



## Wake Vortex Measurements Examples.

In the pictures below, the vertical red line shows the arrival of an aircraft over the wake array. The time along the x axis shows the time in seconds ago, the most recent time is on the right side at 0 seconds. The vertical axis is to a height of 190m. Arrivals on the 16 approach cross the wake array at a height of 60m. Departures are typically above 140m.

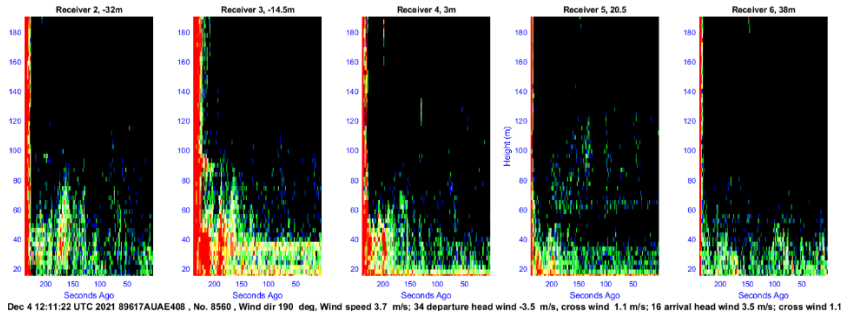


Figure 1. B77W arrival in a 3.5m/s head wind, 1.1m/s right to left cross wind. Wake vortex seen in receiver 3 and has a life of around 50 seconds and stays below the arrival height of 60m.

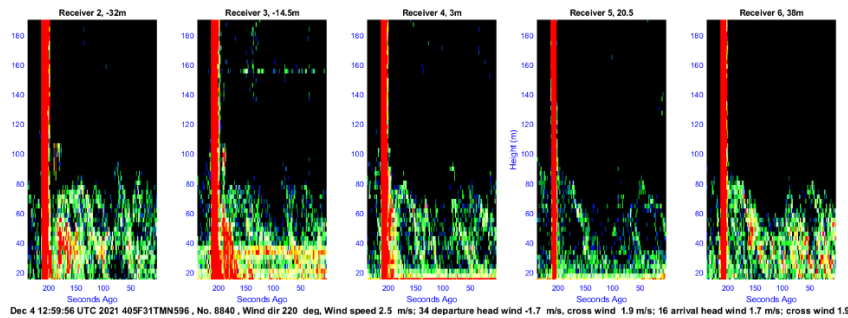


Figure 2. B763 arrival in a 1.7m/s head wind, 1.9m/s right to left cross wind. Wake vortex seen in receiver 3 and has a life of around 50 seconds and stays below the arrival height of 60m.

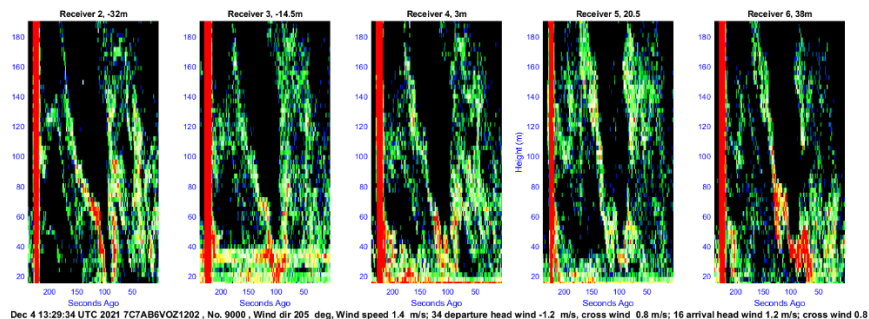
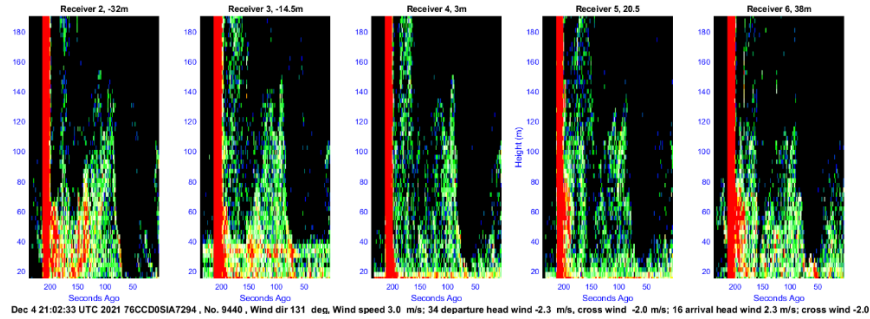
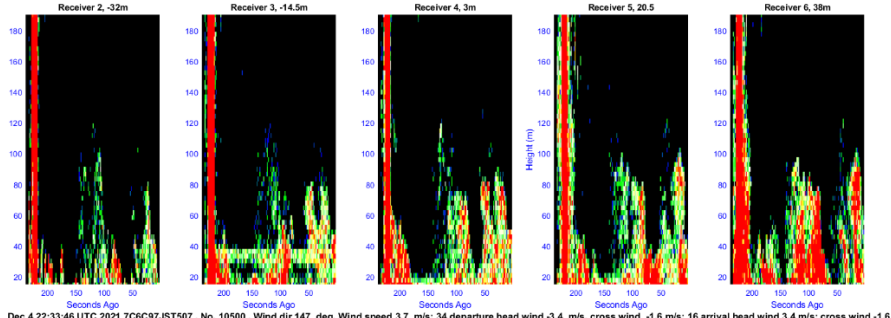


Figure 3. B738 arrival in a 1.2m/s head wind, 0.8/s right to left cross wind. Wake vortex seen in receiver 3 and has a life of around 20 seconds and stays below the arrival height of 60m. Air drawn from above the vortex is clearly evident in all receivers.



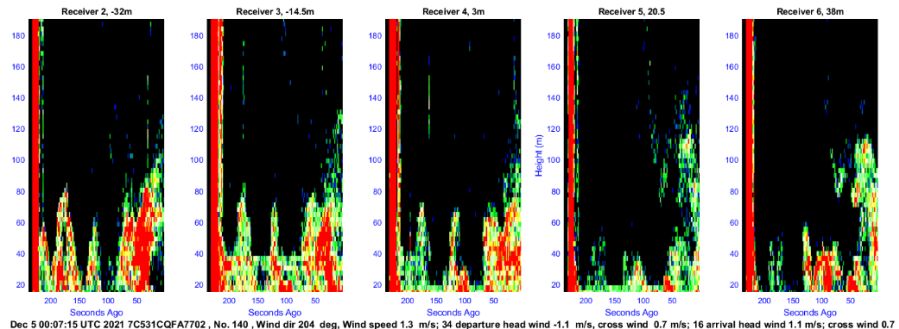
Dec 4 21:02:33 UTC 2021 76CC05IA7294 , No. 9440 , Wind dir 131 deg, Wind speed 3.0 m/s; 34 departure head wind -2.3 m/s, cross wind -2.0 m/s; 16 arrival head wind 2.3 m/s; cross wind -2.0

Figure 4. B744 arrival in a 2.3m/s head wind, 2.0/s left to right cross wind. Wake vortex seen in receiver 2 and has a life of around 80 seconds and rebounds above the arrival height of 60m. The rebound lasts around 140 seconds after the aircraft has passed overhead at a height of 60m.



Dec 4 22:33:46 UTC 2021 7C6C97JST507 , No. 10500 , Wind dir 147 deg, Wind speed 3.7 m/s; 34 departure head wind -3.4 m/s, cross wind -1.6 m/s; 16 arrival head wind 3.4 m/s; cross wind -1.6

Figure 5. A320 arrival in a 3.4m/s head wind, 1.6/s left to right cross wind. Wake vortex seen in receiver 4 and has a life of around 50 seconds and rebounds above the arrival height of 60m after 100 seconds to a height of around 90m. The rebound lasts around 190 seconds after the aircraft has passed overhead at a height of 60m.



Dec 5 00:07:15 UTC 2021 7C531CQFA702 , No. 140 , Wind dir 204 deg, Wind speed 1.3 m/s; 34 departure head wind -1.1 m/s, cross wind 0.7 m/s; 16 arrival head wind 1.1 m/s; cross wind 0.7

Figure 6. A333 arrival in a 1.1m/s head wind, 0.7/s right to left cross wind. Wake vortex seen in receiver 3 and has a life of around 30 seconds and rebounds above the arrival height of 60m after 50 seconds to a height of around 70m. The rebound lasts around 200 seconds after the aircraft has passed overhead at a height of 60m.

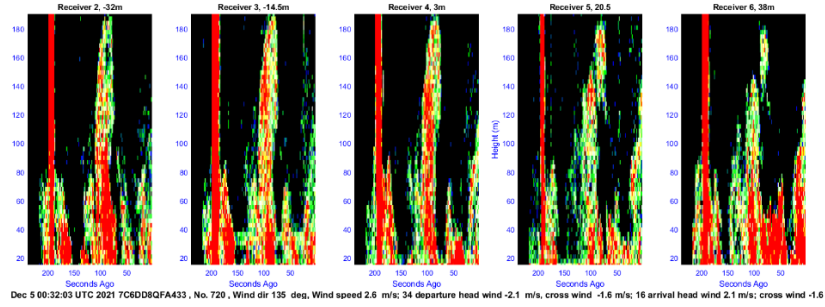


Figure 7. B738 arrival in a 2.1m/s head wind, 1.6/s left to right cross wind. Wake vortex seen in receiver 3 and has a life of around 40 seconds and rebounds above the arrival height of 60m after 100 seconds to a height of around 180m. The rebound lasts around 200 seconds after the aircraft has passed overhead at a height of 60m.

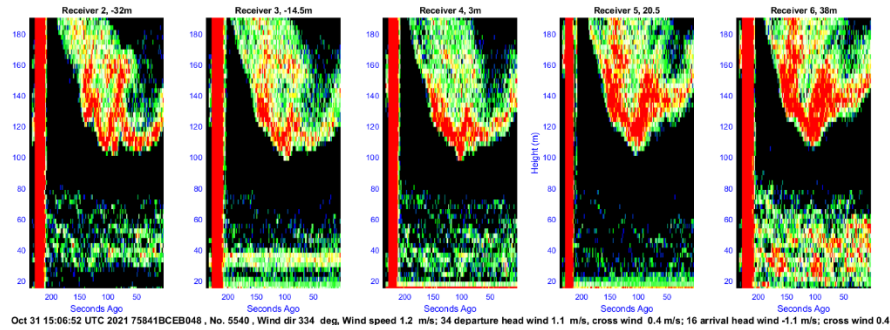


Figure 8. B333 departure in a 1.1m/s head wind, 0.4m/s left to right cross wind at a height above 190m. Wake vortex seen in all receivers and has a life of around 220 seconds and rebounds from the inversion layer at around 100m. Wake lifetime is around 220 seconds.

