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Maurice Ewing, of the Geology Department, Columbia University, shown on the deck of the research ship *Atlantis* prior to its sailing on July 15. Prof. Ewing is directing the group of scientists who will survey part of the mid-Atlantic Ridge 1,200 miles east of Bermuda. The expedition is being sponsored by the National Geographic Society, Columbia University, and the Woods Hole Oceanographic Institution (see *News and Notes*).

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NEW 1947 CHART OF THE ATOMS

Revised Edition
1947

PERIODIC CHART OF THE ATOMS

Henry D. Hubbard

Electronic	The Atoms Grouped According to the Number of Outer (Valence) Electrons																Planetary electrons in the completed shells								
↓																	Total Atom No.	20	2	3	4	4	3	2	
1 0 n 1.0080	1 H 1.0080																2 He 4.003	2	2					1	
2 He	3 Li 6.940	4 Be 9.02	5 B 10.82	6 C 12.010	7 N 14.008	8 O 16.0000	9 F 19.00	10 Ne 20.183									10 Ne	2	8					2	
3 Ne	11 Na 22.997	12 Mg 24.32	13 Al 26.97	14 Si 28.06	15 P 30.98	16 S 32.06	17 Cl 35.457	18 Ar 39.944									18 Ar	2	8	8				3	
4 Ar	19 K 39.096	20 Ca 40.08	21 Sc 45.10	22 Ti 47.90	23 V 50.95	24 Cr 52.01	25 Mn 54.93	26 Fe 55.85	27 Co 58.94	28 Ni 58.69							26 Fe	2	8	18	8			4	
	29 Cu 63.57	30 Zn 65.38	31 Ga 69.72	32 Ge 72.60	33 As 74.91	34 Se 78.96	35 Br 79.916	36 Kr 83.7									36 Kr	2	8	18	8				
5 Kr	37 Rb 85.48	38 Sr 87.63	39 Y 88.92	40 Zr 91.22	41 Nb 92.91	42 Mo 95.95	43 Tc 99.	44 Ru 101.7	45 Rh 102.91	46 Pd 106.7							44 Ru	2	8	18	18			5	
	47 Ag 107.880	48 Cd 112.41	49 In 114.76	50 Sn 118.70	51 Sb 121.76	52 Te 127.61	53 I 126.92	54 Xe 131.3	55 Cs 132.91	56 Ba 137.36	57 La 138.92	58 Ce 140.92	59 Pr 140.92	60 Nd 144.27	61 Pm 147.	62 Sm 150.43	63 Eu 152.0	64 Gd 156.9	65 Tb 158.9	66 Dy 162.5	67 Ho 164.94	68 Er 167.2	69 Tm 168.9	70 Yb 173.04	71 Lu 174.99
6 Xe	55 Cs 132.91	56 Ba 137.36	57 La 138.92	58 Ce 140.92	59 Pr 140.92	60 Nd 144.27	61 Pm 147.	62 Sm 150.43	63 Eu 152.0	64 Gd 156.9	65 Tb 158.9	66 Dy 162.5	67 Ho 164.94	68 Er 167.2	69 Tm 168.9	70 Yb 173.04	71 Lu 174.99	72 Hf 178.6	73 Ta 180.88	74 W 183.92	75 Re 186.31	76 Os 190.2	77 Ir 193.1	78 Pt 195.23	79 Au 197.2
	79 Au 197.2	80 Hg 200.61	81 Tl 204.39	82 Pb 207.21	83 Bi 209.00	84 Po 210.	85 At 211.	86 Rn 222.	87 Fr 223.	88 Ra 226.05	89 Ac 227.05							86 Rn	2	8	18	32	18	8	6
7 Rn	86 Rn 223.	87 Fr 226.05	88 Ra 227.05															86 Rn	2	8	18	32	18	8	
	90 Th 232.12	91 Pa 231.	92 U 238.07	93 Np 237.	94 Pu 239.	95 Am 241.	96 Cm 242.	97 Bk 247.	98 Cf 251.	99 Es 252.	100 Fm 257.	101 Md 258.	102 No 259.	103 Lr 260.				100 Fm	2	8	18	32	18	8	
7 Rare Earths Type SF	90 Th 232.12	91 Pa 231.	92 U 238.07	93 Np 237.	94 Pu 239.	95 Am 241.	96 Cm 242.	97 Bk 247.	98 Cf 251.	99 Es 252.	100 Fm 257.	101 Md 258.	102 No 259.	103 Lr 260.				100 Fm	2	8	18	32	18	8	

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