

## Dataset Description

Station Information							
ID*	Type*	Location	Latitude*	Longitude*	Coordinate System Units	Coordinate Reference System	Coordinate Collection Method
9	Ocean	Hudson Bay	63.7288	-79.9282	decimal degrees	Unknown	GPS - Unspecified
11	Ocean	Hudson Bay	62.865	-78.8966	decimal degrees	Unknown	GPS - Unspecified
15	Ocean	Hudson Bay	63.1939	-81.9189	decimal degrees	Unknown	GPS - Unspecified
16	Ocean	Hudson Bay	62.2796	-85.906	decimal degrees	Unknown	GPS - Unspecified
18	Ocean	Hudson Bay	63.7138	-88.417	decimal degrees	Unknown	GPS - Unspecified
19	Ocean	Hudson Bay	61.848	-92.1103	decimal degrees	Unknown	GPS - Unspecified
21	Ocean	Hudson Bay	60.9113	-89.3586	decimal degrees	Unknown	GPS - Unspecified
22	Ocean	Hudson Bay	60.4233	-94.0022	decimal degrees	Unknown	GPS - Unspecified
24	Ocean	Hudson Bay	61.6966	-87.7641	decimal degrees	Unknown	GPS - Unspecified
25	Ocean	Hudson Bay	62.0219	-87.0088	decimal degrees	Unknown	GPS - Unspecified
32	Ocean	Hudson Bay	56.9842	-88.11718	decimal degrees	Unknown	GPS - Unspecified
34	Ocean	Hudson Bay	56.5062	-86.8942	decimal degrees	Unknown	GPS - Unspecified
36	Ocean	Hudson Bay	57.774	-86.0311	decimal degrees	Unknown	GPS - Unspecified
38	Ocean	Hudson Bay	58.7224	-86.3045	decimal degrees	Unknown	GPS - Unspecified
40	Ocean	Hudson Bay	58.23267	-88.56332	decimal degrees	Unknown	GPS - Unspecified
N-A	Estuary	Hudson Bay	57.05585	-92.53127	decimal degrees	Unknown	GPS - Unspecified
N-B	Estuary	Hudson Bay	57.1155	-92.42117	decimal degrees	Unknown	GPS - Unspecified
N-C	Estuary	Hudson Bay	57.205933	-92.28247	decimal degrees	Unknown	GPS - Unspecified
N-D	Estuary	Hudson Bay	57.22215	-92.29395	decimal degrees	Unknown	GPS - Unspecified
45-HT	Estuary	Hudson Bay	57.296817	-92.063067	decimal degrees	Unknown	GPS - Unspecified
46	Ocean	Hudson Bay	57.5021	-91.8162	decimal degrees	Unknown	GPS - Unspecified

## Dataset Description

### SAMPLE VARIABLE DETAILS

Variable Name*	CanWIN Standardized Name <sup>1</sup>	Variable Description	Variable Speciation	Variable Sample Fraction*	Variable Media Type	Activity Collection Type	Result Value Type
Year			None	None	Other	n/a	Actual
Month			None	None	Other	n/a	Actual
Day			None	None	Other	n/a	Actual
Station		ID	None	None	Other	n/a	Actual
Lat		Latitude in Decimal Degrees	None	None	Other	Satellite	Actual
Long		Longitude in Decimal Degrees	None	None	Other	Satellite	Actual
Sample_Type		Water, Ice-Interface water, Melt pond	None	None	Other	Field Observation	Actual
Optical_Depth_%		Percentage of surface irradiance (100, 30, 15, 5, 1, 0.2%)	None	None	Other	Field Observation	Actual
Depth_m		Water depth	None	None	Other	Field Observation	Actual
PBmax_mg_C_Chla-1_h-1		Maximum photosynthetic rate	None	Filtrate	Biological	Lab Measurement	Calculated
PBs_mg_C_Chla-1_h-1		Photosynthetic rate	None	Filtrate	Biological	Lab Measurement	Calculated

## Dataset Description

alpha_mg_C_Chla-1_h-1_(micromol_photos_m-1_s-1)-1		Photosynthetic efficiency	None	Filtrate	Biological	Lab Measurement	Calculated
Ek_micromol_photos_m-2_s-1		Photoacclimation parameter	None	Filtrate	Biological	Lab Measurement	Calculated
beta_mg_C_Chla-1_h-1_(micromol_photos_m-1_s-1)-1		Photoinhibition	None	Filtrate	Biological	Lab Measurement	Calculated
QF	Prob_bad	Data qualifier: The light levels in each incubation chamber was not sufficient to obtain all light parameters (slope, plateau and photoinhibition). The obtained PE parameters were extracted from PE curves with very bad fits and shouldn't be used.	None	None	Other	n/a	Actual

## Dataset Description

### DATA FILE DETAILS

Column Name*	Unit	Description	Statistic Applied
Sample_Type	none	Water, Ice-Interface water, Melt pond	
Optical_Depth_%	Percentage	Percentage of surface irradiance (100, 30, 15, 5, 1, 0.2%)	
Depth_m	m	Water depth	
PBmax_mg_C_Chla-1_h-1	mg C Chl a-1 h-1	Maximum photosynthetic rate	
PBs_mg_C_Chla-1_h-1	mg C Chl a-1 h-1	Photosynthetic rate	
alpha_mg_C_Chla-1_h-1_(micromol_photons_m1_s-1)-1	mg C Chl a-1 h-1 ( $\square$ m photons m-1 s-1)-1	Photosynthetic efficiency	
Ek_micromol_photons_m-2_s-1	$\square$ m photons m-1 s-1	Photoacclimation parameter	
beta_mg_C_Chla-1_h-1_(micromol_photons_m1_s-1)-1	mg C Chl a-1 h-1 ( $\square$ m photons m-1 s-1)-1	Photoinhibition	

## Dataset Description

**Table 1. Code list**

CanWIN Short Code	Definition	User Code
ADL	Above Detection Limit	
BDL	Below Detection Limit	
\$	Incorrect sample container	
EFAI	Equipment failure, sample lost	
FEF	Field equipment failed	
FEQ	Field Equipment Questionable	
FFB	Failed. Field blank not acceptable.	
FFD	Failed. Field Duplicate.	
FFS	Failed. Field spike not acceptable.	
H	Holding time exceeded	
ISP	Improper sample preservation	
ITNA	Incubation time not attained	
ITNM	Incubation temperature not maintained	
JCW	Sample container damaged, sample lost	
NaN	Value is missing and reason is not known	
NC	Not collected	
ND	Not detected	
NR	Sample taken/measured on site but information in this field not recorded	
NS	Sample collected but not submitted	
OC	Master Coordinate List Used	
P	Analysis requested and result pending	
prob_good	probably good value. Data value that is probably consistent with real phenomena but this is unconfirmed or data value forming part of a malfunction that is considered too small to affect the overall quality of the data object of which it is a part.	
prob_bad	probably bad value. Data value recognised as unusual during quality control that forms part of a feature that is probably inconsistent with real phenomena.	The light levels in each incubation chamber was not sufficient to obtain all light parameters (slope, plateau and photo-inhibition). The obtained PE parameters were extracted from PE curves with very bad fits and shouldn't be used.
Interpolated	This value has been derived by interpolation from other values in the data object.	
Q	Below limit of quantification (LOQ). The value was below the LOQ of the analytical method. The value in the result field is the limit of quantification (limit of detection) for the method.	

## Dataset Description

LAF	Lab Analysis Failure (value cannot be trusted due to detected lab instrument failure (e.g. contamination) during sample processing)	New code added by LCM
-----	---	-----------------------

**Table 2. Options for Statistics Applied**

Statistics Applied	Description
30DADMean	Thirty-day average daily mean
7DADM	Seven-day average daily maximum
7DADMean	Seven-day average daily mean
7DADMin	Seven-day average daily minimum
Coefficient of variation	The ratio of the standard deviation $\sigma$ to the mean, $\mu$ .
Daily Geometric Mean	Provides a number that is more representative of the median and helps reduce the effect of a few extreme values.
Daily Maximum	The largest value of a set, each period of a day cycle
Daily Minimum	The smallest value of a set, each period of a day cycle
Hourly Maximum	The largest value of a set, each period of an hour cycle
Hourly Minimum	The smallest value of a set, each period of an hour cycle
MatLab script	Provide the MatLab script or the link to it
Mean	The sum of all the numbers in the set divided by the amount of numbers in the set
Median	The middle point of a number set, in which half the numbers are above the median and half are below.
None	None
R script	Provide the R script or the link to it
Standard Deviation	This describes the spread of values in the sample
Standard Error	The standard deviation of the sample mean, $\bar{x}$ , which describes its accuracy as an estimate of the population mean, $\mu$ .