

MACDONDLAD PHYSICS BUILDING RESEARCH WORK PROGRESS

Dr. H. T. Barnes -

1. St. Lawrence River ice investigation.
2. Part One - Heat Exchange of the river in relation to various ice formation.
3. Part Two - Ice breaking and ice navigation on the river investigating the means of extending the period of navigation.
4. Physical constants of Ice.
5. Specific Heats and simple liquids and their relation to each other.
6. Study of Snow Crystals in polarized light with reproduction in natural colors.
7. Iceberg investigation physical properties method of detection and means for destroying.

Dr. L. V. King -

1. Use of X-ray diffraction apparatus for study of crystalline structure of solidified gases and liquids at low temperatures.
2. Design, construction and testing of large expansion chamber for study of  $\alpha$ -ray trajectories in various gases and vapours.  
Completion of final report on improvements of lighthouse designs -- summing up results of fog alarm researches dating from 1913.
3. Investigations in theoretical physics on the structure of molecules in relation to optical phenomena (Scattering of light, optical activity, etc.,)

Dr. A. N. Shaw -

1. Writing up further report on "Estuary Tidal Analysis"
2. Supervising F. G. Adney in work on "Thermo Electric Effects."
3. Supervising Miss Crowe in work on "Conductivity of Concentrated Solutions."
4. Developing an Absorption Hygrometer with assistance of J. A. Taylor.
5. Continuing work on Standard Cells (advisory to Prof. Reilley)

Projected - To test a new type of X-ray bolometer.

Dr. D. A. Keys -

1. Conduction of electricity in gases.
2. Applications of Pieze electricity with cathode ray oscillograph.