



*Supplement of*

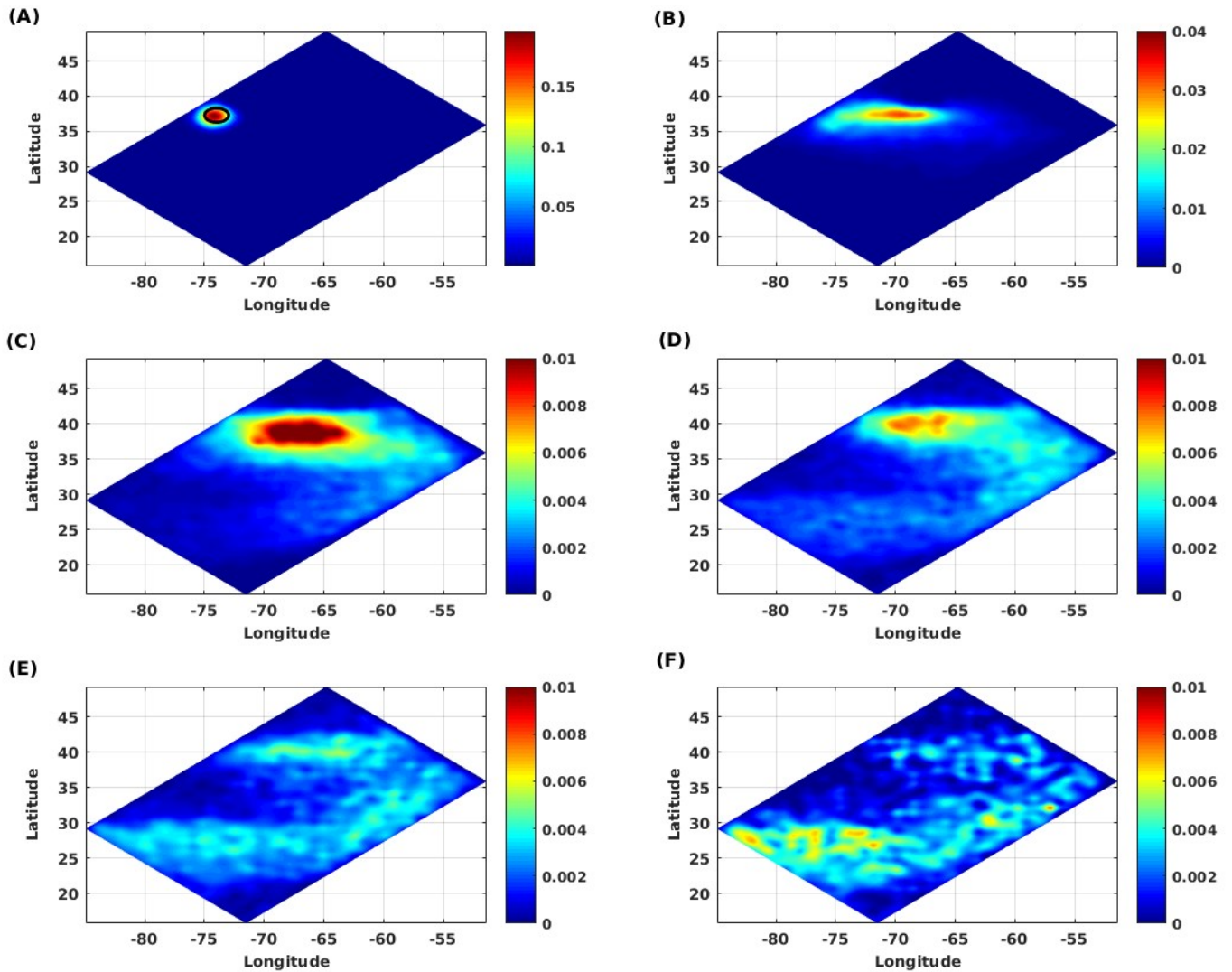
## **Sensitivity of gyre-scale marine connectivity estimates to fine-scale circulation**

**Saeed Hariri et al.**

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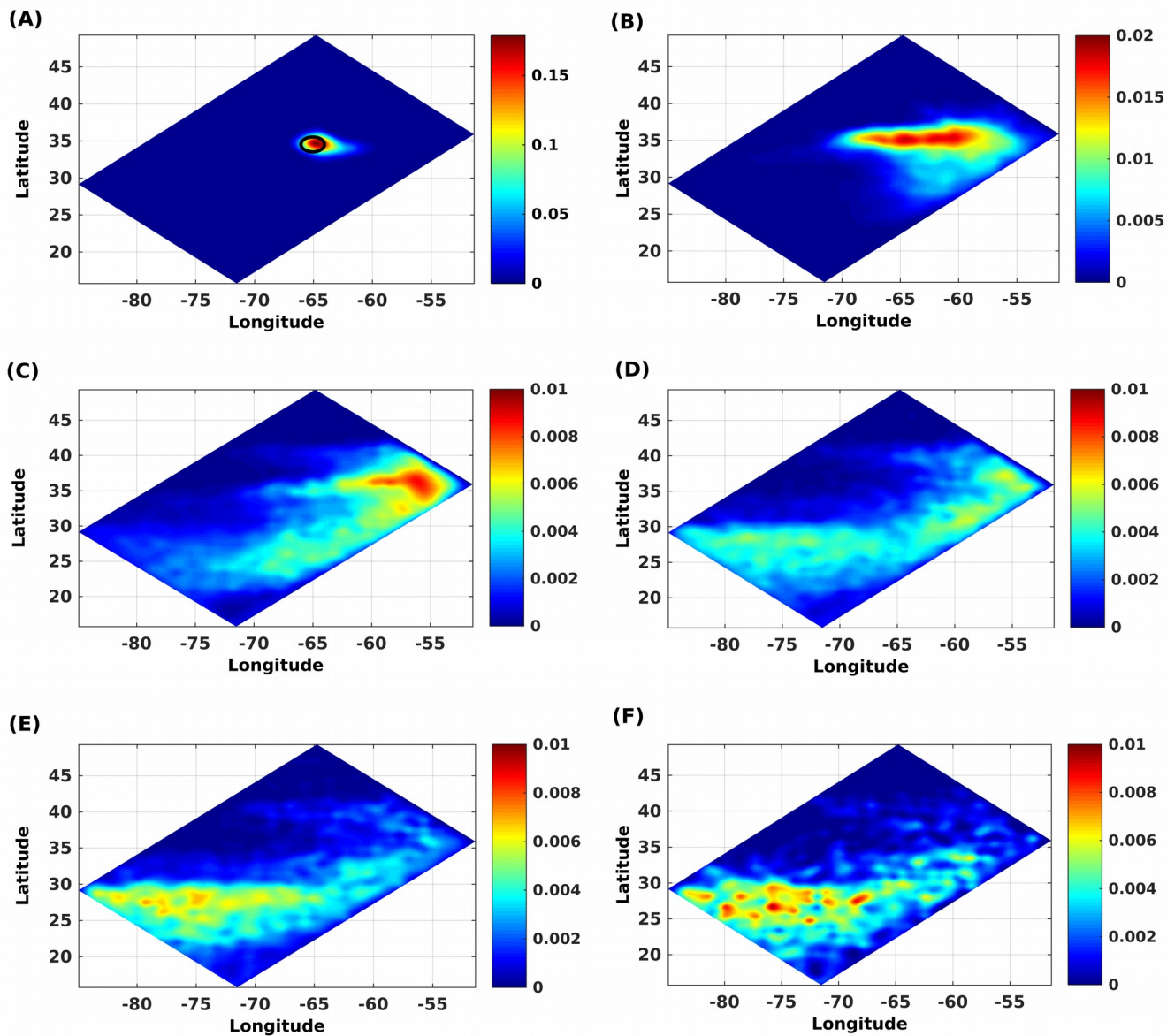
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### PDF Fields for Particles Initially Deployed from Station 2 During Different Periods



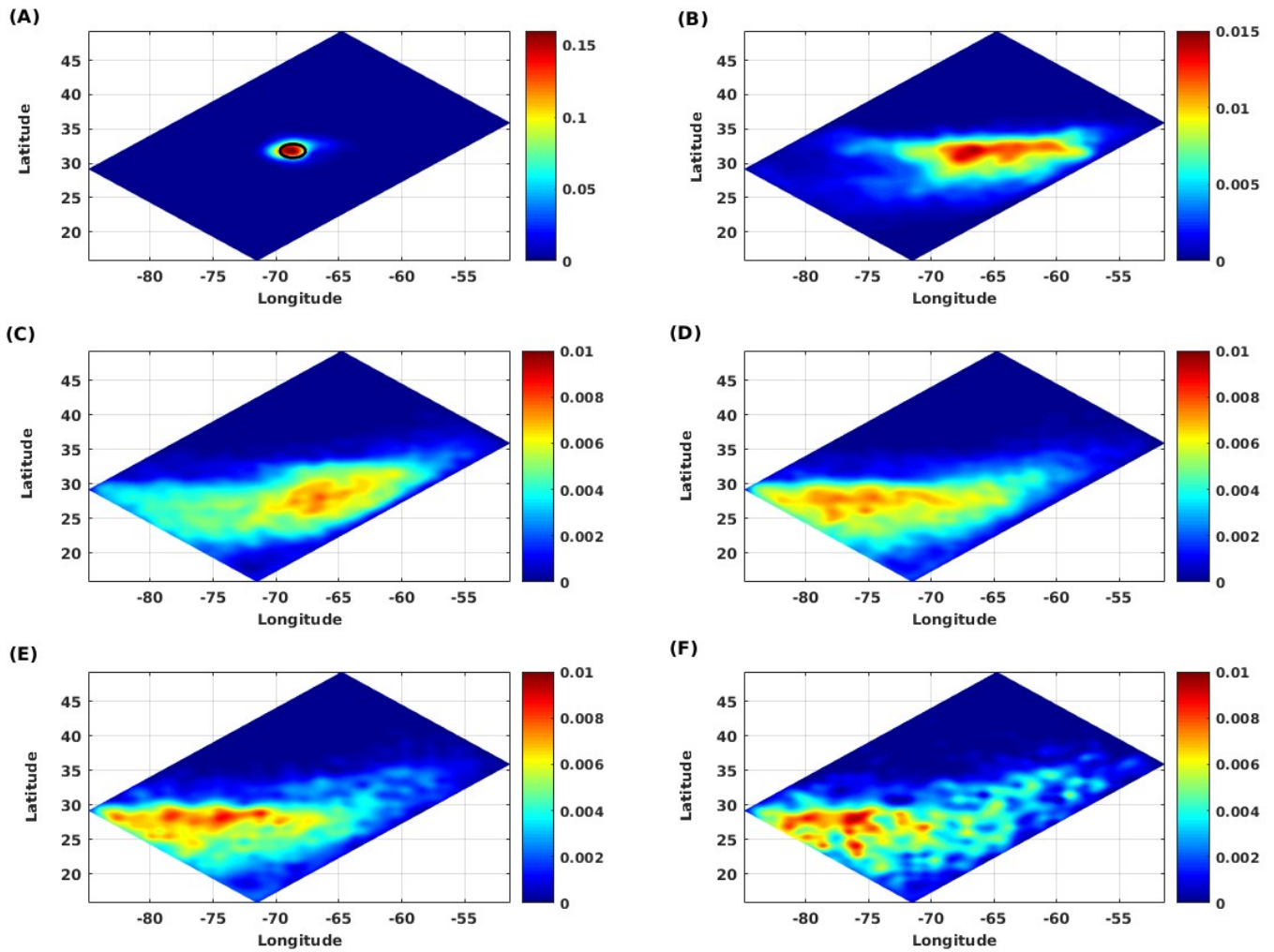
**Figure S1:** PDF fields of the position of particles (initially deployed from site 2) after increasing time intervals, in HR-3D. After 7 days (a), after 180 days (b), after 540 days (c), after 910 days (d), after 1260 days (e), and after 1440 days (f).

### PDF Fields for Particles Initially Deployed from Station 6 During Different Periods



**Figure S2:** PDF fields of the position of particles (initially deployed from site 6) after increasing time intervals, in HR-3D. After 7 days (a), after 180 days (b), after 540 days (c), after 910 days (d), after 1260 days (e), and after 1440 days (f).

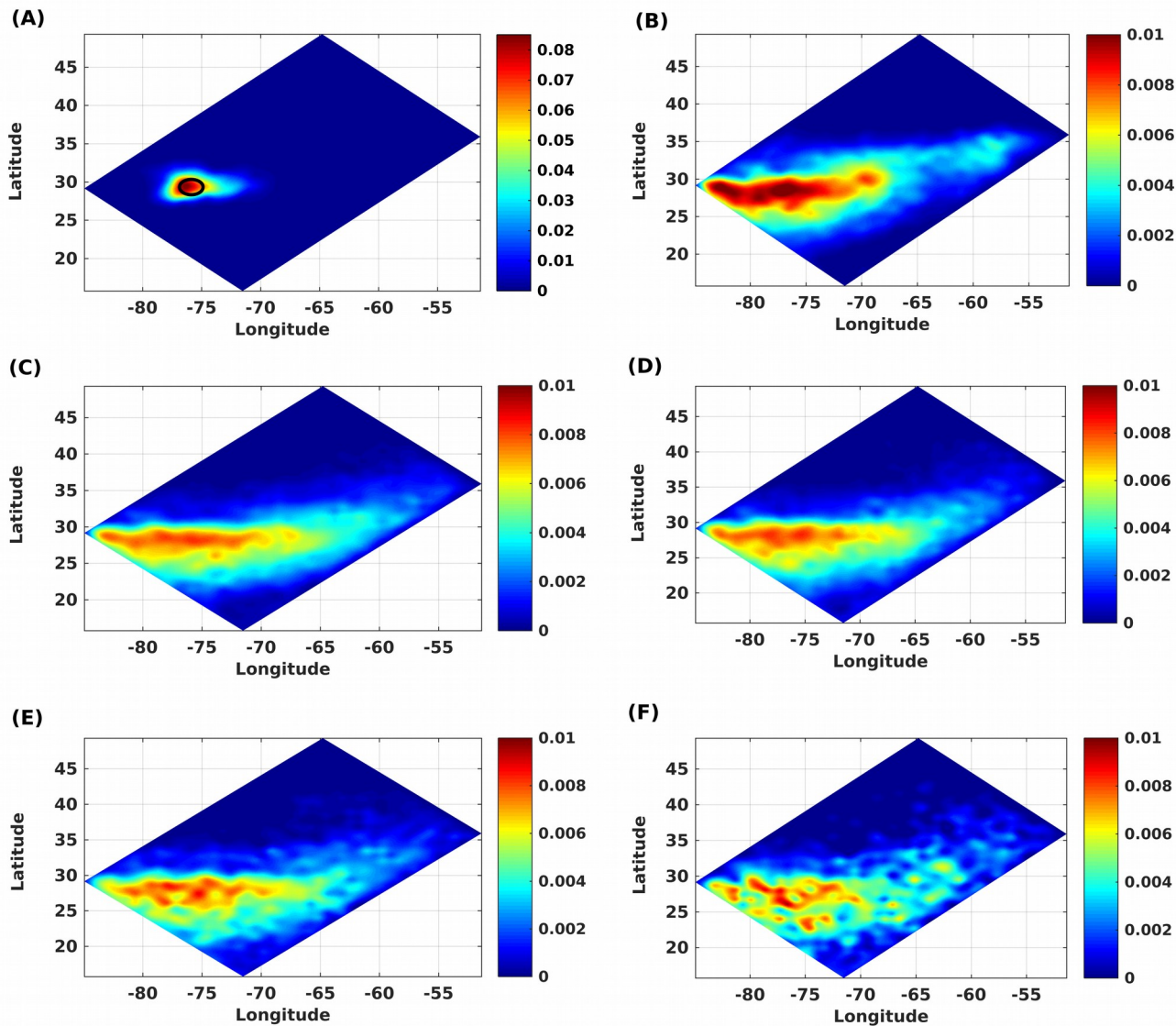
PDF Fields for Particles Initially Deployed from Station 8 During Different Periods



**Figure S3:** PDF fields of the position of particles (initially deployed from site 8) after increasing time intervals, in HR-3D. After 7 days (a), after 180 days (b), after 540 days (c), after 910 days (d), after 1260 days (e), and after 1440 days (f).

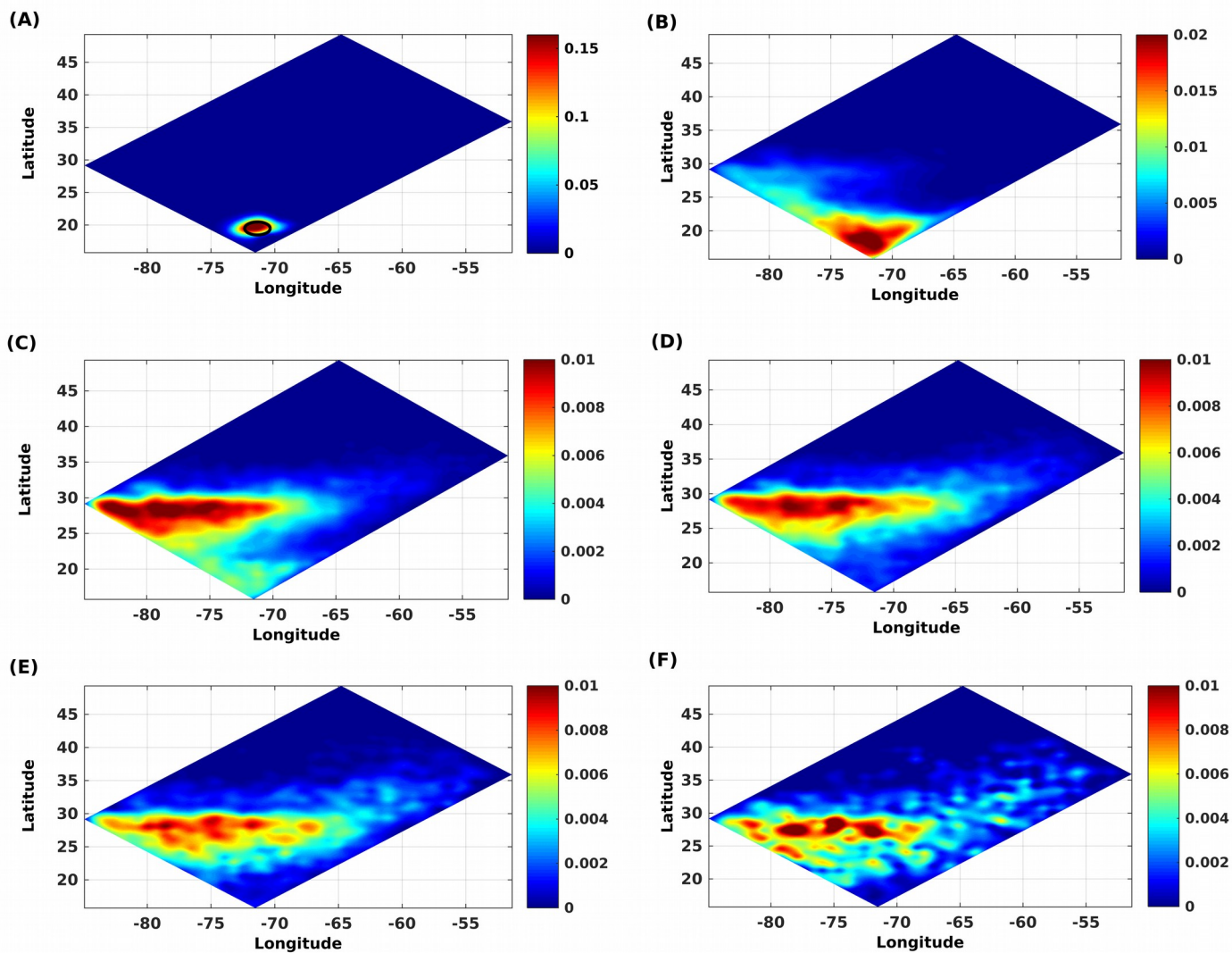


### PDF Fields for Particles Initially Deployed from Station 10 During Different Periods

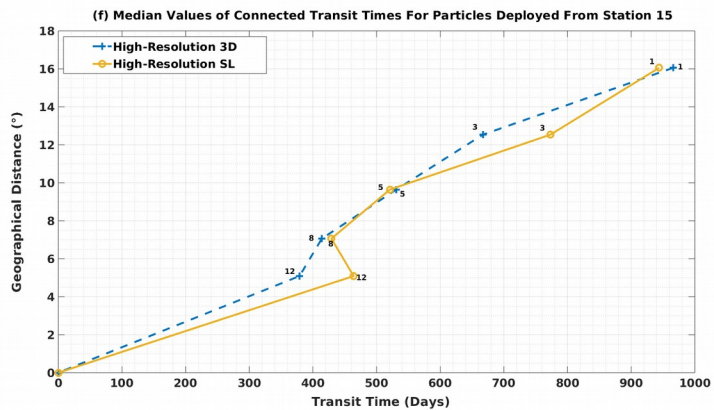
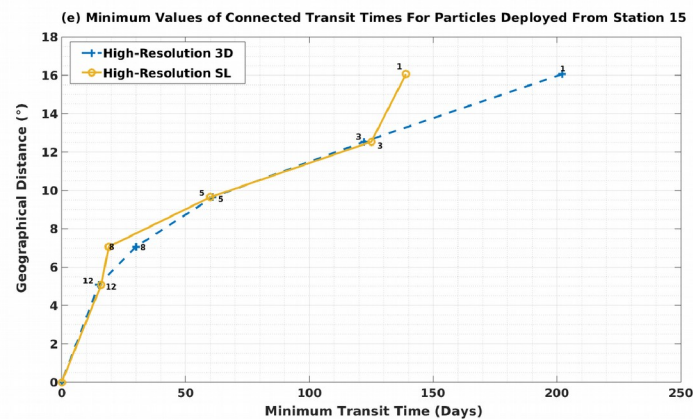
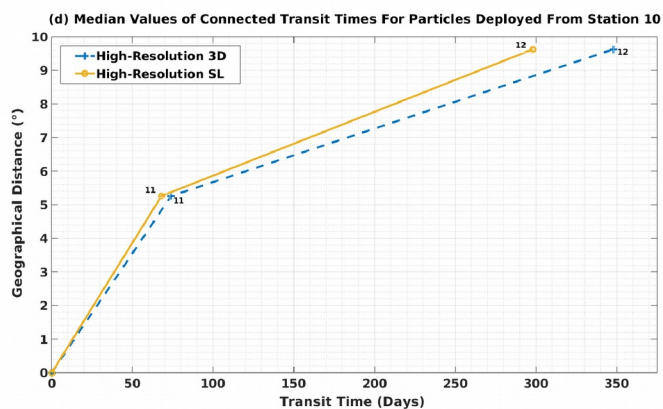
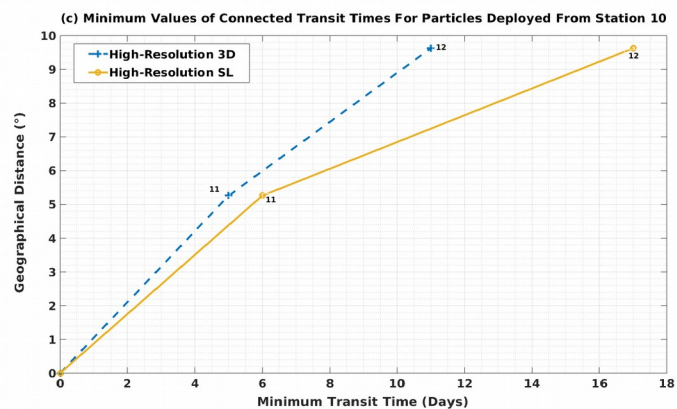
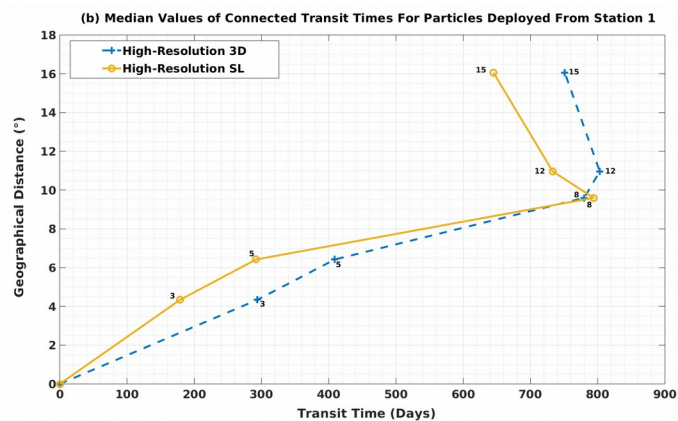
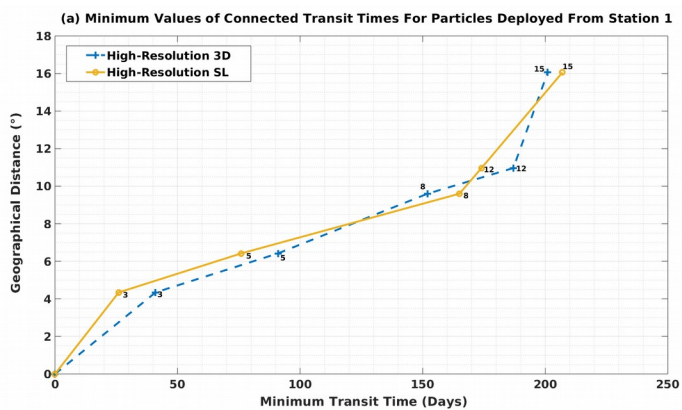


**Figure S4:** PDF fields of the position of particles (initially deployed from site 10) after increasing time intervals, in HR-3D. After 7 days (a), after 180 days (b), after 540 days (c), after 910 days (d), after 1260 days (e), and after 1440 days (f).

PDF Fields for Particles Initially Deployed from Station 16 During Different Periods

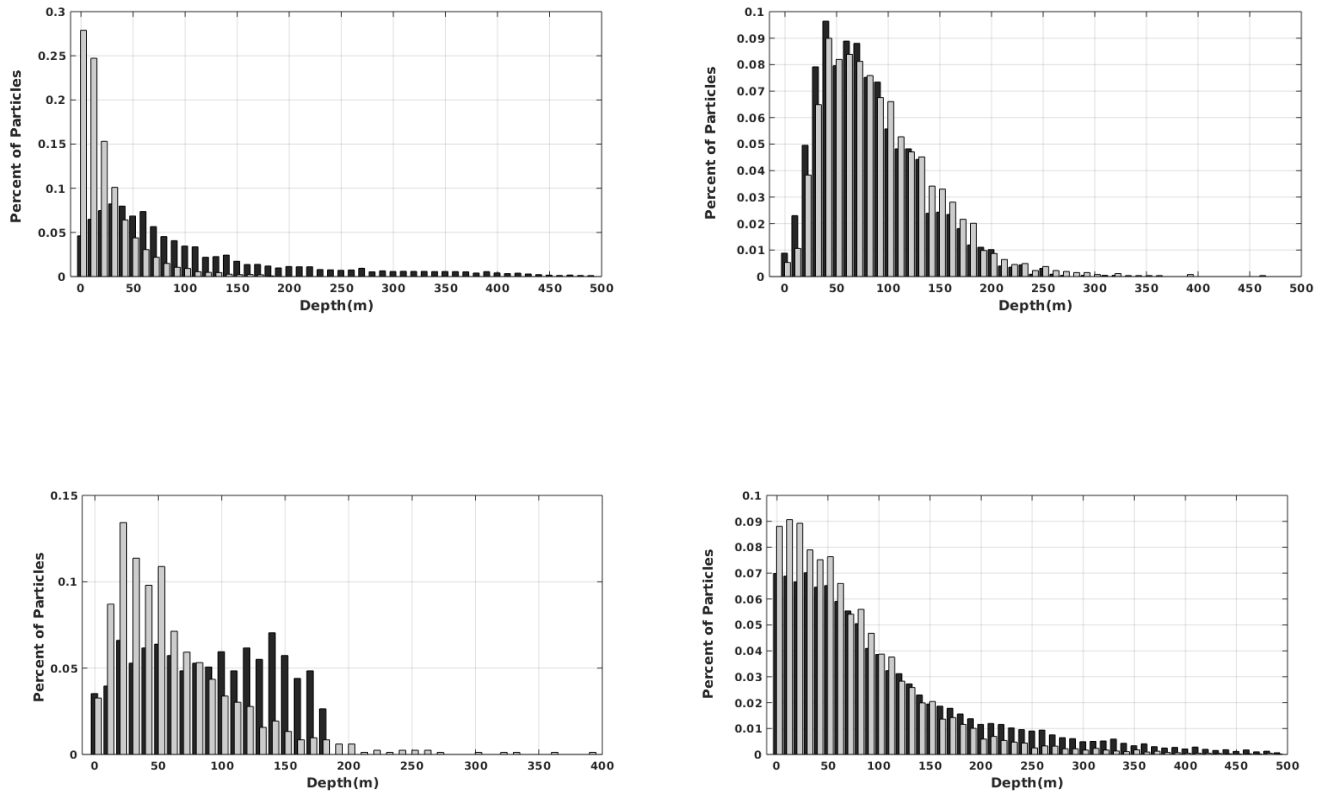


**Figure S5:** PDF fields of the position of particles (initially deployed from site 16) after increasing time intervals, in HR-3D. After 7 days (a), after 180 days (b), after 540 days (c), after 910 days (d), after 1260 days (e), and after 1440 days (f).



**Figure S6:** Comparison of HR-3D and HR-SL minimum and median transit time, (a, b) Along diagonal direction for particles deployed initially from site (station) 1. (c,d) Along front for particles

deployed initially from site (station) 10. (e,f) Along diagonal direction for particles deployed initially from site (station) 15.



**Figure S7:** PDF plots showing the arrival depth: (up:Left Panel: site 4-10, Right Panel: site 10-4; down: Left Panel: site 10-2, Right Panel: site 2-10). Colors: (3D high resolution: Black, 3D coarse resolution grid: Gray).