Table S1. Concentrations (C_{air}) for MOUDI stages 1–5. Concentrations (in ng m^{-3}) are spike and blank corrected. Confidence limits (95%) are shown in parentheses for rotated samples. R = rotated; NR = non-rotated; DL = detection limit; ND = not determined; LJ = Ljubljana (24 and 72 h samples), MA = Martinska (24 h).

MOUDI stage:			1		2		3		4		5	
cutpoint dia. (µm):			10		5.6		3.2		1.8		1.0	
no.	site	el.	conc.	(±%)	conc.	(±%)	conc.	(±%)	conc.	(±%)	conc.	(±%)
1(R)	LJ24	As	< DL		< DL		< DL		< DL		0.054	(0.8)
1(R)	LJ24	Cu	< DL		0.023	(3.1)	0.207	(1.5)	0.583	(1.5)	1.55	(1.9)
1(R)	LJ24	Fe	< DL		0.668	(3.4)	8.65	(1.5)	15.0	(1.2)	35.8	(0.9)
1(R)	LJ24	Mn	< DL		< DL		0.216	(1.3)	0.350	(1.0)	0.900	(0.8)
1(R)	LJ24	Ni	< DL		< DL		< DL		< DL		0.290	(4.0)
1(R)	LJ24	Pb	< DL		< DL		0.018	(1.5)	0.054	(1.2)	0.704	(0.8)
1(R)	LJ24	Sb	< DL		< DL		< DL		0.028	(1.4)	0.193	(1.1)
1(R)	LJ24	V	< DL		< DL		0.016	(1.4)	0.029	(1.1)	0.070	(1.0)
1(R)	LJ24	Zn	< DL		< DL		0.386	(1.4)	1.10	(1.2)	6.45	(0.7)
2(R)	LJ72	As	< DL		< DL		< DL		< DL		< DL	
2(R)	LJ72	Cu	< DL		0.047	(1.6)	0.471	(1.2)	0.686	(1.0)	0.899	(0.9)
2(R)	LJ72	Fe	< DL		4.35	(1.5)	21.1	(1.1)	32.9	(1.2)	42.0	(1.2)
2(R)	LJ72	Mn	< DL		0.115	(1.7)	0.472	(1.3)	0.614	(1.2)	0.921	(1.2)
2(R)	LJ72	Ni	< DL		0.310	(2.2)	0.704	(1.7)	0.634	(2.2)	0.599	(3.1)
2(R)	LJ72	Pb	< DL		0.004	(2.1)	0.032	(2.0)	0.057	(1.9)	0.233	(1.1)
2(R)	LJ72	Sb	< DL		< DL	(3.1)	0.054	(2.0)	0.094	(1.7)	0.153	(1.3)
2(R)	LJ72	V	< DL		0.007	(1.7)	0.027	(1.2)	0.034	(1.2)	0.045	(1.2)
2(R)	LJ72	Zn	< DL		< DL	(2.1)	1.10	(1.5)	1.64	(1.2)	4.54	(0.7)
3(NR)	MA24	As	ND		ND		< DL		< DL		0.027	
3(NR)	MA24	Cu	ND		ND		0.036		< DL		0.169	
3(NR)	MA24	Fe	ND		ND		5.97		14.0		33.2	
3(NR)	MA24	Mn	ND		ND		0.178		0.363		0.794	
3(NR)	MA24	Ni	ND		ND		< DL		< DL		0.116	
3(NR)	MA24	Pb	ND		ND		0.013		0.030		0.260	
3(NR)	MA24	Sb	ND		ND		< DL		< DL		0.027	
3(NR)	MA24	V	ND		ND		0.028		0.062		0.257	
3(NR)	MA24	Zn	ND		ND		< DL		0.175		1.02	

Table S2. Concentrations (C_{air}) for MOUDI stages 6–10. Concentrations (in ng m^{-3}) are spike and blank corrected. Confidence limits (95%) are shown in parentheses for rotated samples. R = rotated; NR = non-rotated; DL = detection limit; ND = not determined; LJ = Ljubljana (24 and 72 h samples), MA = Martinska (24 h).

MOUDI stage:			6		7		8		9		10	
cutpoint dia. (µm):			0.56		0.32		0.18		0.10		0.056	
no.	site	el.	conc.	(±%)	conc.	(±%)	conc.	(±%)	conc.	(±%)	conc.	(±%)
1(R)	LJ24	As	0.135	(0.7)	0.255	(0.3)	0.153	(0.3)	0.089	(0.4)	0.026	(0.4)
1(R)	LJ24	Cu	1.13	(1.2)	1.18	(0.5)	1.31	(0.6)	1.4	(0.6)	0.281	(0.9)
1(R)	LJ24	Fe	23.8	(1.2)	9.48	(0.6)	4.82	(0.8)	2.7	(0.8)	0.437	(1.1)
1(R)	LJ24	Mn	0.925	(1.0)	0.721	(0.5)	0.384	(0.6)	0.148	(0.7)	0.022	(0.8)
1(R)	LJ24	Ni	< DL		0.154	(0.6)	0.122	(0.7)	< DL		< DL	
1(R)	LJ24	Pb	1.62	(0.9)	3.14	(0.6)	2.53	(0.6)	1.04	(0.6)	0.137	(0.6)
1(R)	LJ24	Sb	0.378	(1.0)	0.793	(0.5)	0.552	(0.6)	0.216	(0.6)	0.027	(0.6)
1(R)	LJ24	V	0.099	(1.1)	0.232	(0.5)	0.129	(0.6)	0.02	(0.8)	< DL	
1(R)	LJ24	Zn	5.61	(0.8)	8.63	(0.4)	12.8	(0.5)	7.67	(0.6)	0.950	(0.6)
2(R)	LJ72	As	< DL		0.052	(0.4)	0.055	(0.4)	0.033	(0.4)	< DL	
2(R)	LJ72	Cu	0.438	(1.1)	0.611	(0.6)	0.556	(0.6)	0.310	(0.7)	0.079	(1.1)
2(R)	LJ72	Fe	13.2	(1.5)	8.70	(0.8)	5.72	(0.8)	2.28	(1.0)	0.844	(2.1)
2(R)	LJ72	Mn	0.587	(1.3)	0.635	(0.6)	0.402	(0.6)	0.194	(0.9)	0.058	(1.8)
2(R)	LJ72	Ni	0.290	(3.0)	0.278	(1.1)	0.237	(0.8)	0.126	(2.2)	< DL	
2(R)	LJ72	Pb	0.539	(1.1)	1.28	(0.7)	1.23	(0.7)	0.554	(0.6)	0.113	(0.8)
2(R)	LJ72	Sb	0.100	(1.4)	0.237	(0.6)	0.228	(0.6)	0.105	(0.6)	0.024	(0.7)
2(R)	LJ72	V	0.039	(1.3)	0.246	(0.6)	0.303	(0.6)	0.053	(0.6)	0.005	(1.3)
2(R)	LJ72	Zn	2.96	(1.0)	5.56	(0.5)	7.41	(0.5)	3.13	(0.5)	0.464	(0.6)
3(NR)	MA24	As	0.049		< DL		0.039		0.022		< DL	
3(NR)	MA24	Cu	0.160		0.069		0.075		0.036		0.015	
3(NR)	MA24	Fe	13.0		3.19		1.16		1.10		< DL	
3(NR)	MA24	Mn	0.424		0.116		0.053		0.031		< DL	
3(NR)	MA24	Ni	0.122		0.169		0.577		< DL		< DL	
3(NR)	MA24	Pb	0.571		0.272		0.363		0.131		0.057	
3(NR)	MA24	Sb	0.063		0.039		0.051		< DL		< DL	
3(NR)	MA24	V	0.413		0.557		1.92		0.212		0.030	
3(NR)	MA24	Zn	1.34		0.690		0.634		0.379		0.247	
4(R)	MA24	As	< DL		0.059	(1.4)	0.066	(0.6)	0.027	(0.4)	ND	
4(R)	MA24	Cu	0.359	(2.0)	1.02	(0.9)	0.599	(0.9)	0.124	(0.9)	ND	
4(R)	MA24	Fe	15.1	(2.1)	7.66	(1.2)	2.44	(1.2)	< DL		ND	
4(R)	MA24	Mn	0.603	(1.9)	0.526	(1.0)	0.178	(1.1)	0.033	(1.1)	ND	
4(R)	MA24	Ni	0.135	(2.8)	0.332	(1.1)	0.597	(0.8)	0.139	(0.8)	ND	
4(R)	MA24	Pb	0.395	(1.8)	1.15	(0.8)	0.945	(0.8)	0.281	(0.8)	ND	
4(R)	MA24	Sb	0.052	(2.0)	0.244	(0.9)	0.214	(0.9)	0.063	(0.9)	ND	
4(R)	MA24	V	0.138	(1.8)	0.660	(0.8)	1.36	(0.8)	0.319	(0.7)	ND	
4(R)	MA24	Zn	3.03	(1.8)	4.84	(0.8)	3.20	(0.8)	1.31	(0.8)	ND	

Supporting Information – Figures

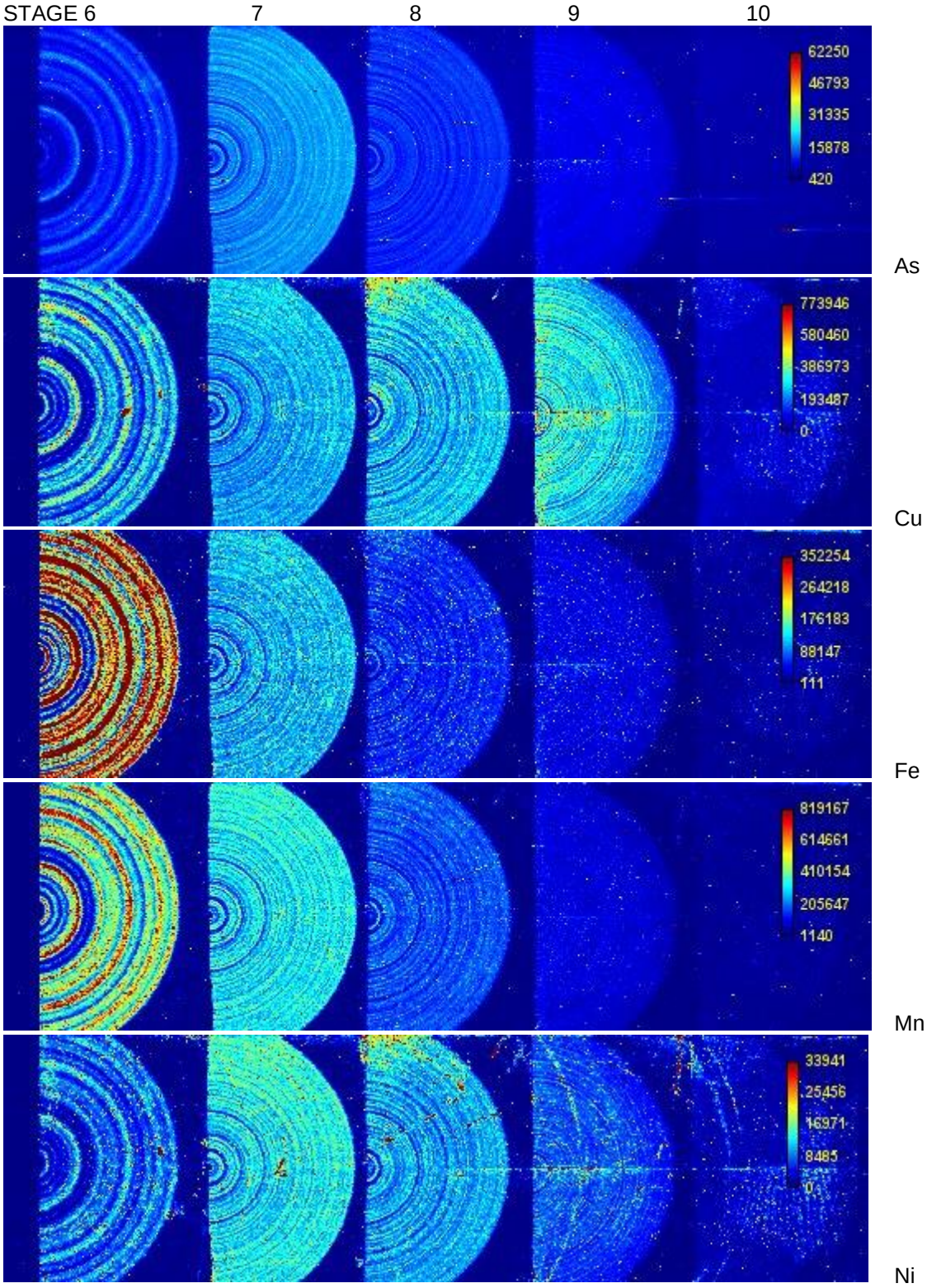


Figure S1. Pseudocolored elemental maps of particles collected in sample 1 (Ljubljana) with rotation. MOUDI stages 6–10 are shown.

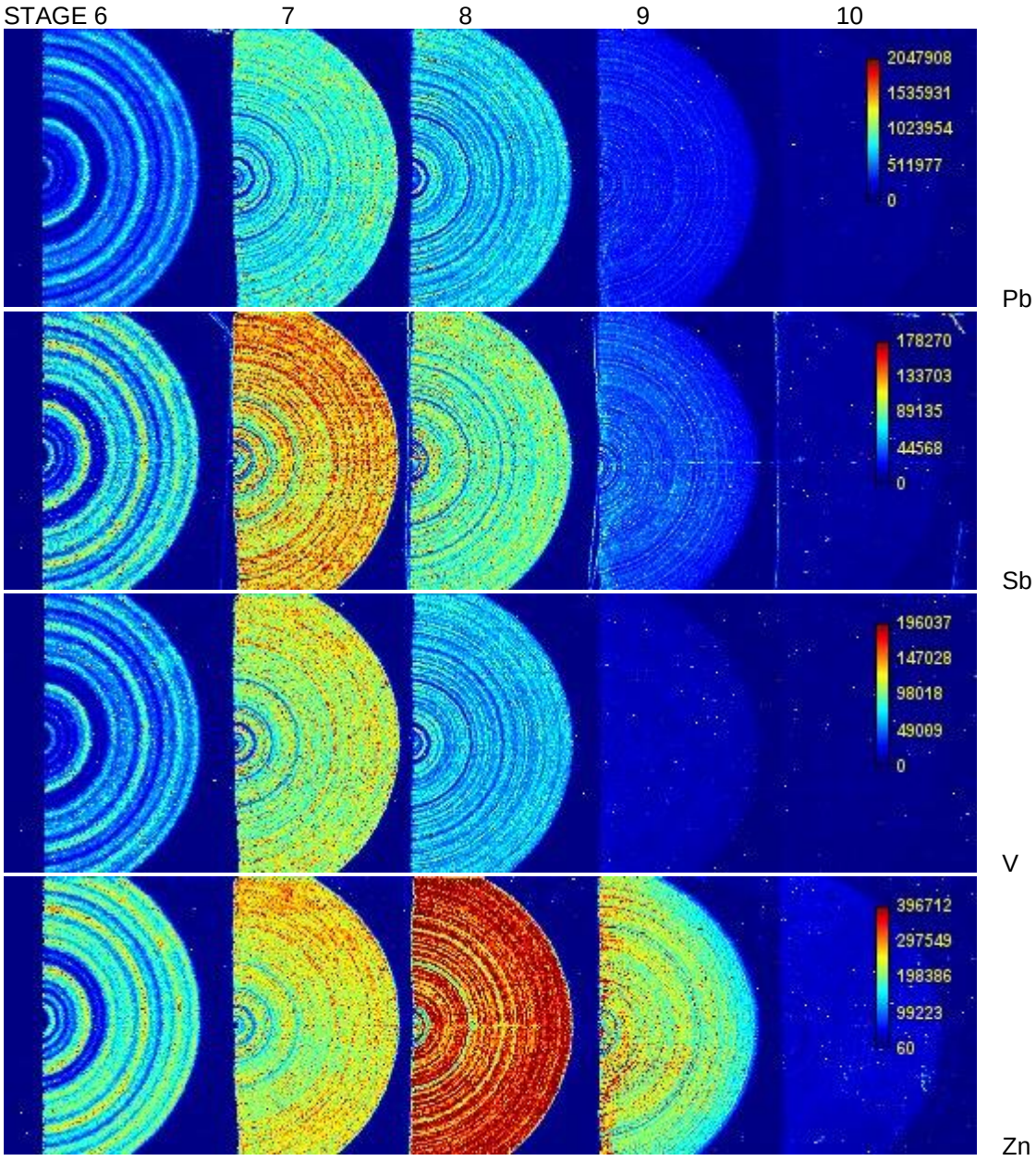
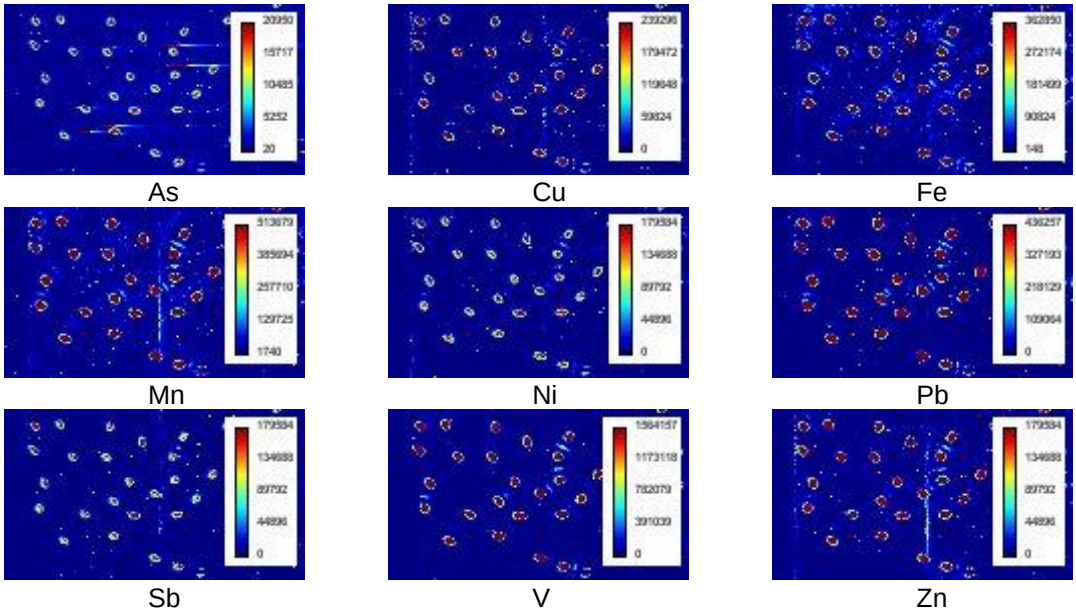


Figure S1 (cont.)

(A) Stage 6



(B) Stage 9

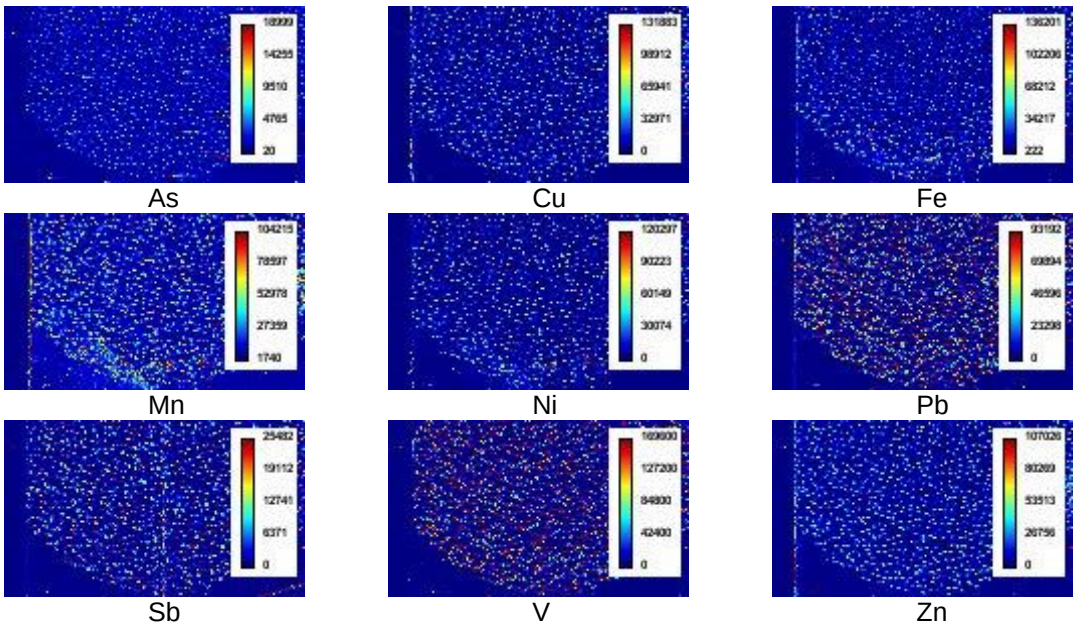


Figure S2. Pseudocolored elemental maps of particles collected in sample 2 (Martinska) without rotation: **(A)** MOUDI stage 6 (80 nozzles) and **(B)** MOUDI stage 9 (2000 nozzles).

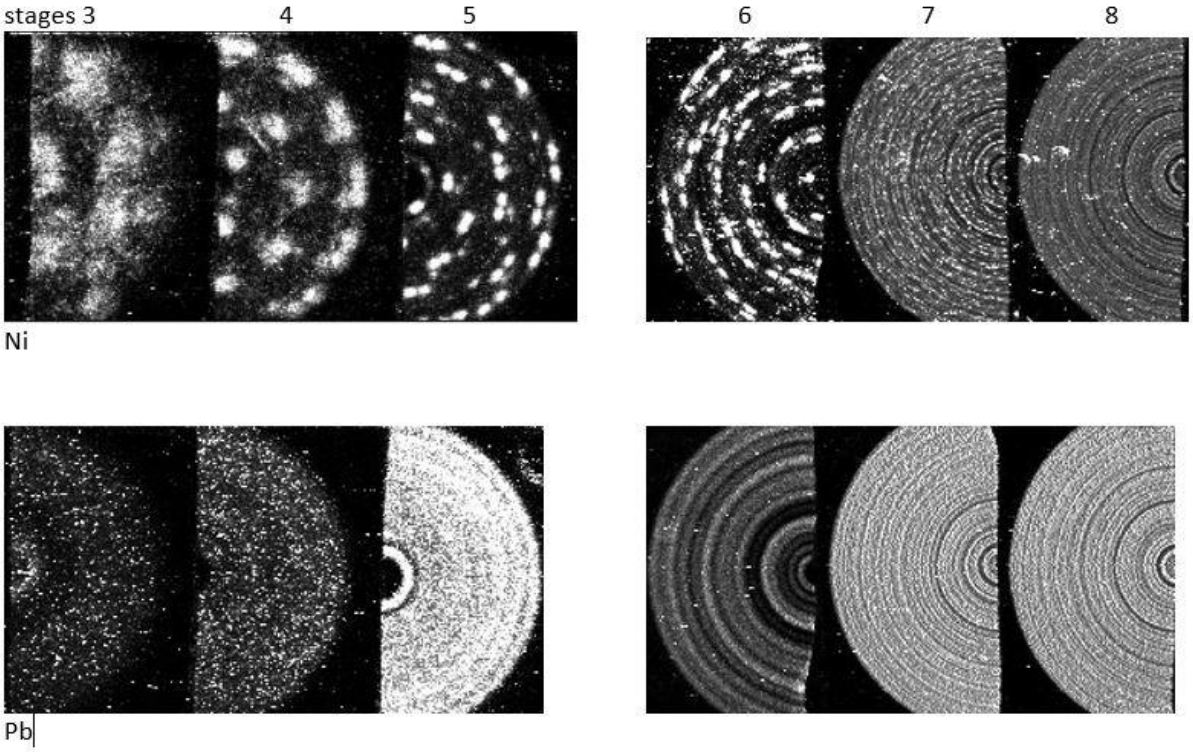


Figure S3. Elemental image maps of nickel (top) and lead (bottom) in stages 3–8 of a 72 h sample collected in Ljubljana with rotation. Note the less uniform deposition of nickel compared to lead particularly in stages 3 through 6. (Spikes were not removed.)

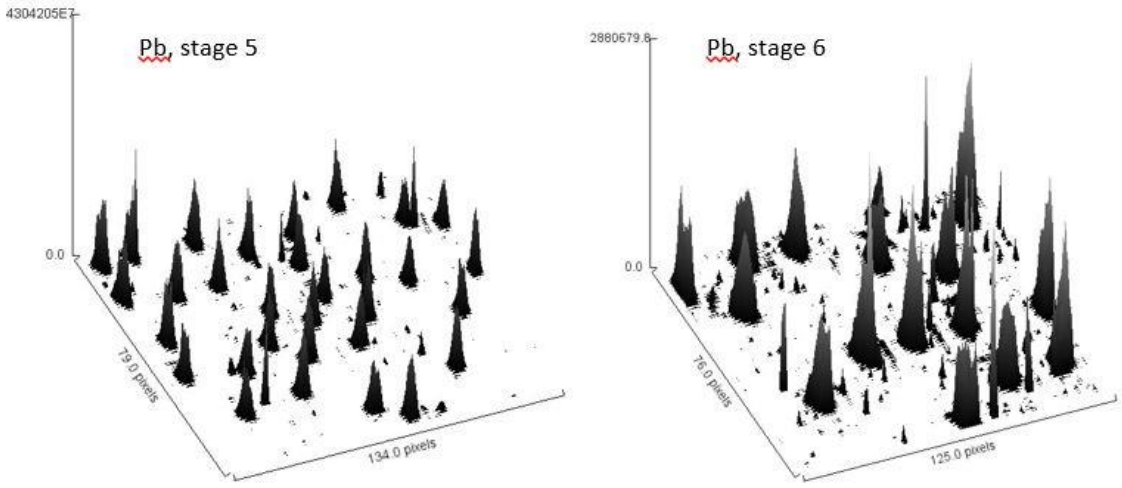


Figure S4. 3-D elemental image maps of Pb (sample 2, stages 5 and 6, no rotation). Pb is observed in-between impaction spots, evidence of particle bounce. The y-axis is in brightness values.

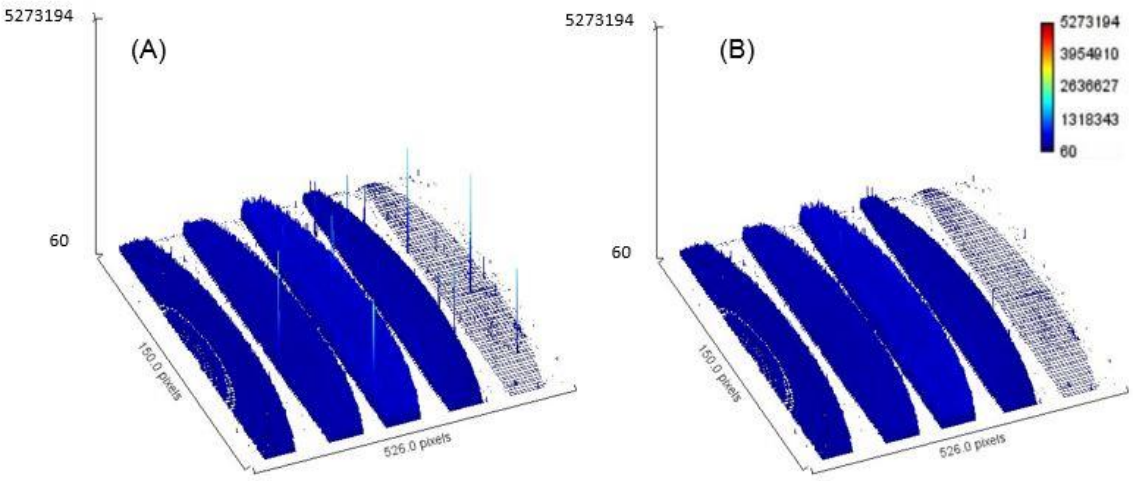


Figure S5. A 3-D elemental map of zinc (stages 6–10, sample 1) before (A) and after (B) spike removal. The *y*-axis is in brightness values.