The New Physics

Physics now & 50 yrs ago.
Complacency : Milli Ran / Todhunter
Even Maxwell : Residual
Effects : Thinkers of / Gauss : Rayleigh

~~Reflection of~~ Complacency of age

Reasons for complacency
Newtonian dynamics :
Thermodynacs : Wave-theory
Maxwell : unification of
ethers & $\mathcal{N}$ = e.s./e.m.
Hertz

Flies in Ointment : Kelvin's
Calculation of age of earth
Helmholtz : Rutherford Blank cheque

1900 clouds gathering : ~~K's clouds~~
19th cent. clouds over the dynamical
~~over 19th Cent. physics~~
theory of Heat + Light
Bursts in this manner : ~~took~~
favourite expt- Discharge

thro' gases : Lurking in it
2 major discoveries = 1895 Rontgen
Blackening of photog. plates
Crooks' moral : Rontg's.

Penetration : medical :
Stokes : other people's lors

New world : New Physics
Antedate by 5 yrs : Hertz

1896 : Radioactivity
Punch : Atom-splitting

1897 electron : 1900 quantum
Relativity
gasping for breath.
Specialist
Lord Rayl. last complete phys.

One interesting feature :
hunt for new particles.

Nothing in Vol: changed colour

Physicist of 80's revived ~~Con~~ would not follow a conversation or lecture

Universe

1) finite but unbounded

2) Curvature

3) Expanding or Contr or alternately Ex or Contr

Physicist re matter & energy: Annihilation
& matter: materialization of energy

Light: nearest candle or dist star same energy for same colour

Oscillator take it or leave it

No. Exaggeration ~~Kelvin~~ Planck's unit
Rayleigh (a)
(b) Bohr's atom

Erewhon : ~~Berkeley~~ :
Theoretical Physicist-
Tyndal Story Tails up.

Ref- ~~Kelvin~~ : died in unbelief
atom : unquit

Another aspect- : Mad world
Chalk : 19th Cent. Laplace

not so sure today : only
1/2 information. Conjugates
Position & vel. Edinburgh
Professor
Energy + time : All data in
history.

Most old controversies :
1) Particle : wave
2) Maxwell demon
3) Benzene ring.

Genius in garret:
P. R. S: Sealing wax
Farady & string tradition
J. J. ~~Lyon~~

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todg: 200" telesc.
50,000 atm.
100,000 amps.
300,000 gauss
50×10^6 e.v.
$10^{6''}$ g.

~~Sk~~ K
Kapitza: Short circuiting.
Steady 20,000: Rope trick

200" telesc.
1/10" Airy: Gill 1/100
3 penny bit at 150 miles.
none but a Scotchman:
22½"; 200" 1300 miles
Castle at 40000 miles

Engineer's mot- recognized: Matter.
high brow: Compensations: Hi bib.

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April 1900 R. I. lecture
whether 19th or 20th cent.

Ether

Cloud I : very dense.
which we could not see as means of dissipating II what would ~~be~~ appear to be wanted is some escape from the destructive simplicity of the general conclusion

Partition of energy

simplest ~~a~~ way of escape was to deny the conclusion

Gentlemen vs players.

I must confess that I do not like this soln of the puzzle. ~~Of course~~

It does not suit me.

The energy reqd by a molec. to enable it to overcome the attraction of all its neighbours at the surface of a liquid is about 3 times greater than the work necessary to separate 2 molecules from contact to infinity.

At the m.p. the amplitude of oscillation in a monatomic solid = 10% to 12% of interatomic distance.