The FREQ Procedure

Basin	Frequency	Percent	Cumulative Frequency	Cumulative Percent
EP	671	21.52	671	21.52
NA	472	15.14	1143	36.66
NI	84	2.69	1227	39.35
SI	588	18.86	1815	58.21
SP	359	11.51	2174	69.72
WP	928	29.76	3102	99.49
na	16	0.51	3118	100.00

Type	Frequency	Percent	Cumulative Frequency	Cumulative Percent
DS	293	9.40	293	9.40
ET	761	24.41	1054	33.80
NR	702	22.51	1756	56.32
SS	5	0.16	1761	56.48
TS	1357	43.52	3118	100.00

Summary Statistics for Maximum Wind(MPH) and Minimum Pressure

The MEANS Procedure

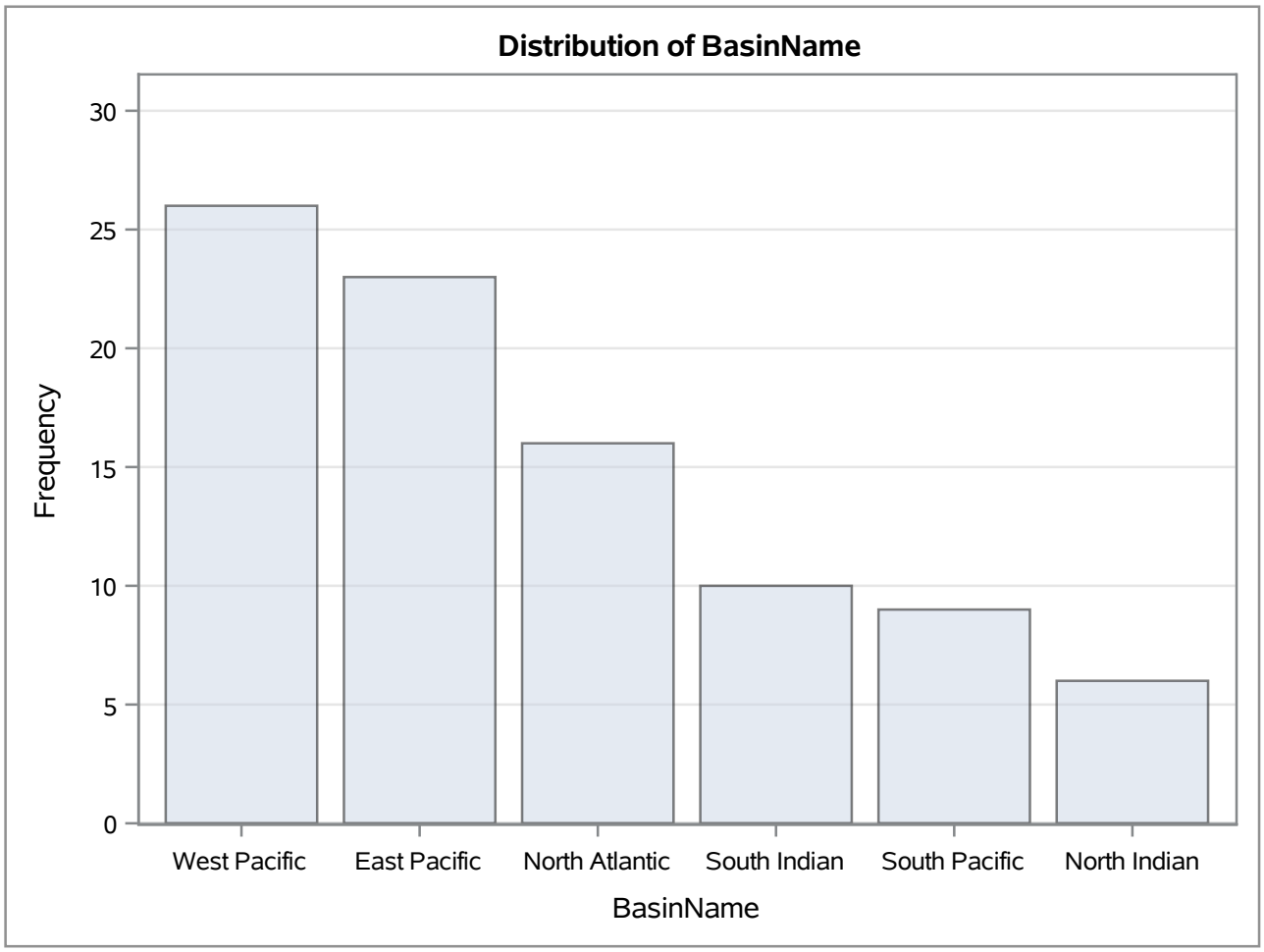
Variable	N	Mean	Std Dev	Minimum	Maximum
MaxWindMPH	3095	79.3179321	31.6853937	6.0000000	213.0000000
MinPressure	2922	961.8545517	288.6582966	-9999.00	1012.00

First 5 Rows from Imported Storm Damage

Obs	Event	Date	Summary	Cost	Deaths
1	Hurricane Katrina	25AUG2005	Category 3 hurricane initially impacts the U.S. as a Category 1 near Miami, FL, then as a strong Category 3 along the eastern LA-western MS coastlines, resulting in severe storm surge damage (maximum surge probably exceeded 30 feet) along the LA-MS-AL coasts, wind damage, and the failure of parts of the levee system in New Orleans. Inland effects included high winds and some flooding in the states of AL, MS, FL, TN, KY, IN, OH, and GA.	$161300000000	1,833
2	Hurricane Harvey	25AUG2017	Category 4 hurricane made landfall near Rockport, Texas causing widespread damage. Harvey's devastation was most pronounced due to the large region of extreme rainfall producing historic flooding across Houston and surrounding areas. More than 30 inches of rainfall fell on 6.9 million people, while 1.25 million experienced over 45 inches and 11,000 had over 50 inches, based on 7-day rainfall totals ending August 31. This historic U.S. rainfall caused massive flooding that displaced over 30,000 people and damaged or destroyed over 200,000 homes and businesses.	$125000000000	89
3	Hurricane Maria	19SEP2017	Category 4 hurricane made landfall in southeast Puerto Rico after striking the U.S. Virgin Island of St. Croix. Maria's high winds caused widespread devastation to Puerto Rico's transportation, agriculture, communication and energy infrastructure. Extreme rainfall up to 37 inches caused widespread flooding and mudslides across the island. The interruption to commerce and standard living conditions will be sustained for a long period, as much of Puerto Rico's infrastructure is rebuilt. Maria tied Hurricane Wilma (2005) for the most rapid intensification, strengthening from tropical depression to a category 5 storm in 54 hours. Maria's landfall at Category 4 strength gives the U.S. a record three Category 4+ landfalls this year (Maria, Harvey, and Irma).	$90000000000	65
4	Hurricane Sandy	30OCT2012	Extensive damage across several northeastern states (MD, DE, NJ, NY, CT, MA, RI) due to high wind and coastal storm surge, particularly NY and NJ. Damage from wind, rain and heavy snow also extended more broadly to other states (NC, VA, WV, OH, PA, NH), as Sandy merged with a developing Nor'easter. Sandy's impact on major population centers caused widespread interruption to critical water / electrical services and also caused 159 deaths (72 direct, 87 indirect). Sandy also caused the New York Stock Exchange to close for two consecutive business days, which last happened in 1888 due to a major winter storm.	$70900000000	159
5	Hurricane Irma	06SEP2017	Category 4 hurricane made landfall at Cudjoe Key, Florida after devastating the U.S. Virgin Islands - St John and St Thomas - as a category 5 storm. The Florida Keys were heavily impacted, as 25% of buildings were destroyed while 65% were significantly damaged. Severe wind and storm surge damage also occurred along the coasts of Florida and South Carolina. Jacksonville, FL and Charleston, SC received near-historic levels of storm surge causing significant coastal flooding. Irma maintained a maximum sustained wind of 185 mph for 37 hours, the longest in the satellite era. Irma also was a category 5 storm for longer than all other Atlantic hurricanes except Ivan in 2004.	$50000000000	97

Number of Storms by Type and Basin
2016 Season

BasinName	Frequency
West Pacific	26
East Pacific	23
North Atlantic	16
South Indian	10
South Pacific	9
North Indian	6



Number of Storms by Type and Basin
2016 Season

Table of BasinName by Type			
BasinName	**Type**	**Frequency**	**Percent**
West Pacific	**TS**	13	14.44
	ET	13	14.44
	DS	0	0.00
	NR	0	0.00
	Total	26	28.89
East Pacific	**TS**	4	4.44
	ET	0	0.00
	DS	18	20.00
	NR	1	1.11
	Total	23	25.56
North Atlantic	**TS**	3	3.33
	ET	9	10.00
	DS	4	4.44
	NR	0	0.00
	Total	16	17.78
South Indian	**TS**	6	6.67
	ET	2	2.22
	DS	0	0.00
	NR	2	2.22
	Total	10	11.11
South Pacific	**TS**	0	0.00
	ET	0	0.00
	DS	0	0.00
	NR	9	10.00
	Total	9	10.00
North Indian	**TS**	0	0.00
	ET	0	0.00
	DS	0	0.00
	NR	6	6.67
	Total	6	6.67
Total	**TS**	26	28.89
	ET	24	26.67
	DS	22	24.44
	NR	18	20.00
	Total	90	100.00

Wind Statistics by Storm
Year 2016

Analysis Variable : Wind Wind(MPH)			
Name	**Mean**	**Minimum**	**Maximum**
AERE	43	35	60
AGATHA	30	25	45
ALEX	55	40	75
AMOS	57	30	80
ANNABELLE	36	20	55
BLAS	68	25	120
BOHALE	28	20	35
BONNIE	28	20	40
CELIA	44	25	85
CHABA	78	35	115
CHANTHU	49	35	55
COLIN	44	30	50
CONSON	43	35	45
CORENTIN	40	25	60
DANIELLE	30	20	40
DARBY	68	25	105
DAYA	30	20	38
DIANMU	37	35	40
EARL	51	25	75
EIGHT	28	20	30
EMERAUDE	48	15	110
ESTELLE	44	25	60
FANTALA	68	20	135
FIONA	34	20	45
FRANK	45	20	75
GASTON	65	20	105
GEORGETTE	50	20	115
HAIMA	78	35	115
HERMINE	45	20	70
HOWARD	34	25	50
IAN	44	35	55
IVETTE	36	25	50
JAVIER	36	20	55
JULIA	33	20	45
KARL	38	20	60
KAY	31	20	45

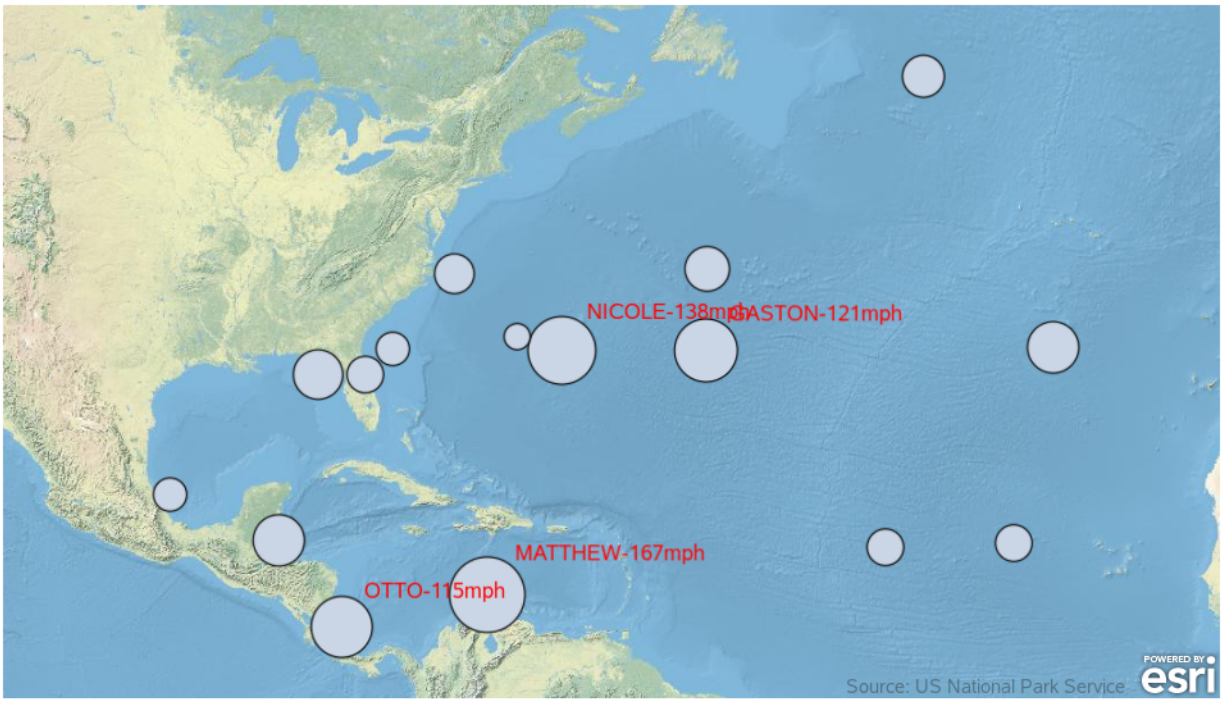
Wind Statistics by Storm
Year 2016

Analysis Variable : Wind Wind(MPH)			
Name	**Mean**	**Minimum**	**Maximum**
KOMPASU	35	35	35
KYANT	31	25	40
LESTER	78	25	125
LIONROCK	71	35	90
LISA	37	25	45
LUPIT	39	35	40
MA-ON	35	35	35
MADELINE	43	30	50
MALAKAS	75	35	95
MALOU	40	40	40
MATTHEW	101	50	145
MEARI	59	35	75
MEGI	64	35	85
MERANTI	82	35	120
MINDULLE	52	35	65
MIRINAE	42	35	55
NADA	33	25	40
NAMTHEUN	57	35	70
NEPARTAK	71	35	110
NEWTON	51	15	80
NICOLE	64	35	120
NIDA	49	35	60
NOCK-TEN	73	35	105
NONAME	18	10	30
OMAIS	50	35	60
ONE	28	25	30
ORLENE	58	25	95
OTTO	47	20	100
PAINE	48	20	80
PALI	45	20	85
RAI	35	35	35
ROANU	36	20	45
ROSLYN	31	15	45
SARIKA	59	35	95
SEVENTEEN	31	20	45
SEYMOUR	57	15	130

Wind Statistics by Storm
Year 2016

Analysis Variable : Wind Wind(MPH)			
Name	**Mean**	**Minimum**	**Maximum**
SIXTEEN	27	25	30
SONGDA	72	35	100
STAN	32	20	55
TATIANA	34	20	50
TINA	24	15	35
TOKAGE	44	35	50
TUNI	32	20	40
TWO	25	25	25
ULA	60	20	100
ULIKA	36	25	65
URIAH	43	15	110
VARDAH	46	20	70
VICTOR	62	25	80
WINSTON	76	25	150
YALO	33	25	40
ZENA	51	30	70

Tropical Storms in 2016 Season
North Atlantic Basin



MaxWindMPH

Storms with MaxWind>100mph are labeled