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Sommario/riassunto

Air quality is personal. Its management is highly so. Asthmatic or air-pollutant-sensitive individuals depend on accurate air quality forecasts to help manage their daily activities. However, the adverse effects of poor air quality on public health and visibility extend far beyond the daily time horizon. Pneumonic and cardiac vascular responses of individuals in all age groups can be both acute, episodic and short-term, as well as chronic, accumulative and long-term. Urban haze resulting from stagnant poor air can linger for many days. In this Special Issue, seven papers cover a wide range of air pollution forecasting technology and emission control responses. It is paramount to verify and improve air quality forecast modeling systems constantly by as many quality-assured and cross-calibrated measurements as possible. Improvements from national centers such as the U. S. National Oceanic and Atmospheric Administration's (NOAA) research arms must produce verification statistics satisfying operational center performance metrics over multiple seasons before implementation is possible. High quality, compact, and mobile monitors are a significant player in air quality and atmospheric composition continuous measurements and are poised to become even more important. Five papers in this issue provide insight on observation technological advances and data assimilation. Air quality monitoring and forecasting sciences necessarily advance in lock-step and improvements for one benefit the other.