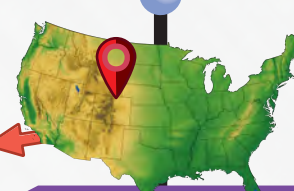



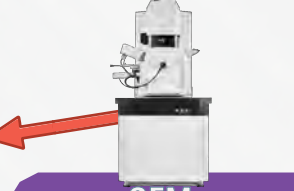
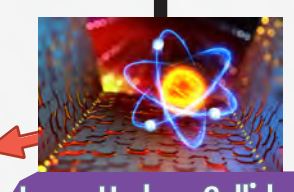
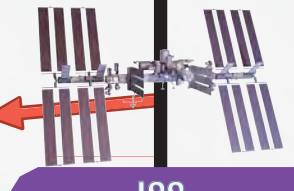


PRESSURE CONVERSION



Kaufman & ROBINSON
The Ion Beam Authority®

	TORR	mTORR	PSI	mBAR	PASCAL	
Rough Vacuum	760.0	7.60E+05	14.70	1.01E+03	1.01E+05	 Fort Collins, CO
	630.0	6.30E+05	12.18	839.9	8.40E+04	
	400.0	4.00E+05	7.735	533.3	5.33E+04	
	250.0	2.50E+05	4.834	333.3	3.33E+04	
	100.0	1.00E+05	1.934	133.3	1.33E+04	
	50.00	5.00E+04	0.967	66.66	6.67E+03	
	10.00	1.00E+04	0.193	13.33	1.33E+03	
Medium Vacuum	1.000	1.00E+03	0.019	1.333	133.3	 Aircraft
	0.500	500.0	9.67E-03	0.667	66.66	
	0.250	250.0	4.83E-03	0.333	33.33	
	0.100	100.0	1.93E-03	0.133	13.33	
	0.075	75.00	1.45E-03	0.100	10.00	
	0.050	50.00	9.67E-04	0.067	6.666	
	0.020	20.00	3.87E-04	0.027	2.666	
	0.010	10.00	1.93E-04	0.013	1.333	
	5.00E-03	5.000	9.67E-05	6.67E-03	0.667	
	1.00E-03	1.000	1.93E-05	1.33E-03	0.133	
High Vacuum	5.00E-04	0.500	9.67E-06	6.67E-04	0.067	 Mars
	4.00E-04	0.400	7.73E-06	5.33E-04	0.053	
	3.00E-04	0.300	5.80E-06	4.00E-04	0.040	
	2.00E-04	0.200	3.87E-06	2.67E-04	0.027	
	1.00E-04	0.100	1.93E-06	1.33E-04	0.013	
	5.00E-05	0.050	9.67E-07	6.67E-05	6.67E-03	
	1.00E-05	0.010	1.93E-07	1.33E-05	1.33E-03	
	5.00E-06	5.00E-03	9.67E-08	6.67E-06	6.67E-04	
	1.00E-06	1.00E-03	1.93E-08	1.33E-06	1.33E-04	
	5.00E-07	5.00E-04	9.67E-09	6.67E-07	6.67E-05	
Ultra-High Vacuum	1.00E-07	1.00E-04	1.93E-09	1.33E-07	1.33E-05	 Magnetron
	5.00E-08	5.00E-05	9.67E-10	6.67E-08	6.67E-06	
	1.00E-08	1.00E-05	1.93E-10	1.33E-08	1.33E-06	
	5.00E-09	5.00E-06	9.67E-11	6.67E-09	6.67E-07	
	1.00E-09	1.00E-06	1.93E-11	1.33E-09	1.33E-07	
Extreme-High Vacuum	1.00E-10	1.00E-07	1.93E-12	1.33E-10	1.33E-08	 SEM
	1.00E-11	1.00E-08	1.93E-13	1.33E-11	1.33E-09	
	1.00E-12	1.00E-09	1.93E-14	1.33E-12	1.33E-10	
	1.00E-13	1.00E-10	1.93E-15	1.33E-13	1.33E-11	
	1.00E-14	1.00E-11	1.93E-16	1.33E-14	1.33E-12	 Large Hadron Collider
	1.00E-15	1.00E-12	1.93E-17	1.33E-15	1.33E-13	
						 ISS



**Kaufman
& ROBINSON**
The Ion Beam Authority®

TORR	mTORR	PSI	mBAR	PASCAL
10.00	1.00E+04	0.193	13.33	1.33E+03
5.000	5.00E+03	0.097	6.666	666.6
2.000	2.00E+03	0.039	2.666	266.6
1.000	1.00E+03	0.019	1.333	133.3
0.100	100.0	1.93E-03	0.133	13.33
0.010	10.00	1.93E-04	0.013	1.333
8.00E-03	8.000	1.55E-04	0.011	1.067
6.00E-03	6.000	1.16E-04	8.00E-03	0.800
5.00E-03	5.000	9.67E-05	6.67E-03	0.667
4.00E-03	4.000	7.73E-05	5.33E-03	0.533
2.00E-03	2.000	3.87E-05	2.67E-03	0.267
1.00E-03	1.000	1.93E-05	1.33E-03	0.133
8.00E-04	0.800	1.55E-05	1.07E-03	0.107
6.00E-04	0.600	1.16E-05	8.00E-04	0.080
5.00E-04	0.500	9.67E-06	6.67E-04	0.067
4.00E-04	0.400	7.73E-06	5.33E-04	0.053
2.00E-04	0.200	3.87E-06	2.67E-04	0.027
1.00E-04	0.100	1.93E-06	1.33E-04	0.013
5.00E-05	0.050	9.67E-07	6.67E-05	6.67E-03
1.00E-05	0.010	1.93E-07	1.33E-05	1.33E-03



Electron Sources



Plasma Sources



Gridless Ion Sources



Gridded Ion Sources