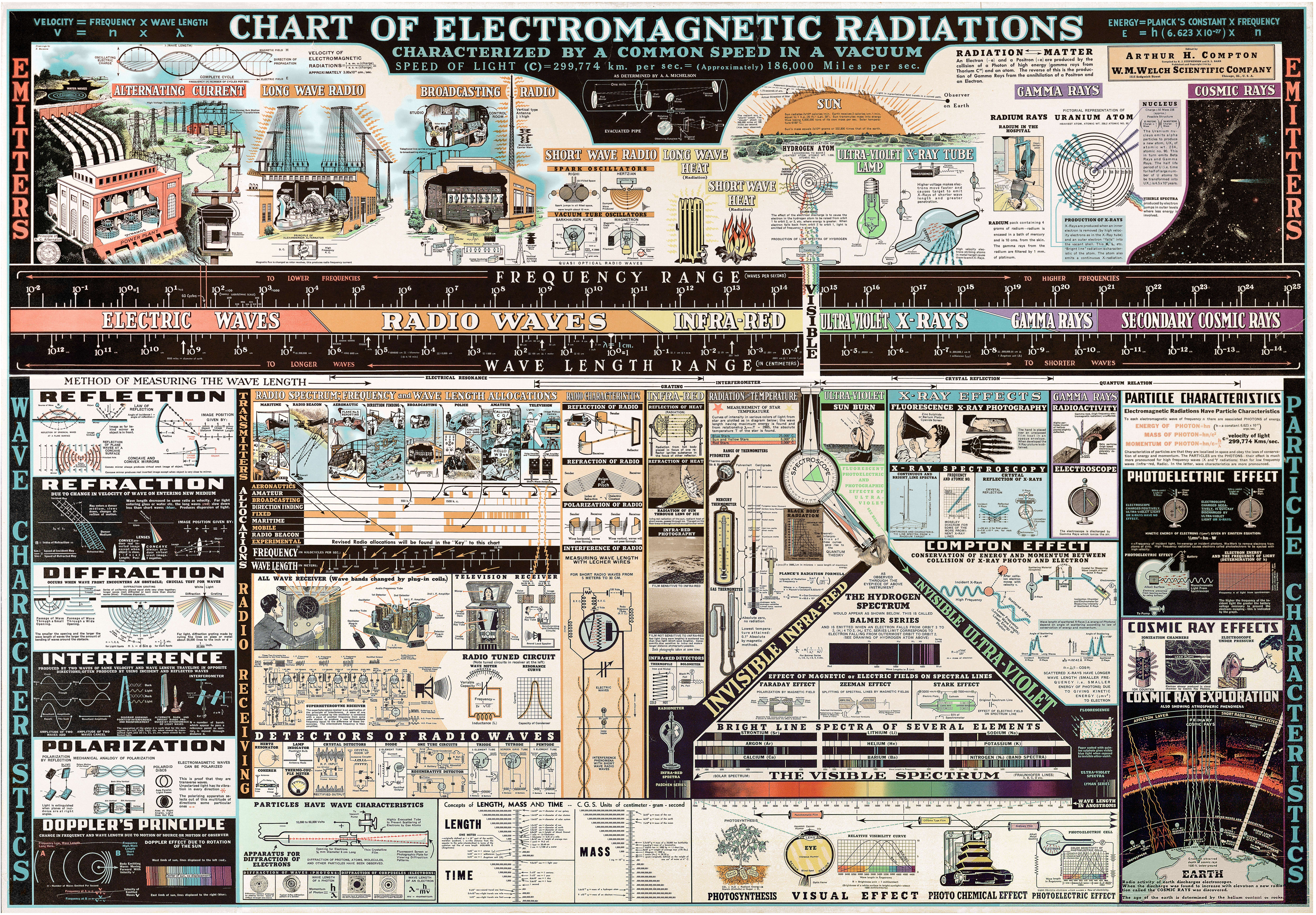
CHART OF ELECTROMAGNETIC RADIATIONS
CHARACTERIZED BY A COMMON SPEED IN A VACUUM
SPEED OF LIGHT (C)=299,774 km. per sec.= (Approximately) 186,000 Miles per sec.
VELOCITY = FREQUENCY x WAVE LENGTH
v = n x λ
ENERGY = PLANCK'S CONSTANT x FREQUENCY
E = h (6.623 x 10⁻²⁷) x n
ARTHUR H. COMPTON
W. M. WELCH SCIENTIFIC COMPANY
EMITTERS
ALTERNATING CURRENT
LONG WAVE RADIO
BROADCASTING
RADIO
SHORT WAVE RADIO
SPARK OSCILLATORS
VACUUM TUBE OSCILLATORS
LONG WAVE HEAT
SHORT WAVE HEAT
SUN
HYDROGEN ATOM
ULTRA-VIOLET LAMP
X-RAY TUBE
RADIATION → MATTER
GAMMA RAYS
RADIUM RAYS
URANIUM ATOM
NUCLEUS
COSMIC RAYS
FREQUENCY RANGE (WAVES PER SECOND)
TO LOWER FREQUENCIES
TO HIGHER FREQUENCIES
VISIBLE
ELECTRIC WAVES
RADIO WAVES
INFRA-RED
ULTRA-VIOLET
X-RAYS
GAMMA RAYS
SECONDARY COSMIC RAYS
WAVE LENGTH RANGE (IN CENTIMETERS)
TO LONGER WAVES
TO SHORTER WAVES
METHOD OF MEASURING THE WAVE LENGTH
ELECTRICAL RESONANCE
GRATING
INTERFEROMETER
CRYSTAL REFLECTION
QUANTUM RELATION
WAVE CHARACTERISTICS
REFLECTION
REFRACTION
DIFFRACTION
INTERFERENCE
POLARIZATION
DOPPLER'S PRINCIPLE
TRANSMITTERS
ALLOCATIONS
RADIO RECEIVING
RADIO SPECTRUM, FREQUENCY and WAVE LENGTH ALLOCATIONS
ALL WAVE RECEIVER
TELEVISION RECEIVER
RADIO TUNED CIRCUIT
DETECTORS OF RADIO WAVES
RADIO CHARACTERISTICS
REFLECTION OF RADIO
REFRACTION OF RADIO
POLARIZATION OF RADIO
INTERFERENCE OF RADIO
INFRA-RED
REFLECTION OF HEAT
REFRACTION OF HEAT
INFRA-RED PHOTOGRAPHY
INFRA-RED DETECTORS
RADIATION — TEMPERATURE
SPECTROSCOPE
INVISIBLE INFRA-RED
INVISIBLE ULTRA-VIOLET
THE HYDROGEN SPECTRUM
BALMER SERIES
EFFECT OF MAGNETIC or ELECTRIC FIELDS ON SPECTRAL LINES
BRIGHT LINE SPECTRA OF SEVERAL ELEMENTS
THE VISIBLE SPECTRUM
ULTRA-VIOLET
SUN BURN
X-RAY EFFECTS
FLUORESCENCE
X-RAY PHOTOGRAPHY
X-RAY SPECTROSCOPY
GAMMA RAYS
RADIOACTIVITY
ELECTROSCOPE
COMPTON EFFECT
CONSERVATION OF ENERGY AND MOMENTUM BETWEEN COLLISION OF X-RAY PHOTON AND ELECTRON
PARTICLE CHARACTERISTICS
PHOTOELECTRIC EFFECT
COSMIC RAY EFFECTS
COSMIC RAY EXPLORATION
EARTH
PARTICLES HAVE WAVE CHARACTERISTICS
APPARATUS FOR DIFFRACTION OF ELECTRONS
Concepts of LENGTH, MASS AND TIME — C.G.S. Units of centimeter - gram - second
LENGTH
MASS
TIME
PHOTOSYNTHESIS
VISUAL EFFECT
PHOTO CHEMICAL EFFECT
PHOTOELECTRIC EFFECT