



FINANCIAL MECHANISM OF THE EUROPEAN ECONOMIC AREA 2009-2014

Integrated marine and inland water management
Recording of and Technical Responses to Coastal Erosion of
Touristic Aegean Island Beaches



Ευρωπαϊκός Οικονομικός Χώρος 2009-2014

Recording of and Technical Responses to Coastal Erosion of Touristic Aegean Island Beaches

KICK OFF MEETING

Venue: University of the Aegean, Mytilene, Lesvos, Greece

Mytilene, March 2016

What has been done till now

- Complex Administration Procedure (more or less completed)
- Team in place 1st March 2016
- Equipment tender finished (but incomplete)
- Fieldwork already undertaken in Tsamakia and Eresos beaches (Lesvos)
- Pilot beach in Chios selected (site visit)



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Project summary

W.P. 1.1: Project Management, financial coordination and project web site

W.P. 1.2: Contacts with local authorities/selection of pilot beaches

W.P. 1.3: Dissemination 

W.P. 2.1: Present/future coastal erosion trends of the selected beaches/islands

W.P. 2.2: Pilot beach experiments (field work) 

W.P. 2.3: Coastal morphodynamics modeling 

W.P. 2.4: Riverine supply and coastal hydrological modelling

W.P. 3.1: Design/evaluation of “soft” coastal protection measures/schemes

W.P. 3.2: Design of “hard” coastal protection measures / schemes

WP 4.1 Cost benefit Analysis (CICERO)

W.P. 4.2: Synthesis of results and management plans/protocols



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GENERAL TIMETABLE (Fieldwork and meetings)

March: Tsamakia and Eresos (Lesvos) (

March: Chios field work

March: Visit in Santorini for pilot beach selection (for camera/weather station installation)

April: Santorini field work – A phase (between 4th and 20th)

May: Kalymnos-Agathonisi-Chalki (between 8th and 18th)

June: Mid-term meeting (between 27th and 30th)

October: Santorini field work – B phase

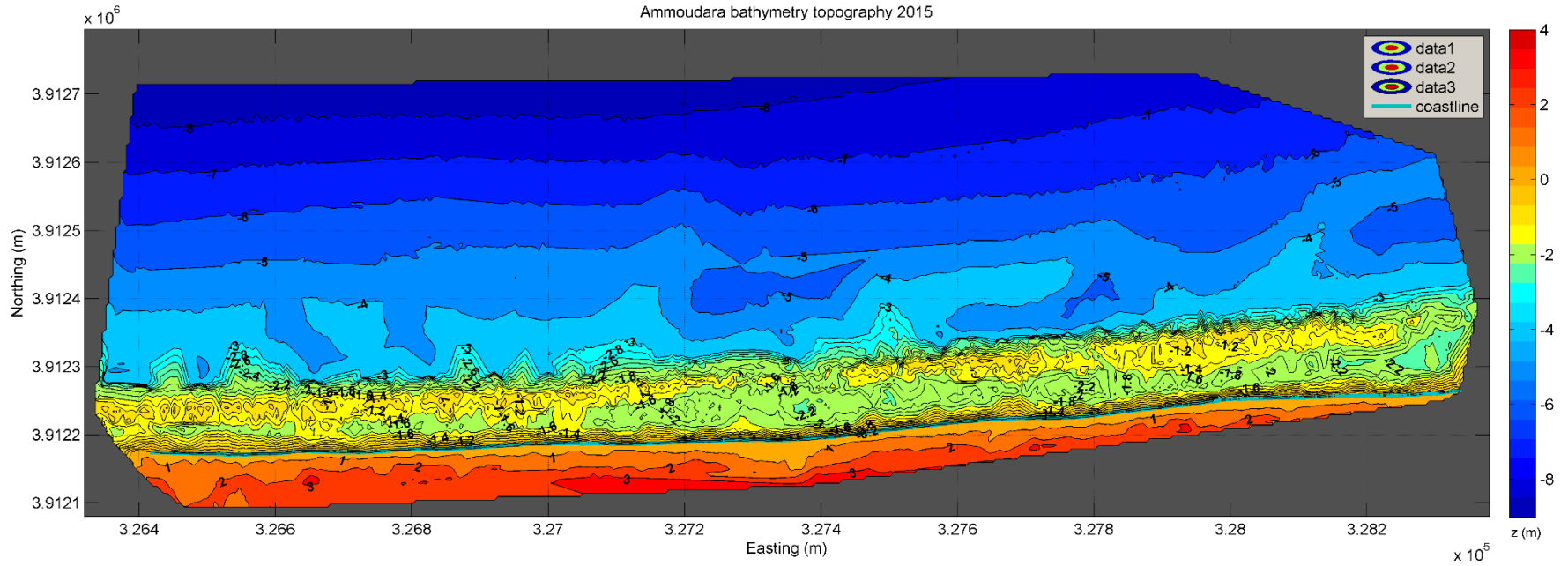
December: Final meeting / symposium and reporting

Discussion?

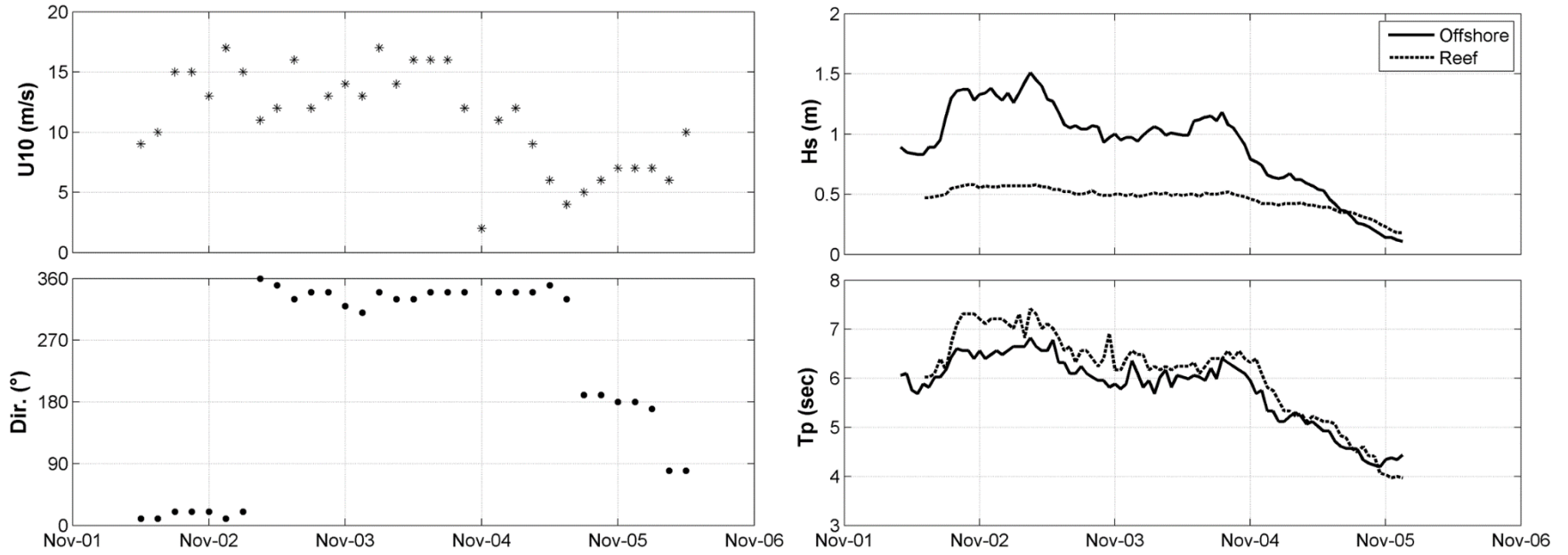
Fieldwork



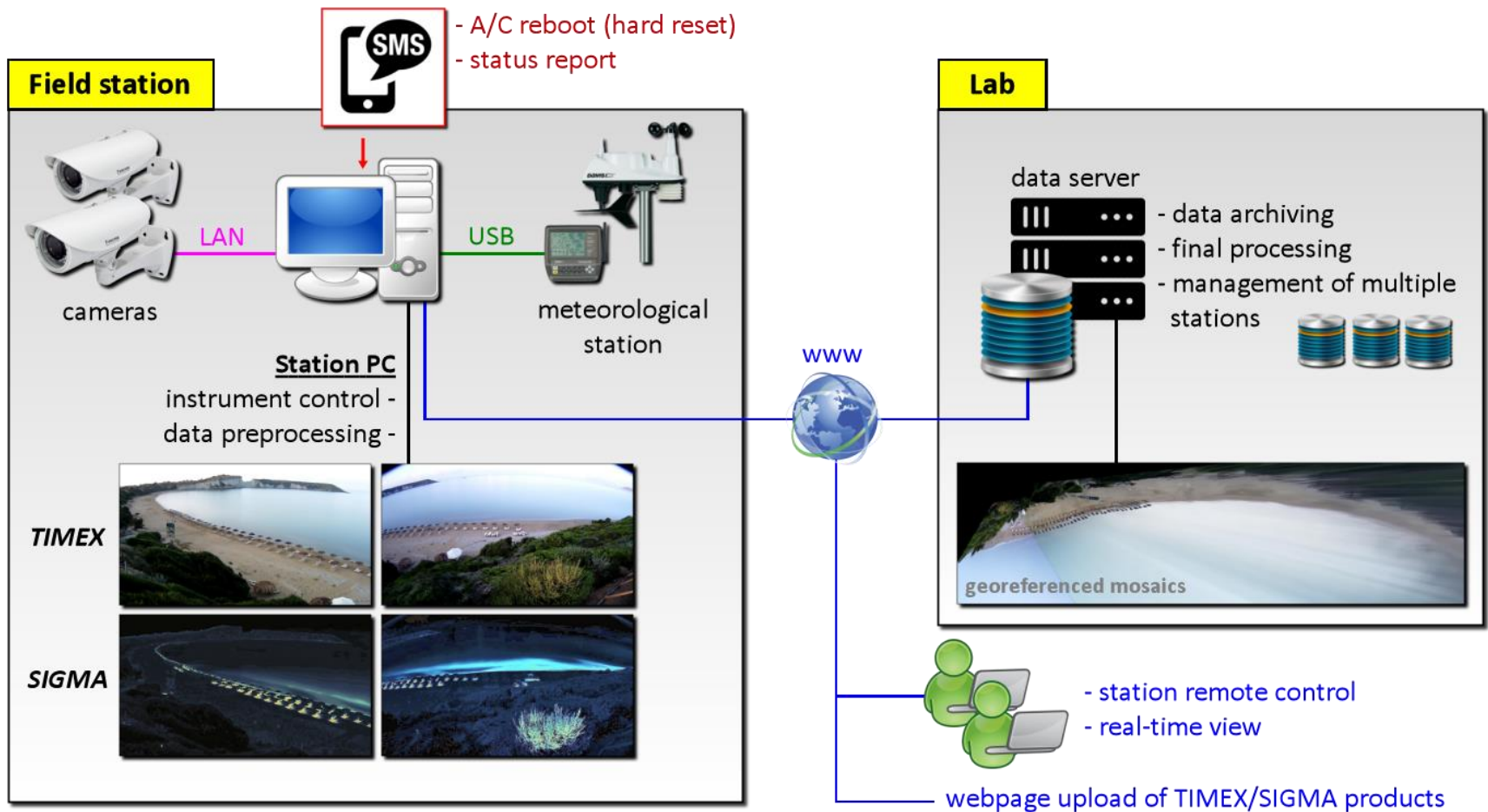
Bathymetry Example



Hydrodynamics

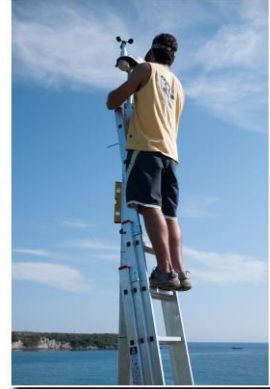


Optical system to be installed in Santorini?



Records for 10 minutes per hour, TIMEX & SIGMA generated *in situ* . Built for 24/7 operation

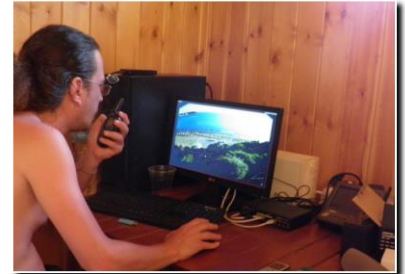
An example from Gerakas beach, Zakynthos (37°42'27"N, 20°59'10"E)



Cam. 1

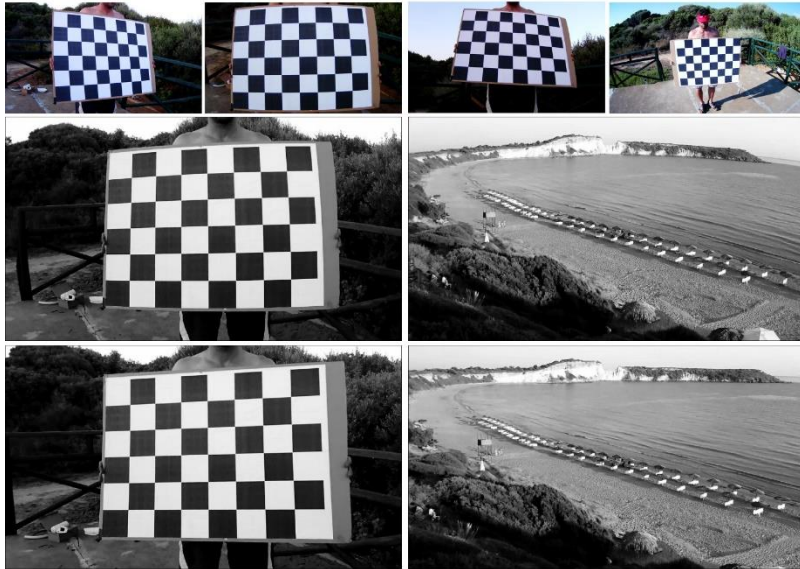


Cam. 2



Calibration

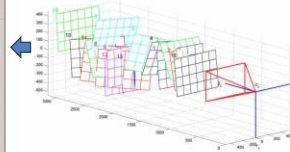
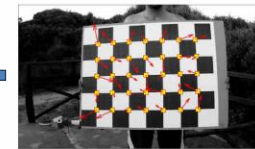
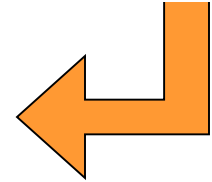
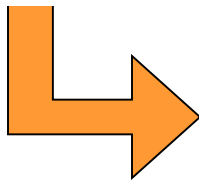
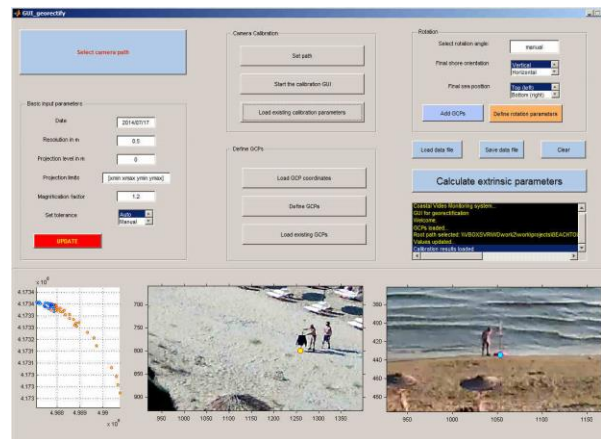
Lens distortion



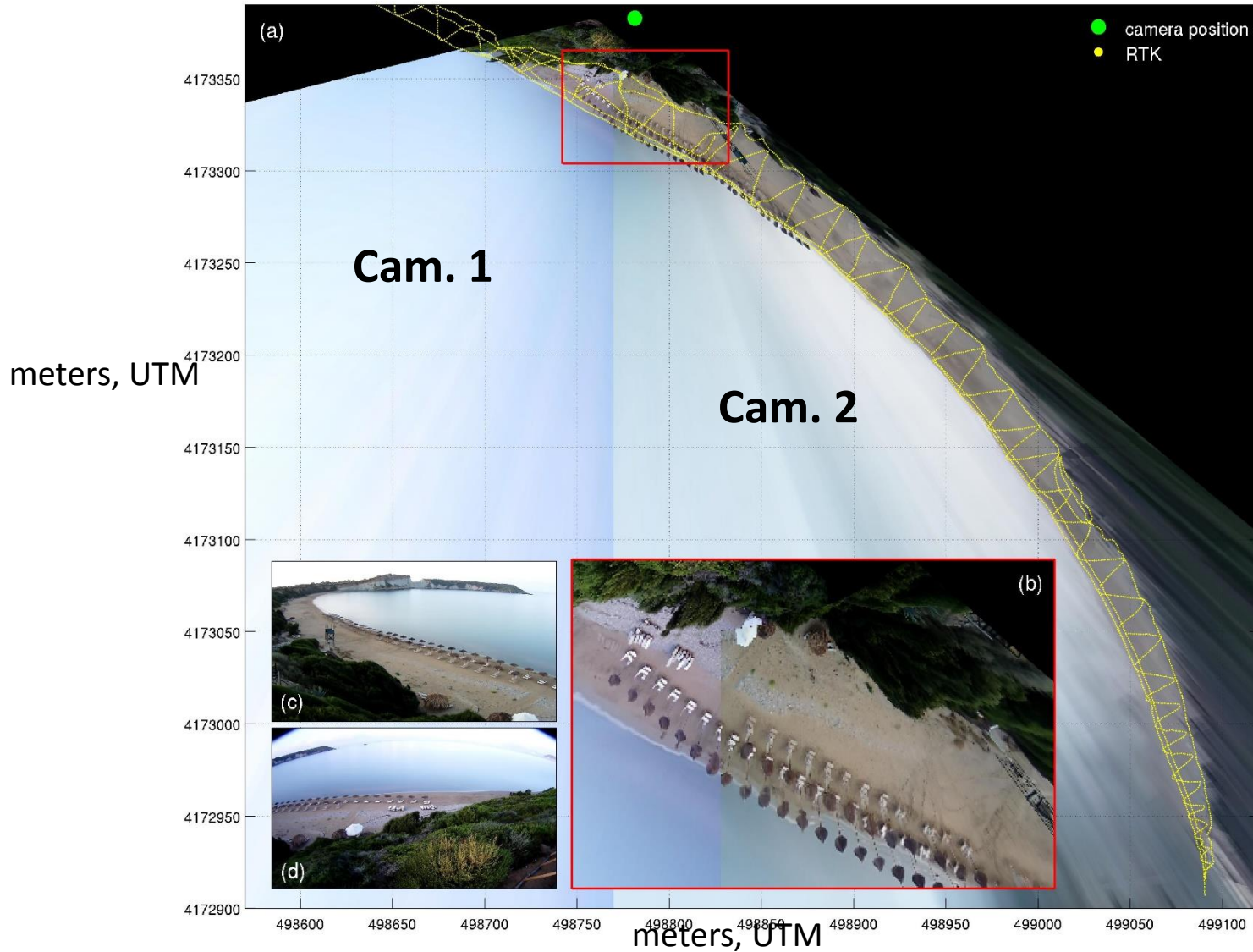
Ground control points (GCPs)



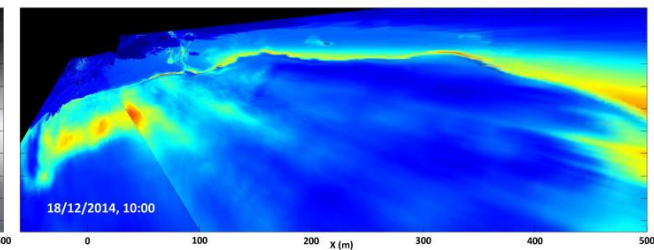
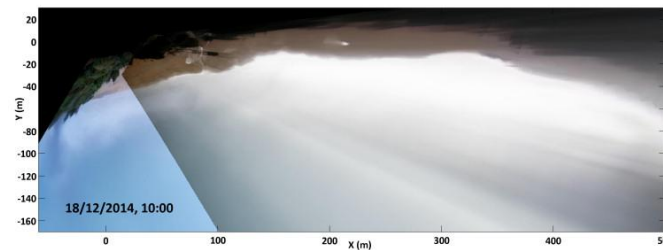
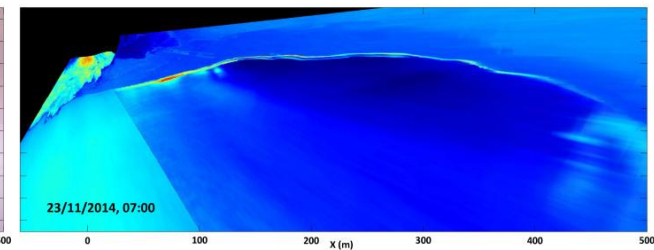
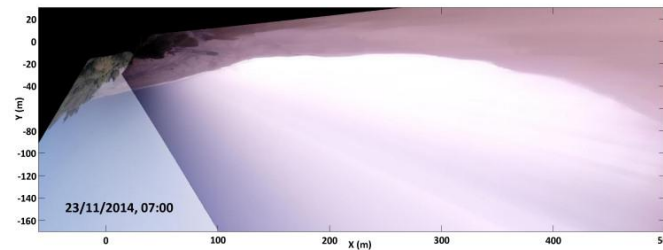
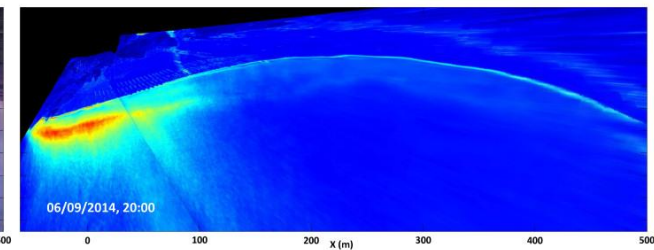
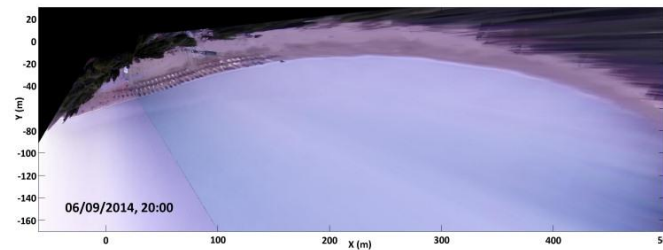
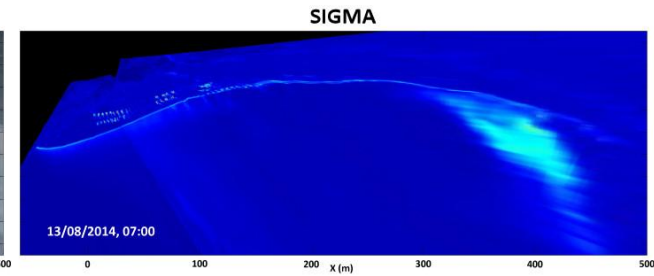
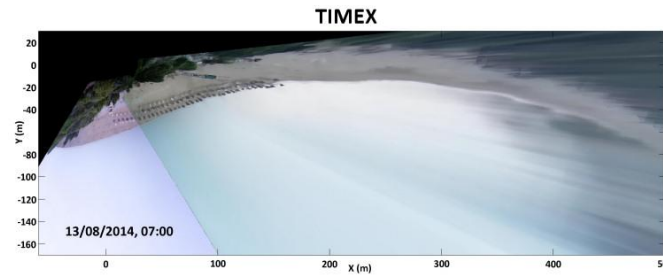
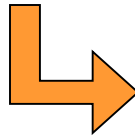
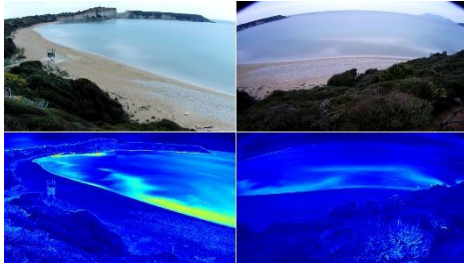
Georectification parameters



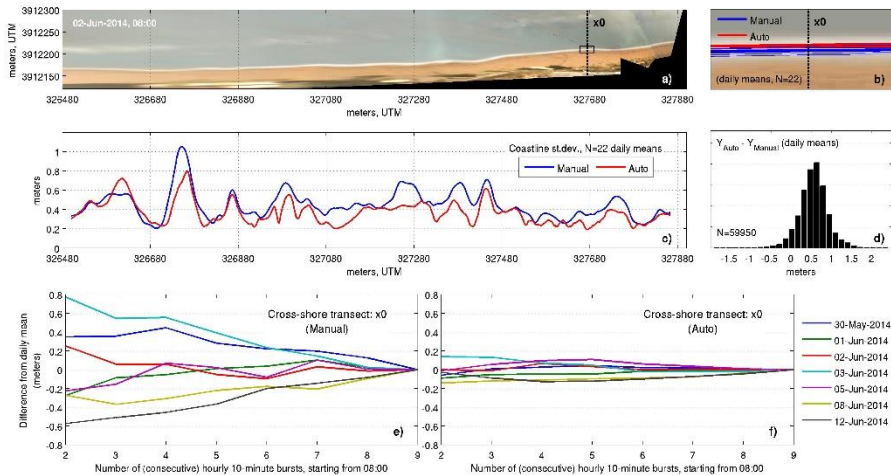
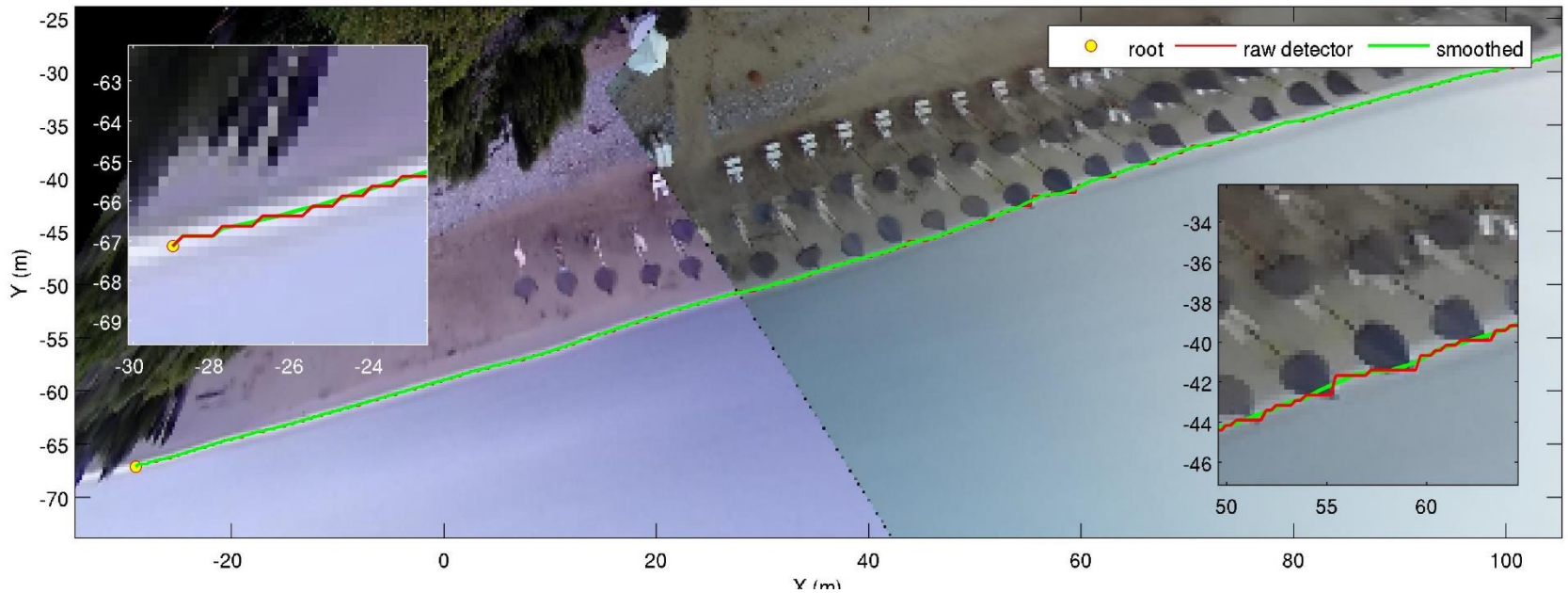
Georectified mosaic (for raw snapshots, TIMEX, SIGMA, ...)



Basic products (TIMEX/SIGMA) are georectified and rotated for easier processing and display

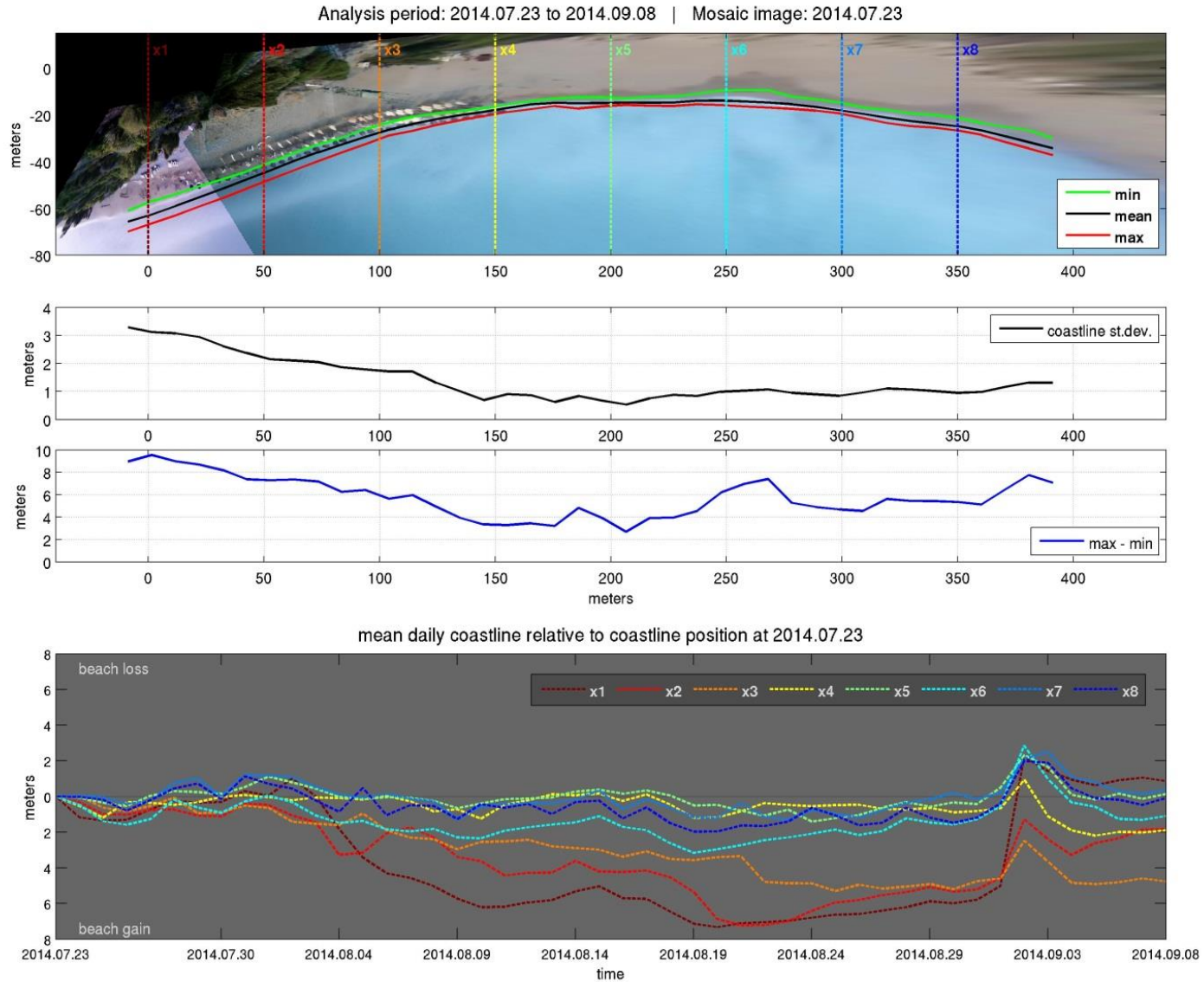


Automatic coastline detector



Ground-truthed with manual detections
(Velegrakis et al., Nat. Haz. under revision)

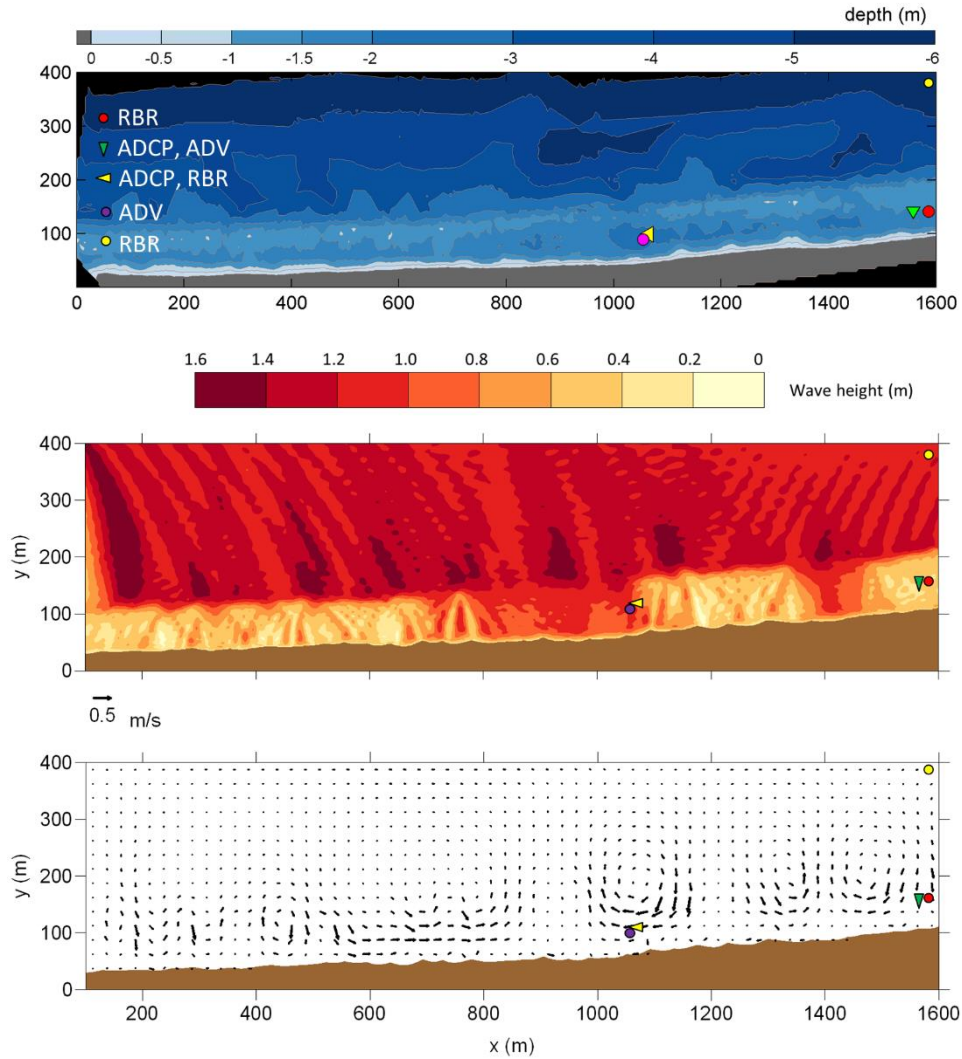
Long-term coastline monitoring: Optical system results



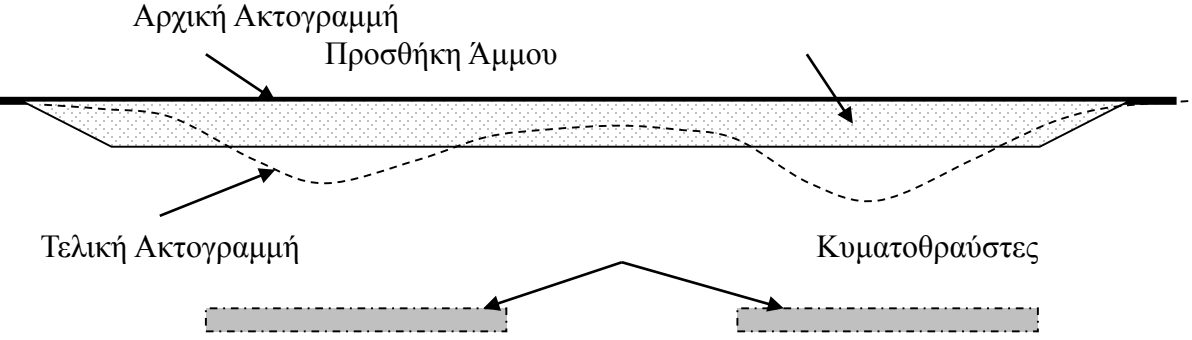
Pilot station(s) under consideration



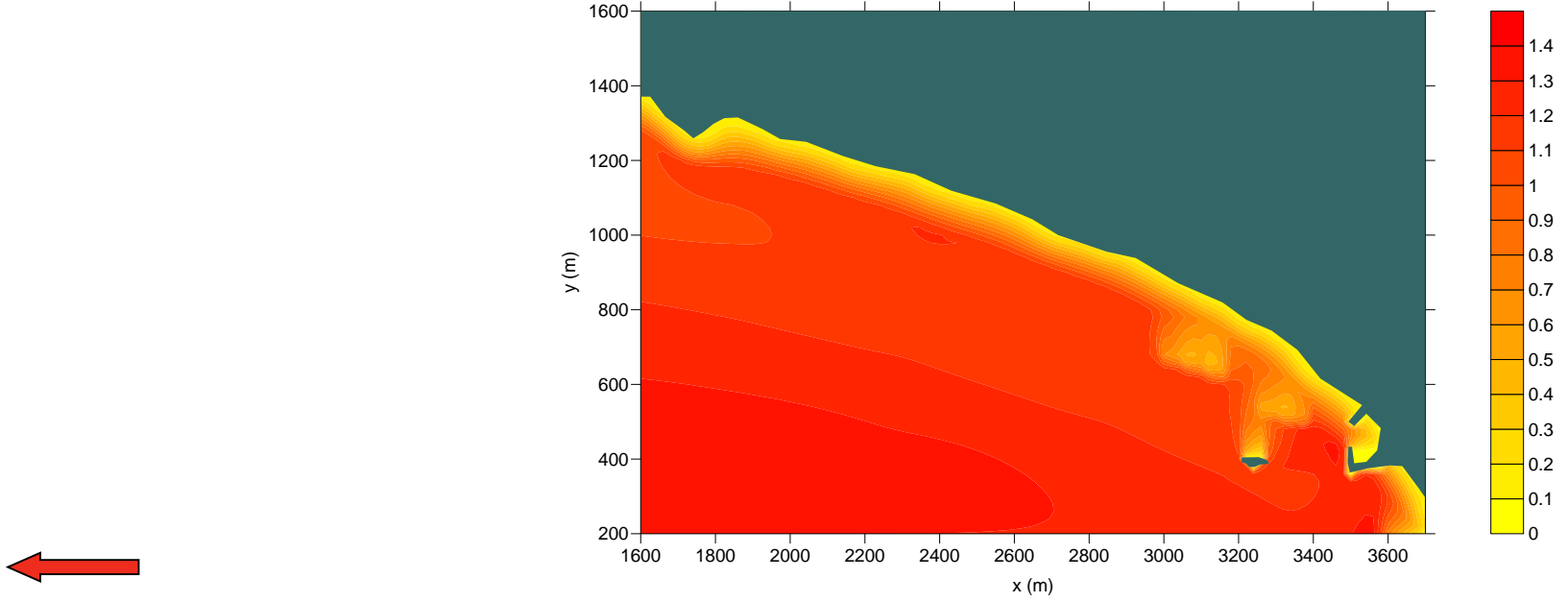
Modeling



Technical solutions



Κατασκευή κυματοθραυστών με αναπλήρωση



H_s (m) for Southerly waves

Dissemination plan

	1	2	3	4	5	6	7	8	9	10	11	12	Responsible
Web Site		x											
Logo		x											
Manual for beach erosion technologies (web)												x	Dr Monioudi
Leaflet for project content and results												x	Dr Monioudi
Training of public body for beaches mgt										x			
Environmental education			x	x	x								Ass Prof Tzoraki
Local festivals								x					
Conferences						x							All
6-month Newsletter						x						x	
public news													
final symposium												x	Ass Prof Hasiotis
Meetings with stakeholders		x	x	x	x	x	x	x	x	x	x	x	All



