

	“Low-cost” sensor network	Optical tent (fixed installation)	Airborne optical remote sensing	Mobile optical remote sensing
	Q-sense/AQMD	UCLA	Aerospace	FluxSense
Facility monitoring	Yes (fenceline)	Yes (entire facility)	Yes (flight data)	Yes (mobile surveys)
Community monitoring	Yes (sensors)	No	Yes (flight data)	Yes (mobile)
Technology	Low-cost sensors e.g.: PurpleAir II, S-Pod, ZooBox, Ccair	LP-DOAS	Airborne IR Imaging Spectroscopy	Fluxsense mobile lab (SOF, DOAS, FTIR – in-situ and remote sensing)
Timeframe	Flexible	~8 months development followed by 8-10 months operation	Snapshot (few times a year)	Flexible
Timescale/ resolution	Continuous (24/7)	Continuous (24/7)	Snapshot	Periodic surveys (weekly/monthly/seasonal)
Compounds	PM, VOC’s, NO, CO, CO <sub>2</sub> , VOC’s	BTEX, HCHO, SO <sub>2</sub> , O <sub>3</sub>	Several VOC’s, toxics, ammonia, methane	Concentration mapping of BTEX, VOC’s Emissions of VOC’s, HCHO, NO <sub>2</sub> , SO <sub>2</sub> , NH <sub>3</sub> , CH <sub>4</sub>
Notes	Q-sense cloud-based platform for data display, analytics, and sensor calibration. Opportunities to <ul style="list-style-type: none"> <li>Collaborate with local community groups;</li> <li>Coordinate with ARB’s traditional sampling</li> </ul>	Need approval and collaboration from refinery	Can use historical data for flights over the LA Basin during the past 8 years to identify persistent “hot-spots”	<ul style="list-style-type: none"> <li>Detailed community surveys and concentration mapping.</li> <li>Can survey of all the refineries</li> </ul>