Flight cruise: Indianapolis

Water vapor isotope vertical profile measurement was conducted nearby Indianapolis, IN, US (40.4135N, -86.9473E) in 4, 6, 7, 17, 18 March 2016.

1. **Time stamps**
   Elapsed time in UTC seconds.

2. **Data format**
   Data files are csv formatted.

3. **Time zone convention**
   Time is reported in UTC.

4. **Missing data**
   Missing data is replaced with -99999.

5. **Variable definitions**

Column	Description	Unit	Equipment	Height (m)	Additional description
Column 1	Time	UTC	Garmin GPS/INS	–	UTC
Column 2	Latitude	degrees	Garmin GPS/INS	–	–
Column 3	Longitude	degrees	Garmin GPS/INS	–	–
Column 4	Altitude	m/s	Best Air Turbulence (BAT) Probe	–	m
Column 5	Wind Speed	degrees	BAT probe	–	–
Column 6	Wind Direction	m/s	BAT probe	–	–
Column 7	Vertical Wind	m/s	BAT probe	–	–

Column 8	Static Pressure	mbar	BAT probe	–	–
Column 9	Ambient Pressure	Torr	Picarro G2301-m	–	–
Column 10	Ambient Temperature	K	Fast Ultra-sensitive Thermocouple (FUST) probe	–	–
Column 11	Ambient Temperature	K	microbead thermistor	–	* It is suggested that the microbead temperature be used.
Column 12	Potential Temperature	K	microbead thermistor	–	–
Column 13	Irradiance	W/m2	LI-COR LI-200R pyranometer	–	–
Column 14	Airspeed	m/s	BAT probe	–	–
Column 15	Groundspeed	m/s	BAT probe	–	–
Column 16	Heading	deg	BAT probe	–	–
Column 17	Carbon dioxide mole fraction	ppmv	Picarro G2301-m	–	–

Column 18	Methane mole fraction	ppmv	Picarro G2301-m	–	–
Column 19	Water vapor mole fraction	%	Picarro G2301-m	–	–
Column 20	Ozone mole fraction	ppbv	2B Technologies Model 202 ozone monitor	–	–
Column 21	Water vapor mole fraction	ppmv	Los Gatos Research (LGR) Triple Water Vapor Isotope Analyzer (TWVIA) (Model: 911-0034)	–	–
Column 22	δD	‰	LGR TWVIA	–	–
Column 23	δ18O	‰	LGR TWVIA	–	–
Column 24	Deuterium excess (d-excess)	‰	LGR TWVIA	–	–
Column 25	Smoothed (20-second rolling average) δD	‰	LGR TWVIA	–	–
Column 26	Smoothed (20-second rolling average) δ18O	‰	LGR TWVIA	–	–
Column 27	Smoothed (20-second rolling average) d-excess	‰	LGR TWVIA	–	–

Column 28	Total error in δD	‰	LGR TWVIA	–	–
Column 29	Instrument precision error in δD	‰	LGR TWVIA	–	–
Column 30	Calibration error in δD	‰	LGR TWVIA	–	–
Column 31	Total error in δ18O	‰	LGR TWVIA	–	–
Column 32	Instrument precision error in δ18O	‰	LGR TWVIA	–	–
Column 33	Calibration error in δ18O	‰	LGR TWVIA	–	–
Column 34	Total error in d-excess	‰	LGR TWVIA	–	–
Column 35	Instrument precision error in d-excess	‰	LGR TWVIA	–	–
Column 36	Calibration error in d-excess	‰	LGR TWVIA		

6. Reference papers

7. Site contact

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