



Making Tracks Pacific Ocean

Ships steaming across the Pacific Ocean left this cluster of bright cloud trails lingering in the atmosphere in February 2012. The narrow clouds, known as ship tracks, form when water vapor condenses around tiny particles of pollution from ship exhaust. The crisscrossing clouds off the coast of California stretched for many hundreds of kilometers from end to end. The narrow ends of the clouds are youngest, while the broader, wavier ends are older.

Some of the pollution particles generated by ships (especially sulfates) are soluble in water and can serve as the seeds around which cloud droplets form. Clouds infused with ship exhaust have more and smaller droplets than unpolluted clouds. As a result, light hitting the ship tracks scatters in many directions, often making them appear brighter than other types of marine clouds, which are usually seeded by larger, naturally occurring particles like sea salt.