

## Series workshop summary

Tuesday

Morning

Modeling SERIES - Ken Denman

Tully underway data products – Marie Robert

Brief Thematic group summaries

Then move to new groups

- i) Foodweb dynamics and top-down control
- ii) Fate of the Bloom and Biogeochemistry
- iii) Modeling and observations

Afternoon

SERIES Atmospheric datasets – Moire Wadleigh

General Discussion

- i) Data – key elements for bloom / patch evolution
- ii) data management, sharing protocols
- iii) communication – meetings and publications
- iv) timeline for 2003 and 2004

Data integration

- i) mixed layer depths – use TLD's ( $0.02 \sigma_t \text{ m}^{-1}$ ); SF6 data from Kaiyo Maru; interpolation required of SF6 and  $\sigma_t$ ; photic light depths and mixed layer depths
- ii) Lateral distributions – ‘top hat’ effect look at pCO<sub>2</sub>, NO<sub>3</sub>, Fluorescence, FRRF, DFe; (NAS NO<sub>3</sub> data – 1<sup>st</sup> hour is suspect); plot Tully SF6 vs. pCO<sub>2</sub>
- iii) Volume of the patch – use TLD and patch dimensions (length and width)
- iv) Patch dilution – estimate strain rate; compare pCO<sub>2</sub> data from the Tully and the Kaiyo Maru
- v) Slippage – what depth of integration is most valid for budgetary estimates; ADCP data – depth bins? 20 m, 50 m and 100 m; ARGO data; floating traps versus drifter trajectories; wind speed data; Moire's Atmospheric data; ship positions (Nelson, Tsuda-san, Marie)
- vi) DMS – DMS (Tully) vs. DMS (El Puma) vs. DMS (Kaiyo); Chlorophyll fluorescence (Tully had problems with quenching – 2-3 days of data only); Nutrient data – intercomparisons; need for a map of the OUT stations relative to the nutrient and pCO<sub>2</sub> fields – due to W-E variability in nutrient distributions

Data Management

- i) Update the SERIES/SOLAS master list with information on what data/data products will be produced/available [PERSON, DATA, ESTIMATE OF AVAILABILITY]

- ii) Data quality – meta-data; data-flags; FTP site which is password protected
- iii) Need to add subdirectories to order the data
- iv) Need for a part-time data manager – through the Secretariat – duties to include cataloging, time-stamping and tracking data versions, data log – to monitor access and checks on data updates
- v) When to have the data manager appointed and in place?
- vi) Kaiyo – where to have the data repository? On the SEEDS/SERIES website – use of data pointers

Data Access and Use

- i) Protocols
- ii) Have ‘open data’ such as wind speed etc in a different subdirectory
- iii) Implement the C-JGOFS or NOW program data access protocols which have worked well in the past – Richard Rivkin to look out previous protocols

2003/4 Timeline

2003	SOLAS ACTIVITY		2004	
J	DATA INTEGRATION		J	
F	DITTO		F	PISCES Fe WORKSHOP; ASLO
M	DITTO		M	
A	DITTO	SOLAS ATLANTIC VOYAGE	A	
M	APPOINT DATA MANAGER	DITTO	M	
J		LINE P VOYAGE; CMOS	J	
J		SOLAS ATLANTIC VOYAGE	J	SEEDS VOYAGE
A			A	DITTO
S		LINE P VOYAGE	S	
O			O	SOLAS INTL SCIENCE MTG
N		NEW ZEALAND VOYAGE?	N	
D			D	

Agenda

‘Conferences

Publications – journals, high profile topics, themes and topics

PICES Fe workshop – move to Feb 10-13 2004 (date change to be confirmed by 9 April 2003

3 key questions

- i) E vs. W Pacific comparison
- ii) Key questions for SEEDS II
- iii) Further SERIES synthesis

Immediately preceding the ASLO-TOS meeting in Hawaii (15-20<sup>th</sup> Feb 2004)

Potential co-sponsorship by PICES

Special session at ASLO-TOS

May/June 2003 – write abstract for the special session

Such as “Effects of iron enrichment of HNLC waters on atmospheric and oceanic processes” OR

“SOLAS – the iron connection”

OR

“Iron enrichment in polar, temperate and tropical HNLC waters

Publication

A special issue versus individual papers

If the former, which journal

GBC – broad appeal to both marine and atmospheric communities – Bob M to talk with Bill Reeburgh

CMOS

Biogeochemistry

JGR

DSR II

Prog. In Oceanogr.

Go for JGR, followed by JGR (include some oceanic papers)

Editors to reflect 3 ship study

High Impact (up-front) papers

(April 2003) Maurice – DMS, decreases during diatom bloom

(June 2003) Philip - Bloom evolution, termination and fate

(Summer 2003) Ken model – testing hypotheses

Nojiri and Whitney – differences in calcite data

IOS – acidify – are they losing POC?

Nojiri – ICPMS

Special volume

Provisional titles/themes / expression of interest

(\* Denotes area of conflict, Kudo – talk with PJH)

Rodney Powell – does he use TAC? Takeda

Denman	Fe model
Marchetti/UBC	phyto processes
	i) chl <sub>a</sub> , POC, C:chl <sub>a</sub>
	ii) nutrient uptake, nitrate utilisation *
	iii) 1ry production*
	iv) d15N
	v) PAM kinetics
Levasseur	S model
Law	i) Patch evolution – large scale physics
	ii) Patch evolution – patch dispersion and nutrient supply
	iii) Trace gases
Rivkin	i) bacterial and microbial dynamics
	ii) community structure and evolution
Ianson	Patch model
Wong	i) CO <sub>2</sub> chemistry
	ii) pigments
	iii) sedimentation and C removal
	iv) Fe distributions and budget
Nishioka	Fe SEEDS vs. SERIES
Takeda	FeL
Sohrin	Trace metals
Kudo	deckboard experiments (W vs. E)
	Biological rate processes (1ry prod, BP, 15N uptake)
Saito	Optics during the fertilization
	UV
Miller	DMS photolysis
Tremblay/McGill	Bacterial dynamics and Fe
	Oxidative stress
	Fe uptake dynamics
	Elemental stoichiometry
Ruiz	Thorium dynamics
	Nutrients and export
Tsuda	(Nojiri) Fate of the carbon
	(Tsuda) Mesozooplankton response
	(Kiosawa) Phyto succession – taxonomy – Seeds and SERIES
	(Nojiri) Dynamics of pCO <sub>2</sub> and nutrients
Merzouk	Biol rate processes (DMSP/DMS)
Scaratt	microcosm Fe enrichment experiments
	DMS/DMSP synthesis
Wadleigh	Atmospheric DMS
Leitch	Aerosols
Sherry	Synthesis – chlorophyll and production
Boyd	Photosynthetic competence and Fe stress
	Bloom termination and changes in phytoplankton properties

Not present etc

Trick – flow cytometry  
Moore – Isoprene and m-halides  
Whitney – N and Si budget? (Nojiri\*)  
Intro and overview by editors