Using $^{87}$Sr/$^{86}$Sr ratios of carbonate minerals to quantify dust fluxes from desert playas to the urban Wasatch Front, Utah, USA

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WHY DO WE STUDY DUST?
- Utah dust storms bring harmful metals and toxins into the air we breathe
- How much of that dust comes from the Great Salt Lake lakebed?

WHERE DO WE SAMPLE DUST?

HOW DO WE ESTIMATE THE PERCENT OF DUST FROM THE GSL LAKEBED?

DO WIND DIRECTIONS HELP DETERMINE DUST SOURCES?
- HYSPLIT backwards trajectory model by NOAA
- Feb 18, 2018 dust event
- Primarily south-southwestern winds
- GSL dust has a greater influence on the northern Wasatch Front

WHAT IS THE BIG TAKEAWAY?
- The Great Salt Lake contributes up to 50% of the dust deposited along the Wasatch Front!
- Because of southwestern winds, the Great Salt Lake dust primarily affects the northern Wasatch Front
- Going forward, we are looking at seasonal changes in dust deposition

HOW DO WE SAMPLE DUST?
- Snow dust collection
- Urban dust deposition collector