

# Ecobeach Proef bij Egmond

**ECOBEBACH** EEN NATUURLIJKE  
OPLOSSING?



Rijkswaterstaat



INNOVATIE LAND(T)  
OP HET STRAND!

Achtergrond  
&  
Stand van Zaken

Deltares  
Kees van Ruiten

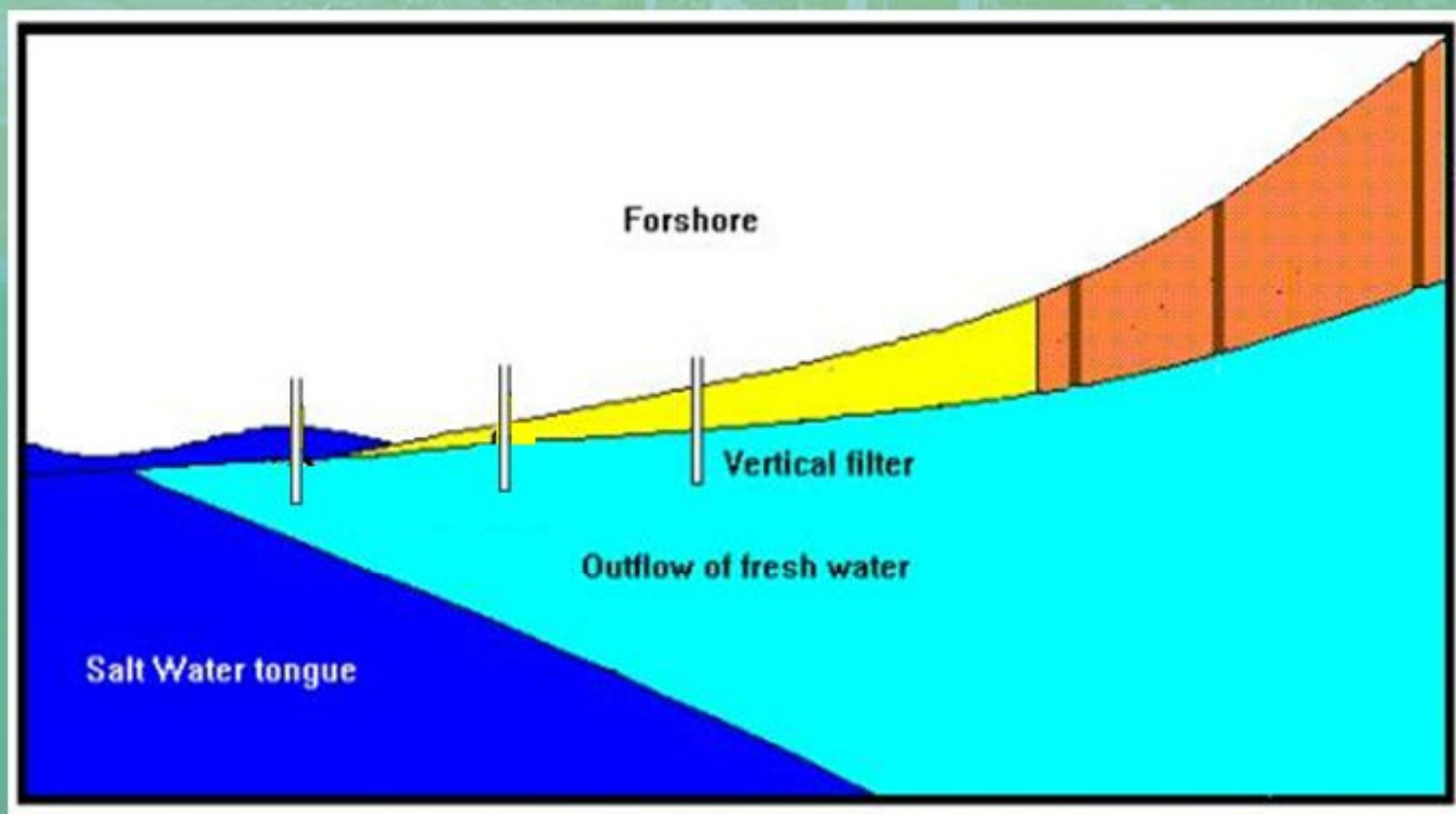
## ‘Dag van Maarssen’ 1 november 2005 Intentieverklaring RWS en BAM voor nader onderzoek Pilot Ecobeach



# Dag van Egmond: Eerste buis in de grond op 13 november 2006



## Ecobeach: Natuurlijke aanzanding



## Proef Ecobeach Skodbjerg

Eigen waarneming RWS  
RWS en BAM, februari 2006



## Aanbrengen Ecobeach buis bij Strand Egmond



## Doel van de proef bij Egmond

### ➤ Maatschappelijke meerwaarde

- ✓ Beheer en onderhoud van de kust (**veiligheid**)

  - Beperken oplopende kosten

  - Gesteld staan voor zeespiegelstijging

- ✓ Strandbreedte/kwaliteit (**recreatie**)

- ✓ Bijdrage aan duinvorming (**natuurontwikkeling**)

- ✓ Werking aantonen

- ✓ Innovatiewaarde Eigen Initiatief

## Gebruikfuncties aan de kust





Geen strandsuppleties meer !

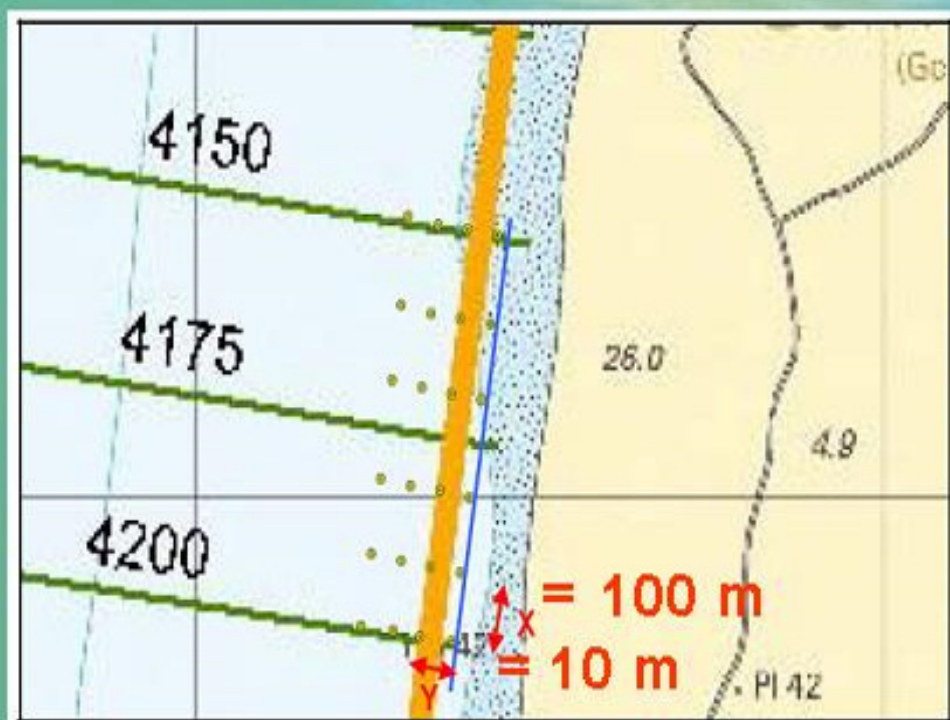


## Betrekken lokale bestuurders, ondernemers en bevolking/ strandgebruikers

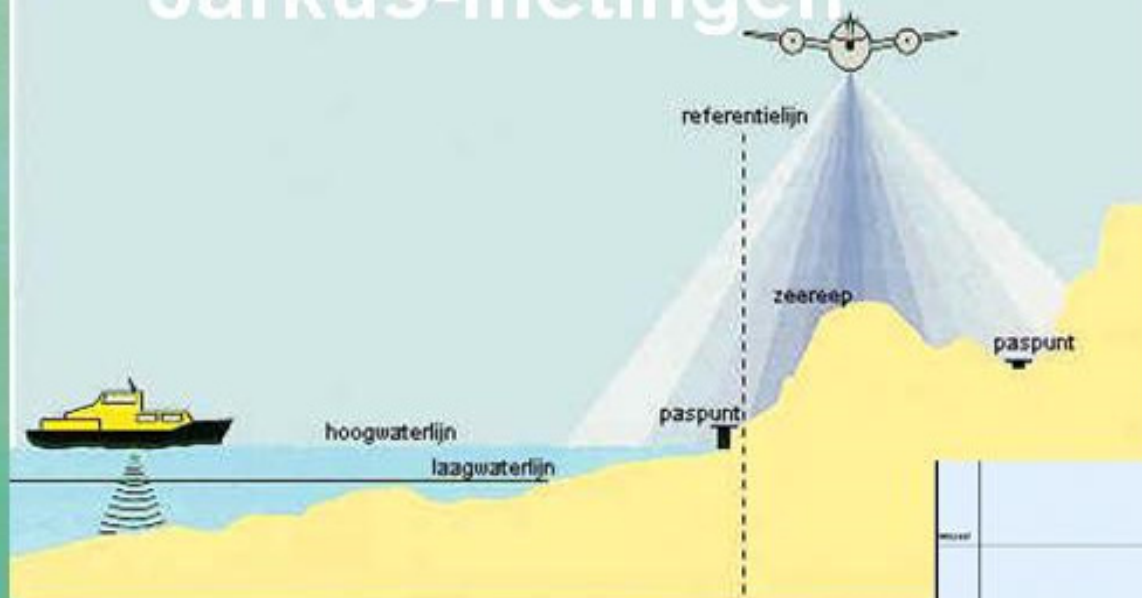
Website ([www.ecobeach.nl](http://www.ecobeach.nl))



### Locatie Proefvak Egmond-Zuid

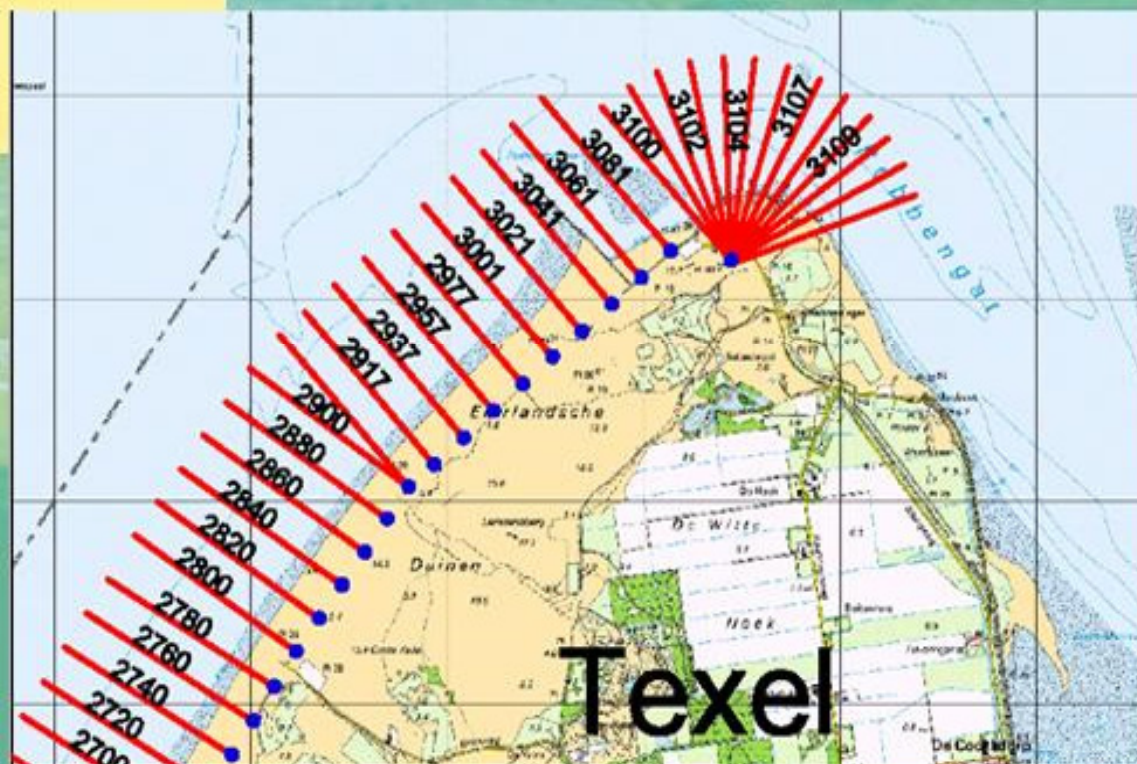


## Jarkus-metingen

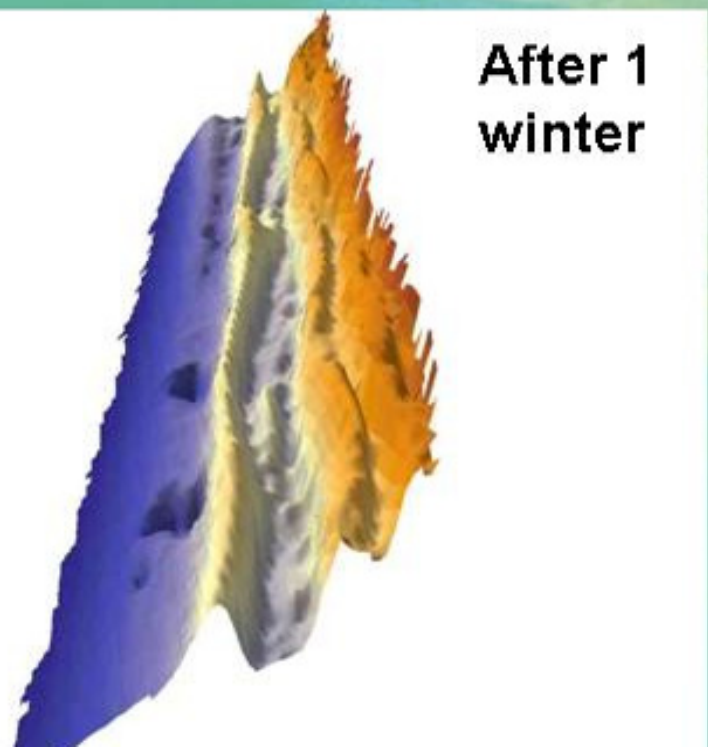


- Jaarlijk na stormseizoen
- Raaiafstand 250 meter

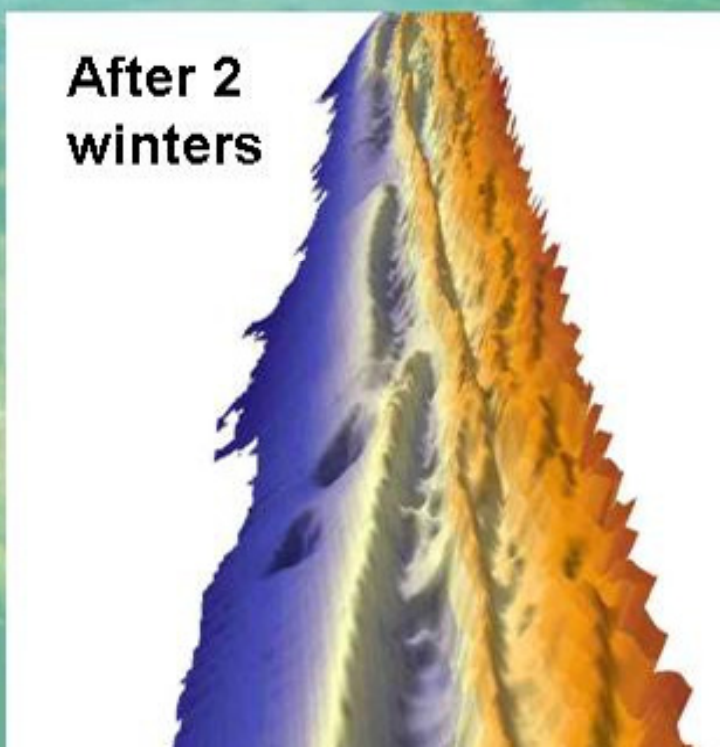
- Laser altimeter (duinen)
- DGPS (strand)
- Sonar (onder water)



# Vooroeversuppletie EGMOND



**After 1  
winter**



**After 2  
winters**

## Proces monitoring ARGUS video camera

2 lokaties

Vuurtoren  
Jan van Speijk  
(KM  $\pm$  3800)

&

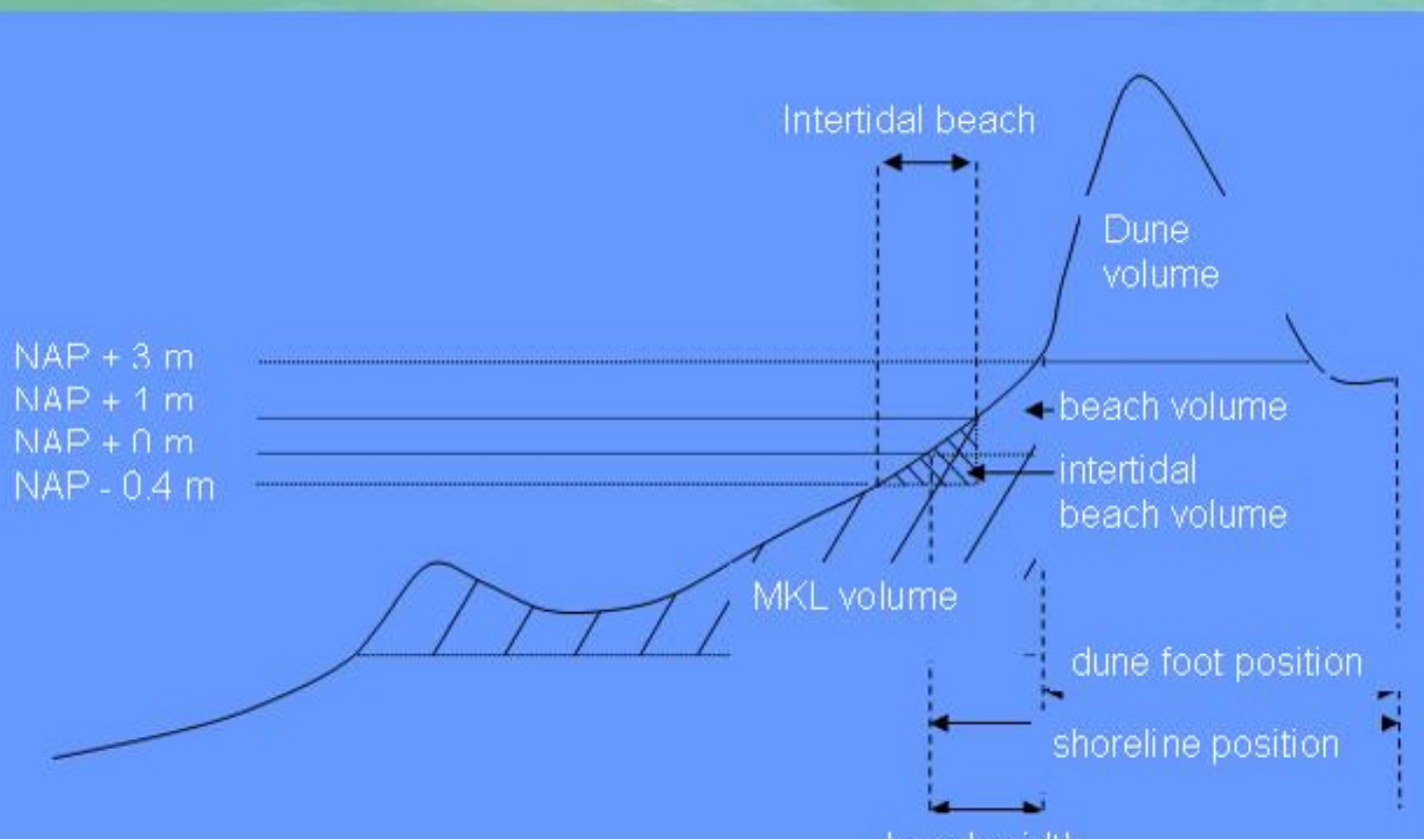
Coast 3D mast  
(KM 4125)



## Resultaten van 2007 tot 2009

Analyse:

- Aggregatie over 3 km
- Volume bepaling per (deel-) dwarsdoorsnede
- Statistisch model met harmonische t.g.v. zandgolven
- Vergelijking met referentie gebied (km 40-43 Castricum)



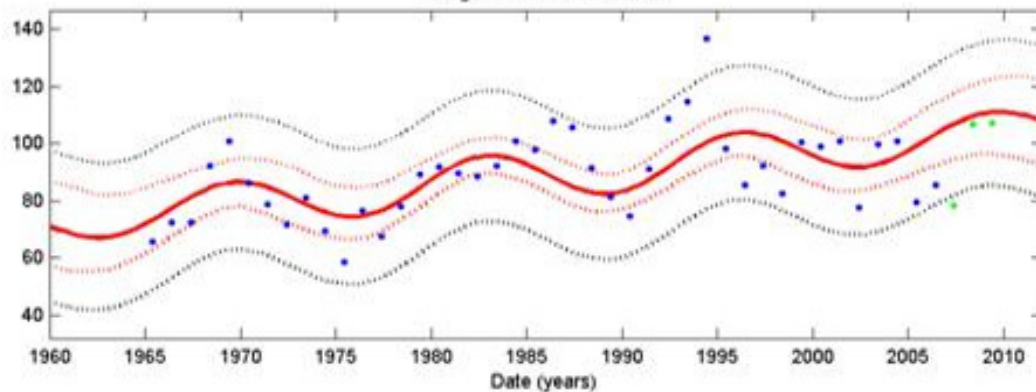
Deltares:  
- Christophe Brière

## Long-term behaviour of the shoreline position in

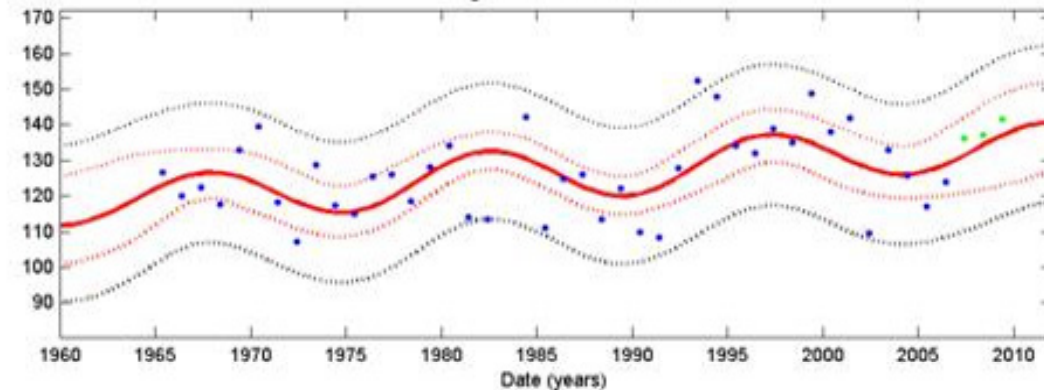
test area

reference area

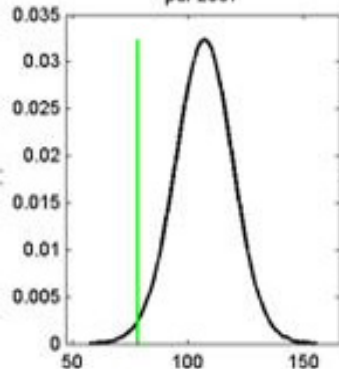
Long-term behaviour of CSI



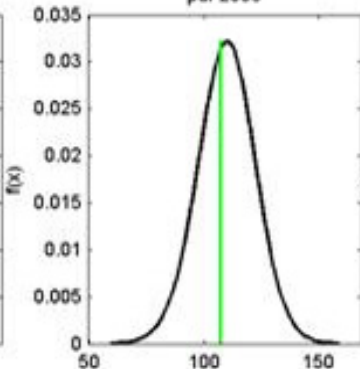
Long-term behaviour of CSI



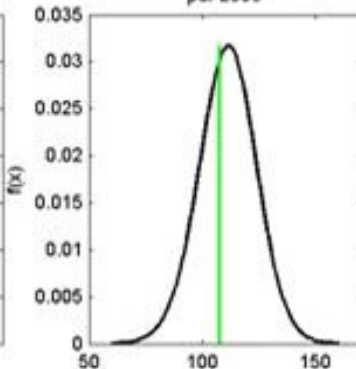
pdf 2007



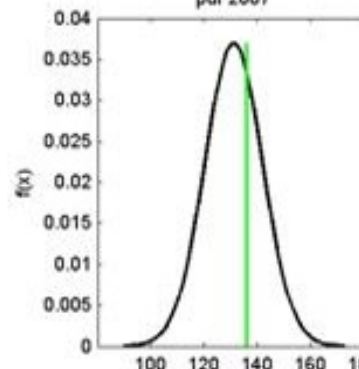
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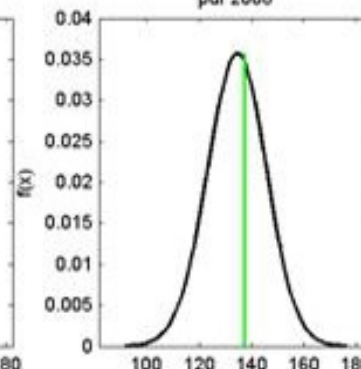
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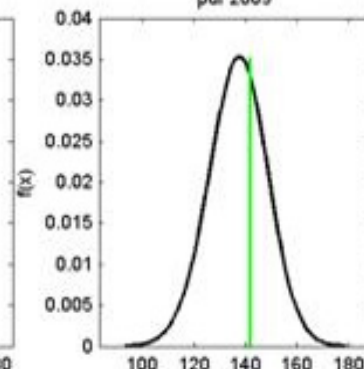
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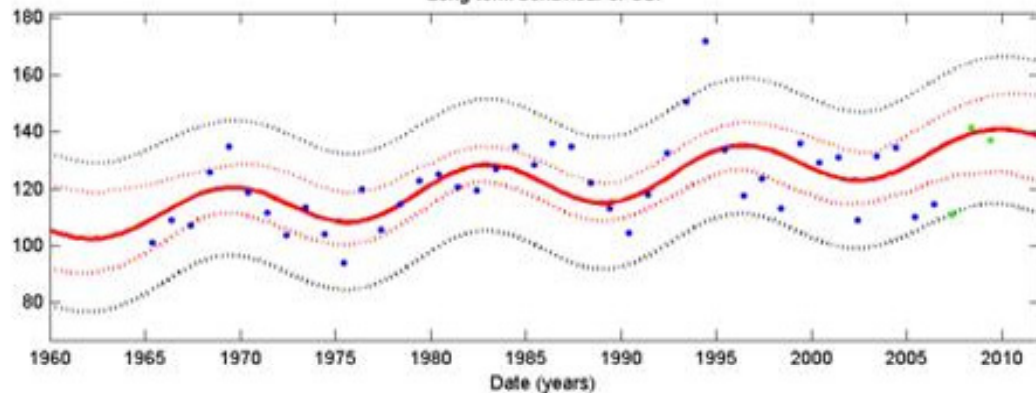


## Long-term behaviour of Beach width in

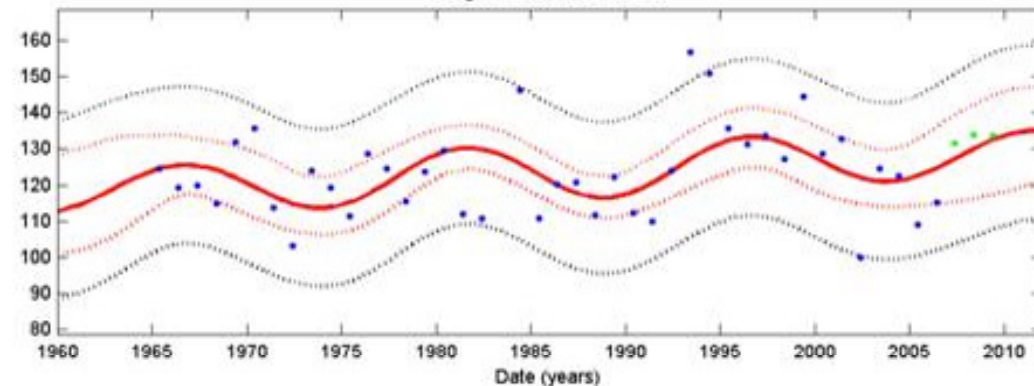
test area

reference area

Long-term behaviour of CSI



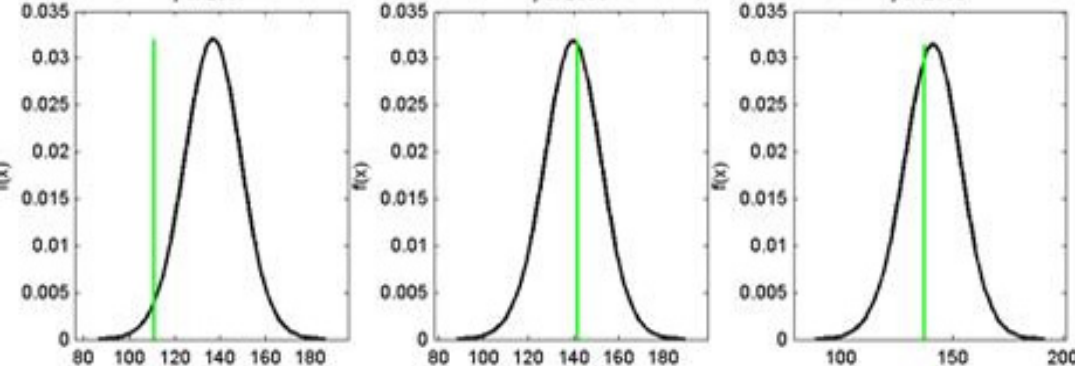
Long-term behaviour of CSI



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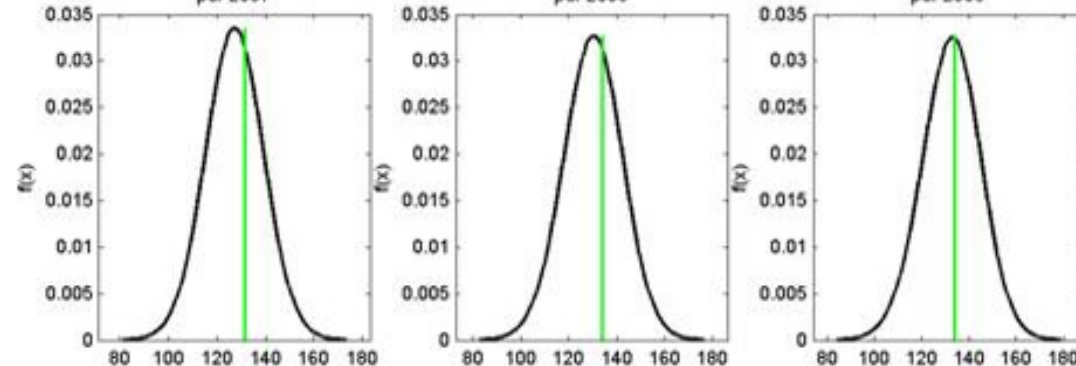
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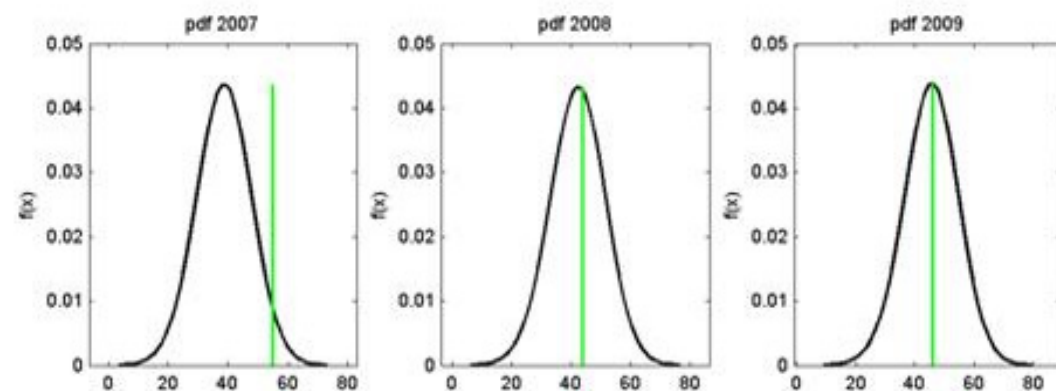
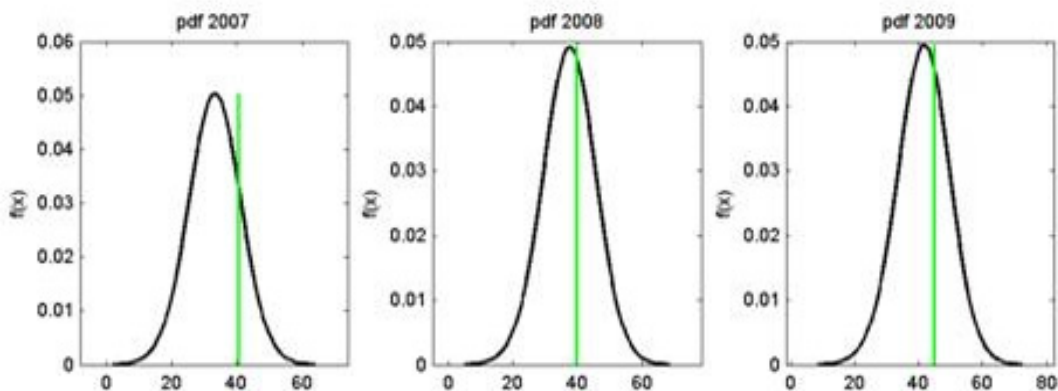
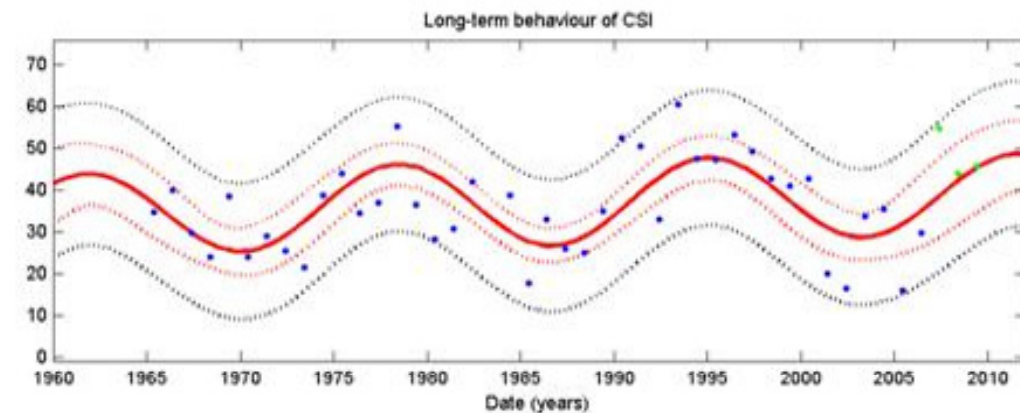
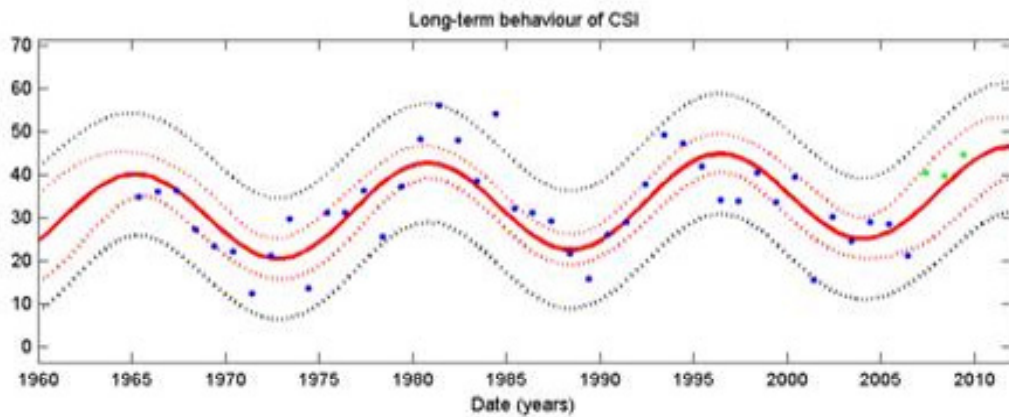
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## Long-term behaviour of the Intertidal Beach volume in

test area

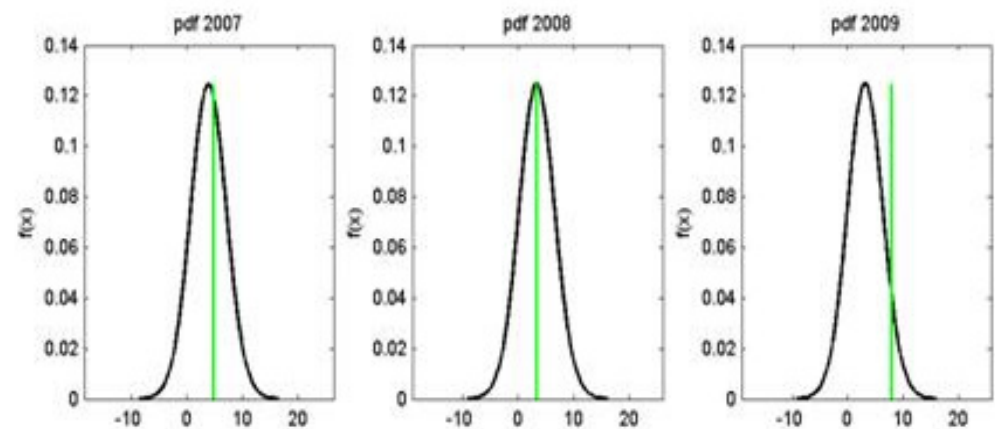
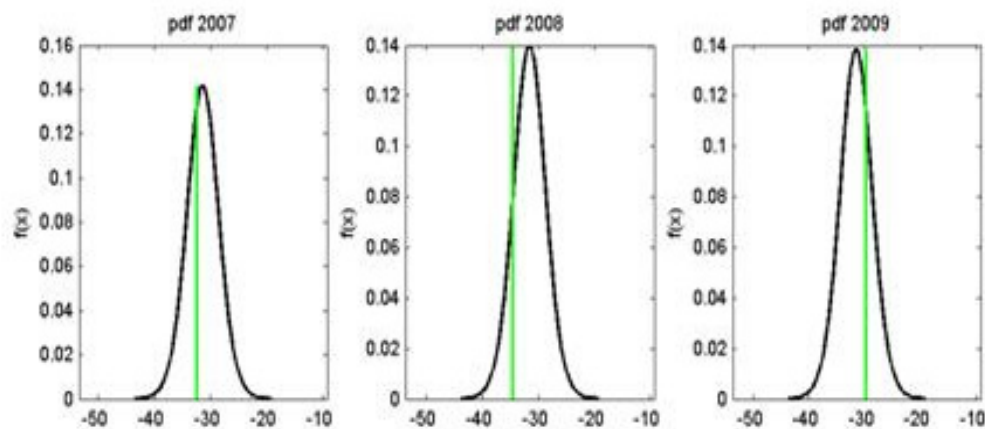
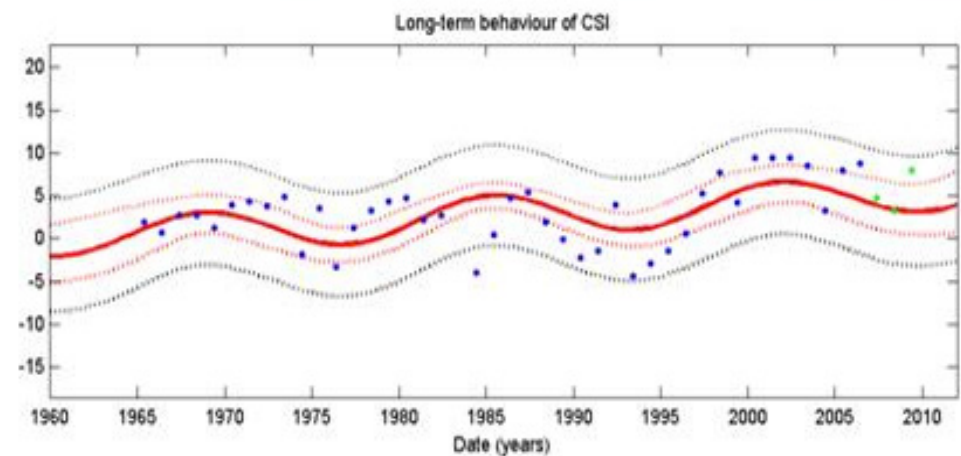
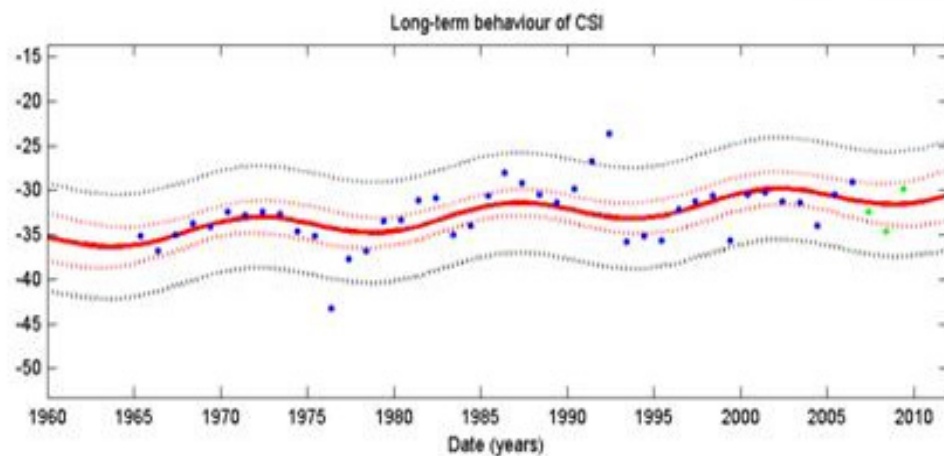
reference area



## Long-term behaviour of the Dune foot position in

test area

reference area

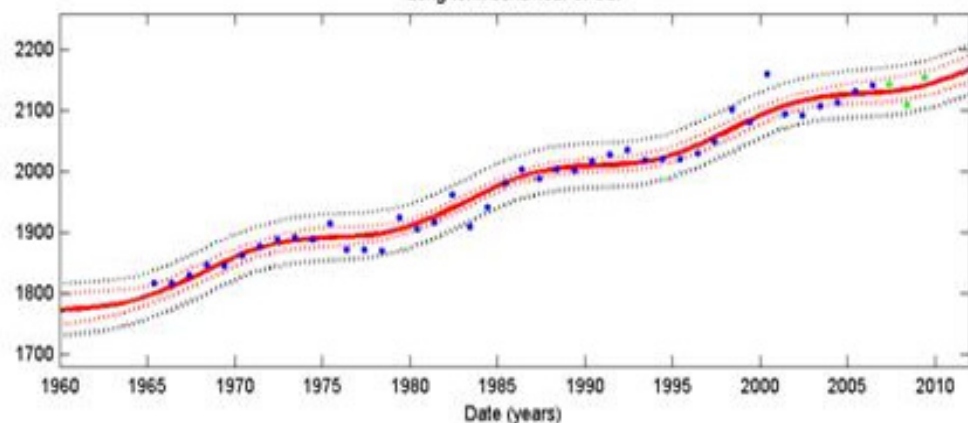


## Long-term behaviour of the Dune volume in

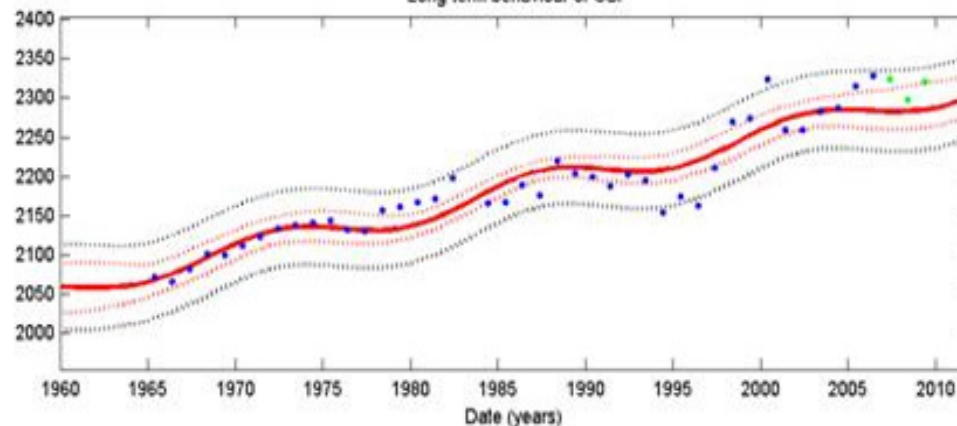
test area

reference area

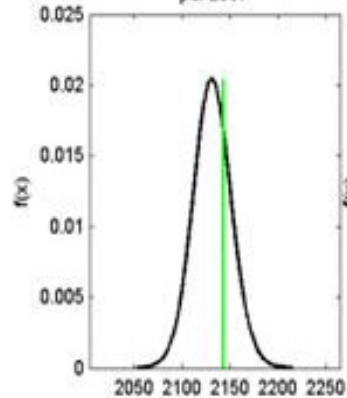
Long-term behaviour of CSI



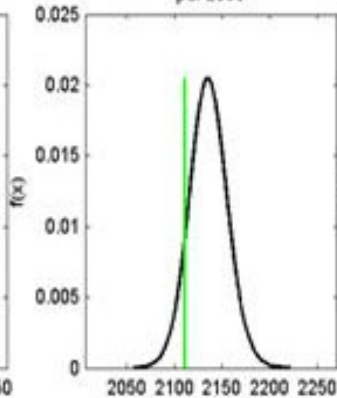
Long-term behaviour of CSI



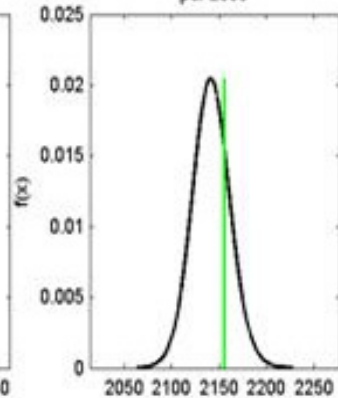
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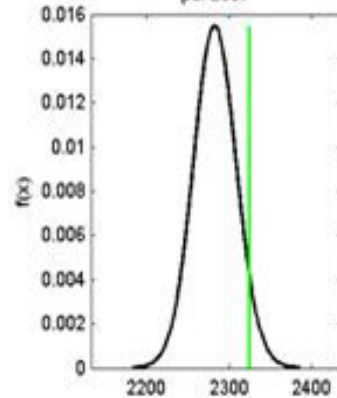
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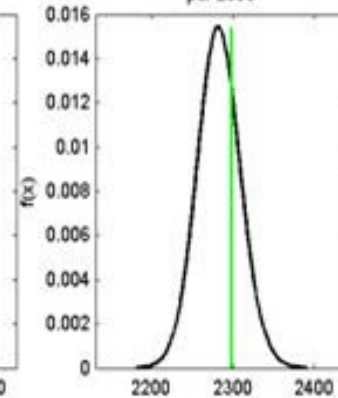
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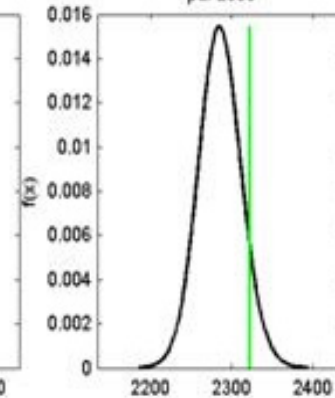
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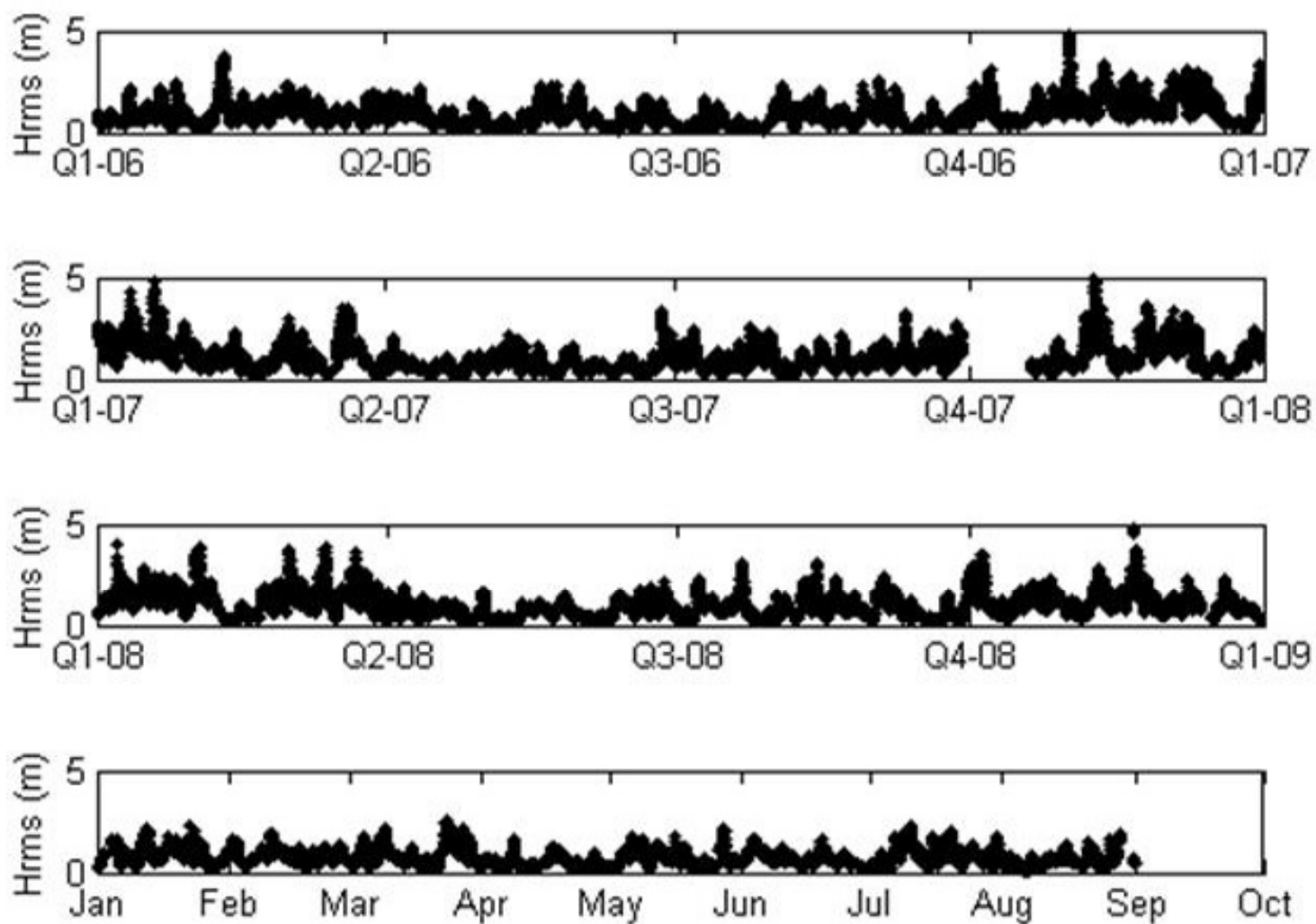
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## Golfcondities



Vragen?

Rijkswaterstaat  
WINN-programma

**Deltares**  
Enabling Delta Life 