

Supplementary Information for: Air transport in Africa: A statistical physics approach

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African airports

Table S1: Information on the 100 African airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set.

ICAO	Flag	Airport	Code	Country	Ops.Avg
HECA		Cairo International Airport	EG	Egypt	123.74
FAOR		O.R. Tambo International Airport	ZA	South Africa	84.66
GCLP		Gran Canaria Airport	ES	Spain	81.48
HAAB		Addis Ababa Bole International Airport	ET	Ethiopia	69.69
GMMN		Mohammed V International Airport	MA	Morocco	61.55
HKJK		Jomo Kenyatta International Airport	KE	Kenya	50.88
GCTS		Tenerife Sur Airport	ES	Spain	50.14
GCXO		Tenerife Norte-Ciudad de La Laguna Airport	ES	Spain	47.90
GCRR		César Manrique-Lanzarote Airport	ES	Spain	42.32
FACT		Cape Town International Airport	ZA	South Africa	40.09
DTTA		Tunis Carthage International Airport	TN	Tunisia	36.48
DAAG		Houari Boumediene Airport	DZ	Algeria	35.62
GCFV		Fuerteventura Airport	ES	Spain	33.85
HEGN		Hurghada International Airport	EG	Egypt	29.00
GMMX		Menara Airport	MA	Morocco	28.39
DNMM		Murtala Muhammed International Airport	NG	Nigeria	25.94
HESH		Sharm El Sheikh International Airport	EG	Egypt	20.92
FALE		King Shaka International Airport	ZA	South Africa	20.55
GOBD		Blaise Diagne International Airport	SN	Senegal	20.25
DGAA		Kotoka International Airport	GH	Ghana	16.78
HTDA		Julius Nyerere International Airport	TZ	Tanzania	16.73
DIAP		Félix-Houphouët-Boigny International Airport	CI	Côte d'Ivoire	16.64
HUEN		Entebbe International Airport	UG	Uganda	15.45
DNAA		Nnamdi Azikiwe International Airport	NG	Nigeria	14.88
GCLA		La Palma Airport	ES	Spain	13.87
HSSK		Khartoum International Airport	SD	Sudan	12.58
GMAD		Al Massira Airport	MA	Morocco	11.14

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Table S1: Information on the 100 African airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set. (Continued)

ICAO	Flag	Airport	Code	Country	Ops.Avg
HTZA		Abeid Amani Karume International Airport	TZ	Tanzania	11.10
DXXX		Lomé-Tokoin International Airport	TG	Togo	11.08
GMTT		Tangier Ibn Battuta Airport	MA	Morocco	11.03
HEBA		Borj El Arab International Airport	EG	Egypt	10.89
DTTJ		Djerba Zarzis International Airport	TN	Tunisia	10.66
FSIA		Seychelles International Airport	SC	Seychelles	10.49
HKMO		Moi International Airport	KE	Kenya	10.39
FIMP		Sir Seewoosagur Ramgoolam International Airport	MU	Mauritius	9.99
HLLM		Mitiga International Airport	LY	Libya	9.53
FNLU		Quatro de Fevereiro International Airport	AO	Angola	9.40
DAOO		Ahmed Ben Bella International Airport	DZ	Algeria	8.84
HRYR		Kigali International Airport	RW	Rwanda	8.73
FMEE		Roland Garros Airport	RE	Réunion	8.42
GABS		Modibo Keita International Airport	ML	Mali	8.21
GMFF		Fes Saïss International Airport	MA	Morocco	7.61
FZAA		Ndjili International Airport	CD	Congo-Kinshasa	7.22
HEMA		Marsa Alam International Airport	EG	Egypt	7.09
HTKJ		Kilimanjaro International Airport	TZ	Tanzania	6.91
FLKK		Kenneth Kaunda International Airport	ZM	Zambia	6.76
FVRG		Robert Gabriel Mugabe International Airport	ZW	Zimbabwe	6.51
FKKD		Douala International Airport	CM	Cameroon	6.47
DTMB		Monastir Habib Bourguiba International Airport	TN	Tunisia	6.41
FAPE		Chief Dawid Stuurman International Airport	ZA	South Africa	6.25
GMME		Rabat-Salé Airport	MA	Morocco	6.17
DBBB		Cadjehoun Airport	BJ	Benin	6.10
DFFD		Ouagadougou Airport	BF	Burkina Faso	5.71
GMMW		Nador Al Aaroui International Airport	MA	Morocco	5.64
GMFO		Oujda Angads Airport	MA	Morocco	5.54
FSPP		Praslin Island Airport	SC	Seychelles	5.46
FQMA		Maputo Airport	MZ	Mozambique	5.29
GQNO		Nouakchott-Oumtounsy International Airport	MR	Mauritania	5.24
GUCY		Conakry International Airport	GN	Guinea	5.15
HELX		Luxor International Airport	EG	Egypt	5.02
GVAC		Amílcar Cabral International Airport	CV	Cabo Verde	5.01
GEML		Melilla Airport	ES	Spain	4.89

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Table S1: Information on the 100 African airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set. (Continued)

ICAO	Flag	Airport	Code	Country	Ops.Avg
FOOL		Libreville Leon M'ba International Airport	GA	Gabon	4.74
DRRN		Diori Hamani International Airport	NE	Niger	4.68
FAGG		George Airport	ZA	South Africa	4.51
DABC		Mohamed Boudiaf International Airport	DZ	Algeria	4.43
FALA		Lanseria International Airport	ZA	South Africa	4.32
HSSJ		Juba International Airport	SS	South Sudan	4.12
FKYS		Yaoundé Nsimalen International Airport	CM	Cameroon	4.05
HESN		Aswan International Airport	EG	Egypt	3.95
FYWH		Hosea Kutako International Airport	SS	Namibia	3.89
HKKI		Kisumu Airport	KE	Kenya	3.87
FCBB		Maya-Maya Airport	CG	Congo-Brazzaville	3.85
HDAM		Djibouti-Ambouli Airport	DJ	Djibouti	3.80
DNKN		Mallam Aminu International Airport	NG	Nigeria	3.79
FAEL		King Phalo Airport	ZA	South Africa	3.75
GCHI		El Hierro Airport	ES	Spain	3.70
GBYD		Banjul International Airport	GM	Gambia	3.55
FMMI		Ivato Airport	MG	Madagascar	3.47
FBSK		Sir Seretse Khama International Airport	BW	Botswana	3.34
HCMM		Aden Adde International Airport	SO	Somalia	3.26
HLLB		Benina International Airport	LY	Libya	3.22
FMCZ		Dzaoudzi Pamandzi International Airport	YT	Mayotte	3.16
FABL		Bram Fischer International Airport	ZA	South Africa	3.11
DNPO		Port Harcourt International Airport	NG	Nigeria	3.04
GFLI		Lungi International Airport	SL	Sierra Leone	2.91
FTTJ		N'Djamena International Airport	TD	Chad	2.86
GVNP		Nelson Mandela International Airport	CV	Cabo Verde	2.69
FCPP		Antonio Agostinho-Neto International Airport	CG	Congo-Brazzaville	2.69
DTNH		Enfidha - Hammamet International Airport	TN	Tunisia	2.65
HKEL		Eldoret International Airport	KE	Kenya	2.52
HTMW		Mwanza Airport	TZ	Tanzania	2.50
GMML		Hassan I Airport	EH	Western Sahara	2.07
FZNA		Goma International Airport	CD	Congo-Kinshasa	1.98
FWKI		Kamuzu International Airport	MW	Malawi	1.95
HTAR		Arusha Airport	TZ	Tanzania	1.91
GLRB		Roberts International Airport	LR	Liberia	1.82

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Table S1: Information on the 100 African airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set. (Continued)

ICAO	Flag	Airport	Code	Country	Ops.Avg
GCGM		La Gomera Airport	ES	Spain	1.79
FZQA		Lubumbashi International Airport	CD	Congo-Kinshasa	1.75
GVBA		Rabil Airport	CV	Cabo Verde	1.71

US airports

Table S2: Information on the 100 US airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set.

ICAO	Airport	Ops.Avg
KATL	Hartsfield Jackson Atlanta International Airport	713.77
KORD	Chicago O'Hare International Airport	675.13
KDFW	Dallas Fort Worth International Airport	664.00
KDEN	Denver International Airport	588.09
KLAX	Los Angeles International Airport	491.46
KCLT	Charlotte Douglas International Airport	486.62
KMIA	Miami International Airport	387.16
KIAH	George Bush Intercontinental Houston Airport	384.69
KJFK	John F Kennedy International Airport	377.64
KSEA	Seattle-Tacoma International Airport	376.74
KPHX	Phoenix Sky Harbor International Airport	366.23
KLAS	Harry Reid International Airport	344.66
KEWR	Newark Liberty International Airport	330.74
KMCO	Orlando International Airport	318.55
KSFO	San Francisco International Airport	300.79
KMSP	Minneapolis-Saint Paul International Airport / Wold-Chamberlain Field	298.42
KBOS	Logan International Airport	296.75
KDTW	Detroit Metropolitan Wayne County Airport	285.24
KLGA	LaGuardia Airport	265.35
KSLC	Salt Lake City International Airport	259.12
KPHL	Philadelphia International Airport	252.96
KDCA	Ronald Reagan Washington National Airport	227.34
KFLL	Fort Lauderdale Hollywood International Airport	219.10
KIAD	Washington Dulles International Airport	217.76
KMEM	Memphis International Airport	215.83
KBWI	Baltimore/Washington International Thurgood Marshall Airport	186.33
KBNA	Nashville International Airport	178.92
KSDF	Louisville Muhammad Ali International Airport	175.15
KAUS	Austin Bergstrom International Airport	164.21
KSAN	San Diego International Airport	164.05
KTPA	Tampa International Airport	160.29
KPDX	Portland International Airport	153.26
KMDW	Chicago Midway International Airport	151.68
KDAL	Dallas Love Field	141.96

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Table S2: Information on the 100 US airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set. (Continued)

ICAO	Airport	Ops.Avg
KCVG	Cincinnati Northern Kentucky International Airport	135.41
KIND	Indianapolis International Airport	130.33
KSTL	St. Louis Lambert International Airport	129.76
KOAK	San Francisco Bay Oakland International Airport	117.00
KRDU	Raleigh Durham International Airport	115.08
KHOU	William P Hobby Airport	111.59
KSMF	Sacramento International Airport	104.00
KSJC	Norman Y. Mineta San Jose International Airport	98.58
KSNA	John Wayne Orange County International Airport	96.41
KPIT	Pittsburgh International Airport	93.72
KMSY	Louis Armstrong New Orleans International Airport	90.35
KMCI	Kansas City International Airport	90.08
KONT	Ontario International Airport	89.72
KSAT	San Antonio International Airport	86.74
KCLE	Cleveland Hopkins International Airport	81.21
KCMH	John Glenn Columbus International Airport	78.69
KRSW	Southwest Florida International Airport	77.04
KPBI	Palm Beach International Airport	73.08
KMKE	General Mitchell International Airport	70.87
KBUR	Hollywood Burbank Airport	68.38
KJAX	Jacksonville International Airport	62.27
KOMA	Eppley Airfield	57.43
KCHS	Charleston International Airport	56.09
KBOI	Boise Air Terminal/Gowen Field	55.53
KBDL	Bradley International Airport	52.94
KABQ	Albuquerque International Sunport	51.91
KRIC	Richmond International Airport	51.36
KGEG	Spokane International Airport	51.12
KRNO	Reno Tahoe International Airport	49.80
KOKC	Will Rogers World Airport	47.24
KELP	El Paso International Airport	47.02
KBUF	Buffalo Niagara International Airport	46.02
KORF	Norfolk International Airport	45.83
KHPN	Westchester County Airport	44.70
KSAV	Savannah Hilton Head International Airport	42.82
KGRR	Gerald R. Ford International Airport	40.05
KTYS	McGhee Tyson Airport	39.89

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Table S2: Information on the 100 US airports considered in this study, including their ICAO code, ranked by the average number of **executed operations** per day available in the data set. (Continued)

ICAO	Airport	Ops.Avg
KTUL	Tulsa International Airport	39.81
KBHM	Birmingham-Shuttlesworth International Airport	39.47
KTEB	Teterboro Airport	37.91
KTUS	Tucson International Airport / Morris Air National Guard Base	37.15
KGSO	Piedmont Triad International Airport	36.37
KPVD	Theodore Francis Green State Airport	34.35
KSYR	Syracuse Hancock International Airport	34.34
KSRQ	Sarasota Bradenton International Airport	34.03
KBIL	Billings Logan International Airport	34.00
KDSM	Des Moines International Airport	33.55
KMYR	Myrtle Beach International Airport	33.18
KPSP	Palm Springs International Airport	33.16
KROC	Frederick Douglass Greater Rochester International Airport	32.30
KGSP	Greenville Spartanburg International Airport	32.21
KICT	Wichita Eisenhower National Airport	32.13
KALB	Albany International Airport	32.04
KPNS	Pensacola International Airport	31.73
KBZN	Bozeman Yellowstone International Airport	30.62
KCOS	City of Colorado Springs Municipal Airport	29.50
KLIT	Bill & Hillary Clinton National Airport/Adams Field	29.19
KFSD	Sioux Falls Regional Airport / Joe Foss Field	28.63
KFAR	Hector International Airport	28.48
KFAT	Fresno Yosemite International Airport	28.46
KCAE	Columbia Metropolitan Airport	28.41
KLGB	Long Beach Airport (Daugherty Field)	28.15
KPWM	Portland International Jetport	28.10
KMSN	Dane County Regional Truax Field	27.26
KSFB	Orlando Sanford International Airport	26.97
KACK	Nantucket Memorial Airport	26.69