Towards Improved Estimates of Ocean Heat Flux (TIE-OHF)

Draft for Requirements baseline document

ESA/TIE-OHF meeting, January 2015

Ifremer Headquarter, Paris

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Suggestion:

- I will generate a first draft, send it around to complement (project partners only); note: regarding to discussion with ESA yesterday, we have only a short time window for this step, please collaborate!)
- And then I will send this draft to all partners/collaborators of the project for dicussion and overall agreement on the defined requirments (first agreements already expected during meeting today)

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1. Intro:

- General description of TIE-OHF and broader context (e.g. link to CLIVAR Research Focus)

- Main objectives for this document and how these will be achieved (e.g. paper assessments, information from other projects, e.g. ORA-IP and white papers (e.g. Ocean Obs 2009; WHOI/GSOP wrokshop 2012 ➔ other suggestions (➔ maybe comments from M. Bourrassa?)

- ➔ Milestone of the project, as this document serves as the principal basis to build up the “reference dataset”

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2. Description of raw input data (re-processed satellite parameters)

Table of proposal: and some description (please add bullet points)

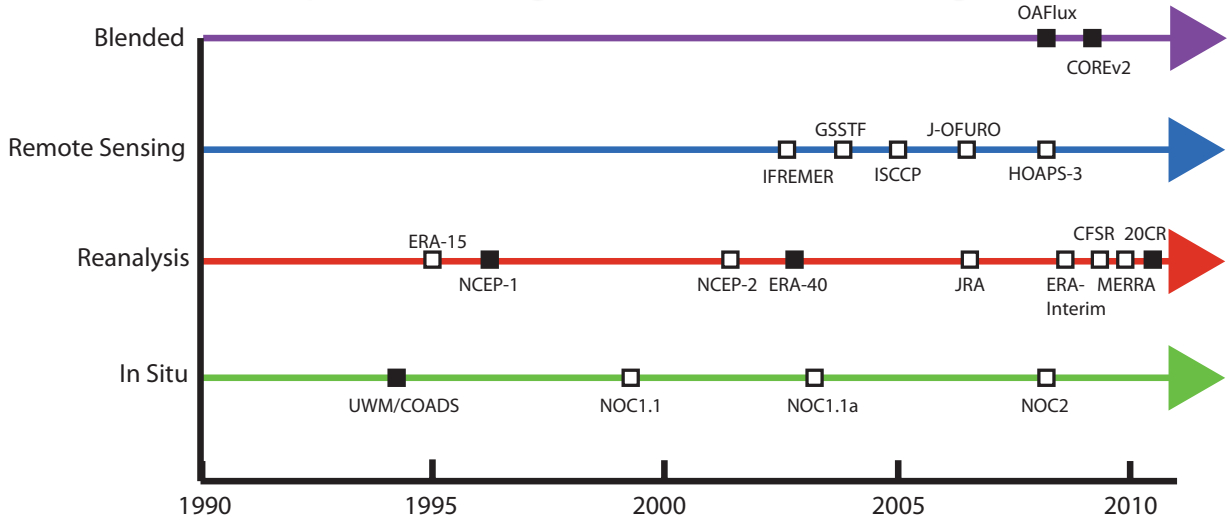
Table 5.3 : Characteristics of inputs and resulting TI-OHF products

TIE-OHF Ocean Heat Products to be delivered	Ref	Parameter	Resolution	Frequency	Time Span	Coverage Time	Coverage Space	Uncertaintyinformation	Error Size	Sensor Soucas	Source	Nature Product	Level	Data Provider	File Format	Comments
Delivered products																
Sensible	DP1	SH	25 km	Daily	1992 - 2011	19 yrs	Global	error bar	30W/m²	Scatteromters and radiometers	ERS1/2; QSCAT; ASCAT-A/B; OceanSat; HY-2; SSM/I F10 - 18, AMSR-E	EO (merged)	L3 and L4	IFREMER	Netcdf 4	Will be reprocessed from IP4, introducing new …
Latent	DP2	LH	25 km	Daily	1992 - 2011	19 yrs	Global	none	10W/m²	Scatterometers and radiometers	SCAT; ASCAT-A/B; OceanSat; HY-2; SSM/I F10 - 18, AMSR-E	EO (merged)	L3 and L4	IFREMER	Netcdf 4	Recomputed by combining IP1, IP2
Radiative SW	DP3	SW	25 km	Daily	1999 - 2011	19 yrs	Global	error bar	30W/m²	Modis, MSG; SSM/I	Aqua; MSG; ADEOS	EO (merged)	L3 and L4	SAF Clim; Univ. Maryland	Netcdf 4	Availble
Radiative LW	DP4	LW	25 km	Daily	1999 - 2011	19 yrs	Global	covariance matrix	30W/m²	Modis; MSG; SSM/I	Aqua; MSG; ADEOS		L3 and L4	SAF Clim; Univ. Maryland	Netcdf 4	

3. Description of raw products for TIEH-OHF

3.1 Intro (e.g. choice of data for this project is focussed on observations as it is dedicated for; use of only 1 reanalysis for comparison; BUT: Similar inter-comparison objective establishs strong link to ORA-IP)

- Overview on products generate similar figure as:



- Short description of product types (e.g. blended, remote sensing, reanalysis, In Situ)

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3. Description of raw products for TIEH-OHF

3.2 Meta-Data

➔ Use information from interface-control document (Jean-Françoise, Antoine)

3.3 Strength & weakness: key performance of products

- Recommended uncertainty range ➔ CLIVAR recommendation ? (discussion/agreement)
- Confidence mask: build a “reference climatology” from the reference data set (ensemble climatology? Or one product only? Or for each product? ➔ to be discussed and agreed), which will be distributed with the reference dataset (very valuable for community!); then: build confidence mask: departure from climatology
- Check whether other methods for performance tests can be useful by assissing review paper Ocean Obs,/ WHOI worksho, ORA-IP (paper of Magdalena, research gate draft (currently most recent one).

3. Description of raw products for TIEH-OHF

3.4 Ensemble method

➔ discussion/input needed; maybe information available from ORA-IP (paper Magdalena?)

3.5 Resampling in time and space ("homogenization")

- Resolution in space and time? Discussion/agreement
- File format and file name (please find agreement)
- Variable names: to be fixed through Essential Climate Variable (GCOS)

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Further points to be discussed:

i) Are there additional information needed in the document?

ii) Who will be dedicated to lead and organize the BAMS proposal? Abderahim? Deadline?? ➔ IMPORTANT to start very early, as scientific discussions are expected…: Maybe discuss here: what are you aiming to address there? Define main objectives/thematics (bullet points)

iii) Further communication: workshop/conference/meeting

Joint TIE-OHF/SOLAS workshop: convenor team? Please agree

GCOS/CLIVAR/?: September 2015 (ESA), please add link here

Joint CLIVAR RF/GSOP/COST (reanalyses) meeting, to be planned for fall 2015 in Exeter, MetOffice (location confirmed)