

Table S1. The best track center, ABI-determined center, R_{IR} and R_{OR} of Hurricane Irma from 1800 UTC 30 August to 1800 UTC 10 September 2017.

Date/Time (UTC)	Best Track Center (°W, °N)	ABI-Determined Center (°W, °N)	R_{IR} (km)	R_{OR} (km)
30/1800	(30.8, 16.3)	(30.73, 16.13)	338.05	876.99
31/0000	(31.7, 16.3)	(31.75, 16.25)	223.93	847.92
31/0600	(32.5, 16.4)	(32.50, 16.20)	242.08	857.85
31/1200	(33.4, 16.7)	(33.55, 16.60)	276.69	889.37
31/1800	(34.2, 17.1)	(34.00, 17.10)	494.27	922.92
01/0000	(35.1, 17.5)	(34.90, 17.55)	314.74	880.04
01/0600	(36.1, 17.9)	(35.90, 17.85)	272.15	849.71
01/1200	(37.3, 18.4)	(37.15, 18.45)	272.08	894.29
01/1800	(38.5, 18.8)	(38.40, 18.80)	329.58	818.09
02/0000	(39.7, 19.1)	(39.65, 19.05)	416.13	892.22
02/0600	(41.1, 19.1)	(41.10, 19.20)	212.16	830.99
02/1200	(42.6, 18.9)	(42.40, 19.00)	258.59	848.43
02/1800	(44.1, 18.7)	(44.03, 18.70)	263.34	871.66
03/0000	(45.5, 18.5)	(45.30, 18.65)	261.67	883.33
03/0600	(46.7, 18.2)	(46.65, 18.30)	438.02	859.48
03/1200	(47.9, 17.9)	(47.90, 17.85)	263.67	889.78
03/1800	(49.2, 17.6)	(49.30, 17.80)	387.38	834.58

04/0000	(50.4, 17.3)	(50.45, 17.25)	285.00	925.39
04/0600	(51.5, 17.0)	(51.52, 17.00)	282.15	899.99
04/1200	(52.6, 16.8)	(52.58, 16.93)	360.60	823.38
04/1800	(53.9, 16.7)	(53.90, 16.75)	235.03	838.10
05/0000	(55.1, 16.6)	(55.10, 16.75)	327.92	914.97
05/0600	(56.4, 16.6)	(56.40, 16.70)	355.19	901.77
05/1200	(57.8, 16.7)	(57.70, 16.75)	370.60	881.81
05/1800	(59.2, 16.9)	(59.10, 17.00)	442.31	867.49
06/0000	(60.6, 17.3)	(60.40, 17.30)	375.42	848.17
06/0600	(61.9, 17.7)	(61.80, 17.80)	459.36	839.00
06/1200	(63.3, 18.1)	(63.25, 18.15)	454.58	837.82
06/1800	(64.7, 18.6)	(64.65, 18.60)	457.08	873.74
07/0000	(66.2, 19.2)	(66.00, 19.20)	512.08	870.42
07/0600	(67.6, 19.7)	(67.55, 19.75)	411.08	891.42
07/1200	(69.0, 20.2)	(68.85, 20.15)	481.68	979.70
07/1800	(70.4, 20.7)	(70.40, 20.90)	451.90	874.82
08/0000	(71.8, 21.1)	(71.80, 21.20)	385.15	865.50
08/0600	(73.2, 21.5)	(73.2, 21.60)	371.70	956.47
08/1200	(74.7, 21.8)	(74.50, 21.85)	593.51	865.91
08/1800	(76.0, 22.0)	(75.90, 22.00)	481.52	923.87
09/0000	(77.2, 22.1)	(77.30, 22.20)	308.24	926.30
Date/Time	Best Track Center	ABI-Determined	R _{IR}	R _{OR}

(UTC)	(°W, °N)	Center (°W, °N)	(km)	(km)
09/0600	(78.3, 22.4)	(78.20, 22.40)	549.04	900.01
09/1200	(79.3, 22.7)	(79.10, 22.80)	175.42	860.66
09/1800	(80.2, 23.1)	(80.00, 23.15)	242.14	841.00
10/0000	(80.9, 23.4)	(80.70, 23.33)	302.47	887.69
10/0600	(81.3, 23.7)	(81.15, 23.75)	219.52	872.32
10/1200	(81.5, 24.5)	(81.45, 24.55)	247.92	876.67
10/1800	(81.7, 25.6)	(81.50, 25.68)	265.53	882.92

Table S2. Same as Table S1 except for Hurricane Jose from 0600 UTC 6 September to 1800 UTC 21 September 2017.

Date/Time (UTC)	Best Track Center (°W, °N)	ABI-Determined Center (°W, °N)	R _{IR} (km)	R _{OR} (km)
06/0600	(42.6, 12.5)	(42.40, 12.30)	306.67	845.50
06/1200	(43.9, 13.1)	(43.70, 12.90)	318.91	859.40
06/1800	(45.2, 13.7)	(44.95, 13.55)	320.91	839.16
07/0000	(46.7, 14.1)	(46.20, 14.60)	389.12	876.72
07/0600	(48.3, 14.4)	(48.00, 14.70)	303.59	878.11
07/1200	(49.9, 14.7)	(49.70, 14.70)	251.09	844.93
07/1800	(51.5, 15.1)	(51.30, 15.15)	252.46	847.54
08/0000	(53.2, 15.5)	(53.18, 15.50)	173.37	896.46
08/0600	(54.9, 15.9)	(54.60, 16.05)	194.93	832.08
08/1200	(56.4, 16.1)	(56.25, 16.20)	238.66	853.89
08/1800	(57.8, 16.4)	(57.65, 16.43)	256.56	859.08
09/0000	(58.9, 16.7)	(58.80, 16.75)	183.10	856.90
09/0600	(59.9, 17.2)	(59.70, 17.20)	156.50	874.31
09/1200	(60.8, 17.9)	(60.60, 18.10)	212.01	872.86
09/1800	(61.8, 18.6)	(61.83, 18.80)	159.47	907.92
10/0000	(62.9, 19.4)	(62.80, 19.55)	182.19	820.46
10/0600	(64.0, 20.3)	(64.00, 20.45)	262.76	923.90

10/1200	(65.3, 21.2)	(65.30, 21.25)	227.91	843.18
10/1800	(66.5, 22.2)	(66.30, 22.10)	276.24	878.85
11/0000	(67.6, 23.3)	(67.65, 23.00)	245.34	872.01
11/0600	(68.6, 24.3)	(68.40, 24.10)	148.57	834.06
11/1200	(69.4, 25.4)	(69.20, 25.20)	120.84	874.02
11/1800	(69.5, 26.5)	(69.35, 26.30)	294.39	857.08
12/0000	(69.4, 27.2)	(69.70, 26.90)	197.15	841.87
12/0600	(69.1, 27.6)	(69.33, 27.30)	225.49	897.08
12/1200	(68.3, 27.7)	(68.10, 27.50)	163.79	892.84
12/1800	(67.4, 27.4)	(67.15, 27.15)	318.62	903.63
13/0000	(66.7, 26.8)	(66.40, 26.50)	255.34	900.22
13/0600	(66.2, 26.3)	(65.90, 26.00)	454.47	886.74
13/1200	(65.8, 25.8)	(65.50, 25.50)	330.99	845.36
13/1800	(65.6, 25.4)	(65.38, 25.10)	363.63	853.93
14/0000	(65.7, 25.1)	(65.40, 24.80)	419.94	860.05
14/0600	(65.9, 24.9)	(65.50, 24.95)	280.54	865.91
14/1200	(66.3, 24.8)	(66.00, 24.50)	407.08	921.87
14/1800	(66.9, 25.0)	(66.55, 24.80)	317.08	853.85
15/0000	(67.6, 25.4)	(67.20, 25.50)	209.58	835.42
15/0600	(68.2, 25.8)	(67.95, 26.00)	292.28	859.96
15/1200	(69.0, 26.3)	(68.68, 26.30)	407.88	857.44
Date/Time	Best Track Center	ABI-Determined	R _{IR}	R _{OR}

(UTC)	(°W, °N)	Center (°W, °N)	(km)	(km)
15/1800	(69.9, 26.8)	(69.60, 27.05)	392.64	839.86
16/0000	(70.7, 27.2)	(70.40, 27.45)	253.66	835.13
16/0600	(71.4, 27.7)	(71.10, 27.75)	181.05	843.57
16/1200	(71.8, 28.2)	(71.60, 28.50)	160.32	888.56
16/1800	(72.0, 28.6)	(71.70, 28.90)	217.57	909.60
17/0000	(72.0, 29.1)	(71.80, 29.30)	311.33	928.55
17/0600	(72.0, 29.8)	(71.70, 30.10)	332.90	825.07
17/1200	(71.9, 30.5)	(71.78, 30.90)	317.62	872.60
17/1800	(71.8, 31.2)	(71.60, 31.40)	397.98	885.00
18/0000	(71.6, 31.9)	(71.90, 32.10)	247.08	862.31
18/0600	(71.4, 32.7)	(71.00, 32.35)	134.58	914.61
18/1200	(71.2, 33.5)	(71.35, 33.20)	114.46	898.13
18/1800	(71.2, 34.2)	(71.50, 33.80)	120.66	919.91
19/0000	(71.4, 34.9)	(71.70, 35.20)	127.84	839.58
19/0600	(71.6, 35.6)	(71.28, 35.40)	116.85	825.87
19/1200	(71.7, 36.3)	(71.20, 36.00)	181.21	850.15
19/1800	(71.5, 37.0)	(71.90, 37.25)	186.03	835.42
20/0000	(71.2, 37.6)	(71.60, 37.25)	212.24	962.92
20/0600	(70.8, 38.1)	(70.95, 38.60)	222.51	896.81
20/1200	(70.2, 38.7)	(69.95, 38.45)	203.25	889.25
20/1800	(69.4, 39.2)	(69.60, 38.75)	131.91	958.86

21/0000	(68.5, 39.4)	(68.45, 38.90)	127.18	899.32
21/0600	(68.1, 39.7)	(68.33, 39.20)	187.04	865.55
21/1200	(68.0, 39.7)	(67.70, 39.30)	210.99	917.15
21/1800	(68.0, 39.5)	(67.55, 39.95)	119.50	886.31