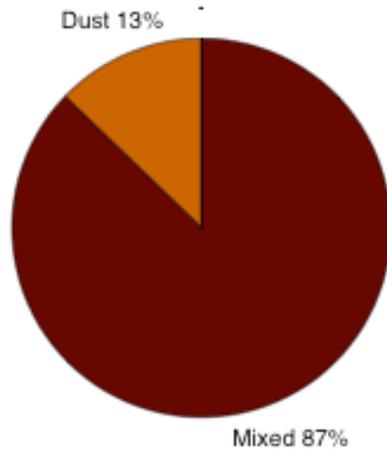


This site (which is no longer active) is located near the coast in Lanai, Hawaii, on a dune approximately 200 m above the shore, at the south end of the island. Data from this instrument were used to define the optical properties of maritime aerosols used in this study.

[Return to Table](#)

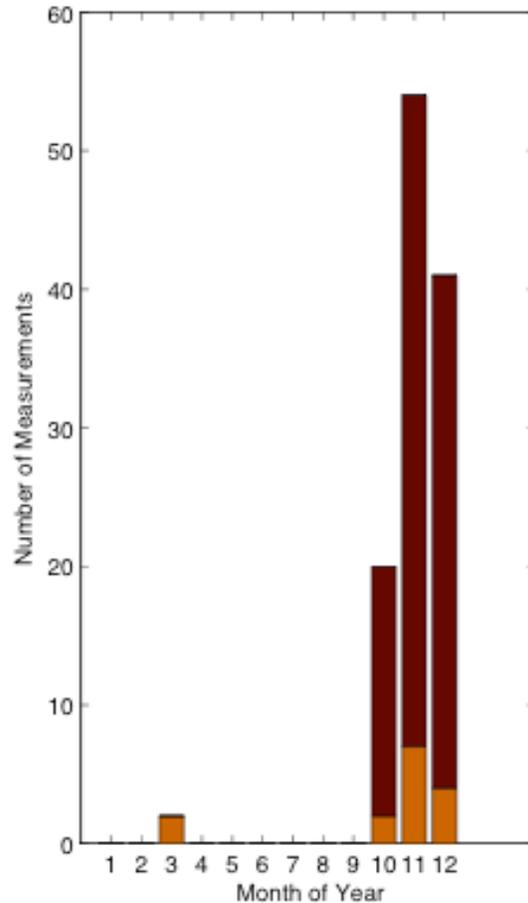
Lanzhou (City), China

Aerosol Composition: LanzhouCity



LONG = 103.853 LAT = 36.048

Data for 2009 – 2010

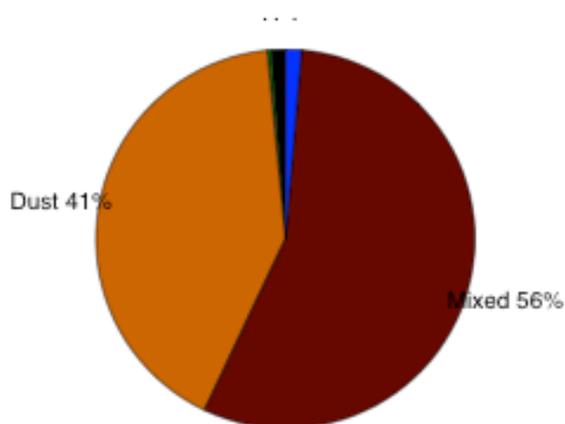


The city of Lanzhou is in northwestern China at an elevation of 1,600 meters (5,200 ft) above sea level. This urban area has a population of about 3.6 million people. The site is located in the urban area. Lanzhou is an industrial city with textile mills, fertilizer plants, machinery and metallurgical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

[Return to Table](#)

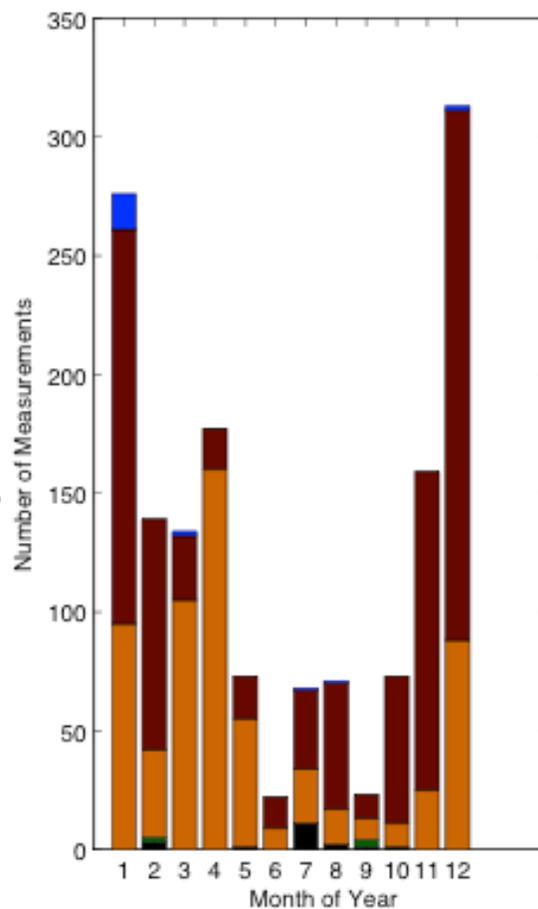
Lanzhou (SACOL), China

Aerosol Composition: SACOL



LONG = 104.137 LAT = 35.946

Data for 2006 – 2012



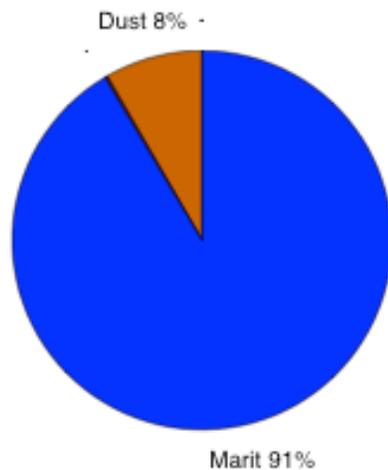
This site is located on the top of Cuiying Mountain about 30 km southeast of the city of Lanzhou, a city of about 3.6 million people. The site elevation is 1965.8 meters. The AERONET website lists this location as SACOL (the Semi-Arid Climate and Environment Observatory of Lanzhou University).

]

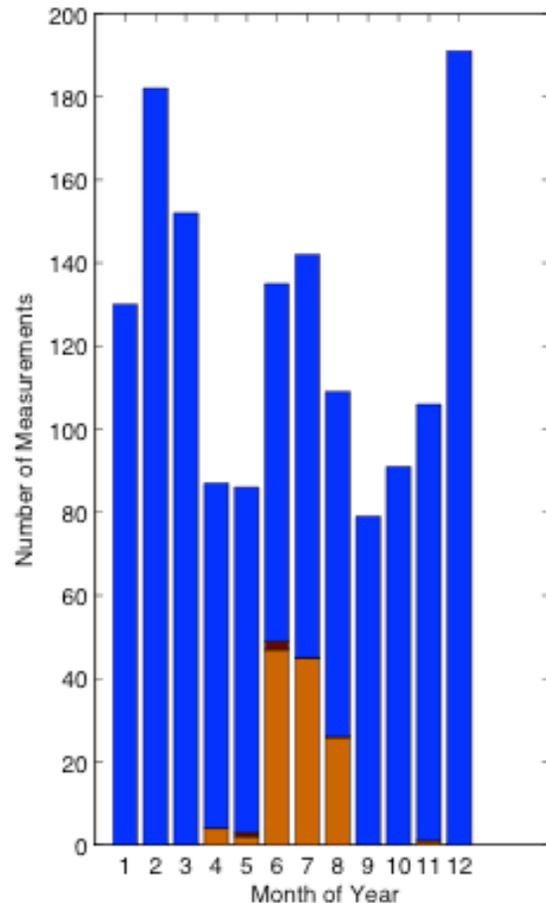
[Return to Table](#)

La Parguera, Puerto Rico

Composition of Aerosols: LaParguera



LONG = -67.045 LAT = 17.97
Data for 2000 - 2012

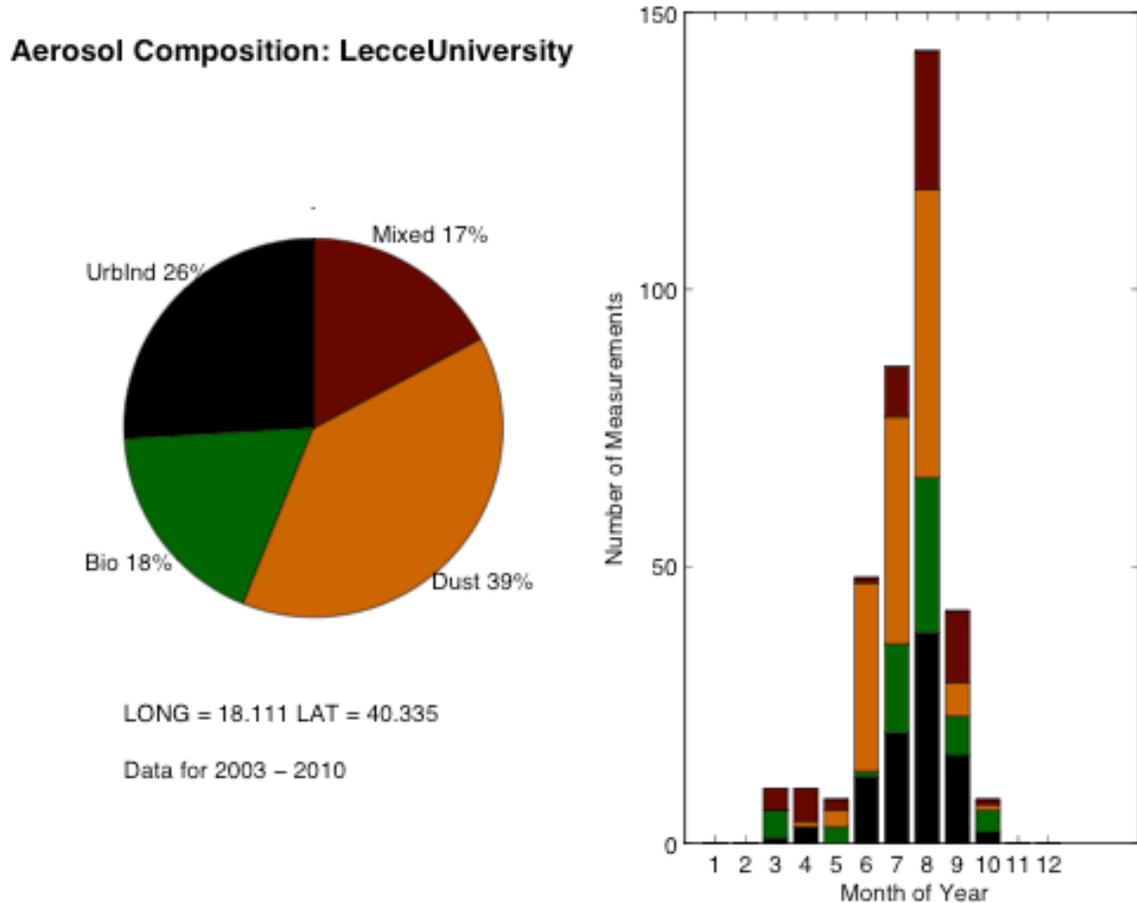


The sunphotometer is located at the University of Puerto Rico's Department of Marine Sciences Isla Mayaguez Field Station, in La Parguera, Southwestern Puerto Rico. The surrounding area is rural/park. Mahalanobis distance calculations for this site reflects dominant occurrence of maritime aerosol throughout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

[Return to Table](#)

Lecce, Italy

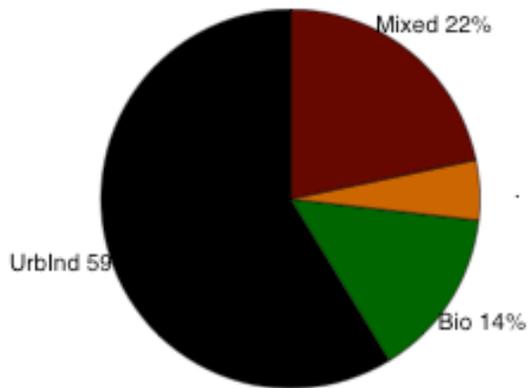


This site is on the southern Salentine Peninsula, in the city of Lecce in southern Italy. It is approximately 20 km inland, west of the Strait of Otranto (between the Adriatic and the Ionian Sea). The surrounding urban area has a population of about 100,000. Lecce is an agricultural and industrial center.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

[Return to Table](#)

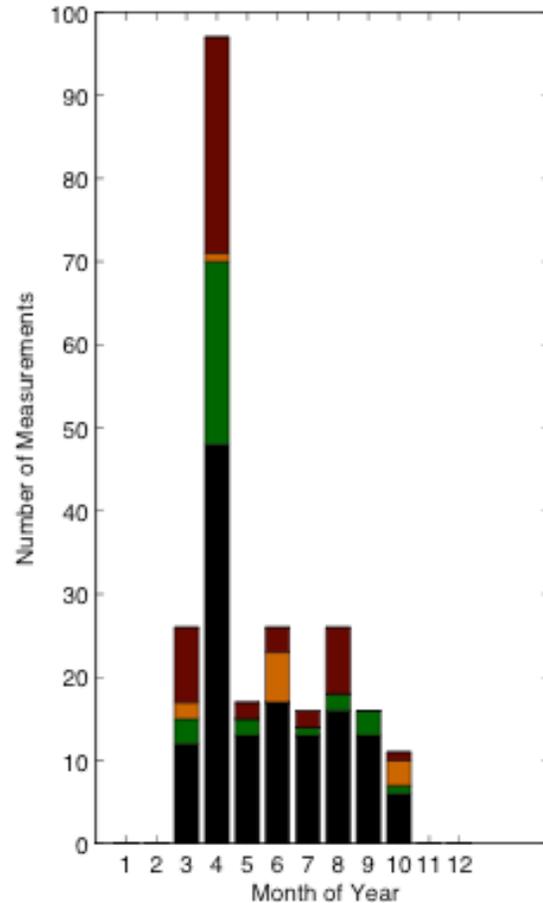
Leipzig, Germany

Aerosol Composition: IFT-Leipzig



LONG = 12.435 LAT = 51.352

Data for 2001 – 2011

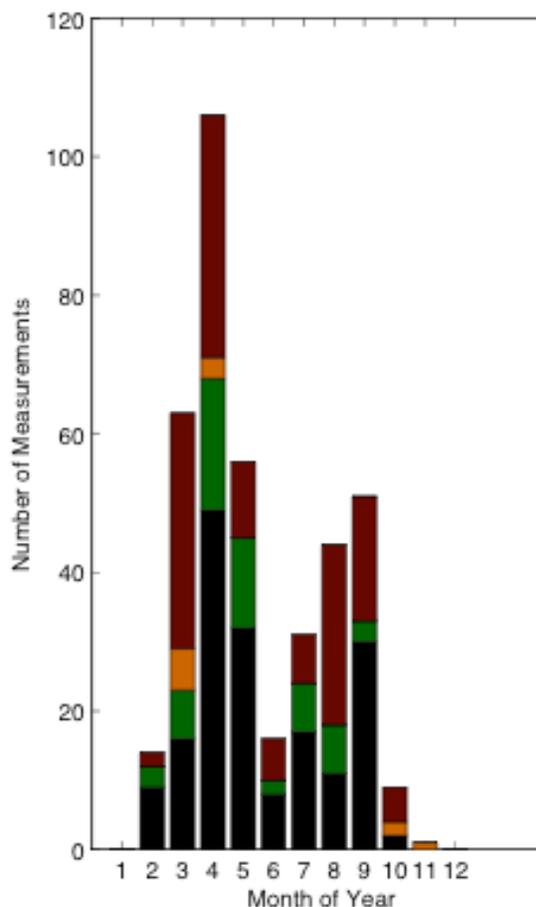
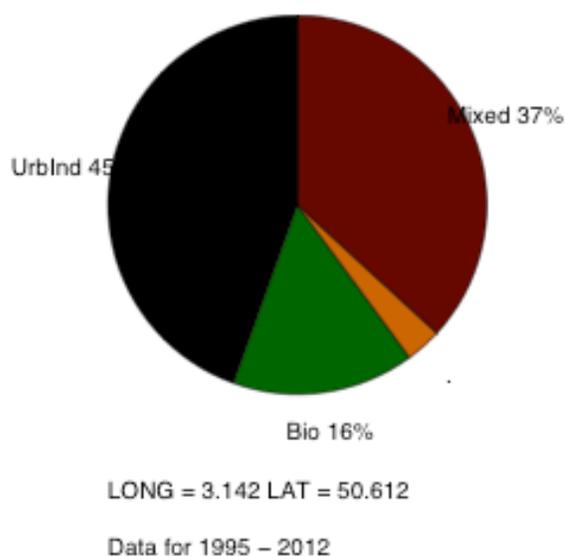


Leipzig is a city of about half a million some 150 km south of Berlin. The climate of Leipzig is in the transition zone between oceanic and continental. The city is a center for the manufacture of automobiles. The AERONET website lists this location as IFT-Leipzig.

[Return to Table](#)

Lille, France

Aerosol Composition: Lille

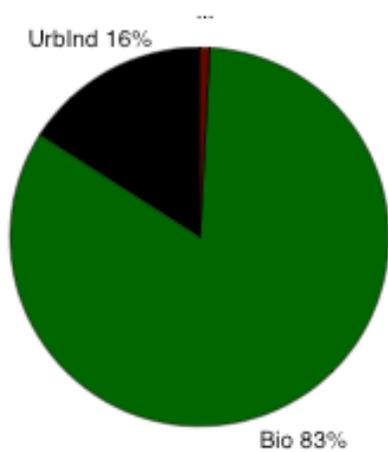


Lille is a city in northeastern France, very close to the Belgian border. The site is in an urban metropolitan environment having a population of about 230,000. If one includes some nearby cities in Belgium, the metropolitan area has a population of nearly 2 million. Lille (sometimes referred to as “a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

[Return to Table](#)

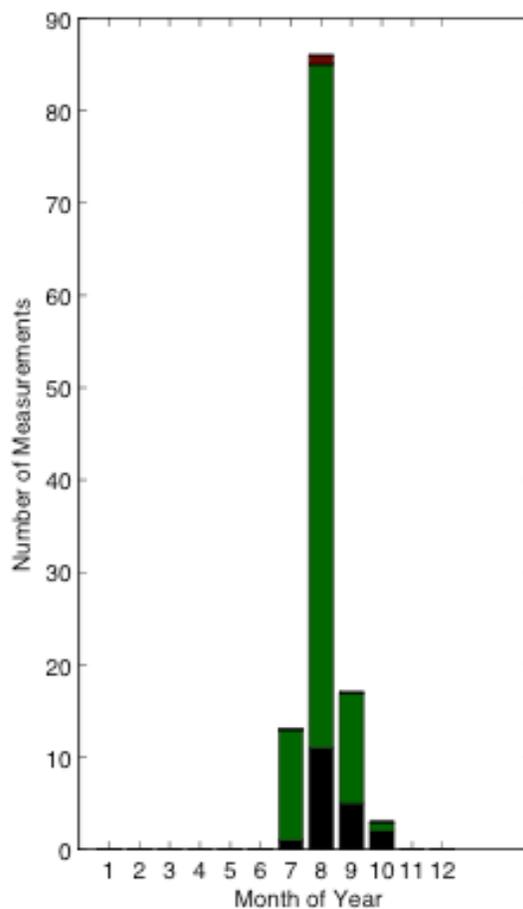
Los Fierros, Bolivia

Aerosol Composition: LosFierros98



LONG = -60.929 LAT = -14.556

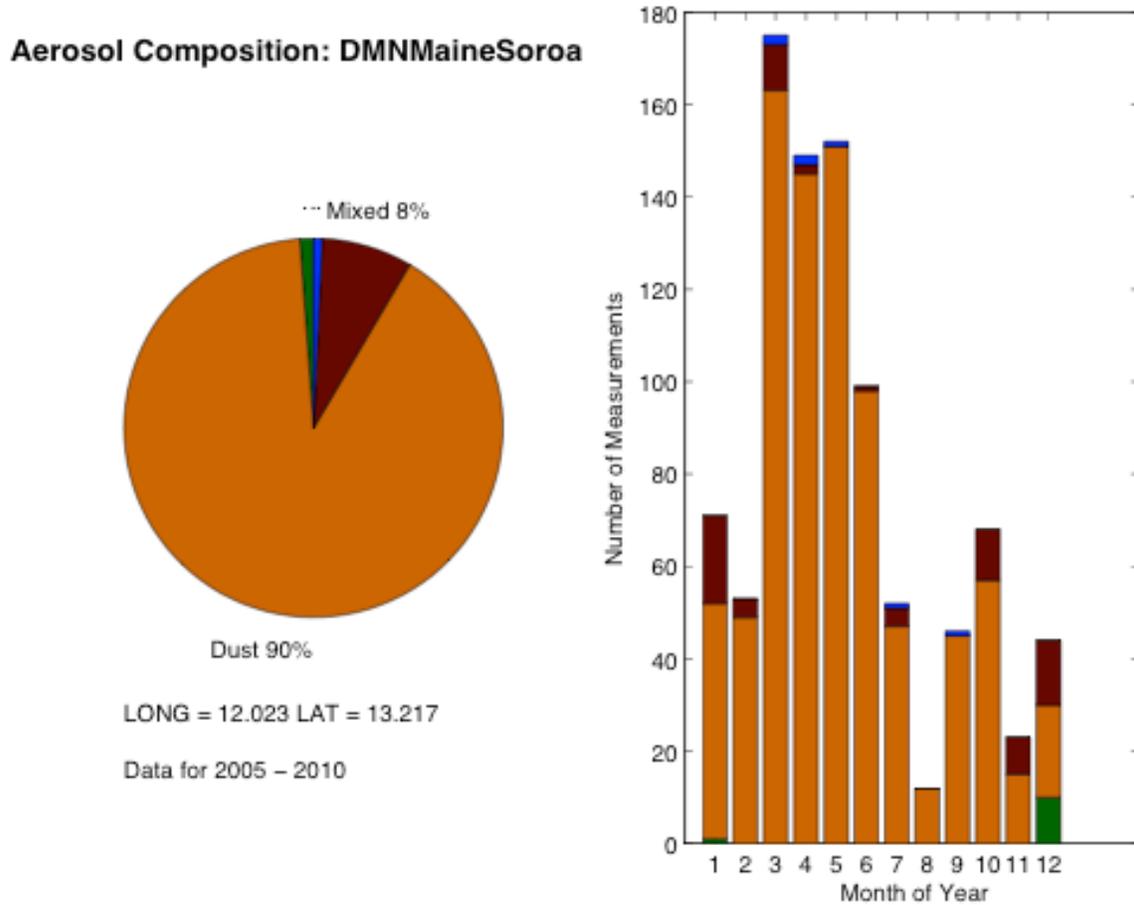
Data for 1998 - 1999



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

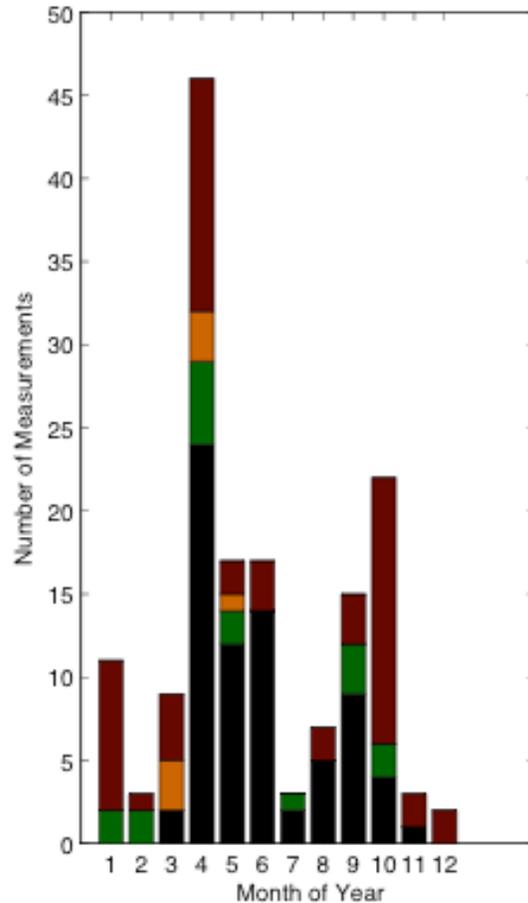
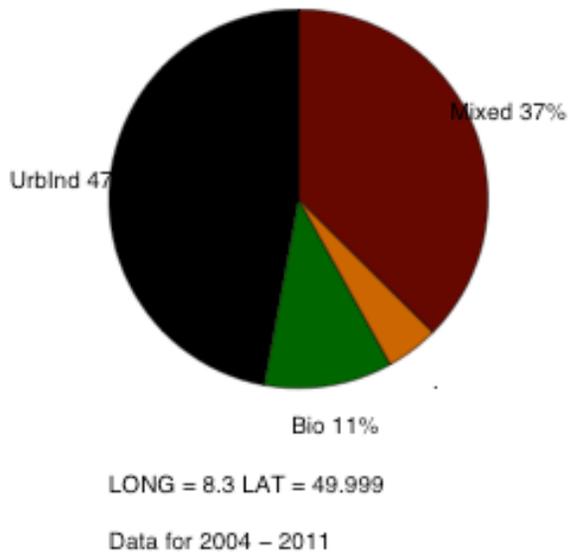


Maine-Soroa is a small town of about 10,000 people in southeastern Niger. The region is agro-pastoral. It lies in the Sahel region of Niger and consequently is under the threat of desertification. The AERONET website lists this location as DMN_Maine_Soroa.

[Return to Table](#)

Mainz, Germany

Aerosol Composition: Mainz

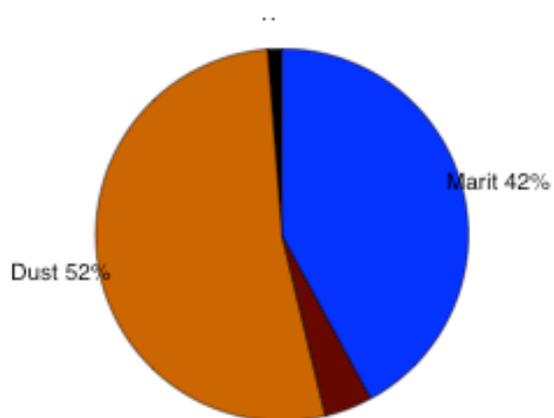


The AERONET site is located on the roof of the Max Planck Institute for Chemistry on a university campus at the edge of the city of Mainz. This urban metropolitan city has a population of about 203,000. The site is surrounded by urban and rural land, in a moderately to highly polluted region. The city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

[Return to Table](#)

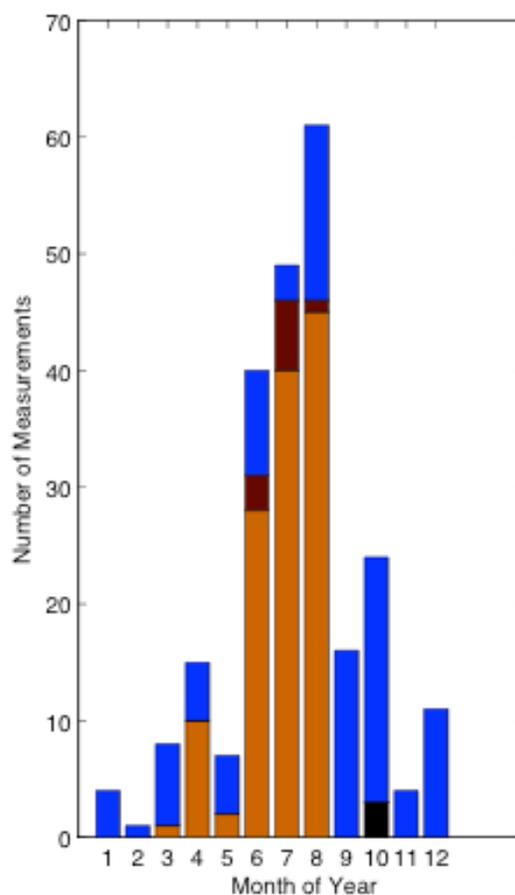
Malaga, Spain

Aerosol Composition: Malaga



LONG = -4.478 LAT = 36.715

Data for 2009 – 2012

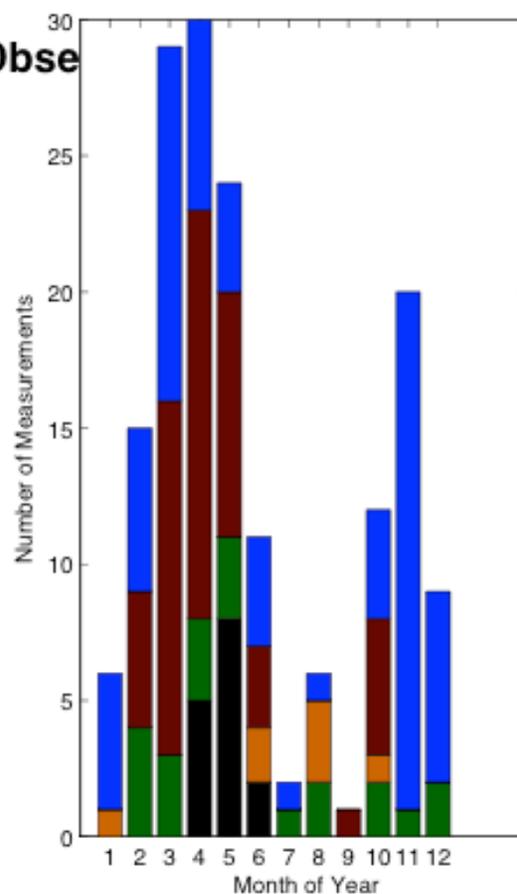
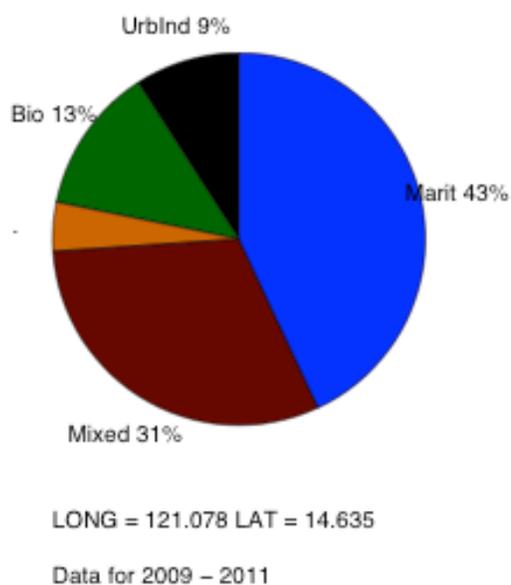


The instrument is on the rooftop of the School of Informatics at the University of Malaga. This site is located west of the city, four kilometers from the sea. Malaga is a port city in southern Spain, with a population around 600,000. It lies about 130 km north of Africa and, as expected, receives transported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

[Return to Table](#)

Manila (Observatory), Philippines

Aerosol Composition: ManilaObse

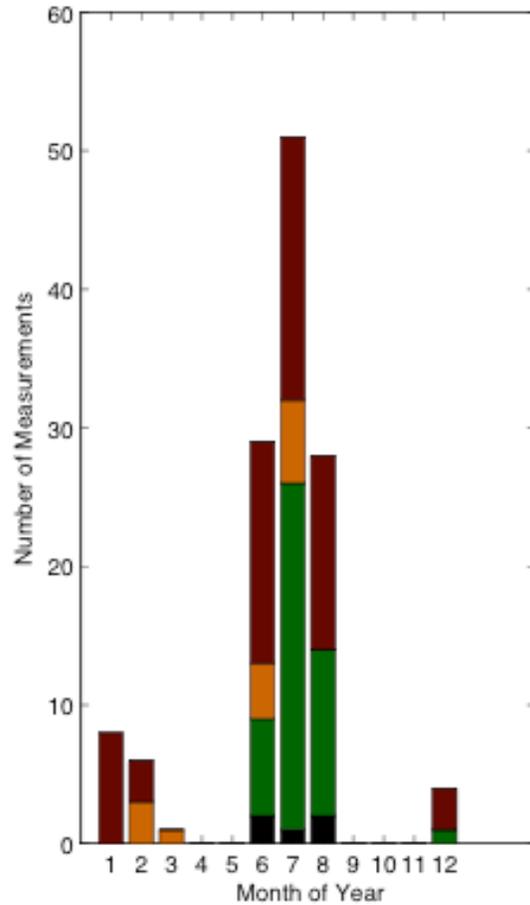
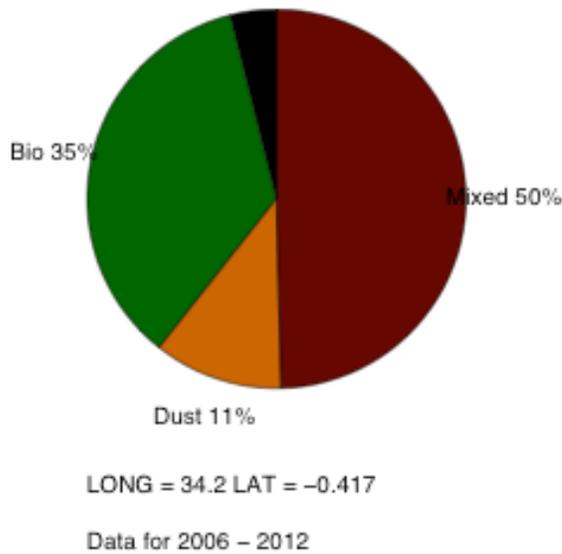


The instrument is installed on roof of the Climate Studies Division building of the Manila Observatory. Manila Observatory is located 15km northeast from the center of Manila, a city of 1.65 million. The site is about 20 km from Manila bay in an urban region. Manila is known to have a significant air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

[Return to Table](#)

Mbita (ICIPE) Kenya

Aerosol Composition: ICIPE-Mbita

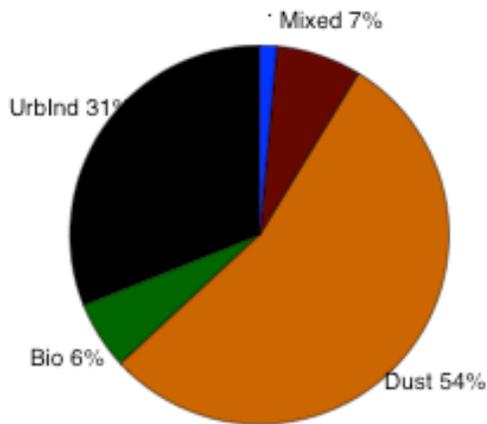


Mbita (Mbita Point) is a rural community on the shores of Lake Victoria in Western Kenya, near the border of Uganda. The population of Mbita is less than 10,000. The site is hosted by the international centre of insect physiology and ecology (ICIPE). The AERONET website lists this location as ICIPE-Mbita.

[Return to Table](#)

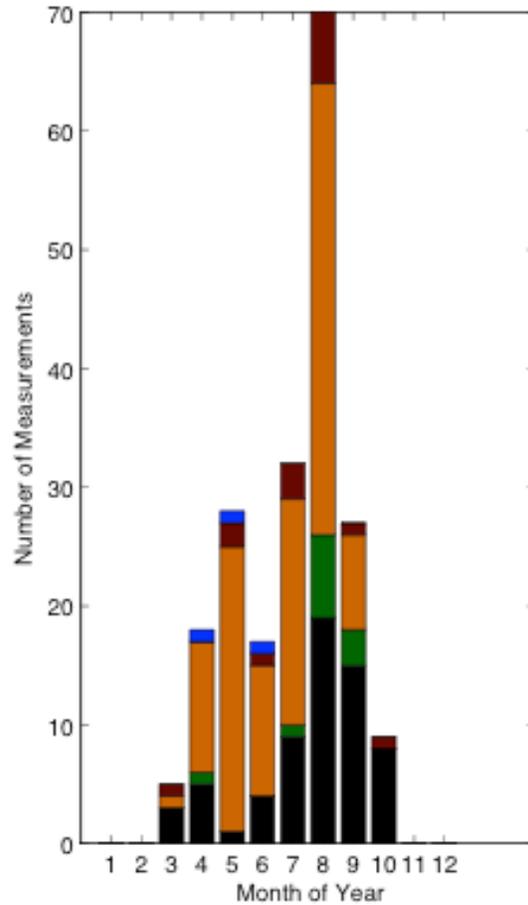
Messina, Italy

Aerosol Composition: Messina



LONG = 15.567 LAT = 38.197

Data for 2005 – 2012

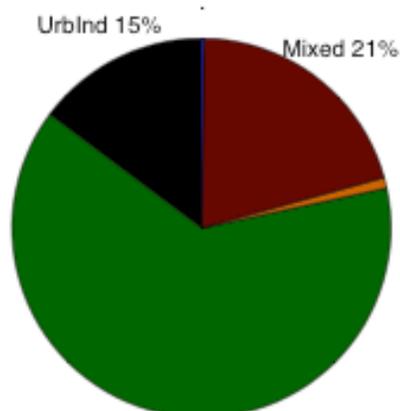


Messina is the third largest city on the island of Sicily. Messina is a port city with an urban population of 260,000 inhabitants. The Sun-photometer is located at the Institute for Coastal Marine Environment, a few meters from the seashore. Unexpectedly, our Mahalanobis calculations only yield about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

[Return to Table](#)

Mexico City, Mexico

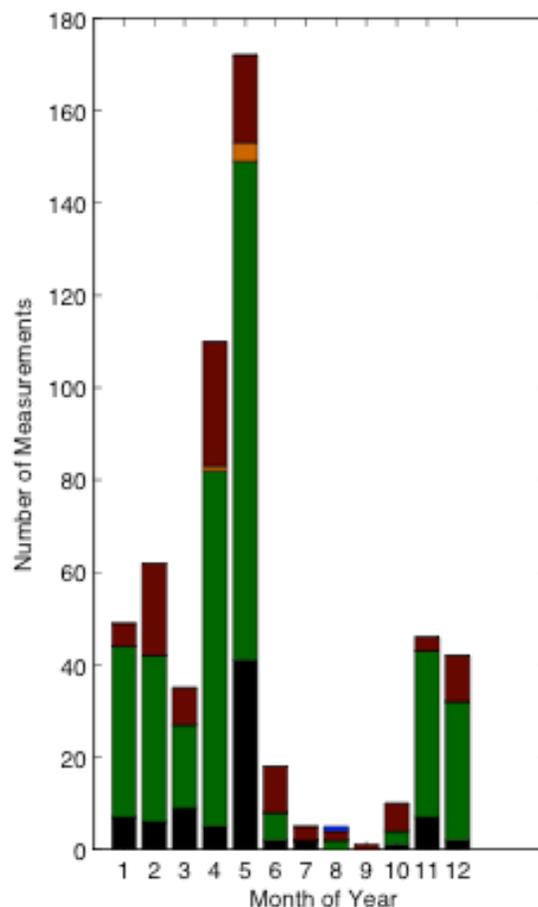
Aerosol Composition: MexicoCity



Bio 64%

LONG = -99.182 LAT = 19.334

Data for 1999 - 2010

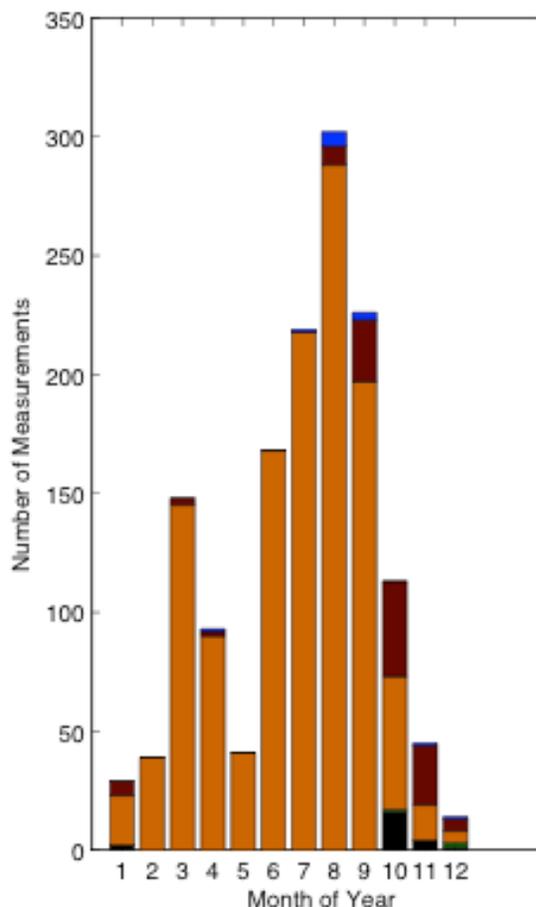
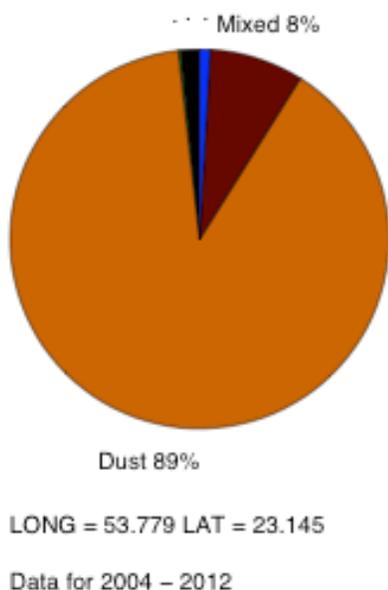


The sun photometer site is located on a platform in a wooded area of Mexico City, in the southern end of the Federal District metropolitan area (population over 8.9 million). Mexico City has a serious air pollution problem, but the Mahalanobis distance analysis indicates that biomass burning aerosols 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.

[Return to Table](#)

Mezaira, UAE

Aerosol Composition: Mezaira



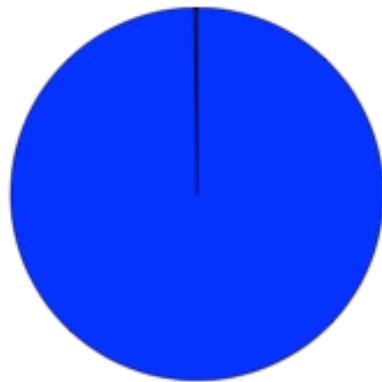
The instrument is on the ground in a dune field. The surrounding area is composed of small, recovered-desert agricultural development. Mezaira is about 130 km south of the Persian Gulf, deep in the desert.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008.

[Return to Table](#)

Midway Island

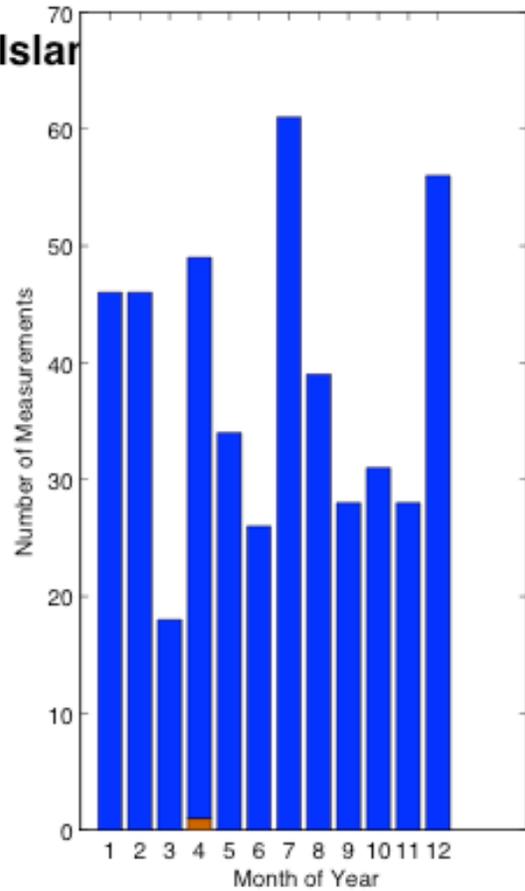
Aerosol Composition: Midway Island



Marit 100%

LONG = -177.378 LAT = 28.21

Data for 2001 - 2012

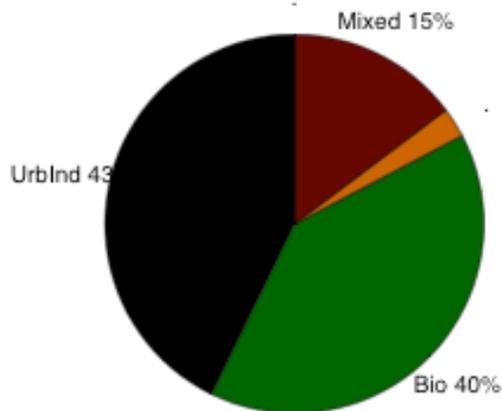


Midway Island is a small atoll in the north Pacific Ocean. It is near the northwestern end of the Hawaiian Archipelago. Once a populated island, it is now inhabited only by fish and wildlife workers. It is roughly equidistant between North America and Asia.

[Return to Table](#)

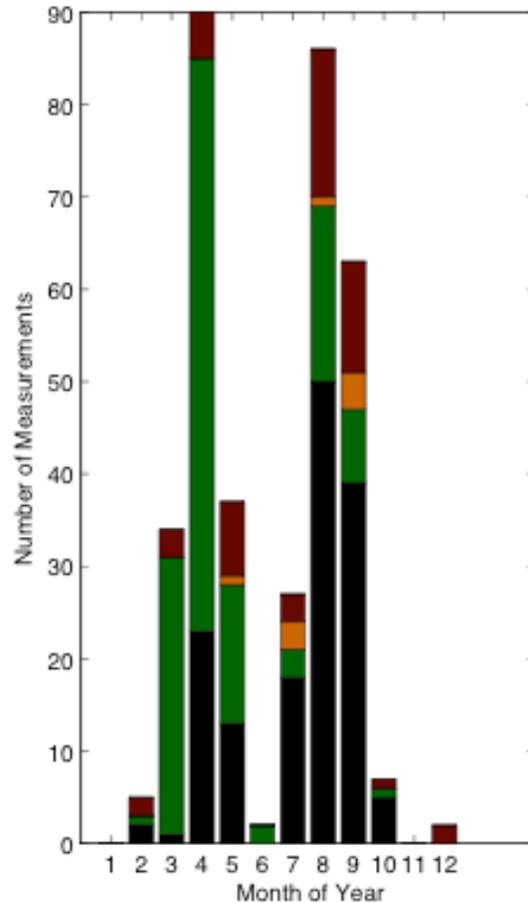
Minsk, Belarus

Aerosol Composition: Minsk



LONG = 27.601 LAT = 53.92

Data for 2002 - 2012

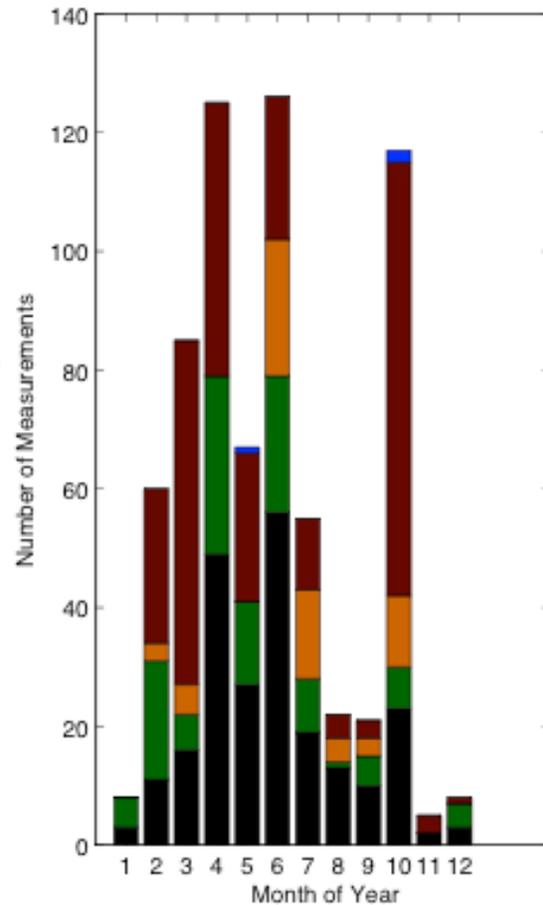
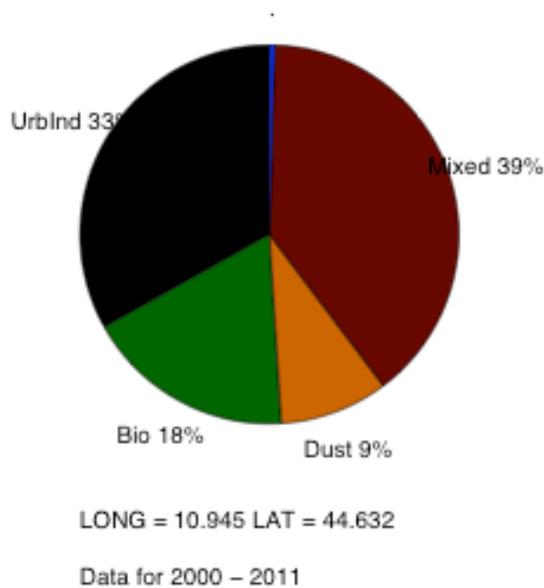


The instrument is located on the roof of the Institute of Physics building. The site is urban, but adjacent to two urban forest parks. The Minsk region has a population of about 2 million. It is the major industrial center of Belarus, having some 250 factories producing trucks, tractors, gears, optical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

[Return to Table](#)

Modena, Italy

Aerosol Composition: Modena

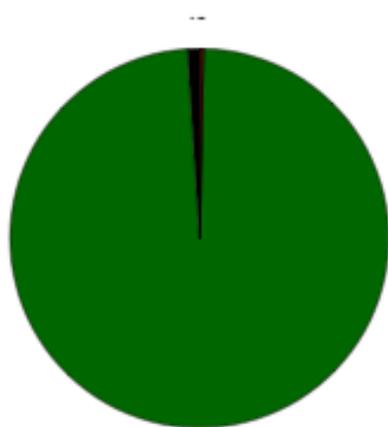


The sunphotometer is located on a roof of Modena University. Modena is a town with an approximate population of 180,000 people. It is located in the most industrialized area of Italy, about 40 km northwest of Bologna, and roughly half way between Genoa and Venice.

[Return to Table](#)

Mongu, Zambia

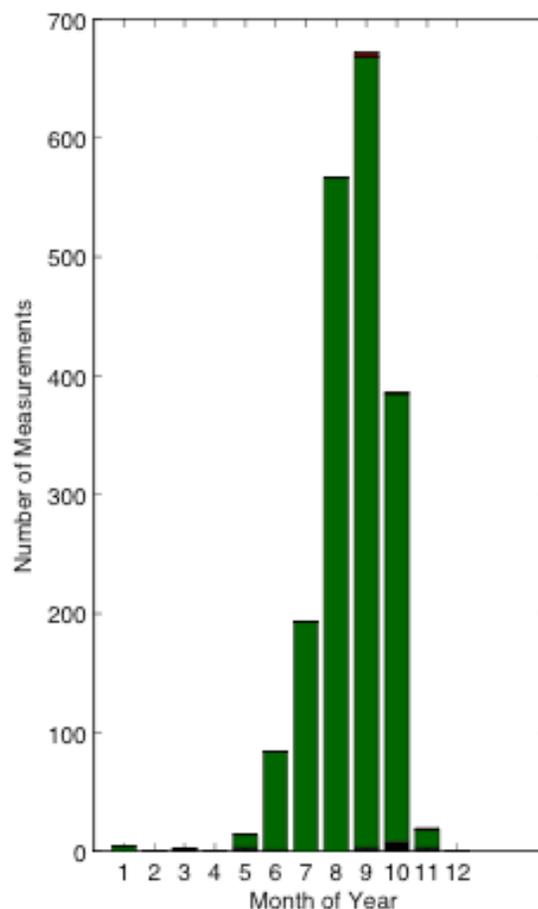
Aerosol Composition: Mongu



Bio 99%

LONG = 23.151 LAT = -15.254

Data for 1995 - 2009

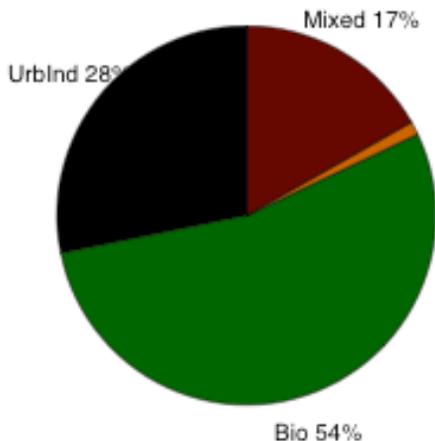


Mongu is a small city (population 45,000) in Zambia, a landlocked country in Southern Africa. It is surrounded by the Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. This site is located on the rooftop of a small building, in a field adjacent to the local airport. The airport 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.

[Return to Table](#)

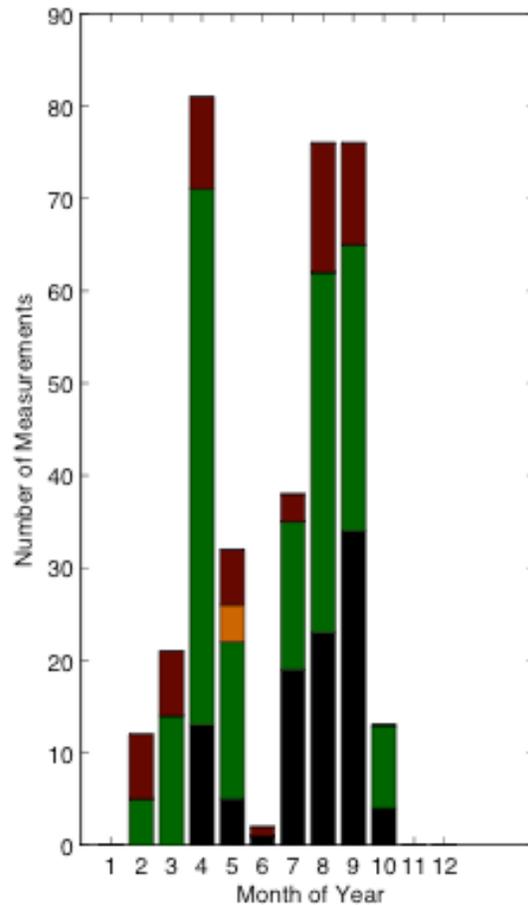
Moscow, Russia

Aerosol Composition: MoscowMSUMO



LONG = 37.51 LAT = 55.7

Data for 2001 - 2011

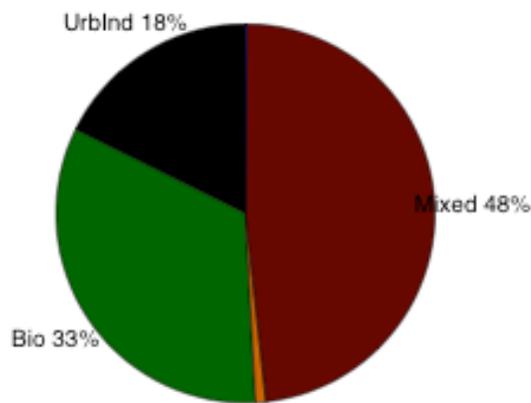


The instrument is located at Moscow State University, which is situated in Southwest Moscow about 5 km from the city center. This highly urban area has a population of some 11.5 million inhabitants. Industry in Moscow includes chemical, metallurgy, food, textile, energy production and machinery. Air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

[Return to Table](#)

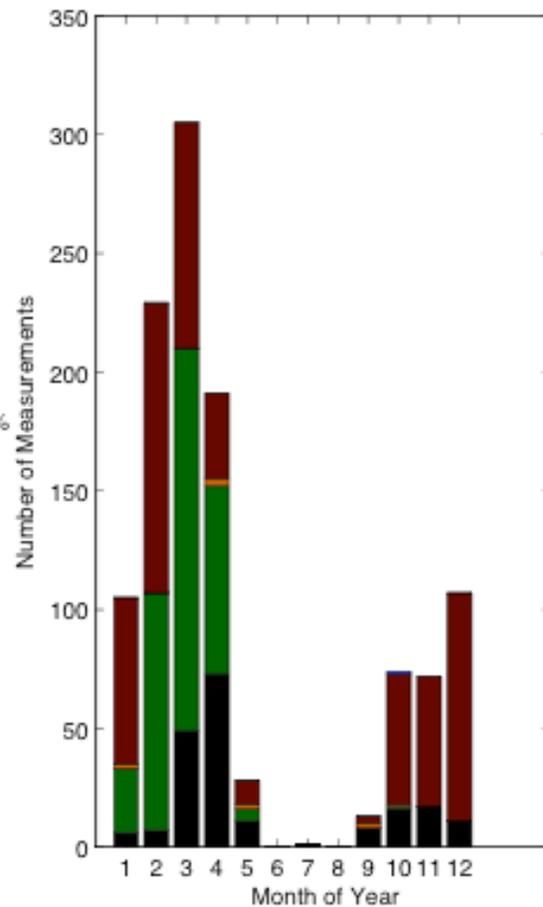
Mukdahan, Thailand

Aerosol Composition: Mukdahan



LONG = 104.676 LAT = 16.607

Data for 2003 - 2009

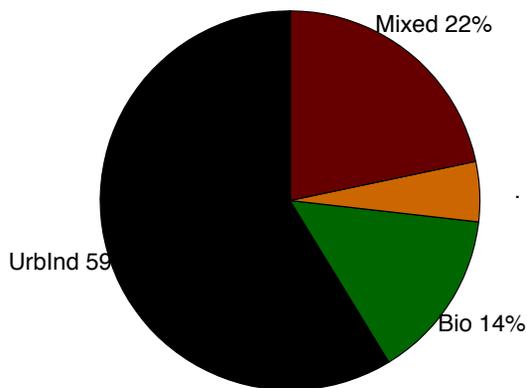


This instrument is located in a rural region about 10 km northwest of the city of Mukdahan, Thailand (population approximately 100,000). The landscape around Mukdahan is relatively flat, but some steep hills are found to the west. The land cover is a mixture of forest and agriculture, mostly dominated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

[Return to Table](#)

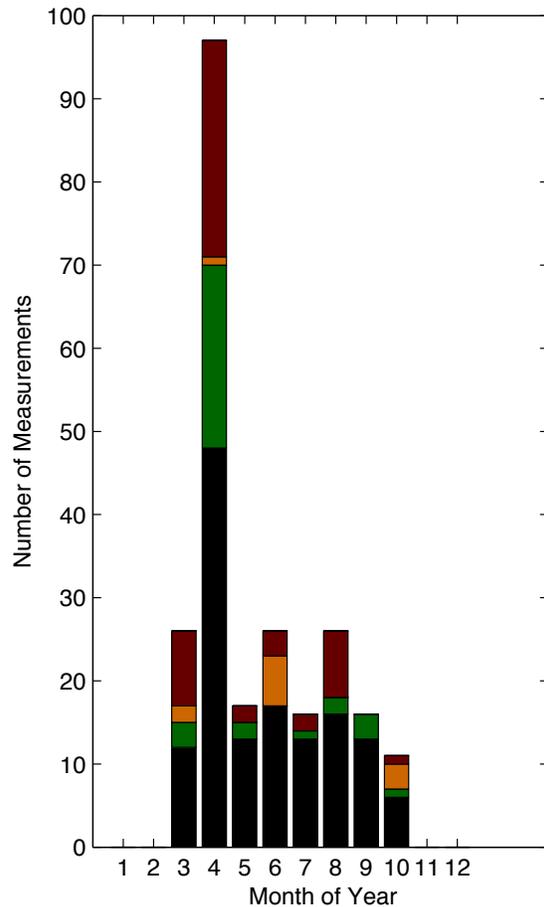
Munich, Germany

Aerosol Composition: IFT–Leipzig



LONG = 12.435 LAT = 51.352

Data for 2001 – 2011

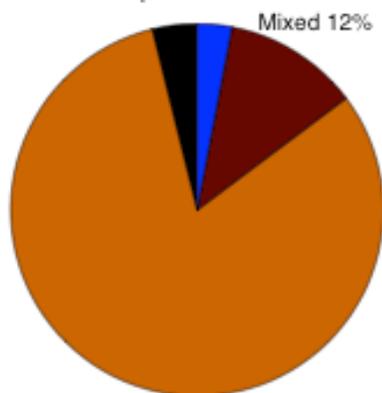


This AERONET site is located at Munich University, near the center of the city of Munich (population about 1.4 million). Munich is said to have the strongest economy of any German city and is the home of many industries, including publishing companies, electronics and automobile manufacturing. This site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

[Return to Table](#)

Mussafa (Abu Dhabi) UAE

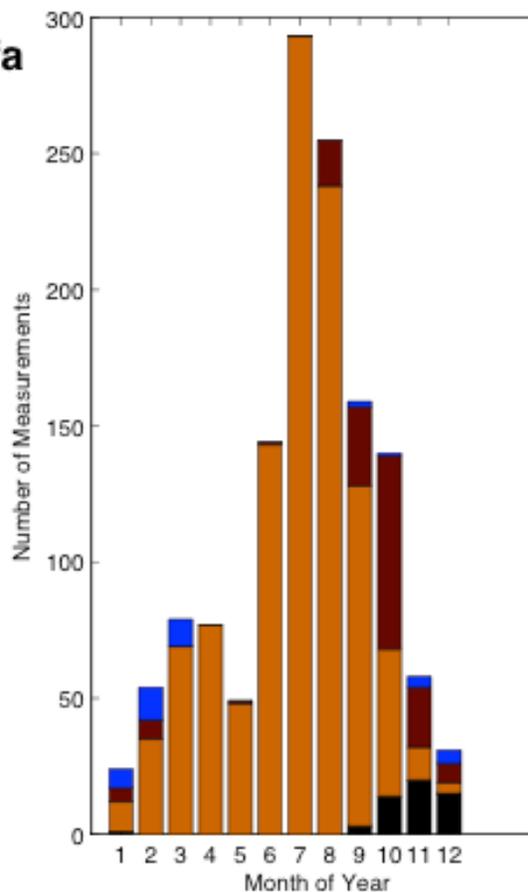
Aerosol Composition: Mussafa



Dust 81%

LONG = 54.467 LAT = 24.372

Data for 2004 – 2010

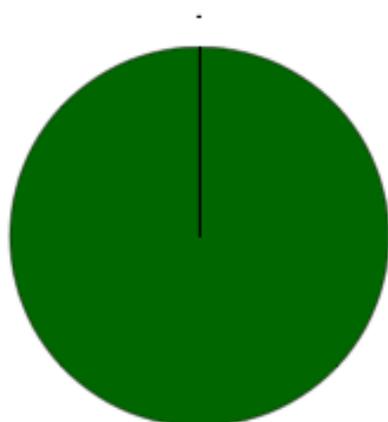


Mussafa is the name of an industrial area in Abu Dhabi, UAE. The instrument is on the south shore of the Persian Gulf. The Gulf is a few meters from the instrument and the surrounding area is industrial/commercial with about 920,000 inhabitants.

[Return to Table](#)

Mwinilunga, Zambia

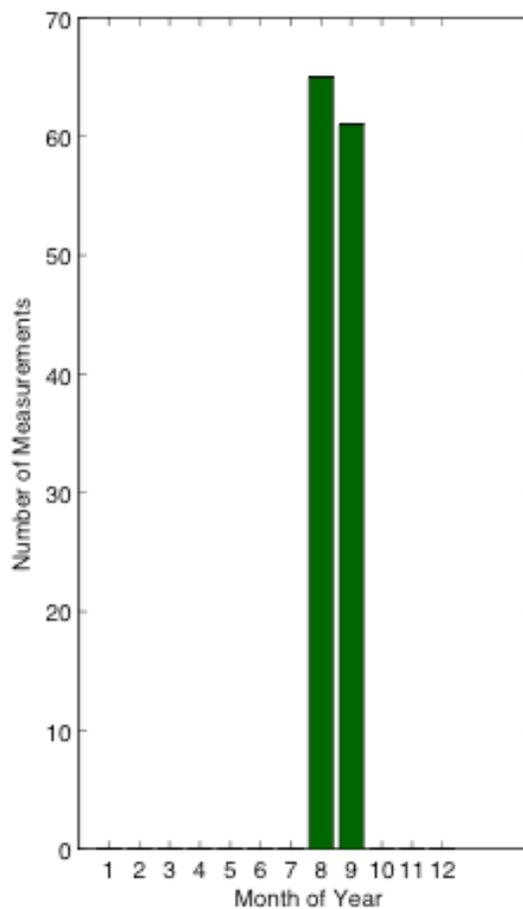
Aerosol Composition: Mwinilunga



Bio 100%

LONG = 24.431 LAT = -11.74

Data for 2000 - 2000

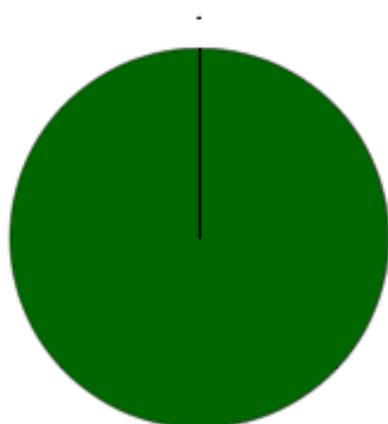


This site is no longer active. It was located on a termite hill in the town of Mwinilunga in northwestern Zambia. The town has a population of 15,000. The region is very rainy, particularly in the period from October to May.

[Return to Table](#)

Ndola, Zambia

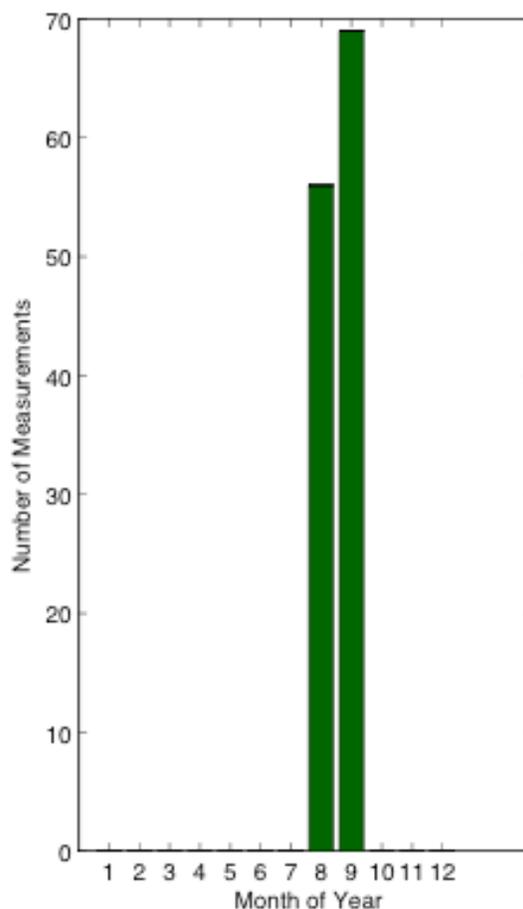
Aerosol Composition: Ndola



Bio 100%

LONG = 28.658 LAT = -12.995

Data for 2000 - 2000

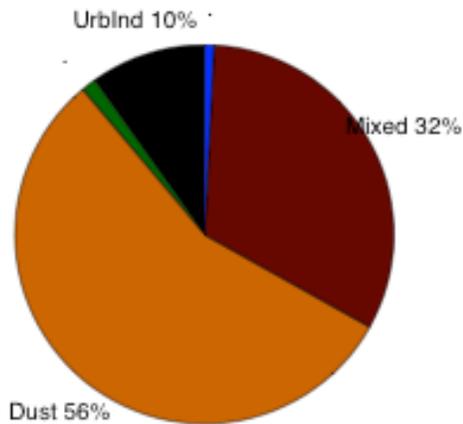


Ndola is in an industrial and mining region with a city population of ~ 460,000. The sun photometer is located at the airport, south and west of the city. It is an industrial and commercial center about 10 km from the border with the Congo. It has a humid subtropical climate. This site is no longer active.

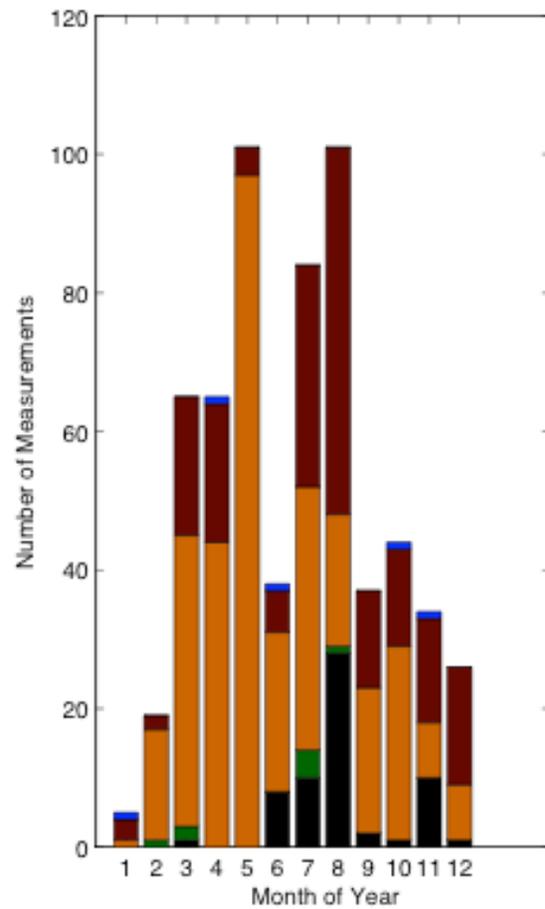
[Return to Table](#)

Nes Ziona, Israel

Aerosol Composition: NesZiona



LONG = 34.789 LAT = 31.922
Data for 2000 - 2012

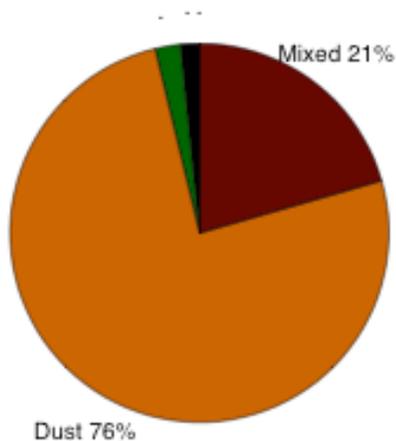


Nes Ziona is a city of about 40,000 a few km south of the Tel Aviv metropolitan area, which has a population of about 3.5 million. Nes Ziona lies about 10 km from the sea.

[Return to Table](#)

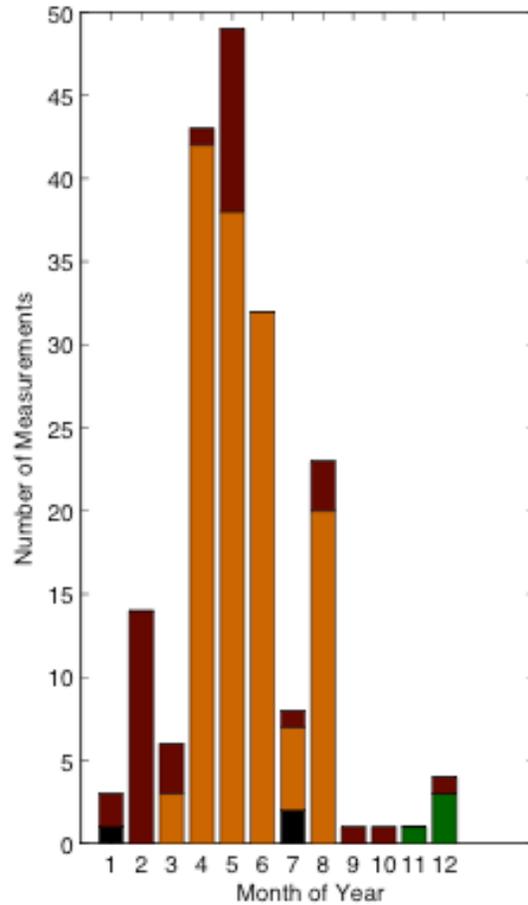
New Delhi, India

Aerosol Composition: NewDelhi



LONG = 77.175 LAT = 28.63

Data for 2009 – 2009

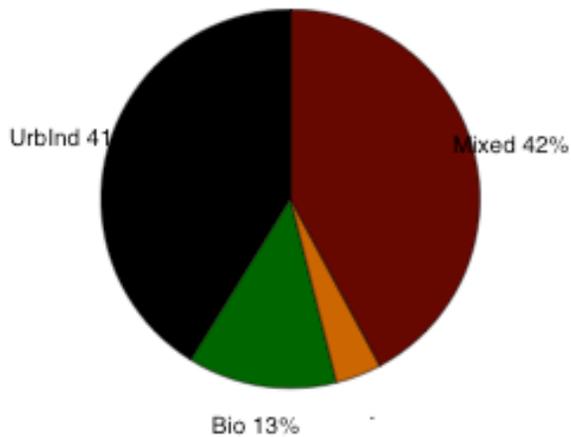


The site is close to the western edge of the New Delhi metropolitan area which has a population of nearly 22 million. New Delhi lies east of the Thar Desert and south of the Himalayas in the Indo-Gangetic plain.

[Return to Table](#)

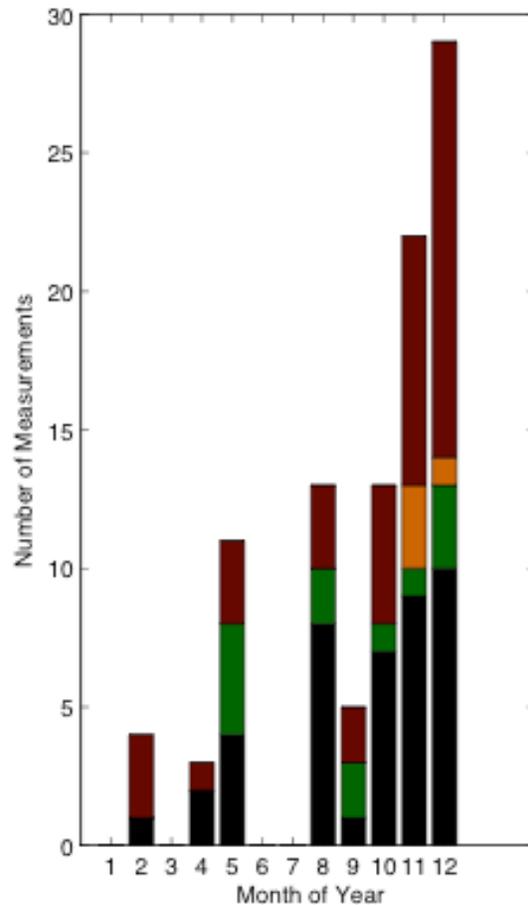
Nghia Do, Vietnam

Aerosol Composition: NGHIADO



LONG = 105.8 LAT = 21.048

Data for 2010 – 2011

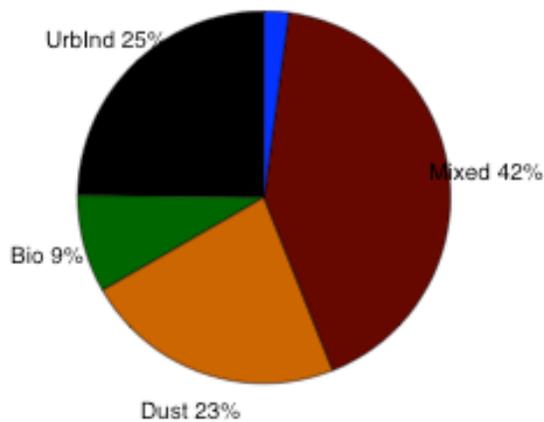


Nghia Do is a region in Hanoi, the capital of Vietnam, which has a population of about 6.5 million. The instrument is located at the Vietnam Academy of Science and Technology in the northern part of the city.

[Return to Table](#)

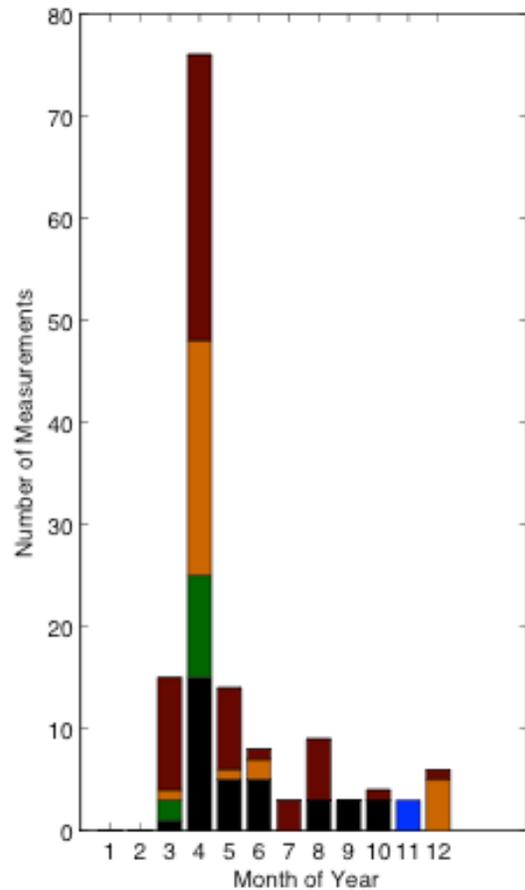
Noto, Japan

Aerosol Composition: Noto



LONG = 137.137 LAT = 37.334

Data for 2001 – 2010

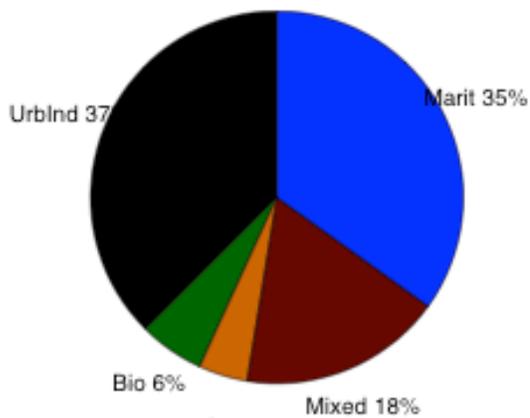


This site is in a rural area on the eastern portion of the Noto Peninsula on the northwestern side of Japan. It is less than 5 km inland from the Sea of Japan. The instrument is at an elevation of ~ 200 meters.

[Return to Table](#)

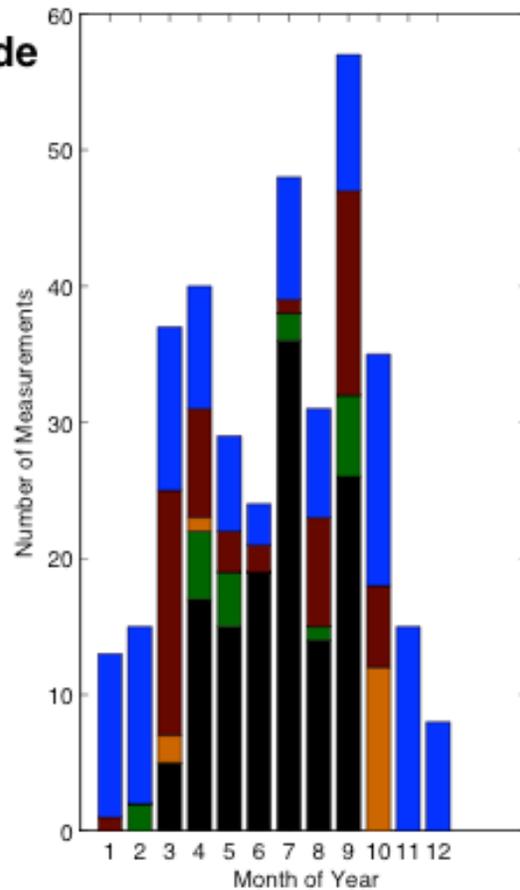
Oostende, Belgium

Aerosol Composition: Oostende



LONG = 2.925 LAT = 51.225

Data for 2001 – 2012

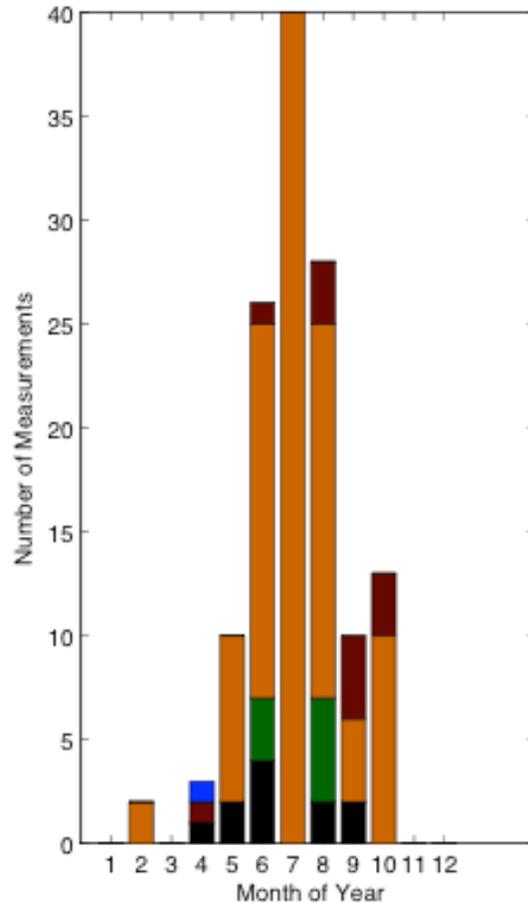
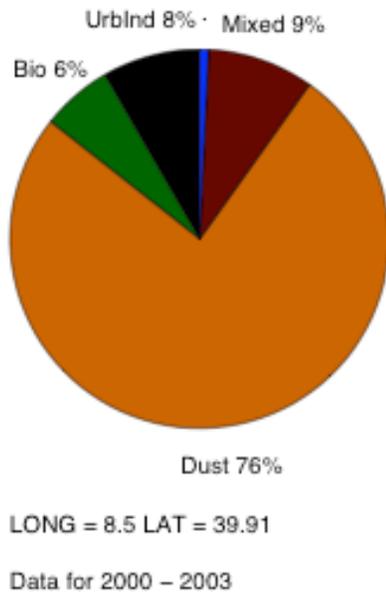


This instrument is about a kilometer from the shore on a roof platform in Oostende, Belgium, a city of some 80,000 inhabitants. Oostende (or Ostende) is a port city on the coast of the North Sea. Its climate is described as maritime temperate.

[Return to Table](#)

Oristano, Sardinia, Italy

Aerosol Composition: IMCOristano

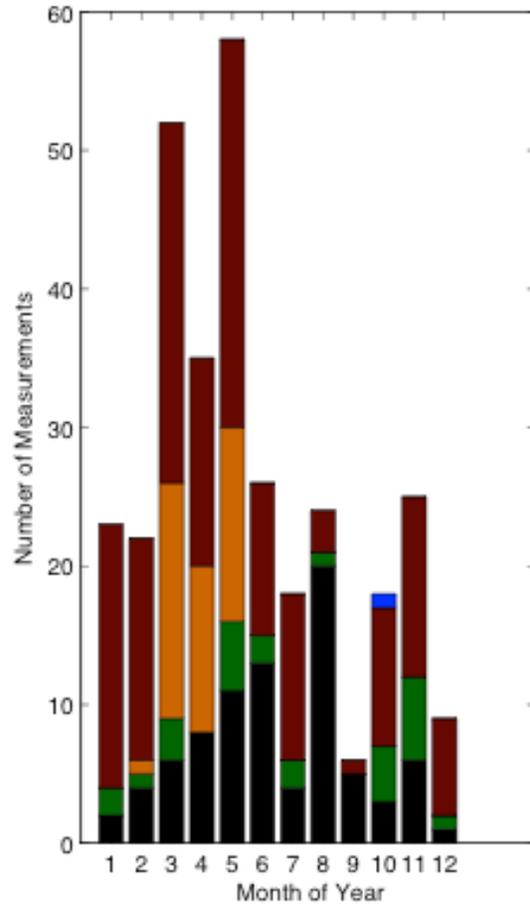
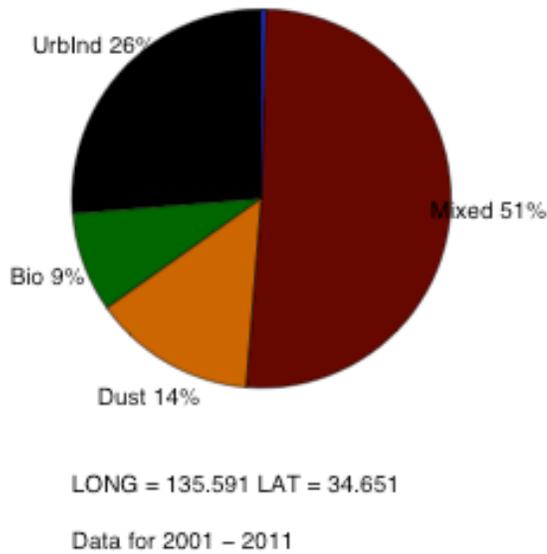


The AERONET sun photometer is located on the shore about 6 km from the city of Oristano (population 32,000) on the island of Sardinia, off the west coast of Italy. It is on the site of the International Marine Center. AERONET list this site as IMC_Oristano.

[Return to Table](#)

Osaka, Japan

Aerosol Composition: Osaka

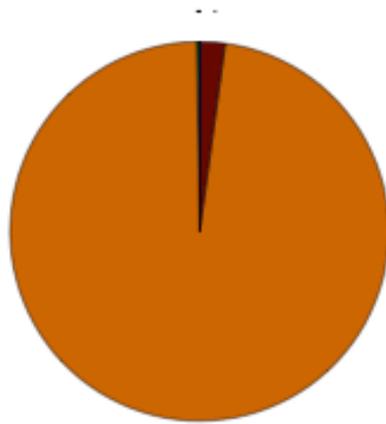


The instrument is located in the heart of the metropolitan urban area of about 19 million people. Osaka is the second largest city in Japan. Commerce, service and manufacturing are the three major activities of Osaka. The city lies on the shore of Osaka Bay.

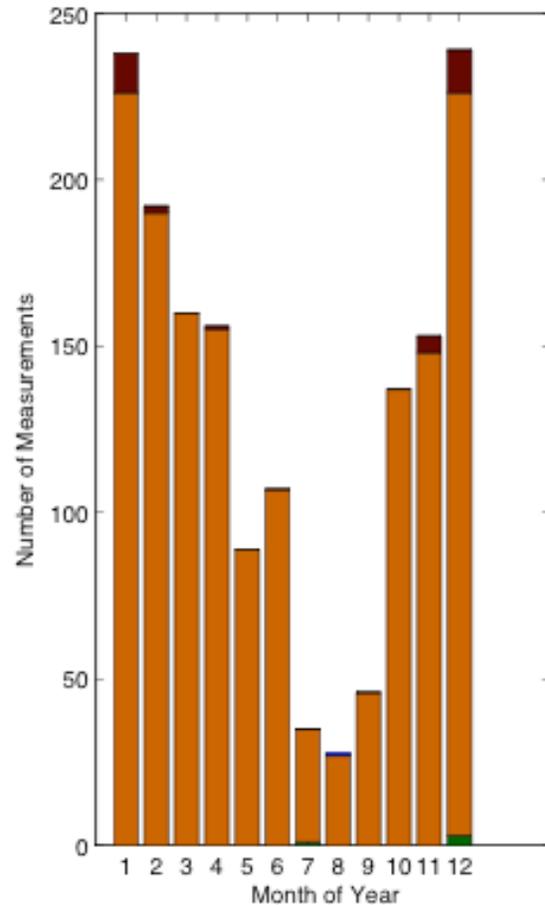
[Return to Table](#)

Ougadougou, Burkina Faso

Aerosol Composition: Ouagadougou



Dust 98%
LONG = -1.4 LAT = 12.2
Data for 1999 - 2007

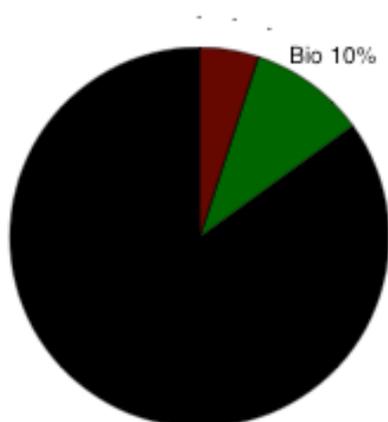


This site is well inland in western Africa. Ouagadougou is the capital of Burkina Faso (or Burkina) a landlocked country just south of the Sahara Desert. Ouagadougou (often referred to as Ouaga) has a population of nearly 1.5 million.

[Return to Table](#)

Oyster, Virginia, USA

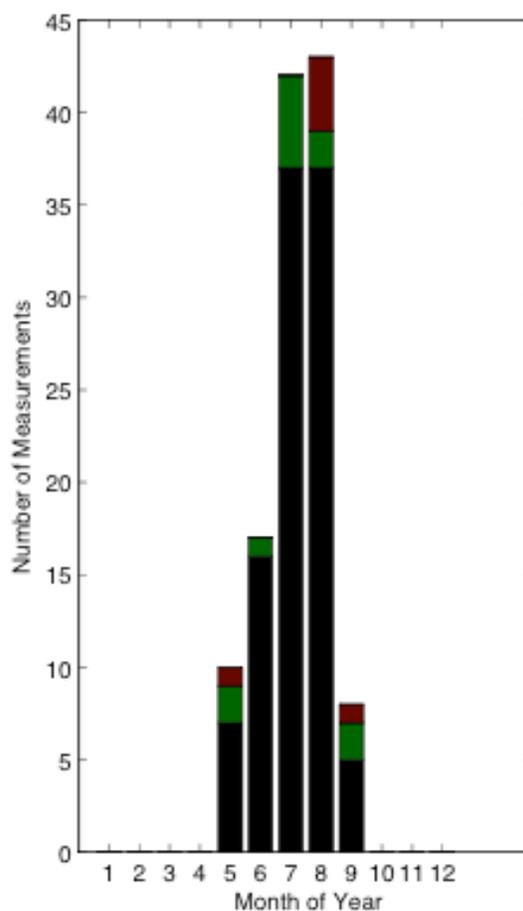
Aerosol Composition: Oyster



Urblnd 85%

LONG = -75.933 LAT = 37.295

Data for 1998 - 2001

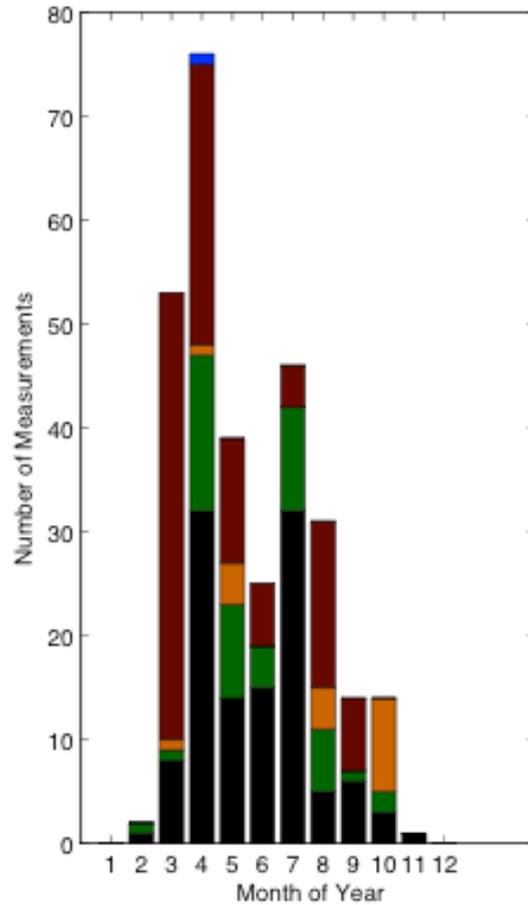
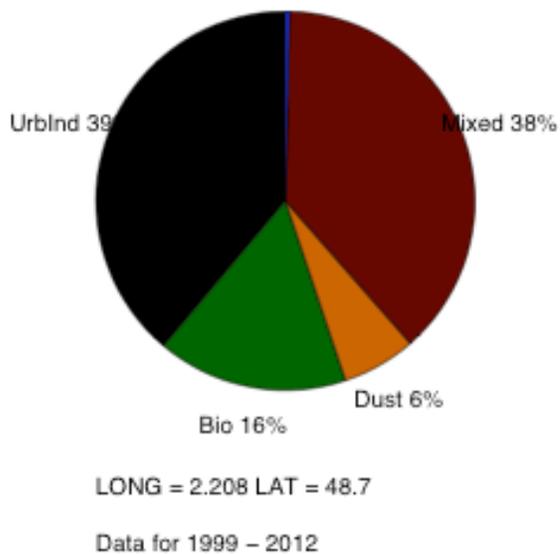


This site is no longer active. Oyster is a small unincorporated community on the Atlantic Coast of the Eastern Shore of the U.S. state of Virginia. The instrument was located in a field about 1 km east of Brockenberry Bay, not far from the Hampton Roads area.

[Return to Table](#)

Palaiseau, France

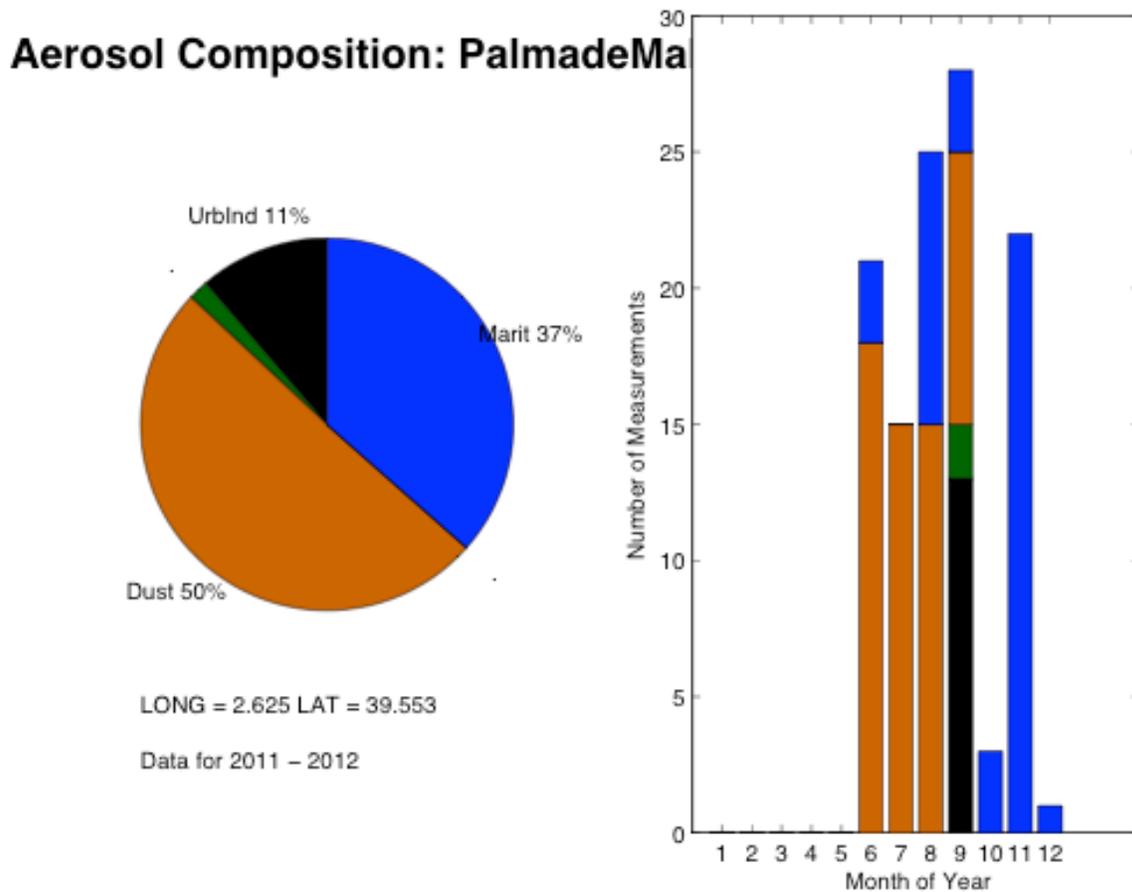
Aerosol Composition: Palaiseau



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

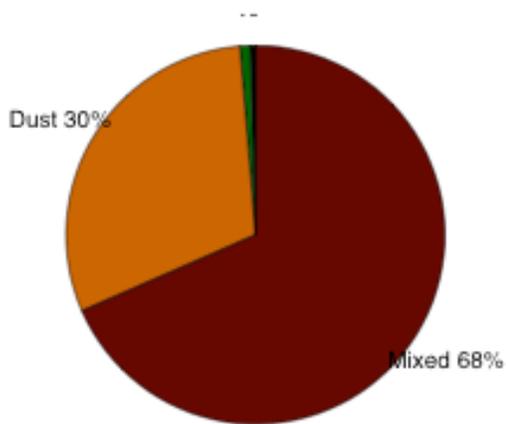


The photometer is near the harbor of the city of Palma in Mallorca. Mallorca is an island in the eastern Mediterranean and Palma is its biggest city with a population around 420,000. It is a major tourist center.

[Return to Table](#)

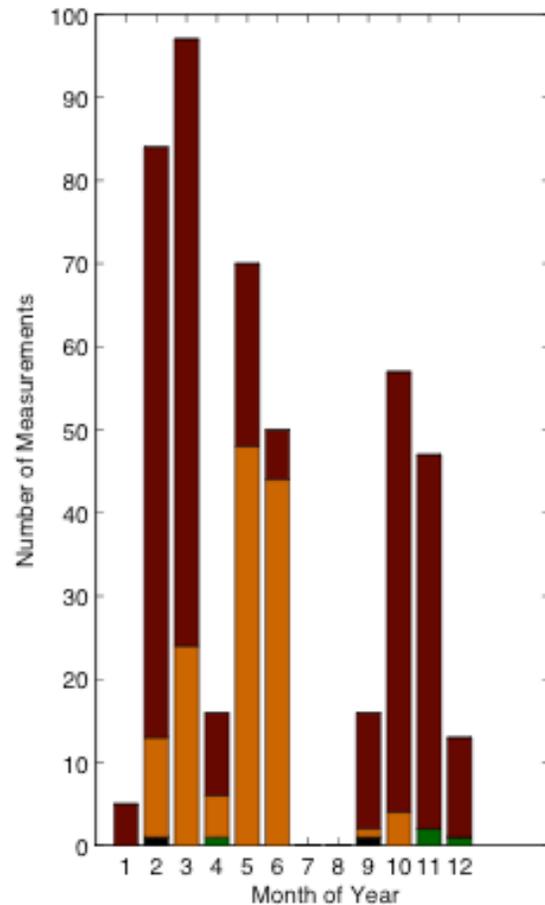
Pantnagar, India

Aerosol Composition: Pantnagar



LONG = 79.521 LAT = 29.046

Data for 2008 - 2009

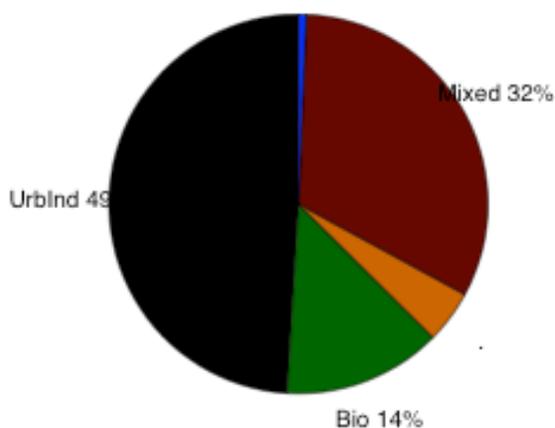


Pantnagar is a city of about 35,000 in the new state of Uttarakhand in Northern India. The surrounding region is rather sparsely populated. It lies on a plain at the foot of the Himalaya mountains.

[Return to Table](#)

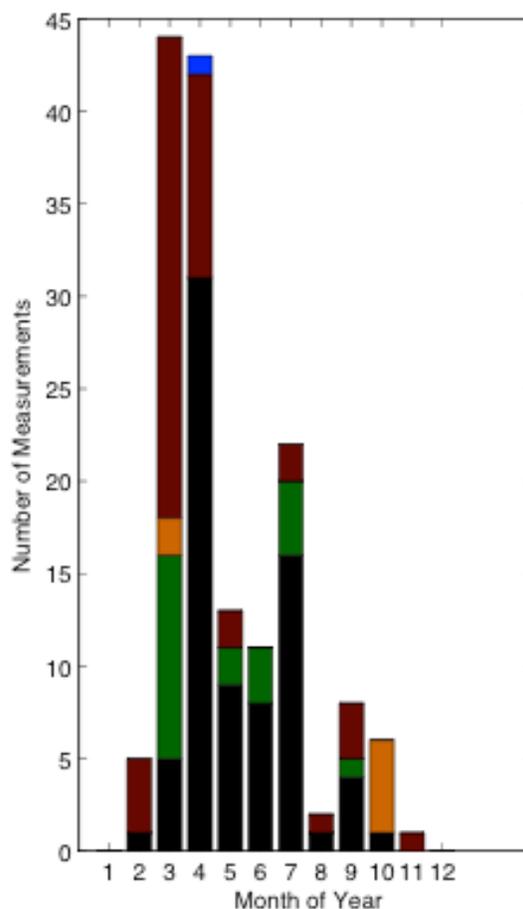
Paris, France

Aerosol Composition: Paris



LONG = 2.333 LAT = 48.867

Data for 2005 – 2012

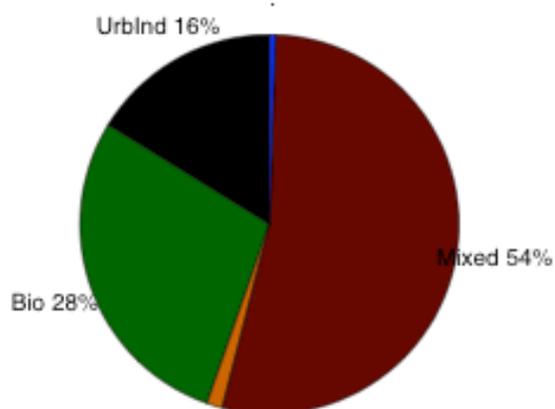


The population of the metropolitan Paris region is about 12 million. The sun photometer is located very near the Louvre Museum, in the heart of the city. Paris is a major transportation, merchandising, manufacturing and administrative center.

[Return to Table](#)

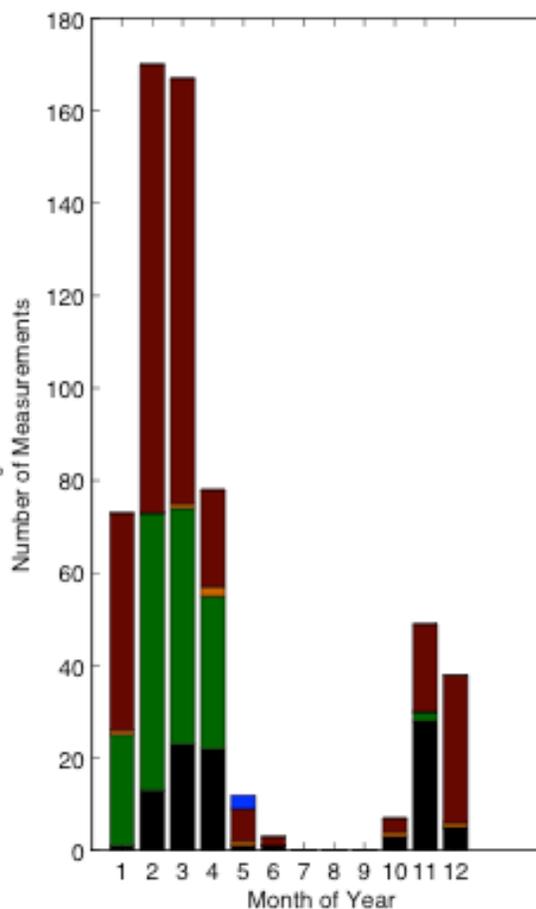
Pimai (Phi Mai), Thailand

Aerosol Composition: Pimai



LONG = 102.564 LAT = 15.182

Data for 2003 – 2008

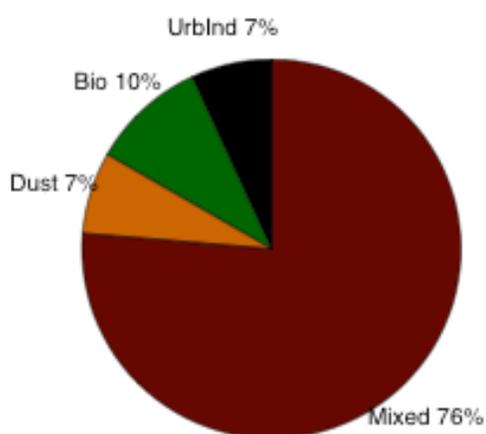


The site at Pimai (Phi Mai) is surrounded by an agricultural region with a rather low population density, in central Thailand.

[Return to Table](#)

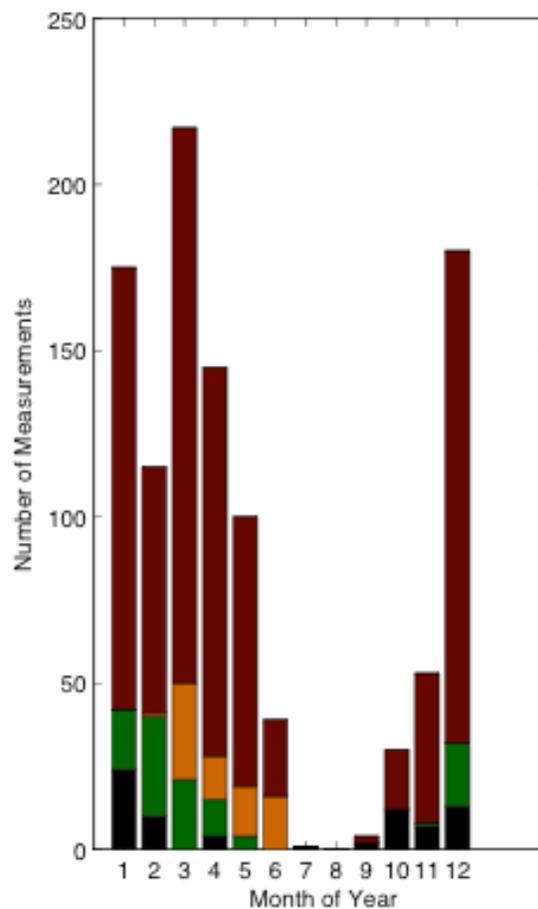
Pokhara, Nepal

Aerosol Composition: Pokhara



LONG = 83.971 LAT = 28.151

Data for 2010 – 2013

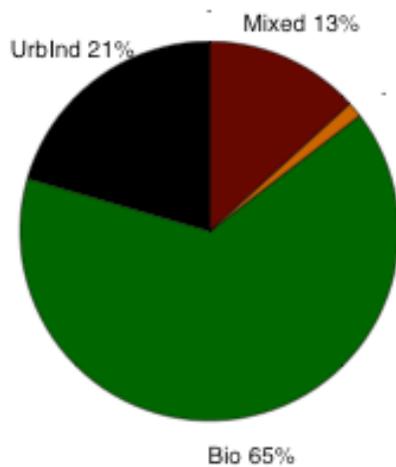


Pokhara is a city of about 250,000 people in a flat valley, less than 40 km south of Mount Annapurna in the Himalayas. The Pokhara area sees some of the strongest monsoon convection in Nepal, with up to more than 5 meters of rainfall per year. The elevation of this station is 807.0 meters.

[Return to Table](#)

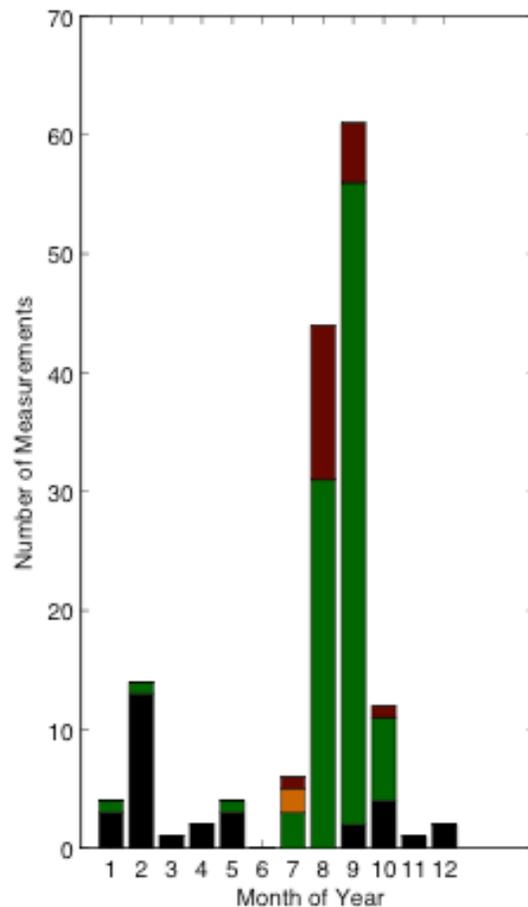
Pretoria, South Africa (CSIR-DPSS)

Aerosol Composition: Pretoria



LONG = 28.28 LAT = -25.757

Data for 2011 – 2013

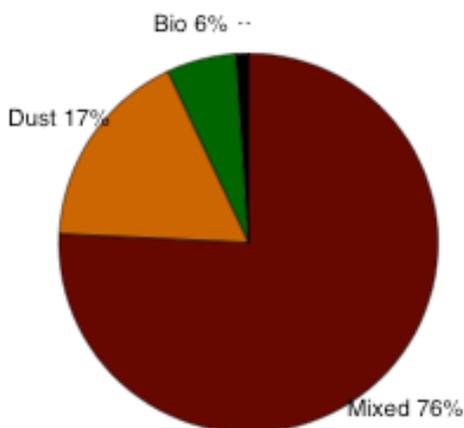


This station is located to the north of the Pretoria – Johannesburg metropolitan area which has about 5 million inhabitants. This site is listed in the AERONET website as Pretoria_CSIR-DPSS.

[Return to Table](#)

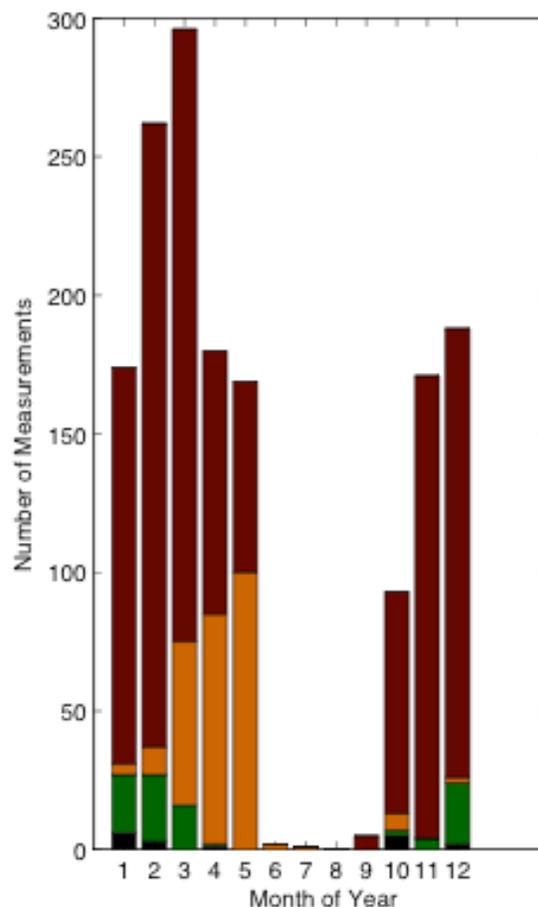
Pune (Poona), India

Aerosol Composition: Pune



LONG = 73.805 LAT = 18.537

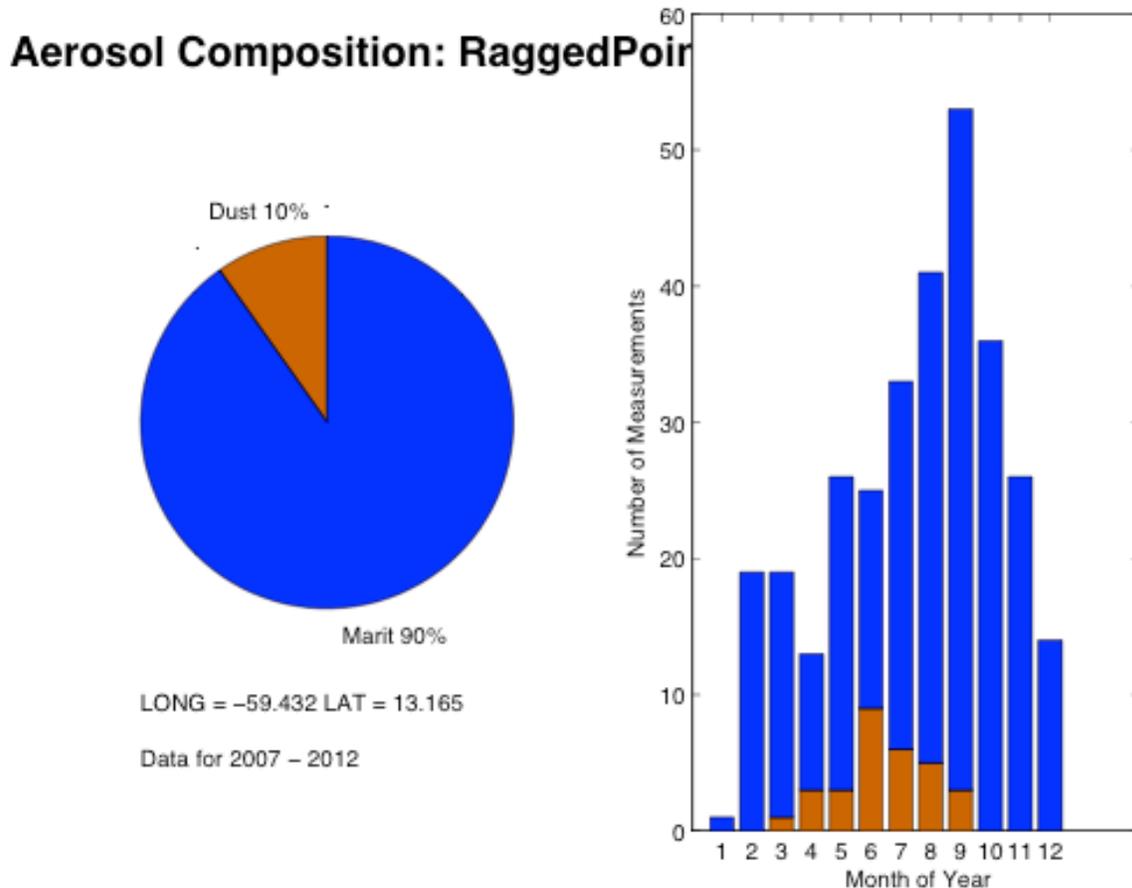
Data for 2008 – 2012



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.

[Return to Table](#)

Ragged Point, Barbados

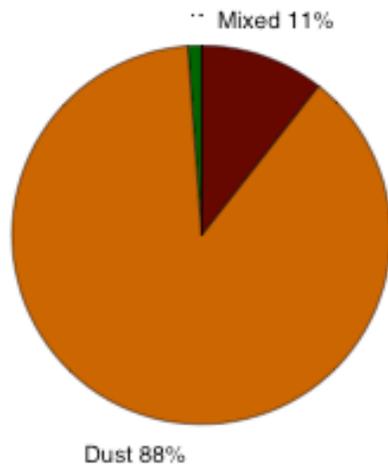


The site is located at the end of a promontory on the east coast of Barbados, at Ragged Point (also known as East Point). The instrument is located on the top of a 17 m tower on a 22 m high bluff on the edge of sea. The only city on Barbados is Bridgetown, located roughly across the island from Ragged 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.

[Return to Table](#)

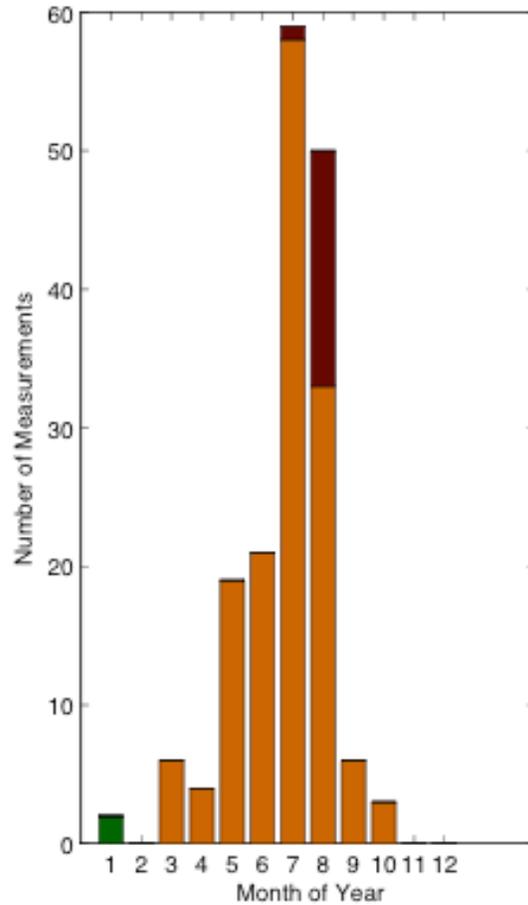
Ras El Ain, Morocco

Aerosol Composition: RasElAin



LONG = -7.599 LAT = 31.67

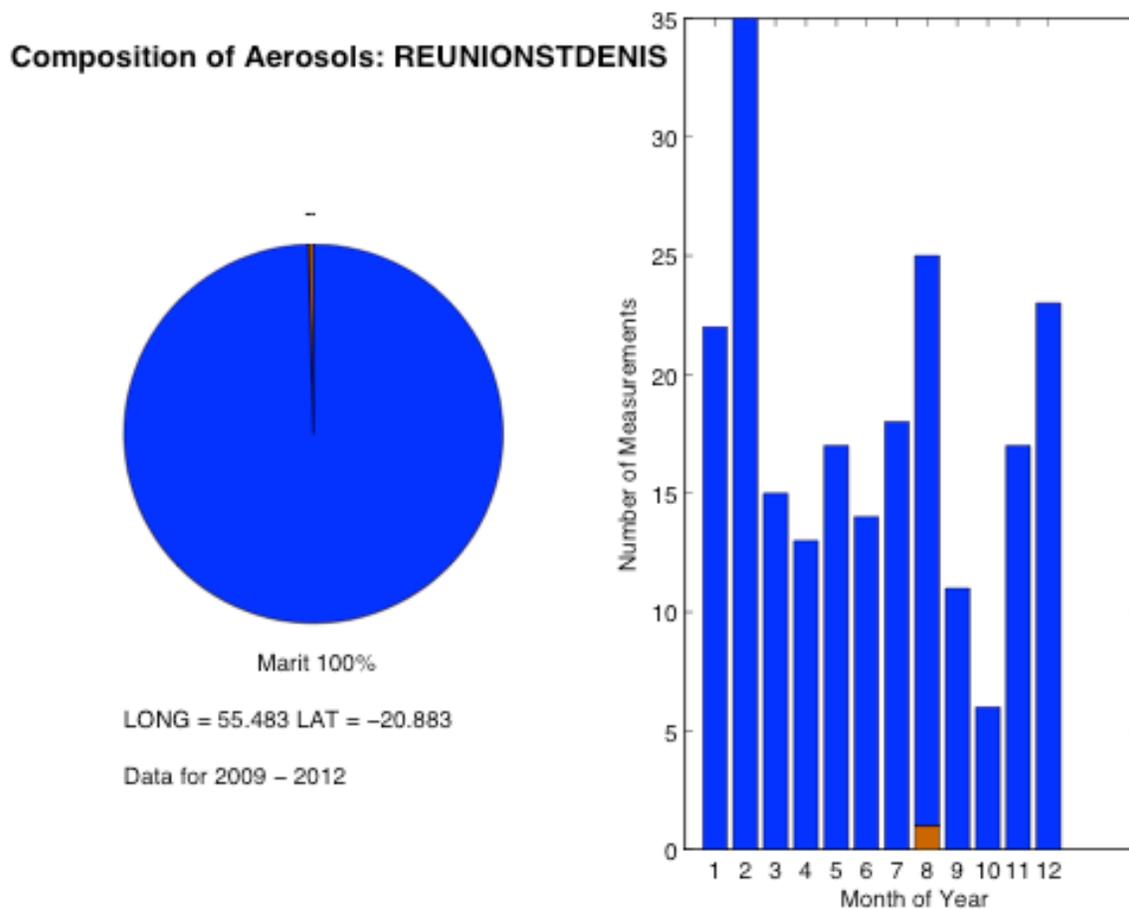
Data for 2006 - 2007



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

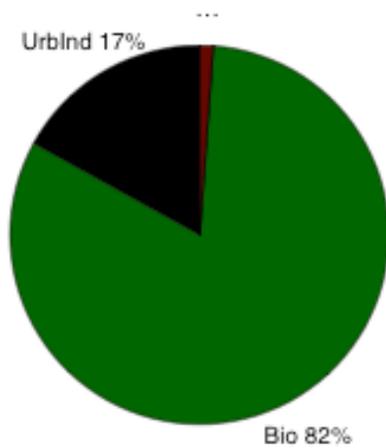


This site is located on the roof of the University of Reunion in the city of Saint-Denis, very near the seashore. Reunion is a French Island located in the Indian Ocean, east of Madagascar. The population of the island is about 840,000 and the population of St. Dennis is approximately 160,000.

[Return to Table](#)

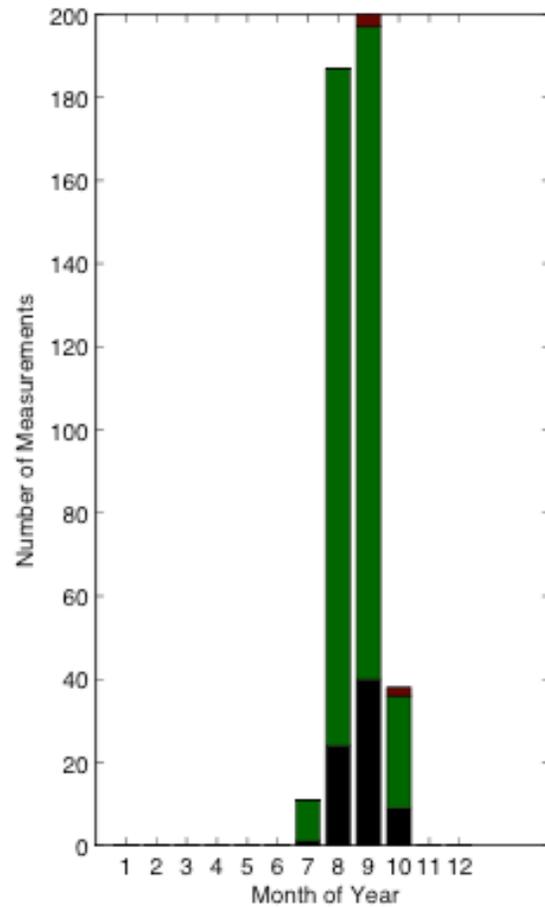
Rio Branco, Brazil

Aerosol Composition: RioBranco



LONG = -67.869 LAT = -9.957

Data for 2000 - 2012

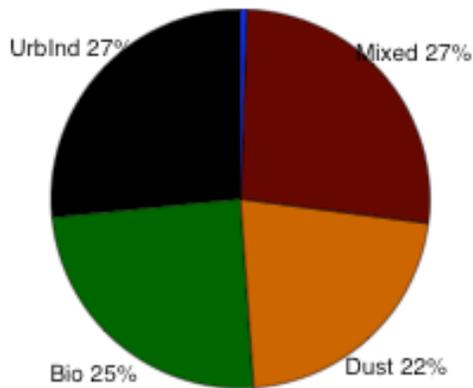


This site is located at a university west of the city of Rio Branco, Acre, Brazil. The site is in Western Brazil, not too far from the Bolivian and Peruvian borders. The local municipal population is ~ 310,000 people.

[Return to Table](#)

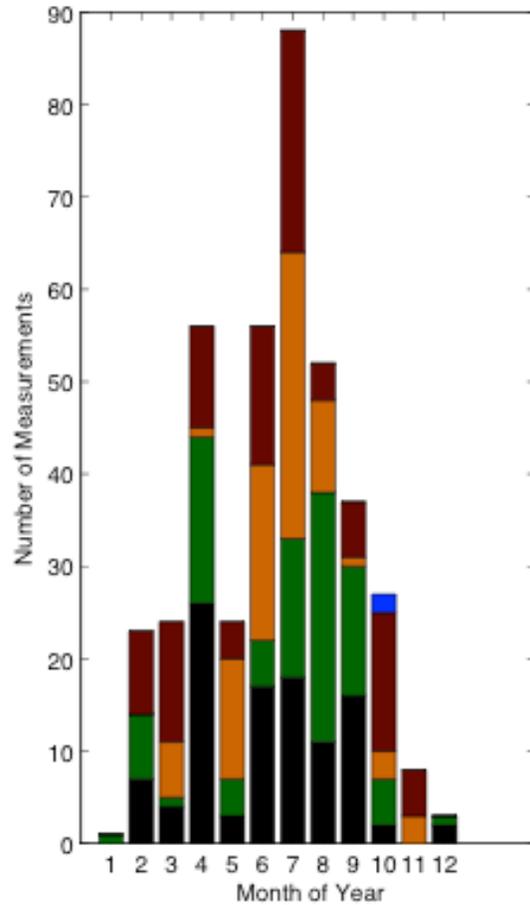
Rome (Tor Vergata), Italy

Aerosol Composition: RomeTorVergata



LONG = 12.647 LAT = 41.84

Data for 2001 – 2012

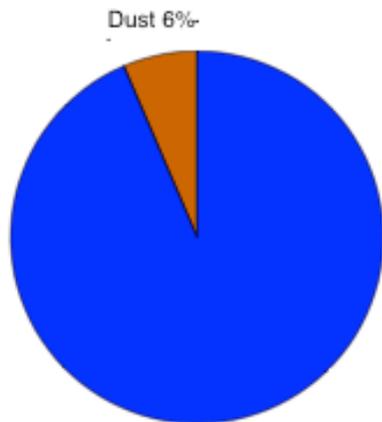


This instrument is located on a roof of the CNR institute near the University of Rome, Tor Vergata campus. This lies in the southern suburbs of Rome about 15 km from the city center, and 30 km inland from the Mediterranean. Rome has a metropolitan population of nearly 4 million. It is an important industrial,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

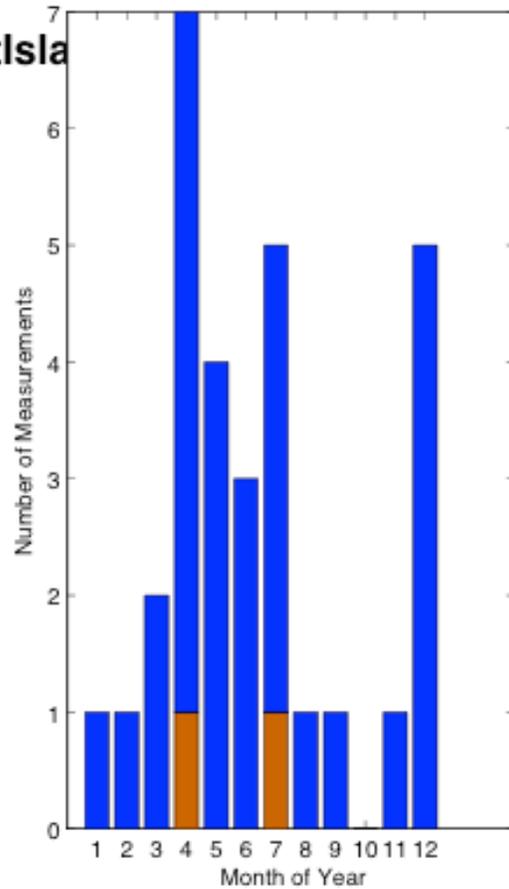
[Return to Table](#)

Rottnest Island, Australia

Aerosol Composition: Rottnest Island



LONG = 115.502 LAT = -32
Data for 2001 - 2002

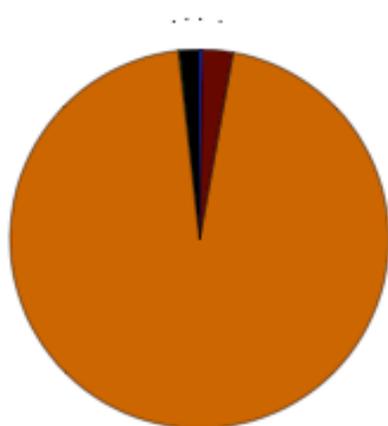


The instrument is located in a field near a lighthouse on the shore of the Indian Ocean. Rottnest Island lies about 20 km to the west of the Australian coast and the mainland city of Perth. Rottnest Island is an A-class Reserve.

[Return to Table](#)

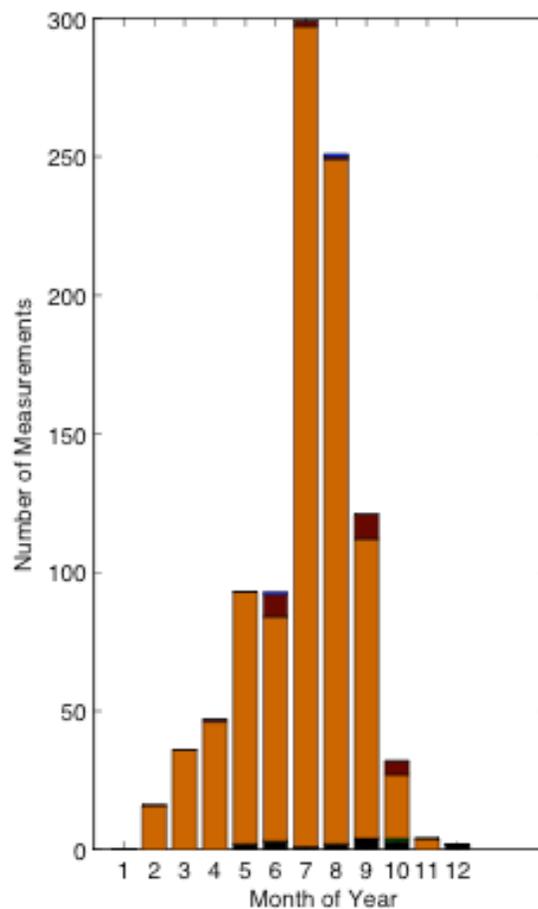
Saada (Marakesh), Morocco

Aerosol Composition: Saada



LONG = -8.156 LAT = 31.626

Data for 2004 - 2011

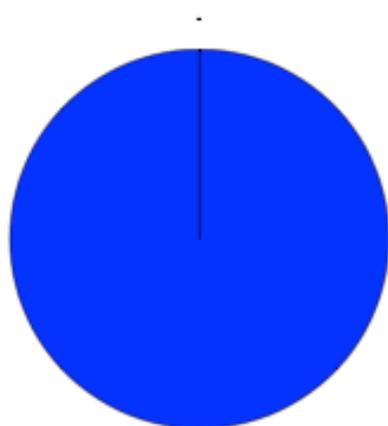


The Saada site is 10 km west of the city of Marakesh, in a rural region. The metropolitan Marakesh region has over 1 million inhabitants.

[Return to Table](#)

Sable Island, Nova Scotia, Canada

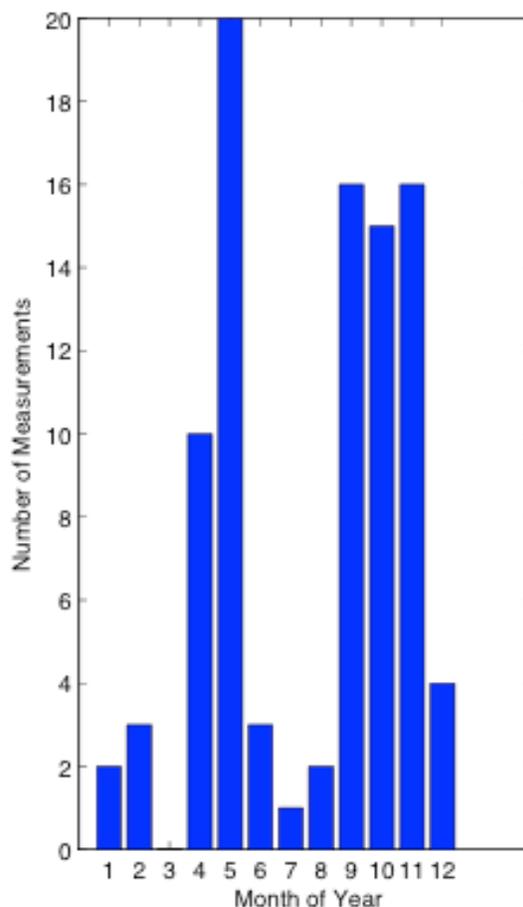
Composition of Aerosols: Sable Island



Marit 100%

LONG = -60.01 LAT = 43.933

Data for 2010 - 2012

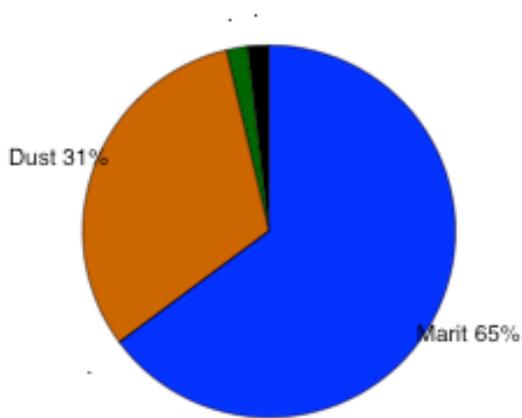


Sable Island is an island in the North Atlantic Ocean approximately 300 km east-southeast of the Nova Scotia shore. It is a protected National Park Reserve of Canada. Sable Island has a permanent population of 5, but tourists and scientists visit in the summer. It is approximately 45 km long and 1 km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

[Return to Table](#)

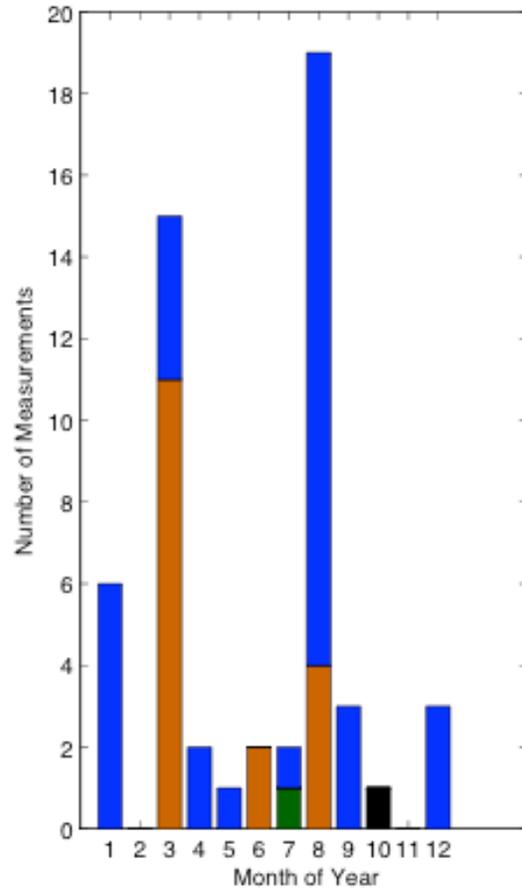
Sagres, Portugal

Aerosol Composition: Sagres



LONG = -8.874 LAT = 37.048

Data for 2011 - 2012

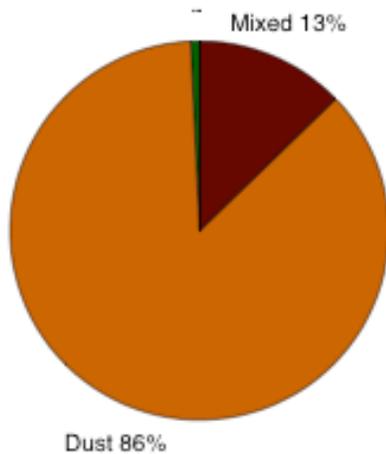


This site is located near the town of Sagres in southwestern Portugal. The instrument is on the shore.

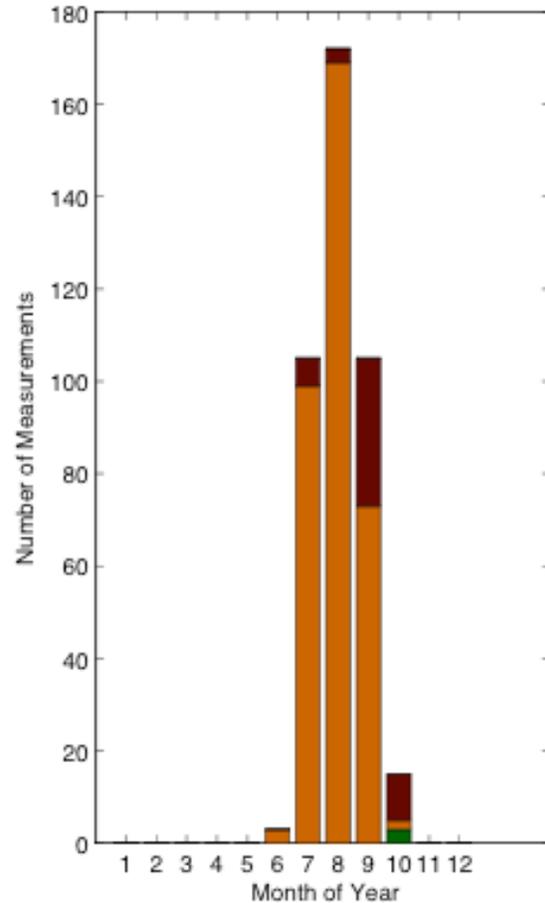
[Return to Table](#)

Saih Salam, UAE

Aerosol Composition: SaihSalam



LONG = 55.313 LAT = 24.829
Data for 2004 - 2004

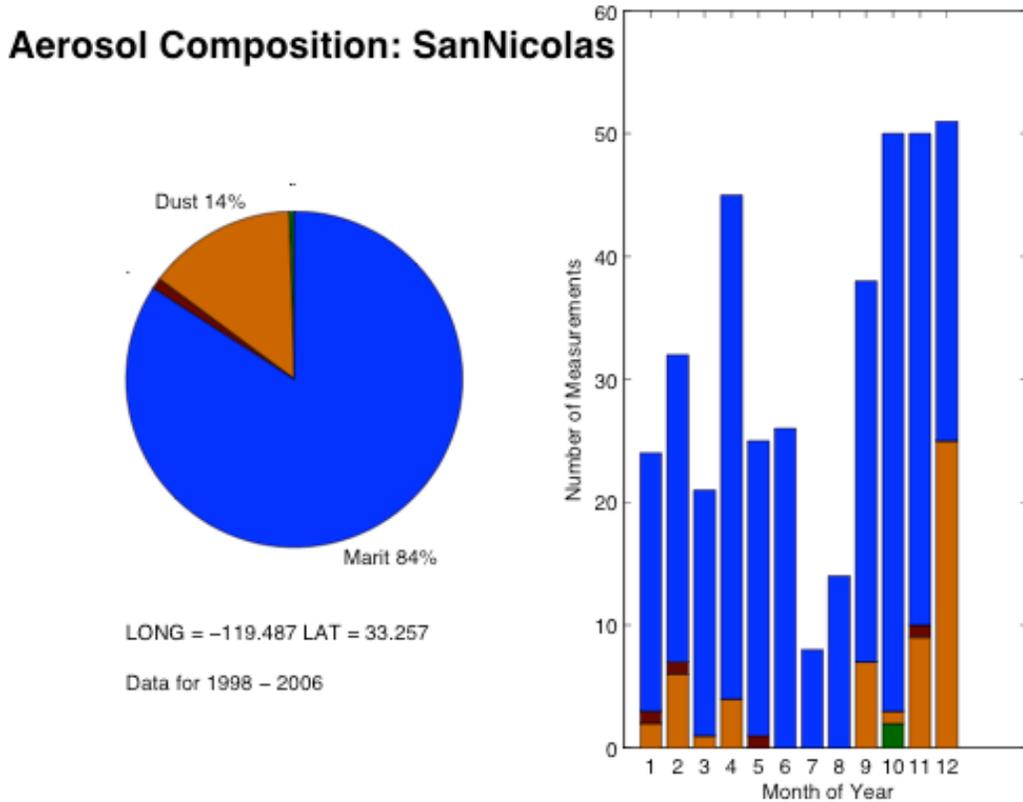


This site is inland some 30 km from the shore of the Persian gulf. The site is north of Abu Dhabi and south of Dubai in the desert.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008.

[Return to Table](#)

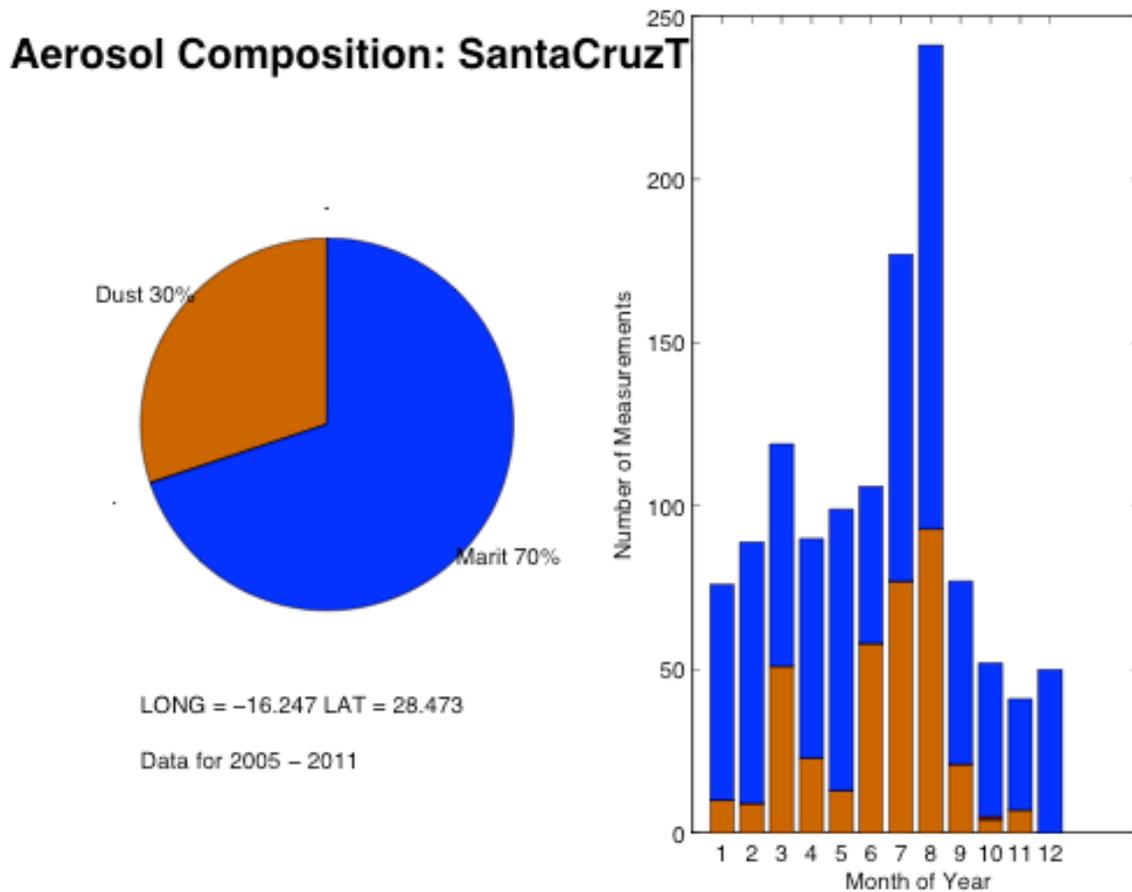
San Nicolas, California, USA



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.

[Return to Table](#)

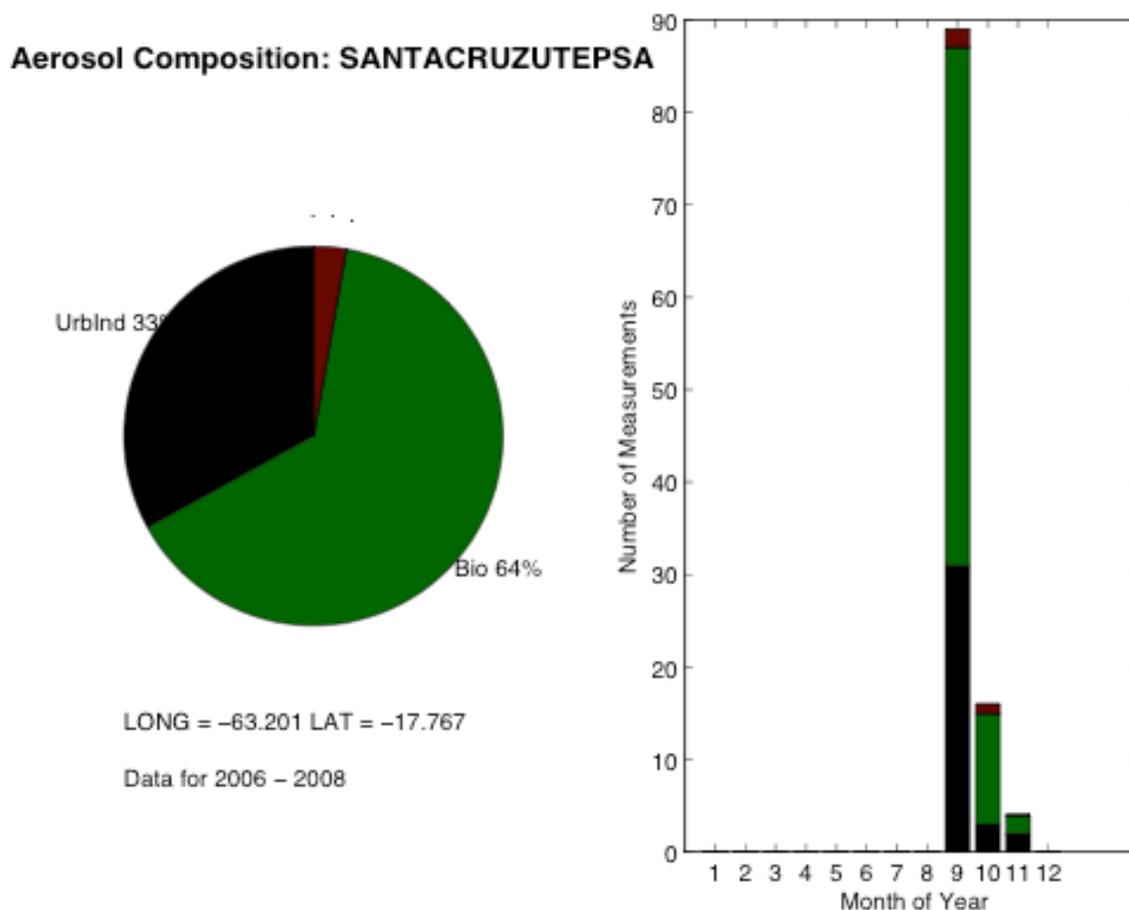
Santa Cruz de Tenerife, Spain



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.

[Return to Table](#)

Santa Cruz, Bolivia (UTEPSA)

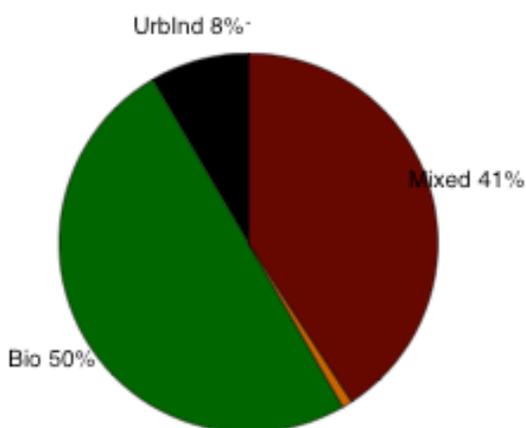


The site is located on the meteorological grounds of the El Trompillo Airport in the urban area of Santa Cruz de la Sierra, Bolivia. Santa Cruz is a rapidly growing urban metropolitan area of about 1.6 million residents in the eastern Bolivian lowlands. The name UTEPSA stands for Universidad Tecnologica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

[Return to Table](#)

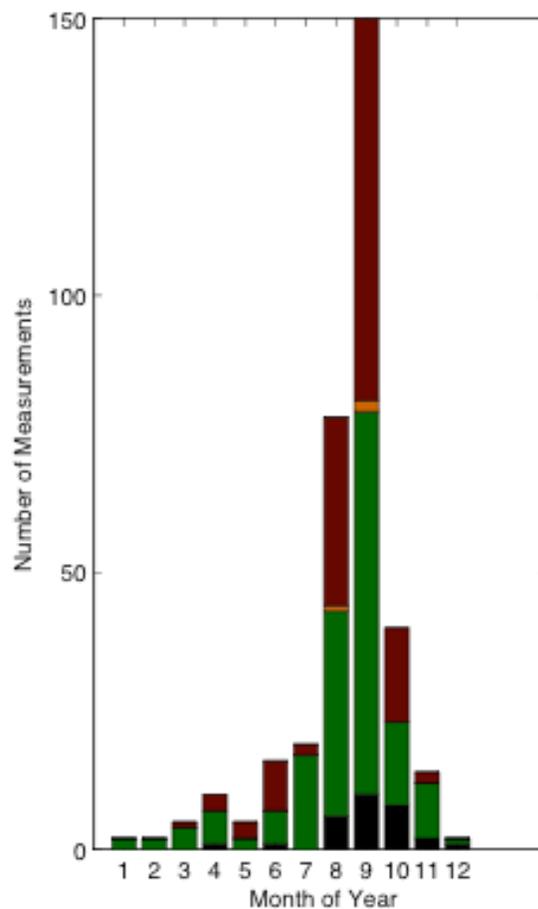
Sao Paulo, Brazil

Aerosol Composition: Sao Paulo



LONG = -46.735 LAT = -23.561

Data for 2001 - 2010

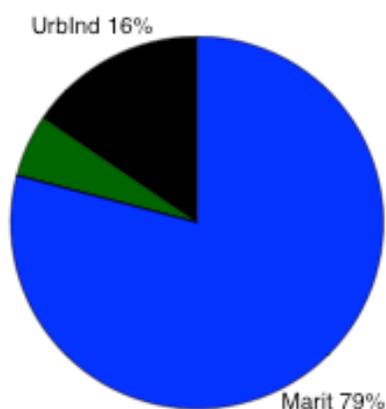


This instrument is located in the western part of the city of Sao Paulo in Southeastern Brazil near the Atlantic Ocean. Sao Paulo is a large urban area of about 12 million people in a metropolitan region of nearly 20 million. It is the largest city in Brazil, and an important financial and industrial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

[Return to Table](#)

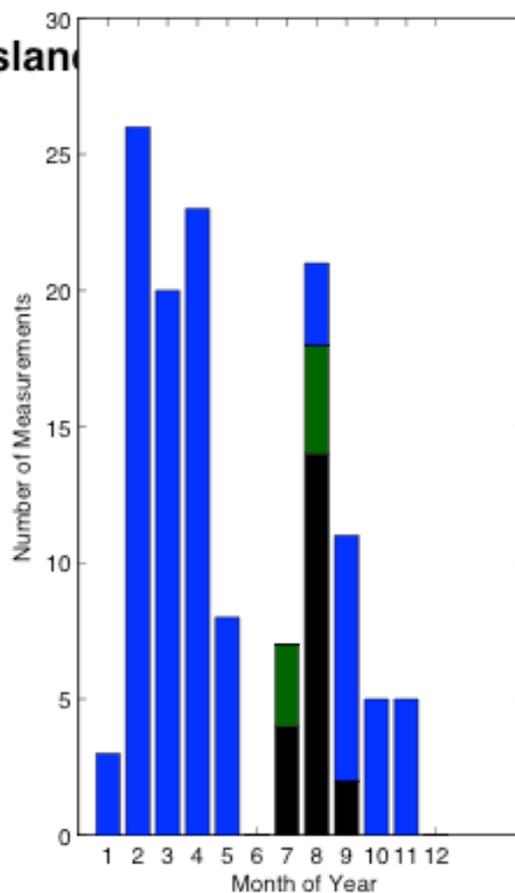
Saturna Island British Columbia Canada

Aerosol Composition: Saturn Island



LONG = -123.133 LAT = 48.783

Data for 1999 – 2012

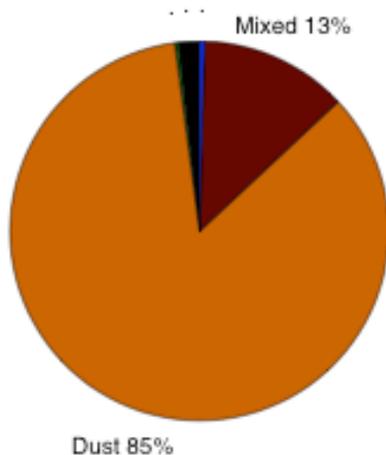


Saturna Island lies to the south of Vancouver to the north of Victoria. It is the second largest and the least populated of the Gulf Islands in British Columbia. The AERONET website lists this site as Saturn_Island.

[Return to Table](#)

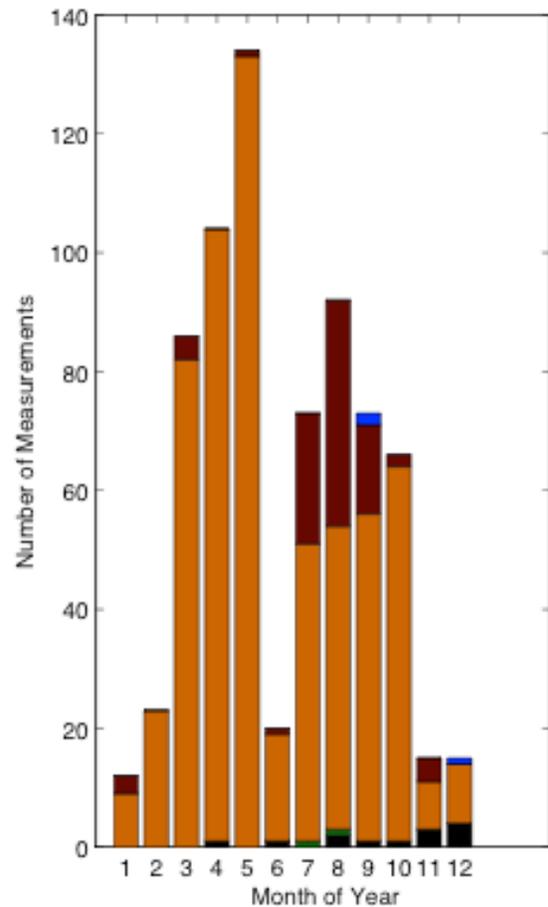
Sede Boker, Israel

Aerosol Composition: SEDEBOKER



LONG = 34.782 LAT = 30.855

Data for 1996 - 2012

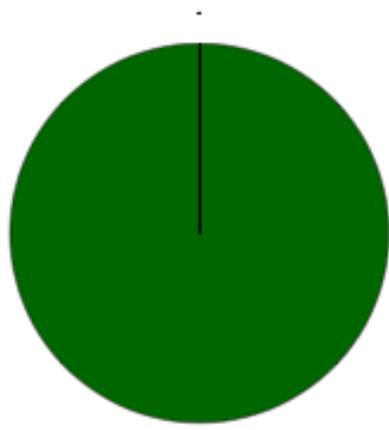


This instrument is located in a small agricultural kibbutz in the Negev desert of southern Israel, well inland.

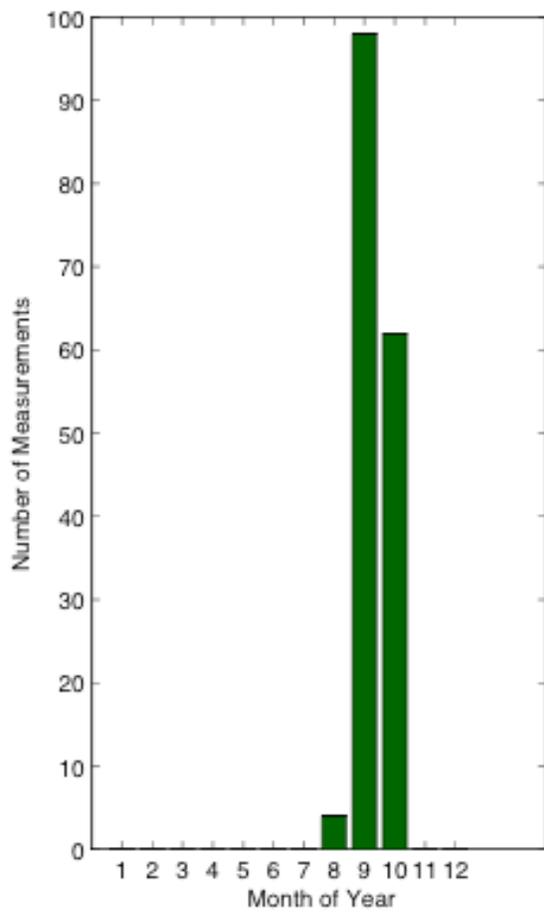
[Return to Table](#)

Senanga, Zambia

Aerosol Composition: Senanga



Bio 100%
LONG = 23.293 LAT = -16.109
Data for 1997 - 2000

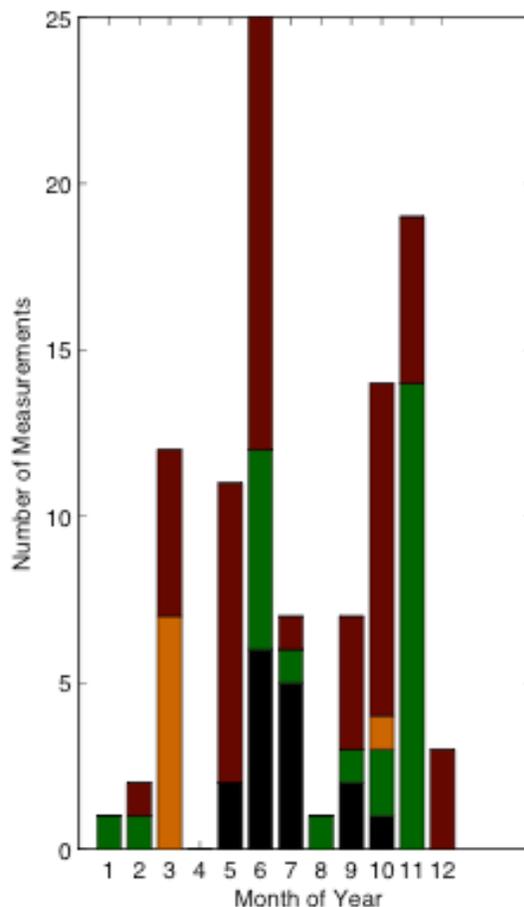
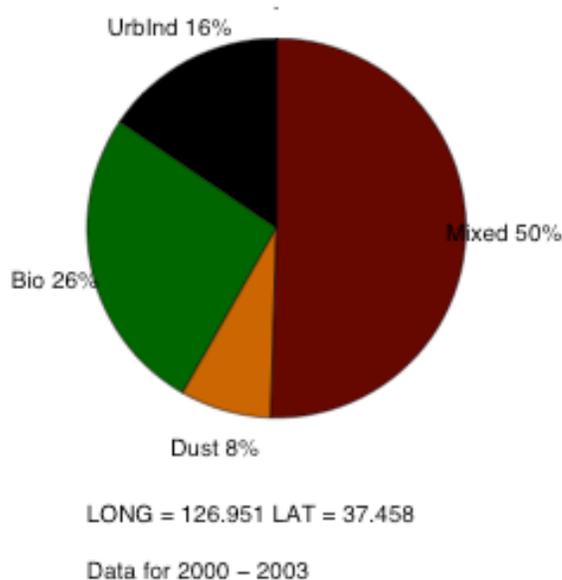


Senanga is a small town in Eastern Zambia. The AERONET site is no longer active, but during its tenure it recorded biomass burning aerosol.

[Return to Table](#)

Seoul, South Korea (SNU)

Aerosol Composition: SeoulSNU

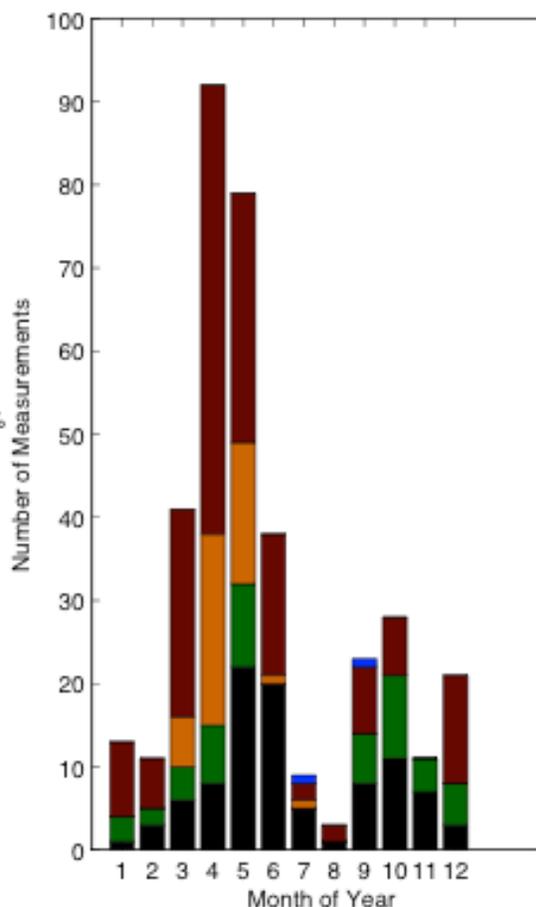
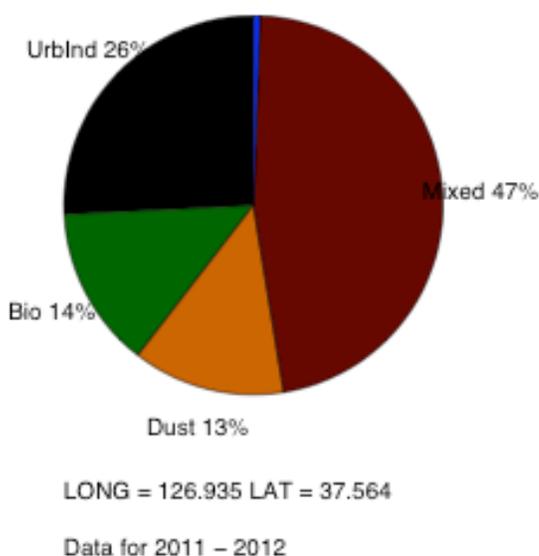


This instrument is installed on the campus of Seoul National University (SNU) in the southern part of Seoul, Korea. Seoul is a large urban center with a population of more than 10 million. Regional traffic, and industry from the surrounding regions are suspected to be major contributors to the aerosol.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

[Return to Table](#)

Seoul, South Korea (Yonsei University)

Aerosol Composition: YonseiUniversity

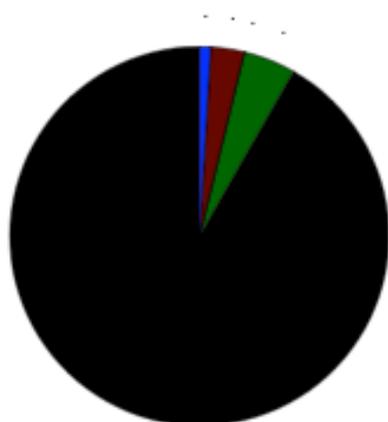


The instrument is installed at the Yonsei University, which is located in the Seoul Metropolitan megacity (population about 25 million). The university is about 3 km west of the city center, and about 40 km east of Incheon Bay. The AERONET website lists this location as Yonsei_University.

[Return to Table](#)

SERC, Annapolis, Maryland, USA

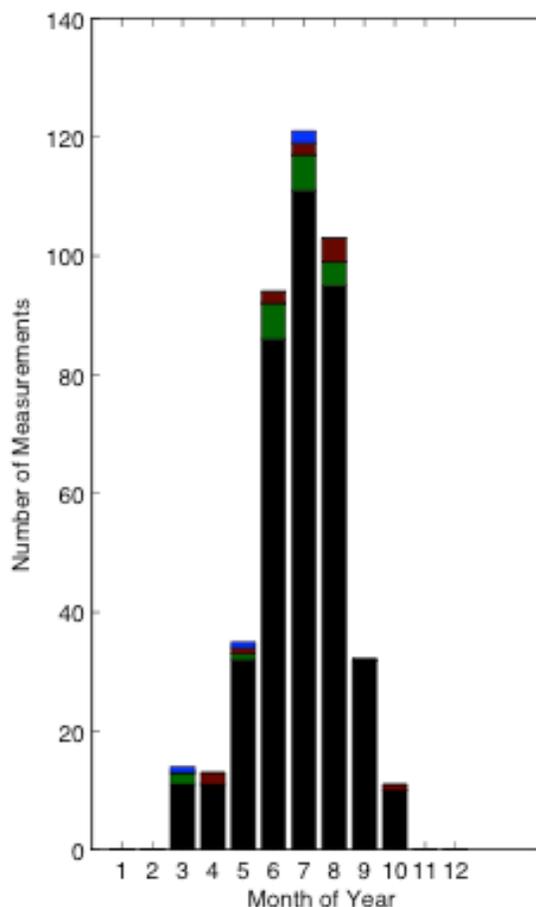
Aerosol Composition: SERC



UrbInd 92%

LONG = -76.5 LAT = 38.883

Data for 1995 - 2012

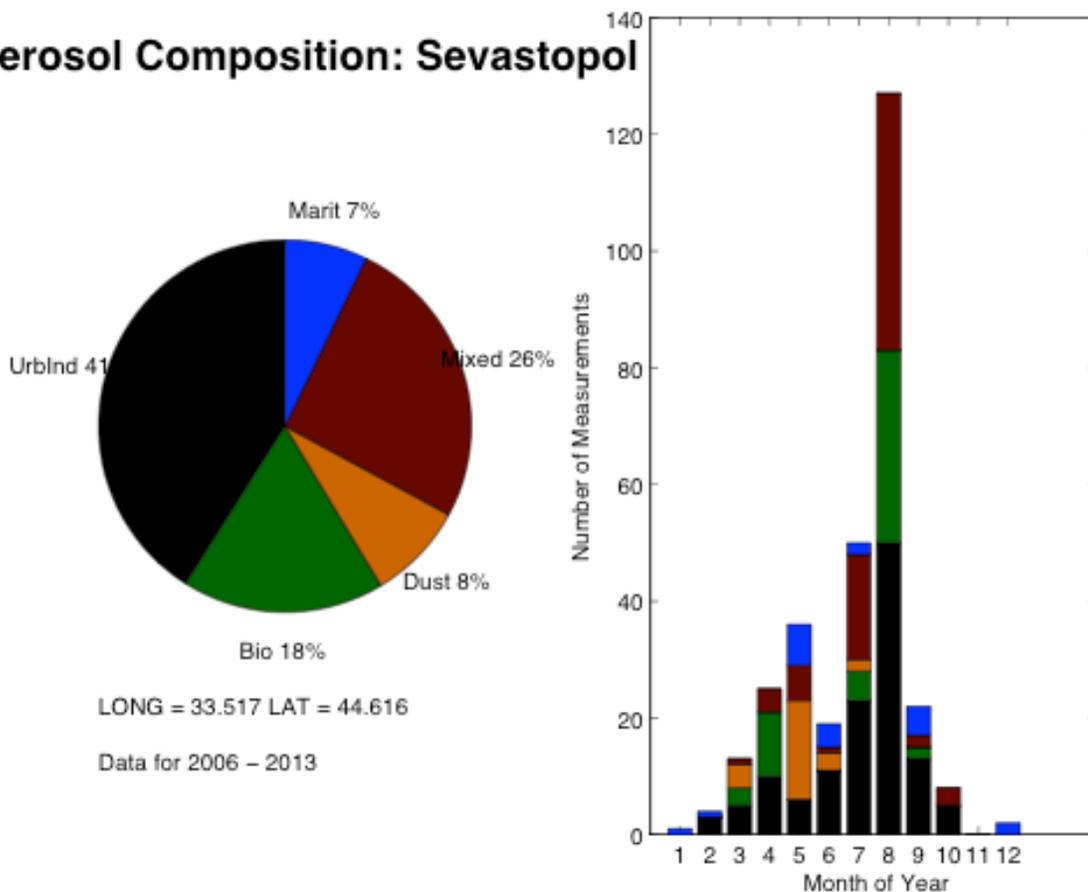


This site is on the campus of the Smithsonian Environmental Research Center (SERC) along the estuary of the Chesapeake Bay. The instrument is tower mounted on the western side of the north end of the bay. It sits some 500 m from the shore and lies 15 km south of Annapolis, Maryland. Although the surroundings 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.

[Return to Table](#)

Sevastopol, Ukraine

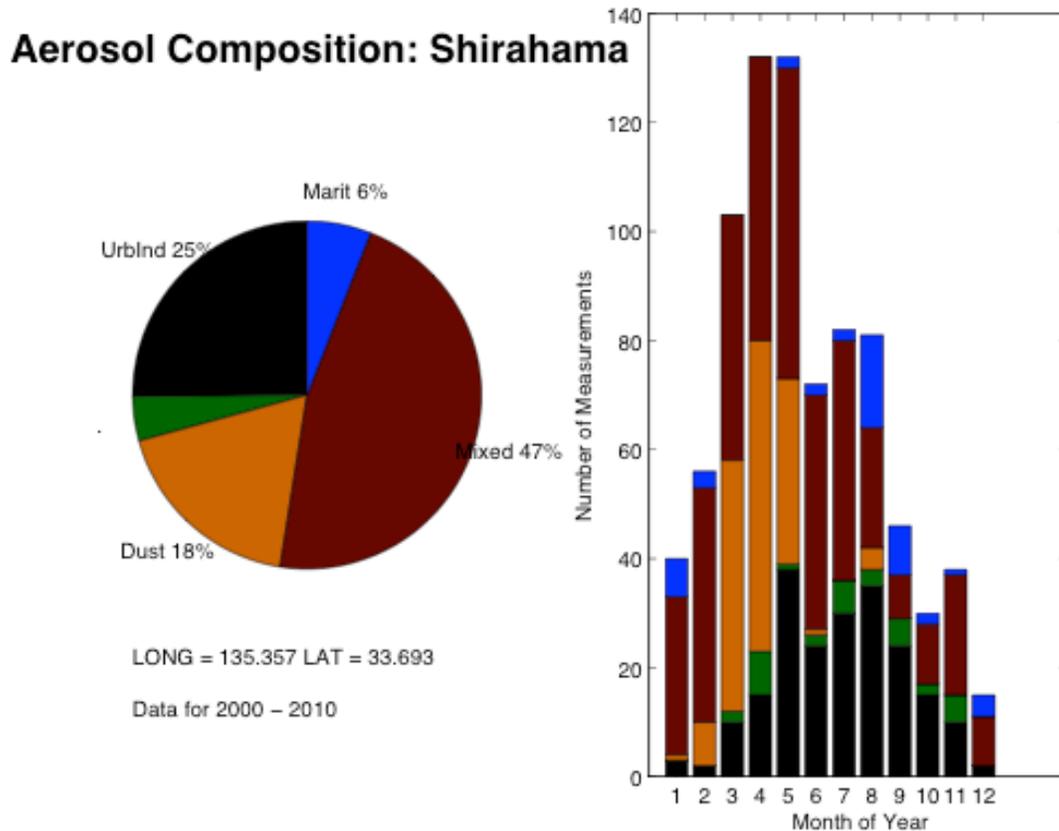
Aerosol Composition: Sevastopol



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.

[Return to Table](#)

Shirahama, Japan

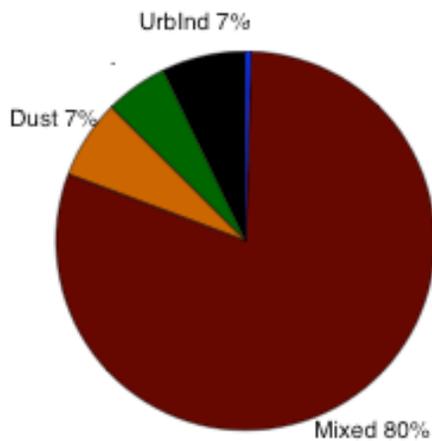


This instrument is mounted on a deck platform at an elevation of 10 meters, above the surrounding water. This location is on a peninsula on the southern end of the main island. This tourist region has about 25,000 permanent residents. Shirahama is a resort town, well known for its beaches.

[Return to Table](#)

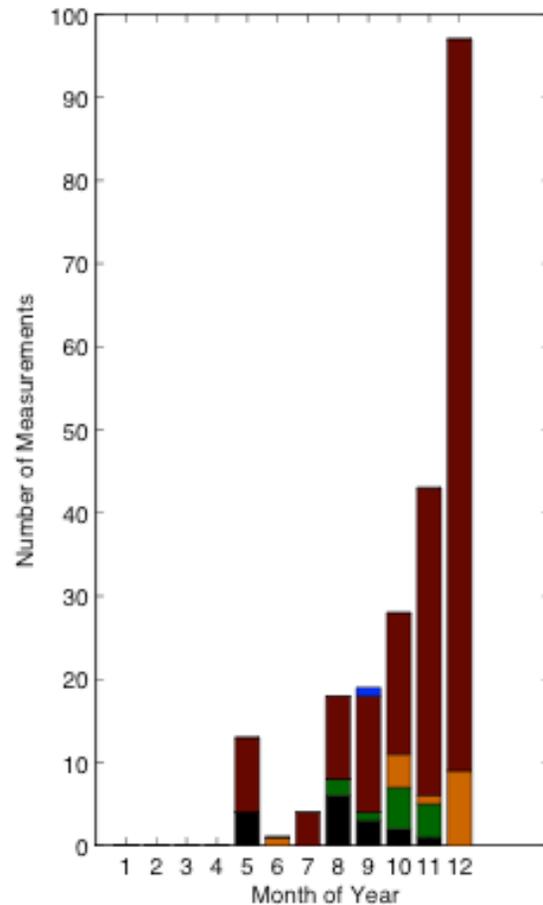
Shouxian, China

Aerosol Composition: Shouxian



LONG = 116.782 LAT = 32.558

Data for 2008 – 2008

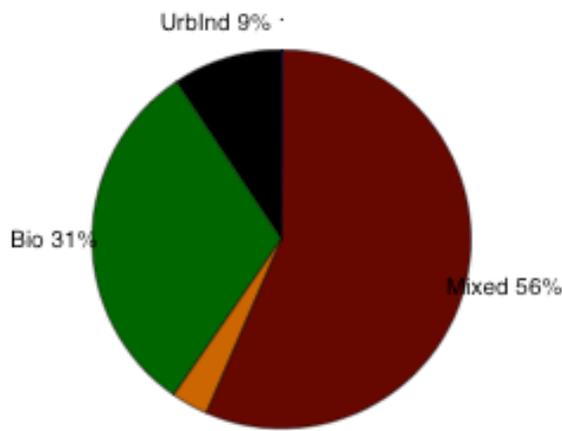


The Shouxian National Climate Observatory is located about 500 km east of Shanghai. Shou Xian County has a population of about 1.3 million people. It is a national cultural and historical city.

[Return to Table](#)

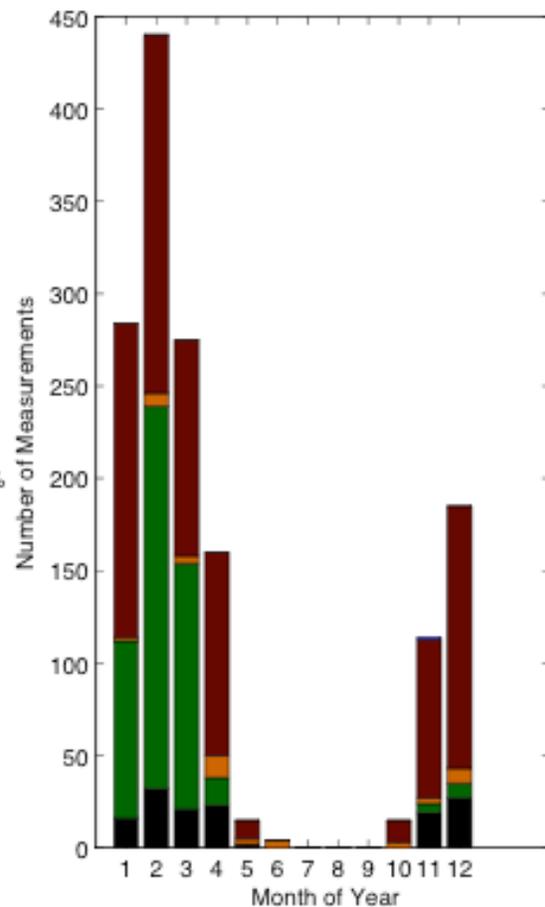
Silpakorn University (Nakhon Pathom), Thailand

Aerosol Composition: SilpakornUniv



LONG = 100.041 LAT = 13.819

Data for 2006 – 2011

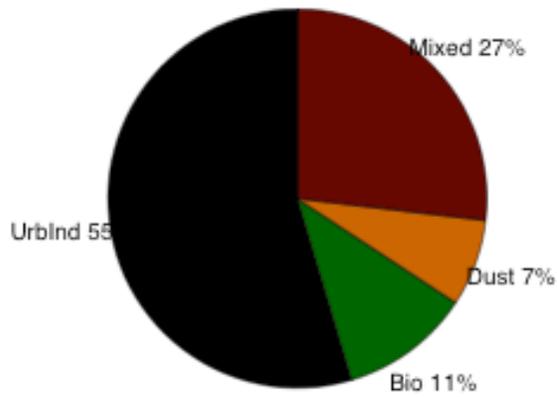


Silpakorn University, the national university of Thailand, is located some 60 km east of Bangkok in the province of Nakhon Pathom. The region has been urbanized and is near the outskirts of Bangkok.

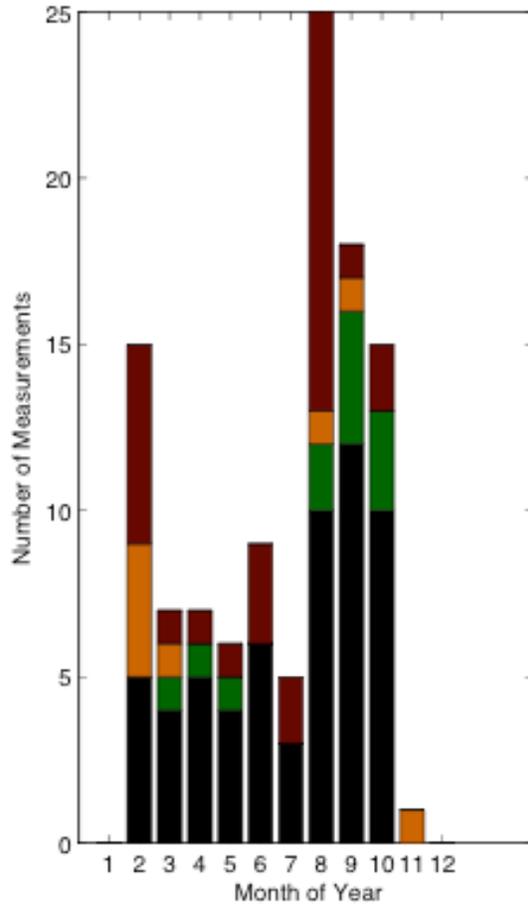
[Return to Table](#)

Singapore

Aerosol Composition: Singapore



LONG = 103.78 LAT = 1.298
Data for 2007 – 2012

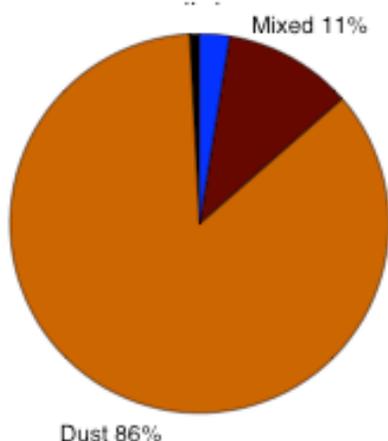


This instrument is within 2 km of the harbor on Singapore Strait. Singapore lies at the southern tip of the Malay Peninsula. Shipping is a major industry in this city of over 5 million people.

[Return to Table](#)

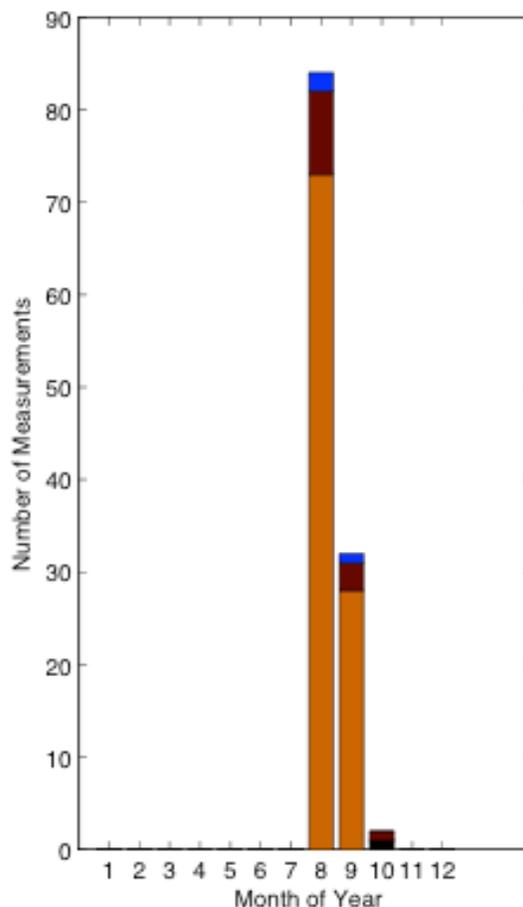
Sir Bu Nuair, United Arab Emirates

Aerosol Composition: SirBuNuair



LONG = 54.233 LAT = 25.217

Data for 2004 - 2004

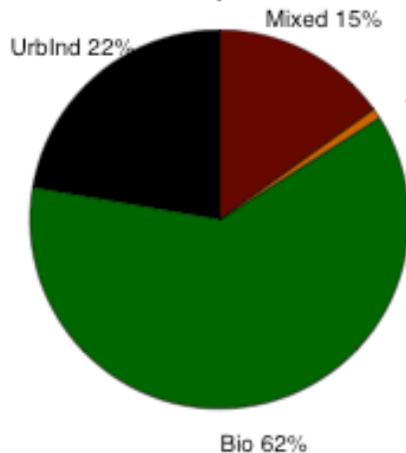


Sir Bu Nuair is a remote island located 65 km off the West UAE coastline, in the middle of the Persian Gulf. The island is roughly 13 square kilometers in area and is uninhabited.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008. [Return to Table](#)

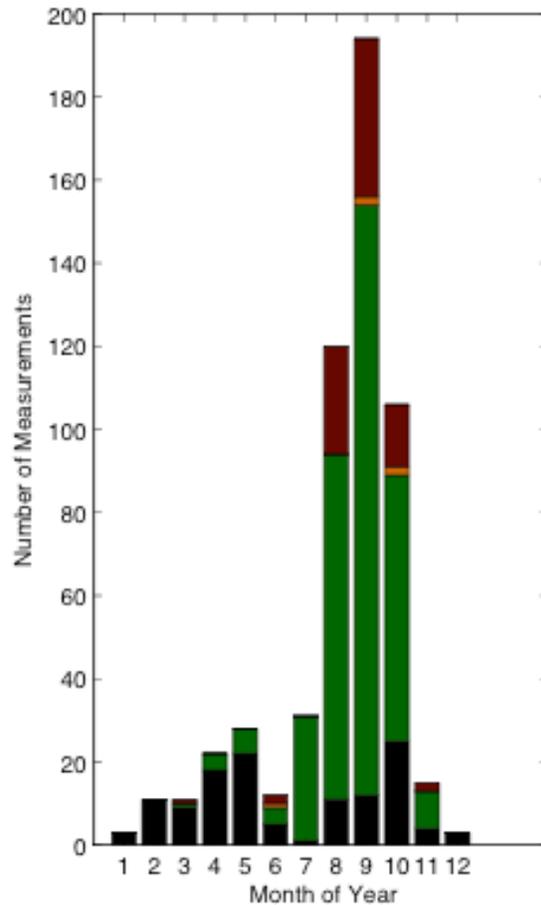
Skukuza, South Africa

Aerosol Composition: Skukuza



LONG = 31.587 LAT = -24.992

Data for 1998 - 2011

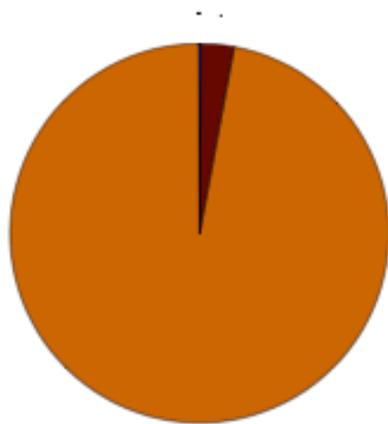


This instrument is located at the Skukuza weather station in Kruger National Park. It is surrounded by Sabi River thicket, and is within 25 km of densely populated settlements lying to the east (outside the National Park). The Skukuza airport serves over 2.3 million tourist per year who visit the Kruger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

[Return to Table](#)

Solar Village, Saudi Arabia

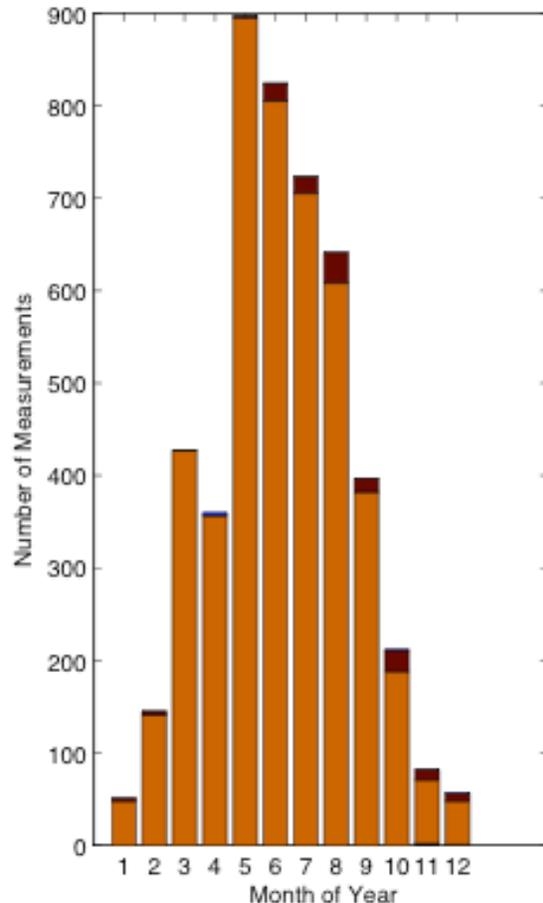
Aerosol Composition: SolarVillage



Dust 97%

LONG = 46.397 LAT = 24.907

Data for 1999 – 2012

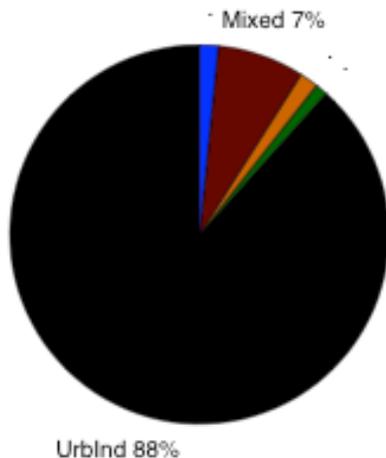


This instrument is located at Solar Village in Saudi Arabia, approximately 50 km northwest of Riyadh. The installation is an experimental site for generating solar power. It is near the village of Uyaynah. The location is considered typical of a Saudi Arabian desert site, exhibiting a dust aerosol.

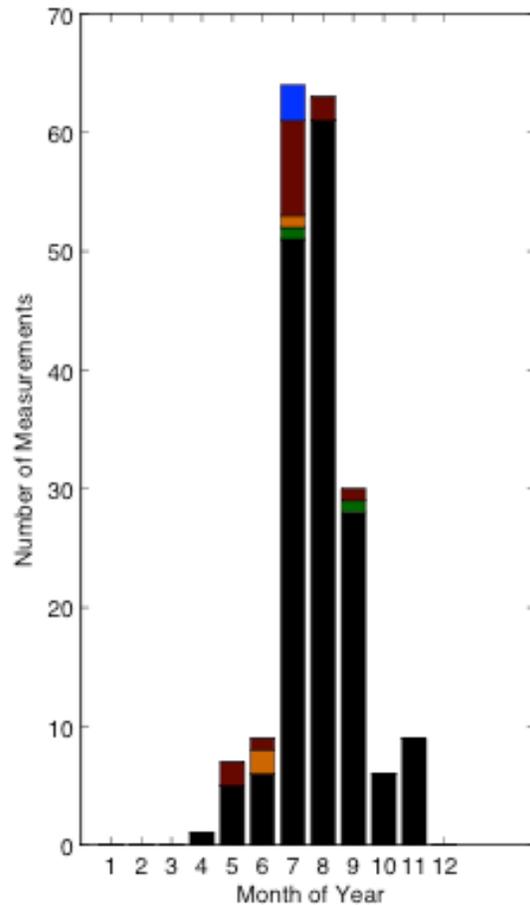
This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) mission that was conducted commencing in 2004. A mission objective was to gain insight on the properties and concentrations of aerosols in the Persian Gulf region, and how these 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:10.1029/2007JD008944, 2008. [Return to Table](#)

Stennis, Mississippi, USA

Aerosol Composition: Stennis



LONG = -89.617 LAT = 30.368
Data for 2000 - 2003

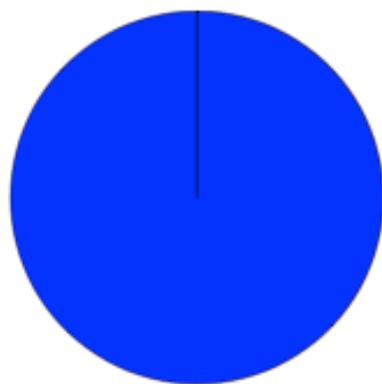


This instrument is located near Highway 43, approximately 3 km east of the Louisiana – Mississippi border and within the confines of the NASA Stennis Space Center. The surrounding region is mostly rural. The site is the home of NASA’s rocket testing facility.

[Return to Table](#)

Tahiti, French Polynesia

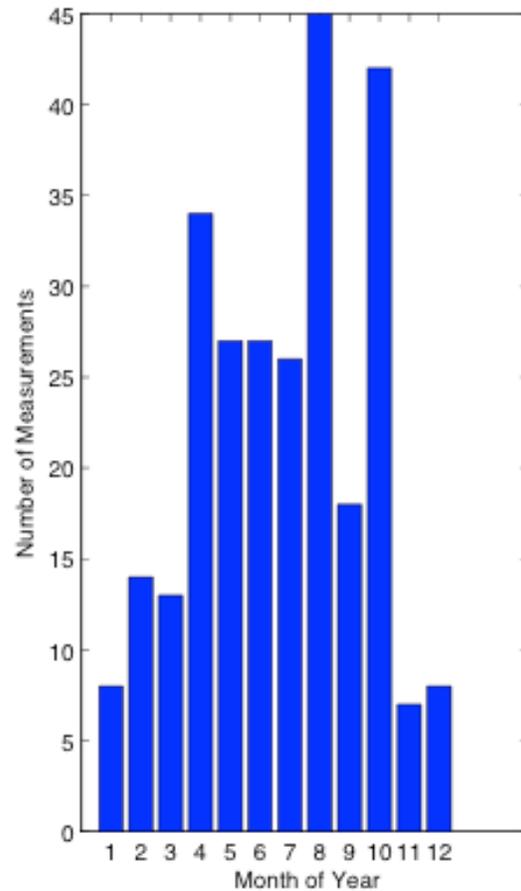
Aerosol Composition: Tahiti



Marit 100%

LONG = -149.606 LAT = -17.577

Data for 1999 - 2009

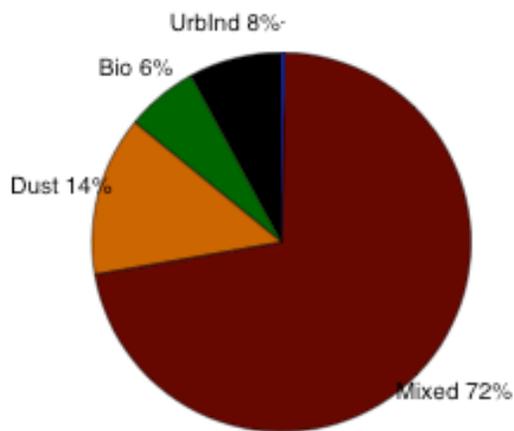


Tahiti is an island in the Southern Pacific Ocean. The population of the island is somewhat less than 200,000. The instrument is located in Papeete, the largest city, within 2 km of the shore.

[Return to Table](#)

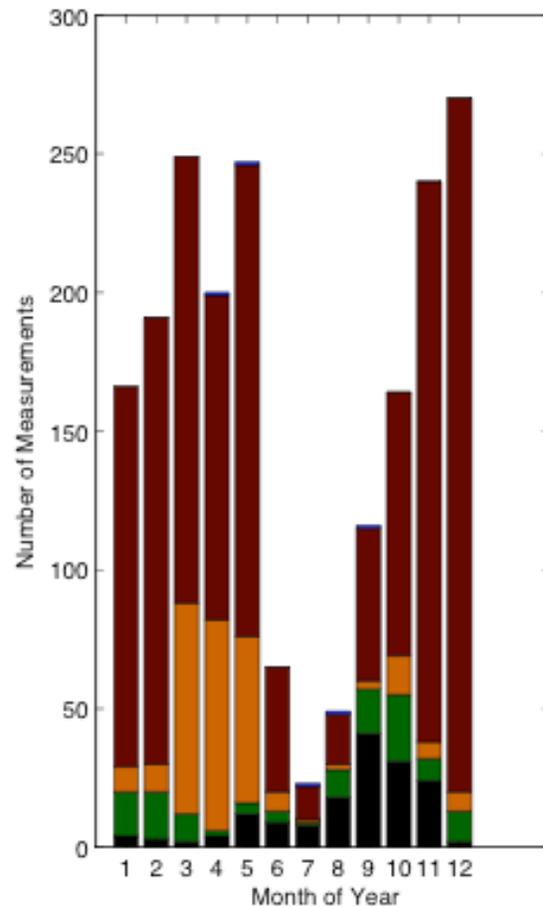
Taihu, China

Aerosol Composition: Taihu



LONG = 120.215 LAT = 31.421

Data for 2005 – 2012

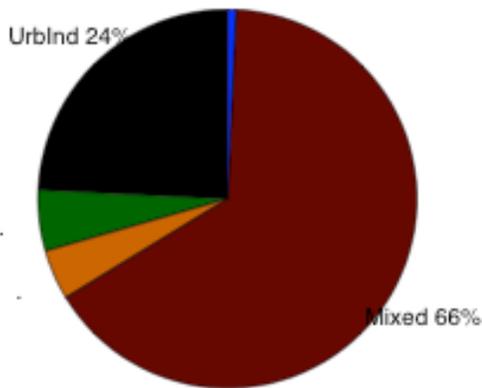


This site is located less than 100 m from the shore of Taihu Lake on a small peninsula near the north shore of the lake. This venue is between Changzhou prefecture with some 4.5 million people to the northwest, and Suzhou prefecture with 8.5 million people to the southeast. The region is west of Shanghai.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

[Return to Table](#)

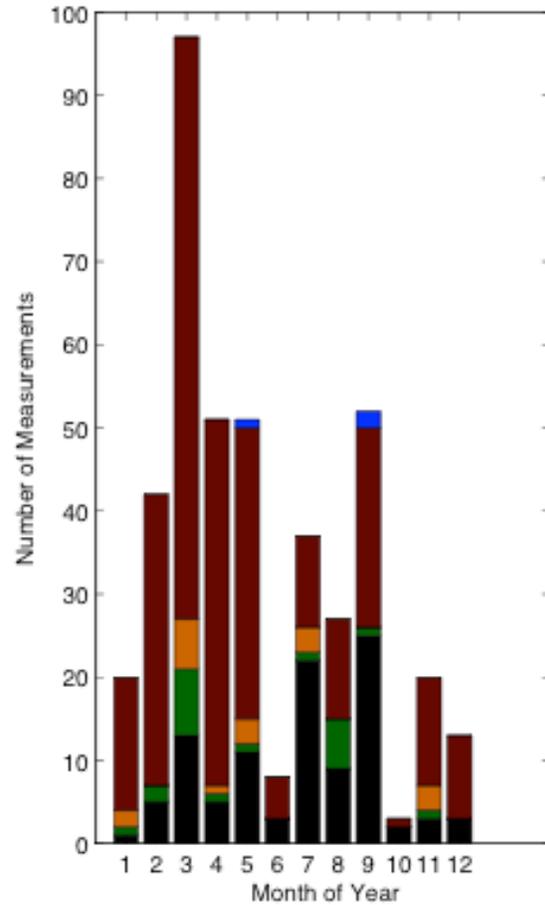
Taipei,(CWB) Taiwan

Aerosol Composition: TaipeiCWB



LONG = 121.5 LAT = 25.03

Data for 2002 - 2012

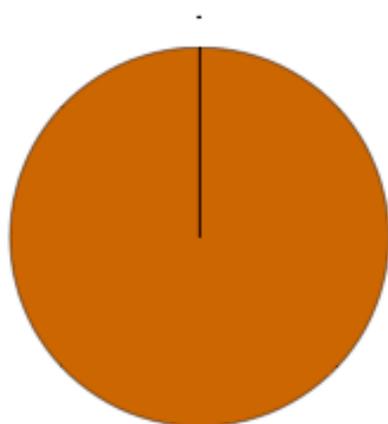


This instrument is located in an urban location in Taipei City (population about 8 million people), on the northern end of the island. The AERONET website lists this location as Taipei_CWB, the initials standing for “Central Weather Bureau.”

[Return to Table](#)

Tamanrasset, Algeria (INM)

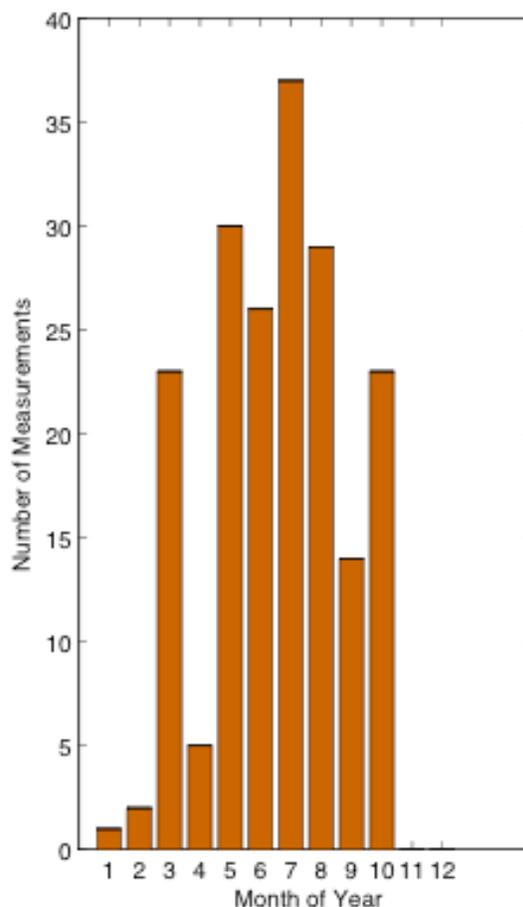
Aerosol Composition: TamanrassetINM



Dust 100%

LONG = 5.53 LAT = 22.79

Data for 2006 – 2009

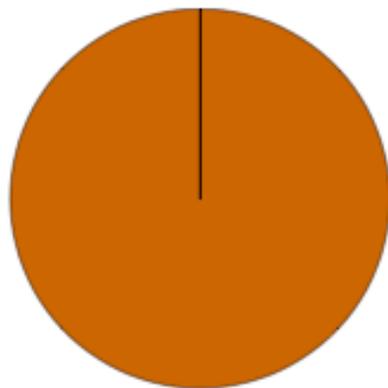


The sunphotometer is located in the highlands of the Algerian Sahara. There are no industries in the vicinity of this location. The site is in a city with a population of approximately 90,000 completely surrounded by a vast desert region. The AERONET website denotes this site as Tamanrasset_INM. A reference 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.

[Return to Table](#)

Tamanrasset, Algeria (TMP)

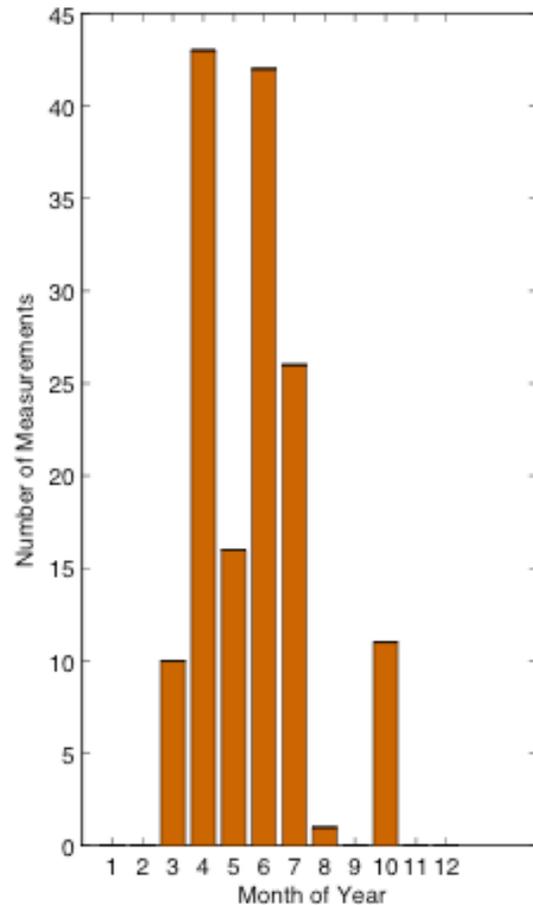
Aerosol Composition: TamanrassetTMP



Dust 100%

LONG = 5.53 LAT = 22.79

Data for 2006 – 2006

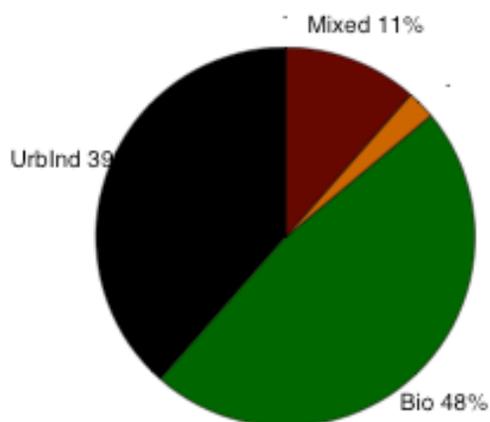


The sunphotometer is located in the highlands of the Algerian Sahara. There are no industries in the vicinity of this location. The site is in a city with a population of approximately 90,000 completely surrounded by a vast desert region. Data from this site and five other northern Sahara venues were 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.

[Return to Table](#)

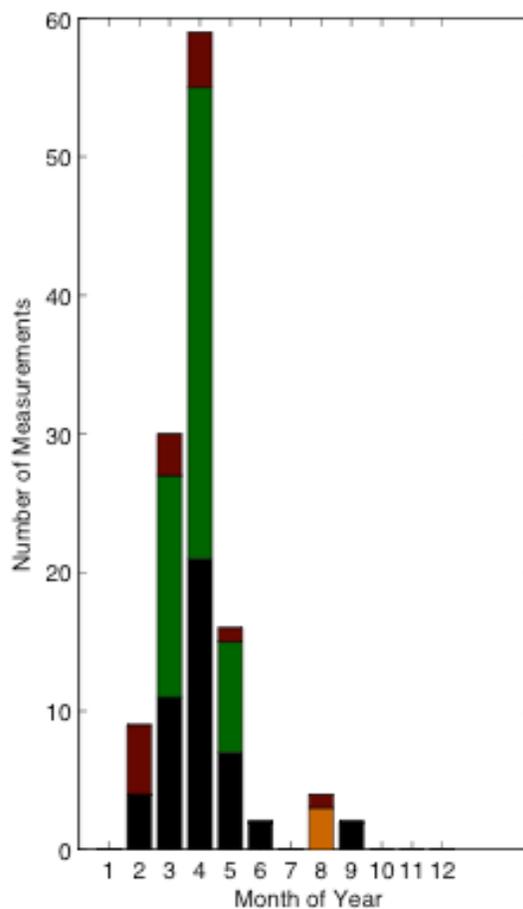
Tenosique, Mexico

Aerosol Composition: Tenosique



LONG = -91.426 LAT = 17.488

Data for 2005 - 2005

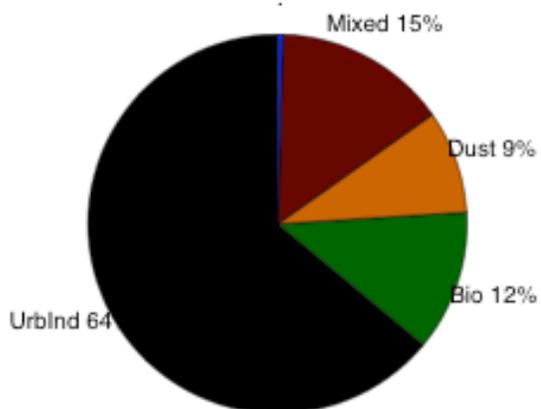


This site is in southeastern Mexico in the state of Tabasco near the Guatemala border. The region is rural/agricultural with a population of ~ 35, 000. Data is available only for the year 2005.

[Return to Table](#)

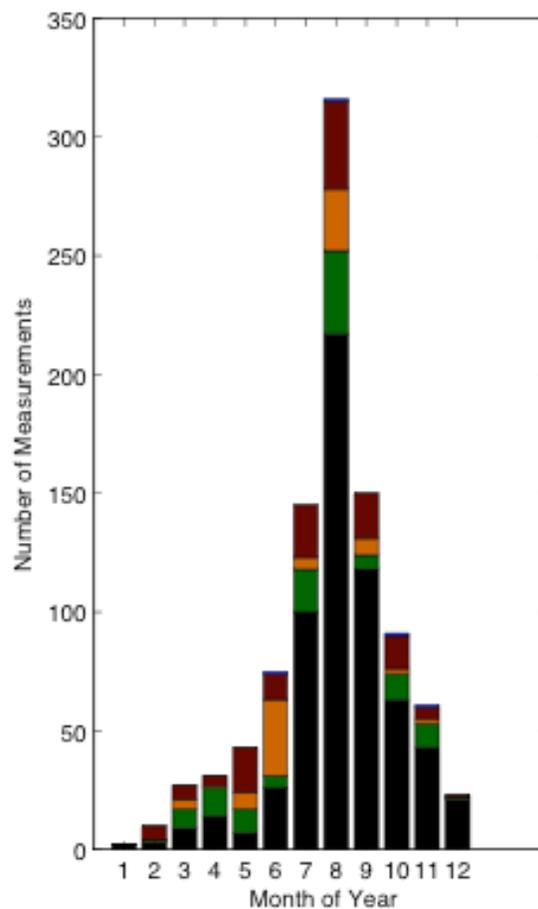
Thessaloniki, Greece

Aerosol Composition: Thessaloniki



LONG = 22.96 LAT = 40.63

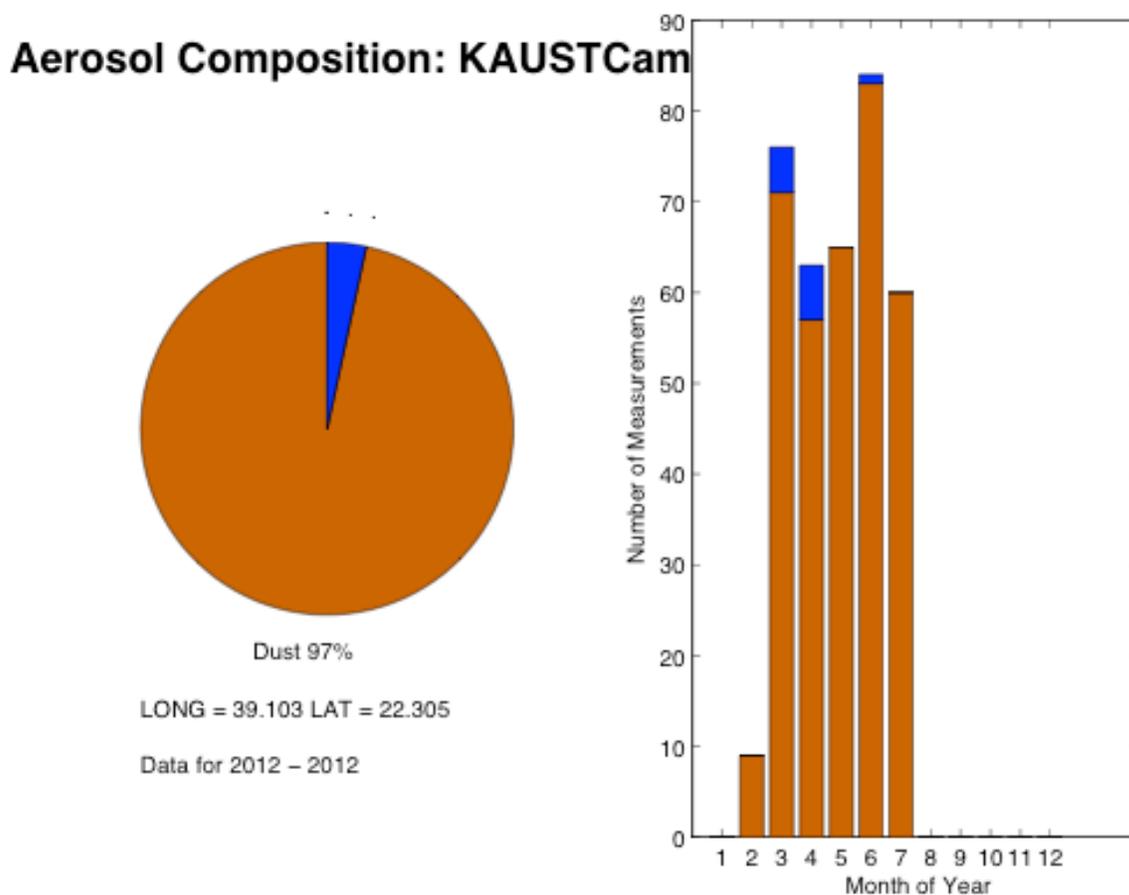
Data for 2005 - 2012



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.

[Return to Table](#)

Thuwal, Saudi Arabia [KAUST]

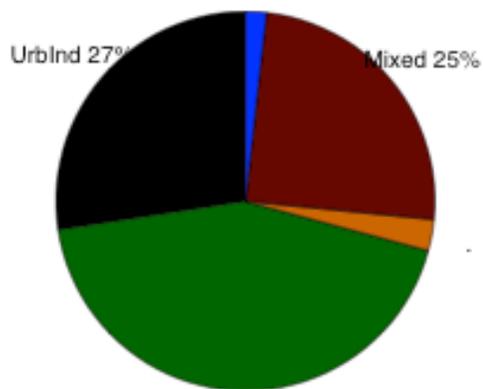


Thuwal is a small town on the Red Sea, about 80 km north of Jeddah. To the west of Thuwal lies the Red Sea, and to the east lies the Arabian desert. Thuwal is the home of the King Abdullah University of Science and Technology (KAUST). This location is listed in the AERONET website as KAUST_Campus.

[Return to Table](#)

Tomsk, Russia

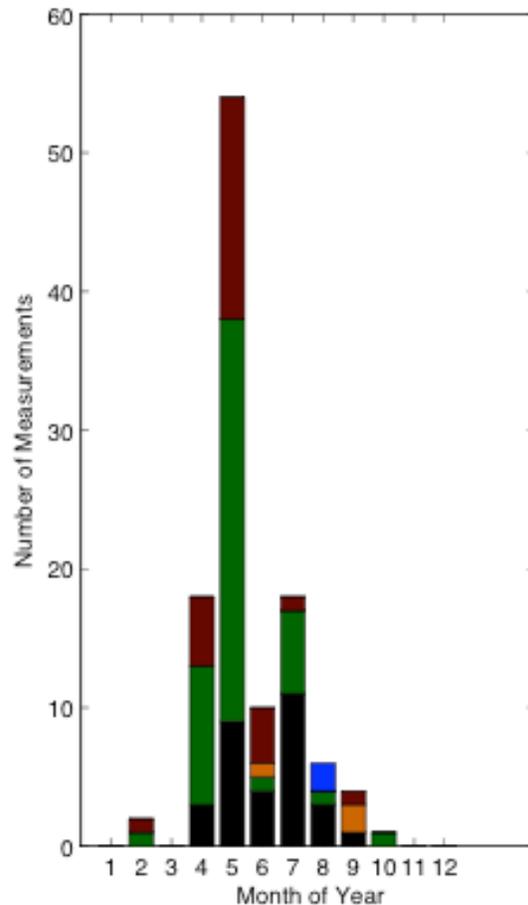
Aerosol Composition: Tomsk



Bio 43%

LONG = 85.047 LAT = 56.477

Data for 2003 – 2010

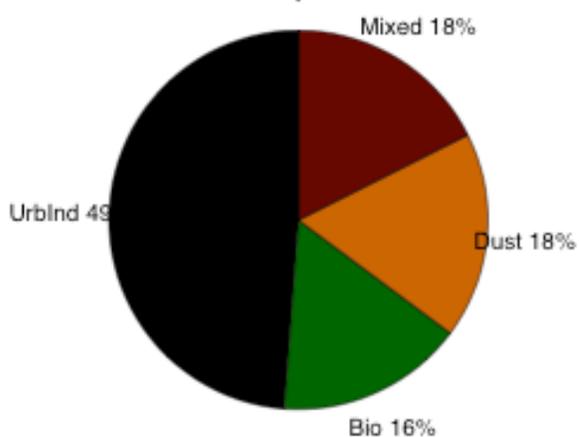


This instrument site is at the eastern edge of the city, which is located in the central Asian portion of Russian Siberia. The city of approximately 500,000 people has three local power generating plants. The climate of Tomsk is described as humid continental.

[Return to Table](#)

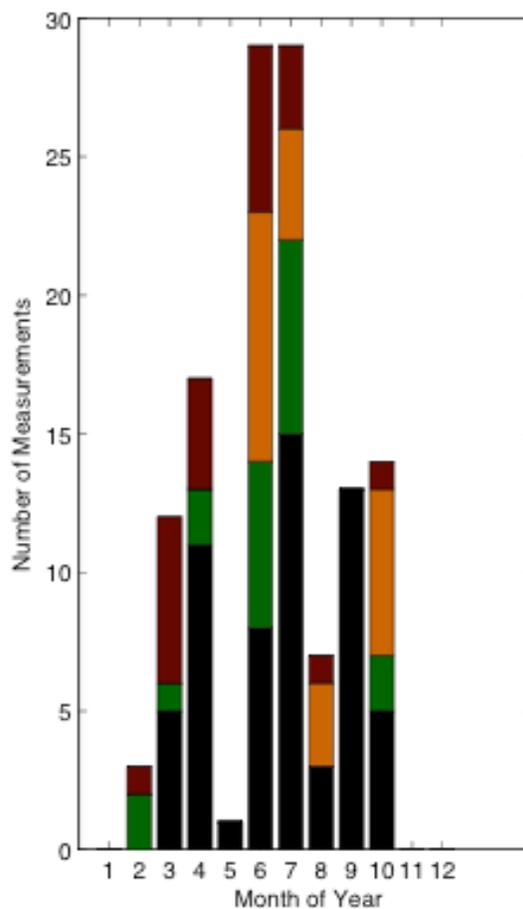
Toulon, France

Aerosol Composition: Toulon



LONG = 6.009 LAT = 43.136

Data for 2005 - 2010

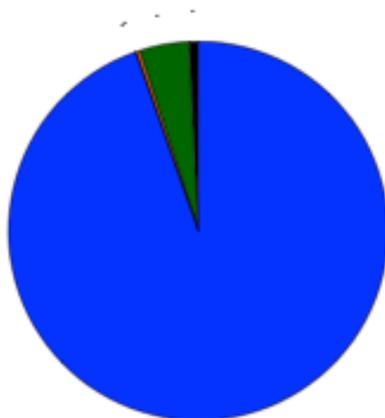


Toulon is city of about 170,000 in Provence, Southern France. The instrument is on a hill at the east edge of the nearby town of La Vallette-du-bar, approximately 5 km from the Mediterranean coast.

[Return to Table](#)

Trinidad Head, California, USA

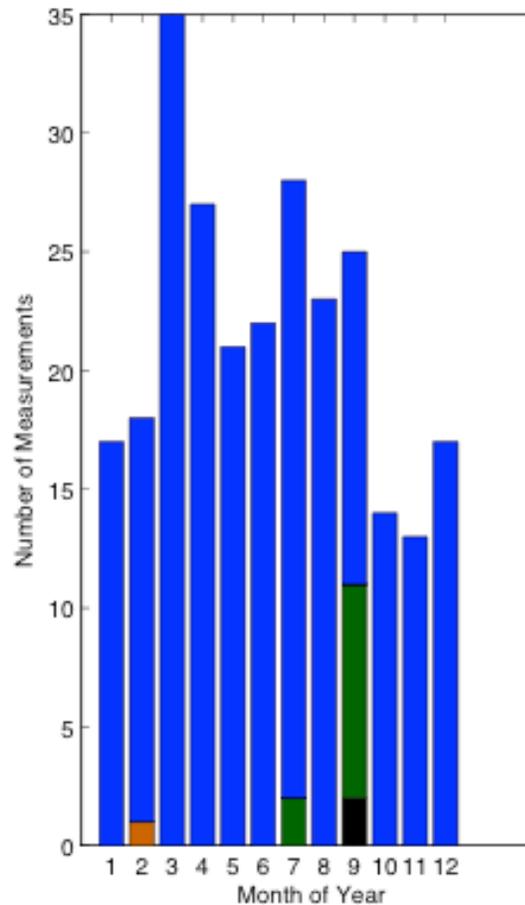
TrinidadHead



Marit 95%

LONG = -124.151 LAT = 41.054

Data for 2005 - 2012

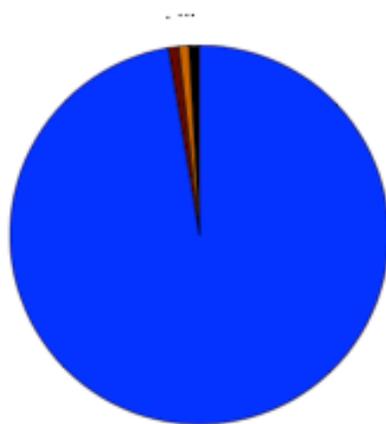


The instrument is on a bluff approximately 100 m above the shore of the Pacific Ocean, at a site located on a point jutting into the ocean along the remote north coast of California. The closest municipality is a small community of Trinidad (population less than 500) about 1 km to the Northeast, and 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.

[Return to Table](#)

Tudor Hill, Bermuda

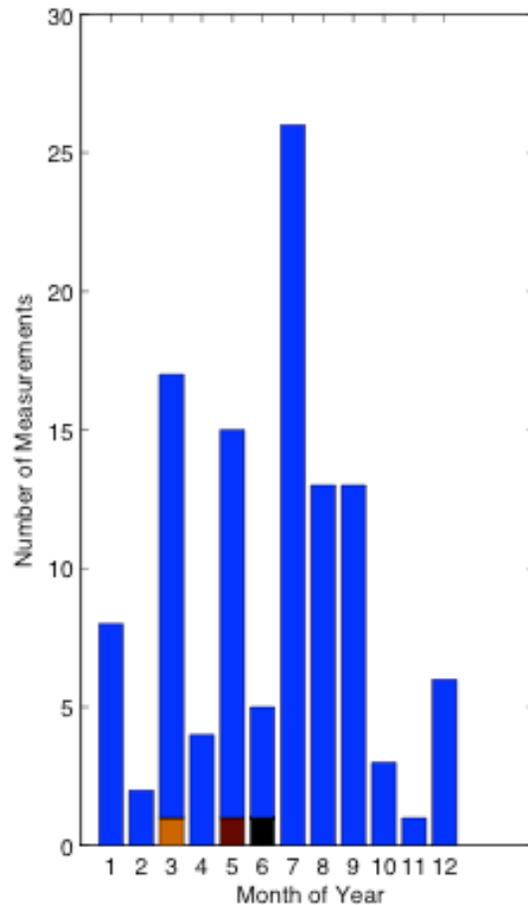
Composition of Aerosols: TudorHill



Marit 97%

LONG = -64.879 LAT = 32.264

Data for 2007 - 2012

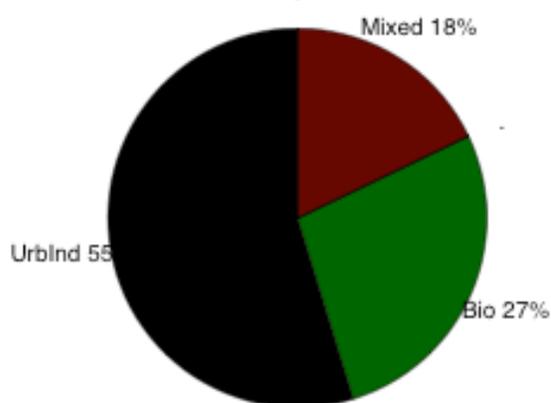


This site is adjacent to the shore on southwest coast of the island of Bermuda. Bermuda has a population of about 60,000. It is located in the Atlantic Ocean some 1000 km from the North American mainland.

[Return to Table](#)

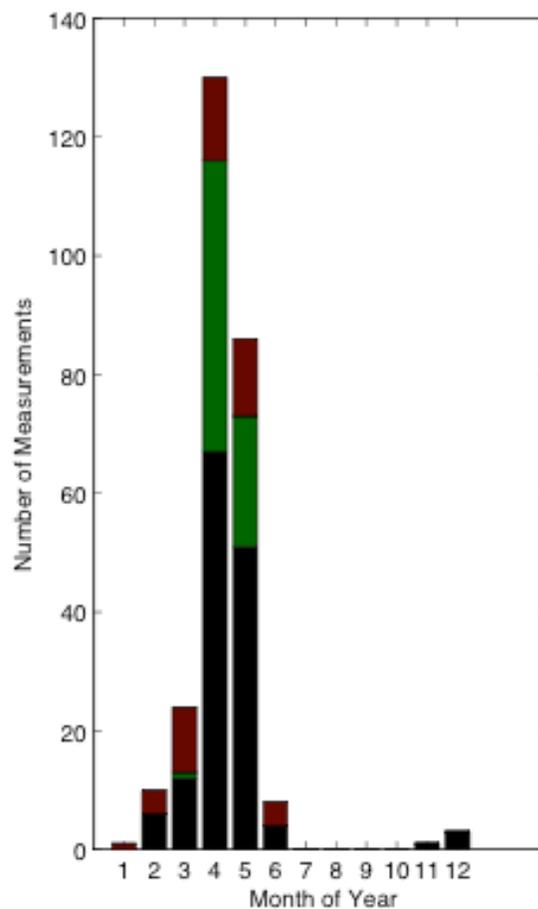
Tuxtla Gutierrez, Mexico

Aerosol Composition: TuxtlaGutierrez



LONG = -93.152 LAT = 16.755

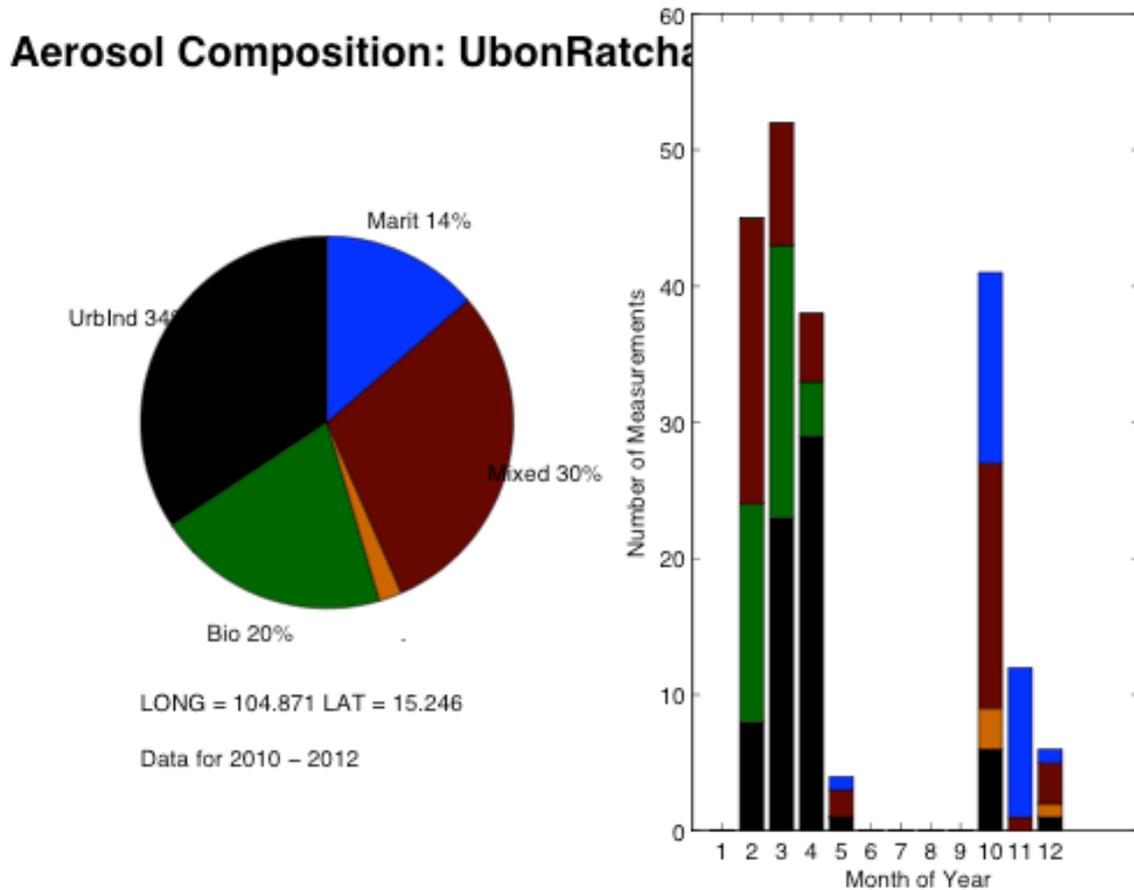
Data for 2005 - 2007



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.

[Return to Table](#)

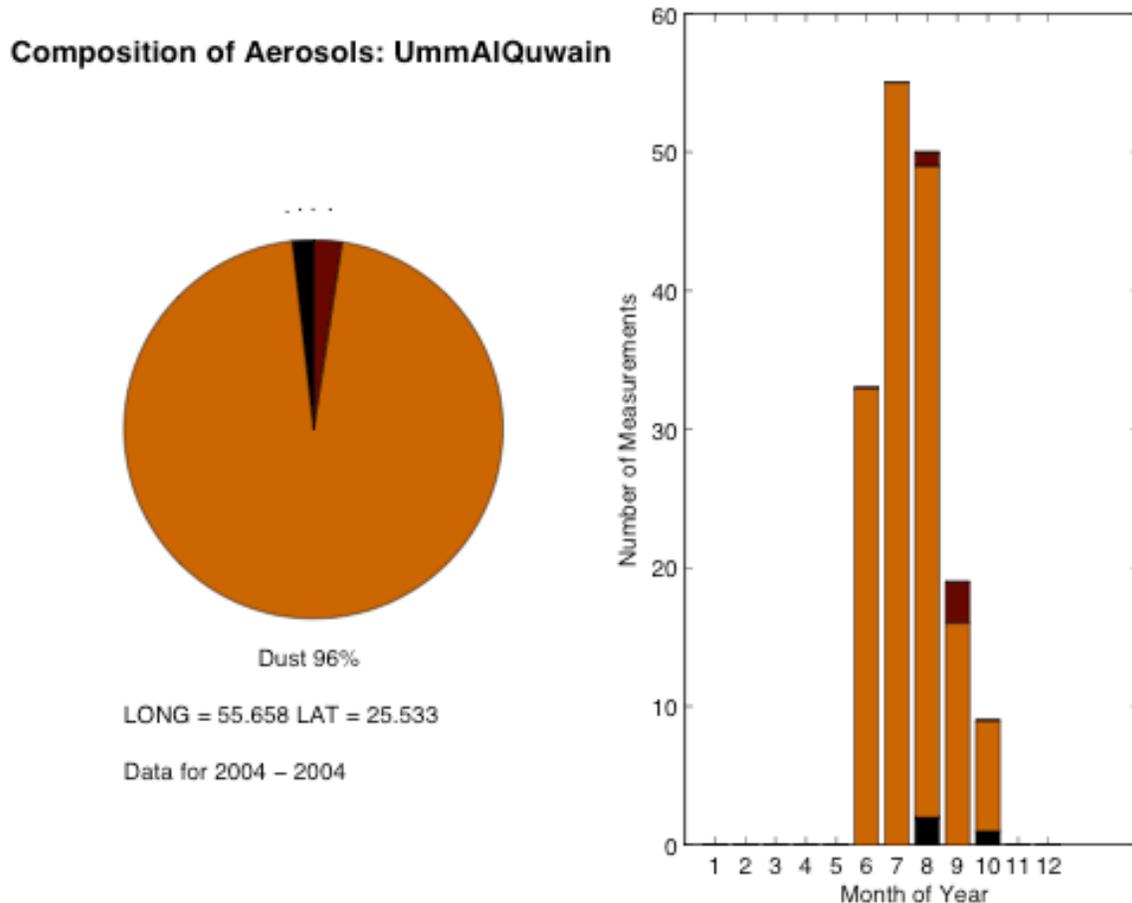
Ubon Ratchathani, Thailand



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

[Return to Table](#)

Umm Al Quwain, UAE

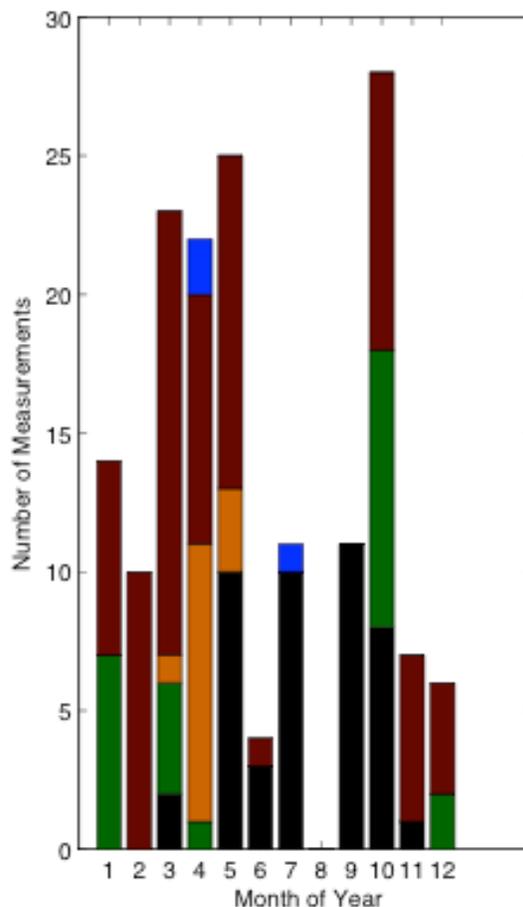
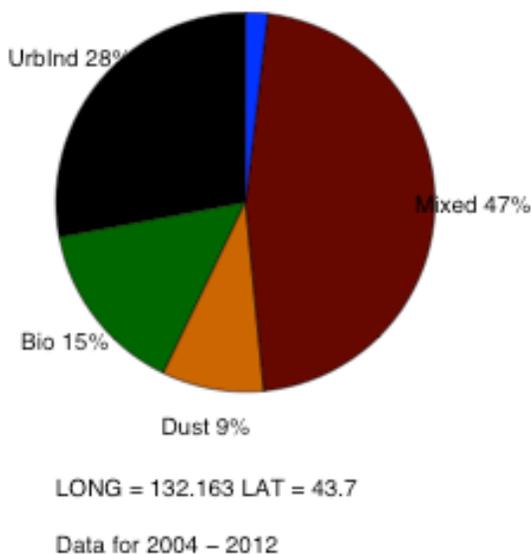


This site is north of Dubai and is surrounded by sand. It is located on the western side of the peninsula facing the Persian Gulf, approximately 5 km from the shore. There is a nearby highway and an industrial park to the north. It is ~ 65 km directly west of the Dhadnah AERONET site.

This site was one of 15 Middle East sites that were part of the NASA *United Arab Emirates Unified Aerosol Experiment* (UAE²) 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:10.1029/2007JD008944, 2008. [Return to Table](#)

Ussuriysk, Russia

Aerosol Composition: Ussuriysk

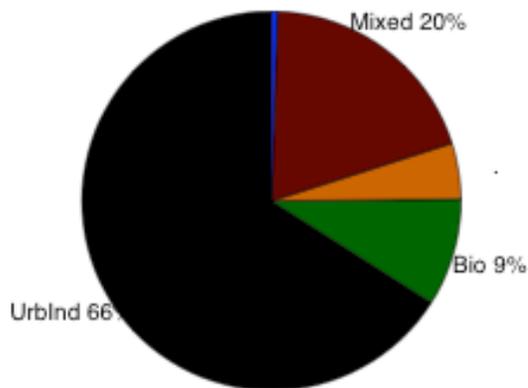


This instrument is located in a rural site in Russian Siberia about 25 km southeast of Ussuriysk (population 158,000) at the astrophysics observatory. The city is about 98 kilometers north of Vladivostok and about 60 kilometers from both the China–Russia border and the Pacific Ocean.

[Return to Table](#)

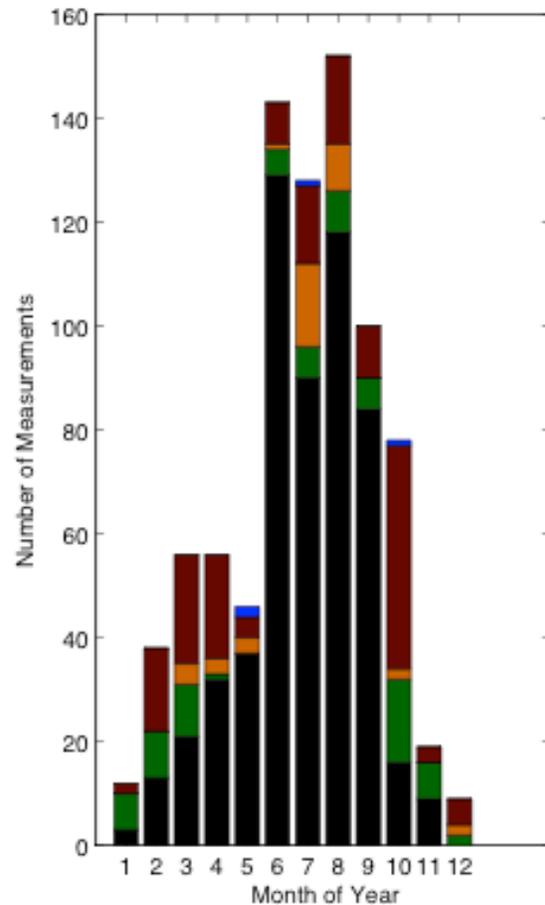
Venice (Lagoon AAOT), Italy

Aerosol Composition: Venise



LONG = 12.508 LAT = 45.314

Data for 1999 – 2005

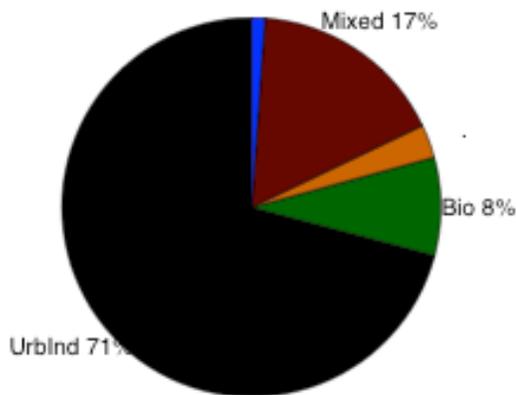


This instrument is located on the Acqua Alta Oceanographic Tower (AAOT) in the northern Adriatic Sea, 8 nautical miles offshore in the Venice Lagoon. Although the population of Venice is only about 280,000 the surrounding mainland area has a population of about 1.6 million. The AERONET website lists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

[Return to Table](#)

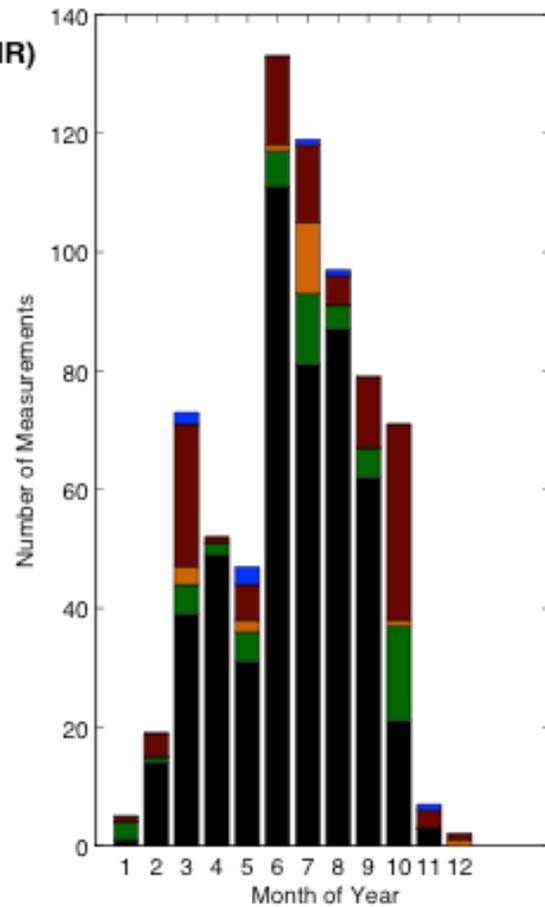
Venice, (ISDGM-CNR) Italy

Aerosol Composition: Venice(ISDGM-CNR)



LONG = 12.332 LAT = 45.437

Data for 2002 – 2007

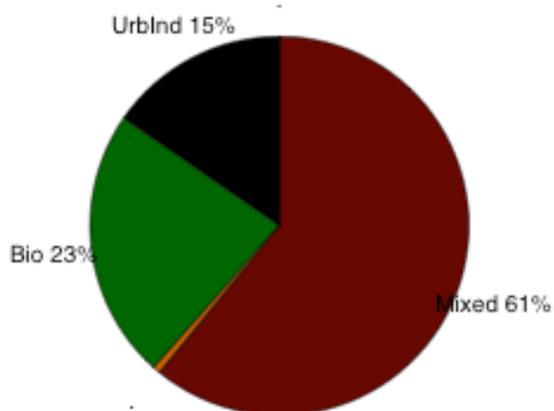


The sun photometer is located in the center of Venice, in front of the Grand Canal. Venice is a major port (as well as a most visited tourist destination). The port handles coal, coke, sulfur, sand, iron, steel products, etc. Porto Marghera and the city of Maestre on the mainland are huge industrial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

[Return to Table](#)

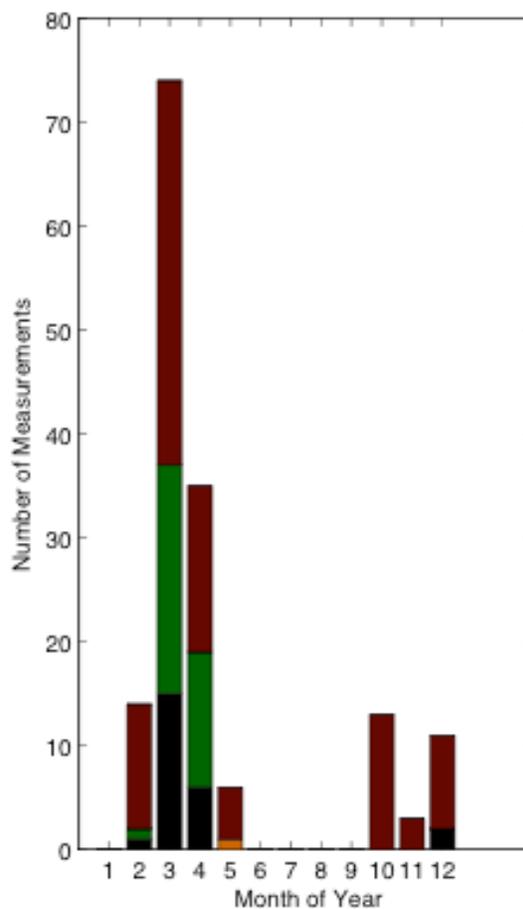
Vientiane, Laos

Aerosol Composition: Vientiane



LONG = 102.57 LAT = 17.992

Data for 2010 - 2012

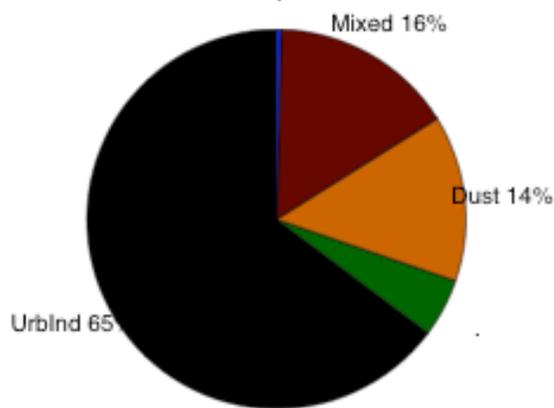


This instrument is located in Vientiane, adjacent to the Wattay International Airport. It is about two kilometers north of the Mekong river border. The urban population is about 750,000 and the city is developing rapidly.

[Return to Table](#)

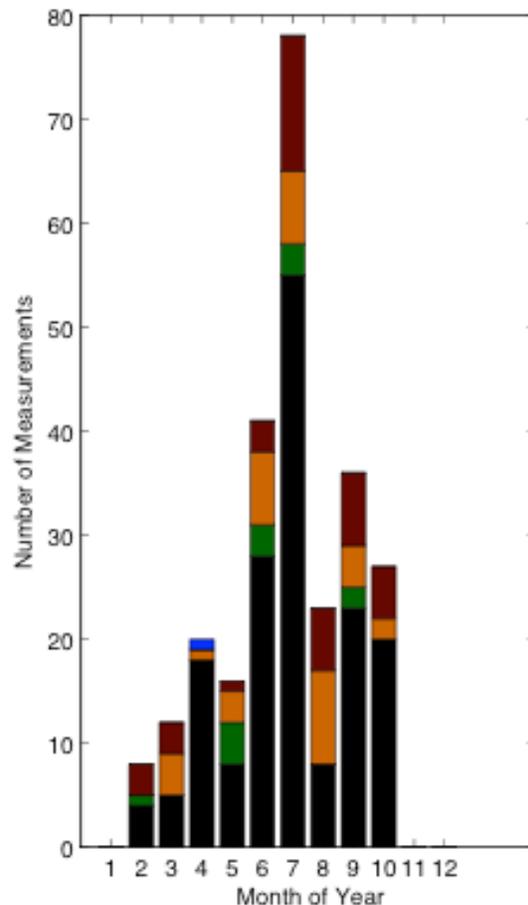
Villefranche, France

Aerosol Composition: Villefranche



LONG = 7.329 LAT = 43.684

Data for 2004 - 2012

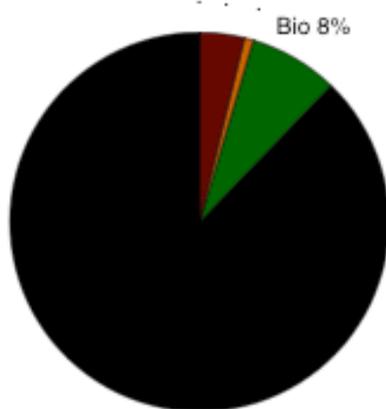


This instrument site is located on a hill in the center of a small peninsula above and between the bays of Villefranche and Baulieu. The site is less than 3 km east of the city of Nice, which has a population of about 1 million. The site is directly across the harbor from the airport.

[Return to Table](#)

Walker Branch, Tennessee, USA

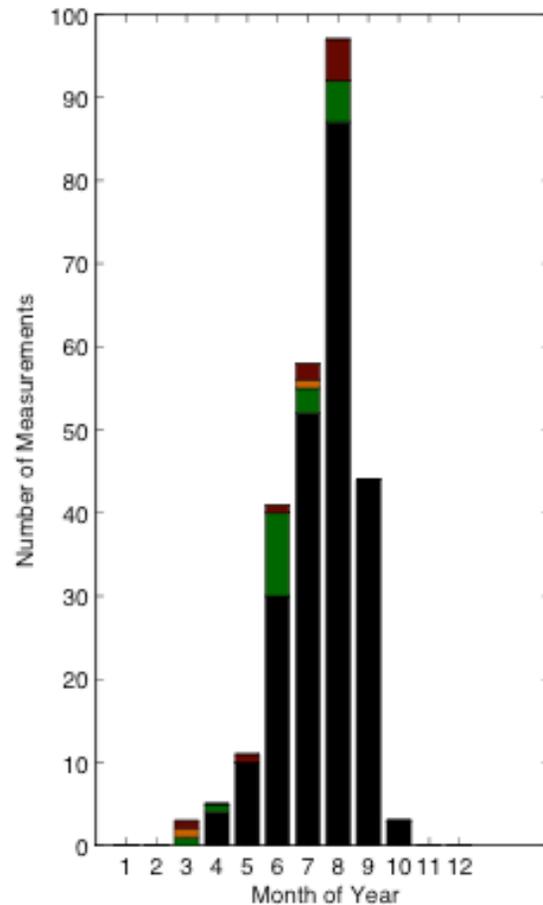
Aerosol Composition: WalkerBranch



Urban 88%

LONG = -84.287 LAT = 35.958

Data for 2000 - 2008

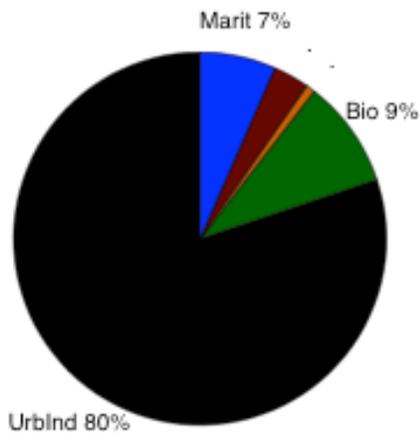


This instrument is located on a tower in a forested area approximately 2 km west of Oak Ridge National Laboratory. Oak ridge itself is about 35 km west of the Knoxville metropolitan area (population approximately 700,000). The area is home to a substantial nuclear research facility and power generating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

[Return to Table](#)

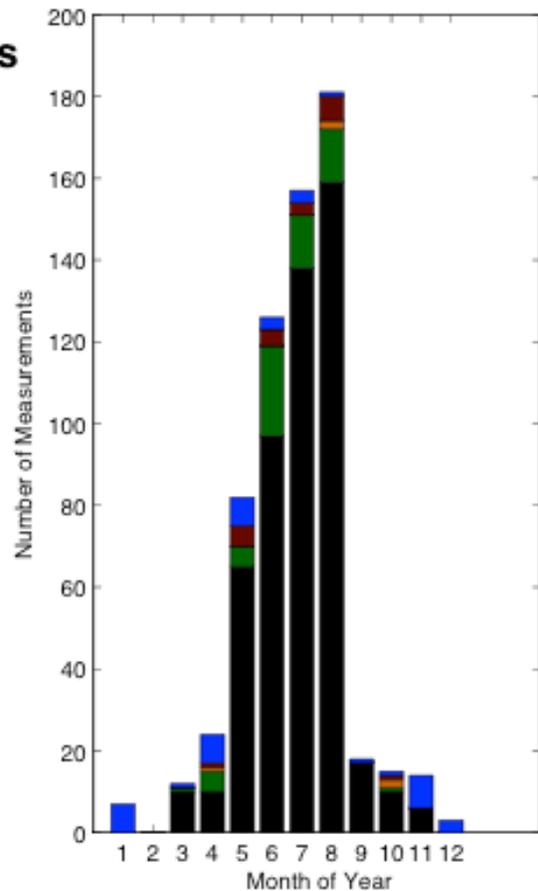
Wallops Island, Virginia, USA

Aerosol Composition: Wallops



LONG = -75.475 LAT = 37.942

Data for 1993 - 2012

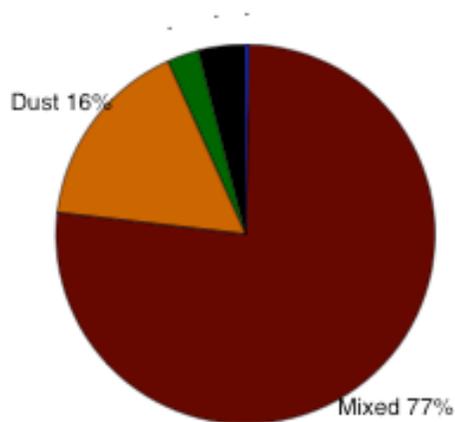


This instrument is located adjacent the runway at the NASA Wallops Flight Facility. The location is near the south end of the Chincoteague Bay on the Atlantic coast. The site is some 270 km southeast of the Baltimore and the Washington D.C metropolitan areas, and 300 km south of New York City.

[Return to Table](#)

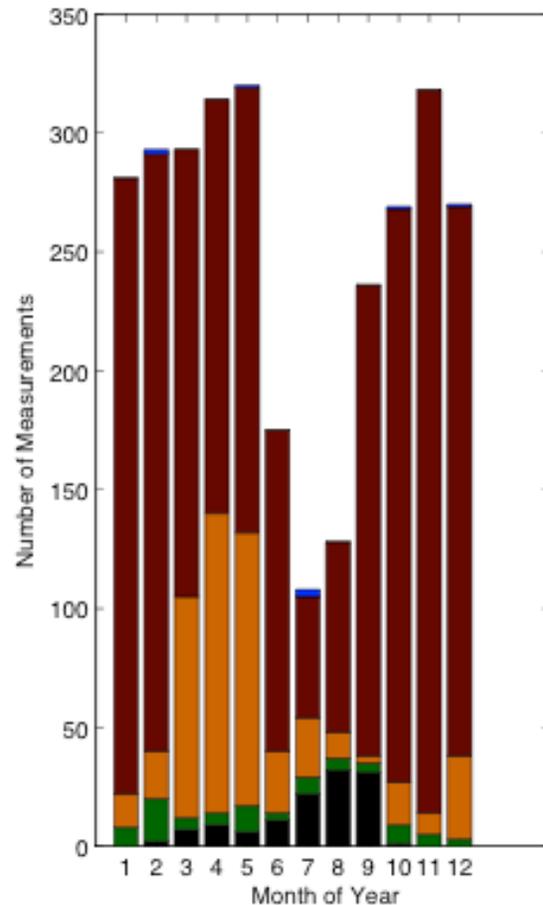
Xiang He, China

Aerosol Composition: XiangHe



LONG = 116.962 LAT = 39.754

Data for 2001 – 2012

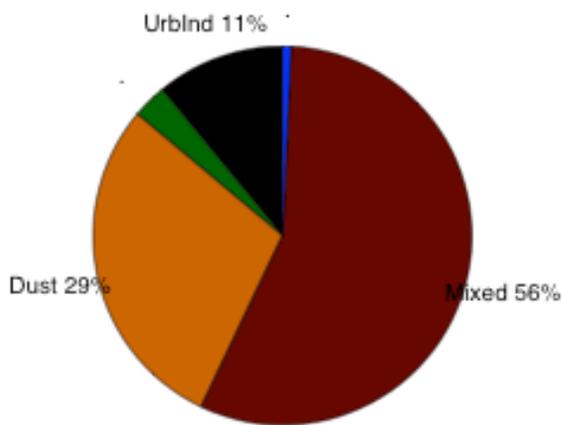


The sun photometer is installed at the Xianghe Observatory, Institute of Atmospheric Physics. The site is surrounded by a small city (less than 300,000) to the east and by agricultural fields in remaining the directions. The location is less than 50 km from central Beijing. It is the home of a growing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

[Return to Table](#)

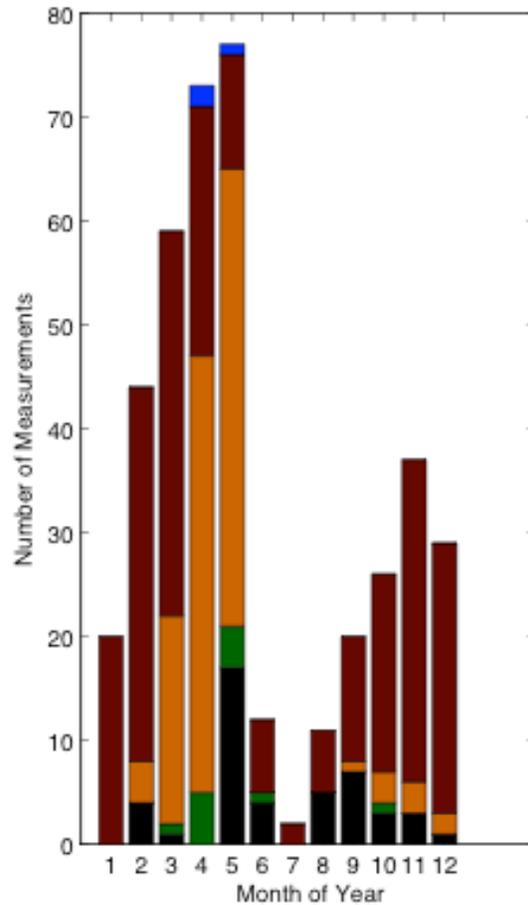
Xinglong, China

Aerosol Composition: Xinglong



LONG = 117.578 LAT = 40.396

Data for 2006 – 2012

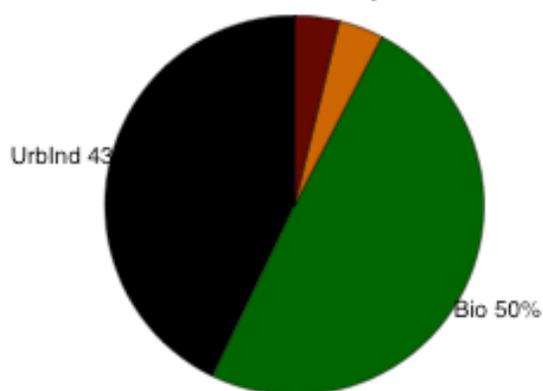


This site is 960 meters above sea level and located south of the main peak of Yanshan mountains, at the National Astronomical Observatory of China. It is less than 2 km south of the Great Wall. The city of Xinglong is about 10 km west of the site.

[Return to Table](#)

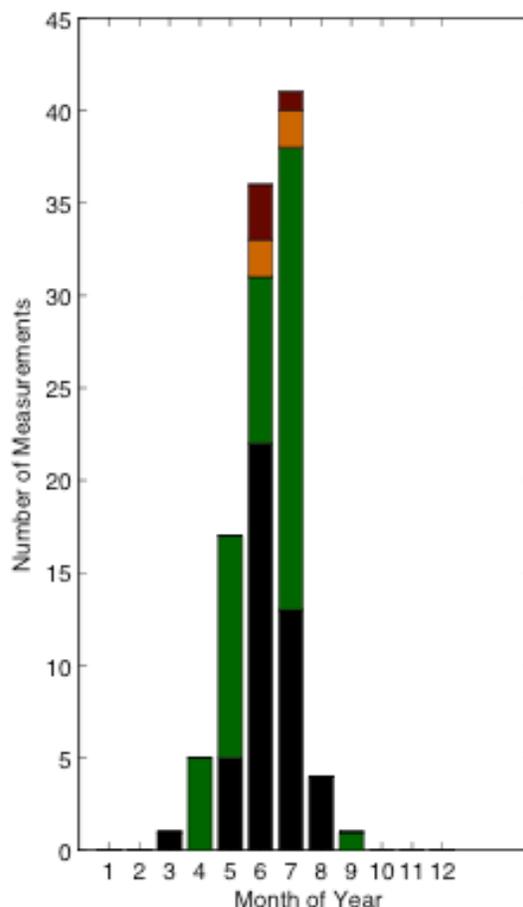
Yakutsk, Russia

Aerosol Composition: Yakutsk



LONG = 129.367 LAT = 61.662

Data for 2004 – 2012

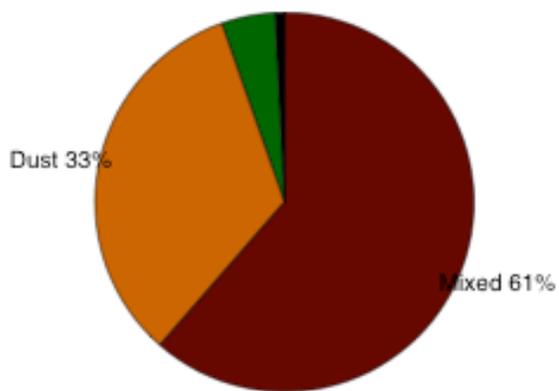


The instrument is located at the Institute of Cosmophysical Research and Aeronomy in Siberia. The site is some 50 km south of Yakutsk (population about 270,000) on the west bank of the Lena River. Yakutsk is a center for mining, food processing, and the manufacturing of building materials.

[Return to Table](#)

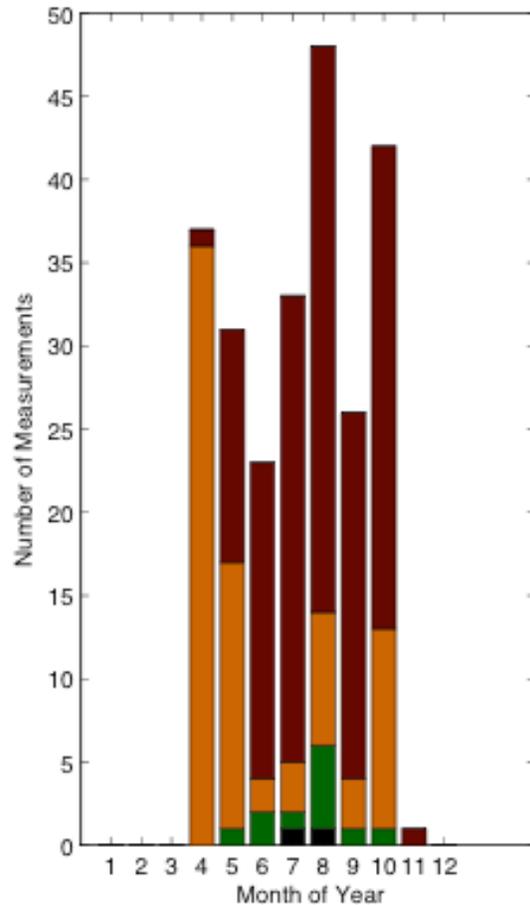
Yulin, China

Aerosol Composition: Yulin



LONG = 109.717 LAT = 38.283

Data for 2001 - 2002

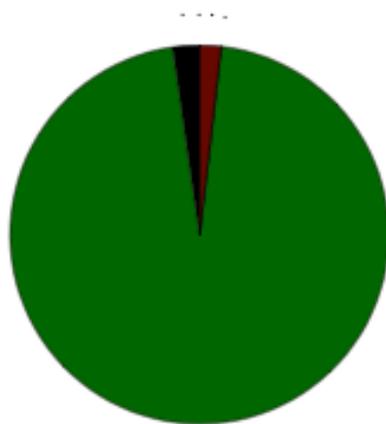


The instrument was roof mounted at the Shaanxi Desert Institute in Yulin, a city of approximately 3.8 million. The surrounding area is the Ordos desert. This site is no longer active.

[Return to Table](#)

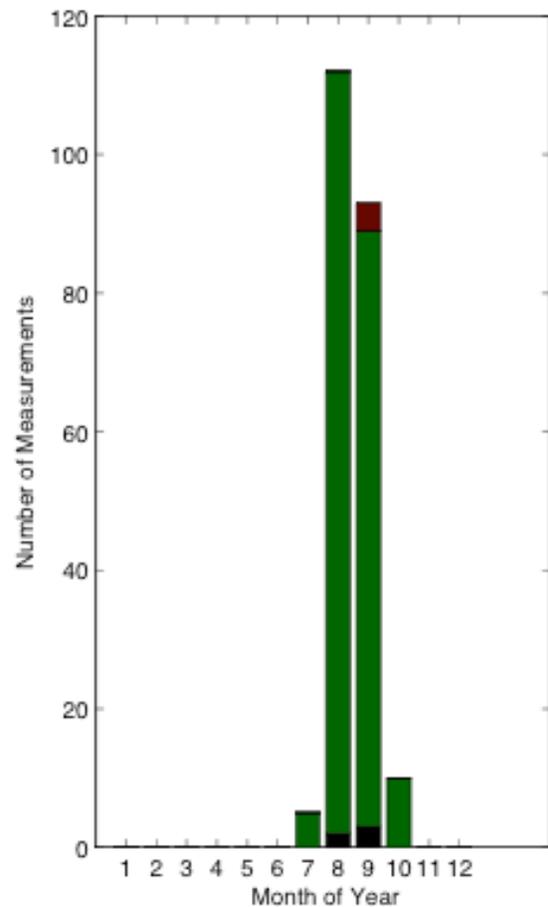
Zambezi, Zambia

Aerosol Composition: Zambezi



LONG = 23.107 LAT = -13.533

Data for 1996 - 2000

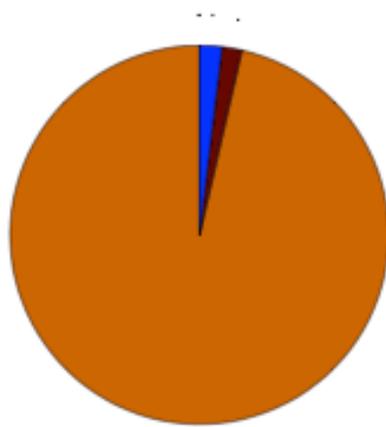


This site (which is no longer active) was located at the airport in Zambezi, a town in western Zambia. The aerosol over the extended AERONET sampling time period was presumably predominantly burning biomass in origin.

[Return to Table](#)

Zinder, Niger

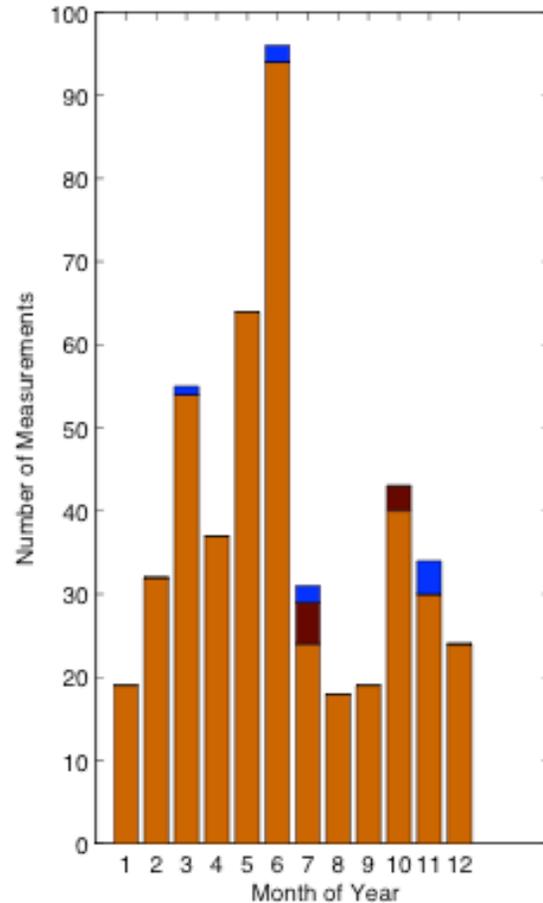
Aerosol Composition: ZinderAirport



Dust 96%

LONG = 8.99 LAT = 13.777

Data for 2009 - 2011

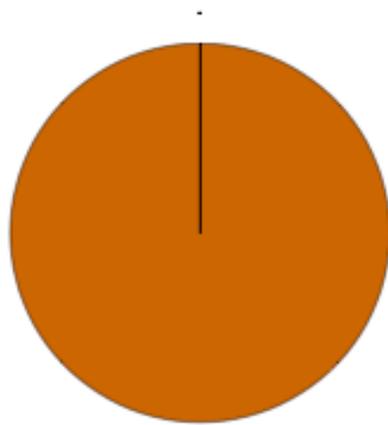


The instrument is located in a field adjacent to the airport of the city of Zinder. The city has a population of about 300,000 inhabitants and lies in the semi-arid Sahelian Zone. There are two AERONET records of aerosols at Zinder. The one shown is listed in the AERONET website as Zinder_Airport. The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

[Return to Table](#)

Zinder (DMN), Niger

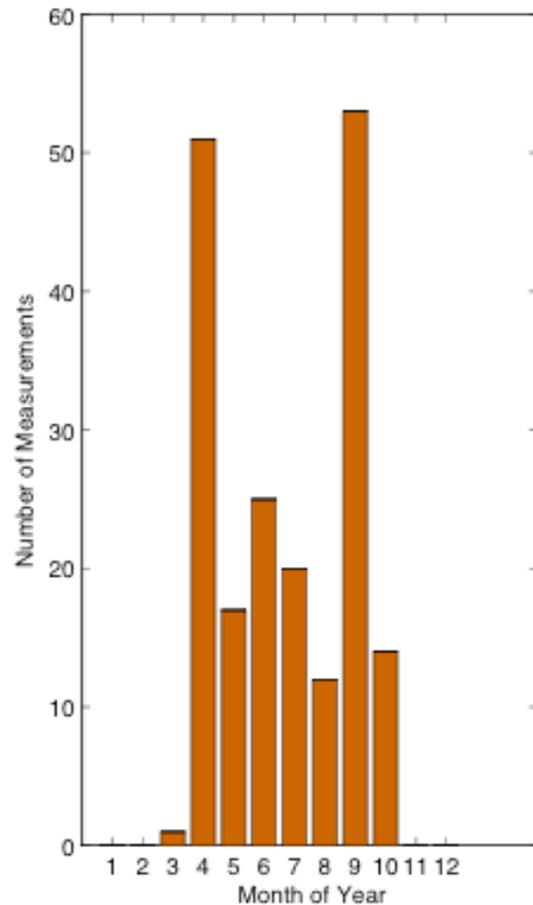
Aerosol Composition: ZinderDMN



Dust 100%

LONG = 8.984 LAT = 13.775

Data for 2008 - 2008



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 in the semi-arid Sahelian Zone. There are two AERONET records of aerosols at Zinder. This site is no longer active.

[Return to Table](#)