Prepared for:

Rijkswaterstaat

Dienst Getijdewateren

Wave conditions along the Dutch coast

Part B: Figures

Report on numerical model studies

July 1993

delft hydraulics

Wave conditions along the Dutch coast

delft hydraulics

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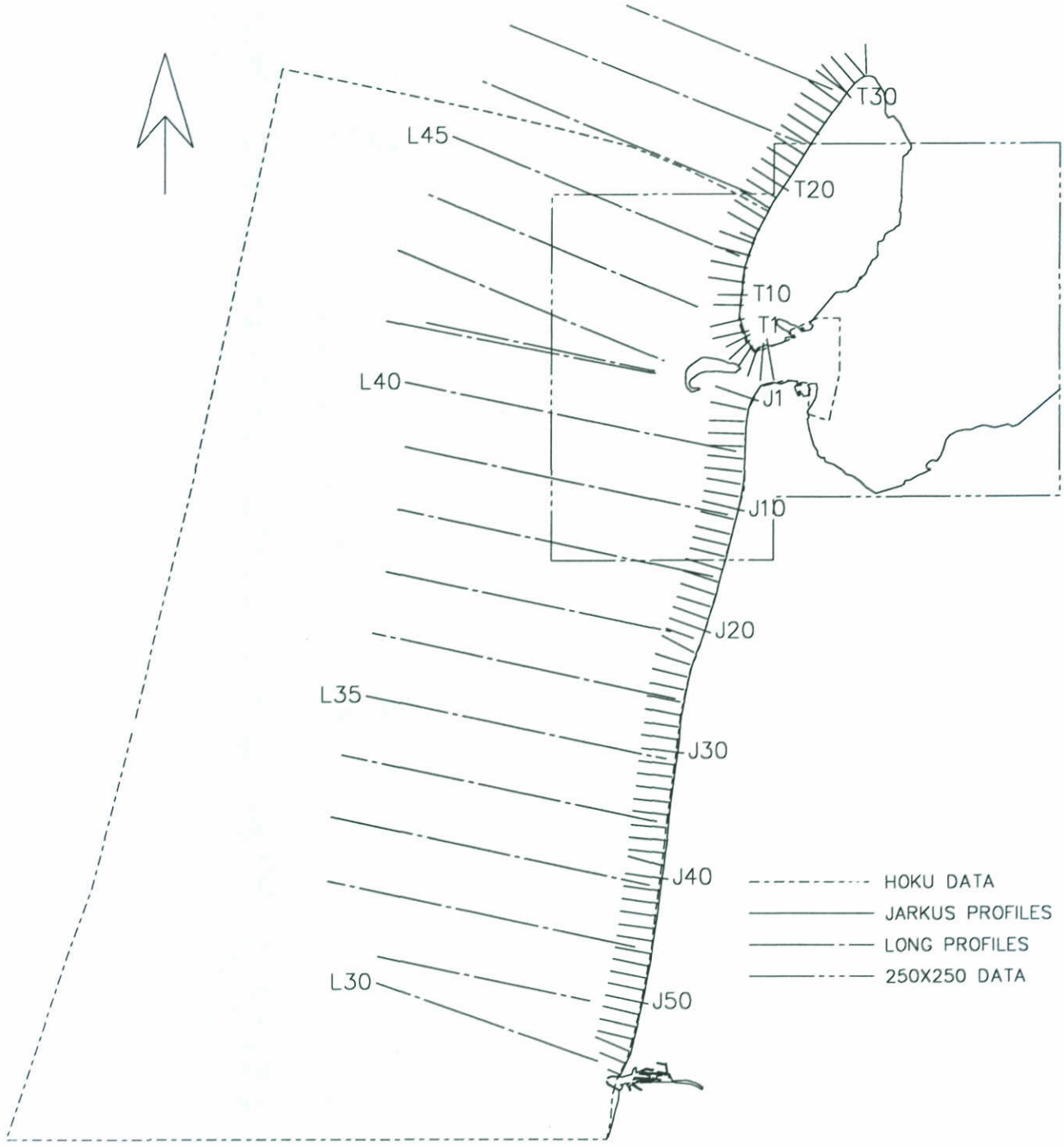
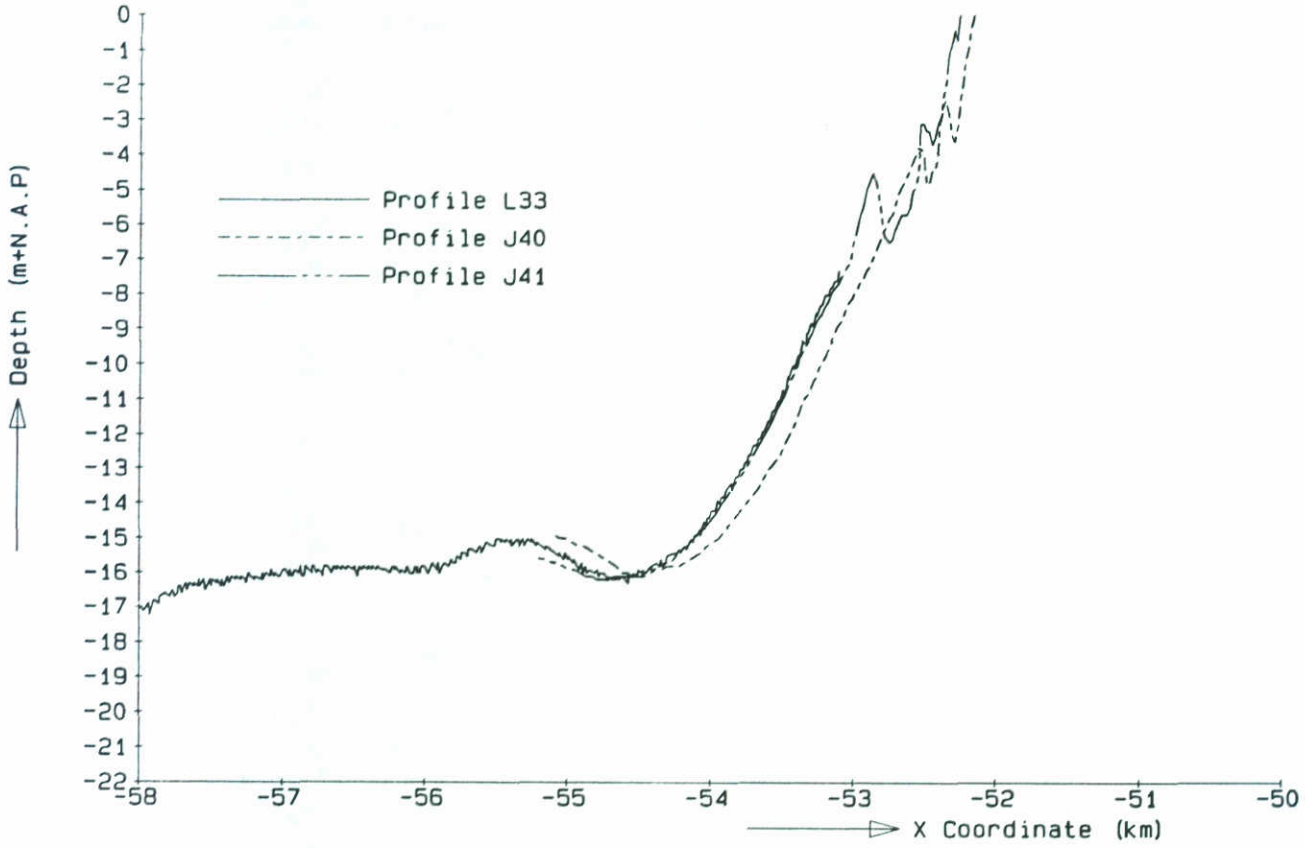
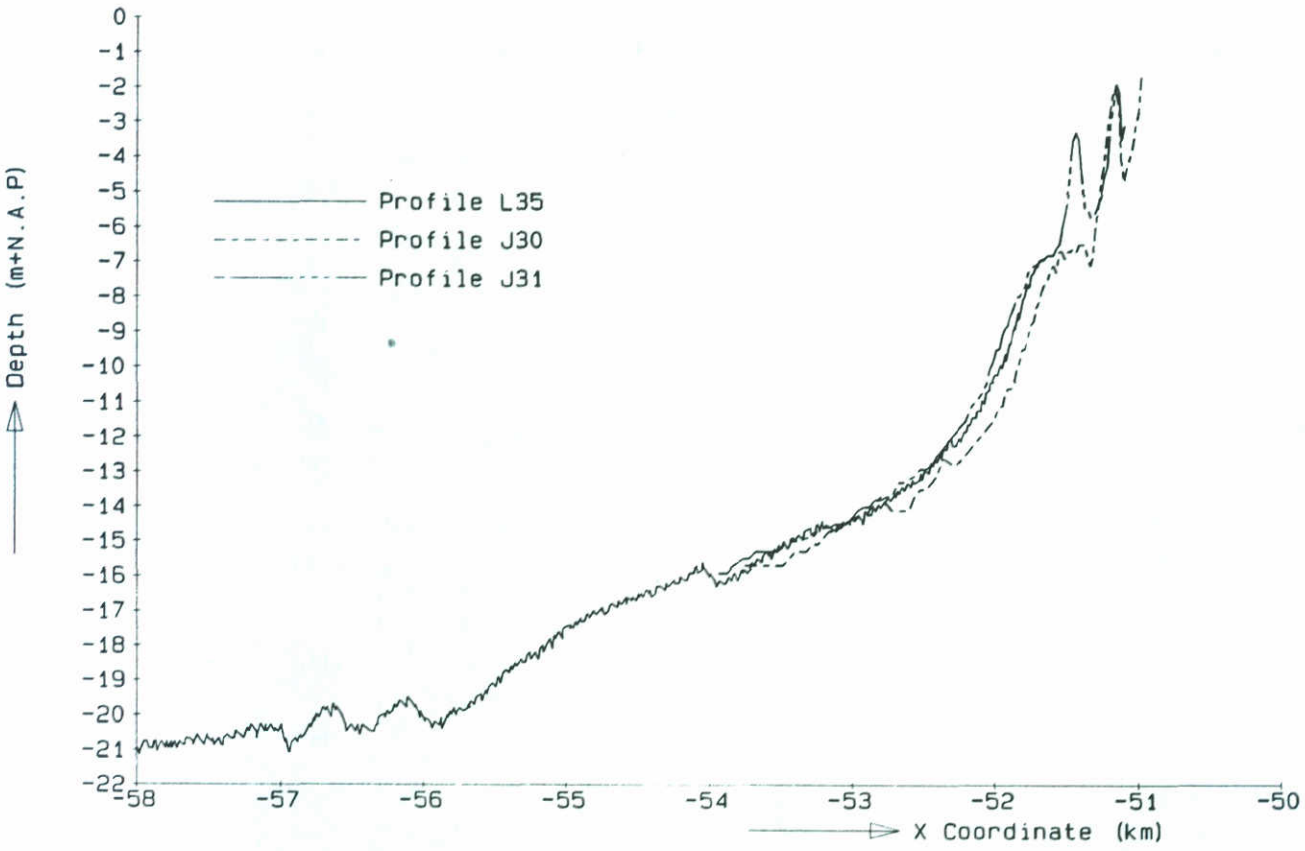
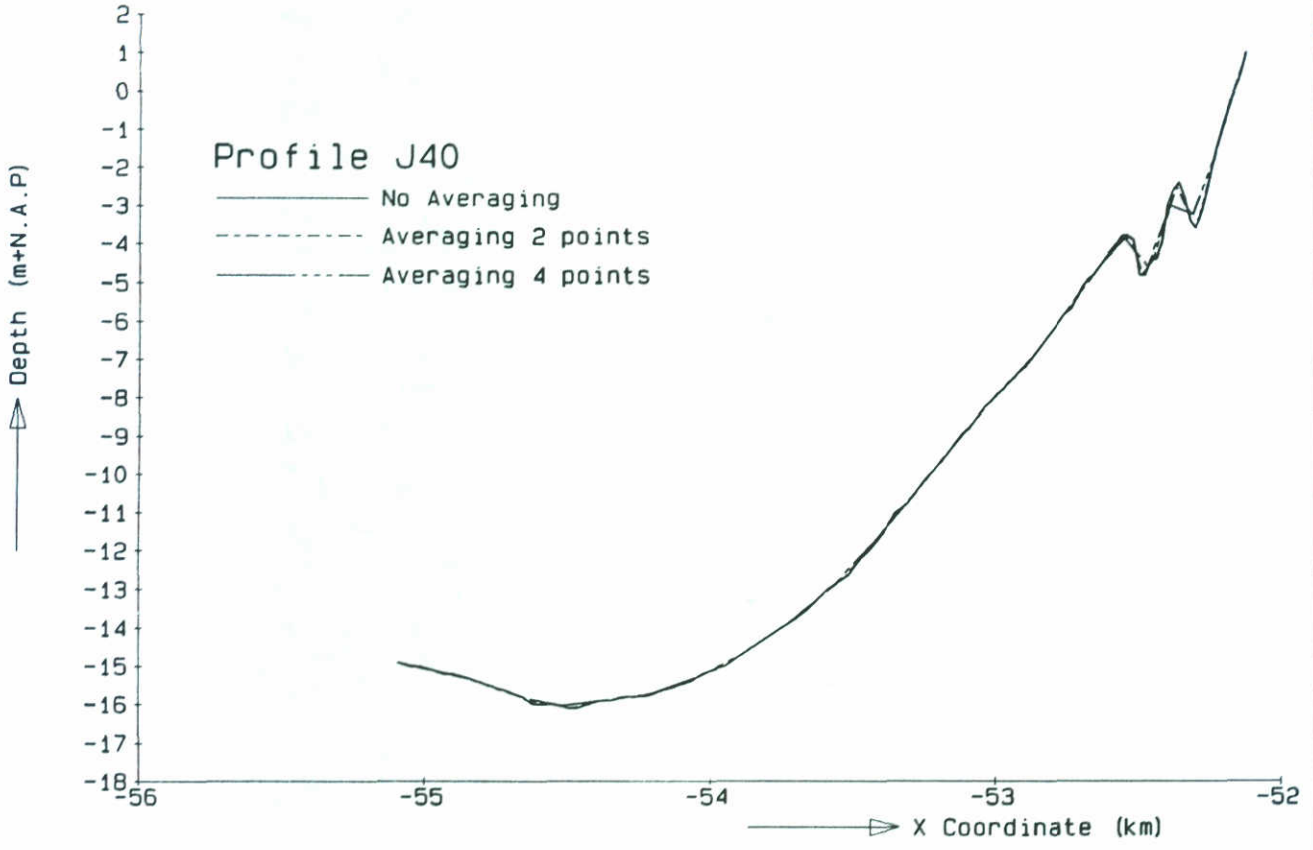


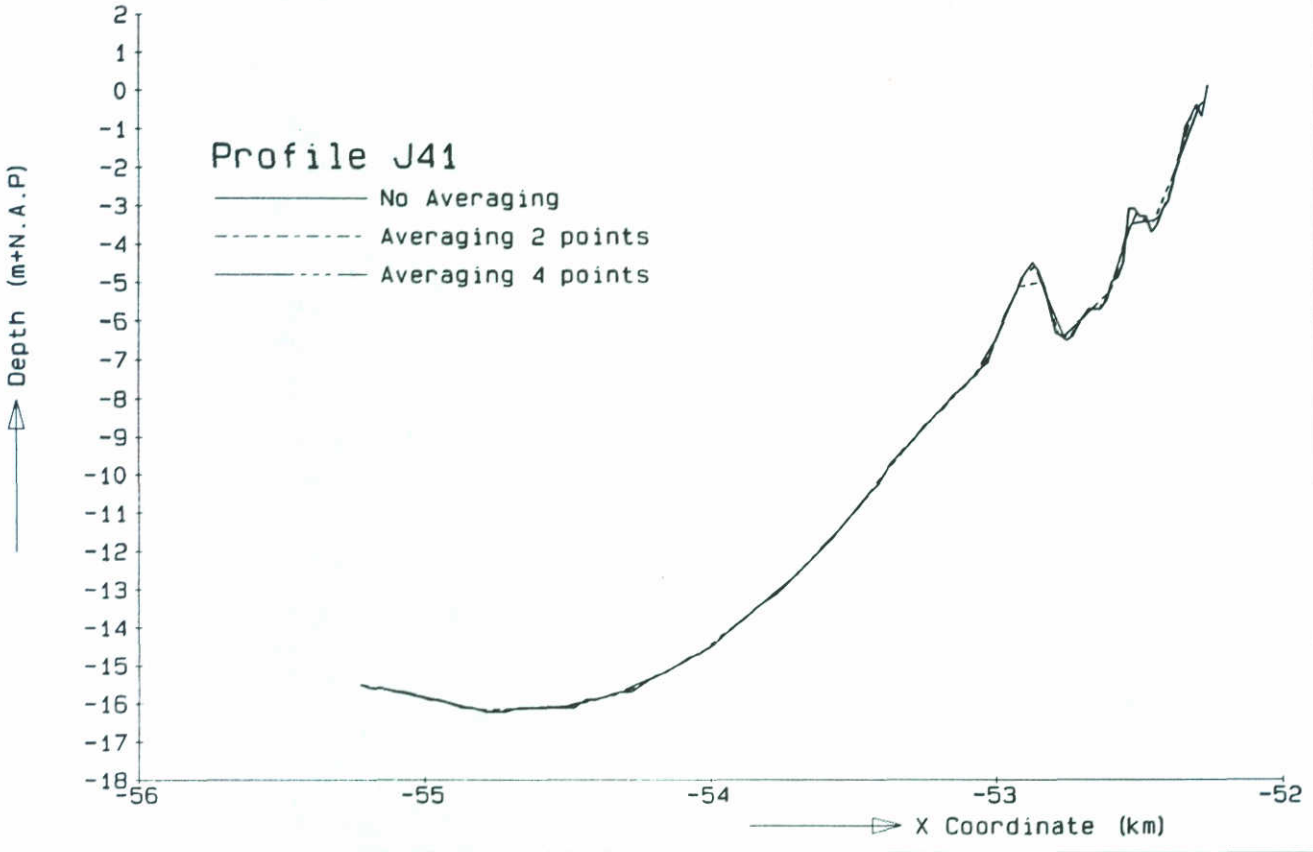
DATA SOURCES BATHYMETRY	HYDRA	
	SCALE 1:500000	
DELFT HYDRAULICS	H 1355	FIG. 4.1



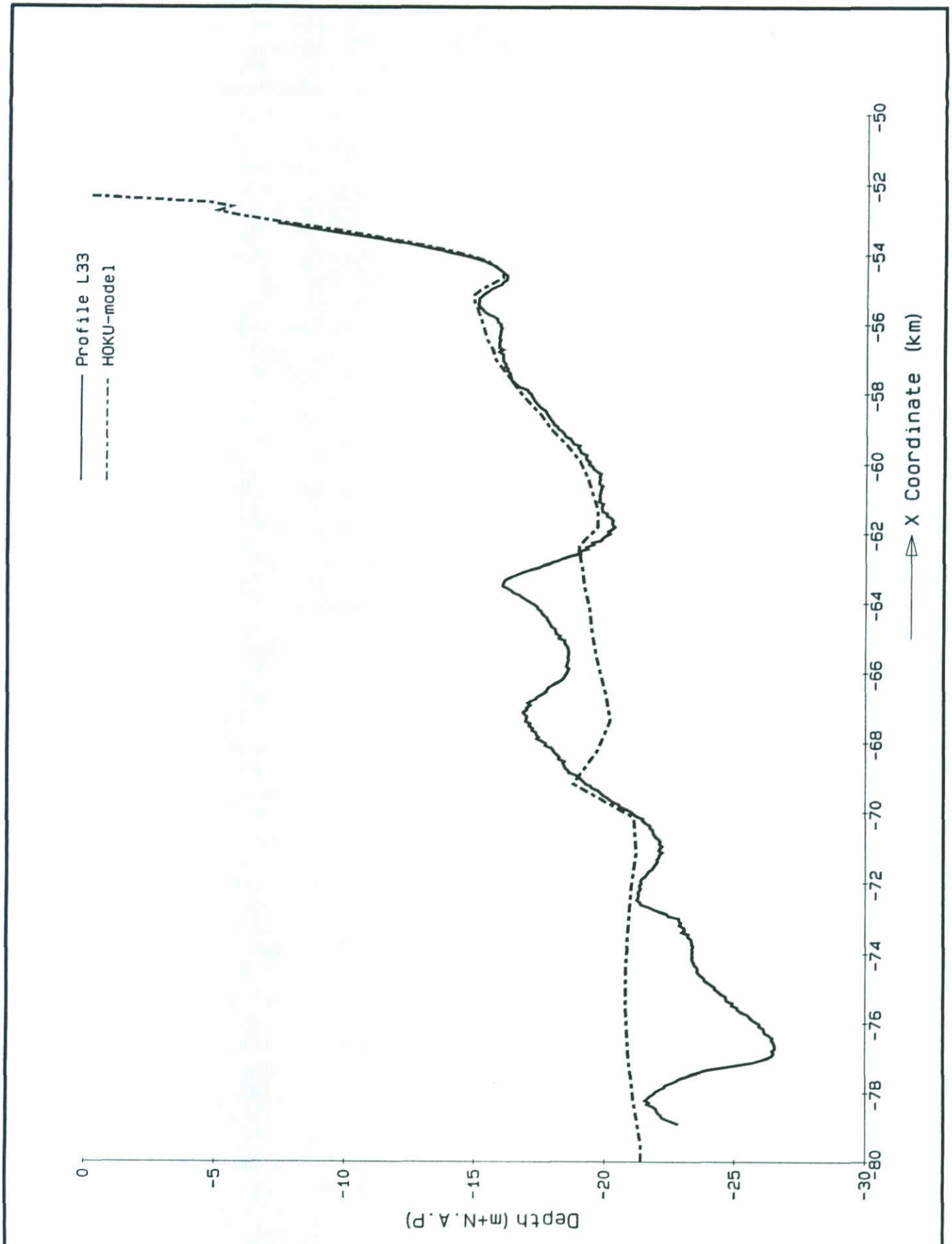


COMPARISON LONG PROFILES L33 AND L35 WITH CORRESPONDING JARKUS-PROFILES	HYDRA	
DELFT HYDRAULICS	H1355	Fig.4.2

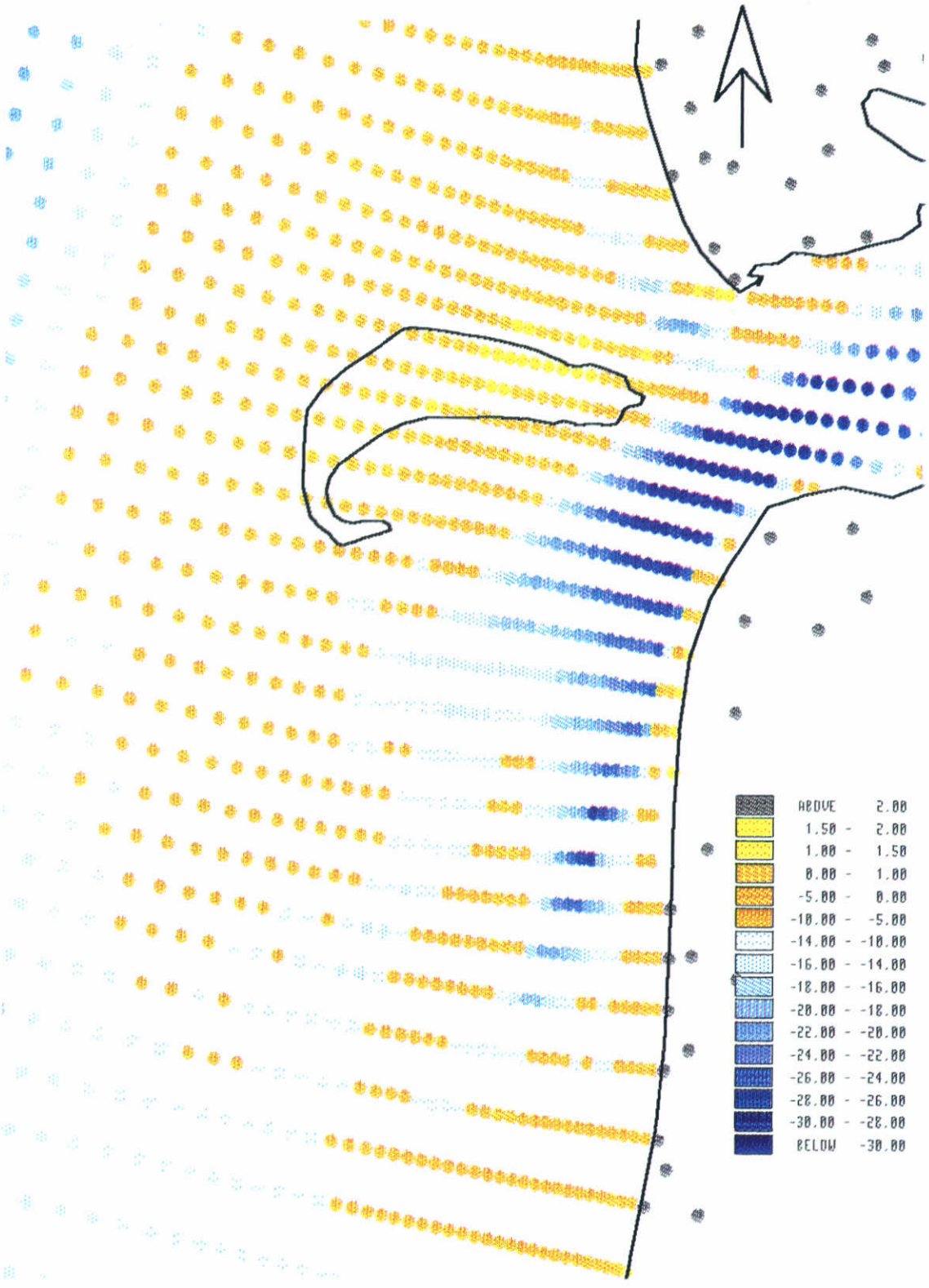




EFFECT OF AVERAGING ON PROFILE REPRESENTATION	HYDRA	
DELFT HYDRAULICS	H1355	Fig.4.3



COMPARISON LONG PROFILE L33 WITH CORRESPONDING SECTION OF THE HOKU-MODEL	HYDRA	
DELFT HYDRAULICS	H1355	FIG.4.4



DATA POINTS HOKU BATHYMETRY
DETAIL OUTER DELTA

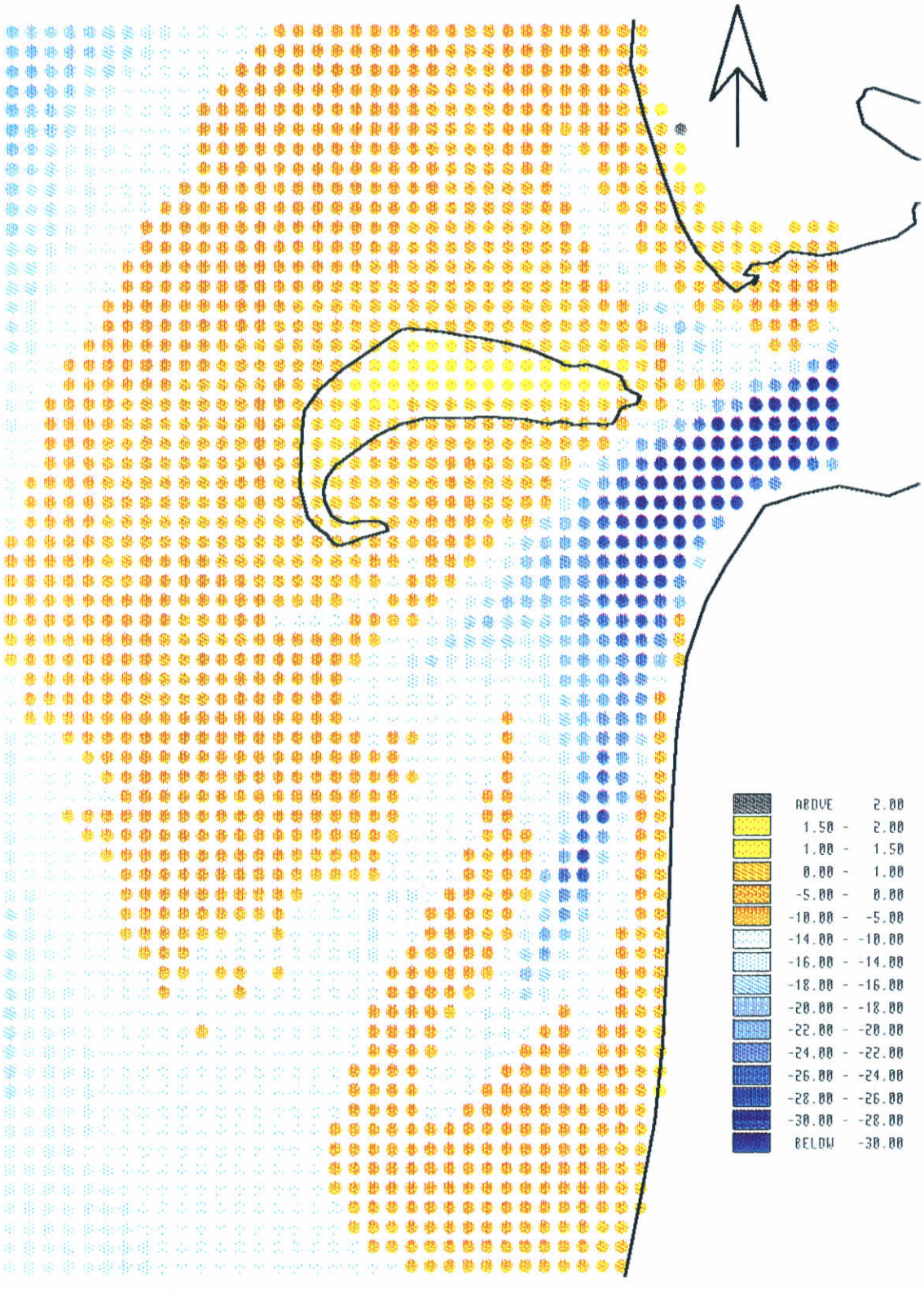
HYDRA

Scale 1 : 80000

DELFT HYDRAULICS

H1355

Fig 4.5



DATA POINTS 250x250 BATHYMETRY
DETAIL OUTER DELTA

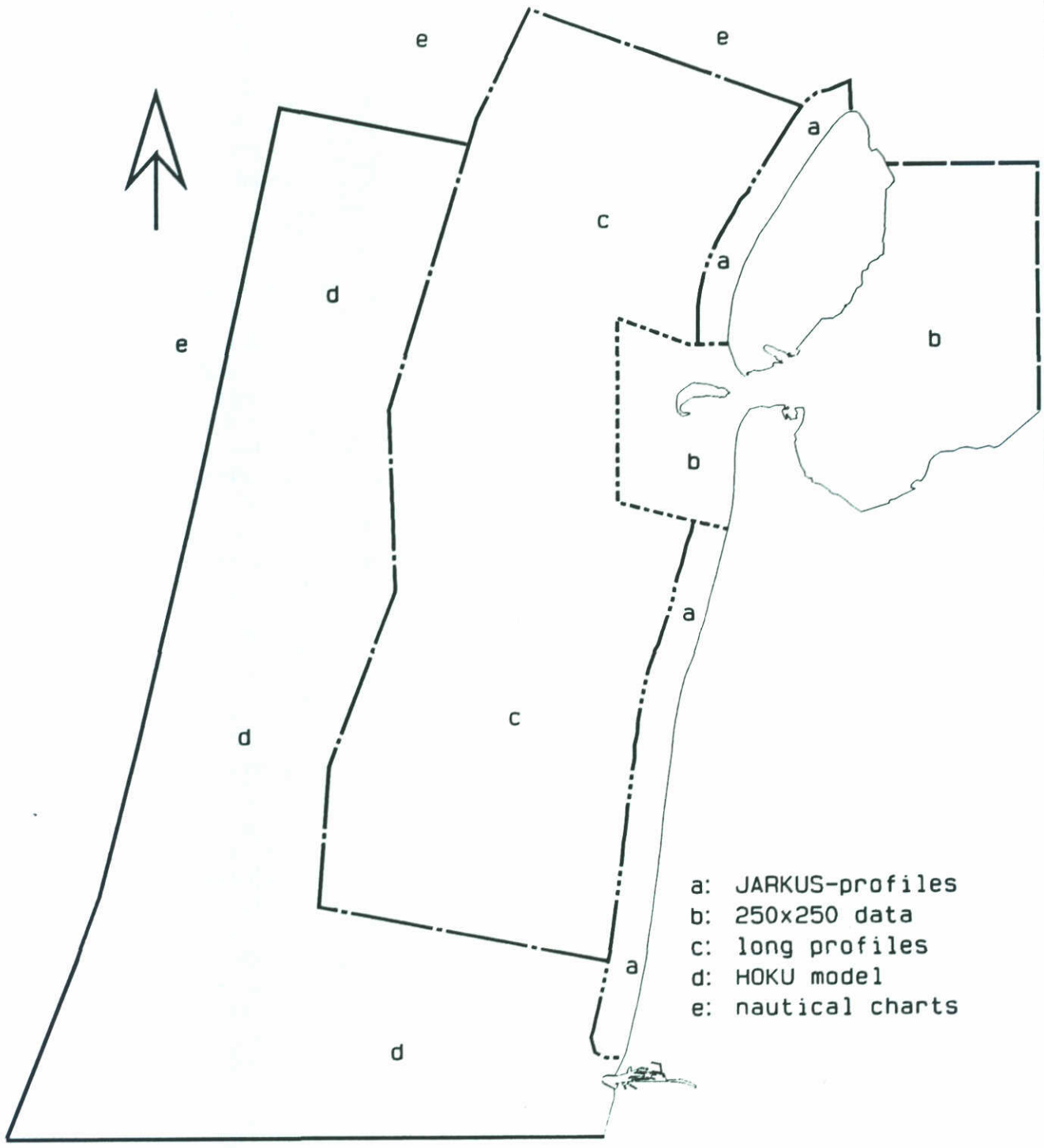
HYDRA

Scale 1 : 80000

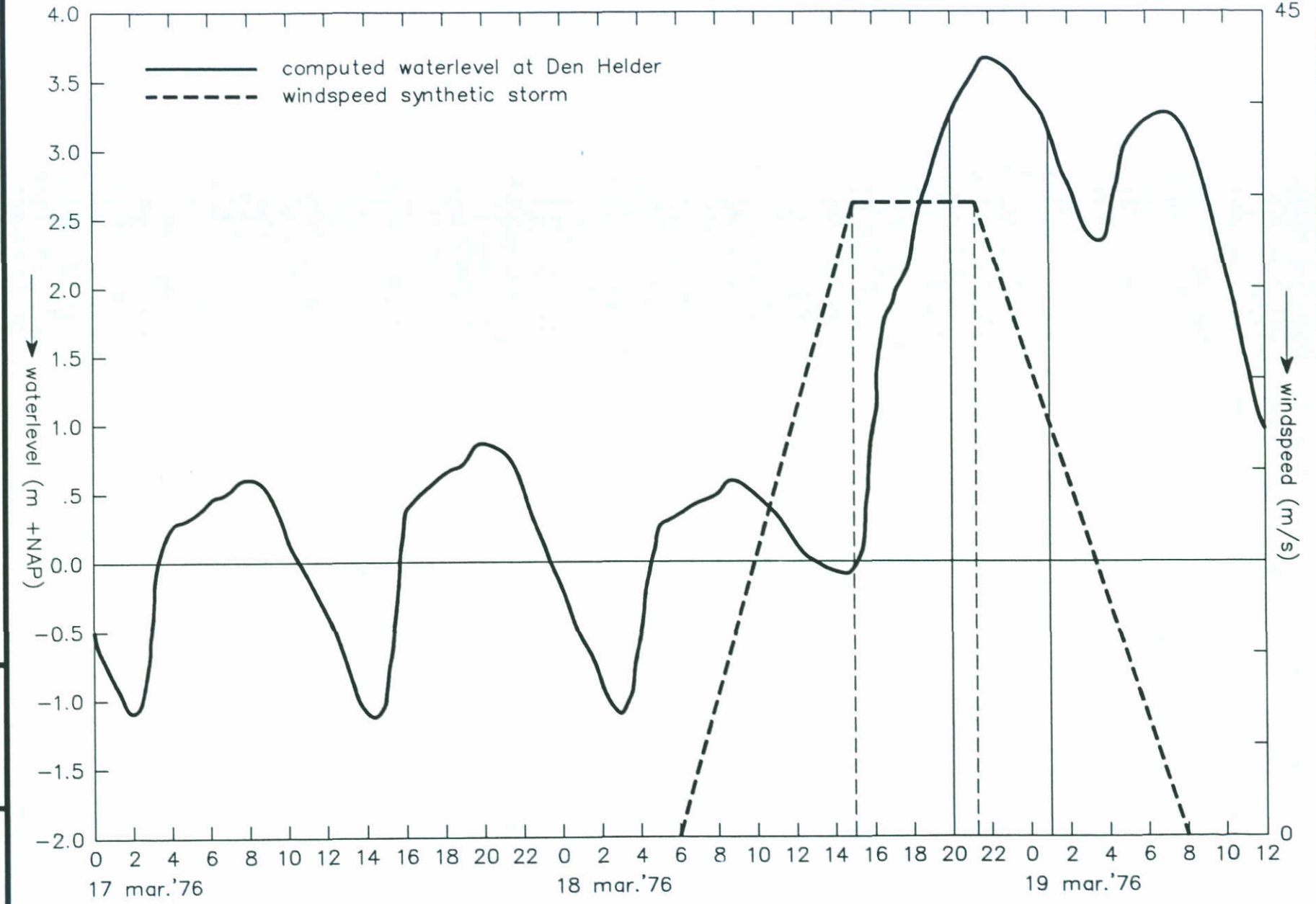
DELFT HYDRAULICS

H1355

Fig 4.6



ORIGIN OF DATA BATHYMETRY	HYDRA	
	Scale 1 : 500000	
DELFT HYDRAULICS	H1355	Fig 4.7



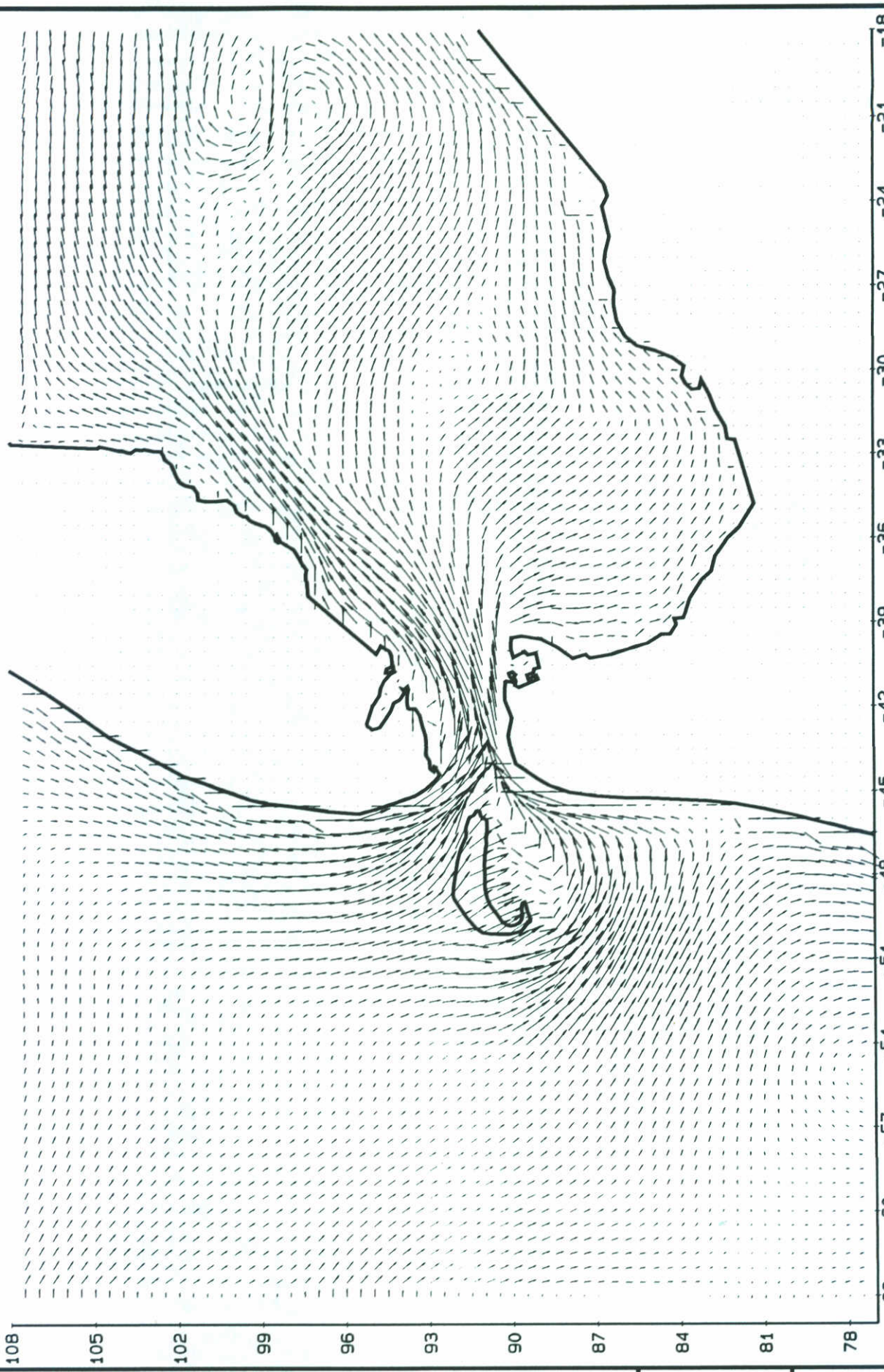
WATERLEVEL AND WINDSPEED
SYNTHETIC EXTREME STORM

DELFT HYDRAULICS

HYDRA

H 1355

FIG. 4.8

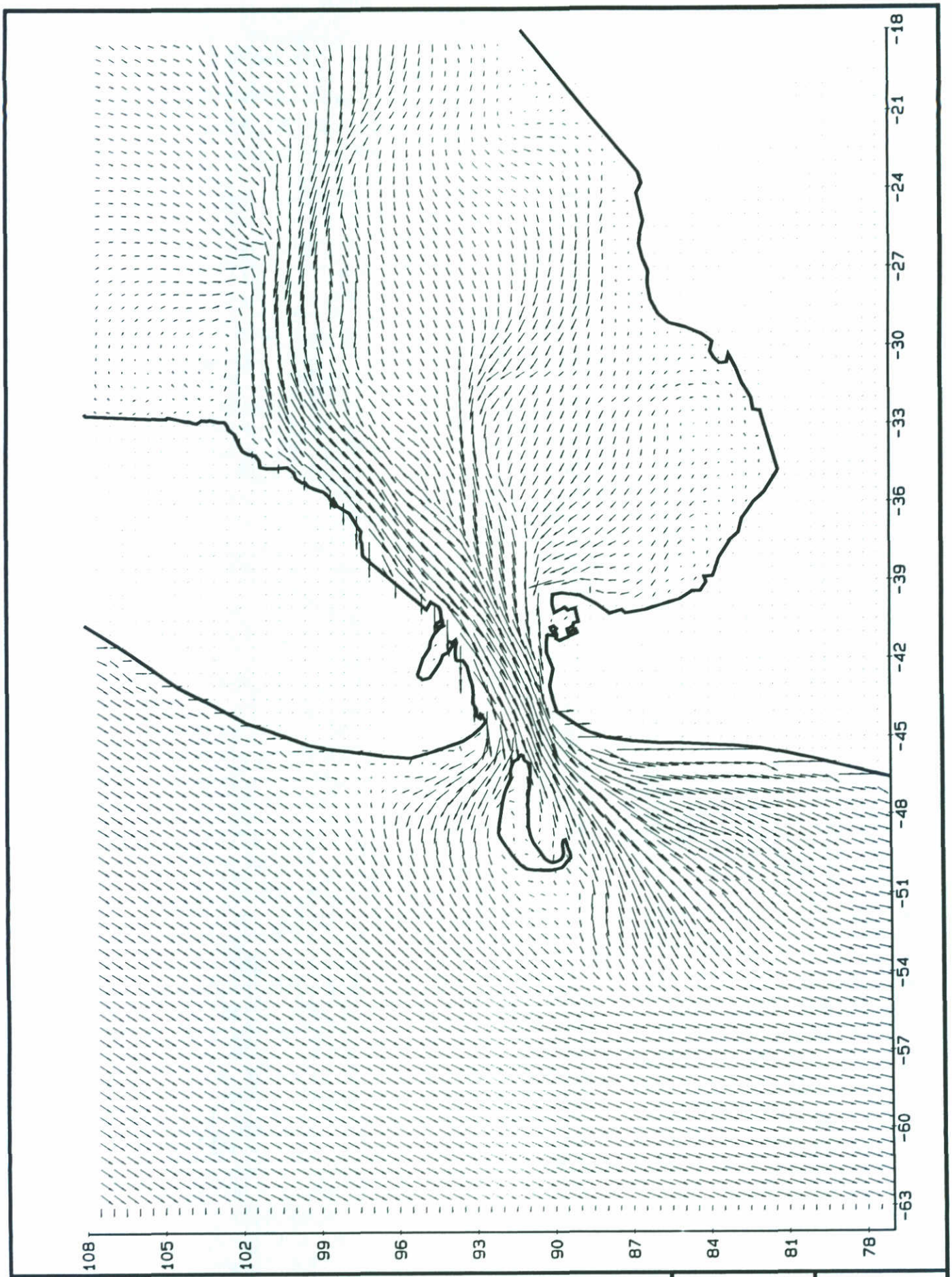


CURRENT FIELD EXTREME STORM
FLOOD CONDITIONS

HYDRA | T=20.00 h

Scale 1 : 200000

DELFT HYDRAULICS | H1355 | Fig 4.9

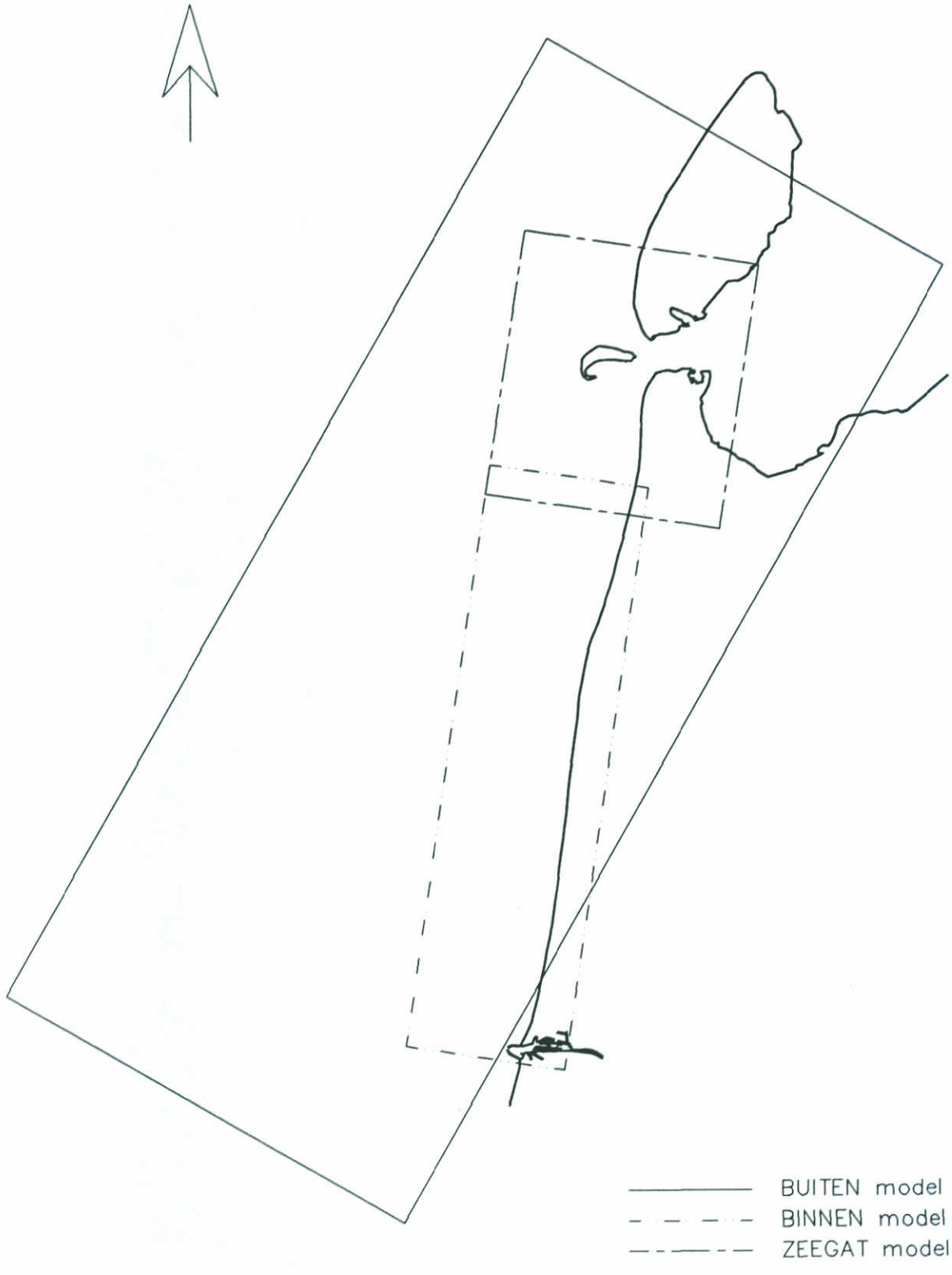


CURRENT FIELD EXTREME STORM
EBB CONDITONS

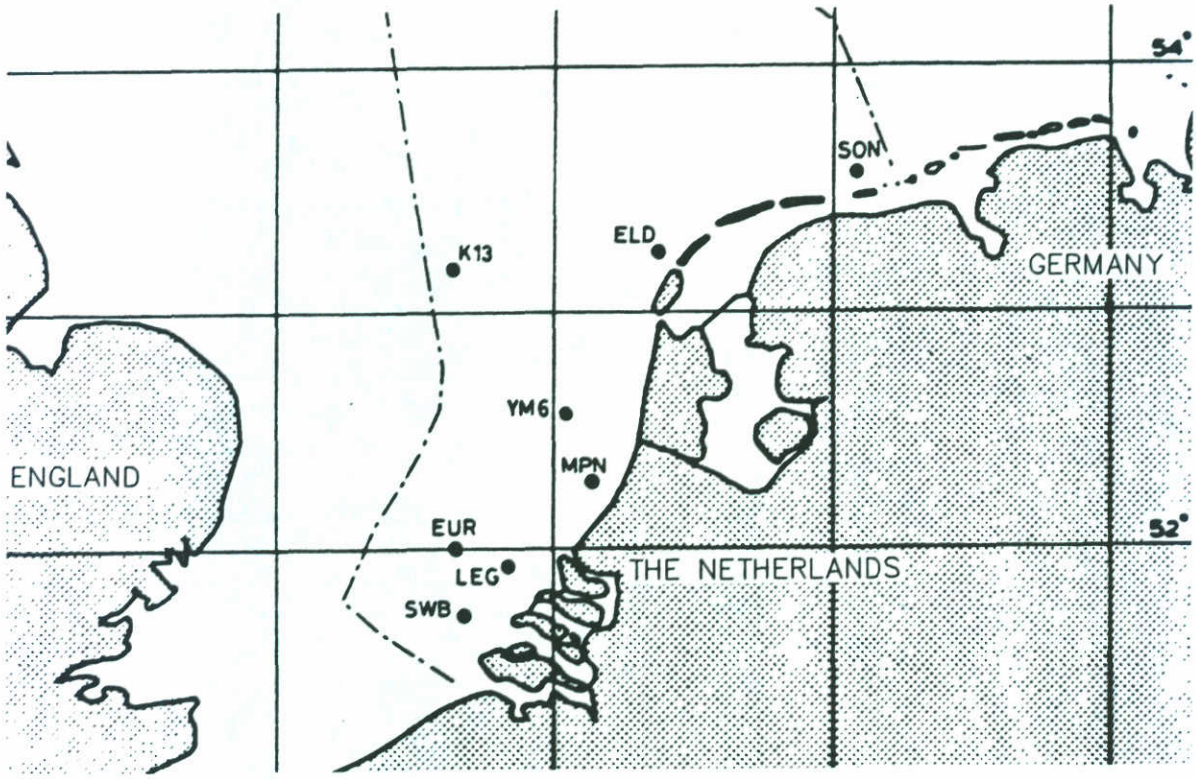
HYDRA | T=01.00 h

Scale 1 : 200000

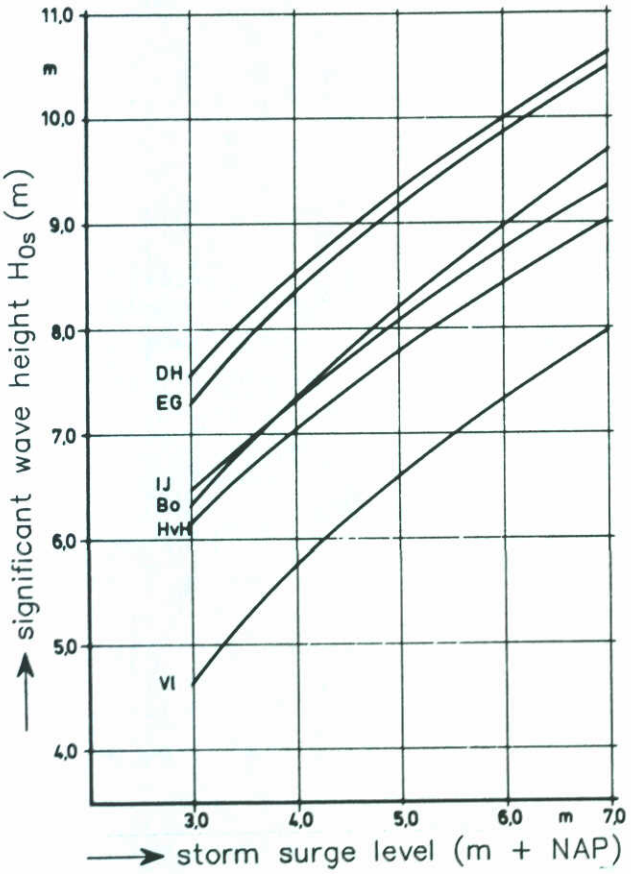
DELFT HYDRAULICS | H1355 | Fig 4.10

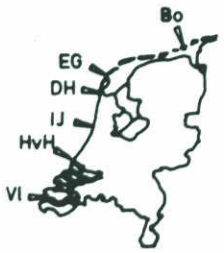


LOCATIONS OF COMPUTATIONAL GRIDS	HYDRA	
	SCALE 1:500000	
DELFT HYDRAULICS	H 1355	FIG. 4.11



LOCATION WAVE MEASURING STATIONS		
DELFT HYDRAULICS	H 1355	FIG. 4.12





DH = Den Helder

EG = Eierlandsche Gat

IJ = IJmuiden

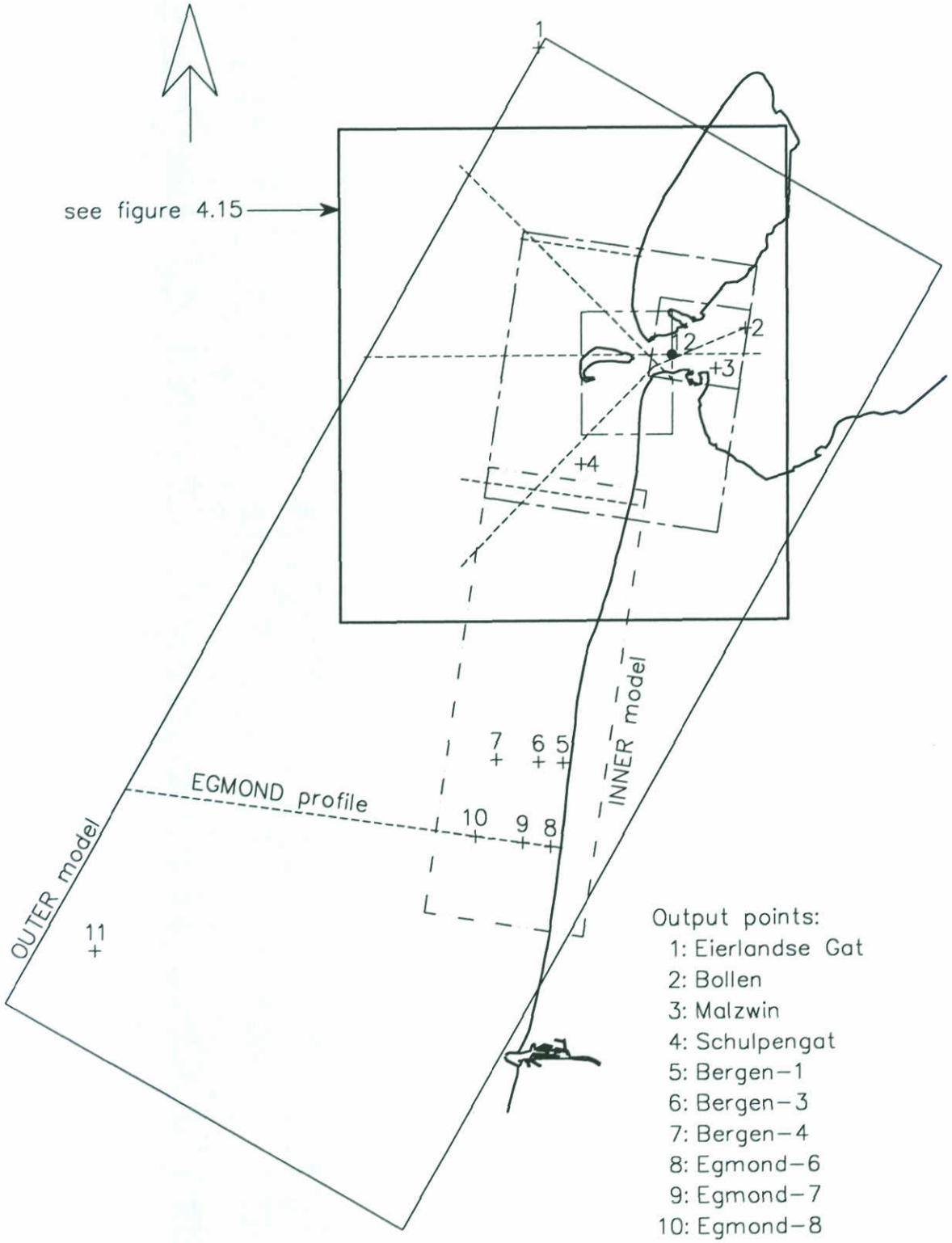
Bo = Borkum

HvH = Hoek van Holland

VI = Vlissingen *)

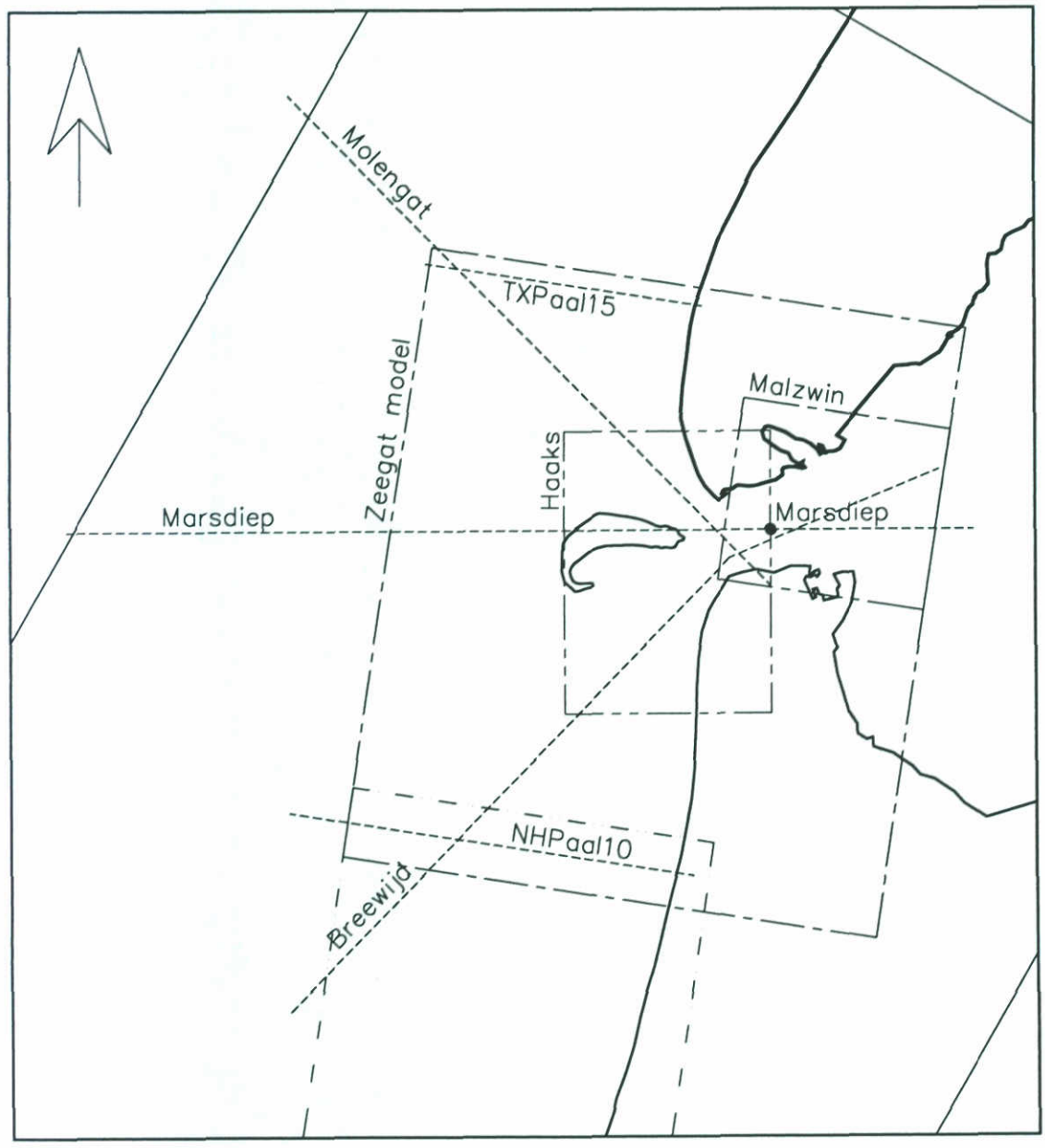
*) outside shoal area

EXPECTED SIGNIFICANT WAVE HEIGHT VERSUS STORM SURGE LEVEL		
DELFT HYDRAULICS	H 1355	FIG. 4.13

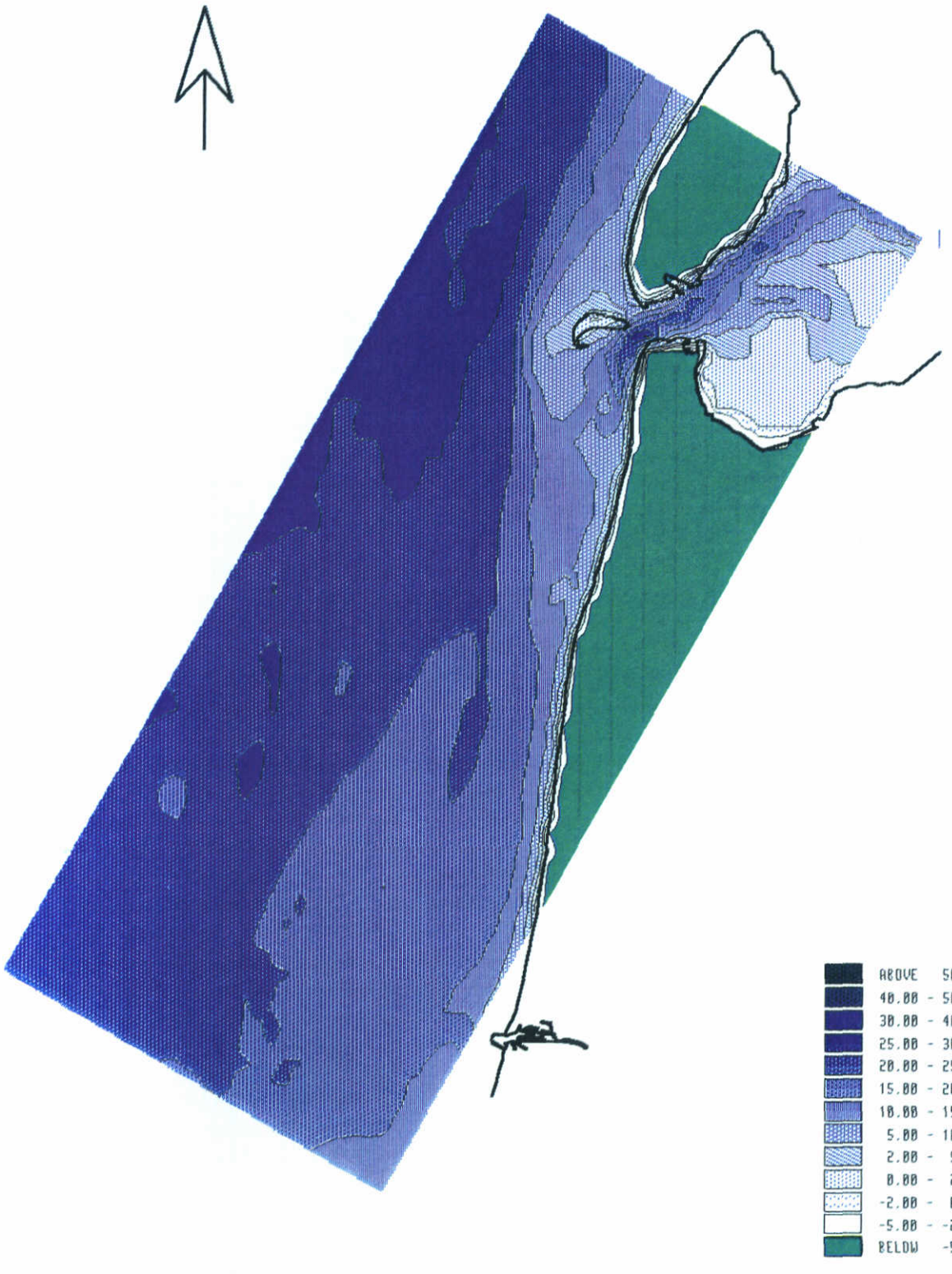


Output points:
1: Eierlandse Gat
2: Bollen
3: Malzwin
4: Schulpengat
5: Bergen–1
6: Bergen–3
7: Bergen–4
8: Egmond–6
9: Egmond–7
10: Egmond–8
11: Munitie st.pl. IJmuiden
12: Marsdiep

LOCATION OF OUTPUT POINTS, LINES AND AREAS	HYDRA	
	SCALE 1: 500000	
DELFT HYDRAULICS	H 1355	FIG. 4.14

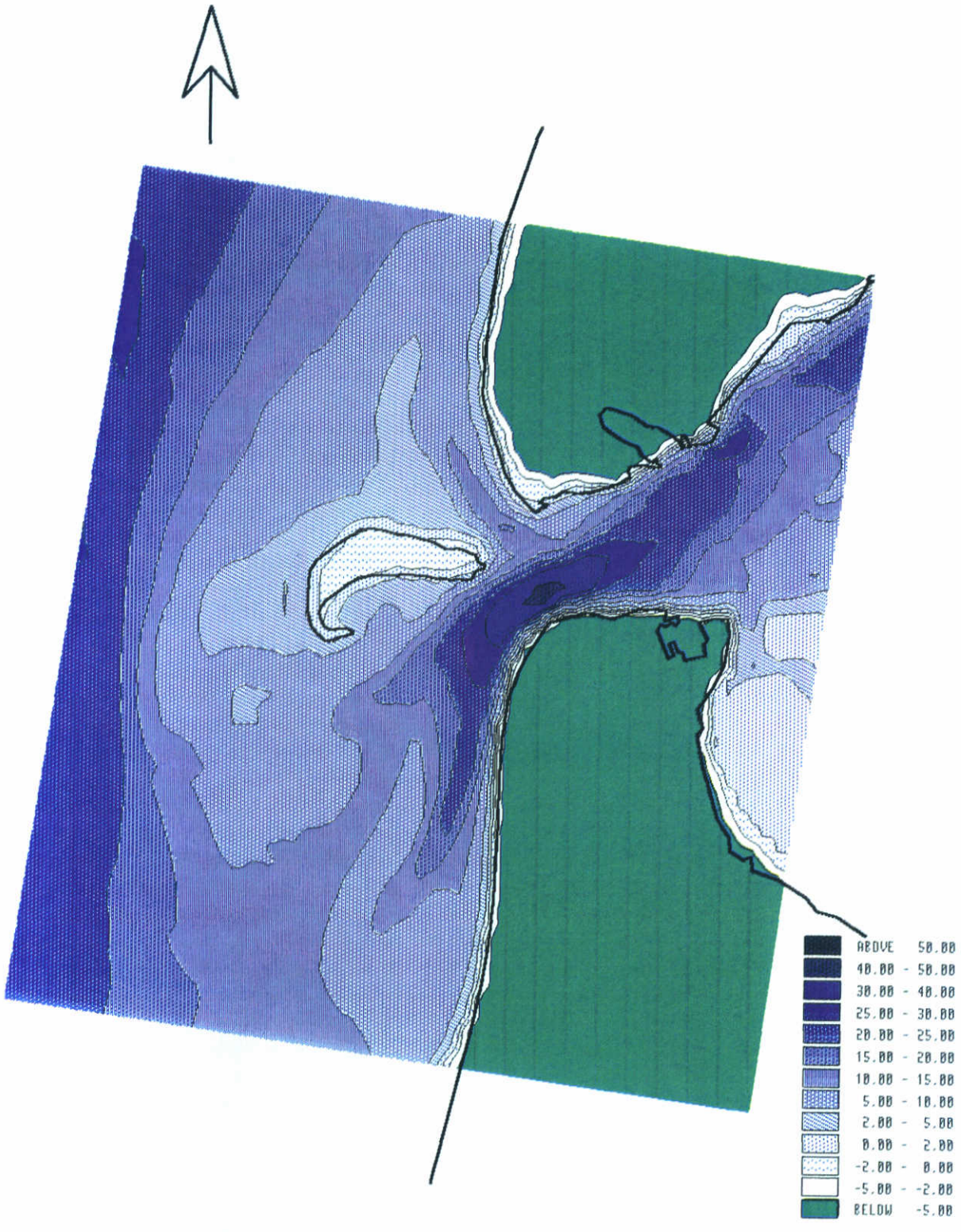


LOCATION OF OUTPUT POINTS, LINES AND AREAS DETAIL ZEEGAT VAN TEXEL	HYDRA	
	SCALE 1: 250000	
DELFT HYDRAULICS	H 1355	FIG. 4.15



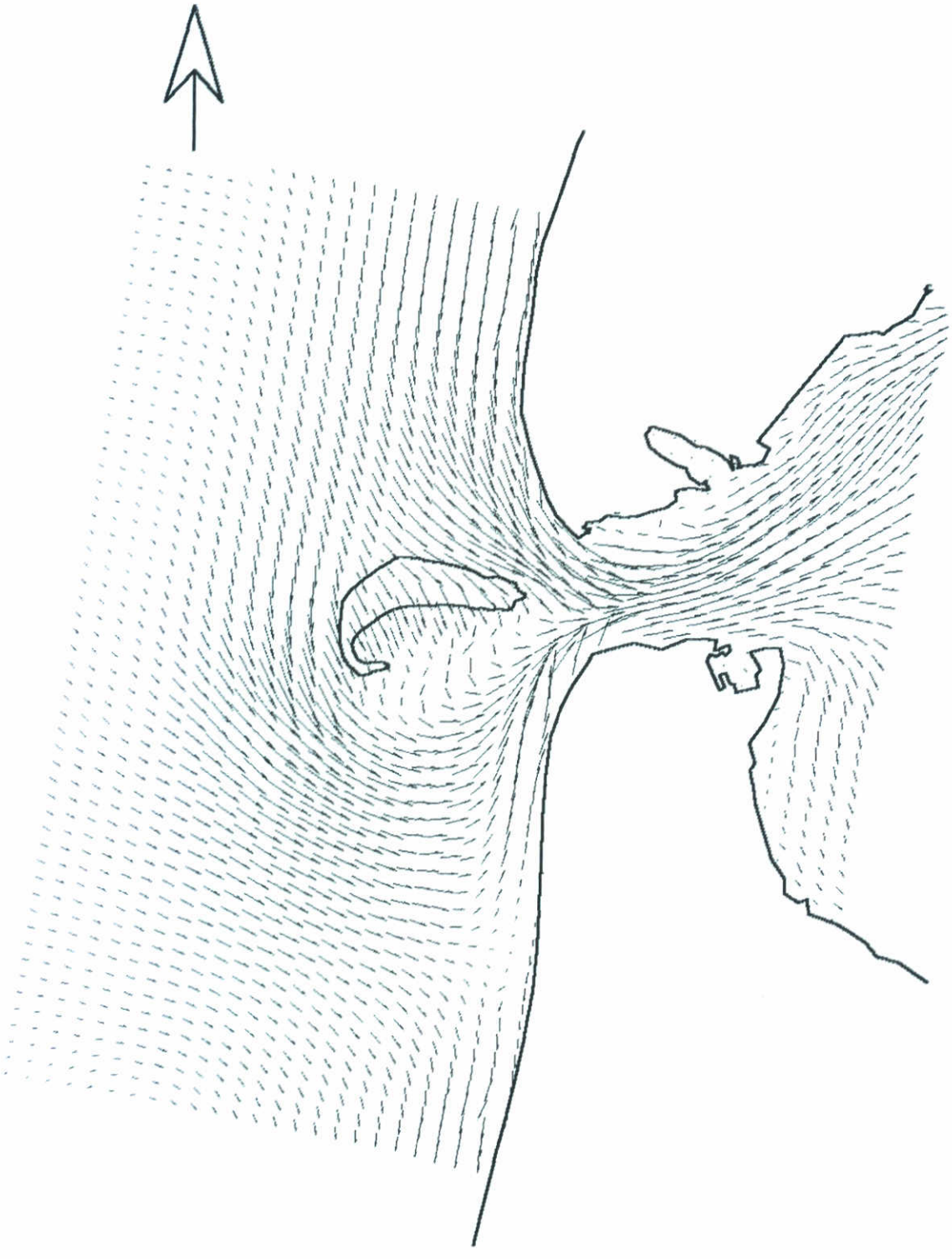
BOTTOM TOPOGRAPHY
RUN SSS OUTER MODEL (IN M BELOW NAP)

HYDRA	SSSBURK
Scale 1 : 500000	
DELFT HYDRAULICS	H1355 Fig 4.16

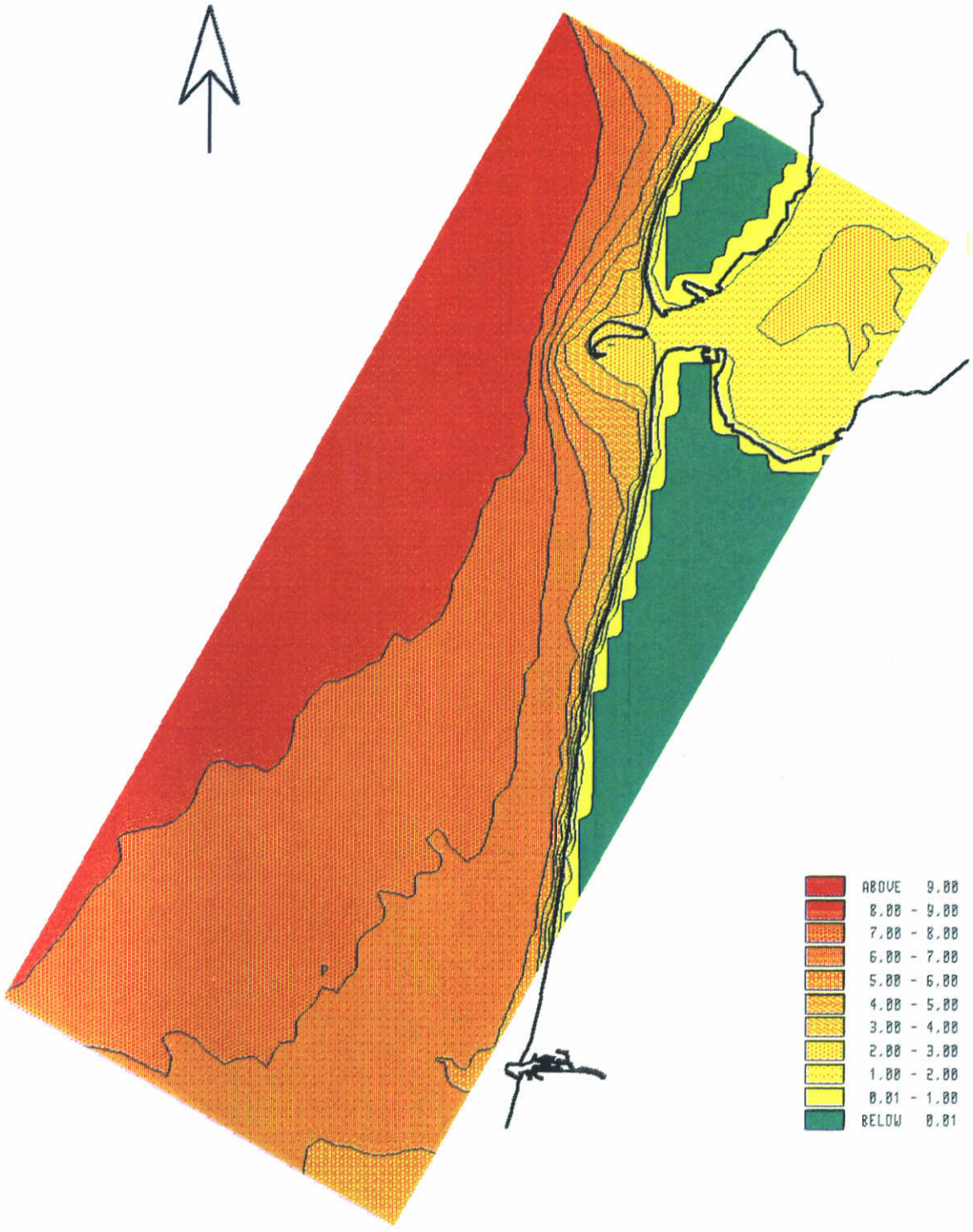


BOTTOM TOPOGRAPHY
RUN SSS, ZEEGAT MODEL (IN M BELOW NAP)

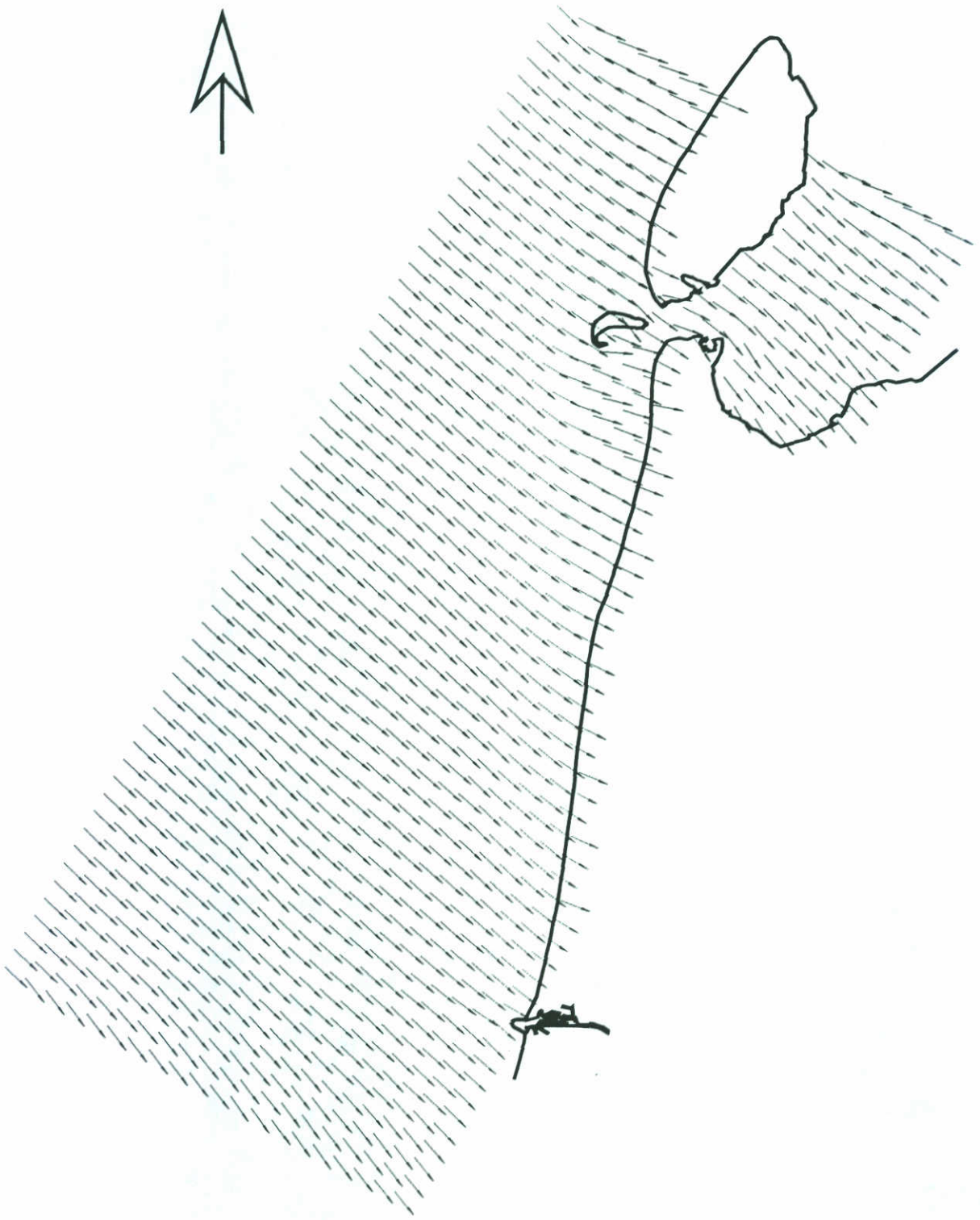
HYDRA	SSSZGRK
Scale 1 : 150000	
DELFT HYDRAULICS	H1355 Fig 4.17



CURRENT FIELD RUN SSS, ZEEGAT MODEL	HYDRA	SSSZGRK
	Scale 1 : 150000	
DELFT HYDRAULICS	H1355	Fig 4.18

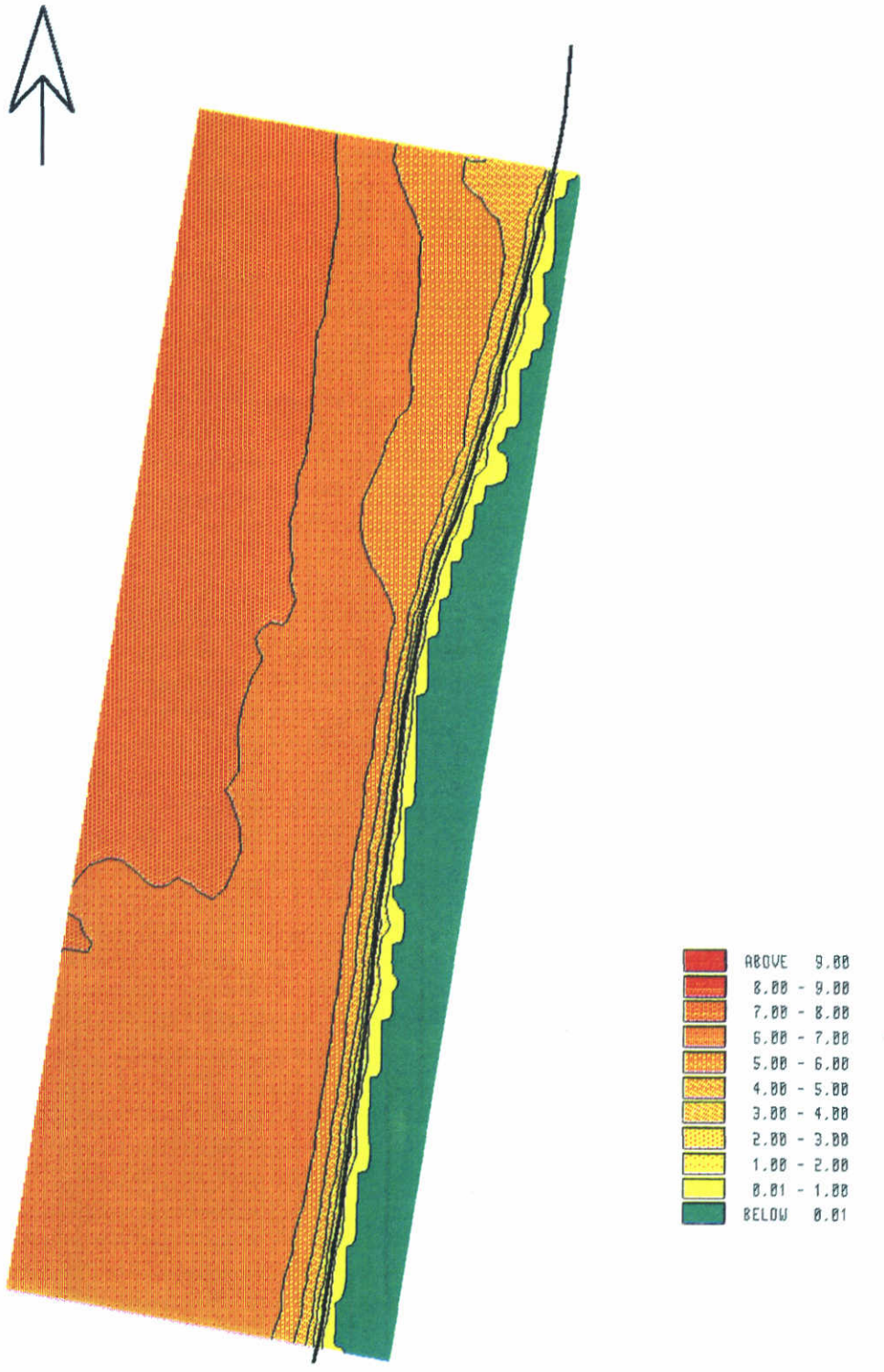


SIGNIFICANT WAVE HEIGHT CONTOURS RUN SSS OUTER MODEL (IN M)	HYDRA	SSSBURK
	Scale 1 : 500000	
DELFT HYDRAULICS	H1355	Fig 4.19a

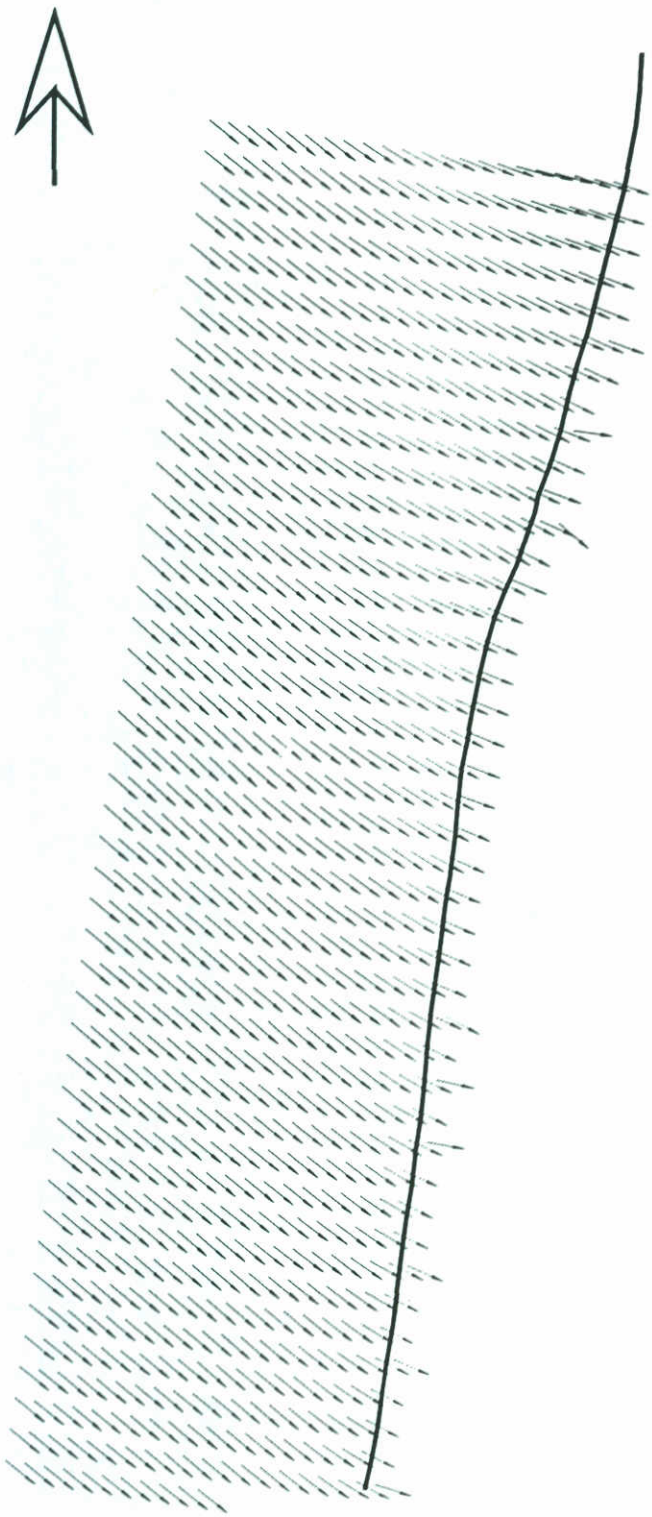


MAIN WAVE DIRECTIONS
RUN SSS OUTER MODEL

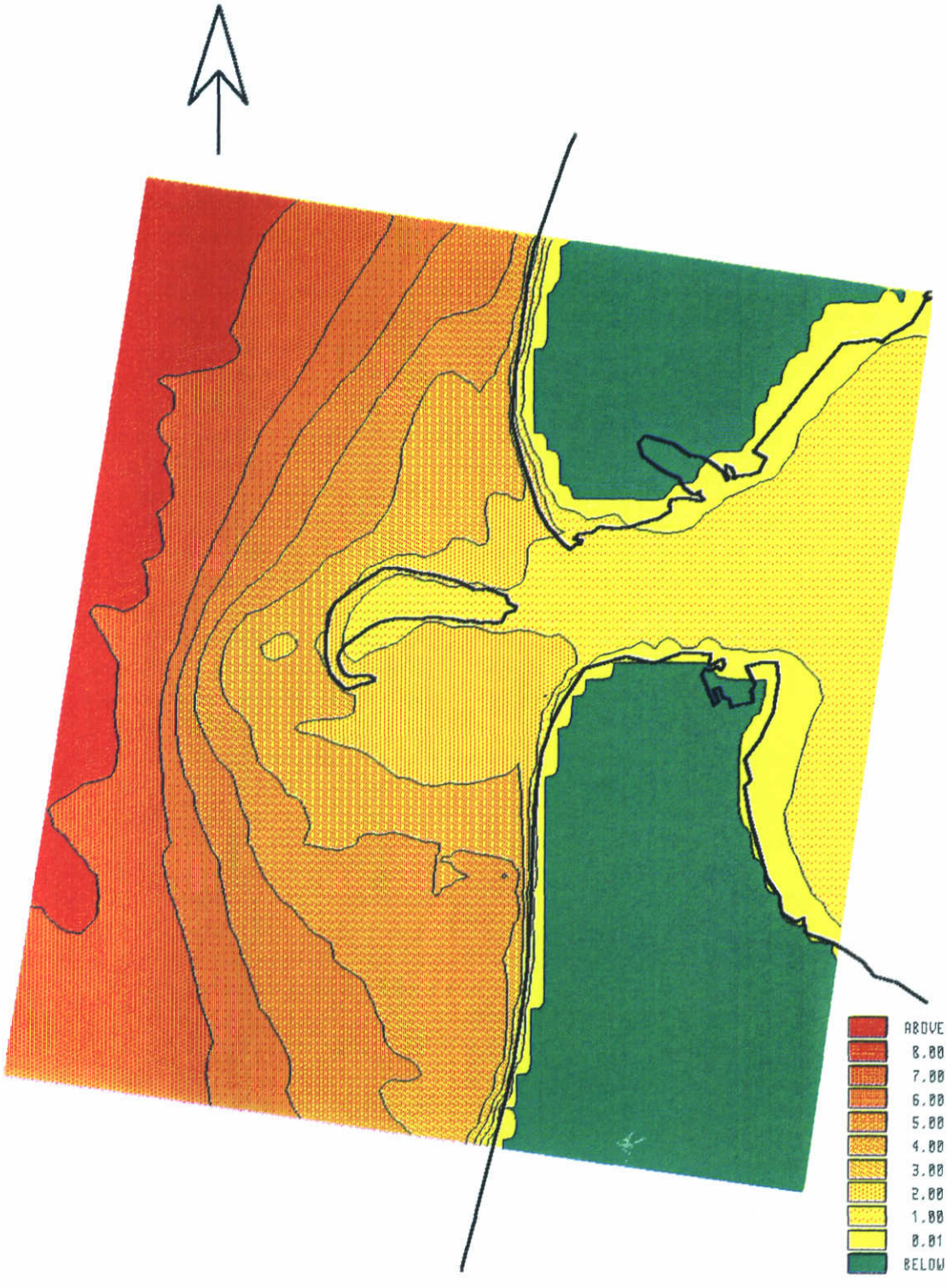
HYDRA	SSSBURK
Scale 1 : 500000	
DELFT HYDRAULICS	H1355 Fig 4.19b



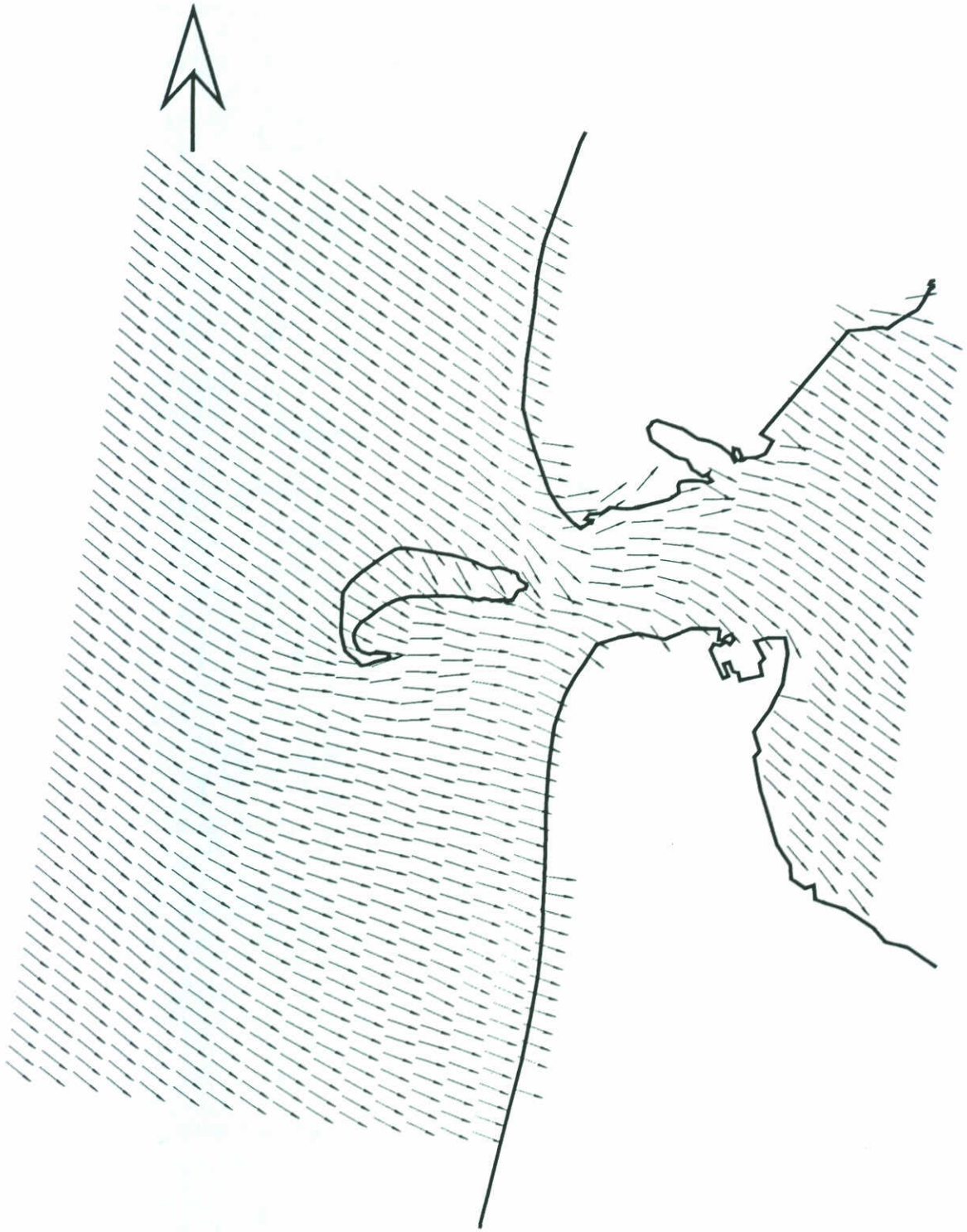
SIGNIFICANT WAVE HEIGHT CONTOURS RUN SSS INNER MODEL (IN M)	HYDRA	SSSBIRK
	Scale 1 : 220000	
DELFT HYDRAULICS	H1355	Fig 4.20a



MAIN WAVE DIRECTIONS RUN SSS INNER MODEL	HYDRA	SSSBIRK
	Scale 1 : 220000	
DELFT HYDRAULICS	H1355	Fig 4.20b



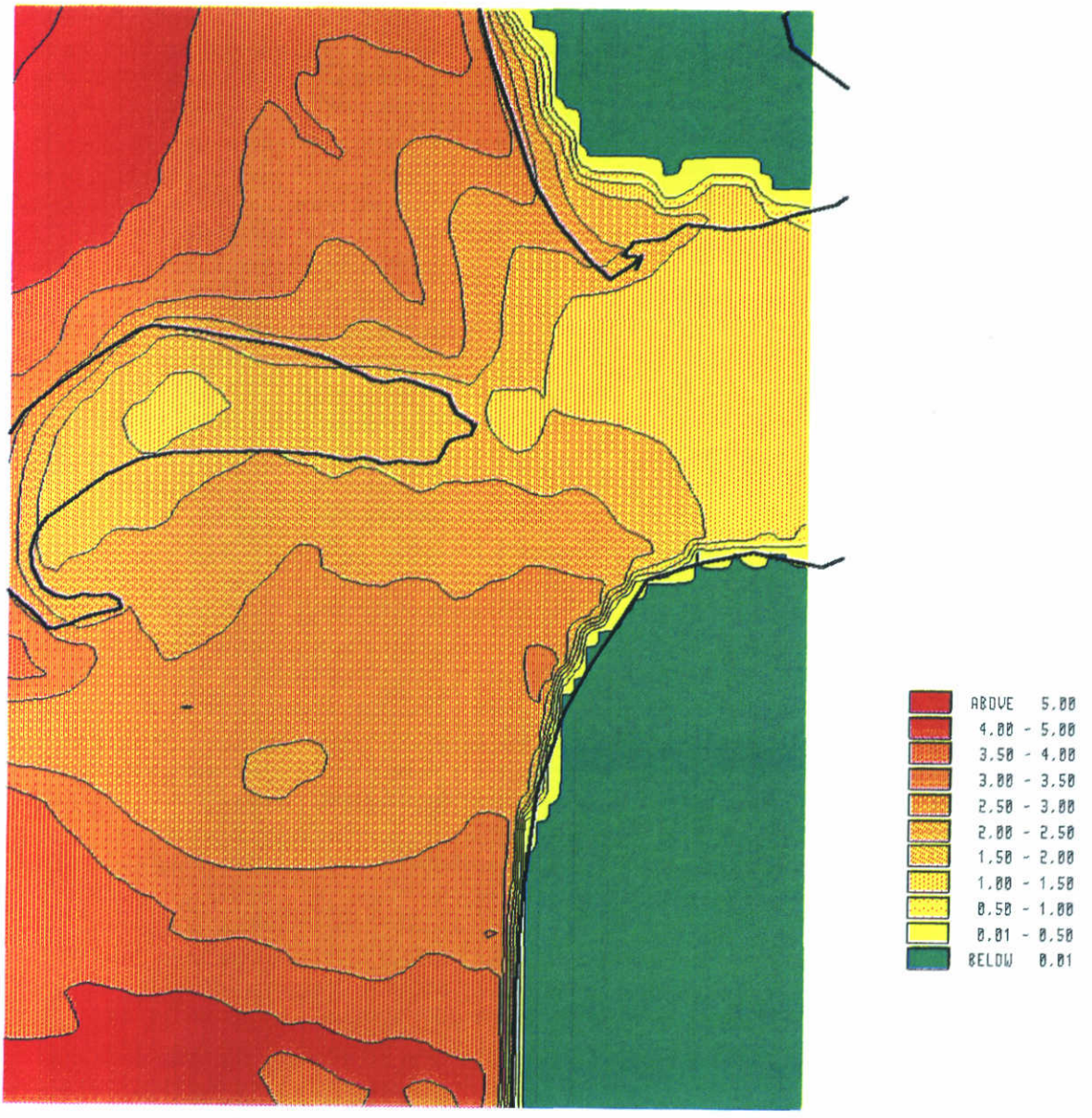
SIGNIFICANT WAVE HEIGHT CONTOURS RUN SSS, ZEEGAT MODEL (IN M)	HYDRA	SSSZGRK
	Scale 1 : 150000	
DELFT HYDRAULICS	H1355	Fig 4.21a



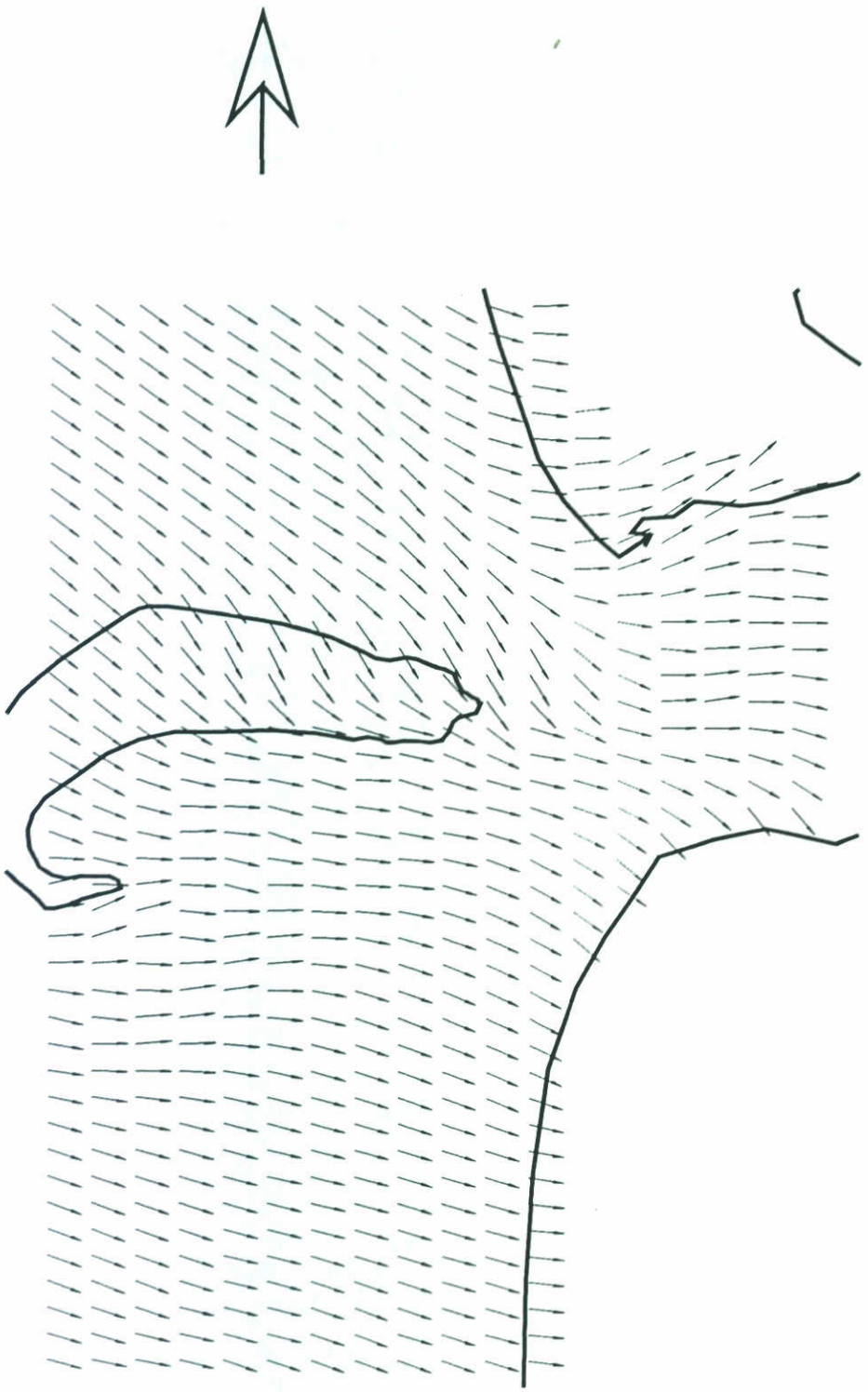
MAIN WAVE DIRECTIONS
RUN SSS, ZEEGAT MODEL

HYDRA	SSSZGRK
Scale 1 : 150000	
H1355	Fig 4.21b

DELFT HYDRAULICS

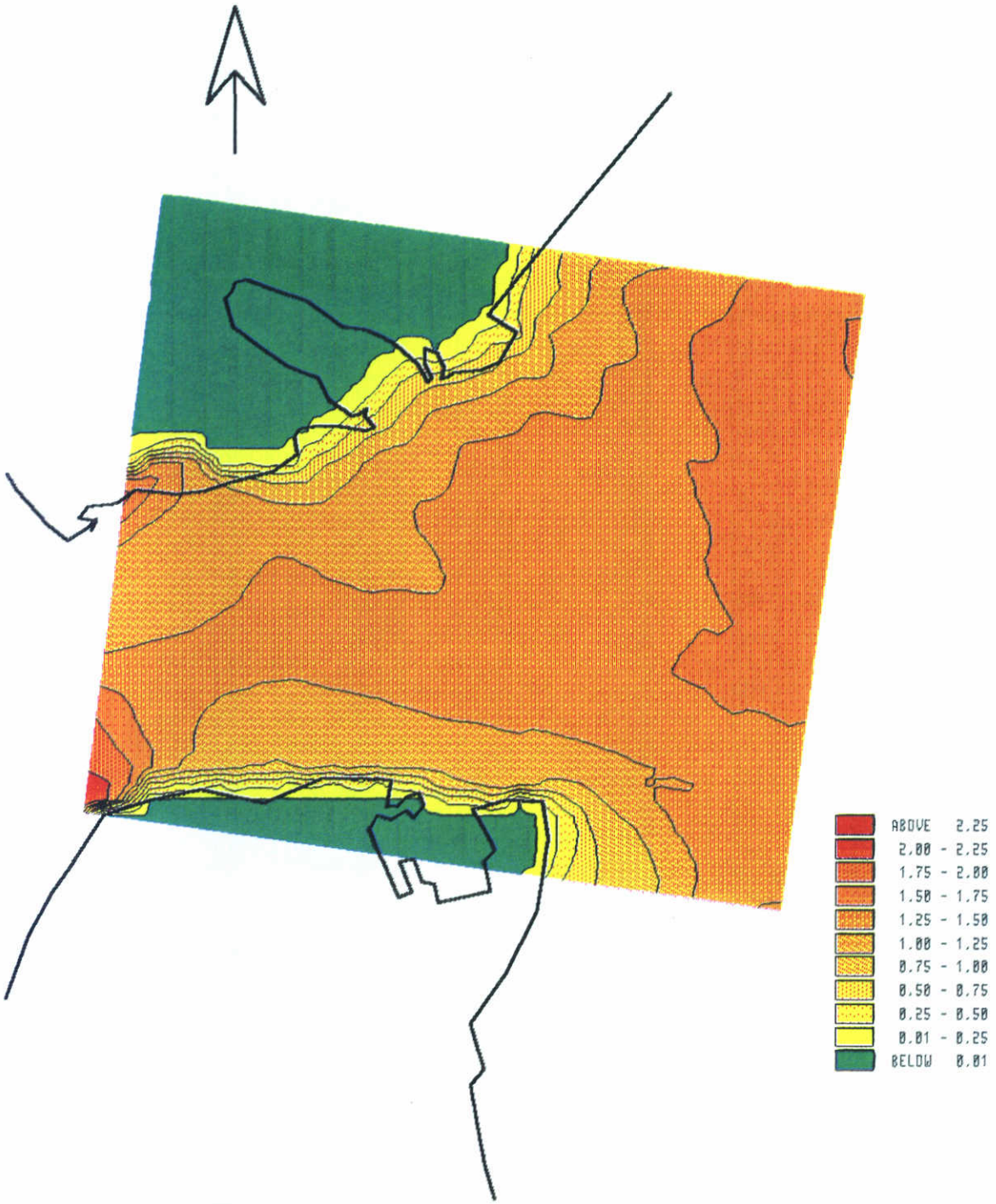


SIGNIFICANT WAVE HEIGHT CONTOURS RUN SSS, DETAIL HAAKS (IN M)	HYDRA	SSSZGHK
	Scale 1 : 65000	
DELFT HYDRAULICS	H1355	Fig 4.22a



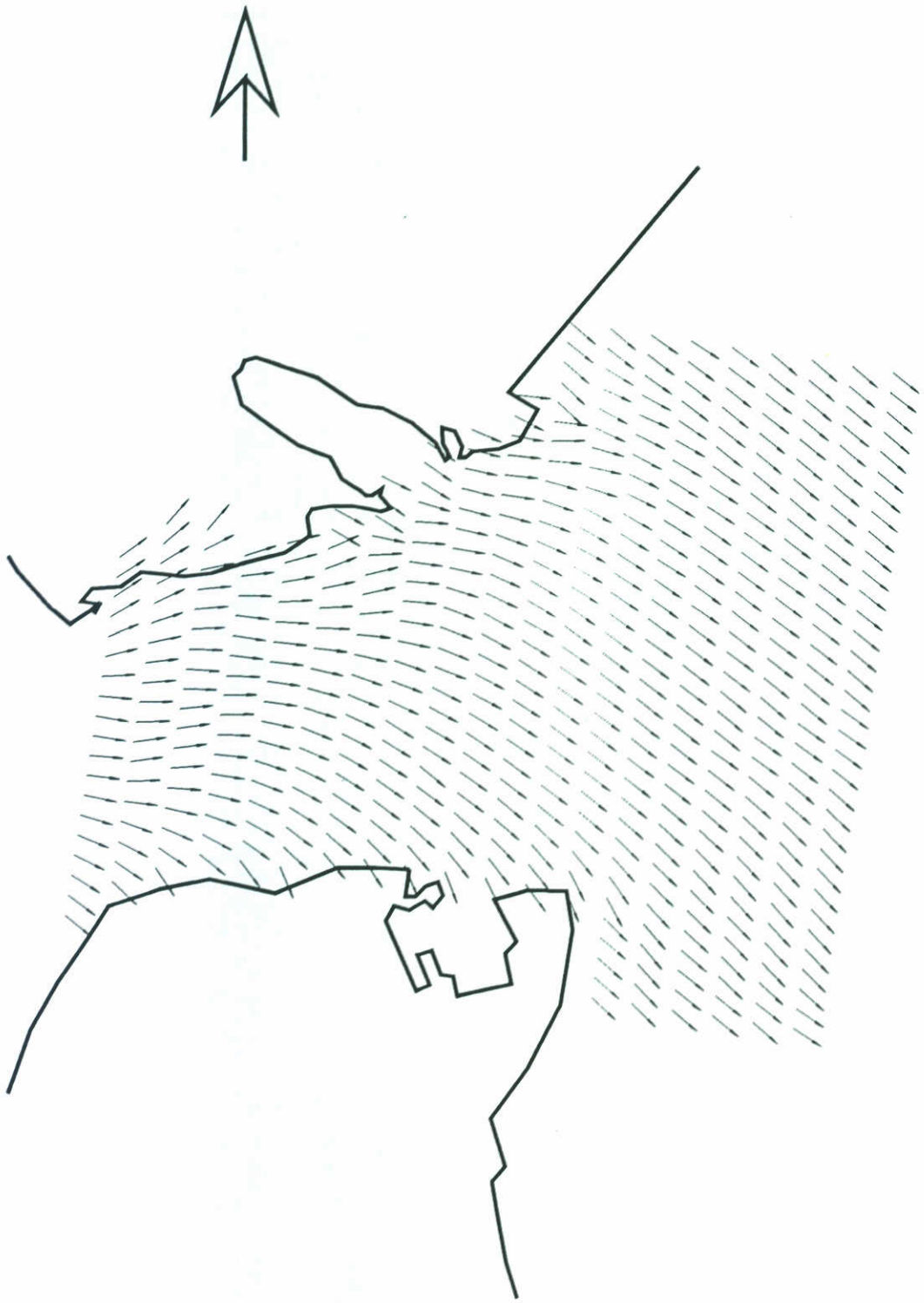
MAIN WAVE DIRECTIONS
RUN SSS, DETAIL HAAKS

HYDRA	SSSZGHK
Scale 1 : 65000	
DELFT HYDRAULICS	H1355 Fig 4.22b



SIGNIFICANT WAVE HEIGHT CONTOURS
RUN SSS, DETAIL MALZWIN (IN M)

HYDRA	SSSZGMZ
Scale 1 : 65000	
DELFT HYDRAULICS	H1355 Fig 4.23a



MAIN WAVE DIRECTIONS
RUN SSS, DETAIL MALZWIN

HYDRA	SSSZGMZ
Scale 1 : 65000	
DELFT HYDRAULICS	H1355 Fig 4.23b

SIGNIFICANT WAVE HEIGHT EGMOND PROFILE
COMPARISON BUITEN AND BINNEN MODEL

HYDRA-HISWA | SSSBUEG

DELFT HYDRAULICS | H1355 | FIG 4.24a

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE COMPARISON BUITEN AND ZEEGAT MODEL	HYDRA-HISWA	SSSMG
DELFT HYDRAULICS	H1355	FIG 4.24b

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE COMPARISON OF BUITEN AND ZEEGAT MODEL	HYDRA-HISWA	SSSMD
DELFT HYDRAULICS	H1355	FIG 4.24c

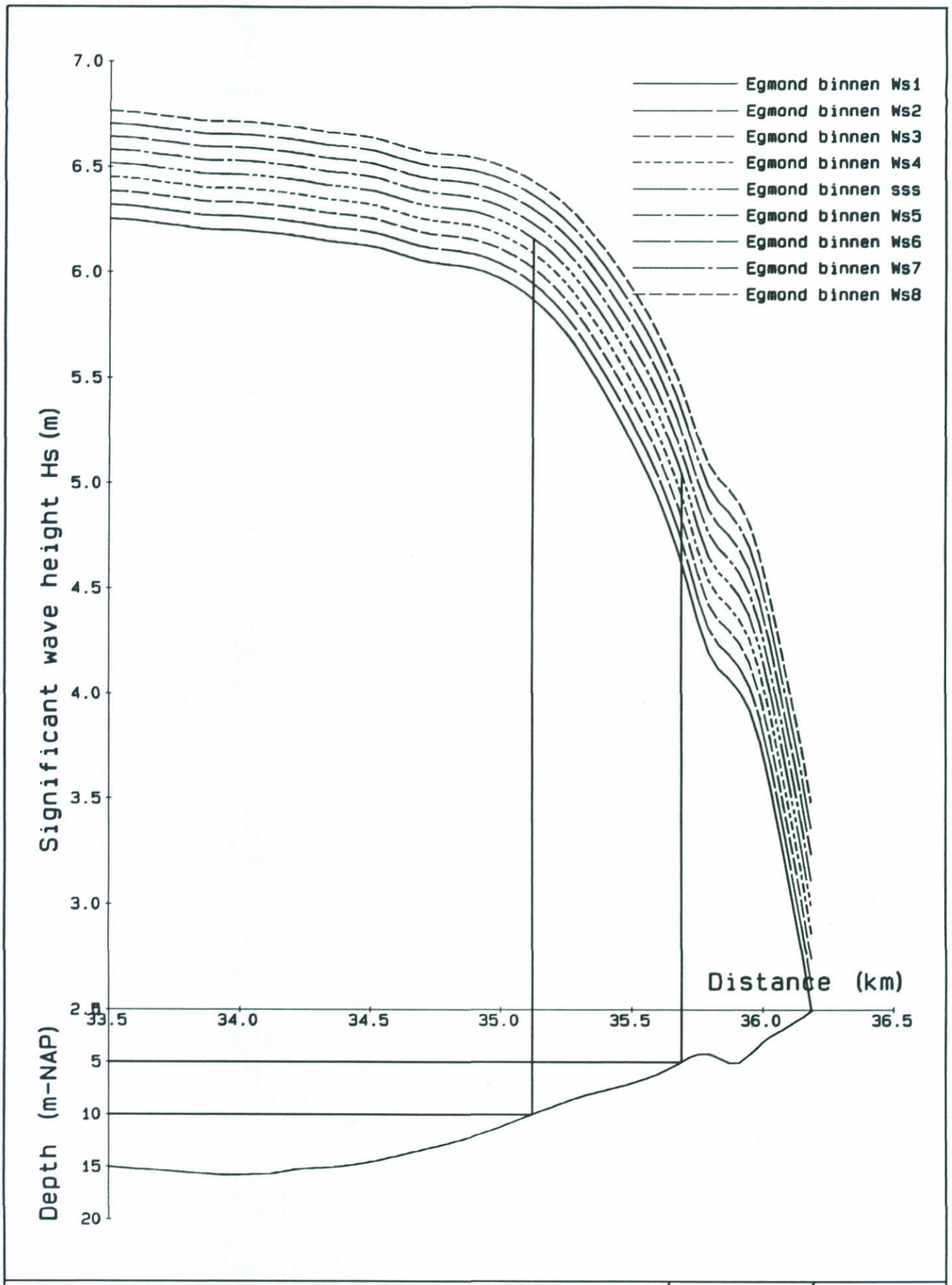
SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE COMPARISON BUITEN AND ZEEGAT MODEL

HYDRA-HISWA | SSSBW

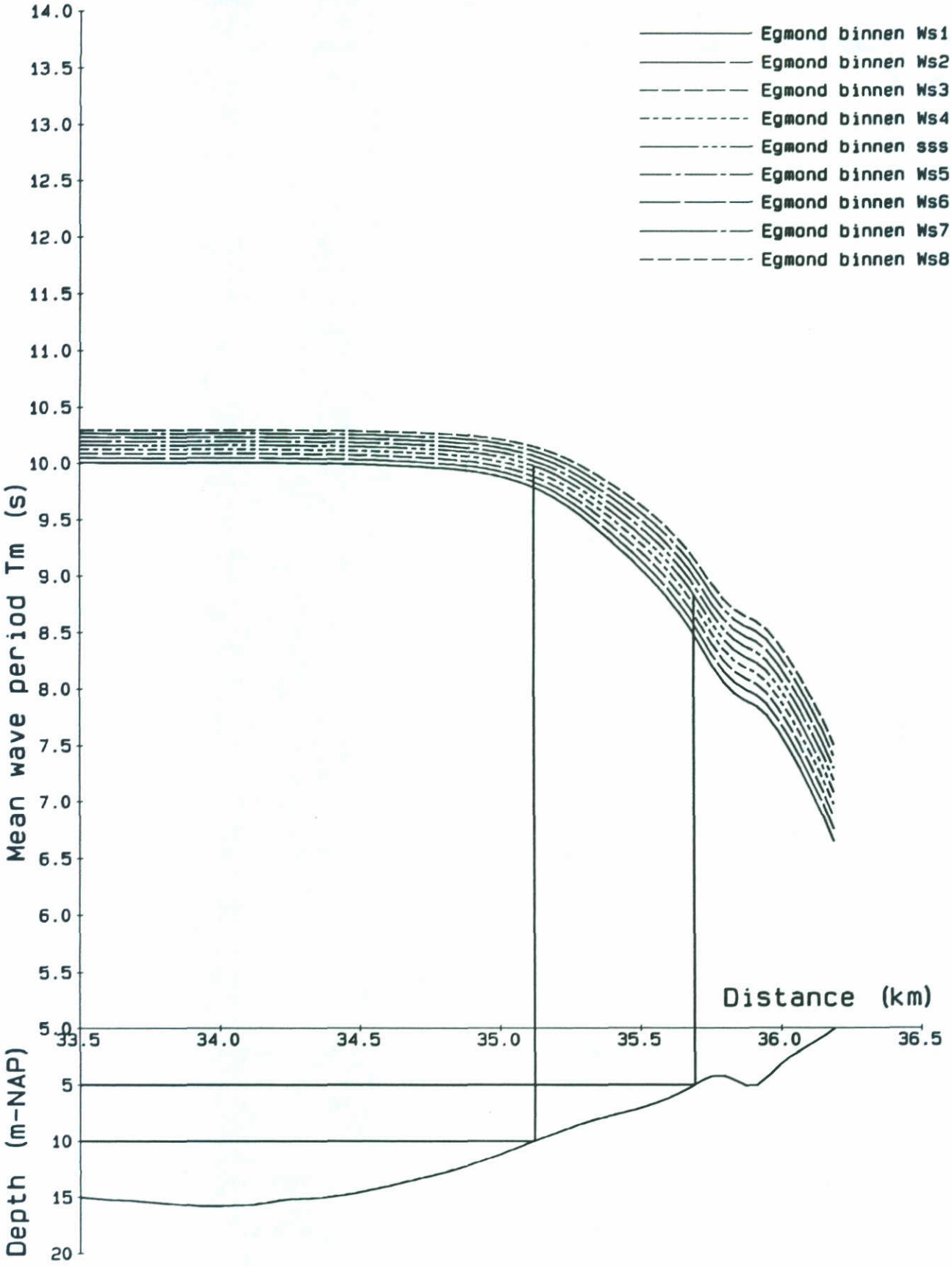
DELFT HYDRAULICS | H1355 | FIG 4.24d

SIGNIFICANT WAVE HEIGHT NHPAAL10 PROFILE COMPARISON BUITEN, BINNEN AND ZEEGAT MODEL	HYDRA-HISWA	SSSNH
DELFT HYDRAULICS	H1355	FIG 4.24e

SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WSBUEG
DELFT HYDRAULICS	H1355	FIG. 4.25a



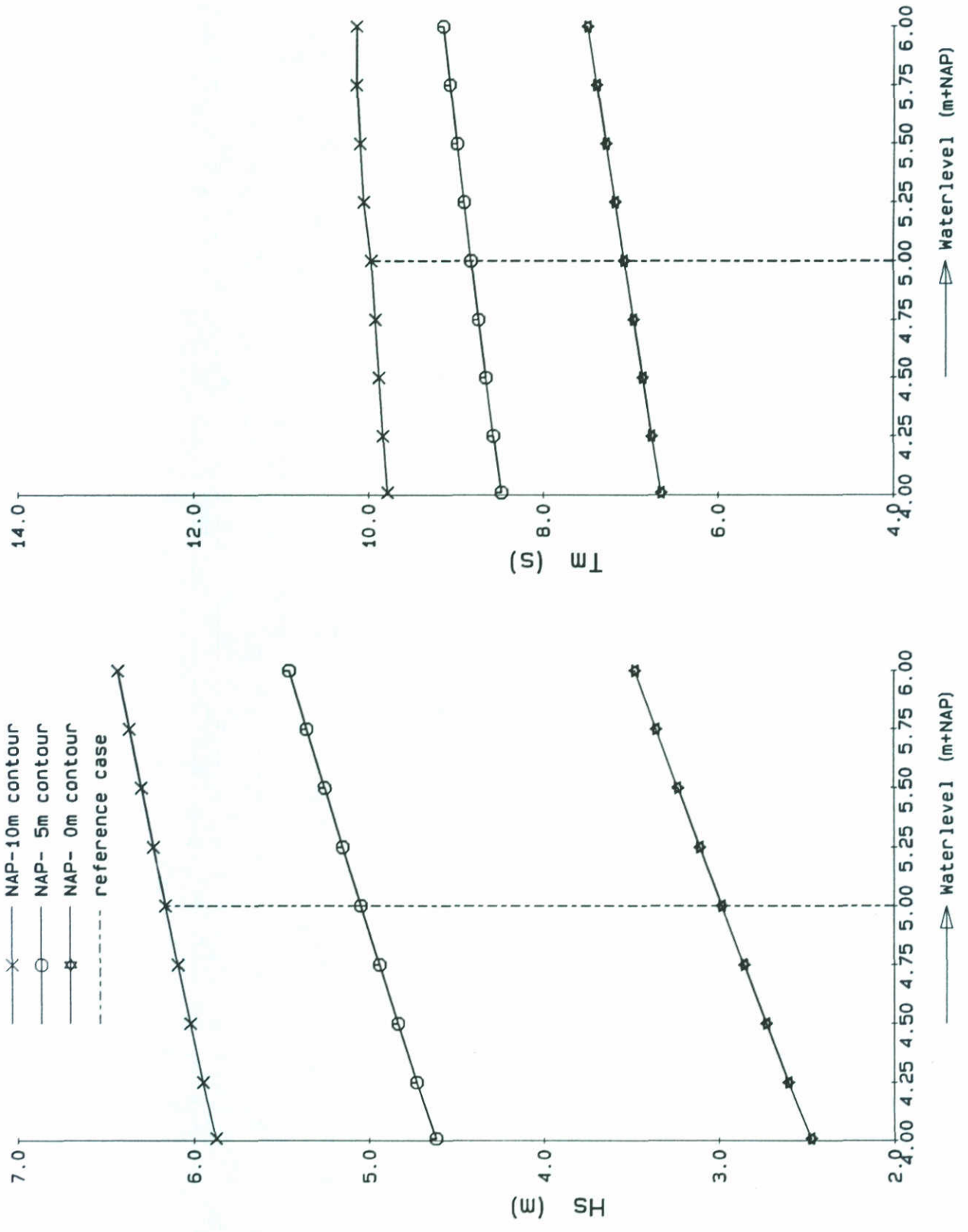
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WS1WS8
DELFT HYDRAULICS	H1355	FIG. 4.25b



MEAN WAVE PERIOD EGMOND PROFILE
VARYING WATER LEVEL

HYDRA-HISWA | WS1WS8

DELFT HYDRAULICS | H1355 | FIG. 4.25c



EFFECT OF WATER LEVEL VARIATION EGMOND PROFILE	HYDRA-HISWA	WS1WS8
DELFT HYDRAULICS	H1355	FIG. 4.25d

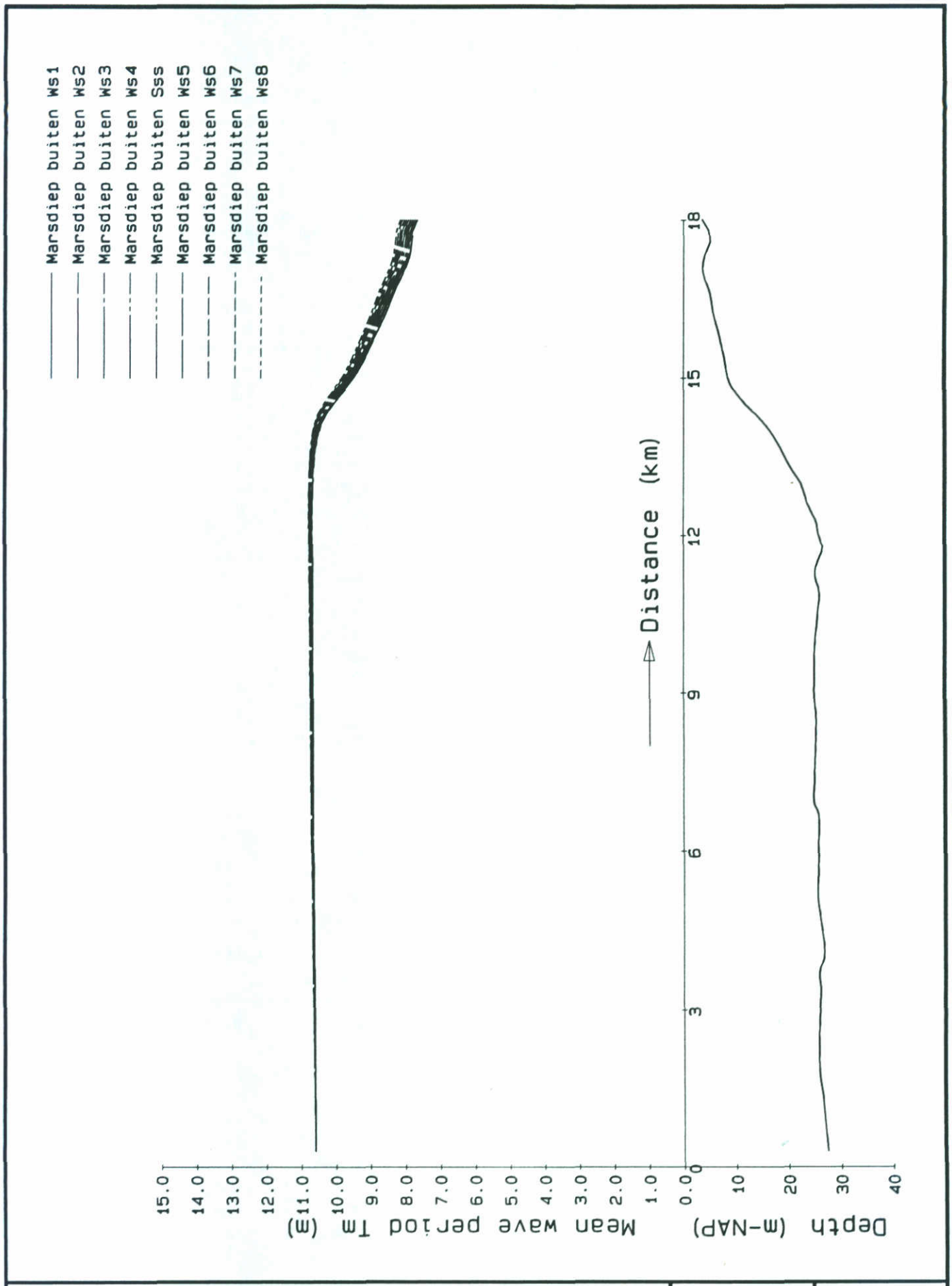
SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WSBUMG
DELFT HYDRAULICS	H1355	FIG. 4.25e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE
VARYING WATER LEVEL

HYDRA-HISWA | WSZGMG

DELFT HYDRAULICS | H1355 | FIG. 4.25f

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WSBUMD
DELFT HYDRAULICS	H1355	FIG. 4.25g



MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING WATER LEVEL

HYDRA-HISWA | WSBUMD

DELFT HYDRAULICS | H1355 | FIG. 4.25h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE
VARYING WATER LEVEL

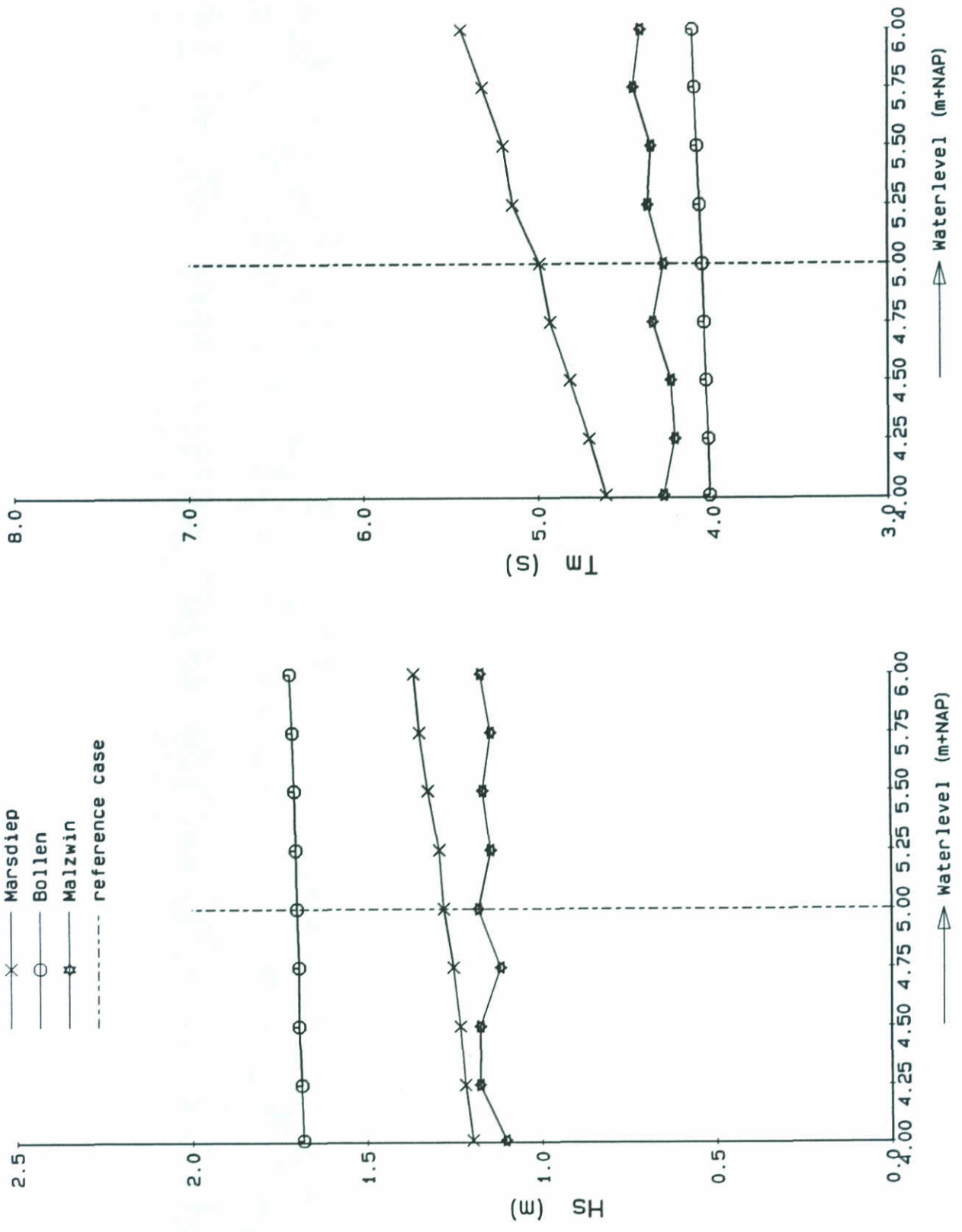
HYDRA-HISWA | WSZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.25i

MEAN WAVE PERIOD MARSDIEP PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WSZGMD
DELFT HYDRAULICS	H1355	FIG. 4.25j

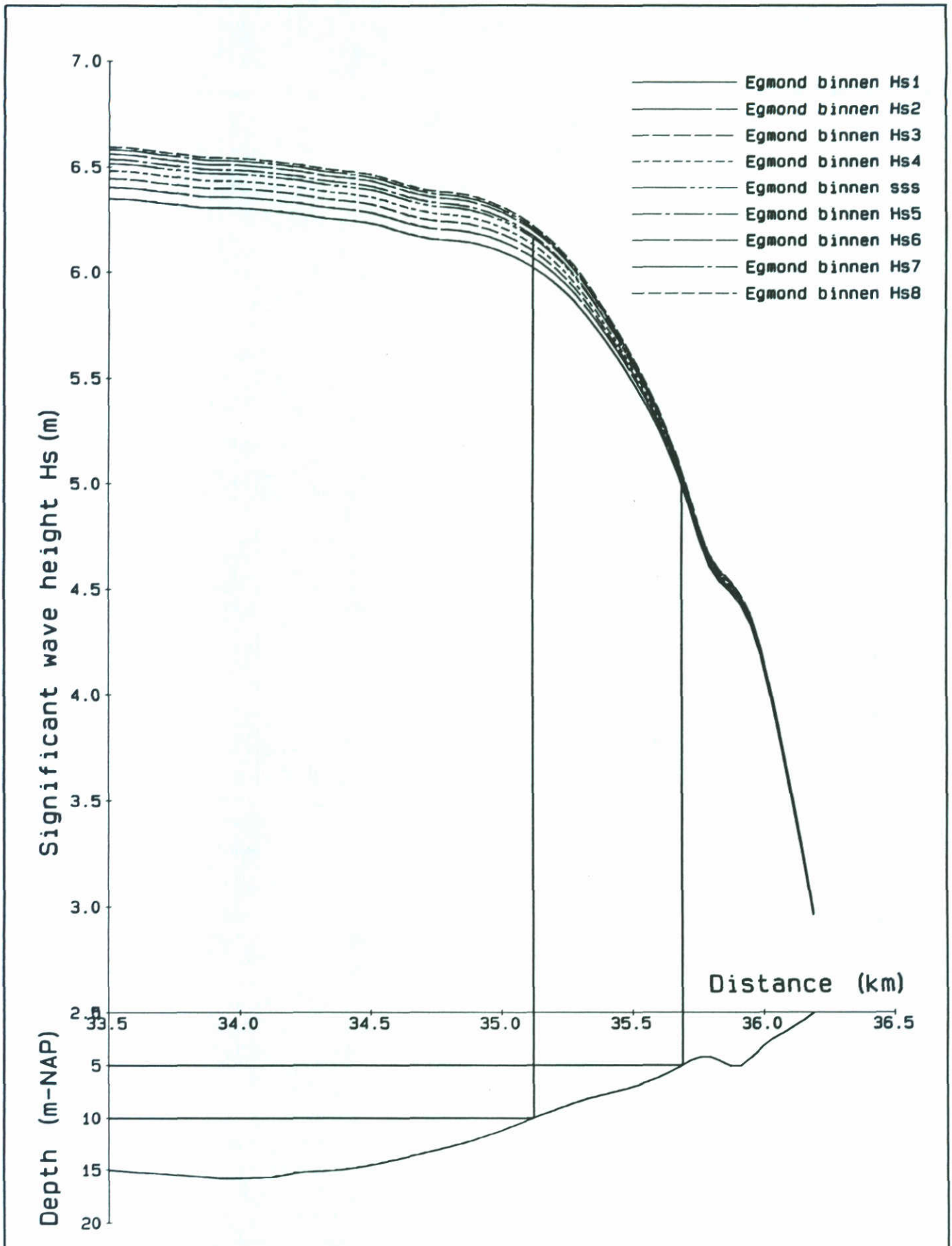
SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WSBUBW
DELFT HYDRAULICS	H1355	FIG. 4.25k

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING WATER LEVEL	HYDRA-HISWA	WSZGBW
DELFT HYDRAULICS	H1355	FIG. 4.25I

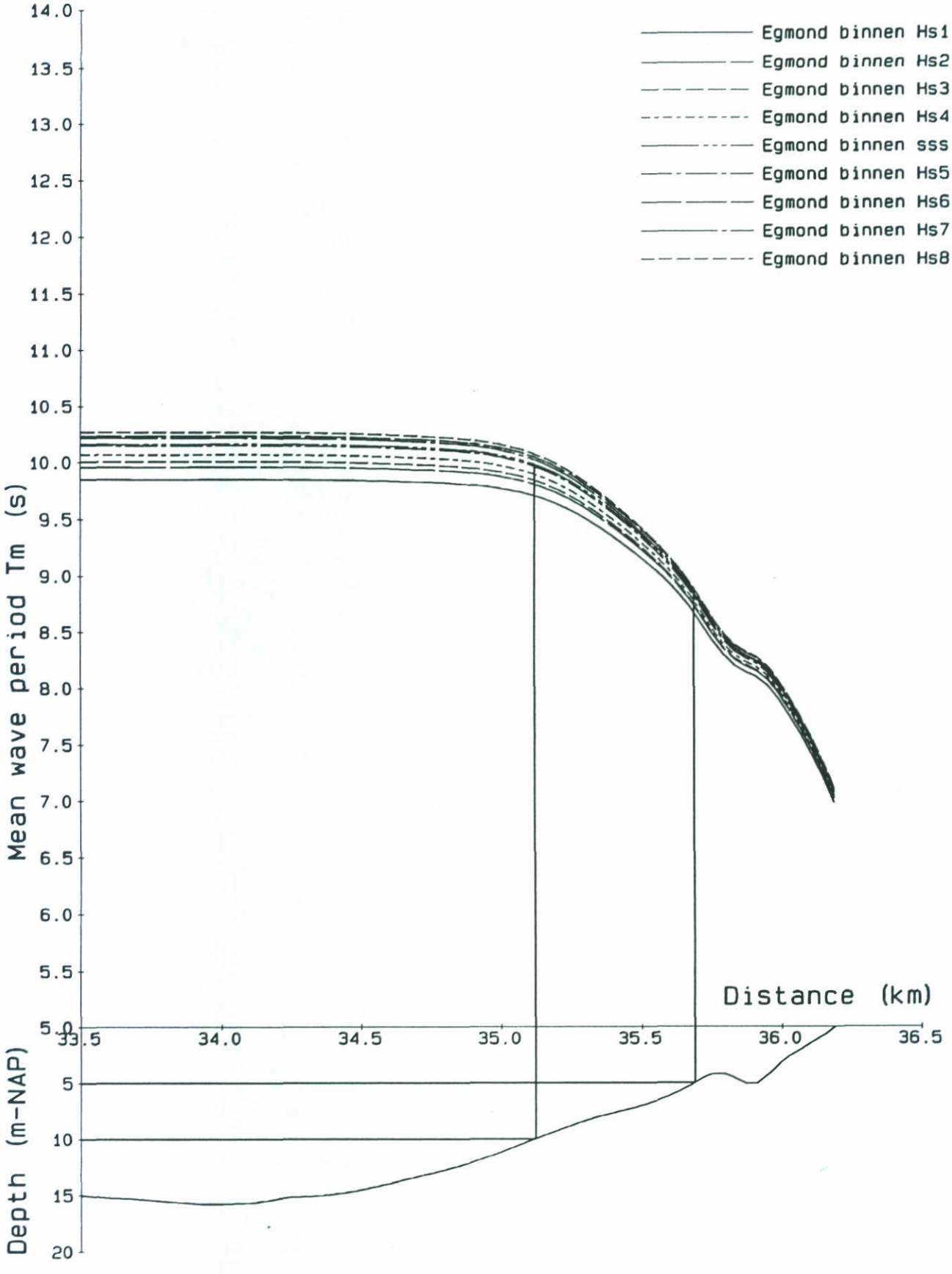


EFFECT OF WATER LEVEL VARIATION ENTRANCE WADDEN SEA	HYDRA-HISWA	WS1WS8
DELFT HYDRAULICS	H1355	FIG. 4.25m

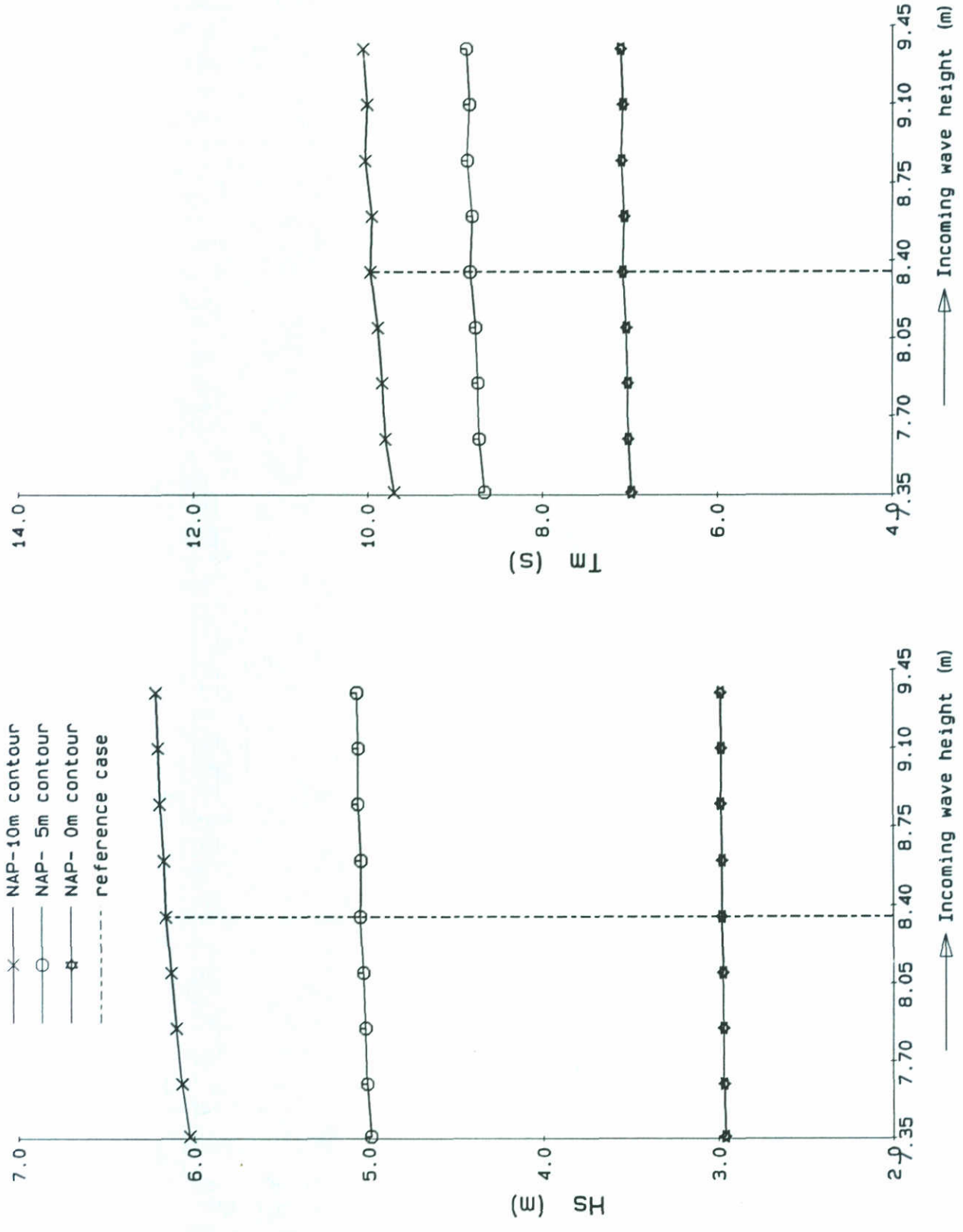
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSBUEG
DELFT HYDRAULICS	H1355	FIG. 4.26a



SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HS1HS8
DELFT HYDRAULICS	H1355	FIG. 4.26b



MEAN WAVE PERIOD EGMOND PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HS1HS8
DELFT HYDRAULICS	H1355	FIG. 4.26c



EFFECT OF WAVE HEIGHT VARIATION EGMOND PROFILE	HYDRA-HISWA	HS1HS8
DELFT HYDRAULICS	H1355	FIG. 4.26d

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSBUMG
DELFT HYDRAULICS	H1355	FIG. 4.26e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSZGMG
DELFT HYDRAULICS	H1355	FIG. 4.26f

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSBUMD
DELFT HYDRAULICS	H1355	FIG. 4.26g

MEAN WAVE PERIOD MARSDIEP PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSBUMD
DELFT HYDRAULICS	H1355	FIG. 4.26h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE
VARYING INCOMING WAVE HEIGHT

HYDRA-HISWA | HSZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.26i

MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING INCOMING WAVE HEIGHT

HYDRA-HISWA | HSZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.26j

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSBUBW
DELFT HYDRAULICS	H1355	FIG. 4.26k

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING INCOMING WAVE HEIGHT	HYDRA-HISWA	HSZGBW
DELFT HYDRAULICS	H1355	FIG. 4.261

EFFECT OF WAVE HEIGHT VARIATION

ENTRANCE WADDEN SEA

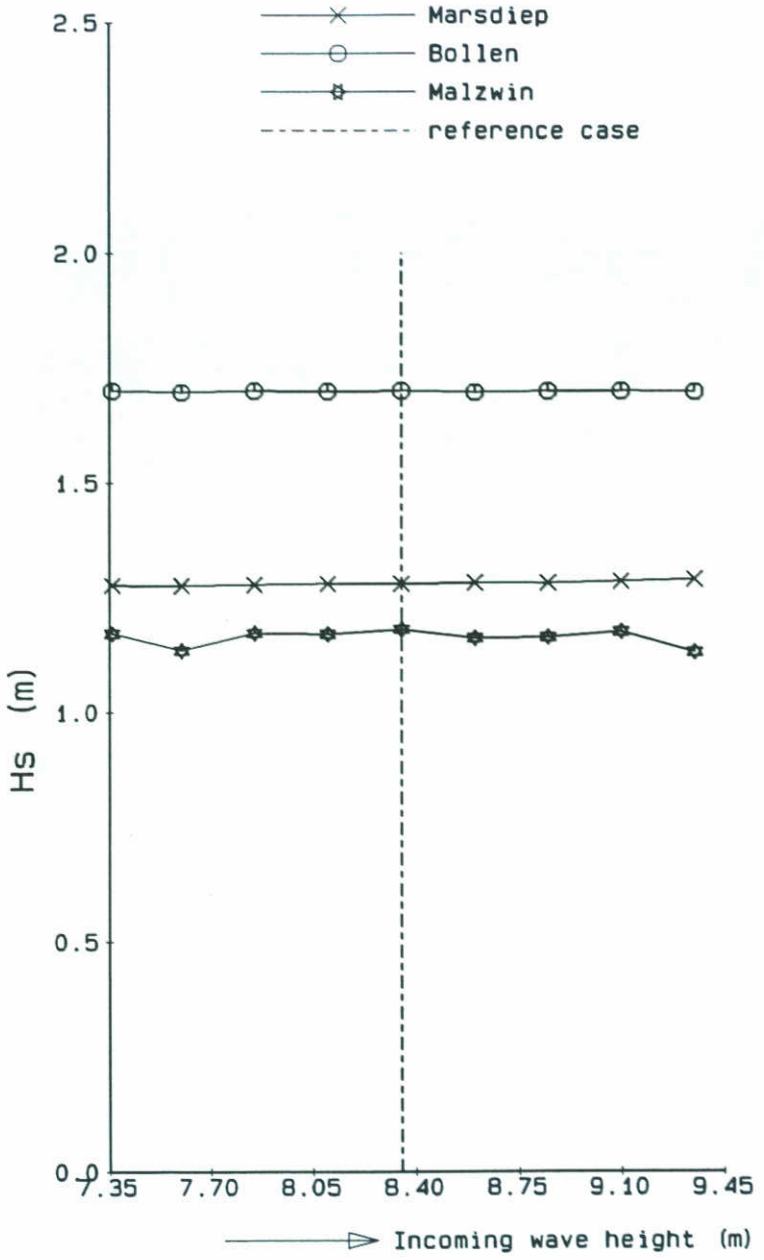
DELFT HYDRAULICS

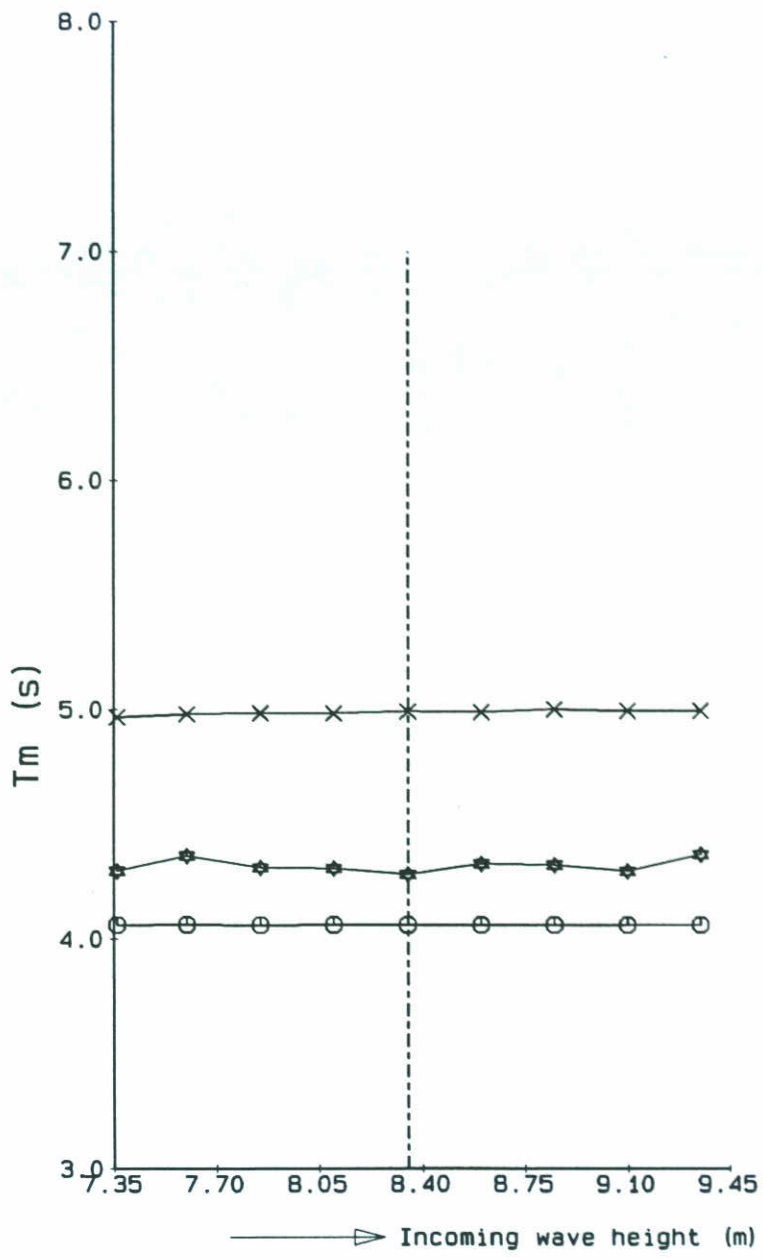
H1355

FIG. 4.26m

HYDRA-HISWA

HS1HS8



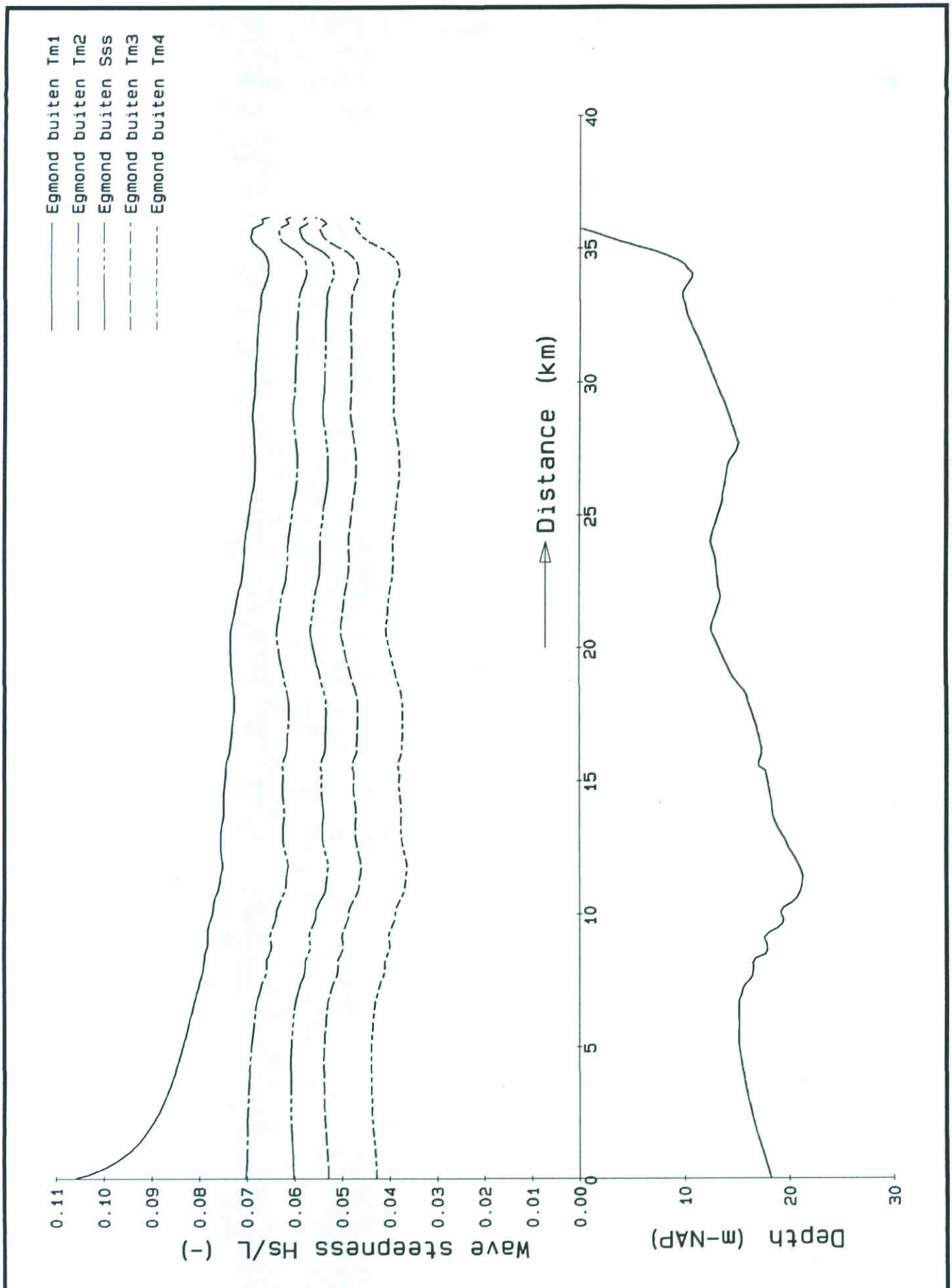


SIGNIFICANT WAVE HEIGHT EGMOND PROFILE
VARYING WAVE PERIOD

HYDRA-HISWA | TMBUEG

DELFT HYDRAULICS | H1355 | FIG. 4.27a

MEAN WAVE PERIOD EGMOND PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TMBUEG
DELFT HYDRAULICS	H1355	FIG. 4.27b

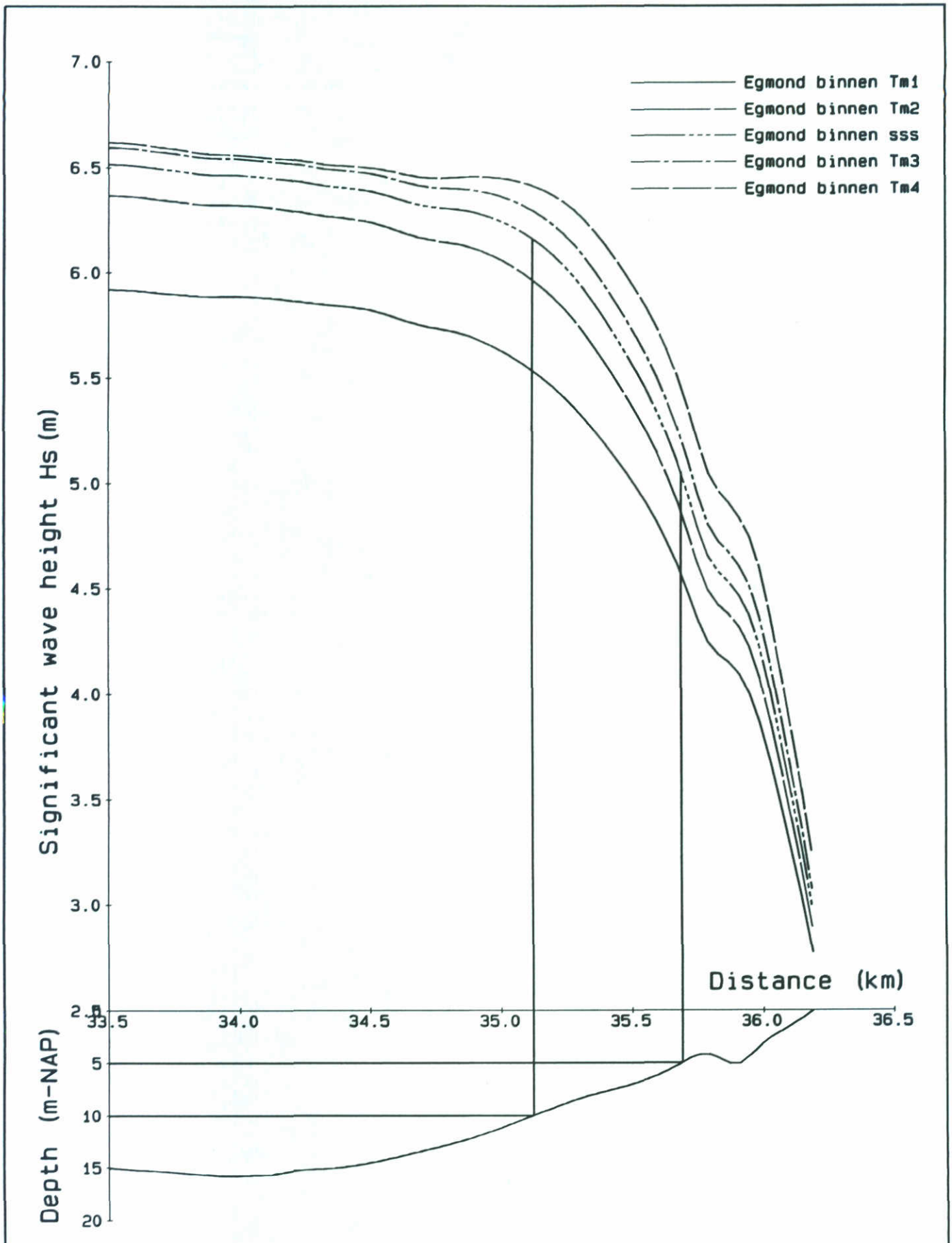


WAVE STEEPNESS EGMOND PROFILE

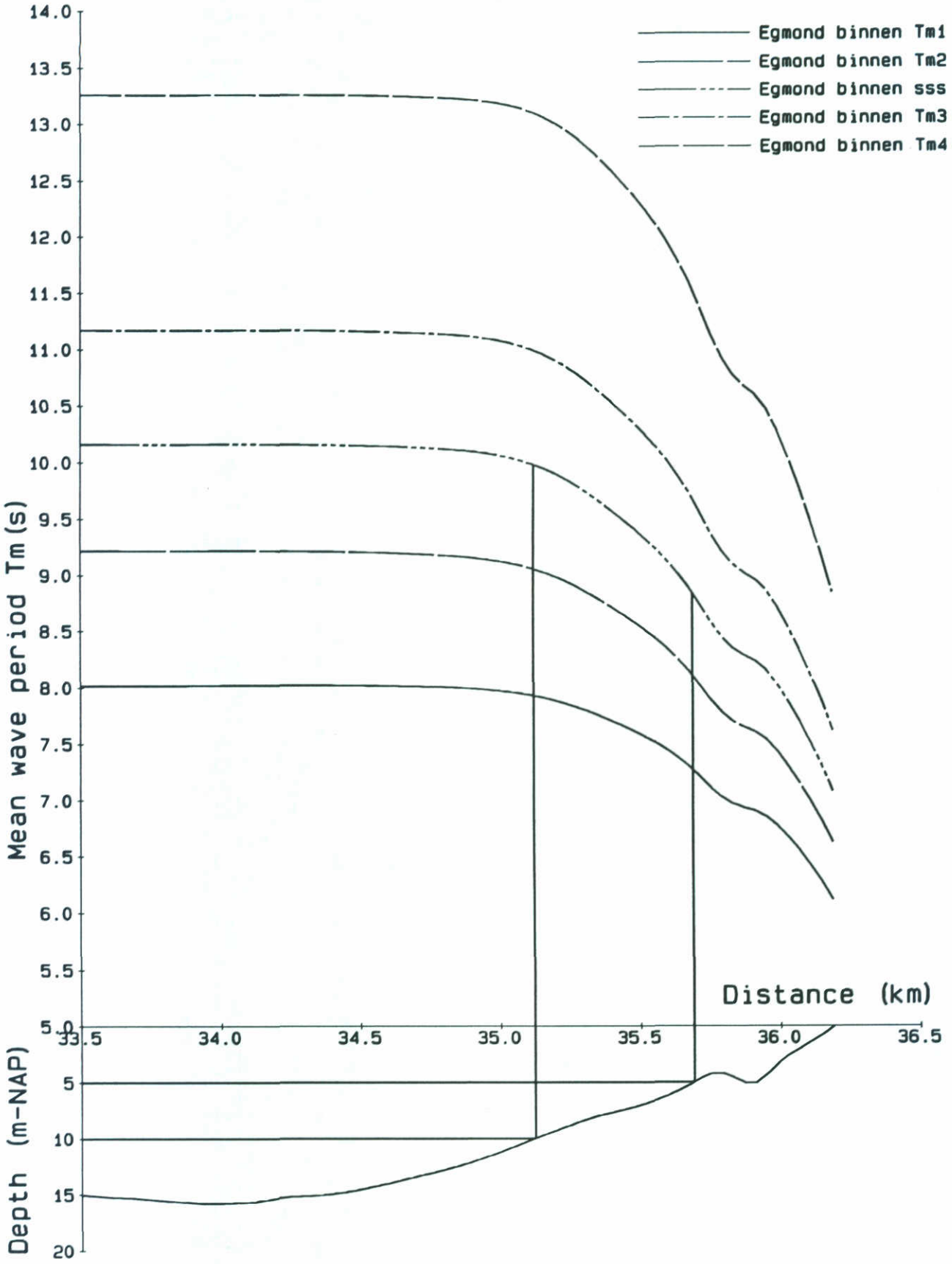
VARYING WAVE PERIOD

HYDRA-HISWA | TMBUEG

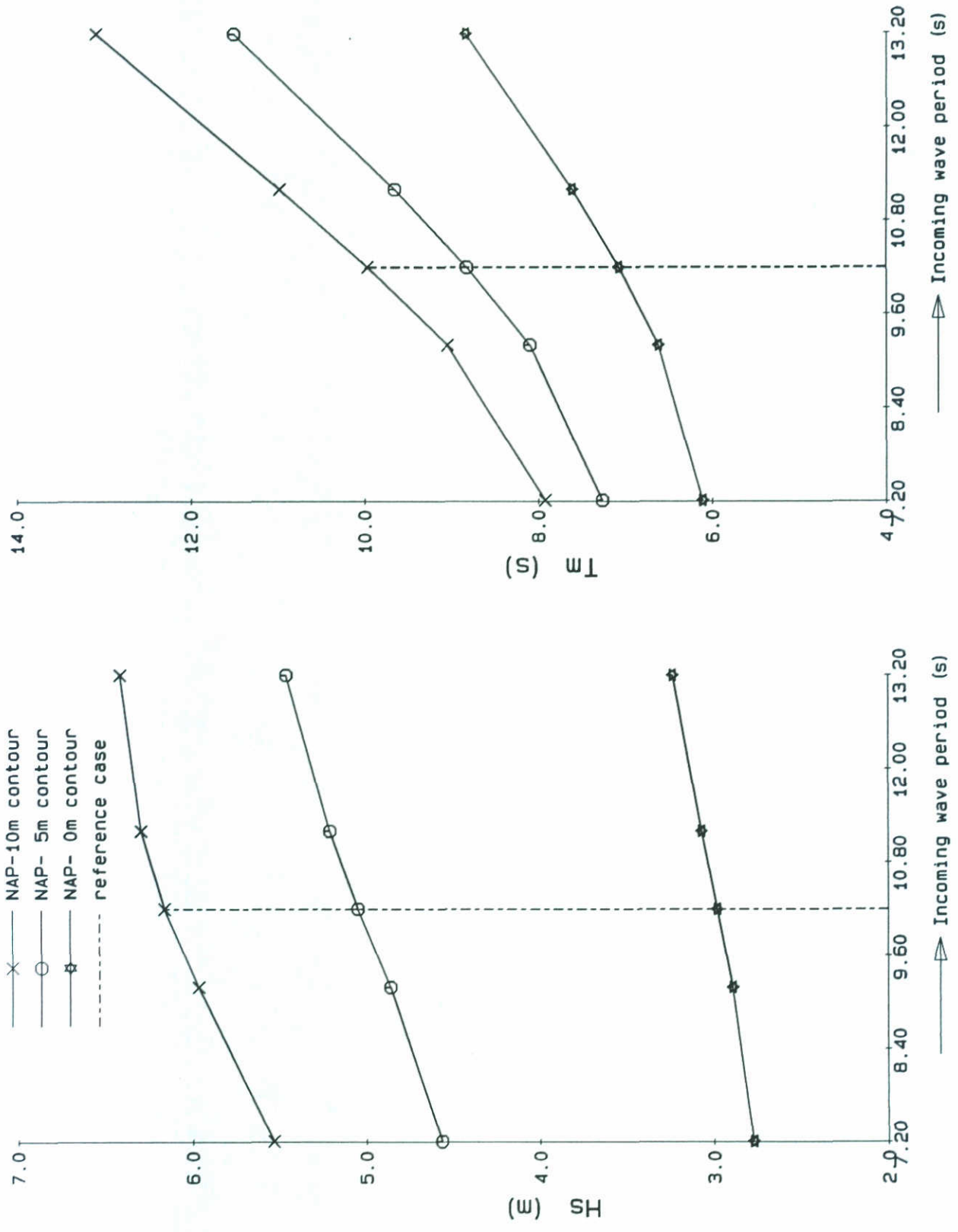
DELFT HYDRAULICS | H1355 | FIG. 4.27c



SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TM1TM4
DELFT HYDRAULICS	H1355	FIG. 4.27d



MEAN WAVE PERIOD EGMOND PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TM1TM4
DELFT HYDRAULICS	H1355	FIG. 4.27e



EFFECT OF WAVE PERIOD VARIATION

EGMOND PROFILE

HYDRA-HISWA | TM1TM4

DELFT HYDRAULICS | H1355 | FIG. 4.27f

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TMBUMG
DELFT HYDRAULICS	H1355	FIG.4.27g

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TMZGMG
DELFT HYDRAULICS	H1355	FIG. 4.27h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE
VARYING WAVE PERIOD

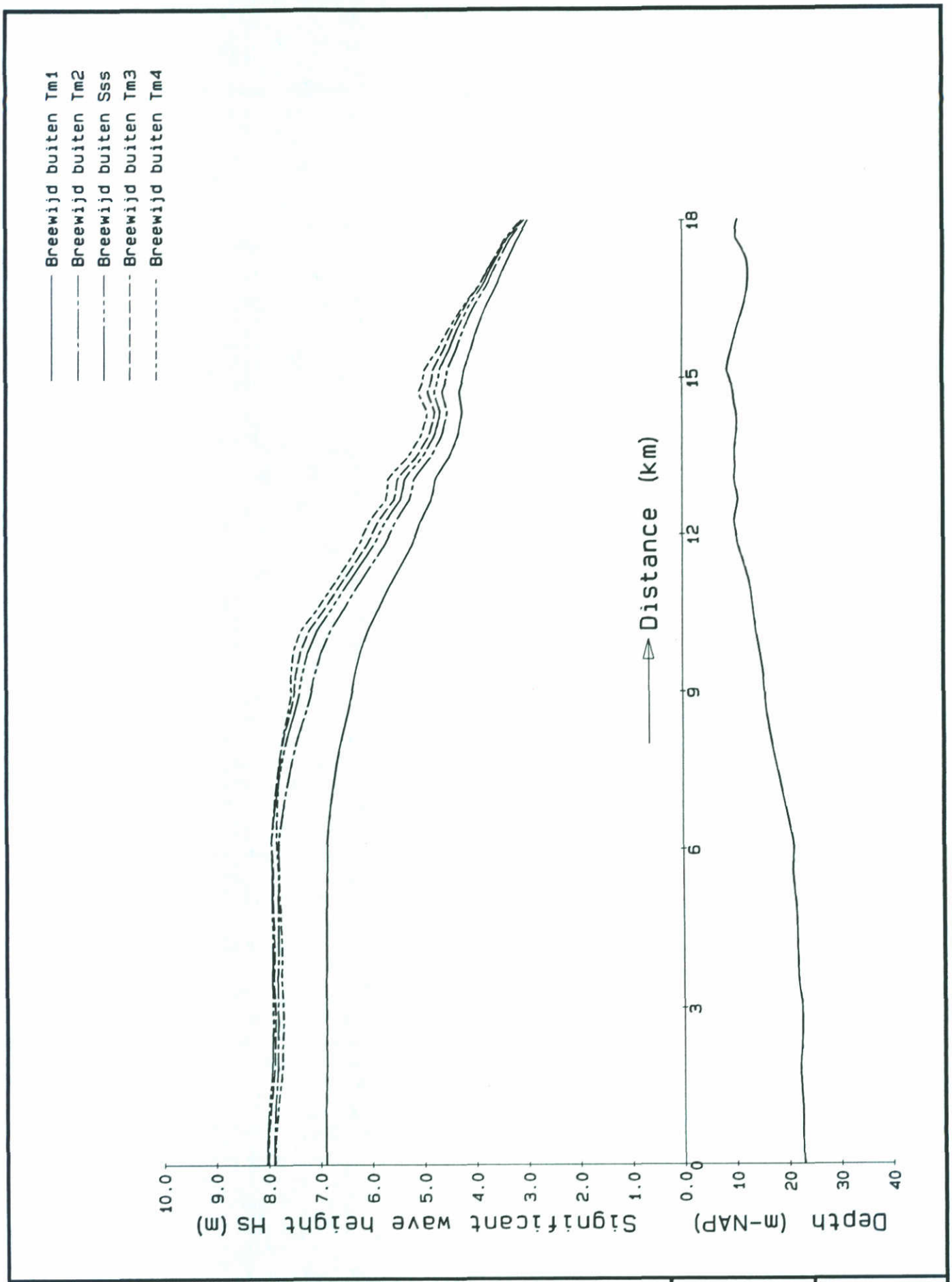
HYDRA-HISWA | TMBUMG

DELFT HYDRAULICS | H1355 | FIG. 4.27i

MEAN WAVE PERIOD MARSDIEP PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TMBUMG
DELFT HYDRAULICS	H1355	FIG. 4.27j

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TMZGMD
DELFT HYDRAULICS	H1355	FIG. 4.27k

MEAN WAVE PERIOD MARSDIEP PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	TMZGMD
DELFT HYDRAULICS	H1355	FIG. 4.27I



SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE
VARYING WAVE PERIOD

HYDRA-HISWA | TMBUBW

DELFT HYDRAULICS | H1355 | FIG. 4.27m

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING WAVE PERIOD	HYDRA-HISWA	BWZGMD
DELFT HYDRAULICS	H1355	FIG. 4.27n

EFFECT OF WAVE PERIOD VARIATION

ENTRANCE WADDEN SEA

HYDRA-HISWA | TM1TM4

DELFT HYDRAULICS | H1355 | FIG. 4.27o

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WAVE DIRECTION	HYDRA-HISWA	WRZGMG
DELFT HYDRAULICS	H1355	FIG. 4.28a

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING WAVE DIRECTION	HYDRA-HISWA	WR3ZGMD
DELFT HYDRAULICS	H1355	FIG. 4.28b

MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING WAVE DIRECTION

HYDRA-HISWA | WR3ZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.28c

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE
VARYING WAVE DIRECTION

HYDRA-HISWA | WR3ZGBW

DELFT HYDRAULICS | H1355 | FIG. 4.28d

EFFECT OF MAIN WAVE DIRECTION

ENTRANCE WADDEN SEA

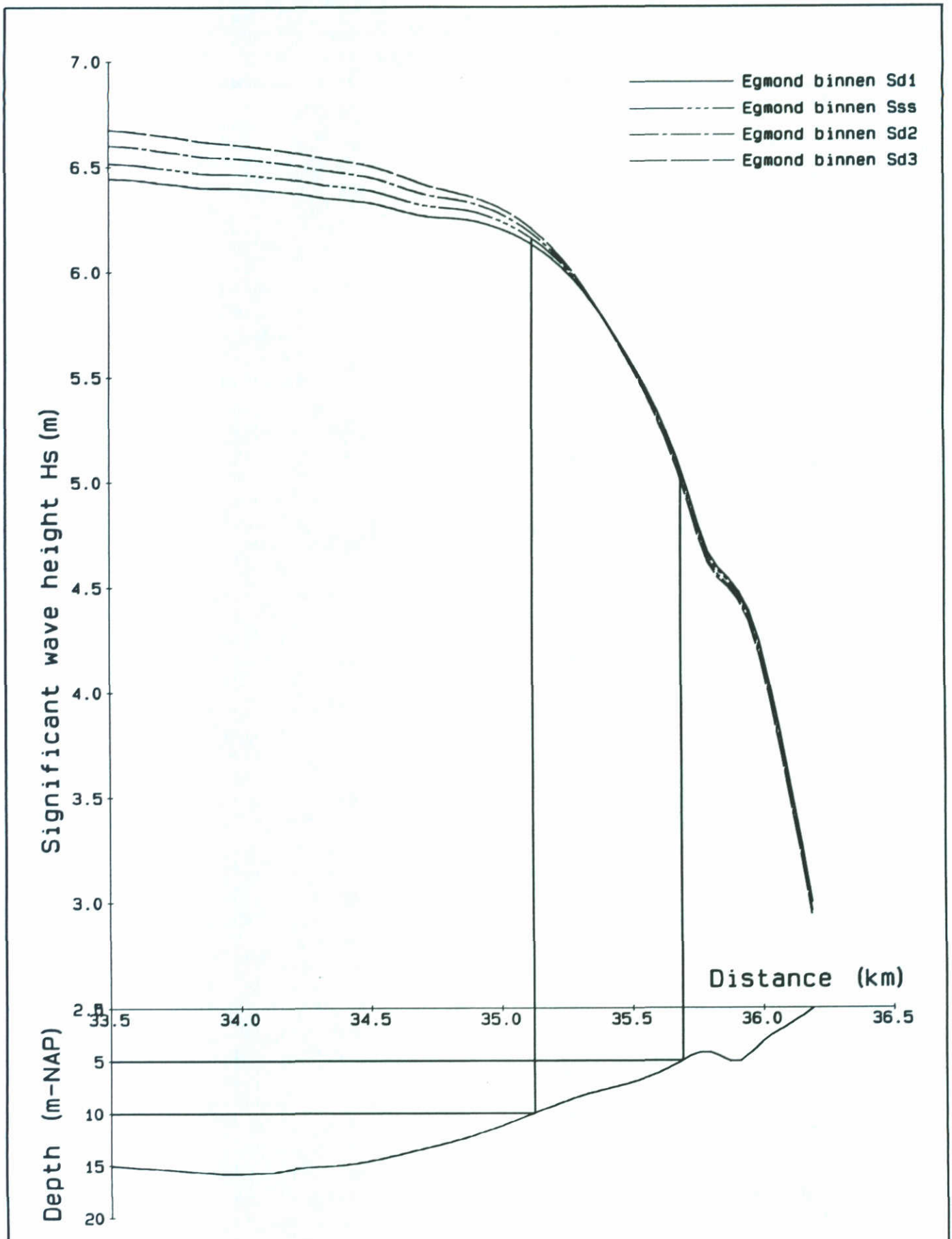
HYDRA-HISWA | WR3

DELFT HYDRAULICS | H1355 | FIG. 4.28e

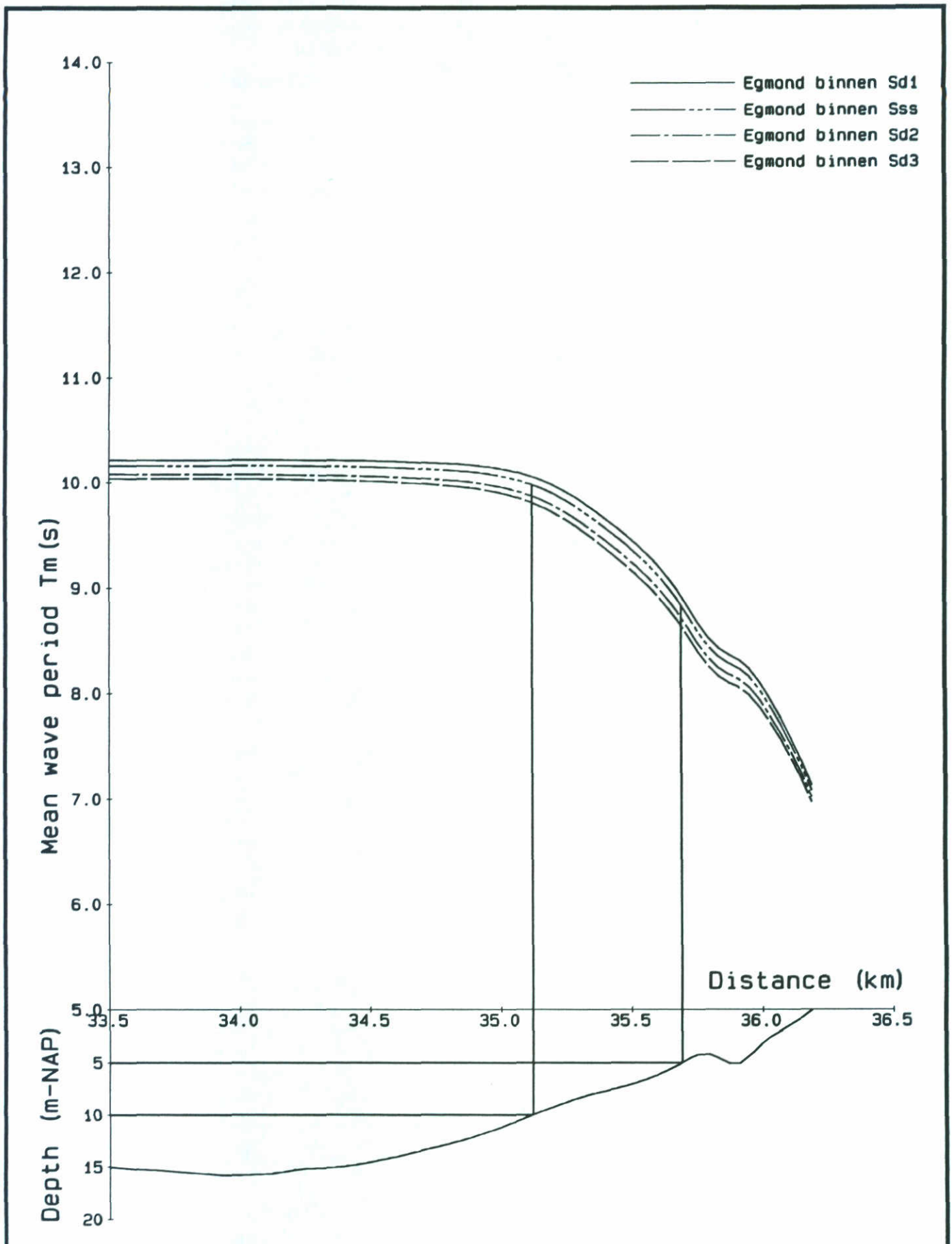
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE
VARYING DIRECTIONAL SPREADING

HYDRA-HISWA | SDBUEG

DELFT HYDRAULICS | H1355 | FIG. 4.29a



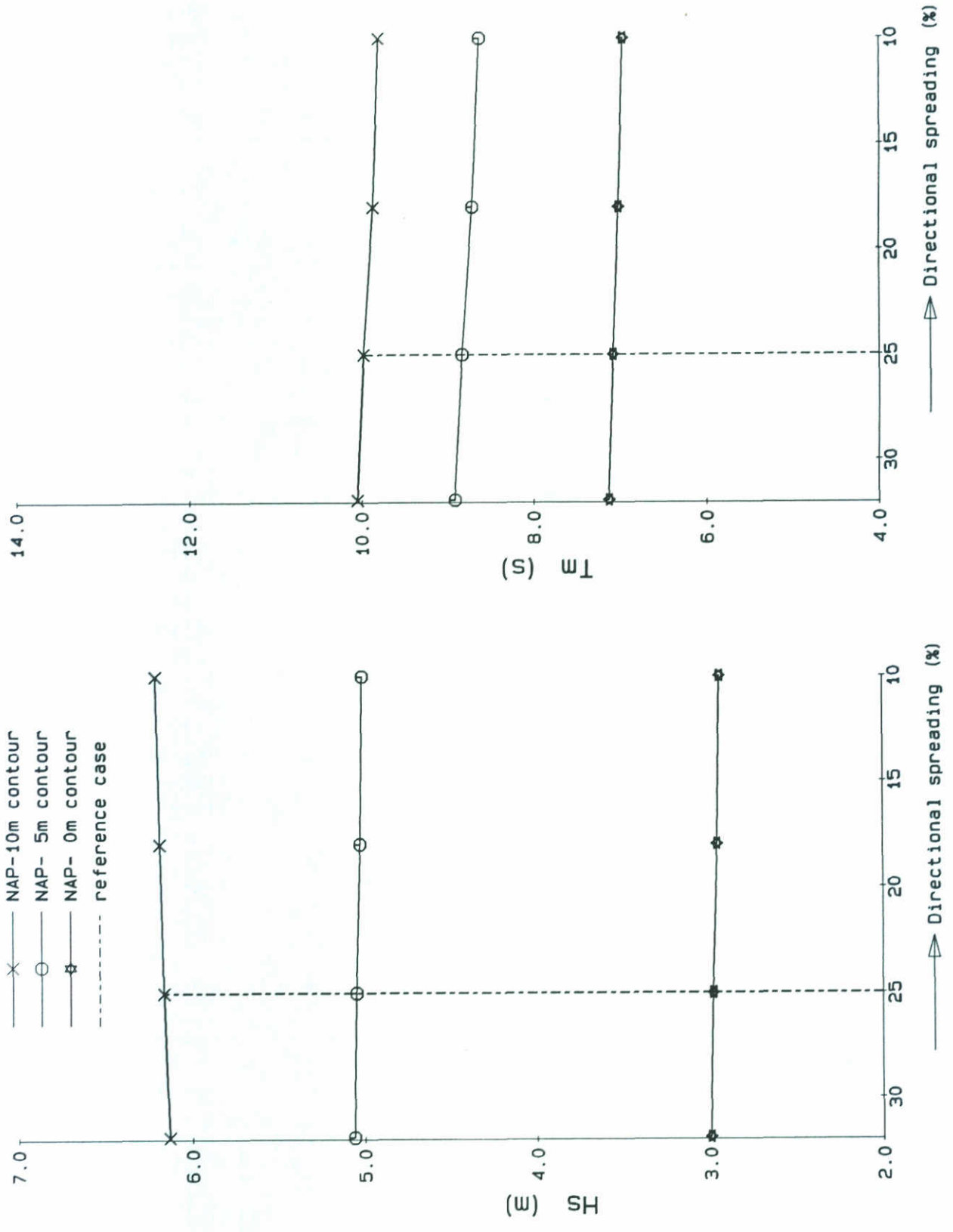
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SD1SD4
DELFT HYDRAULICS	H1355	FIG. 4.29b



MEAN WAVE PERIOD EGMOND PROFILE
VARYING DIRECTIONAL SPREADING

HYDRA-HISWA | SD1SD4

DELFT HYDRAULICS | H1355 | FIG. 4.29c



EFFECT OF DIRECTIONAL SPREADING

EGMOND PROFILE

HYDRA-HISWA | SD1SD3

DELFT HYDRAULICS | H1355 | FIG. 4.29d

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SDBUMG
DELFT HYDRAULICS	H1355	FIG. 4.29e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SDZGMG
DELFT HYDRAULICS	H1355	FIG. 4.29f

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SDBUMD
DELFT HYDRAULICS	H1355	FIG. 4.29g

MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING DIRECTIONAL SPREADING

HYDRA-HISWA | SDBUMD

DELFT HYDRAULICS | H1355 | FIG. 4.29h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SDZGMD
DELFT HYDRAULICS	H1355	FIG. 4.29i

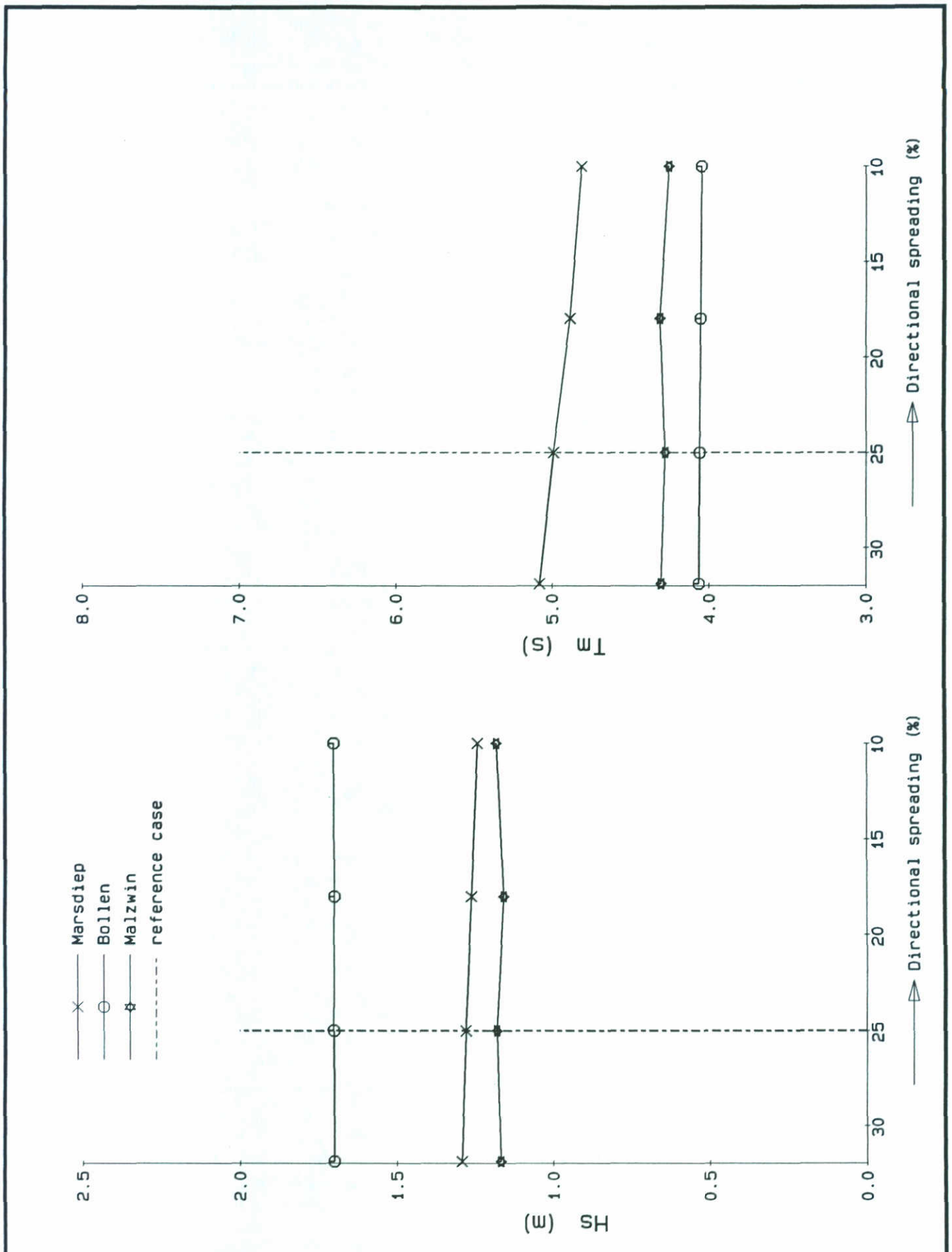
MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING DIRECTIONAL SPREADING

HYDRA-HISWA | SDZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.29j

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SDBUBW
DELFT HYDRAULICS	H1355	FIG. 4.29k

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING DIRECTIONAL SPREADING	HYDRA-HISWA	SDZGBW
DELFT HYDRAULICS	H1355	FIG. 4.291

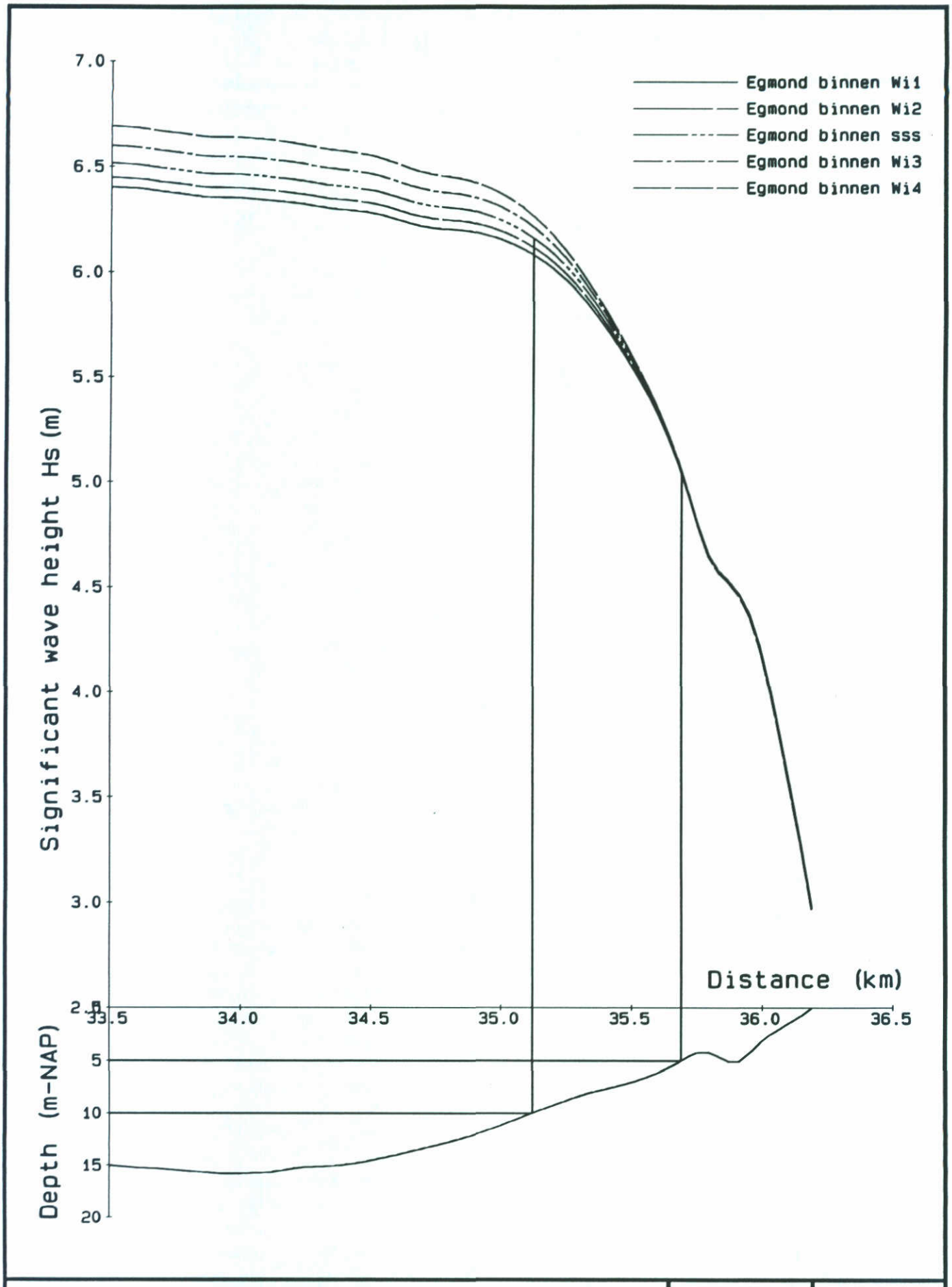


EFFECT OF DIRECTIONAL SPREADING ENTRANCE WADDEN SEA	HYDRA-HISWA	SD1SD3
DELFT HYDRAULICS	H1355	FIG. 4.29m

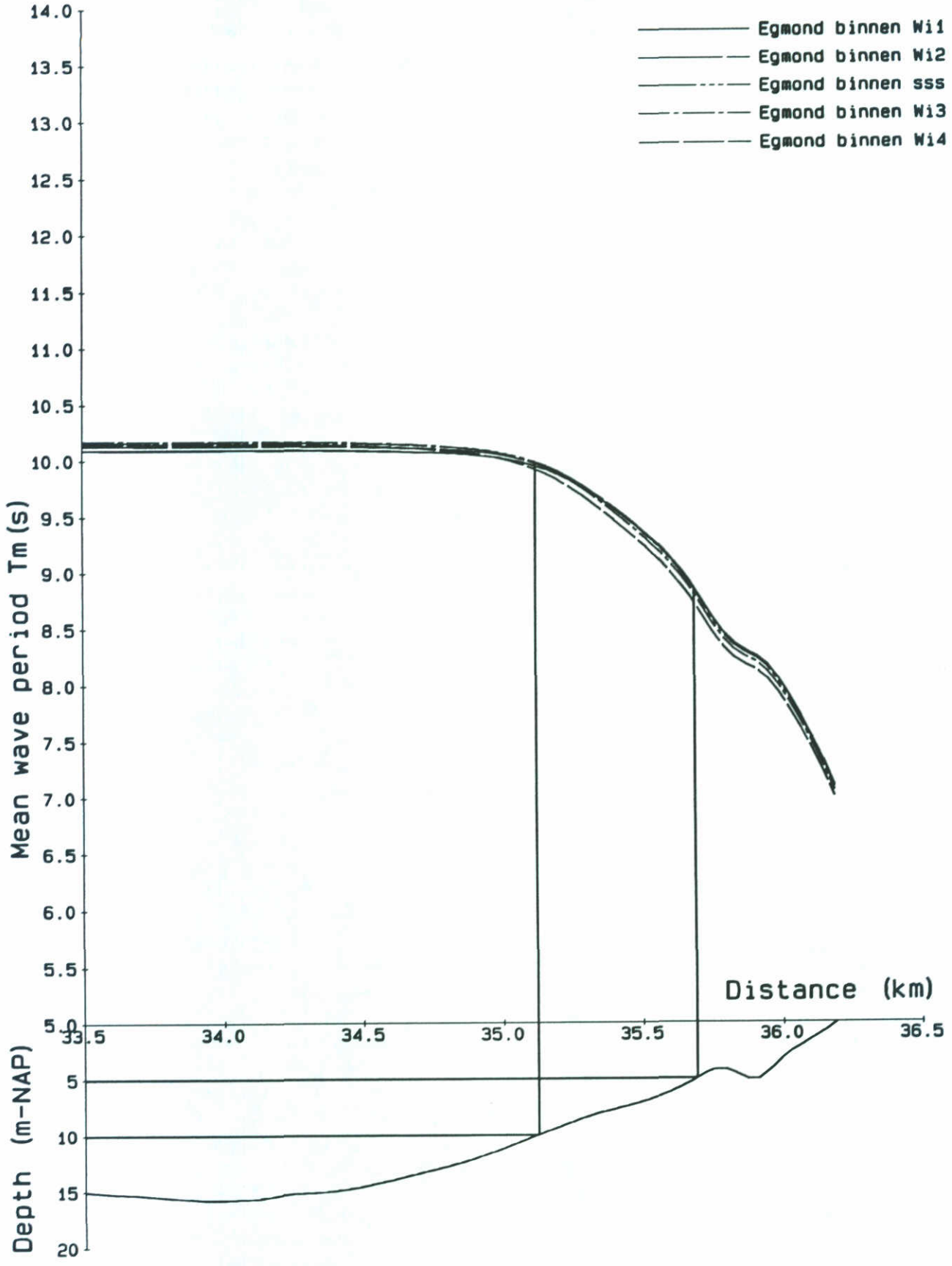
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE
VARYING WIND SPEED

HYDRA-HISWA | WIBUEG

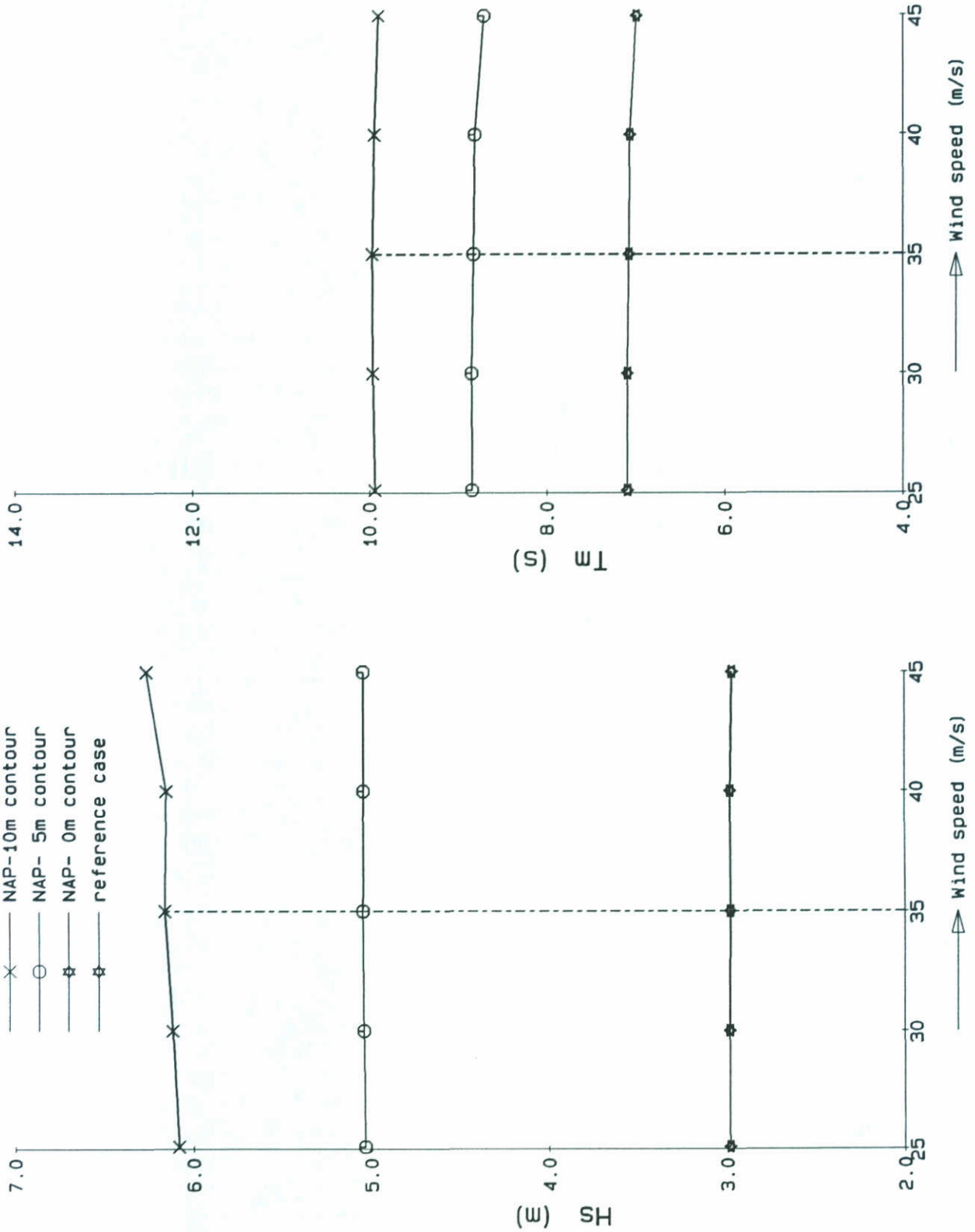
DELFT HYDRAULICS | H1355 | FIG. 4.30a



SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING WIND SPEED	HYDRA-HISWA	WI1WI4
DELFT HYDRAULICS	H1355	FIG. 4.30b



MEAN WAVE PERIOD EGMOND PROFILE VARYING WIND SPEED	HYDRA-HISWA	WI1WI4
DELFT HYDRAULICS	H1355	FIG. 4.30c



EFFECT OF WIND SPEED VARIATION

EGMOND PROFILE

HYDRA-HISWA | WI1WI4

DELFT HYDRAULICS | H1355 | FIG. 4.30d

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WIND SPEED	HYDRA-HISWA	WIBUMG
DELFT HYDRAULICS	H1355	FIG. 4.30e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE
VARYING WIND SPEED

HYDRA-HISWA | WIZGMG

DELFT HYDRAULICS | H1355 | FIG. 4.30f

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE
VARYING WIND SPEED

HYDRA-HISWA | WIBUMD

DELFT HYDRAULICS | H1355 | FIG. 4.30g

MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING WIND SPEED

HYDRA-HISWA | WIBUMD

DELFT HYDRAULICS | H1355 | FIG. 4.30h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING WIND SPEED	HYDRA-HISWA	WIZGMD
DELFT HYDRAULICS	H1355	FIG. 4.30i

MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING WIND SPEED

HYDRA-HISWA | WIZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.30j

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING WIND SPEED	HYDRA-HISWA	WIBUBW
DELFT HYDRAULICS	H1355	FIG. 4.30k

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE
VARYING WIND SPEED

HYDRA-HISWA | WIZGBW

DELFT HYDRAULICS | H1355 | FIG. 4.301

EFFECT OF WIND SPEED VARIATION

ENTRANCE WADDEN SEA

HYDRA-HISWA | WI1WI4

DELFT HYDRAULICS | H1355 | FIG. 4.30m

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING CURRENT CONDITIONS	HYDRA-HISWA	MGZGHS
DELFT HYDRAULICS	H1355	FIG. 4.31 a

MEAN WAVE PERIOD MOLENGAT PROFILE VARYING CURRENT CONDITIONS	HYDRA-HISWA	MGZGTM
DELFT HYDRAULICS	H1355	FIG. 4.31 b

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE
VARYING CURRENT CONDITIONS

HYDRA-HISWA | MDZGHS

DELFT HYDRAULICS | H1355 | FIG. 4.31 c

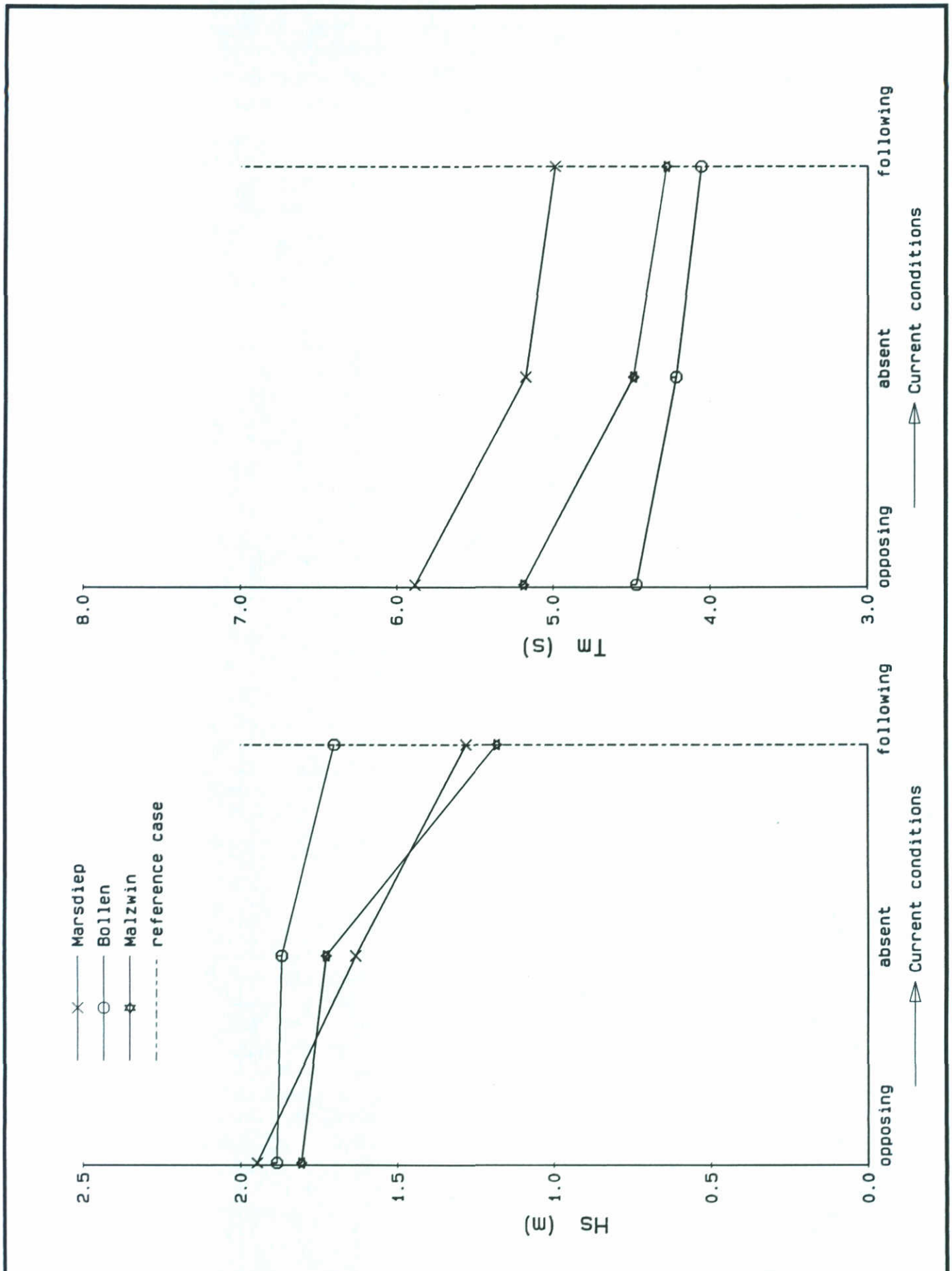
MEAN WAVE PERIOD MARSDIEP PROFILE VARYING CURRENT CONDITIONS	HYDRA-HISWA	MDZGTM
DELFT HYDRAULICS	H1355	FIG. 4.31 d

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING CURRENT CONDITIONS	HYDRA-HISWA	BWZGHS
DELFT HYDRAULICS	H1355	FIG. 4.31 e

MEAN WAVE PERIOD BREEWIJD PROFILE
VARYING CURRENT CONDITIONS

HYDRA-HISWA | BWZGTM

DELFT HYDRAULICS | H1355 | FIG. 4.31 f

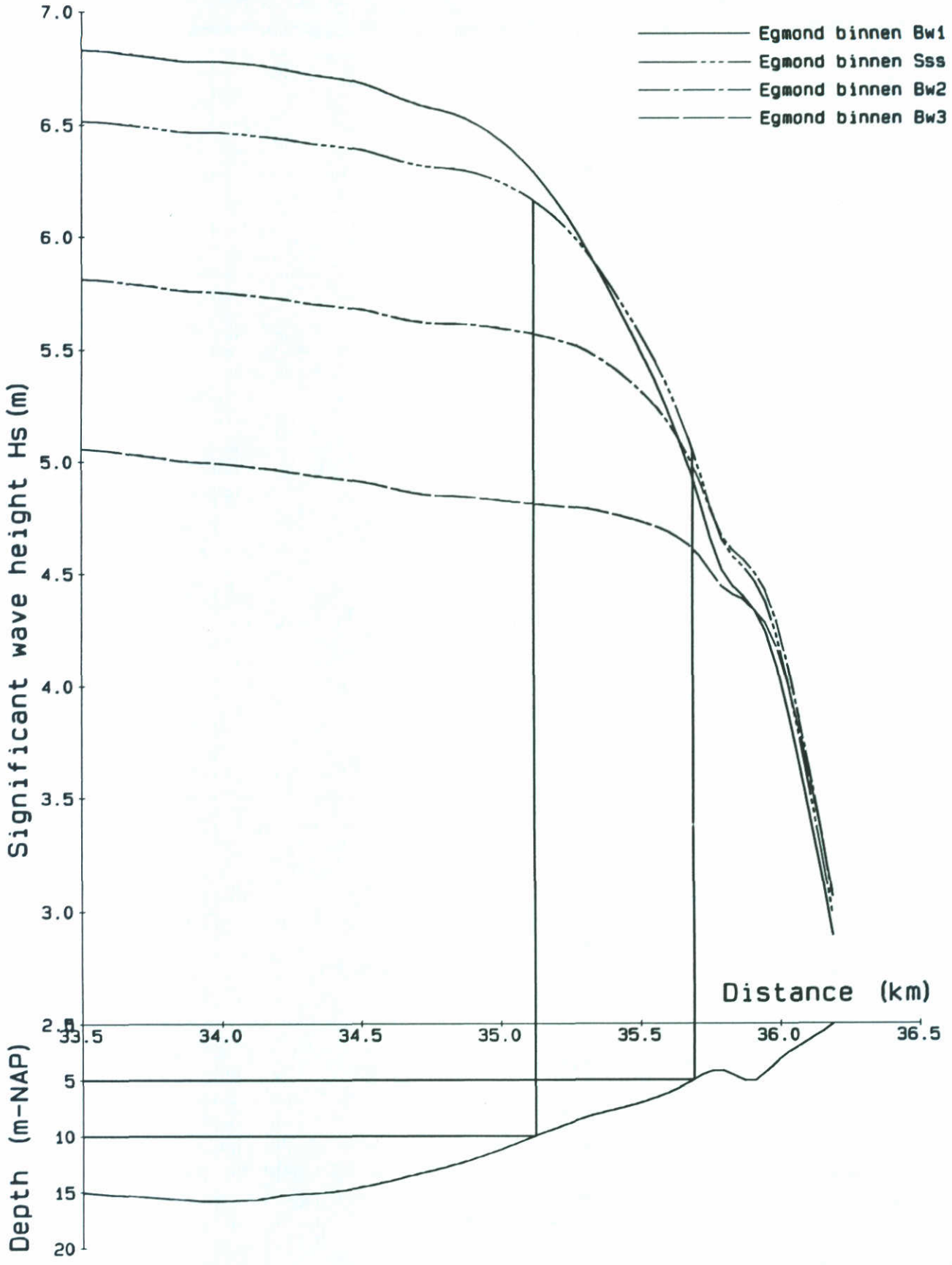


EFFECT OF CURRENT CONDITIONS
ENTRANCE WADDEN SEA

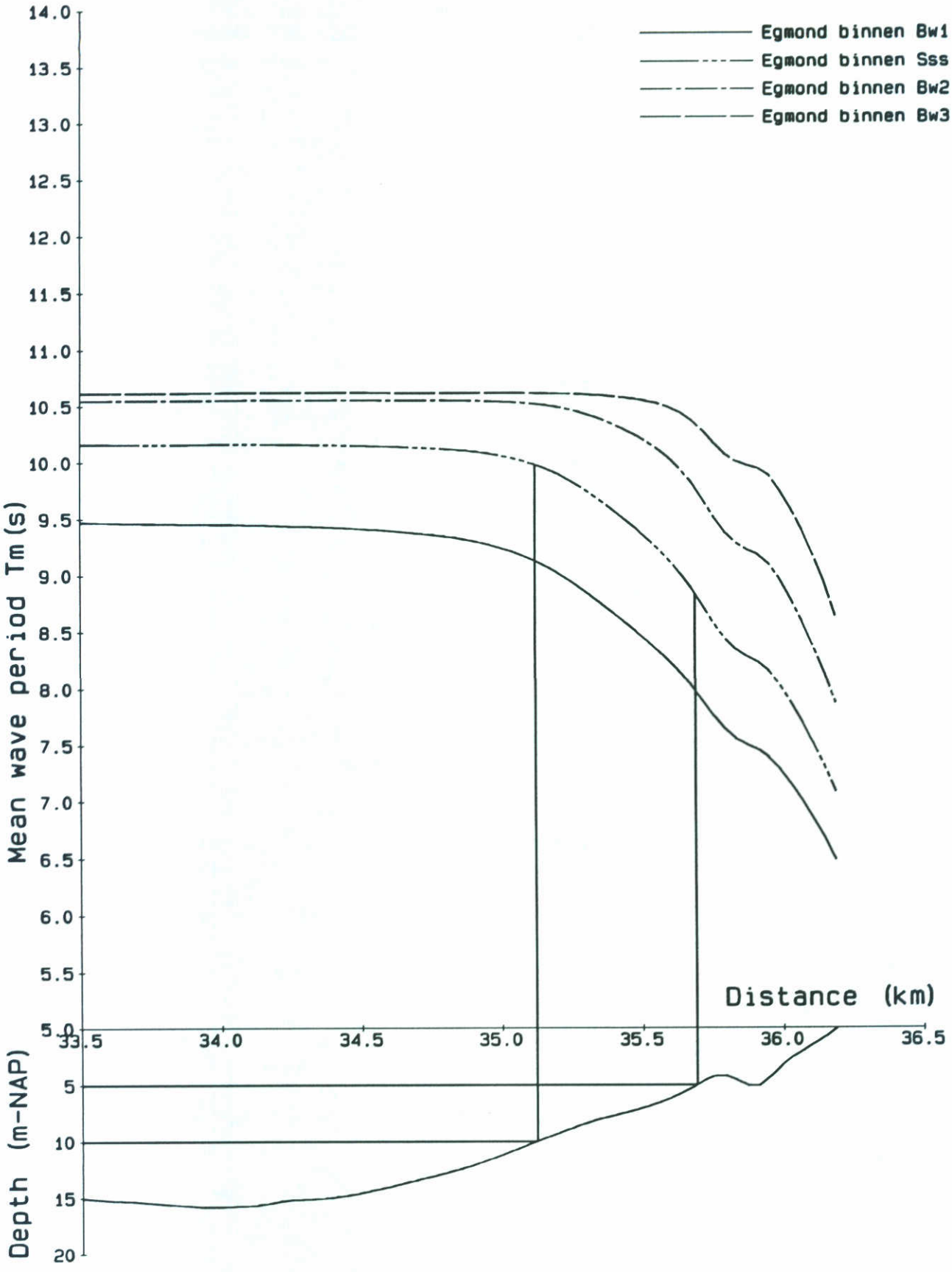
HYDRA-HISWA | SR1SR2

DELFT HYDRAULICS | H1355 | FIG. 4.31 g

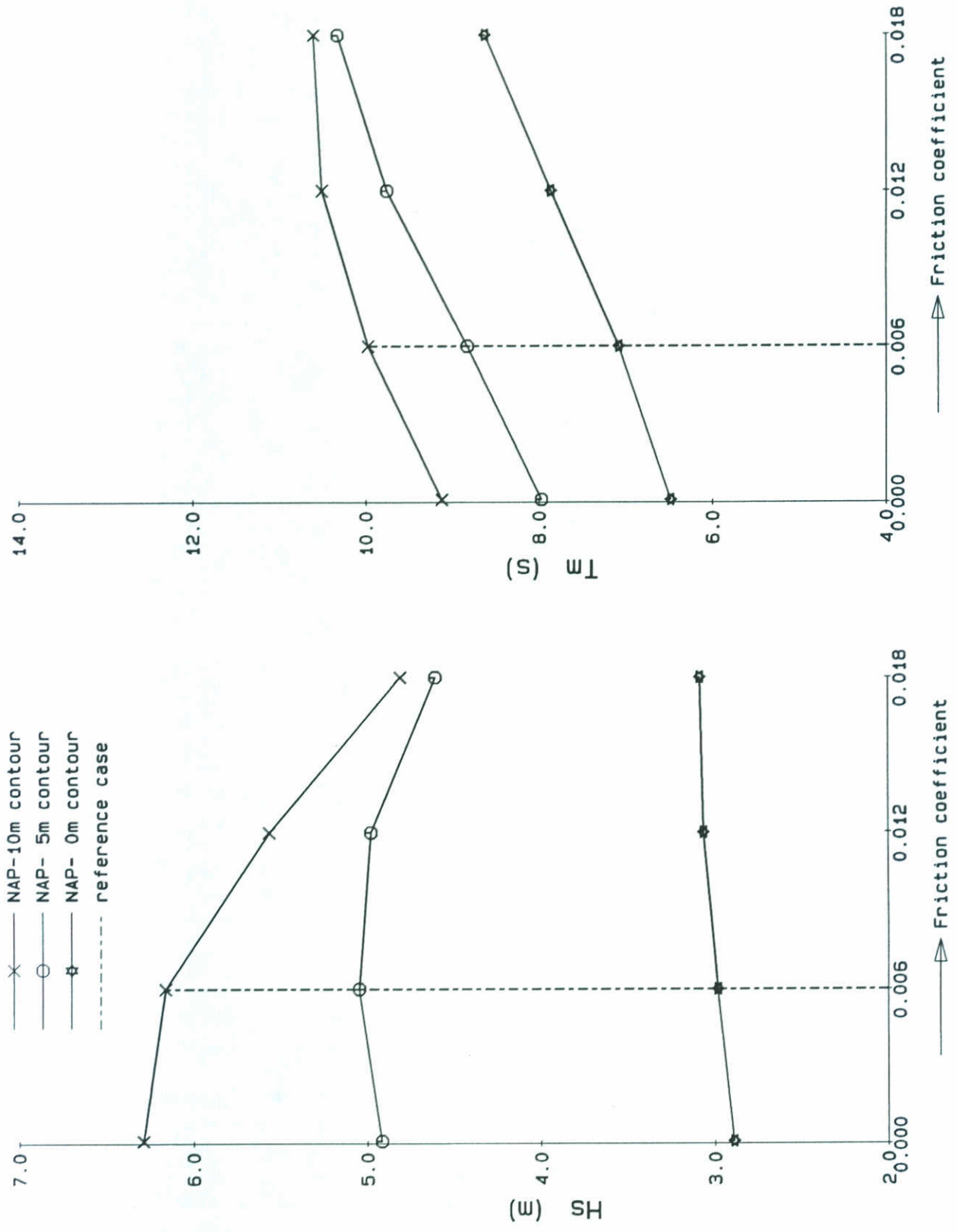
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWBUEG
DELFT HYDRAULICS	H1355	FIG. 4.32a



SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING BOTTOM FRICTION	HYDRA-HISWA	BW1BW4
DELFT HYDRAULICS	H1355	FIG. 4.32b



MEAN WAVE PERIOD EGMOND PROFILE VARYING BOTTOM FRICTION	HYDRA-HISWA	BW1BW4
DELFT HYDRAULICS	H1355	FIG. 4.32c



EFFECT OF FRICTION COEFFICIENT EGMOND PROFILE	HYDRA-HISWA	BW1BW3
DELFT HYDRAULICS	H1355	FIG. 4.32d

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWBUMG
DELFT HYDRAULICS	H1355	FIG. 4.32e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWZGMG
DELFT HYDRAULICS	H1355	FIG. 4.32f

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWBUMD
DELFT HYDRAULICS	H1355	FIG. 4.32g

MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING BOTTOM FRICTION COEFFICIENT

HYDRA-HISWA | BWBUMD

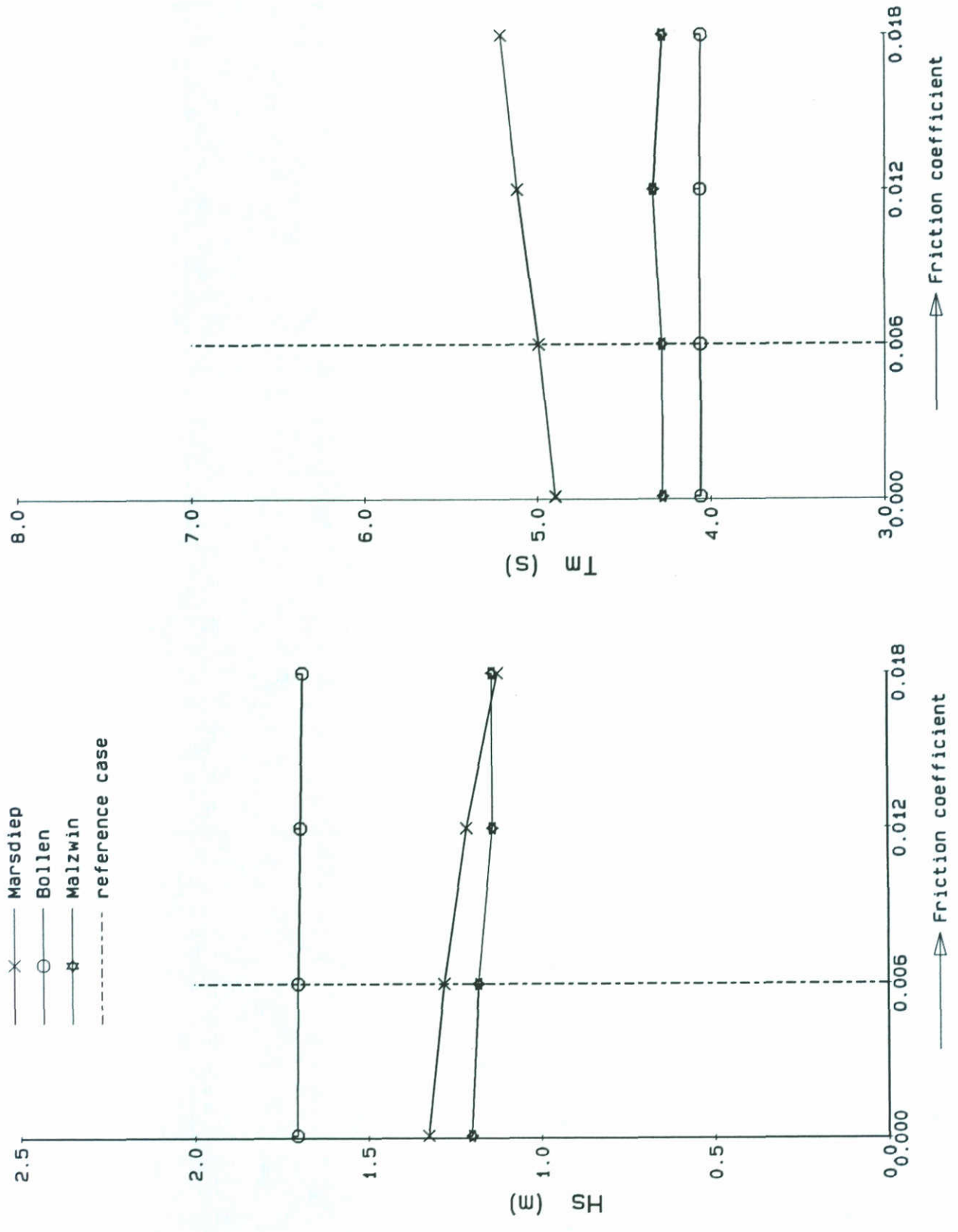
DELFT HYDRAULICS | H1355 | FIG.4.32h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWZGMD
DELFT HYDRAULICS	H1355	FIG. 4.32i

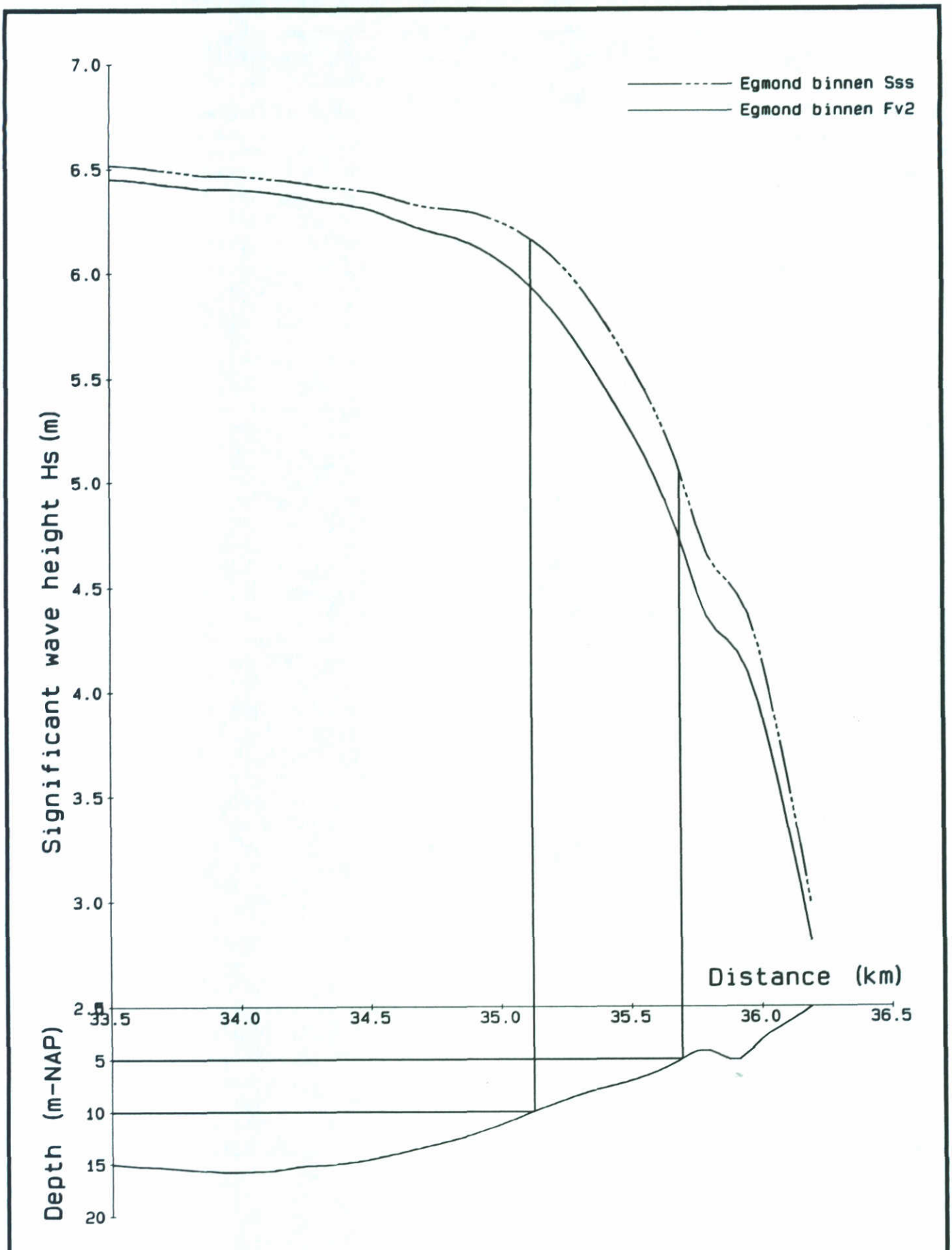
MEAN WAVE PERIOD MARSDIEP PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWZGMD
DELFT HYDRAULICS	H1355	FIG. 4.32j

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWBUBW
DELFT HYDRAULICS	H1355	FIG. 4.32k

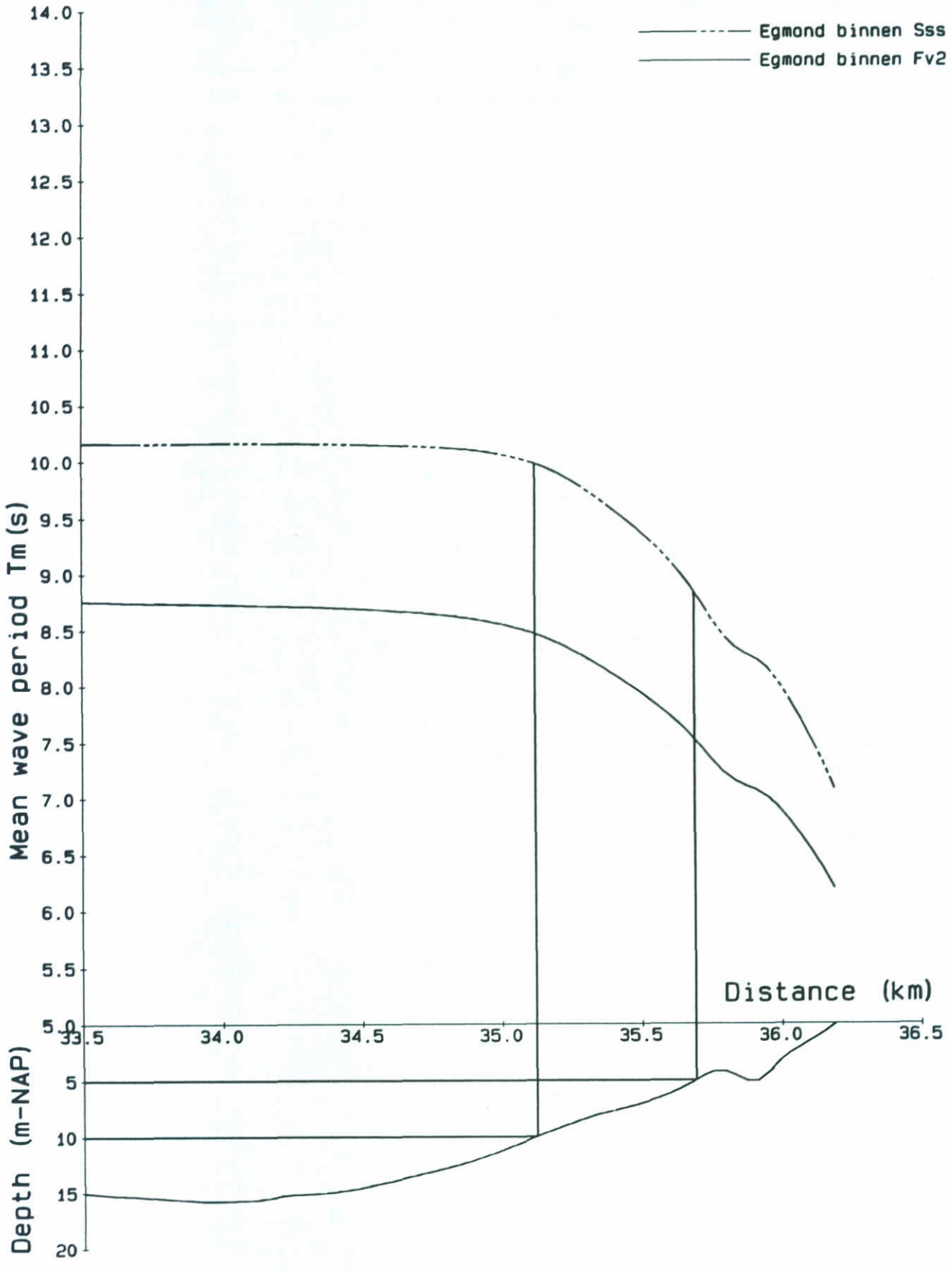
SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING BOTTOM FRICTION COEFFICIENT	HYDRA-HISWA	BWZGBW
DELFT HYDRAULICS	H1355	FIG. 4.321



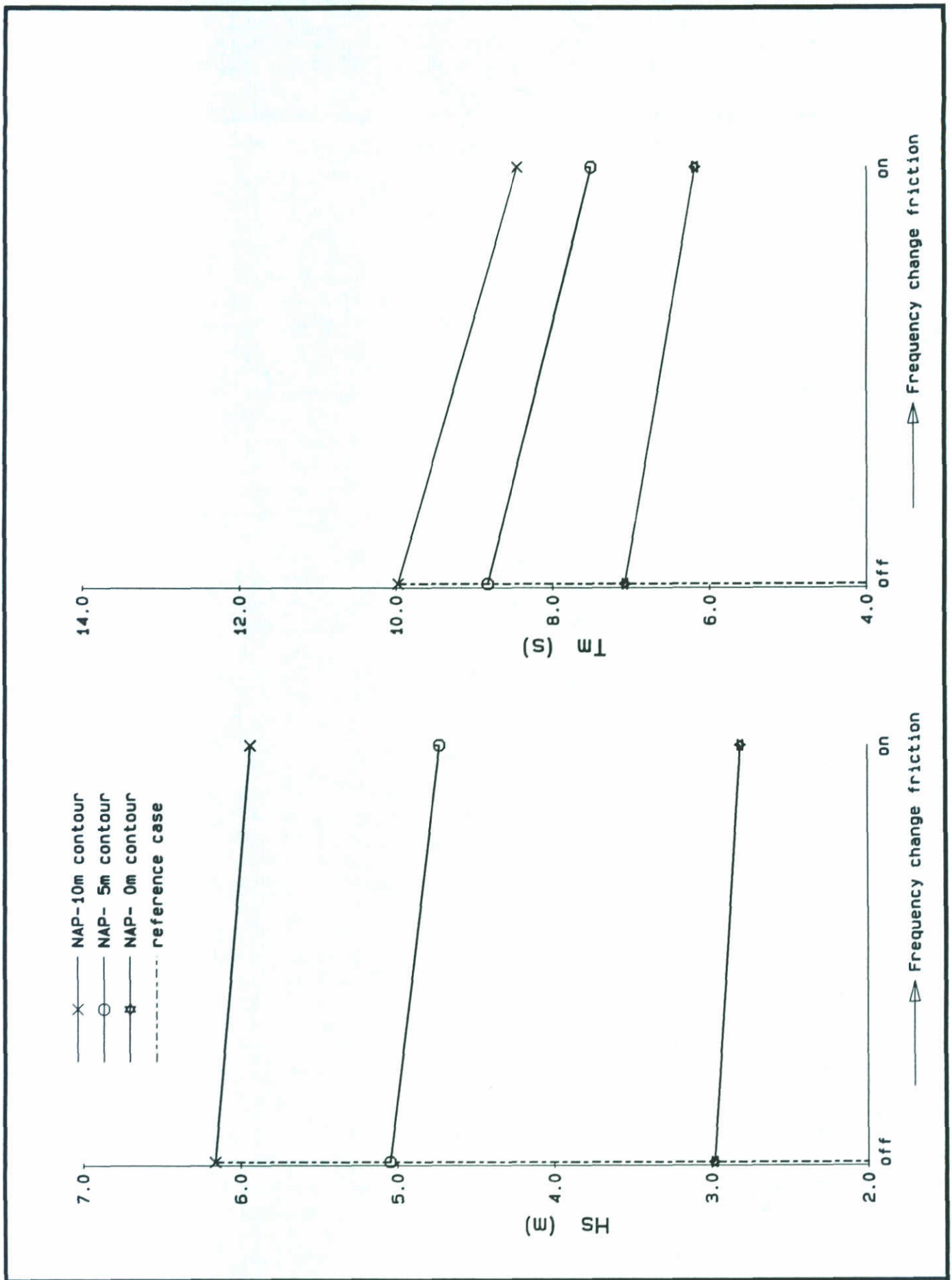
EFFECT OF FRICTION COEFFICIENT ENTRANCE WADDEN SEA	HYDRA-HISWA	BW1BW3
DELFT HYDRAULICS	H1355	FIG. 4.32m



SIGNIFICANT WAVE HEIGHT EGMOND PROFILE FREQUENCY CHANGE FRICTION ON/OFF	HYDRA-HISWA	FV2
DELFT HYDRAULICS	H1355	FIG. 4.33a



MEAN WAVE PERIOD EGMOND PROFILE FREQUENCY CHANGE FRICTION ON/OFF	HYDRA-HISWA	FV2
DELFT HYDRAULICS	H1355	FIG. 4.33b



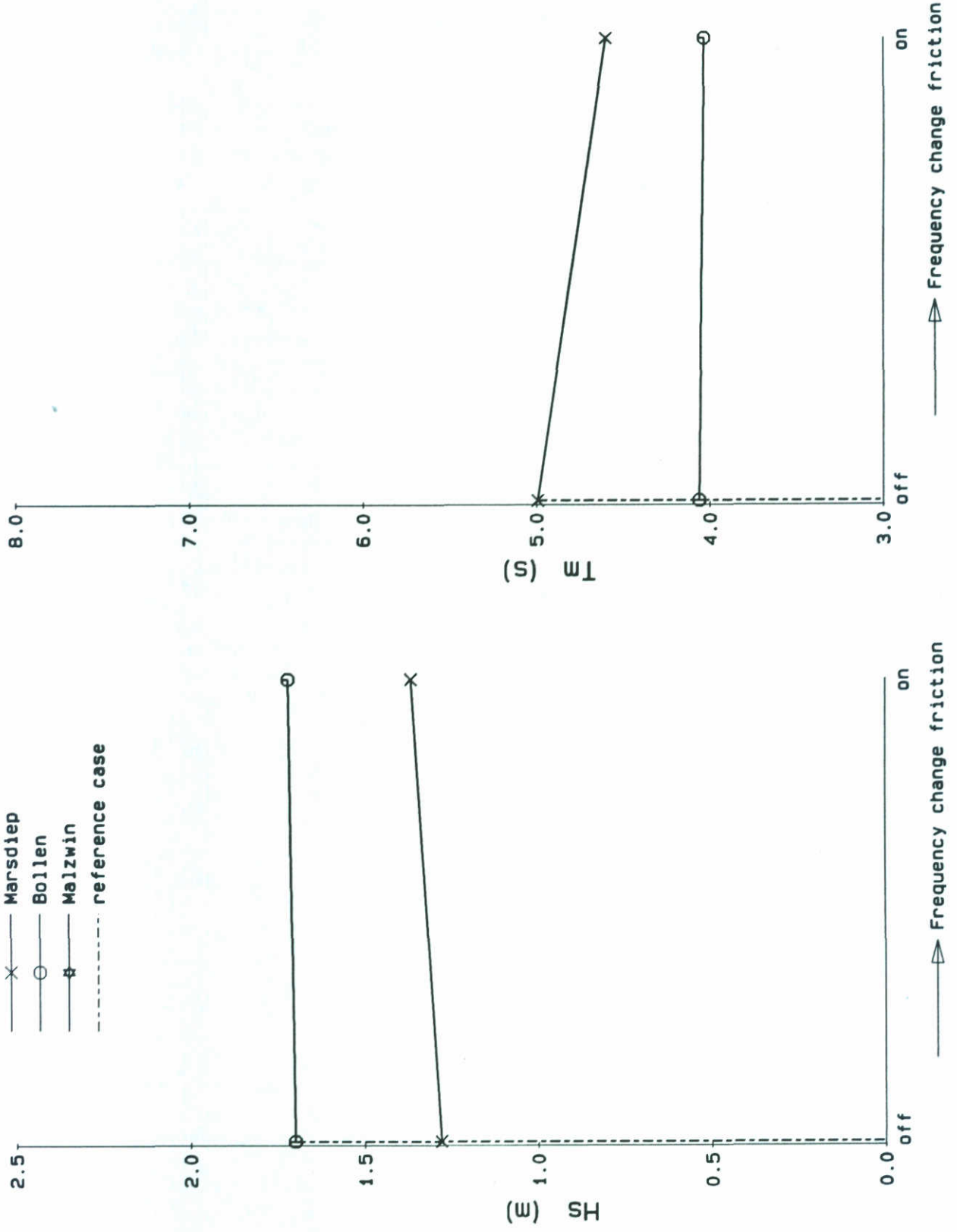
EFFECT OF FREQUENCY CHANGE FRICTION EGMOND PROFILE	HYDRA-HISWA	FV2
DELFT HYDRAULICS	H1355	FIG. 4.33c

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE FREQUENCY CHANGE FRICTION ON/OFF	HYDRA-HISWA	FVZGMG
DELFT HYDRAULICS	H1355	FIG. 4.33d

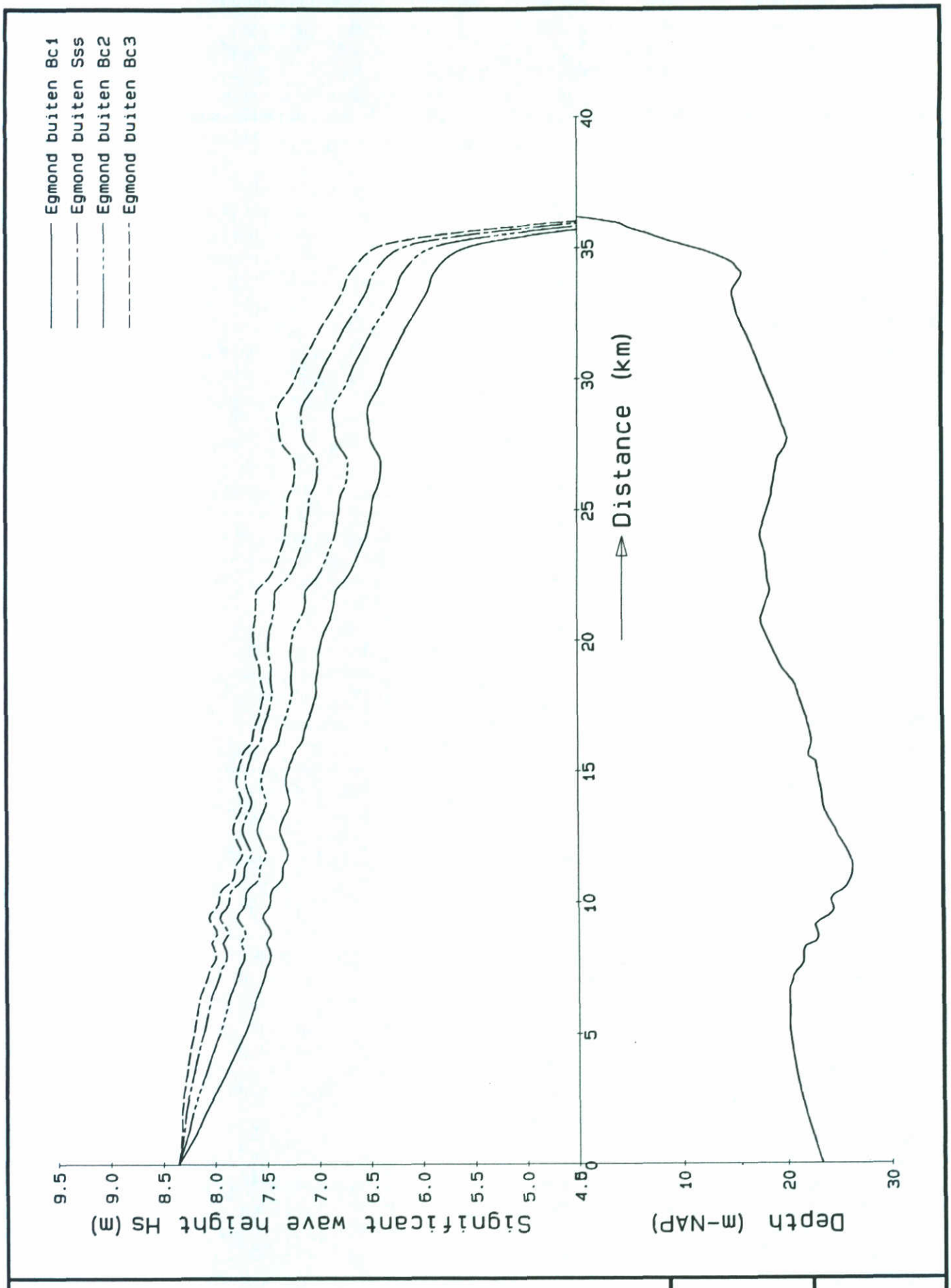
SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE FREQUENCY CHANGE FRICTION ON/OFF	HYDRA-HISWA	FV2ZGMD
DELFT HYDRAULICS	H1355	FIG. 4.33e

MEAN WAVE PERIOD MARSDIEP PROFILE FREQUENCY CHANGE FRICTION ON/OFF	HYDRA-HISWA	FV22ZGMD
DELFT HYDRAULICS	H1355	FIG. 4.33f

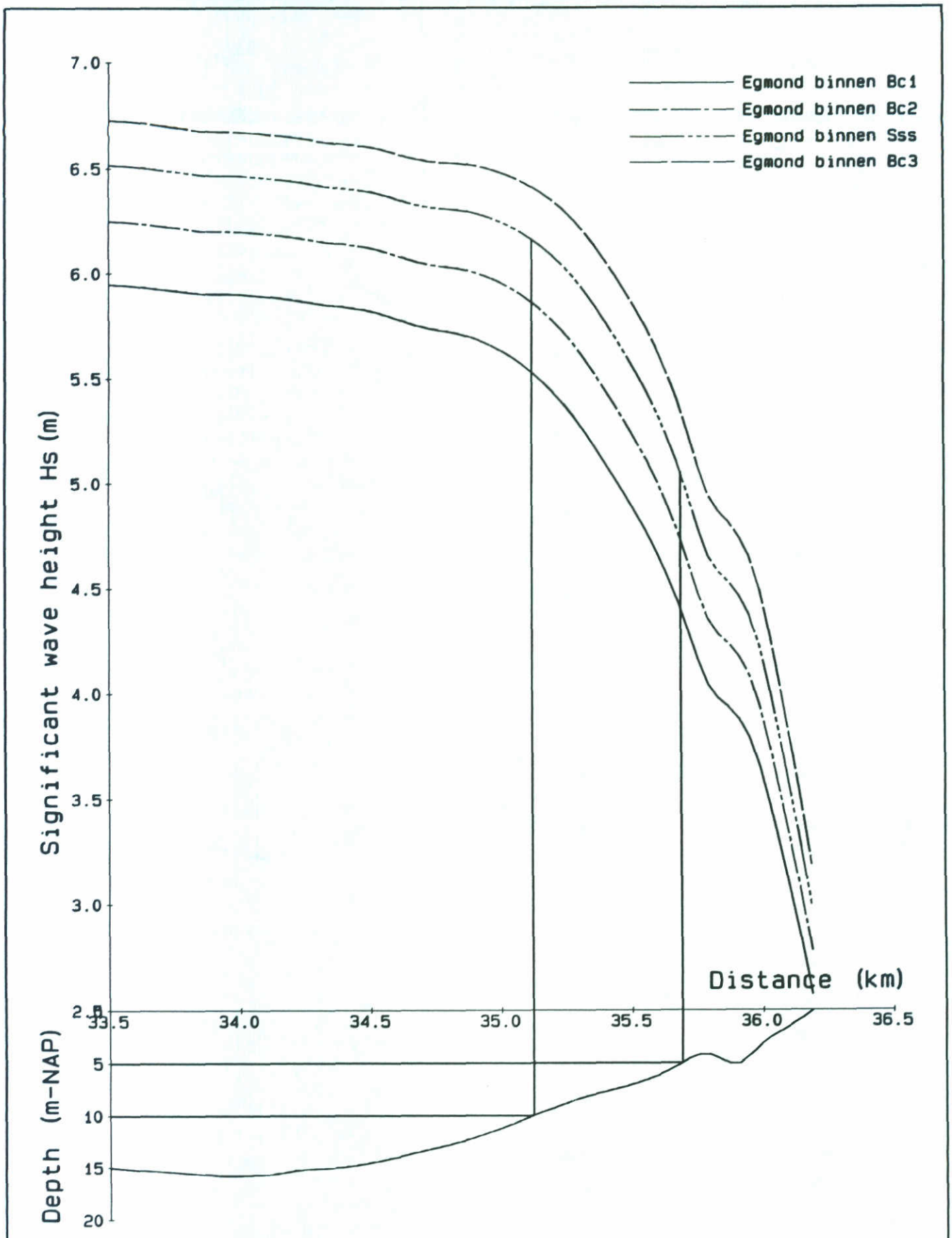
SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE FREQUENCY CHANGE FRICTION ON/OFF	HYDRA-HISWA	FV2ZGBW
DELFT HYDRAULICS	H1355	FIG. 4.33g



EFFECT OF FREQUENCY CHANGE FRICTION ENTRANCE WADDEN SEA	HYDRA-HISWA	FV2
DELFT HYDRAULICS	H1355	FIG. 4.33h



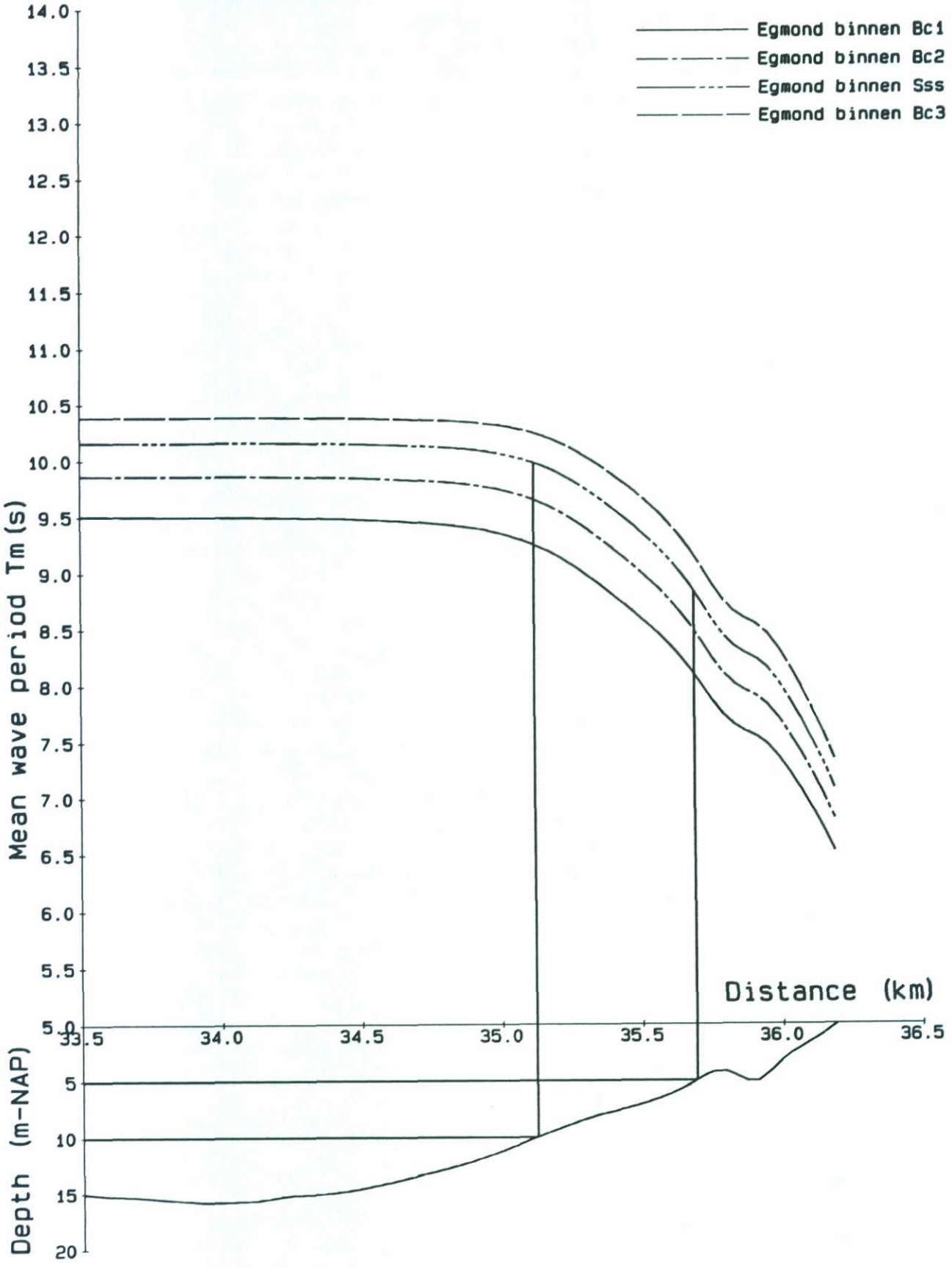
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCBUEG
DELFT HYDRAULICS	H1355	FIG. 4.34a



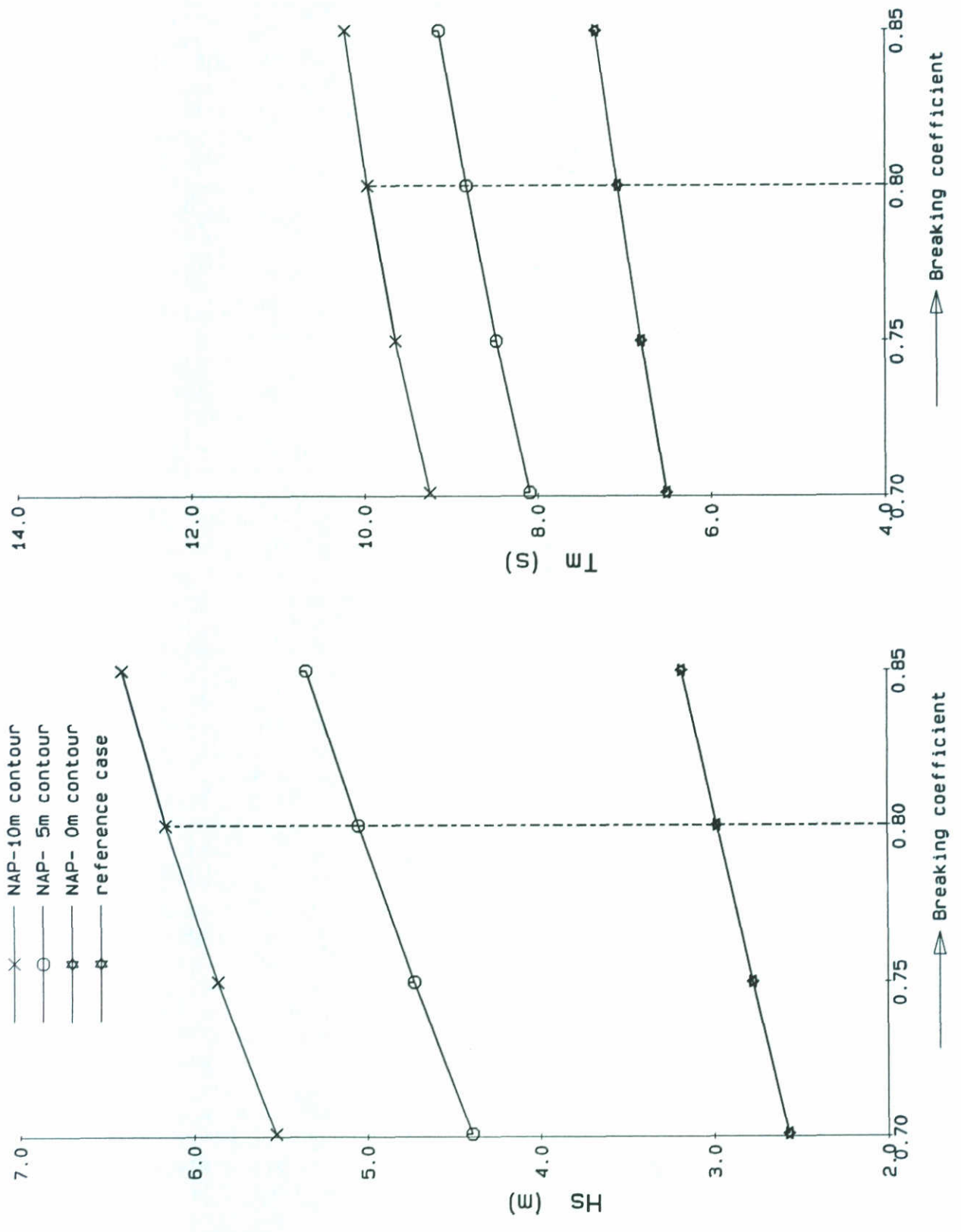
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE
VARYING WAVE BREAKING COEFFICIENT

HYDRA-HISWA | BC1BC4

DELFT HYDRAULICS | H1355 | FIG. 4.34b



MEAN WAVE PERIOD EGMOND PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BC1BC4
DELFT HYDRAULICS	H1355	FIG. 4.34c



EFFECT OF BREAKING COEFFICIENT EGMOND PROFILE	HYDRA-HISWA	BC1BC3
DELFT HYDRAULICS	H1355	FIG. 4.34d

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCBUMG
DELFT HYDRAULICS	H1355	FIG. 4.34e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCZGMG
DELFT HYDRAULICS	H1355	FIG. 4.34f

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCBUMD
DELFT HYDRAULICS	H1355	FIG. 4.34g

MEAN WAVE PERIOD MARSDIEP PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCBUMD
DELFT HYDRAULICS	H1355	FIG. 4.34h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCZGMD
DELFT HYDRAULICS	H1355	FIG. 4.34i

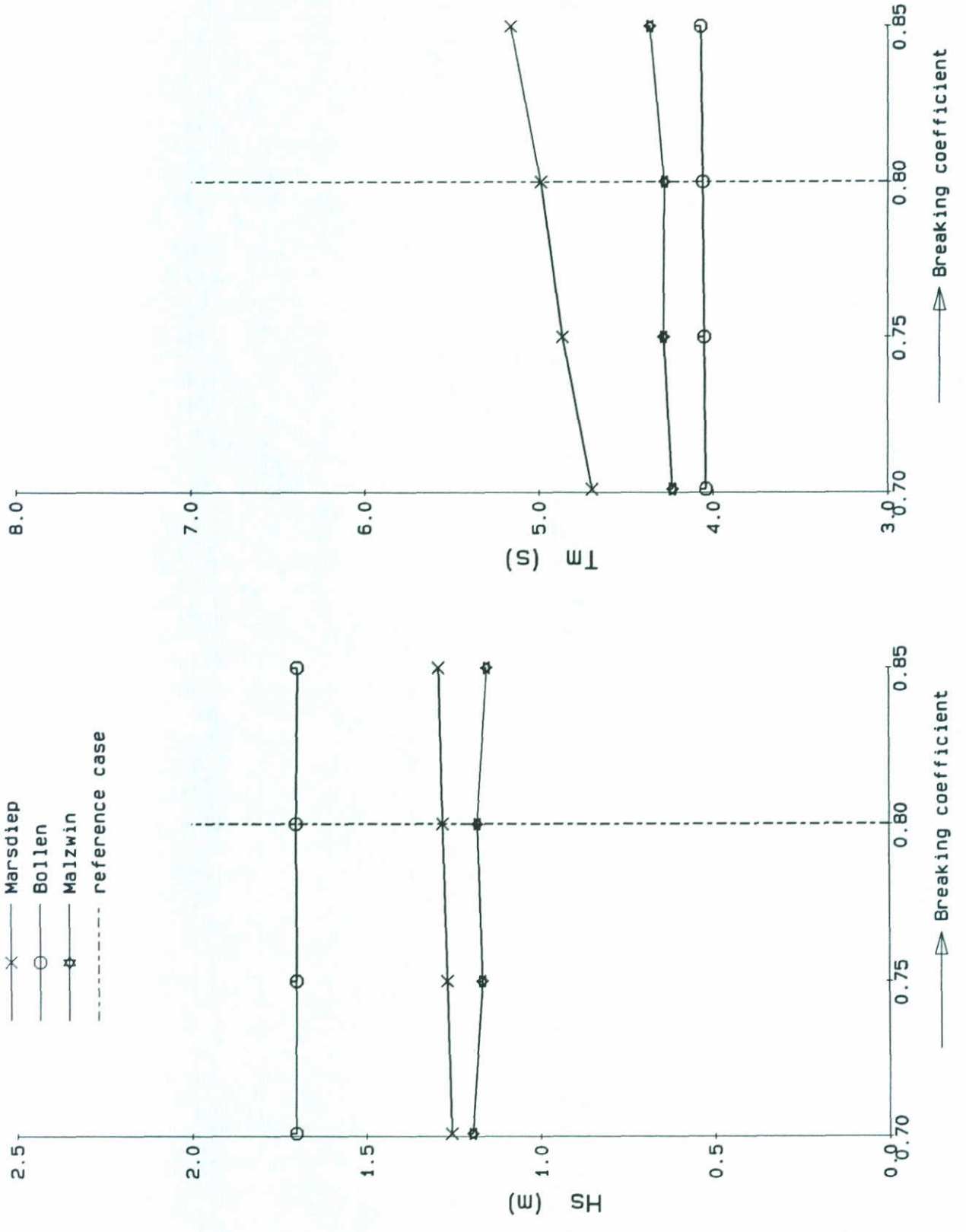
MEAN WAVE PERIOD MARSDIEP PROFILE
VARYING WAVE BREAKING COEFFICIENT

HYDRA-HISWA | BCZGMD

DELFT HYDRAULICS | H1355 | FIG. 4.34j

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCBUBW
DELFT HYDRAULICS	H1355	FIG. 4.34k

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE VARYING WAVE BREAKING COEFFICIENT	HYDRA-HISWA	BCZGBW
DELFT HYDRAULICS	H1355	FIG. 4.341

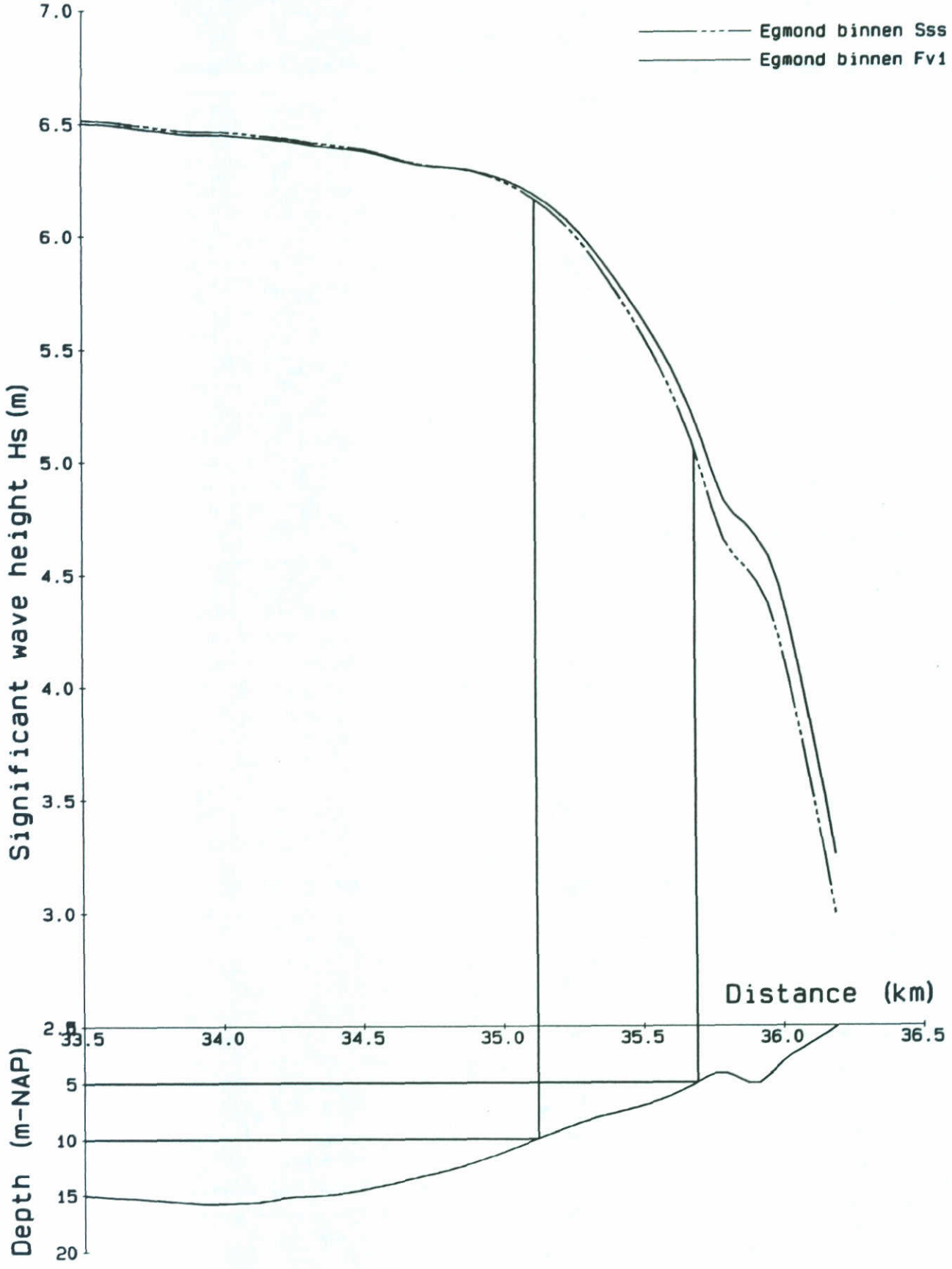


EFFECT OF BREAKING COEFFICIENT ENTRANCE WADDEN SEA	HYDRA-HISWA	BC1BC3
DELFT HYDRAULICS	H1355	FIG. 4.34m

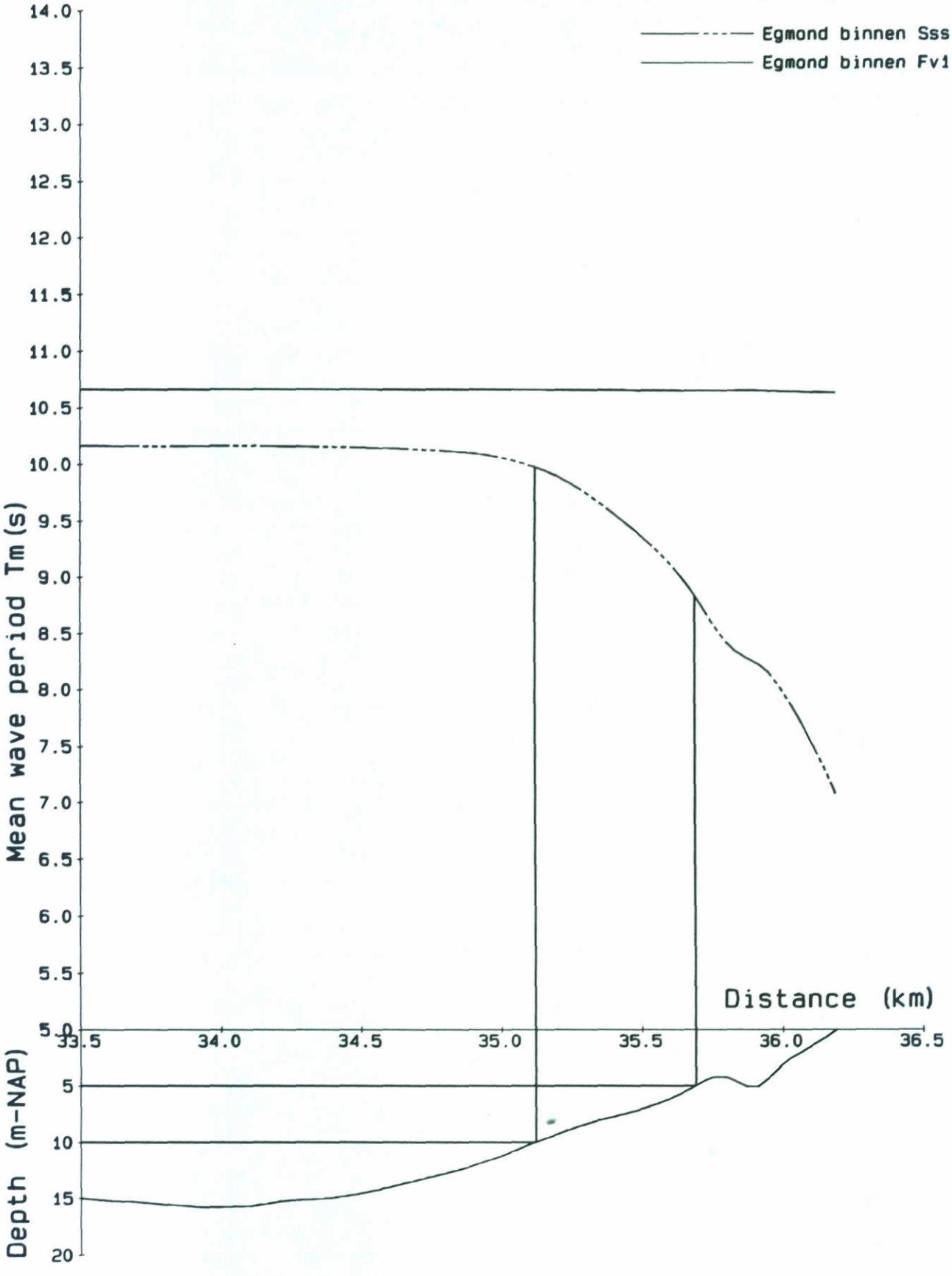
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE
FREQUENCY CHANGE BREAKING ON/OFF

HYDRA-HISWA | FVBUEG

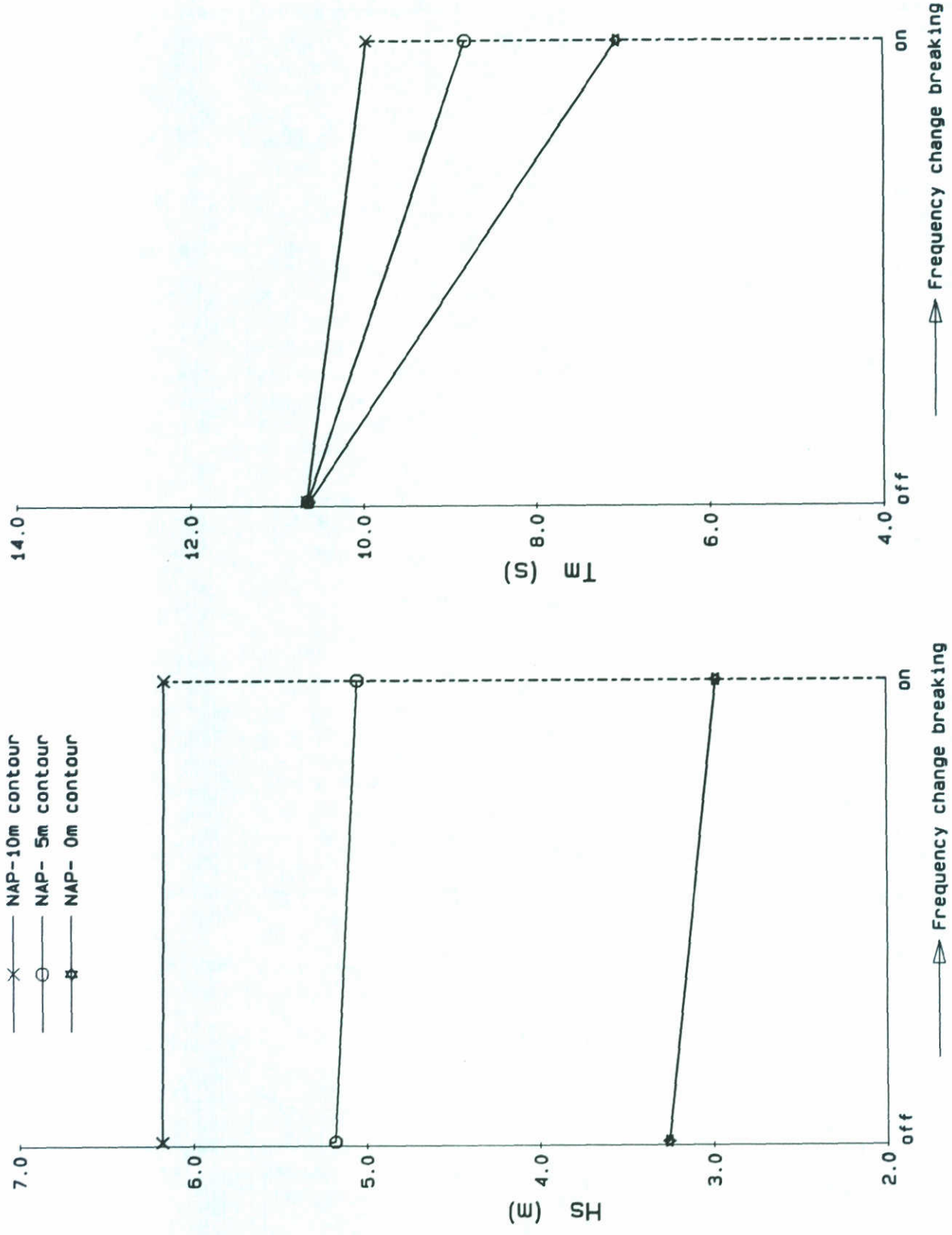
DELFT HYDRAULICS | H1355 | FIG. 4.35a



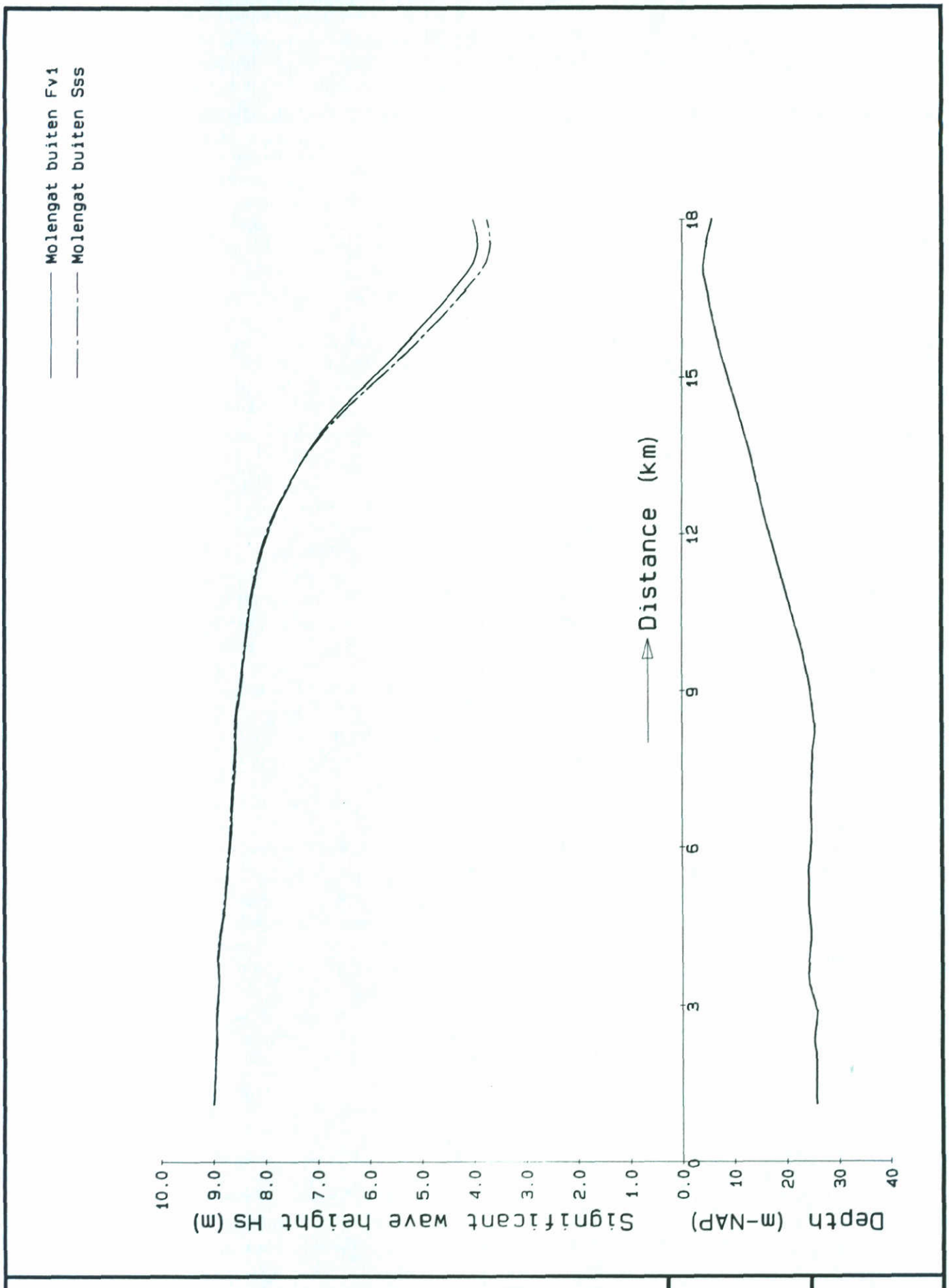
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FV1
DELFT HYDRAULICS	H1355	FIG. 4.35b



MEAN WAVE PERIOD EGMOND PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FV1
DELFT HYDRAULICS	H1355	FIG. 4.35c

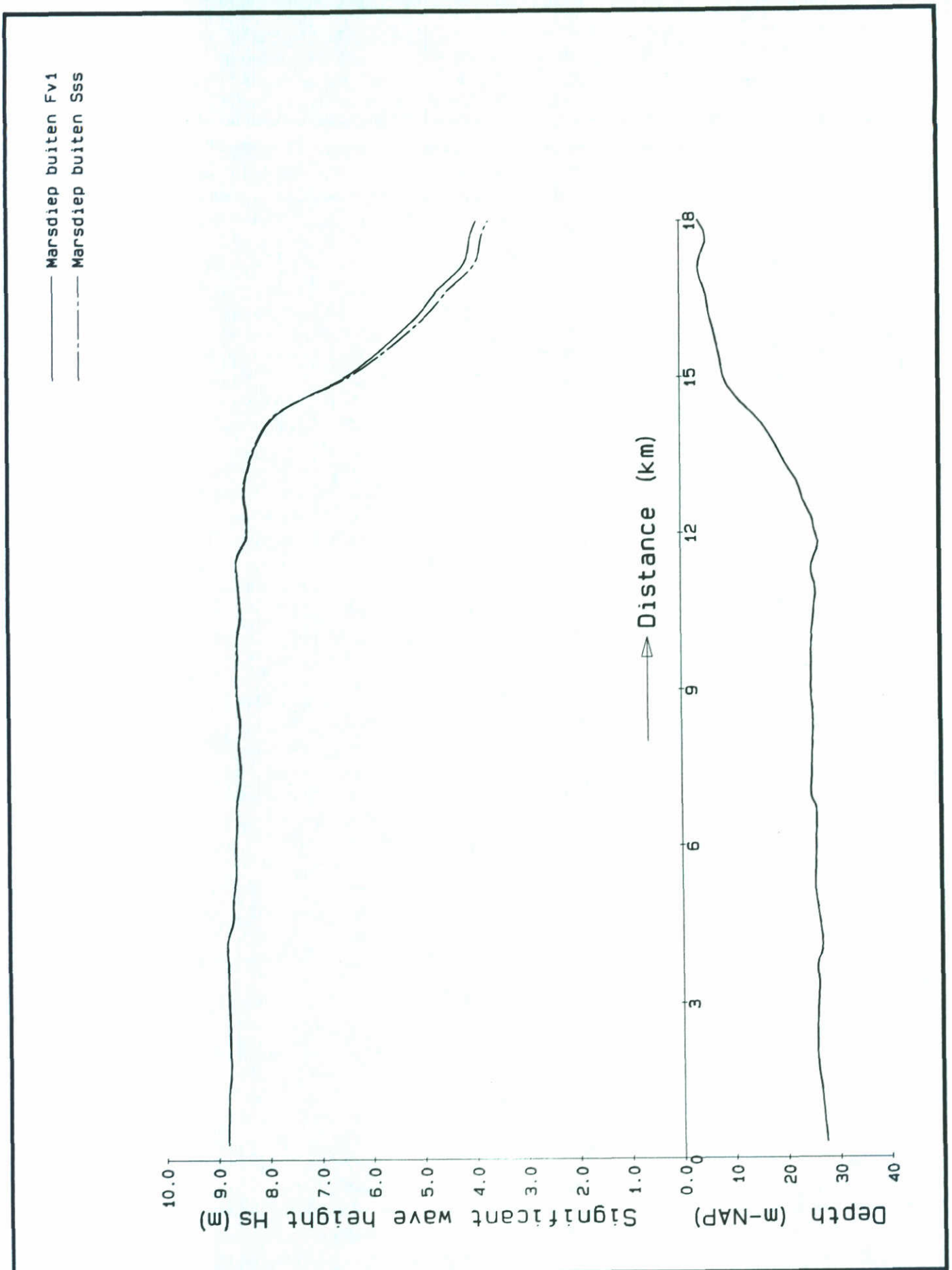


EFFECT OF FREQUENCY CHANGE BREAKING EGMOND PROFILE	HYDRA-HISWA	FV1
DELFT HYDRAULICS	H1355	FIG. 4.35d



SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVBUMG
DELFT HYDRAULICS	H1355	FIG. 4.35e

SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVZGMG
DELFT HYDRAULICS	H1355	FIG. 4.35f



SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVBUMD
DELFT HYDRAULICS	H1355	FIG.4.35g

MEAN WAVE PERIOD MARSDIEP PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVBUMD
DELFT HYDRAULICS	H1355	FIG. 4.35h

SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVZGMD
DELFT HYDRAULICS	H1355	FIG. 4.35i

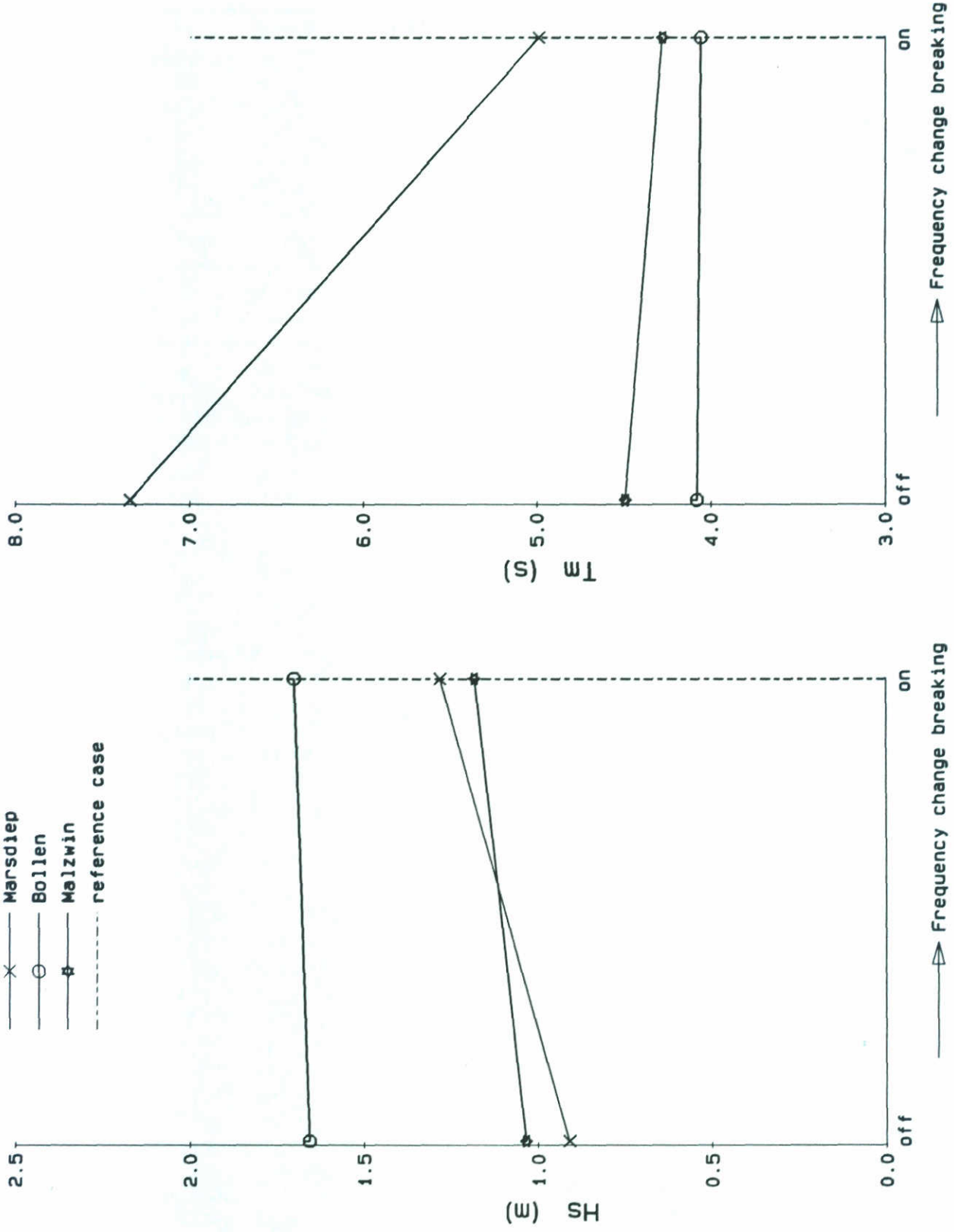
MEAN WAVE PERIOD MARSDIEP PROFILE
FREQUENCY CHANGE BREAKING ON/OFF

HYDRA-HISWA | FVZGMD

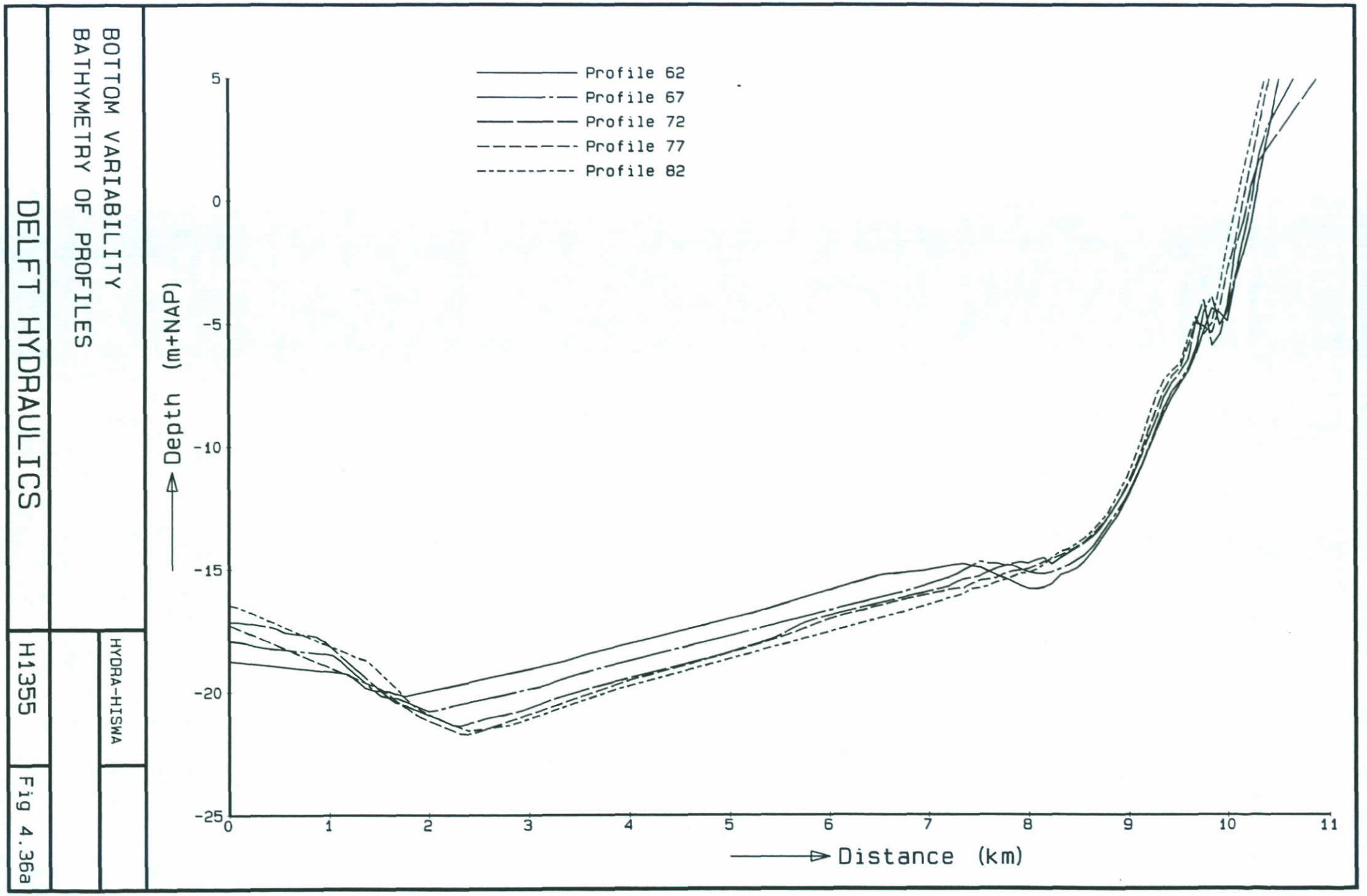
DELFT HYDRAULICS | H1355 | FIG. 4.35j

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVBUBW
DELFT HYDRAULICS	H1355	FIG. 4.35k

SIGNIFICANT WAVE HEIGHT BREEWIJD PROFILE FREQUENCY CHANGE BREAKING ON/OFF	HYDRA-HISWA	FVZGBW
DELFT HYDRAULICS	H1355	FIG. 4.35I



EFFECT OF FREQUENCY CHANGE BREAKING ENTRANCE WADDEN SEA	HYDRA-HISWA	FV1
DELFT HYDRAULICS	H1355	FIG. 4.35m



BOTTOM VARIABILITY
BATHYMETRY OF PROFILES

DELFT HYDRAULICS

H1355

HYDRA-HISWA

Fig 4.36a

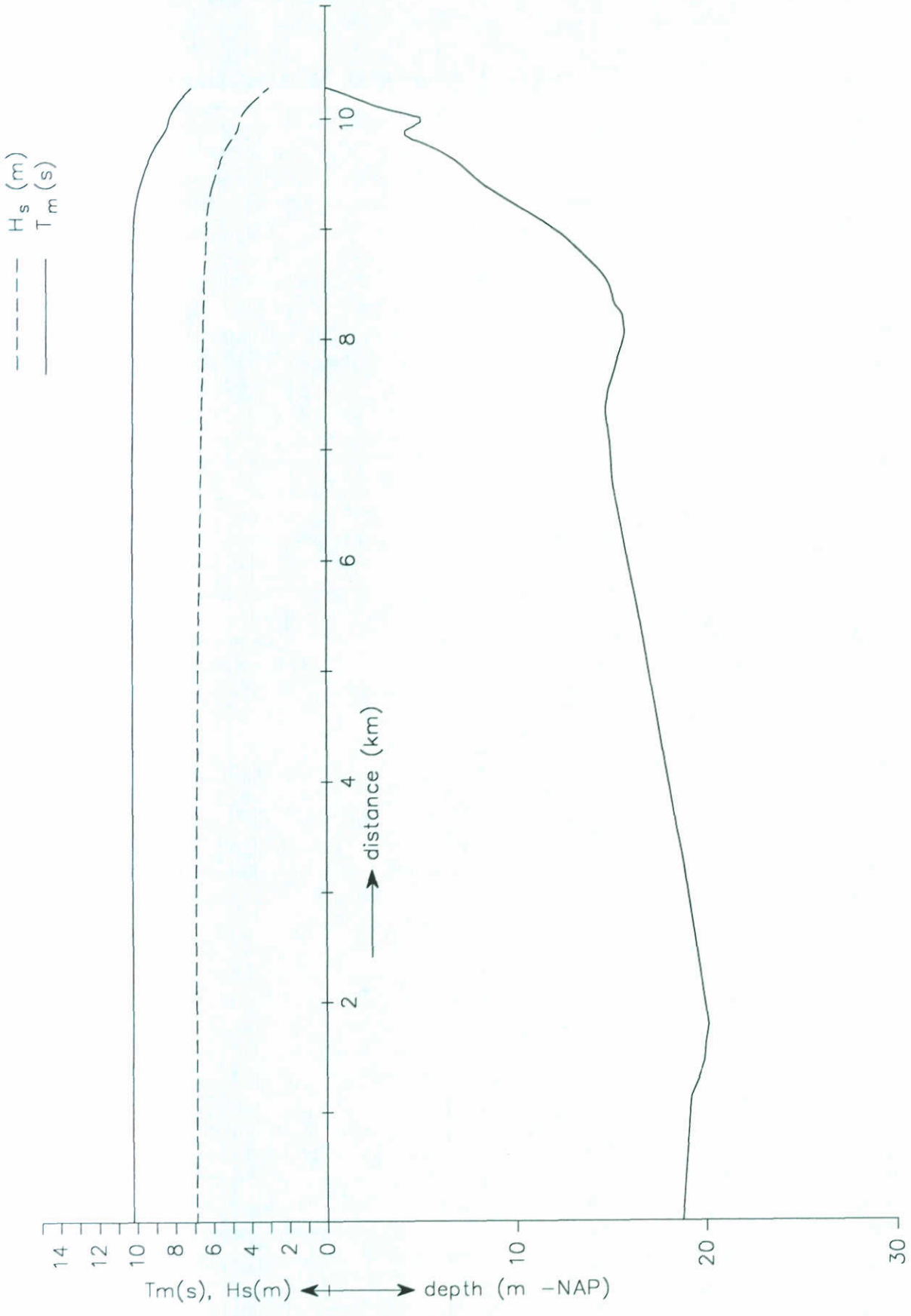
BOTTOM VARIABILITY
RELATION DEPTH - SIGNIFICANT WAVE HEIGHT

HYDRA-HISWA

DELFT HYDRAULICS

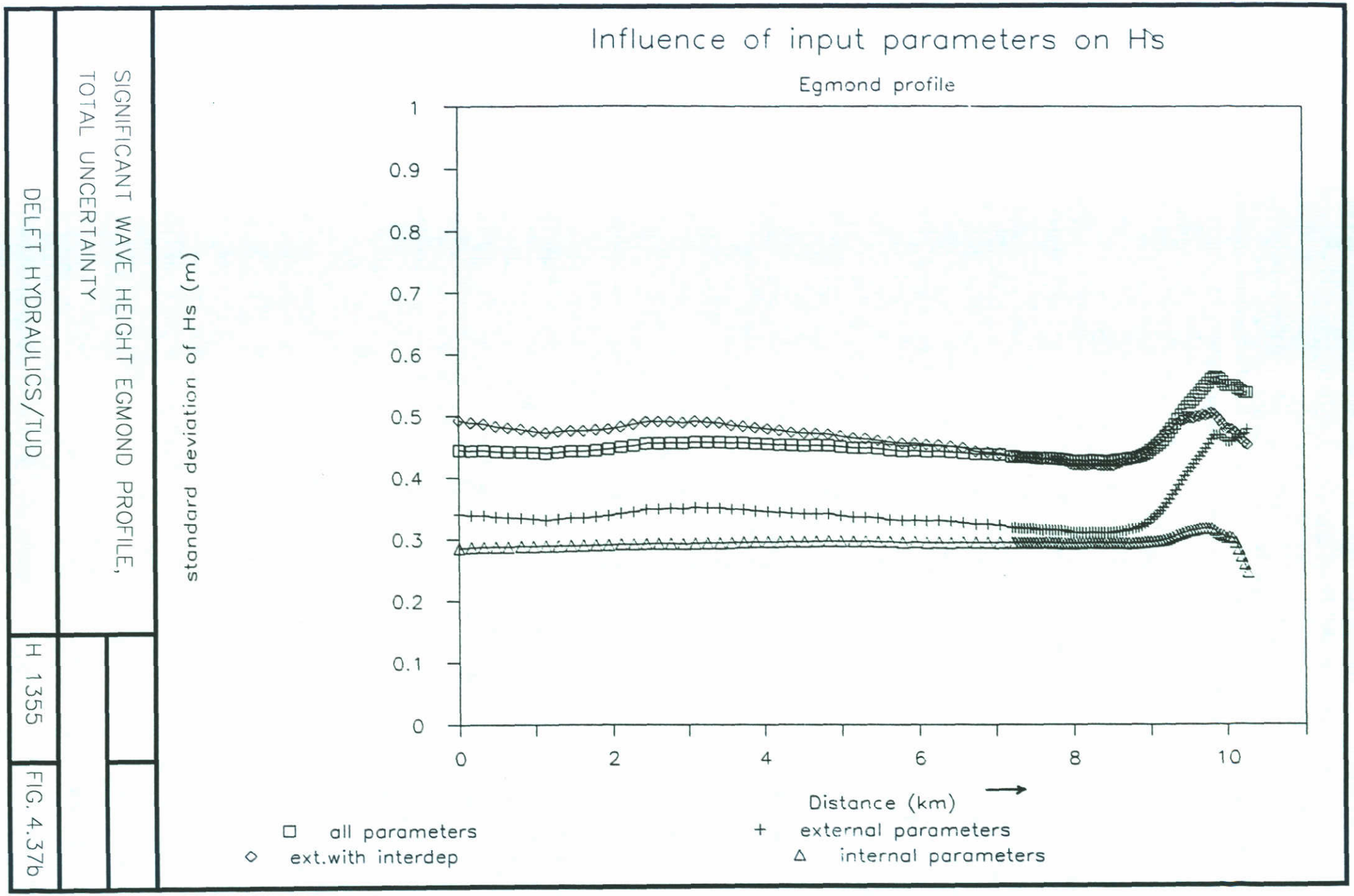
H1355

Fig 4.36b



SIGNIFICANT WAVE HEIGHT AND MEAN WAVE PERIOD EGMOND PROFILE

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.37a

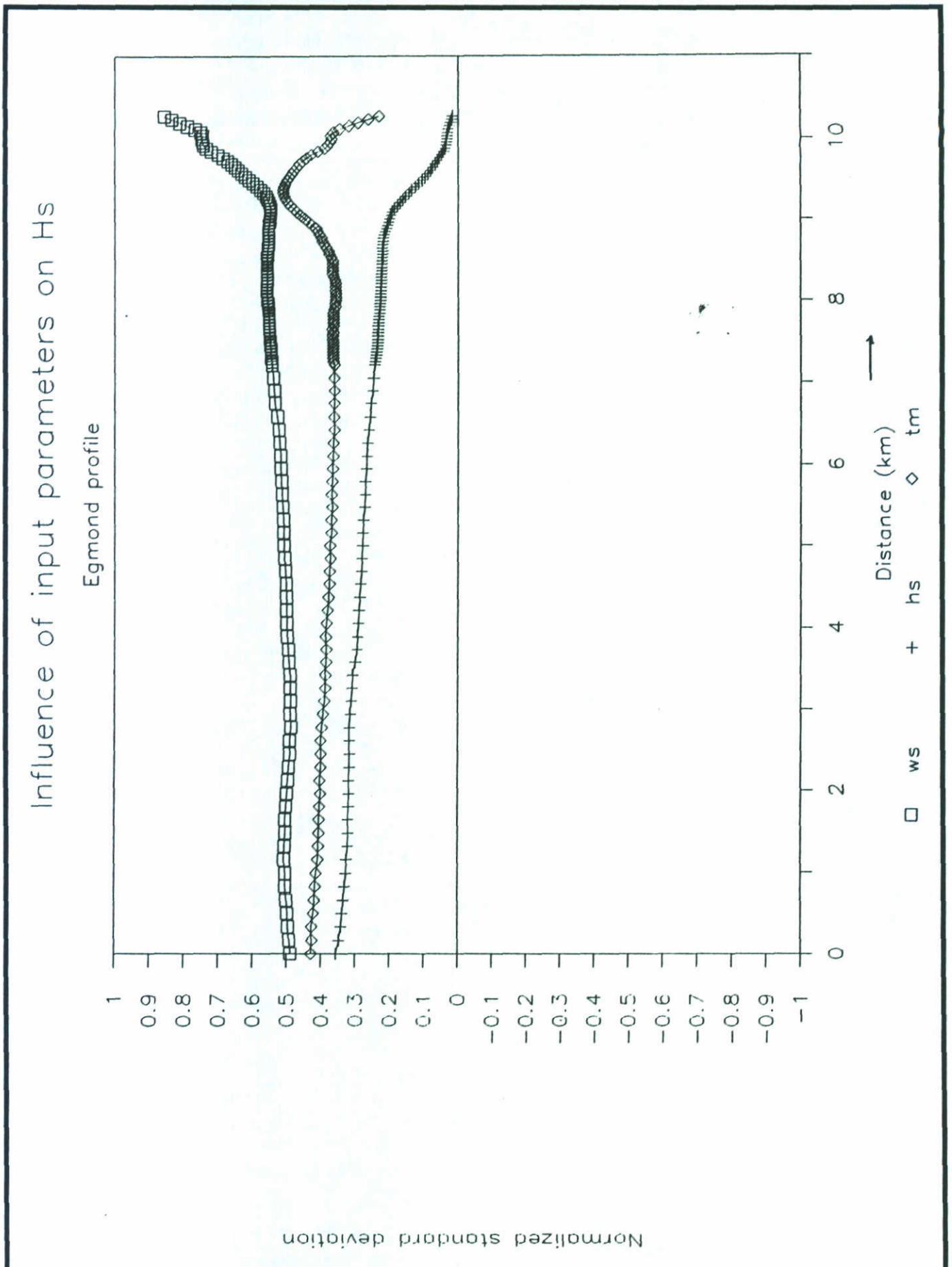


SIGNIFICANT WAVE HEIGHT EGMOND PROFILE,
TOTAL UNCERTAINTY

DELFT HYDRAULICS/TUD

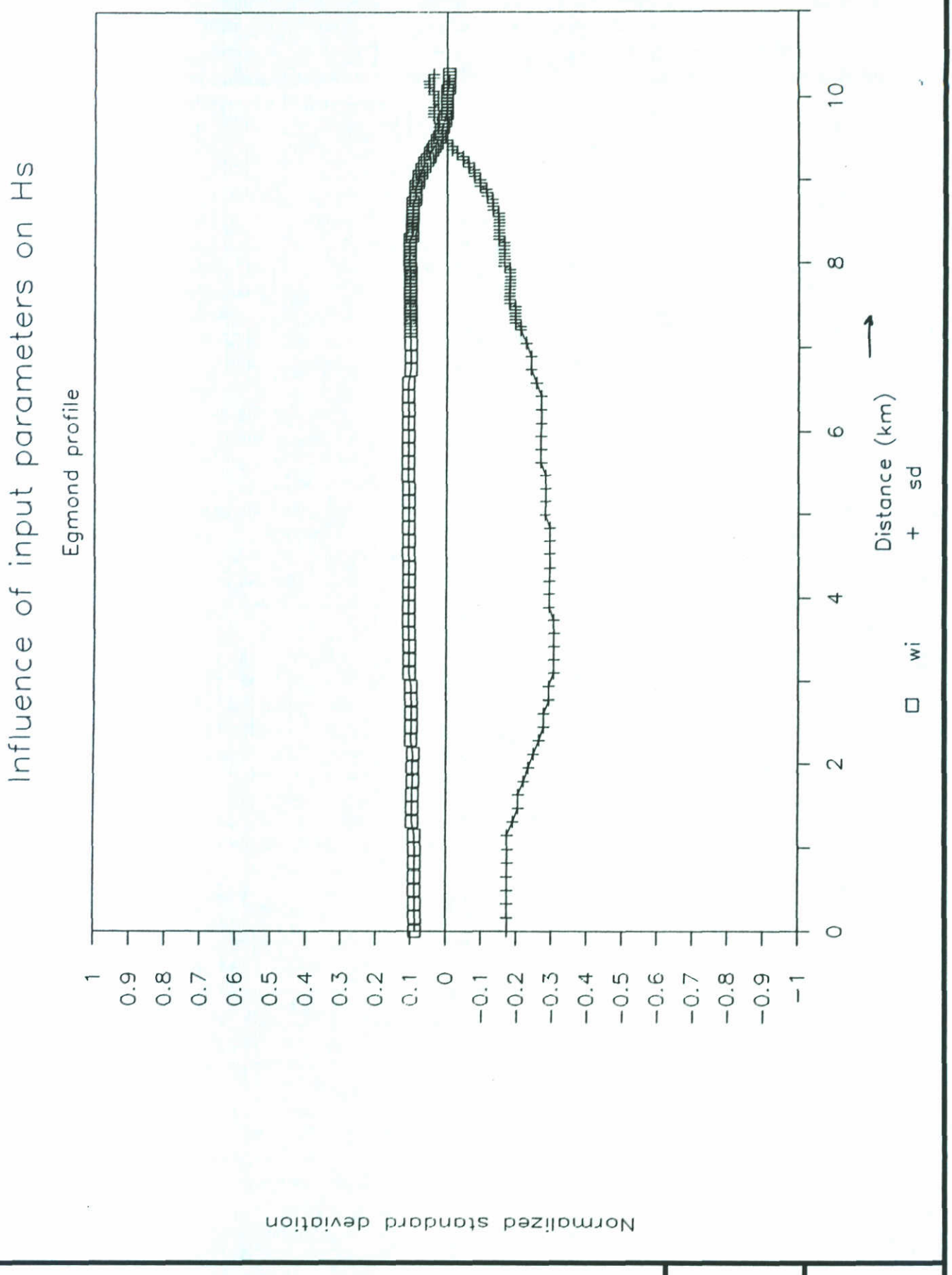
H 1355

FIG. 4.37b

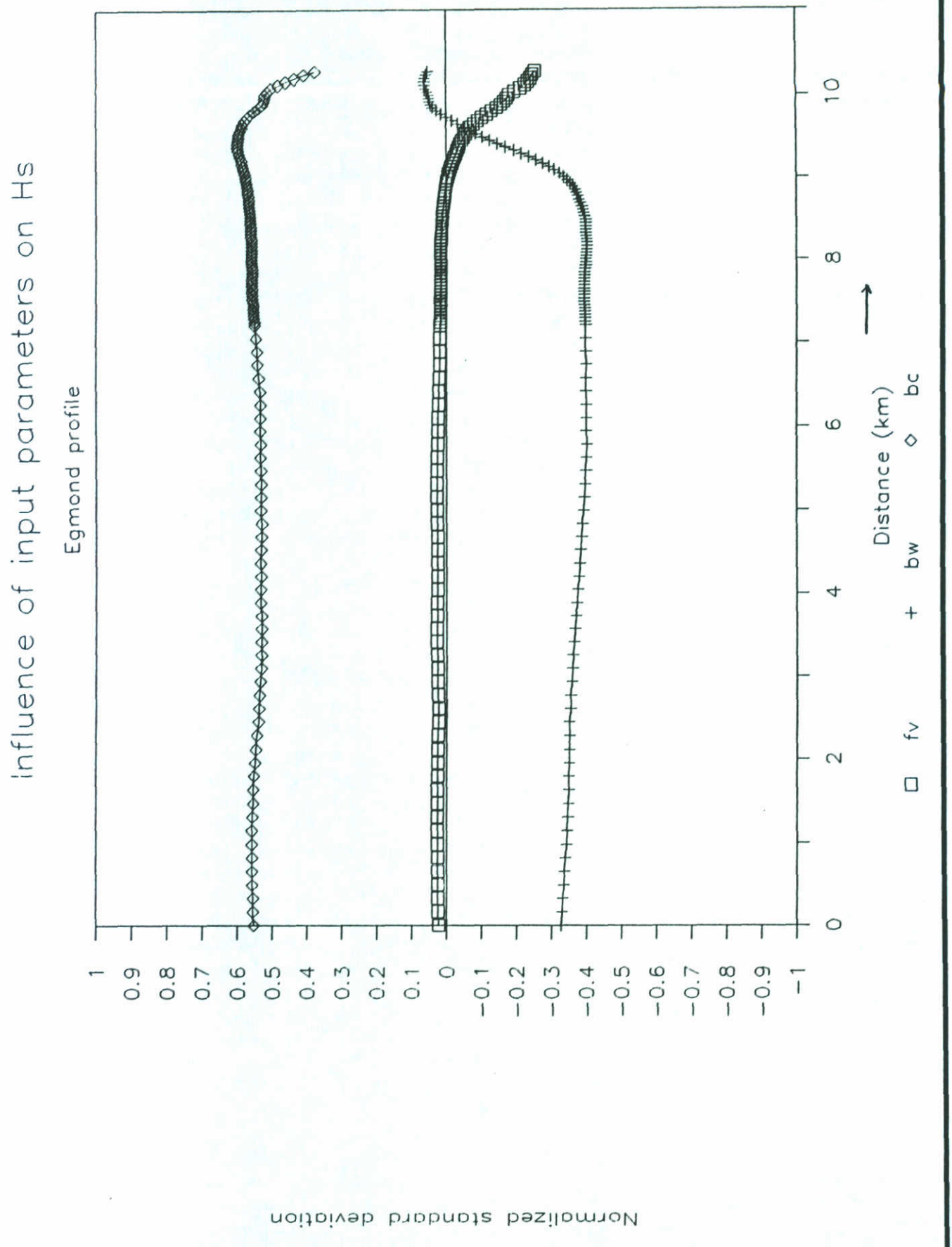


SIGNIFICANT WAVE HEIGHT EGMOND PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS WS, HS AND TM

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.37c

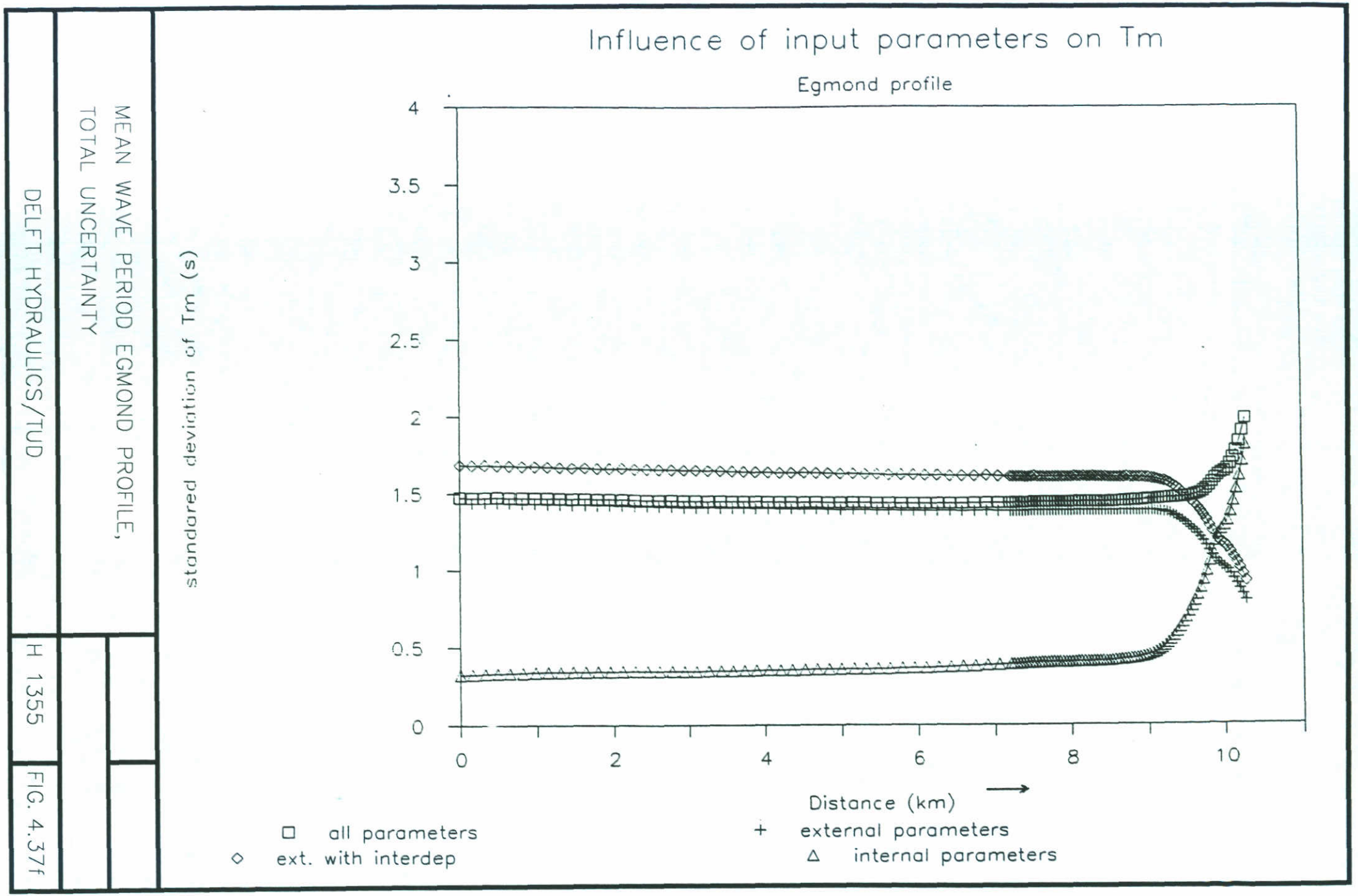


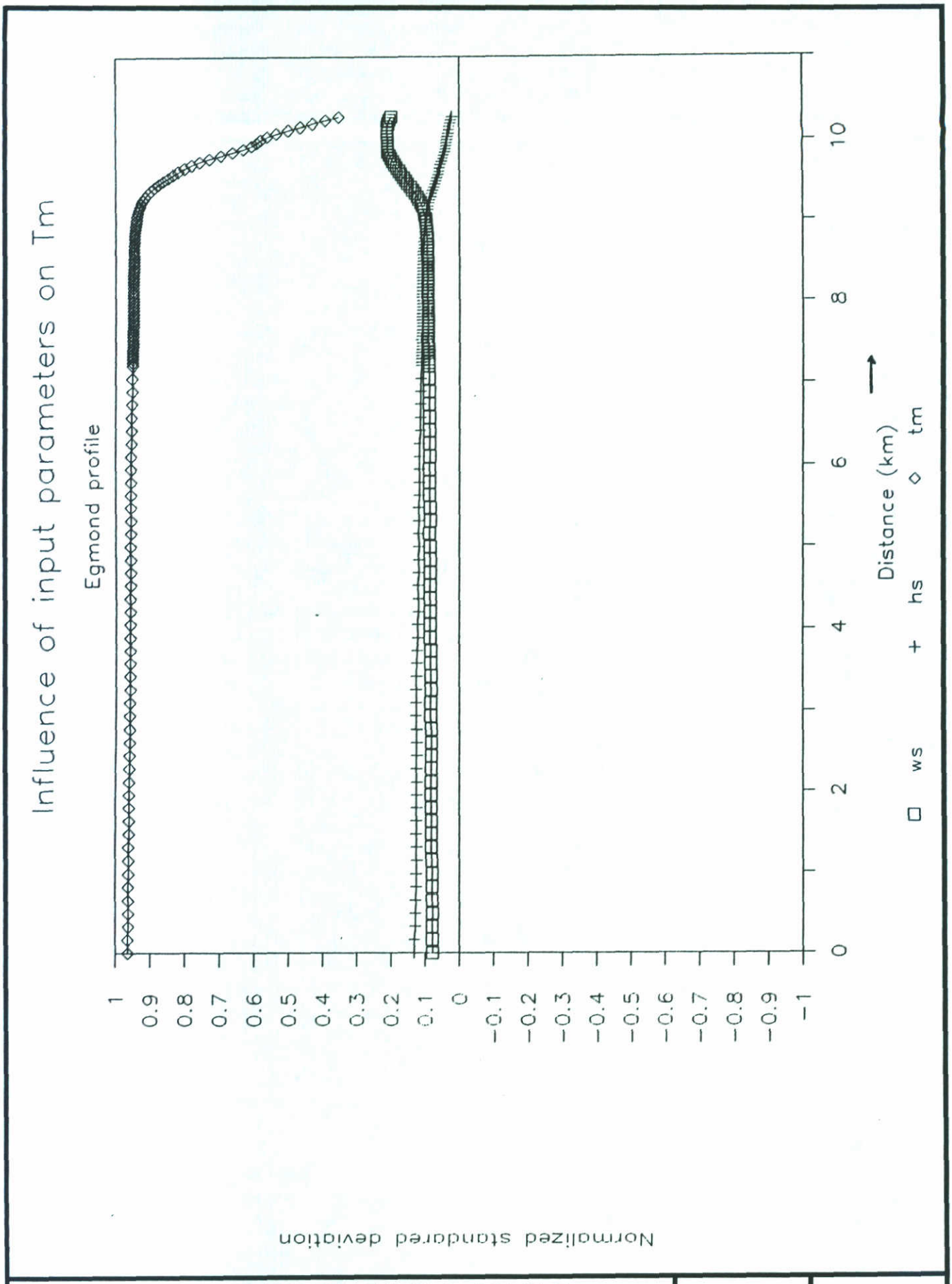
SIGNIFICANT WAVE HEIGHT EGMOND PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS WI AND SD		
DELFT HYDRAULICS/TUD	H 1355	FIG. 4.37d



SIGNIFICANT WAVE HEIGHT EGMOND PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS FV, BW AND BC

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.37e


Influence of input parameters on Tm
Egmond profile
standard deviation of Tm (s)
4
3.5
3
2.5
2
1.5
1
0.5
0
0
2
4
6
8
10
Distance (km)
□ all parameters
◇ ext. with interdep
+ external parameters
△ internal parameters
MEAN WAVE PERIOD EGMOND PROFILE,
TOTAL UNCERTAINTY
DELFT HYDRAULICS/TUD
H 1355
FIG. 4.37f

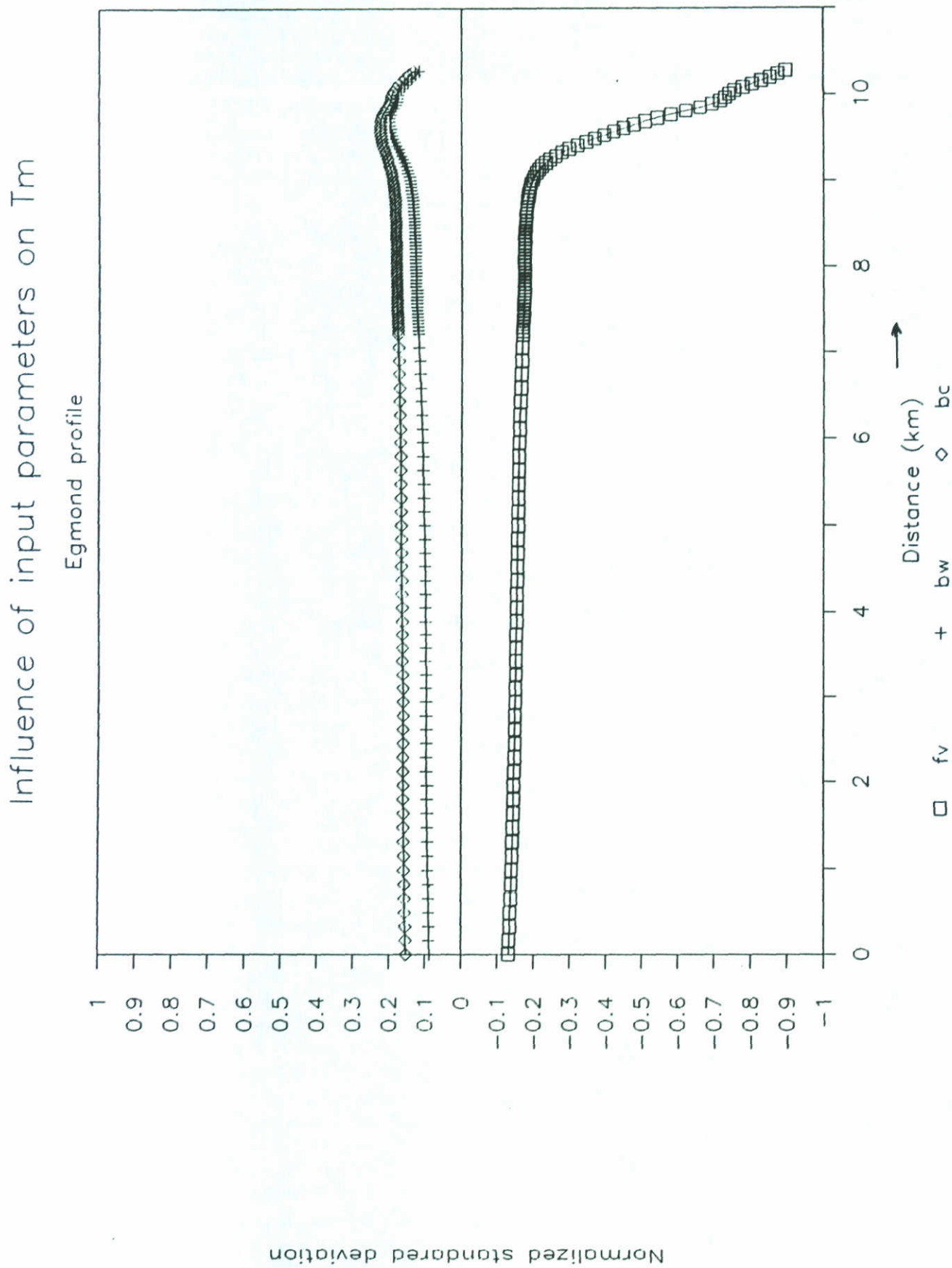


MEAN WAVE PERIOD EGMOND PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS WS, HS AND TM

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.37g

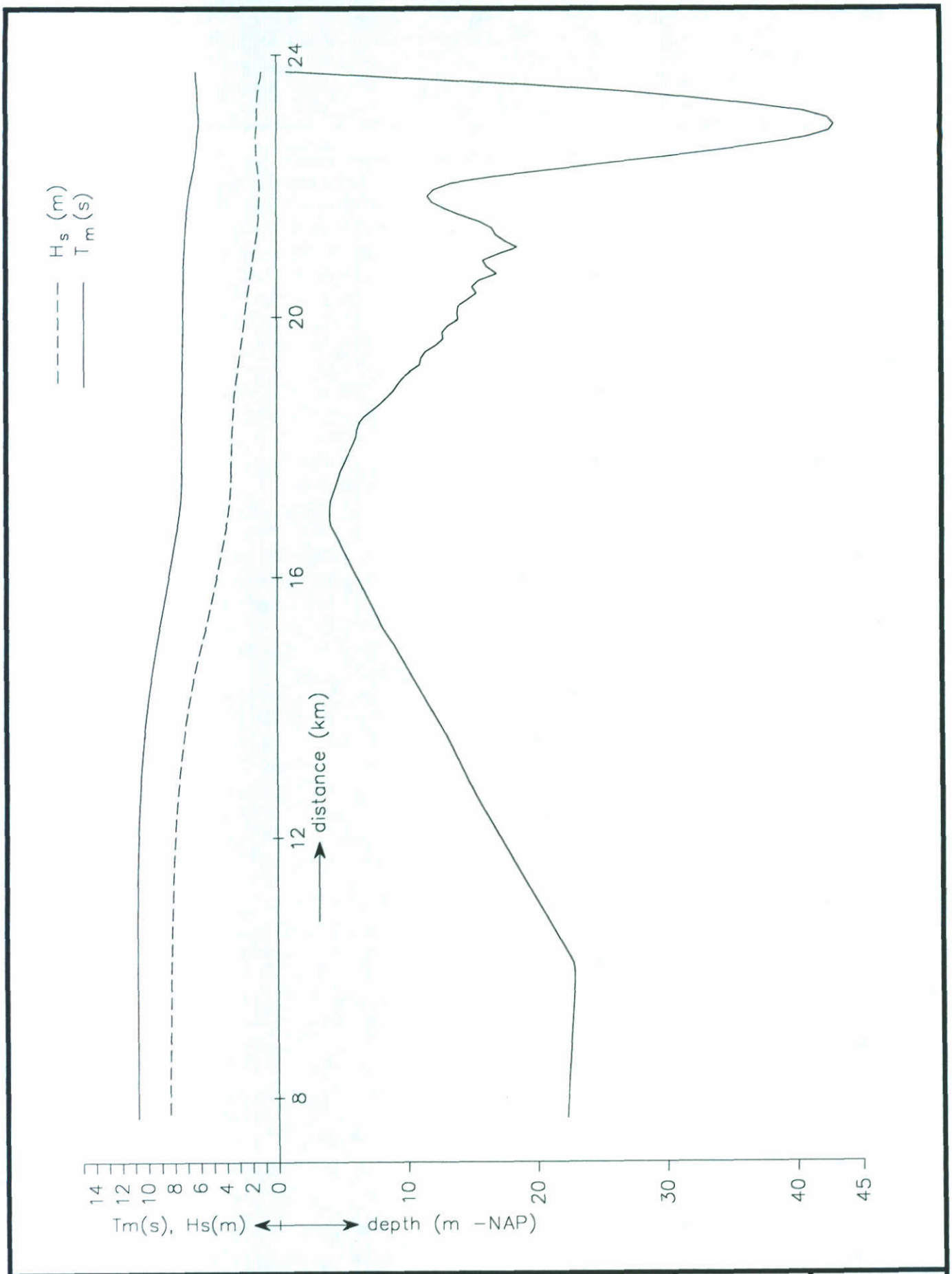
MEAN WAVE PERIOD EGMOND PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS WI AND SD

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.37h



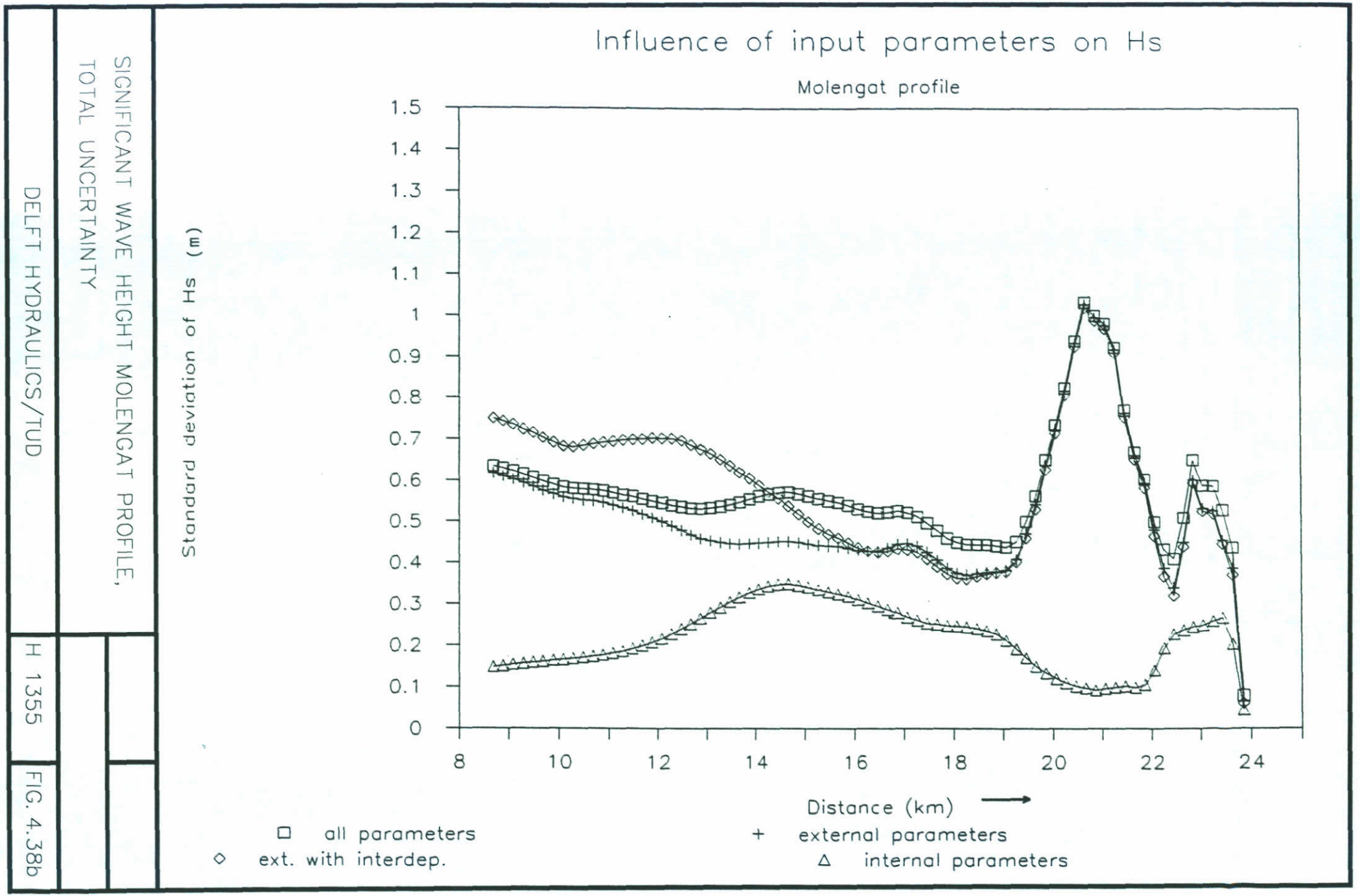
MEAN WAVE PERIOD EGMOND PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS FV, BW AND BC

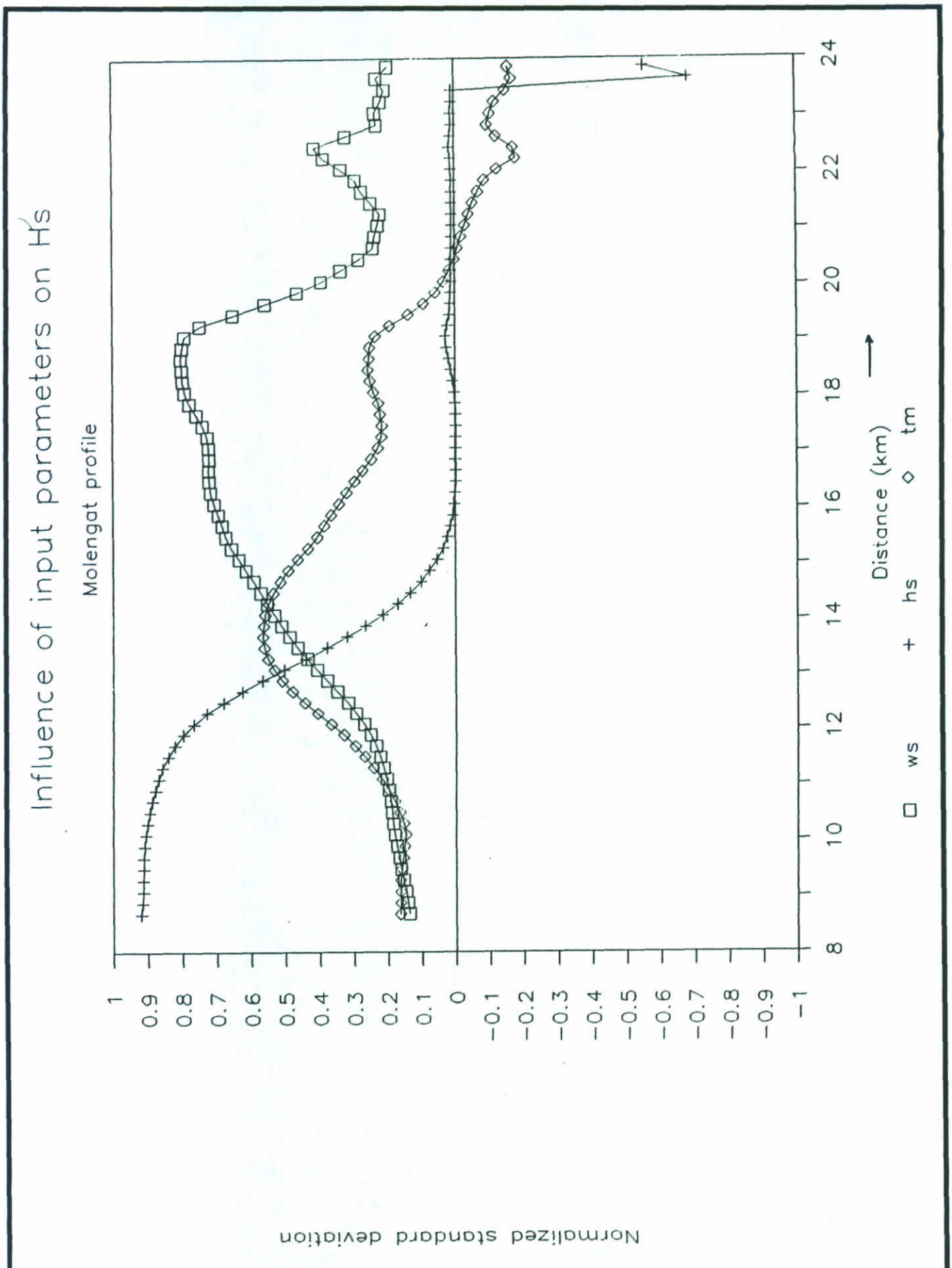
DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.37i



SIGNIFICANT WAVE HEIGHT AND MEAN WAVE PERIOD MOLENGAT PROFILE

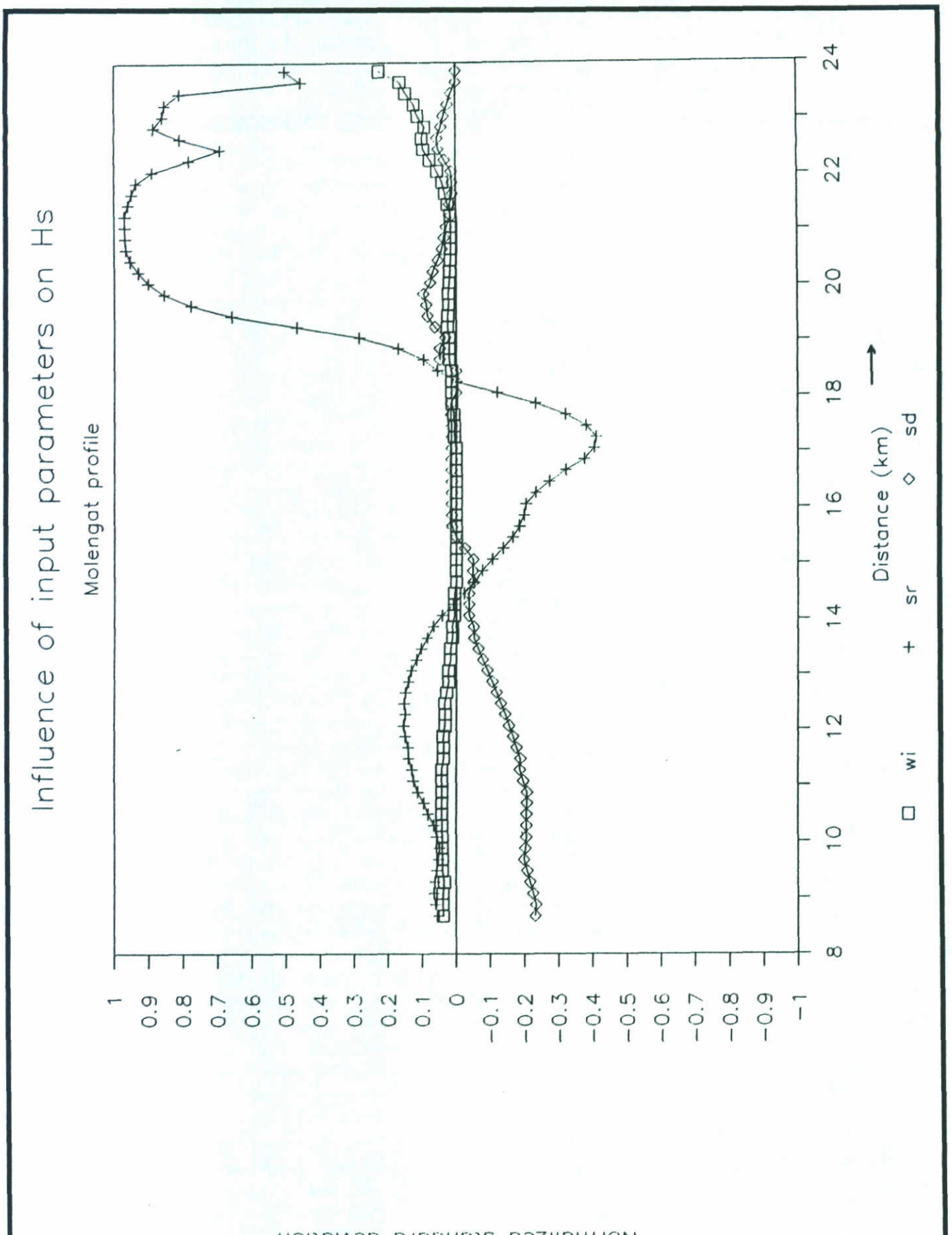
DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.38a


Influence of input parameters on Hs
Molengat profile
Standard deviation of Hs (m)
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
8
10
12
14
16
18
20
22
24
Distance (km)
all parameters
ext. with interdep.
external parameters
internal parameters
SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE,
TOTAL UNCERTAINTY
DELFT HYDRAULICS/TUD
H 1355
FIG. 4.38b



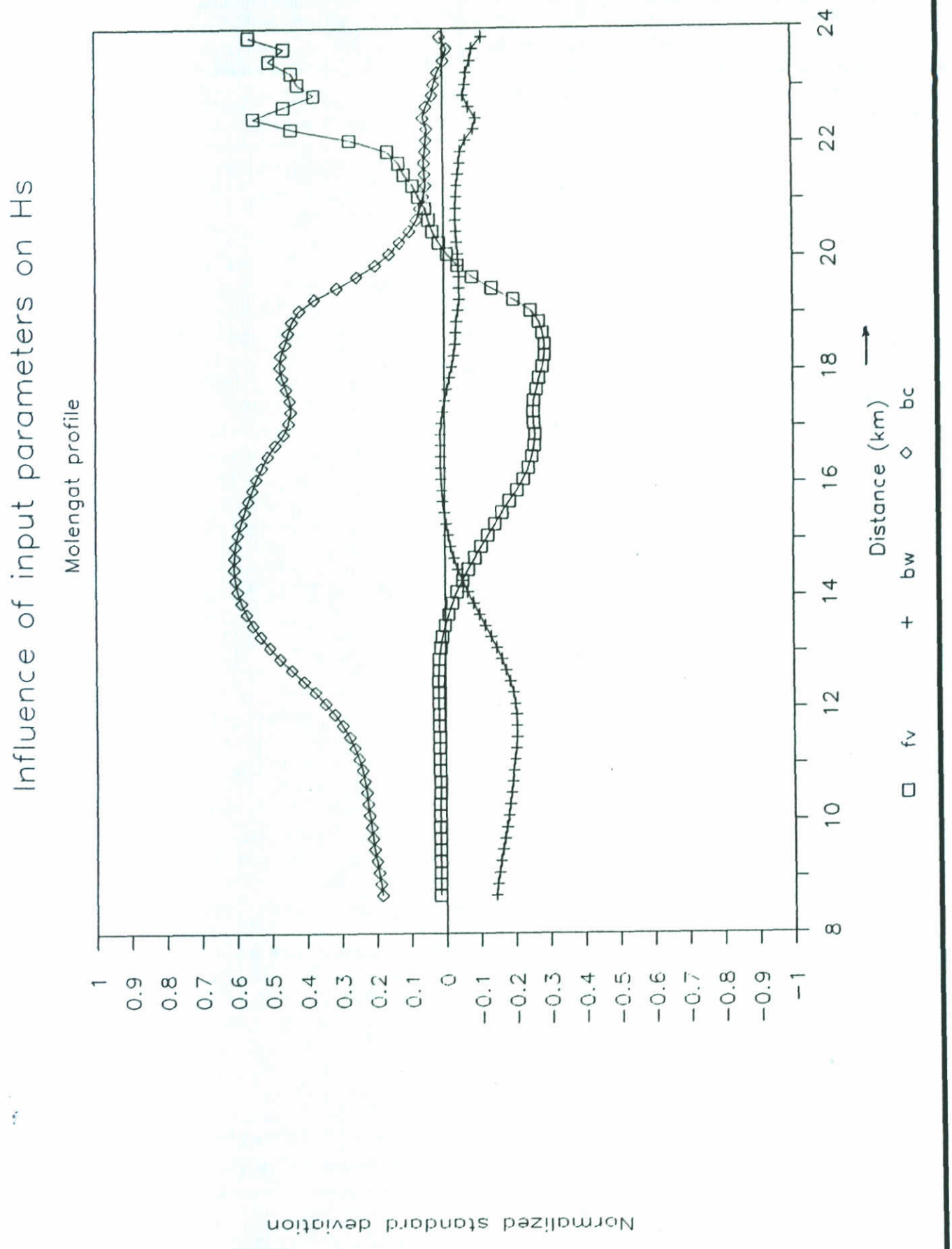
SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS WS, HS AND TM

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.38c



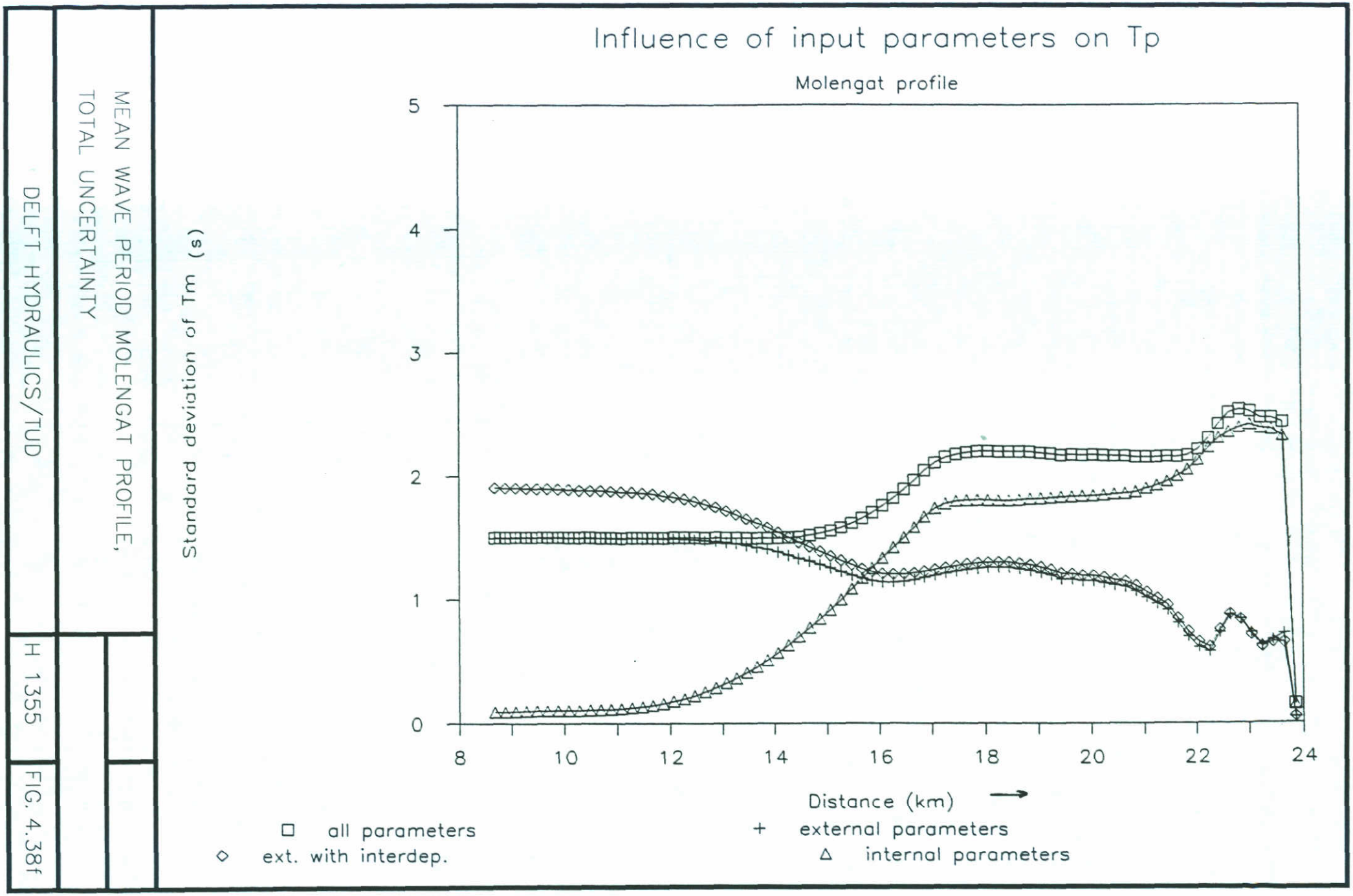
SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS WI, SR AND SD

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.38d



SIGNIFICANT WAVE HEIGHT MOLENGAT PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS FV, BW AND BC

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.38e

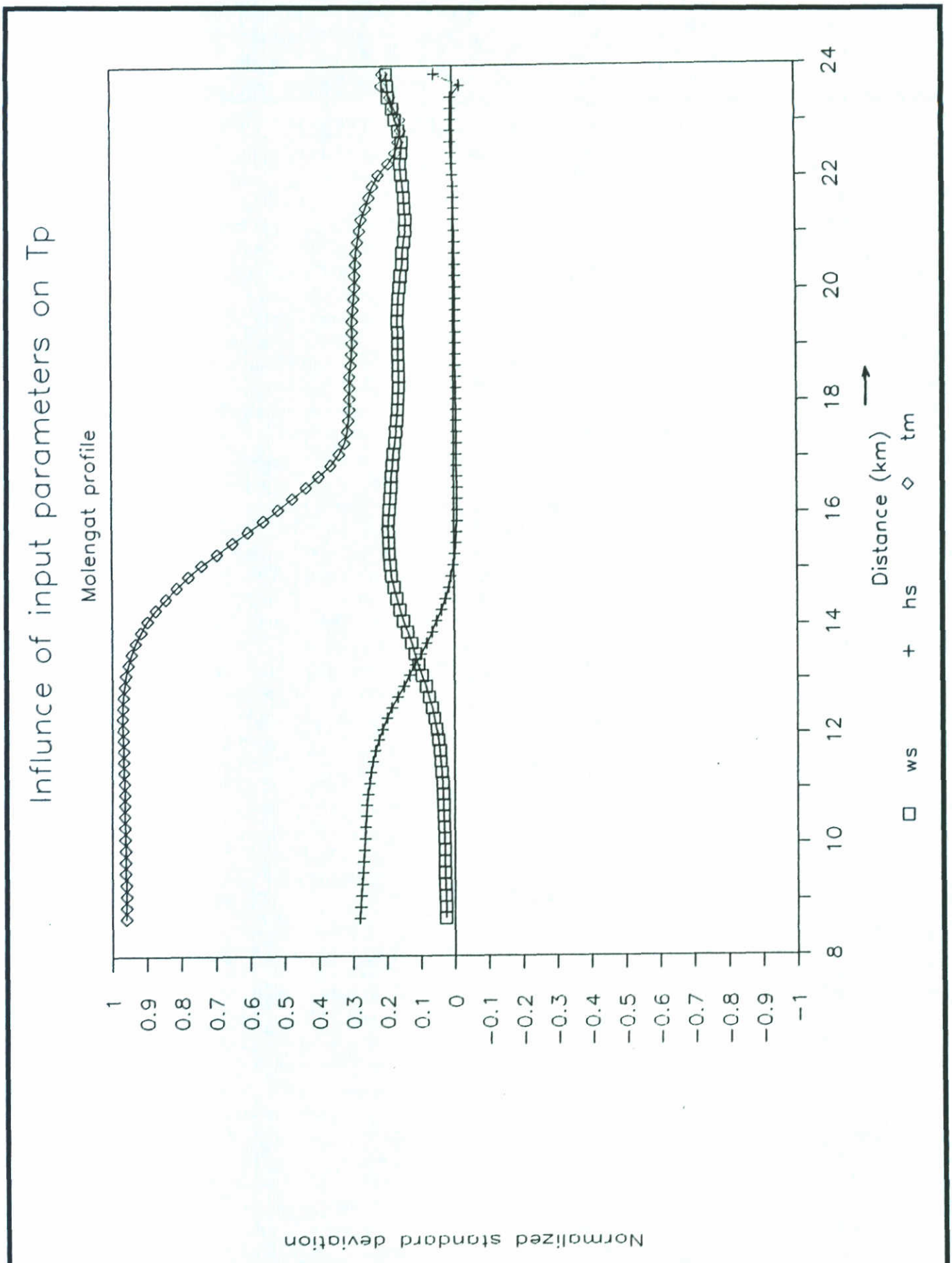


MEAN WAVE PERIOD MOLENGAT PROFILE,
TOTAL UNCERTAINTY

DELFT HYDRAULICS/TUD

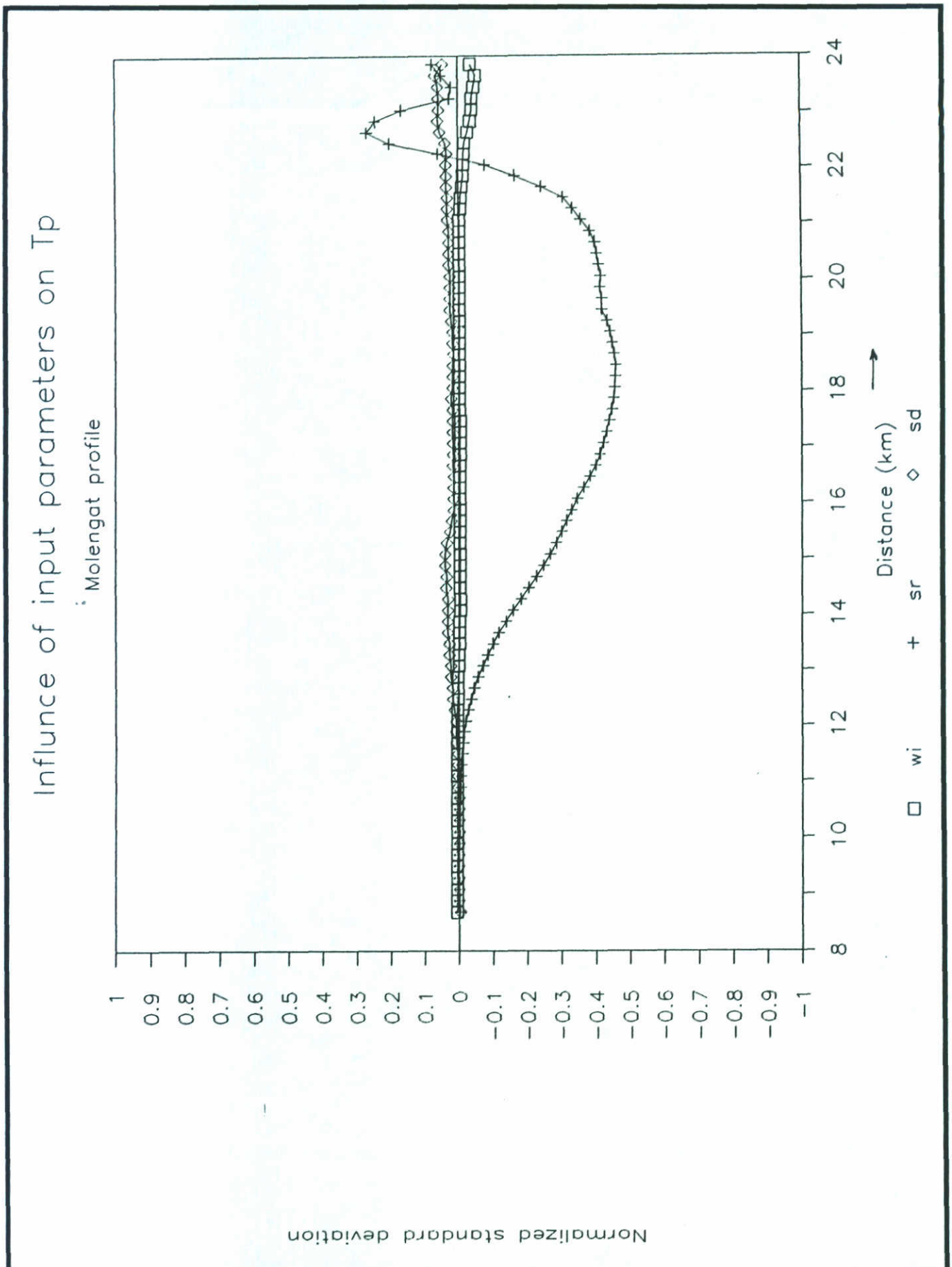
H 1355

FIG. 4.38f



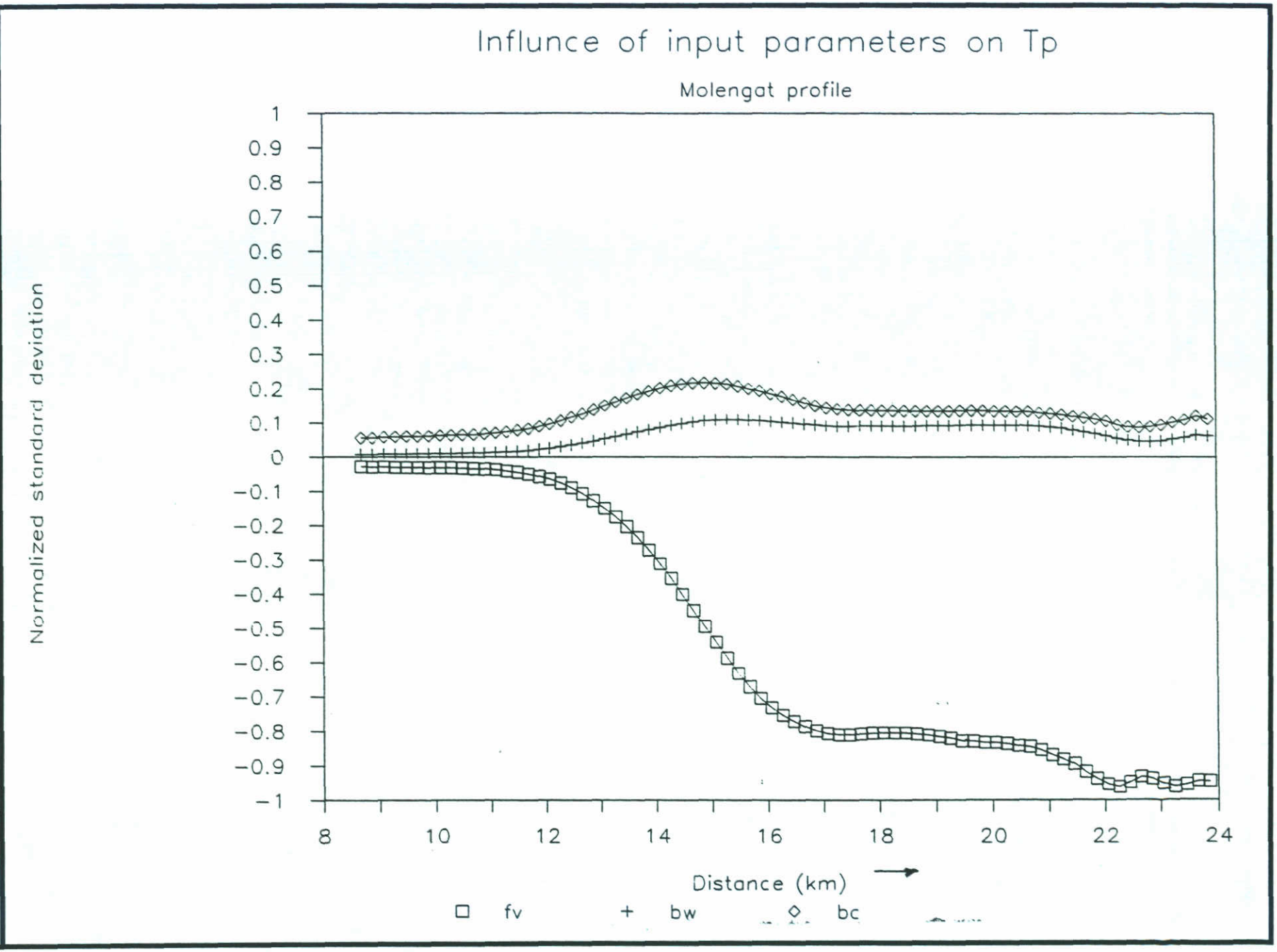
MEAN WAVE PERIOD MOLENGAT PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS WS, HS AND TM

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.38g



MEAN WAVE PERIOD MOLENGAT PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS WI, SR AND SD

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.38h

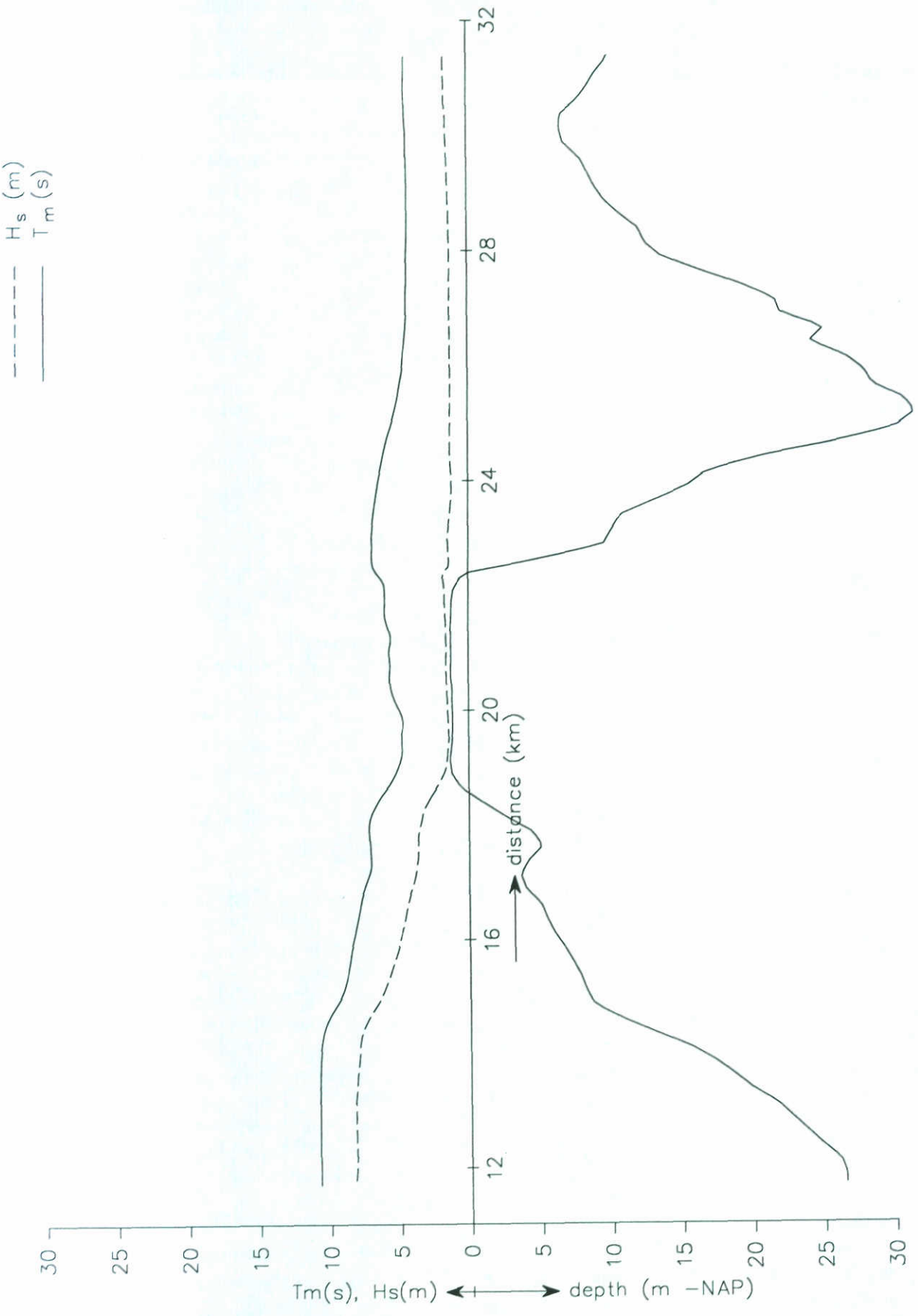


MEAN WAVE PERIOD MOLENGAT PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS FV, BW AND BC

DELFT HYDRAULICS/TUD

H 1355

FIG. 4.38i



SIGNIFICANT WAVE HEIGHT AND MEAN WAVE PERIOD MARSDIEP PROFILE

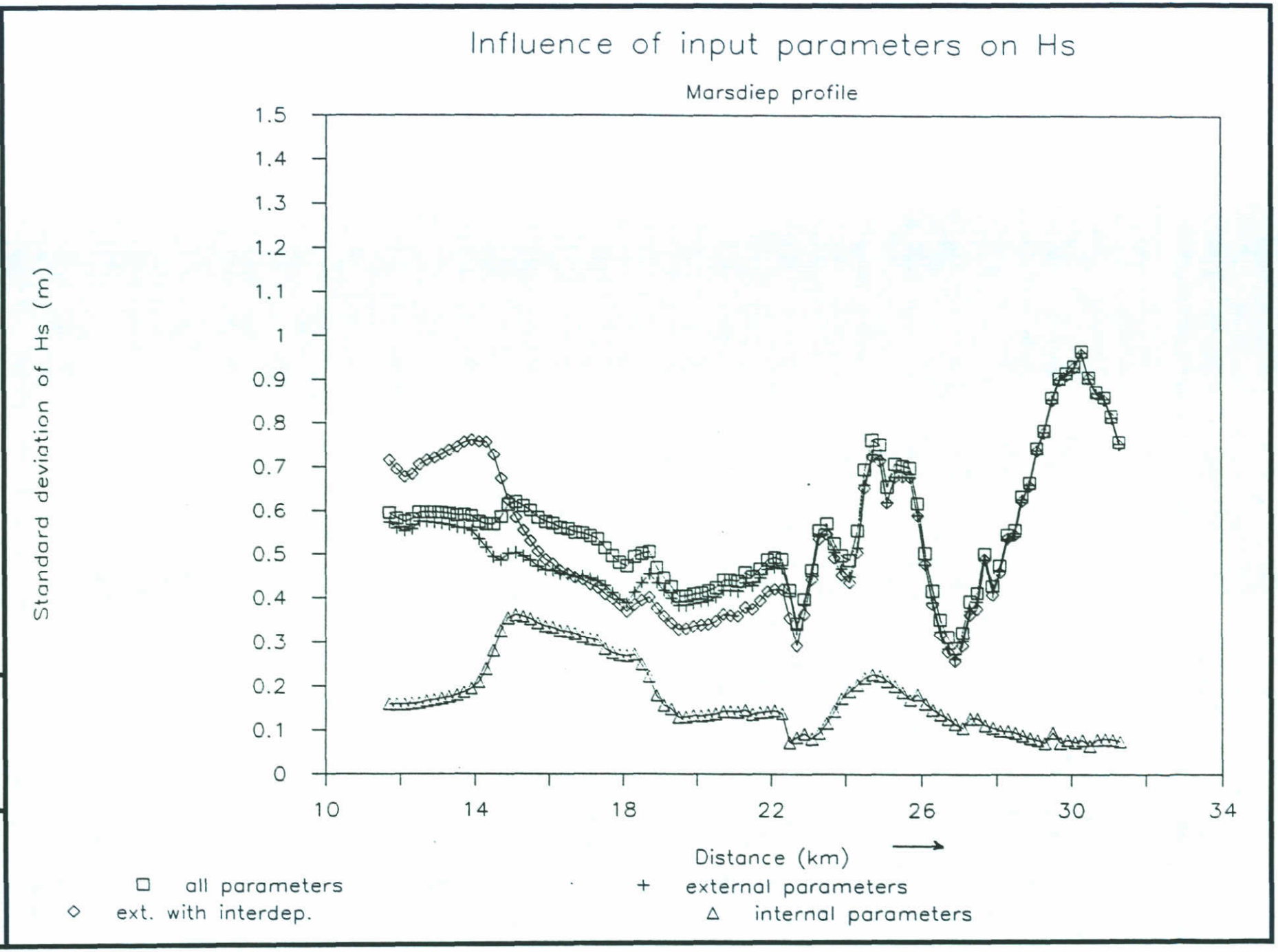
DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.39a

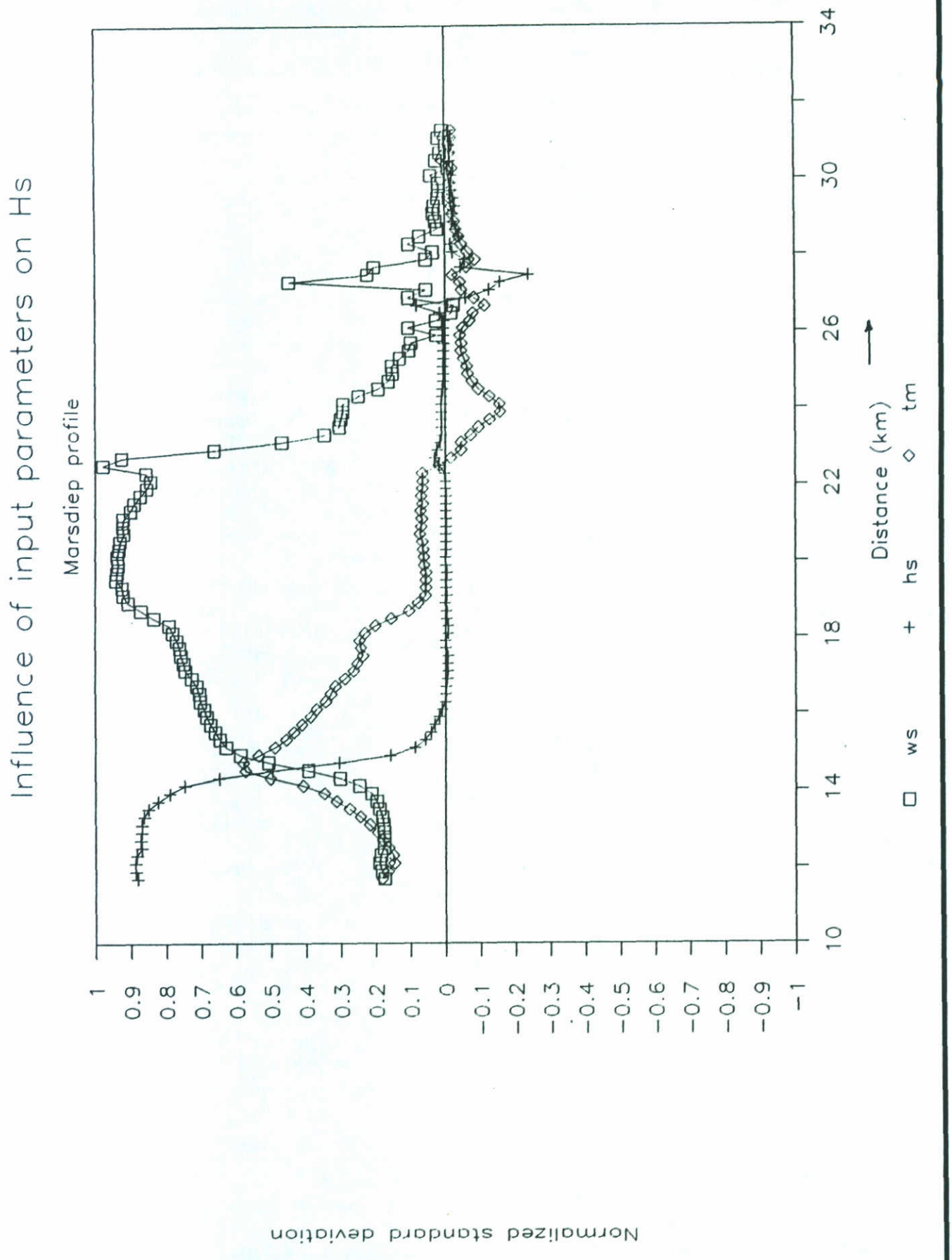
SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE,
TOTAL UNCERTAINTY

DELFT HYDRAULICS/TUD

H 1355

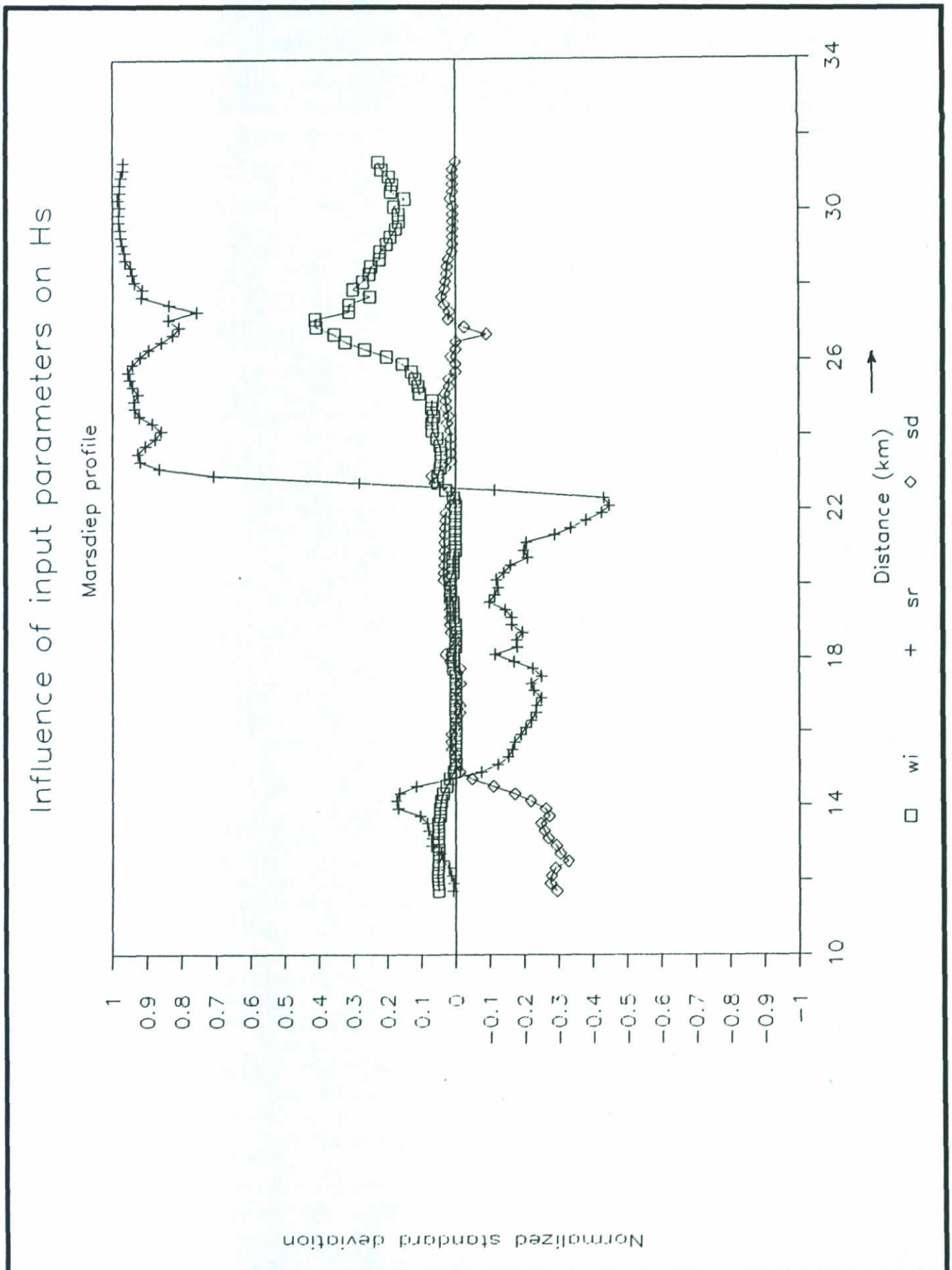
FIG. 4.39b



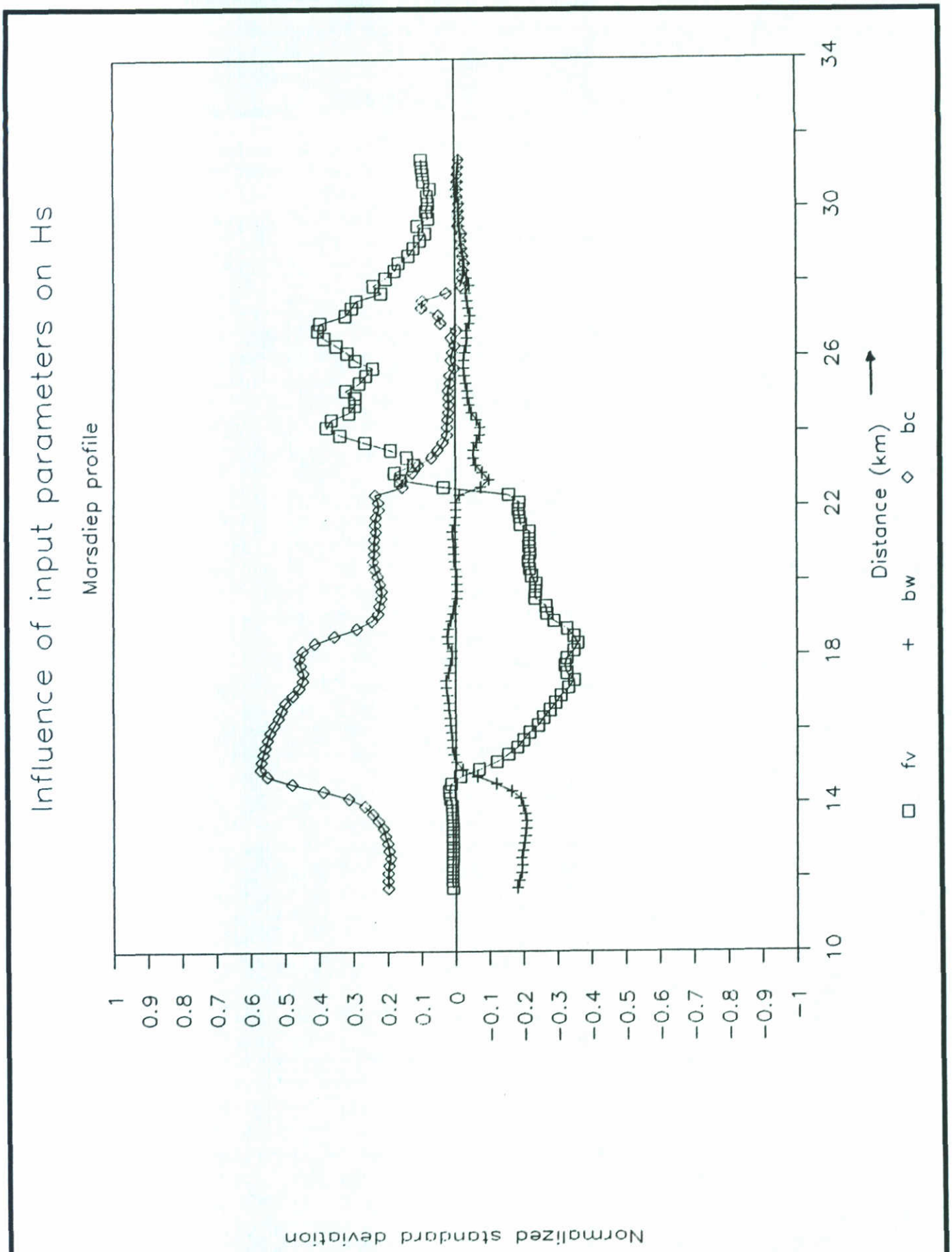


SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS WS, HS AND TM

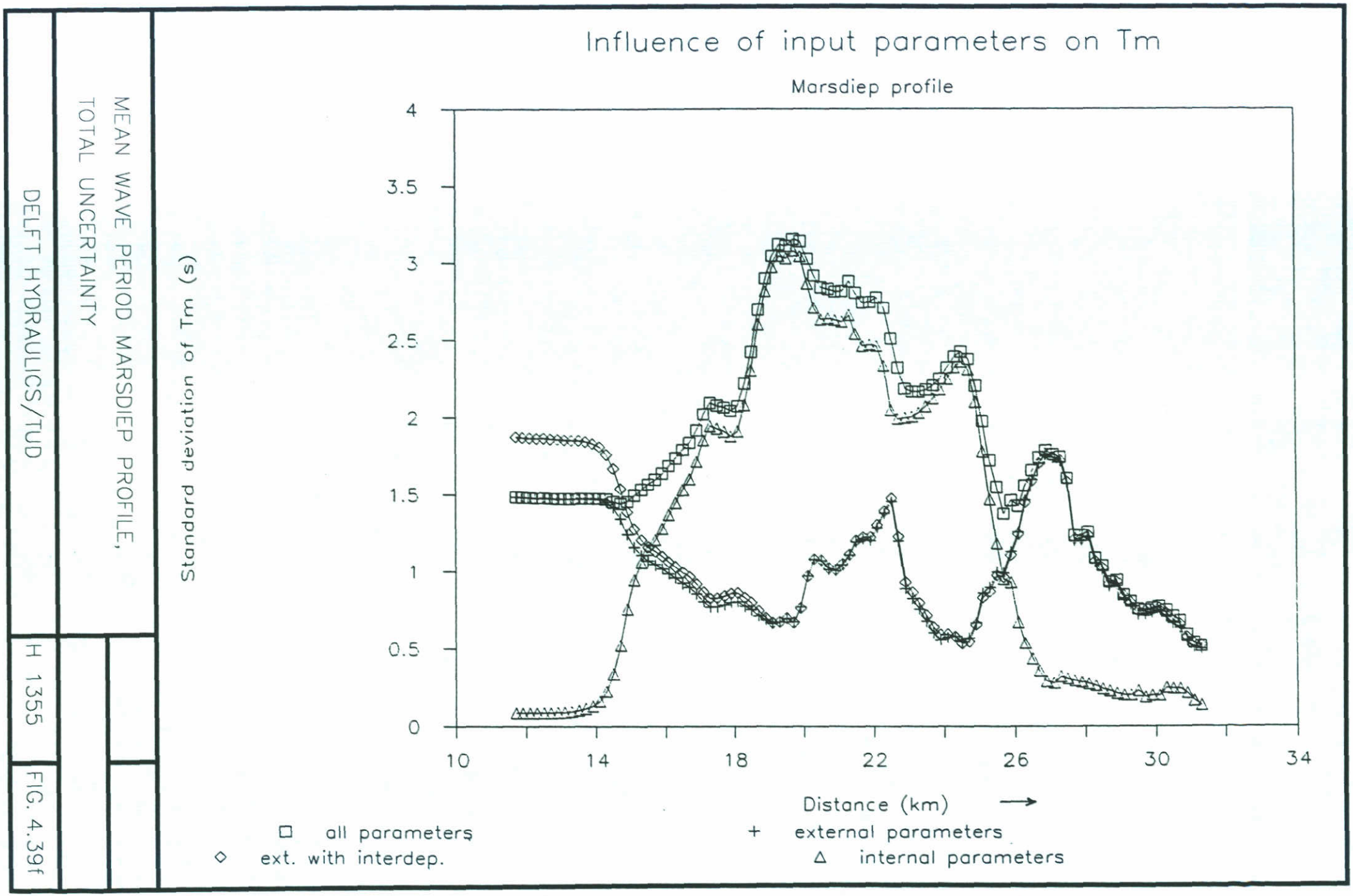
DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.39c

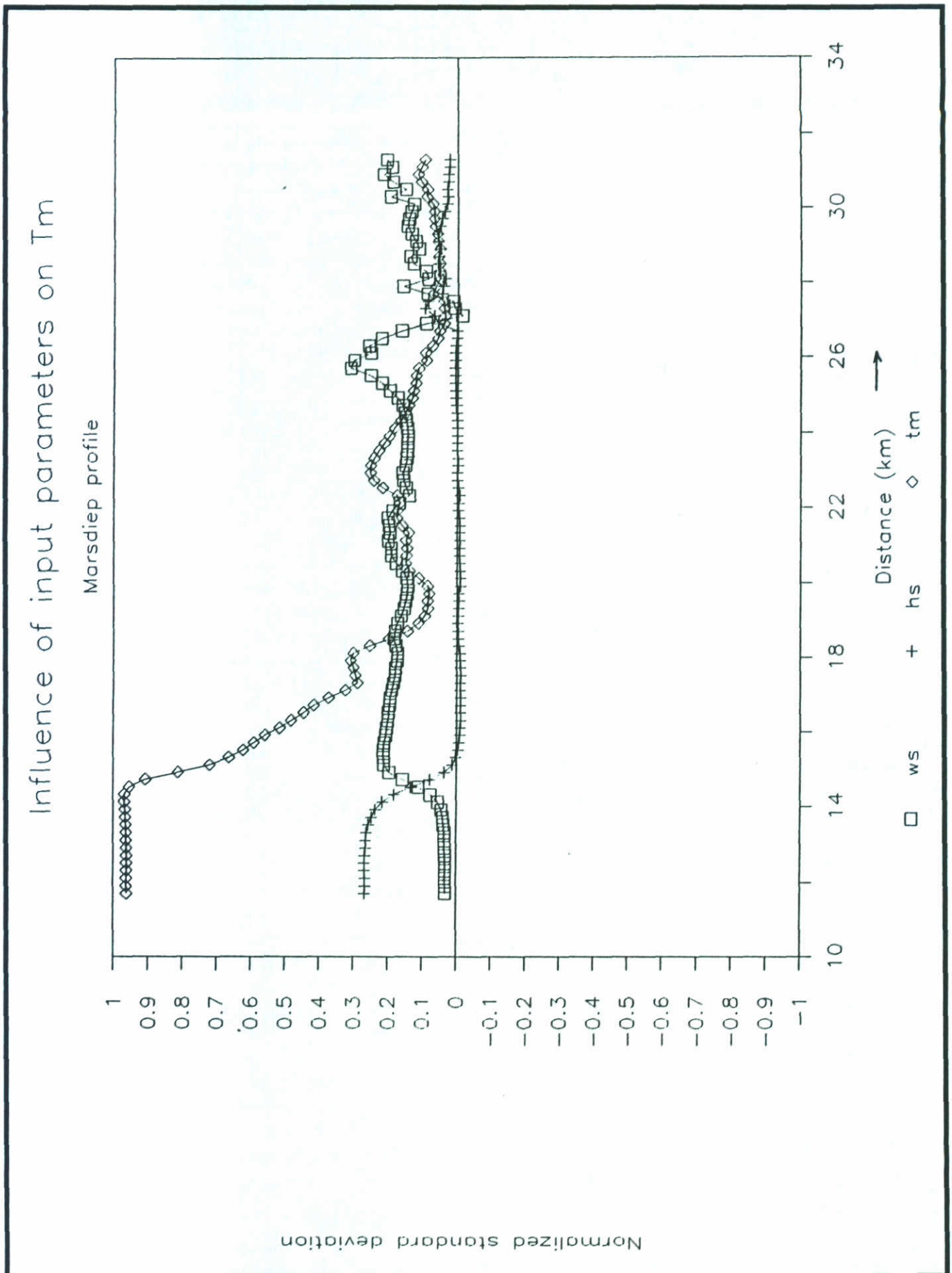


SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS WI, SR AND SD		
DELFT HYDRAULICS/TUD	H 1355	FIG. 4.39d



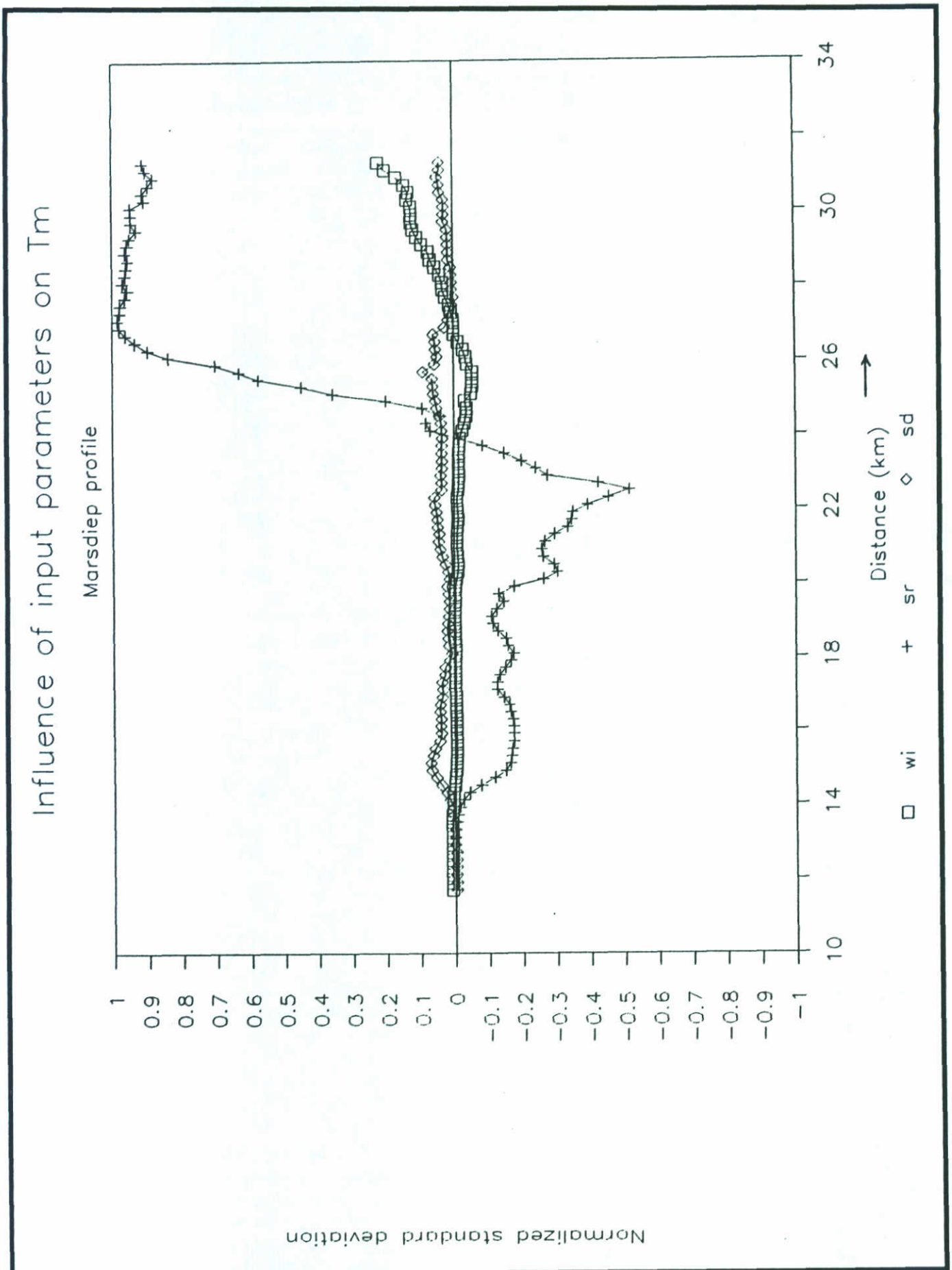
SIGNIFICANT WAVE HEIGHT MARSDIEP PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS FV, BW AND BC		
DELFT HYDRAULICS/TUD	H 1355	FIG. 4.39e


Influence of input parameters on Tm
Marsdiep profile
Standard deviation of Tm (s)
4
3.5
3
2.5
2
1.5
1
0.5
0
10
14
18
22
26
30
34
Distance (km)
□ all parameters
◇ ext. with interdep.
+ external parameters
△ internal parameters
MEAN WAVE PERIOD MARSDIEP PROFILE,
TOTAL UNCERTAINTY
DELFT HYDRAULICS/TUD
H 1355
FIG. 4.39f



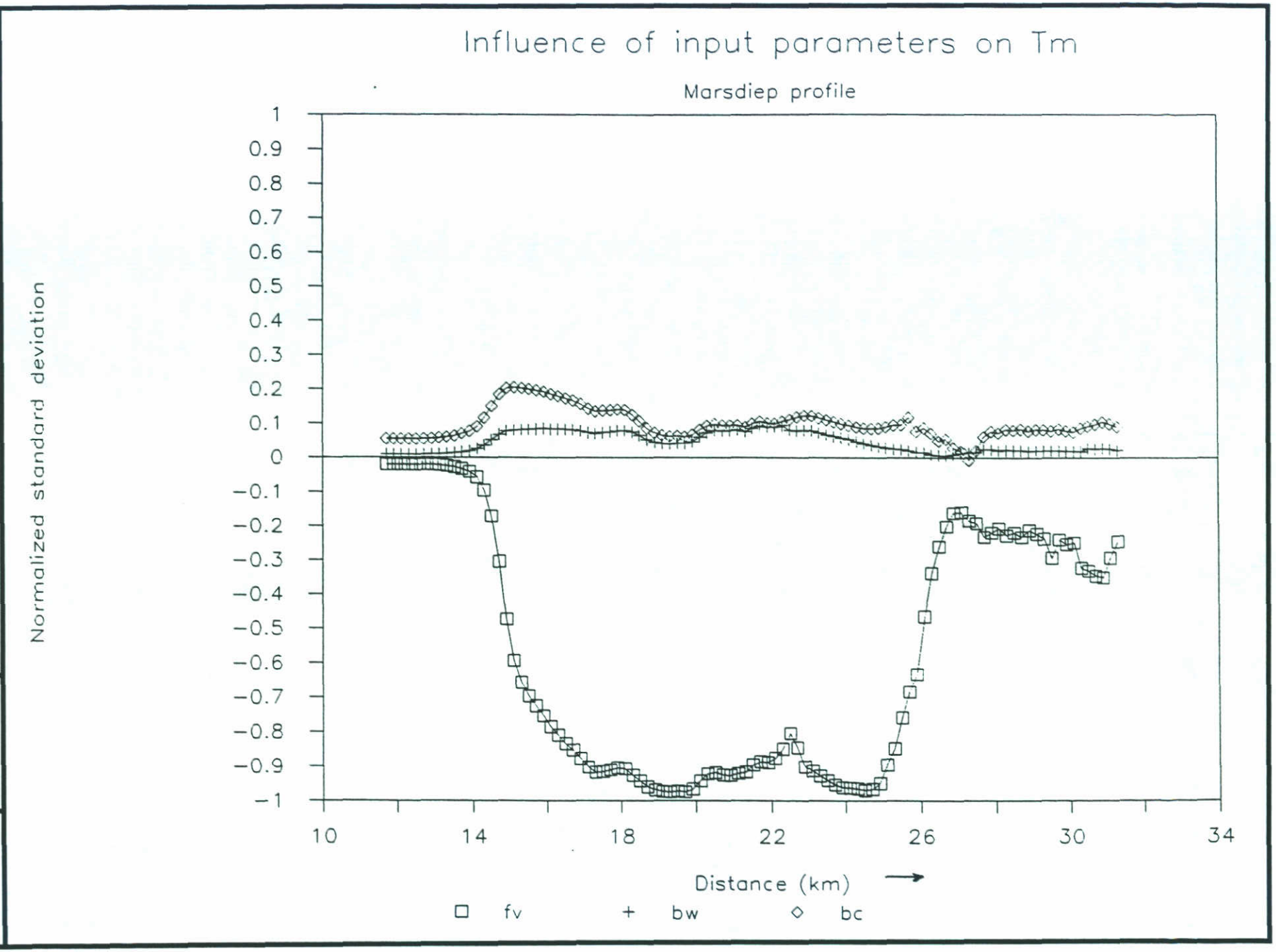
MEAN WAVE PERIOD MARSDIEP PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS WS, HS AND TM

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.39g



MEAN WAVE PERIOD MARSDIEP PROFILE, NORMALIZED UNCERTAINTY DUE TO PARAMETERS WI, SR AND SD

DELFT HYDRAULICS/TUD | H 1355 | FIG. 4.39h

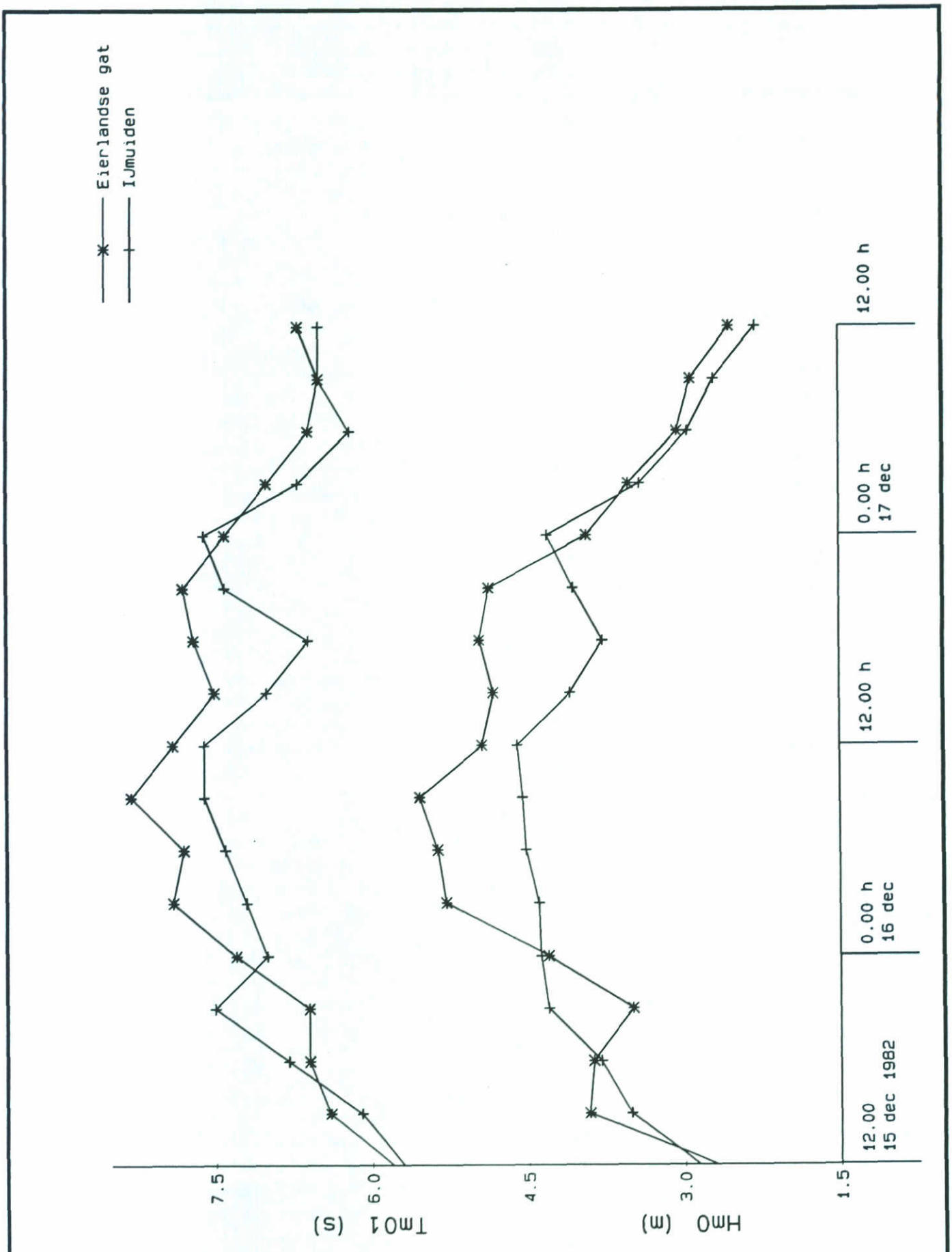


MEAN WAVE PERIOD MARSDIEP PROFILE,
NORMALIZED UNCERTAINTY DUE TO
PARAMETERS FV, BW AND BC

DELFT HYDRAULICS/TUD

H 1355

FIG. 4.39i



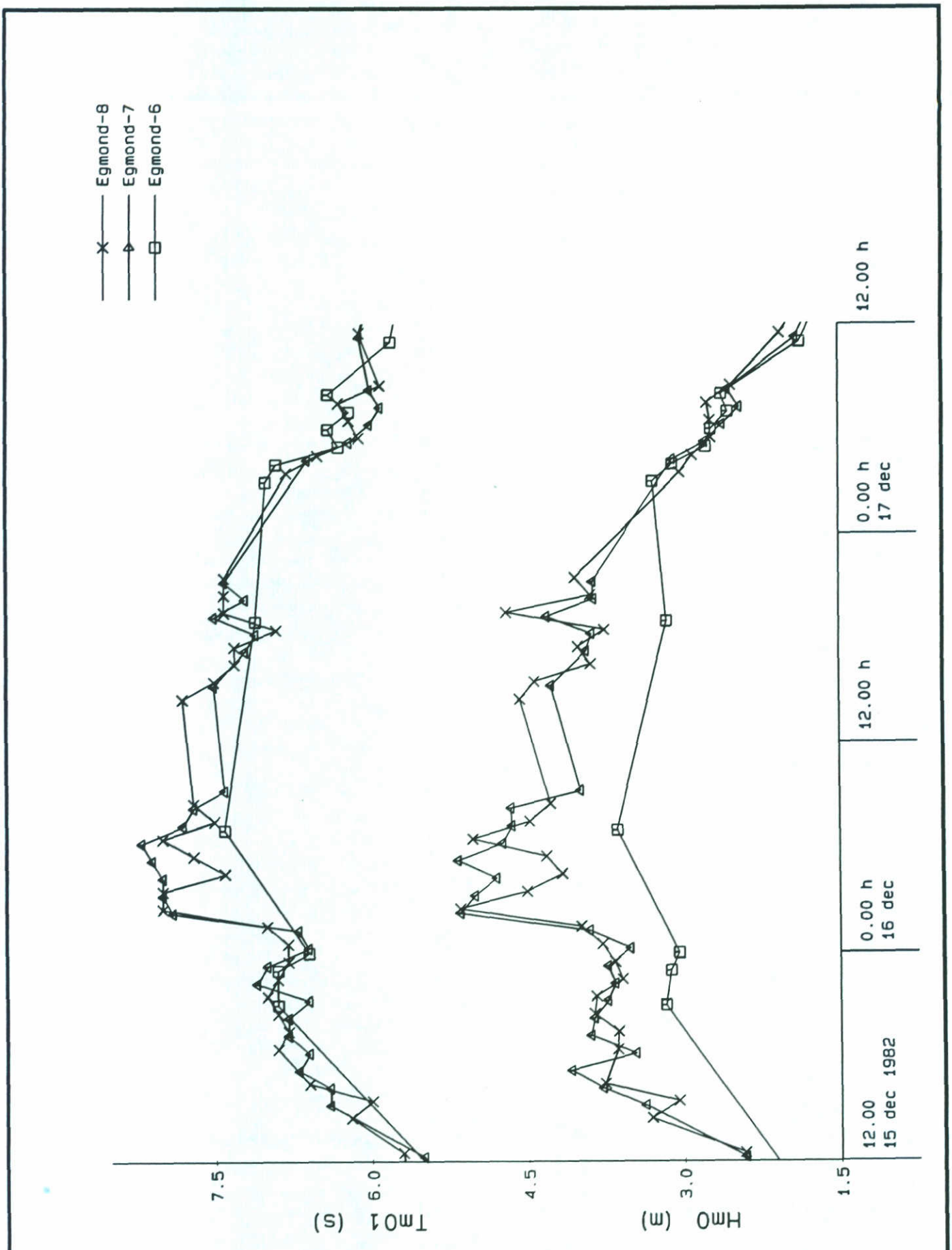
MEASURED WAVE HEIGHT Hm0 (DOWN) AND
WAVE PERIOD Tm01 (UP)
STORM DECEMBER 1982, OFFSHORE STATIONS

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.1a



MEASURED WAVE HEIGHT Hm0 (DOWN) AND
WAVE PERIOD Tm01 (UP)
STORM DECEMBER 1982, EGMOND STATIONS

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.1b

MEASURED WIND SPEED (DOWN) AND DIRECTION (UP) STORM DECEMBER 1982, OFFSHORE STATIONS

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.2a

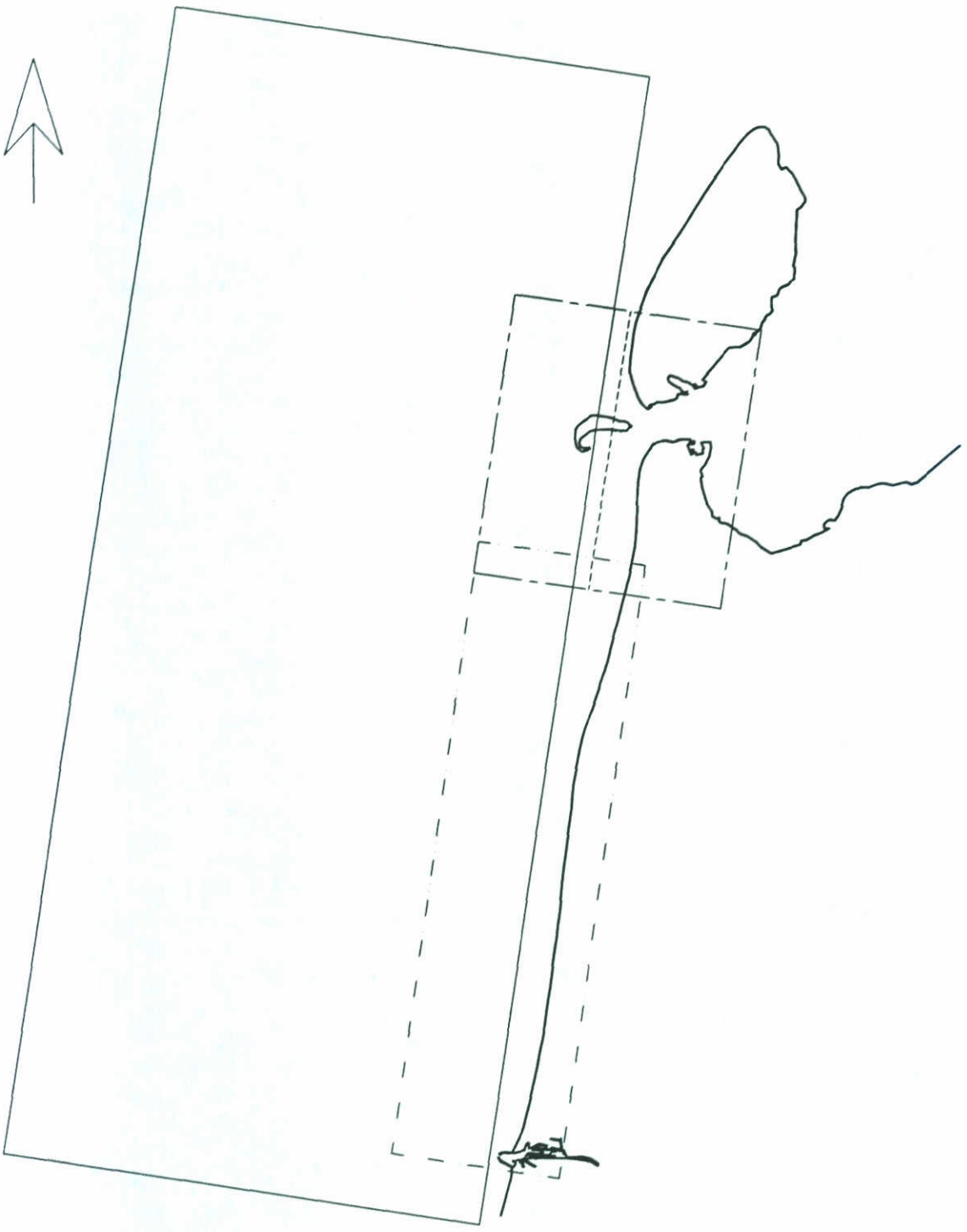
MEASURED WIND SPEED (DOWN) AND DIRECTION (UP) STORM DECEMBER 1982, EGMOND STATIONS

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.2b



LOCATIONS OF COMPUTATIONAL GRIDS VALIDATION COMPUTATIONS	HYDRA	
	SCALE 1:500000	
DELFT HYDRAULICS	H 1355	FIG. 5.3

SIGNIFICANT WAVE HEIGHT Hs AND
MEAN WAVE PERIOD Tm
16 DECEMBER 1982, 0.00 h

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG.5.4

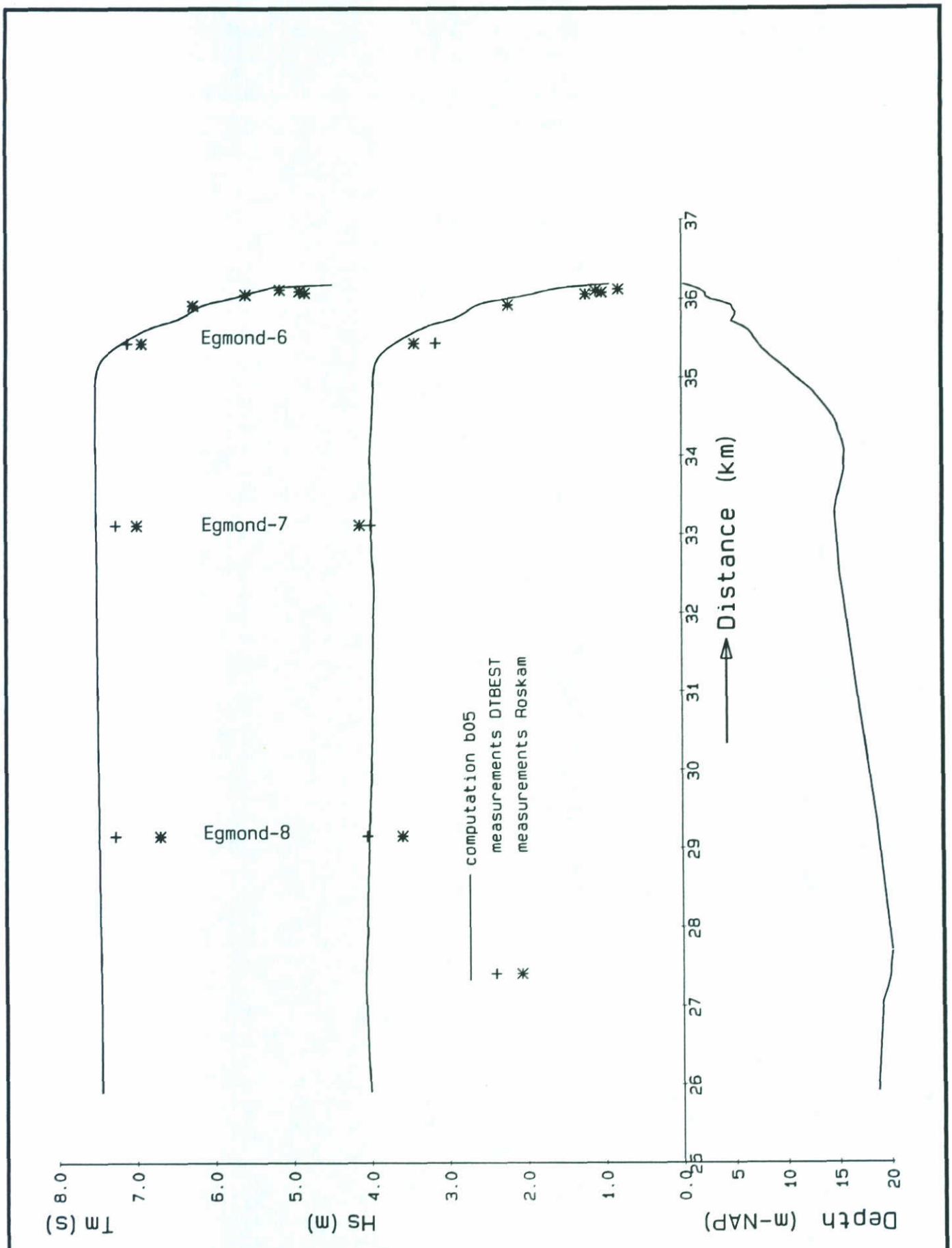
SIGNIFICANT WAVE HEIGHT Hs AND
MEAN WAVE PERIOD Tm
16 DECEMBER 1982, 6.00 h

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG.5.5



SIGNIFICANT WAVE HEIGHT Hs AND
MEAN WAVE PERIOD Tm
16 DECEMBER 1982, 18.00 h

HYDRA-HISWA

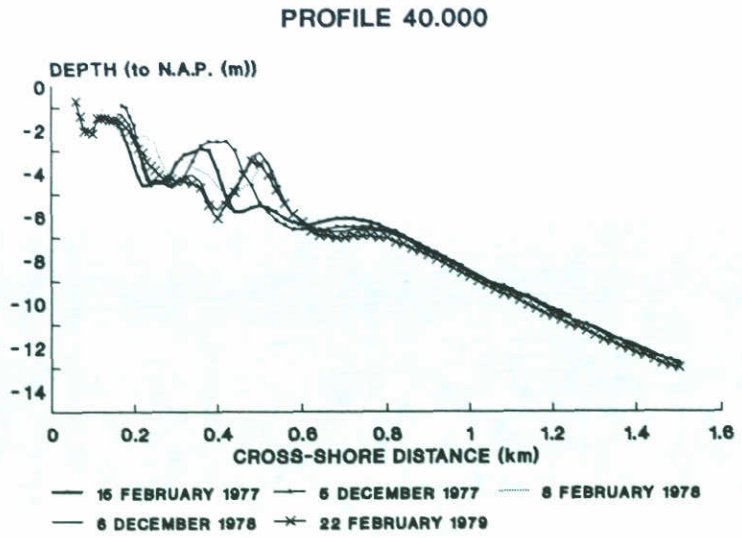
DELFT HYDRAULICS

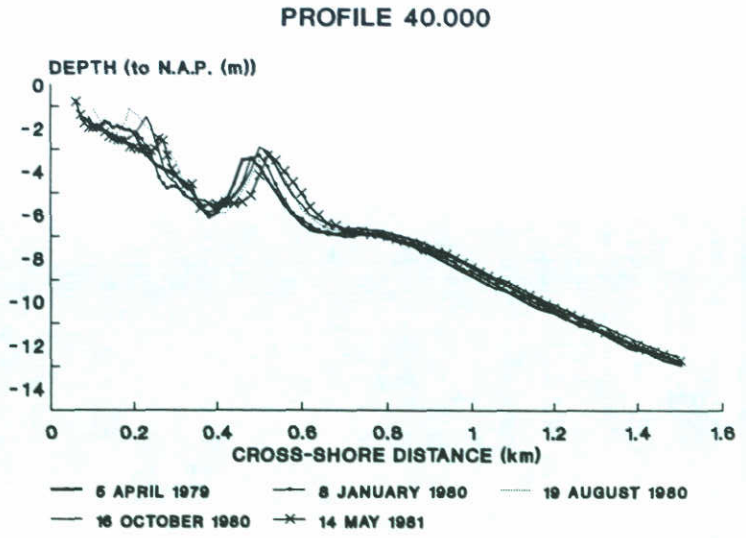
H1355

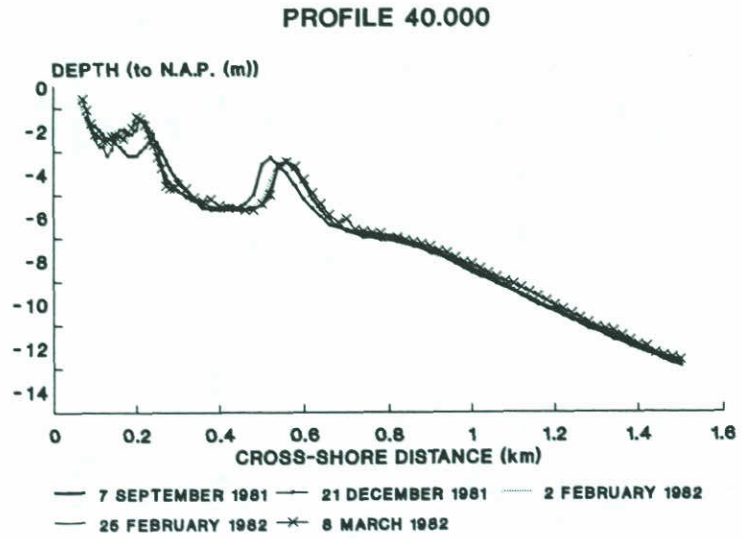
FIG.5.6

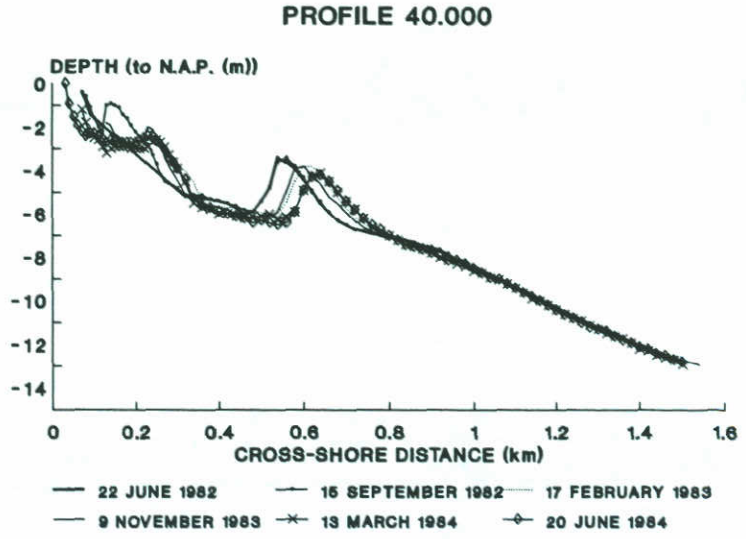
VARIATION BATHYMETRY EGMOND PROFILE

PROFILE 40.000, 1977–1984









DELFT HYDRAULICS

H 1355

FIG. 5.7a

HYDRA

VARIATION BATHYMETRY EGMOND PROFILE

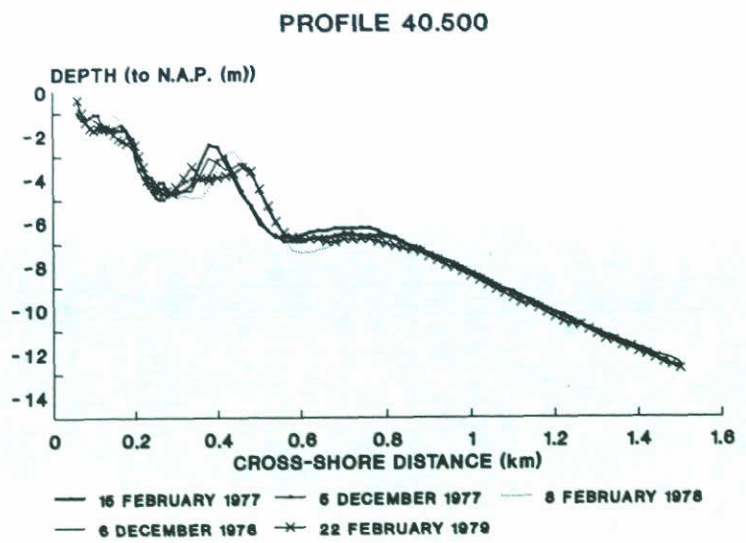
PROFILE 40.500, 1977–1984

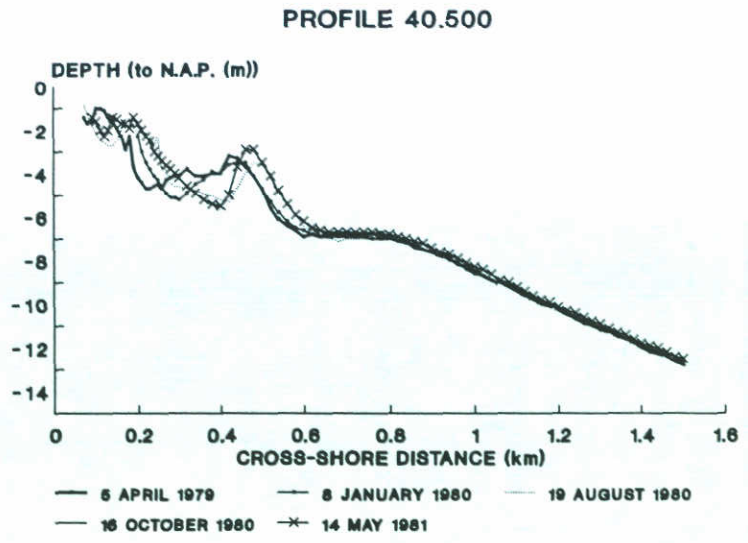
DELFT HYDRAULICS

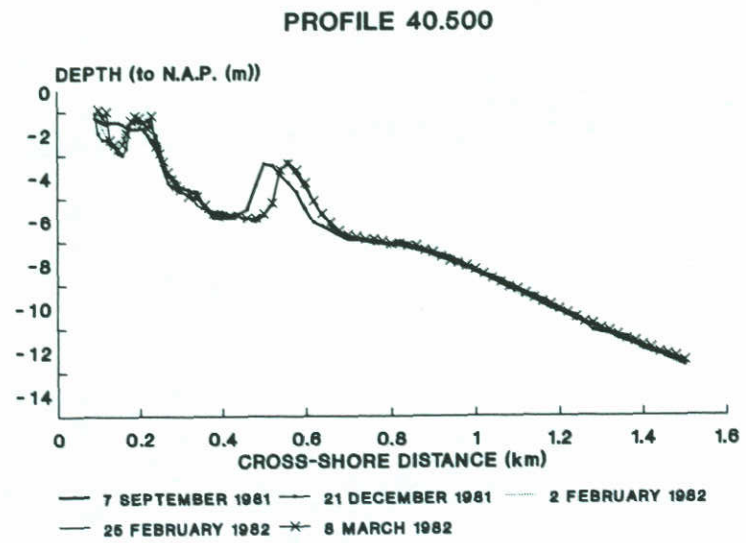
H 1355

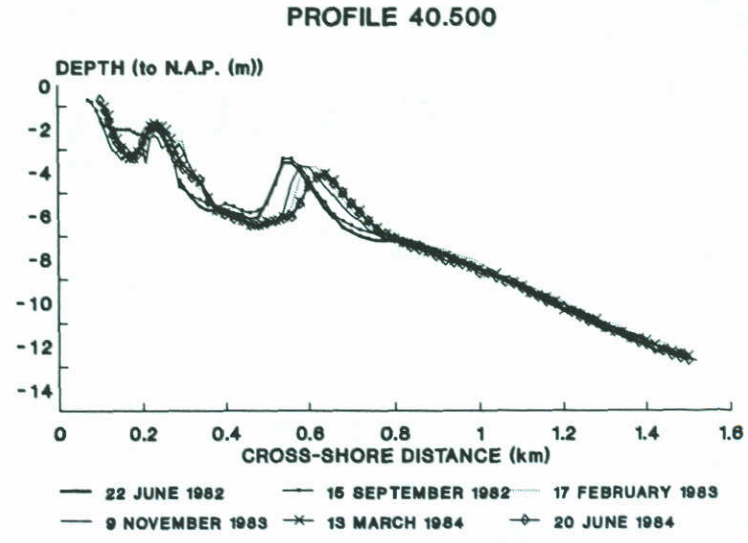
HYDRA

FIG. 5.7b









VARIATION BATHYMETRY EGMOND PROFILE

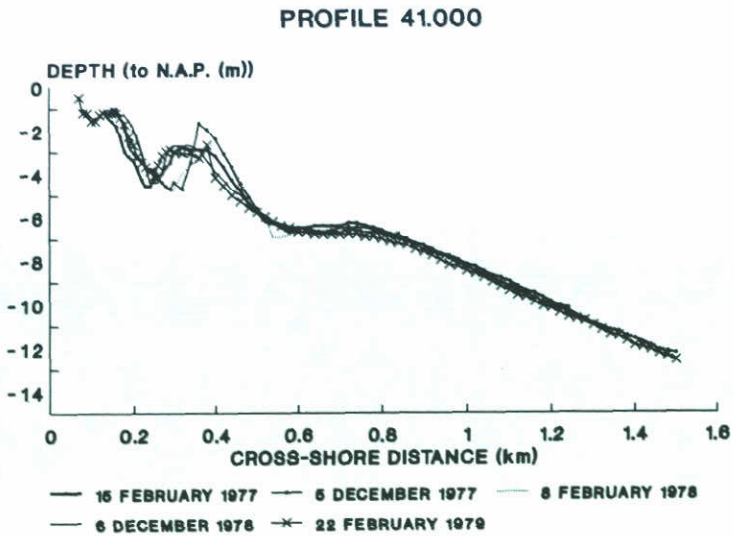
PROFILE 41.000, 1977–1984

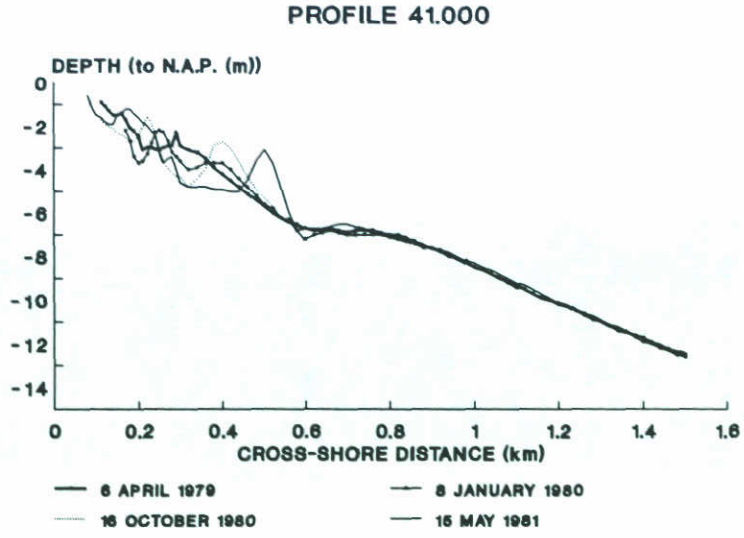
DELFT HYDRAULICS

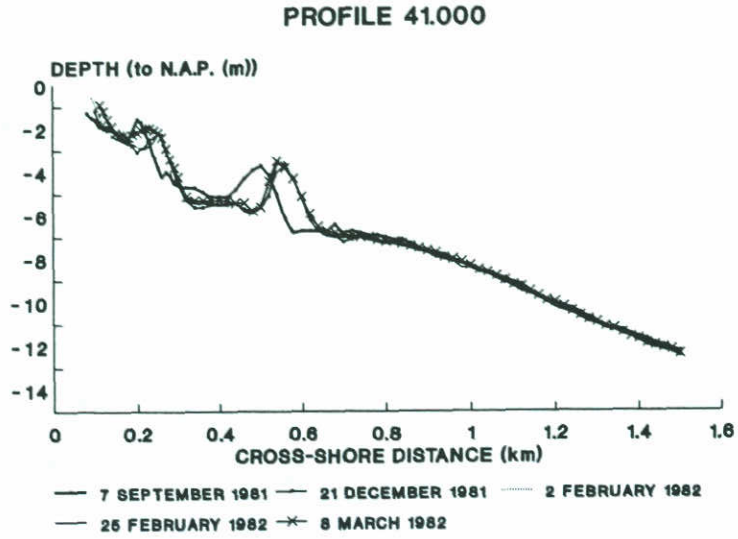
HYDRA

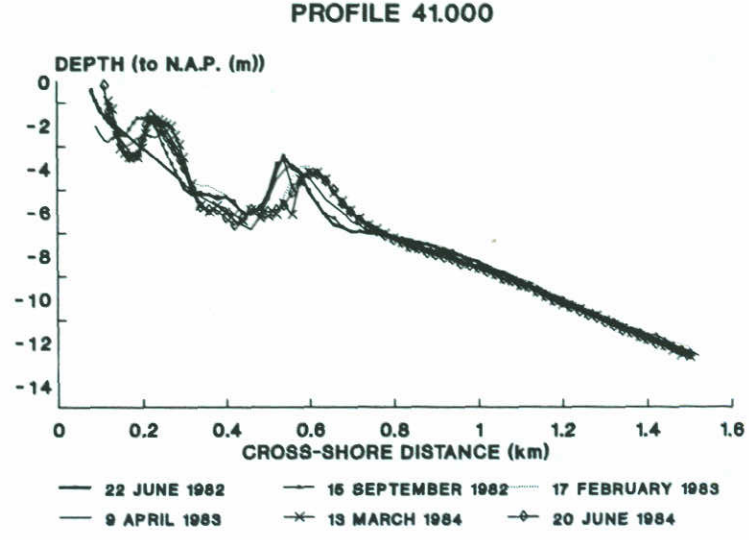
H 1355

FIG. 5.7c









MEASURED WAVE HEIGHT Hm0 (DOWN) AND
WAVE PERIOD Tm01 (UP)
STORM NOVEMBER 1981, SCHULPENGAT

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.8a

MEASURED WAVE HEIGHT Hm0 (DOWN) AND
WAVE PERIOD Tm01 (UP)
STORM NOVEMBER 1981, BOLLEN

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.8b

MEASURED WIND SPEED (DOWN) AND DIRECTION (UP) STORM NOVEMBER 1981, SCHULPENGAT

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.9a

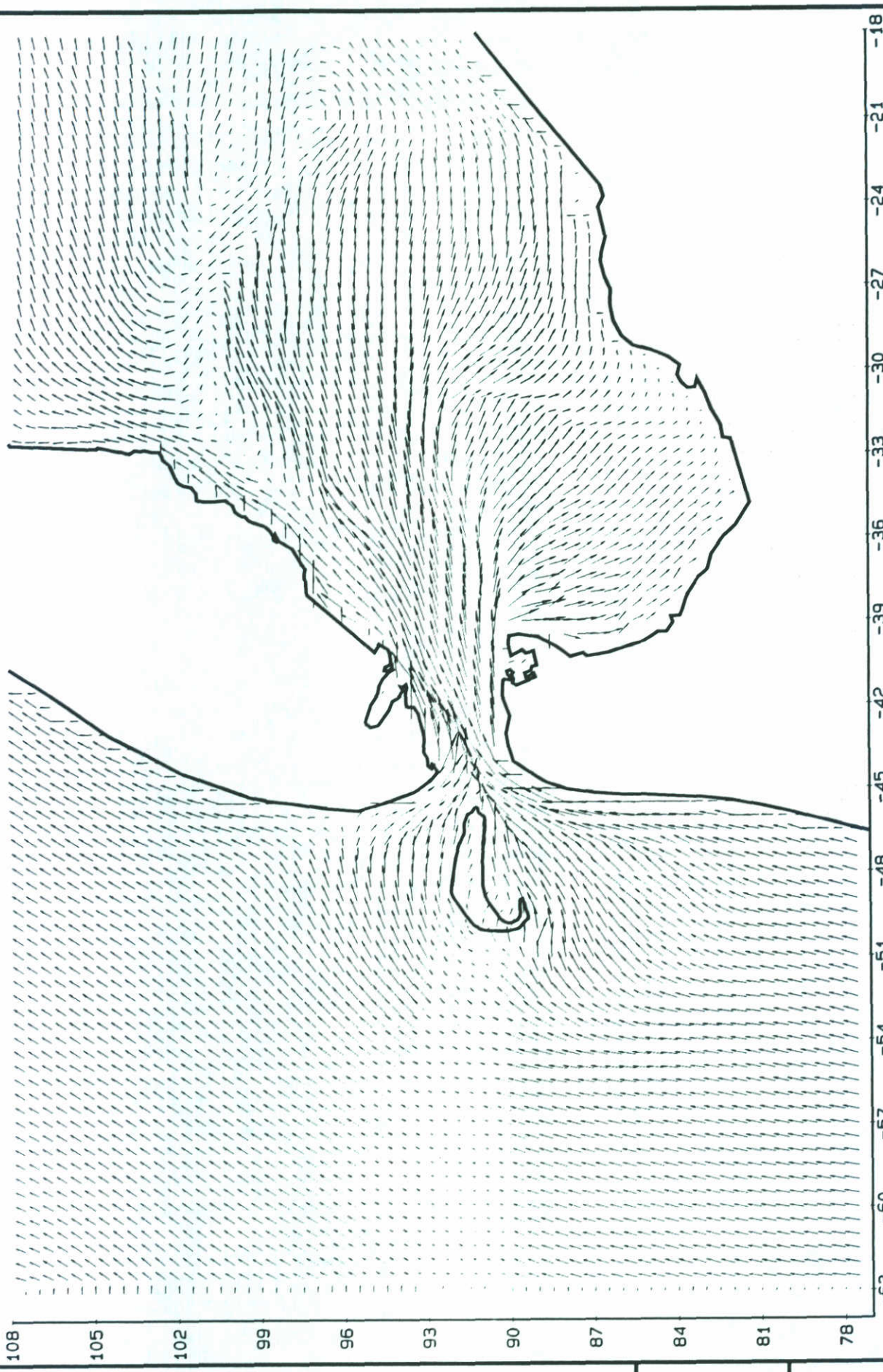
MEASURED WIND SPEED (DOWN) AND DIRECTION (UP) STORM NOVEMBER 1981, BOLLEN

HYDRA-HISWA

DELFT HYDRAULICS

H1355

FIG 5.9b

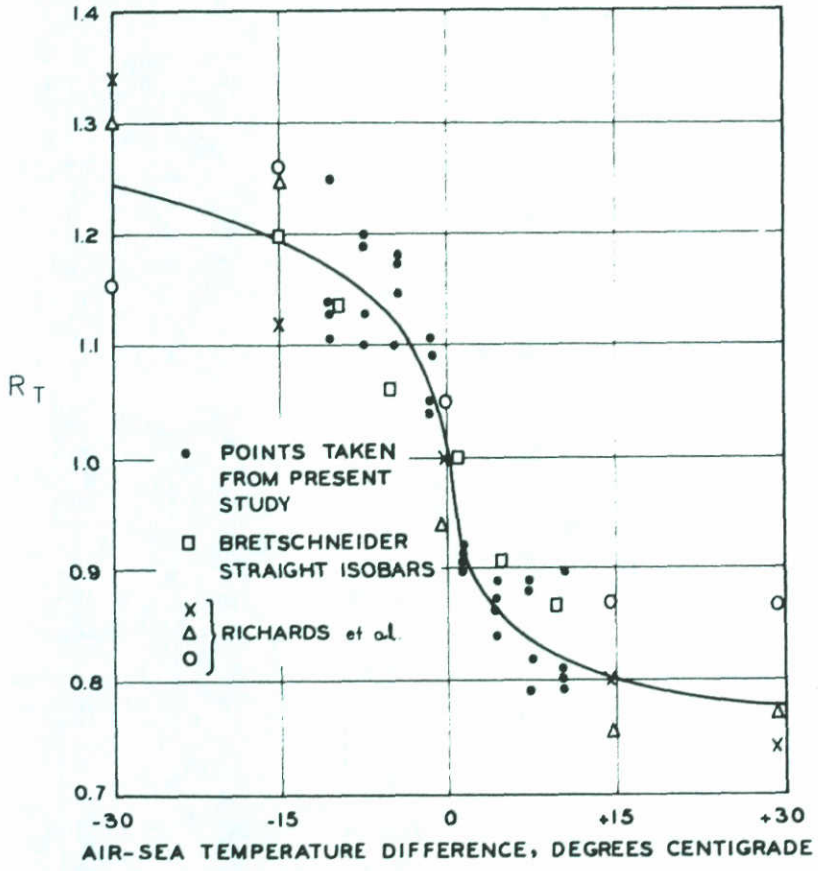


CURRENT FIELD STORM 24 NOVEMBER 1981

HYDRA | T=14.00 h

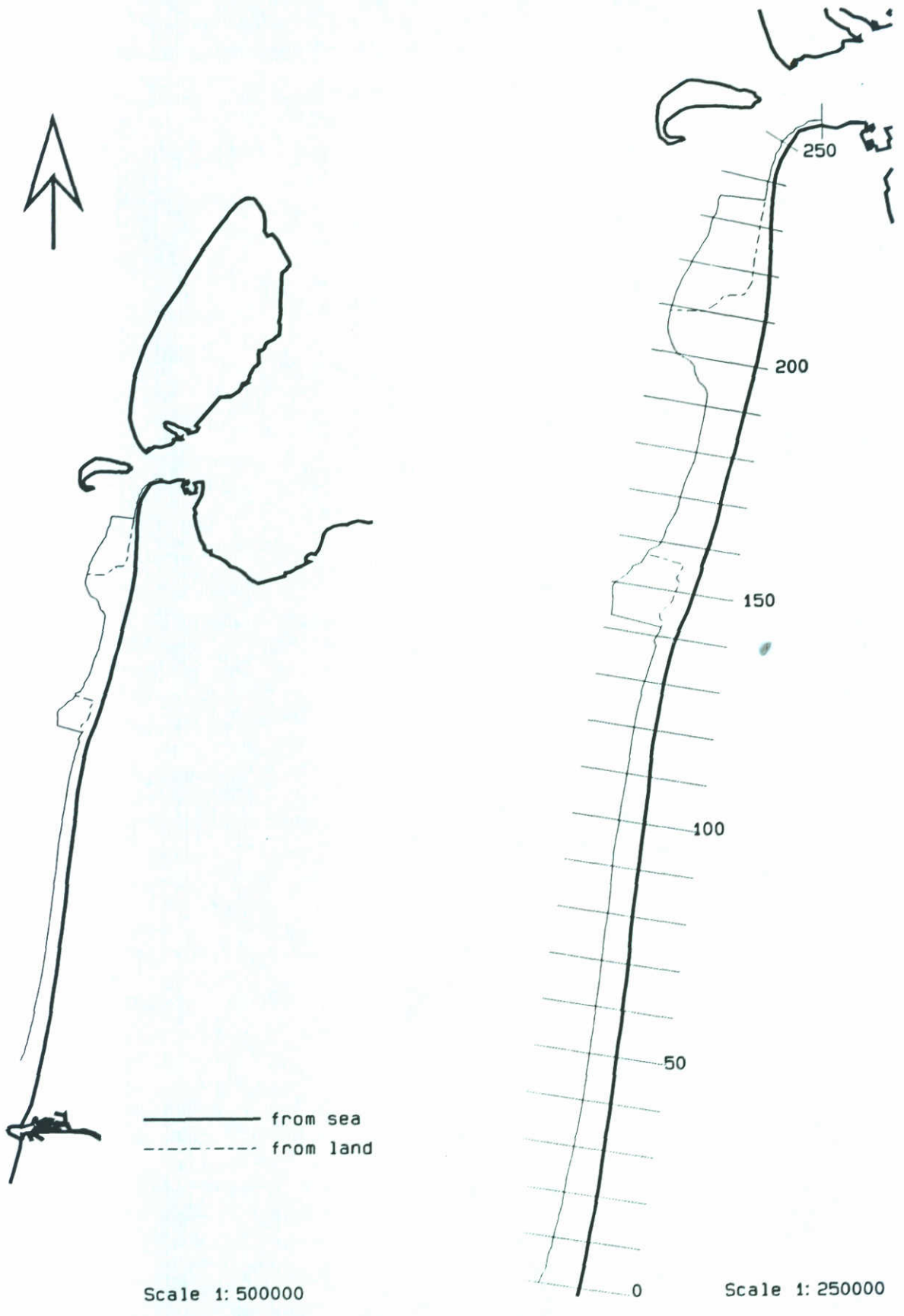
Scale 1 : 200000

DELFT HYDRAULICS | H1355 | Fig 5.10

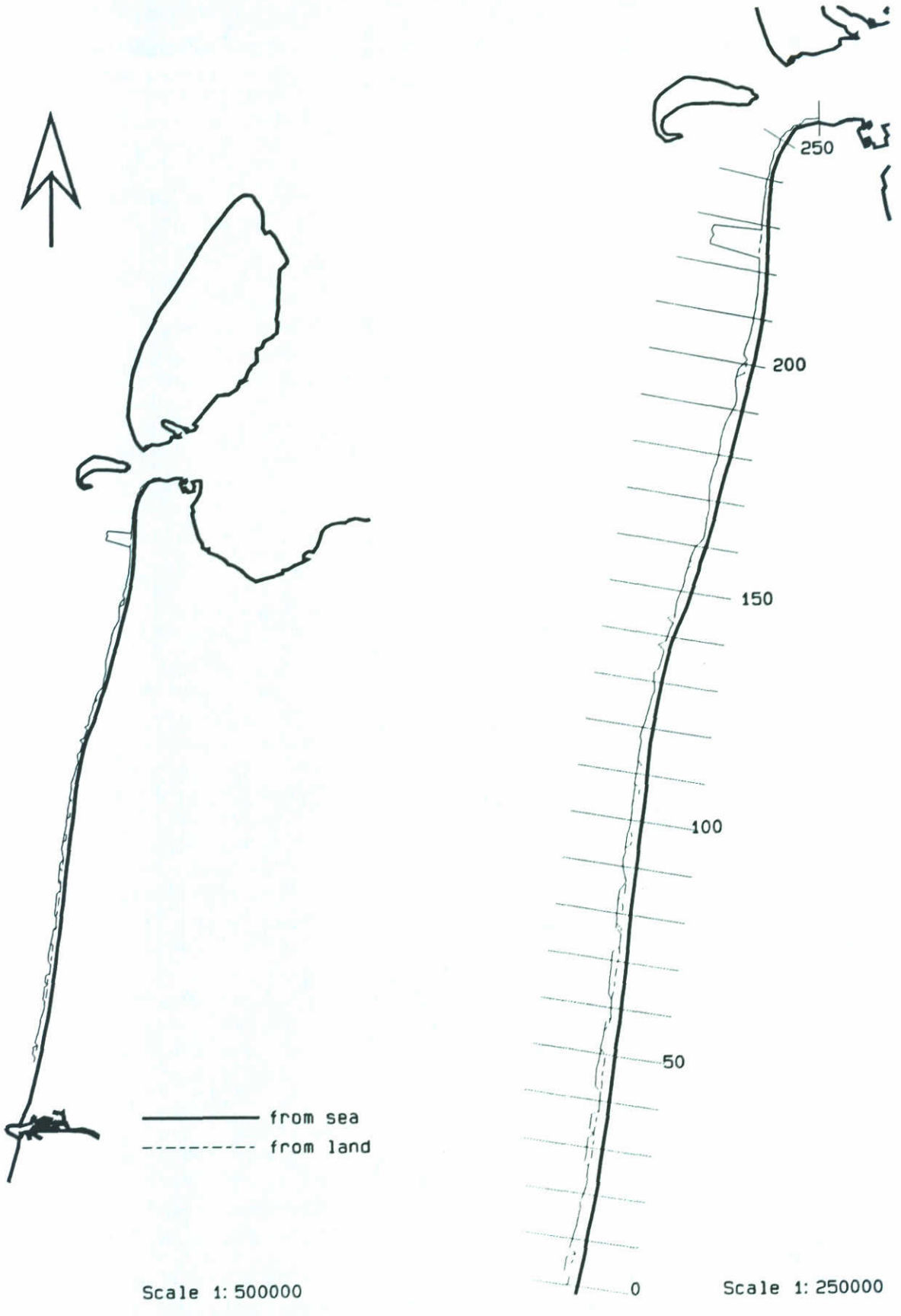


after Resio and Vincent (1977)

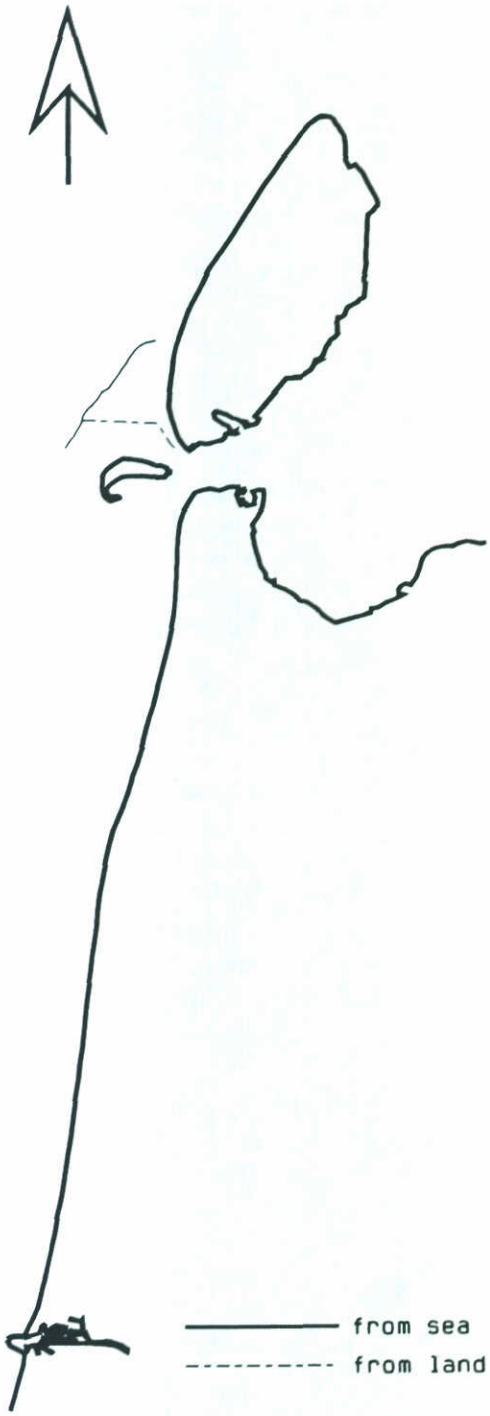
AMPLIFICATION FACTOR FOR EFFECT OF AIR–WATER TEMPERATURE DIFFERENCE	HYDRA	
DELFT HYDRAULICS	H 1355	FIG. 5.11



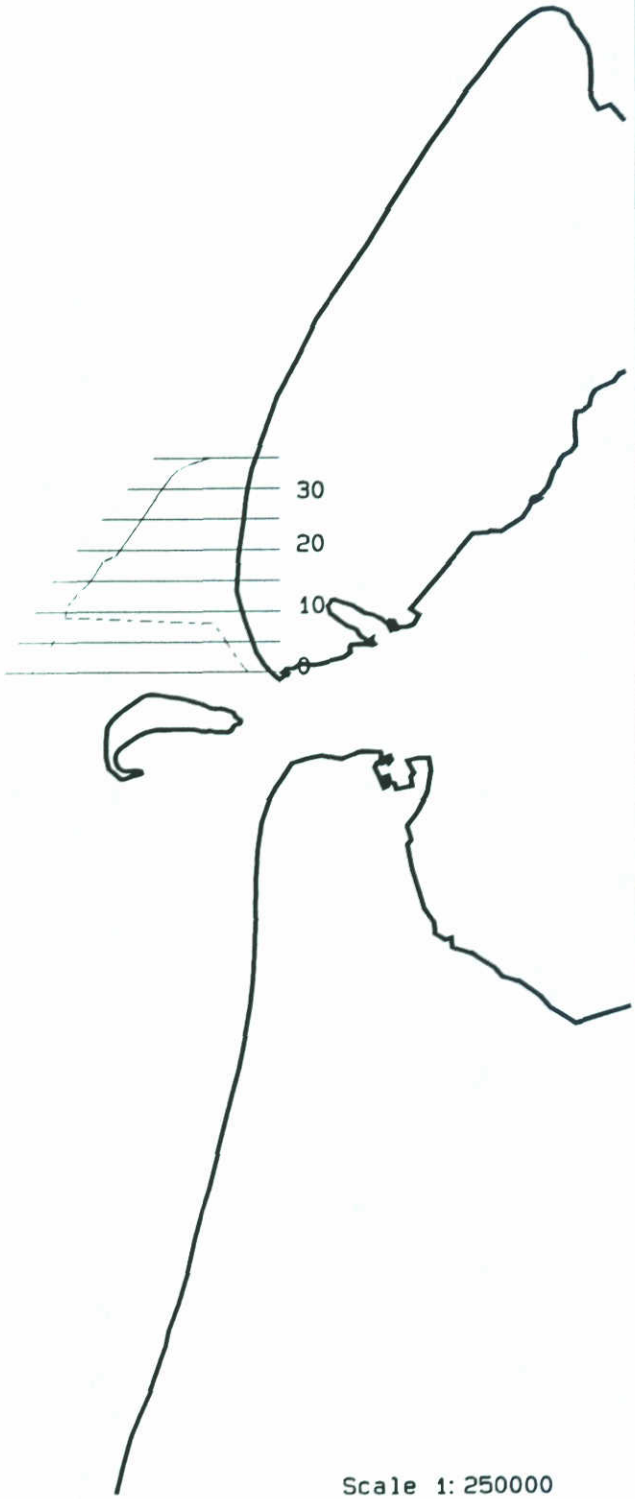
Position of NAP-10 m contour HISWA output Coast of NORTH - HOLLAND	HYDRA	
	Scale as shown	
DELFT HYDRAULICS	H1355	Fig 6.1



Position of NAP-5 m contour HISWA output Coast of NORTH - HOLLAND	HYDRA	
	Scale as shown	
DELFT HYDRAULICS	H1355	Fig 6.2

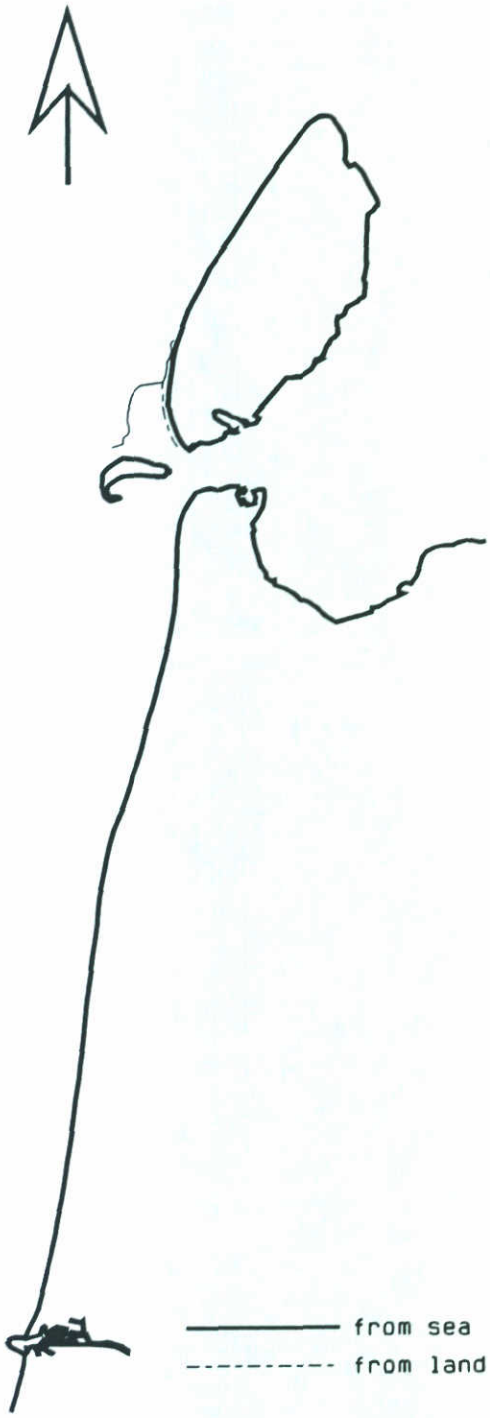


Scale 1: 500000



Scale 1: 250000

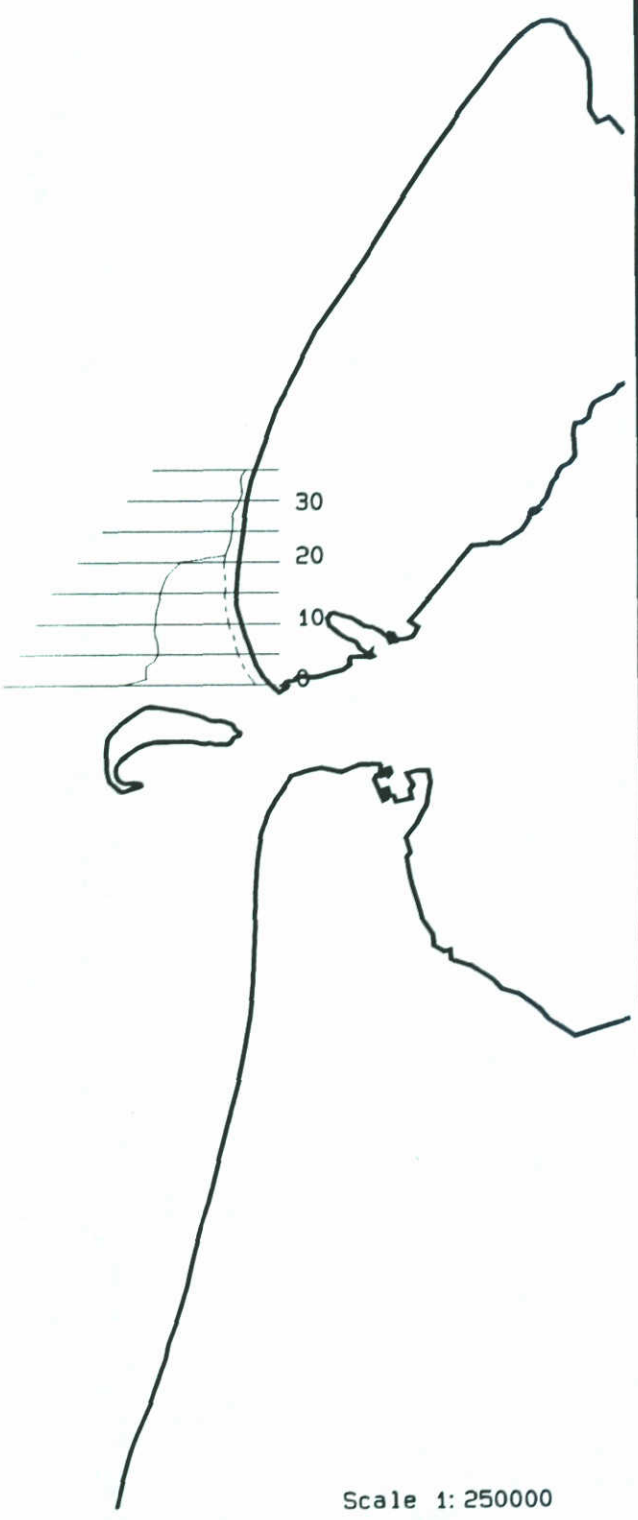
Position of NAP-10 m contour HISWA output Coast of TEXEL	HYDRA	
	Scale as shown	
DELFT HYDRAULICS	H1355	Fig 6.3



from sea

from land

Scale 1: 500000



Scale 1: 250000

Position of NAP-5 m contour HISWA output
Coast of TEXEL

HYDRA

Scale as shown

DELFT HYDRAULICS

H1355

Fig 6.4

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-10 M CONTOUR COAST OF NORTH-HOLLAND

HYDRA-HISWA | Z01

DELFT HYDRAULICS | H1355 | FIG 6.5a

MAIN WAVE DIRECTION AT NAP-10 M CONTOUR COAST OF NORTH-HOLLAND	HYDRA-HISWA	Z01
DELFT HYDRAULICS	H1355	FIG 6.5b

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-5 M CONTOUR COAST OF NORTH-HOLLAND

HYDRA-HISWA | Z01

DELFT HYDRAULICS | H1355 | FIG 6.6a

MAIN WAVE DIRECTION AT NAP-5 M CONTOUR COAST OF NORTH-HOLLAND	HYDRA-HISWA	Z01
DELFT HYDRAULICS	H1355	FIG 6.6b

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-10 M CONTOUR COAST OF TEXEL

HYDRA-HISWA | Z01

DELFT HYDRAULICS | H1355 | FIG 6.7a

MAIN WAVE DIRECTION AT NAP-10 M CONTOUR COAST OF TEXEL	HYDRA-HISWA	Z01
DELFT HYDRAULICS	H1355	FIG 6.7b

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-5 M CONTOUR COAST OF TEXEL

HYDRA-HISWA | Z01

DELFT HYDRAULICS | H1355 | FIG 6.8a

MAIN WAVE DIRECTION AT NAP-5 M CONTOUR
COAST OF TEXEL

HYDRA-HISWA | Z01

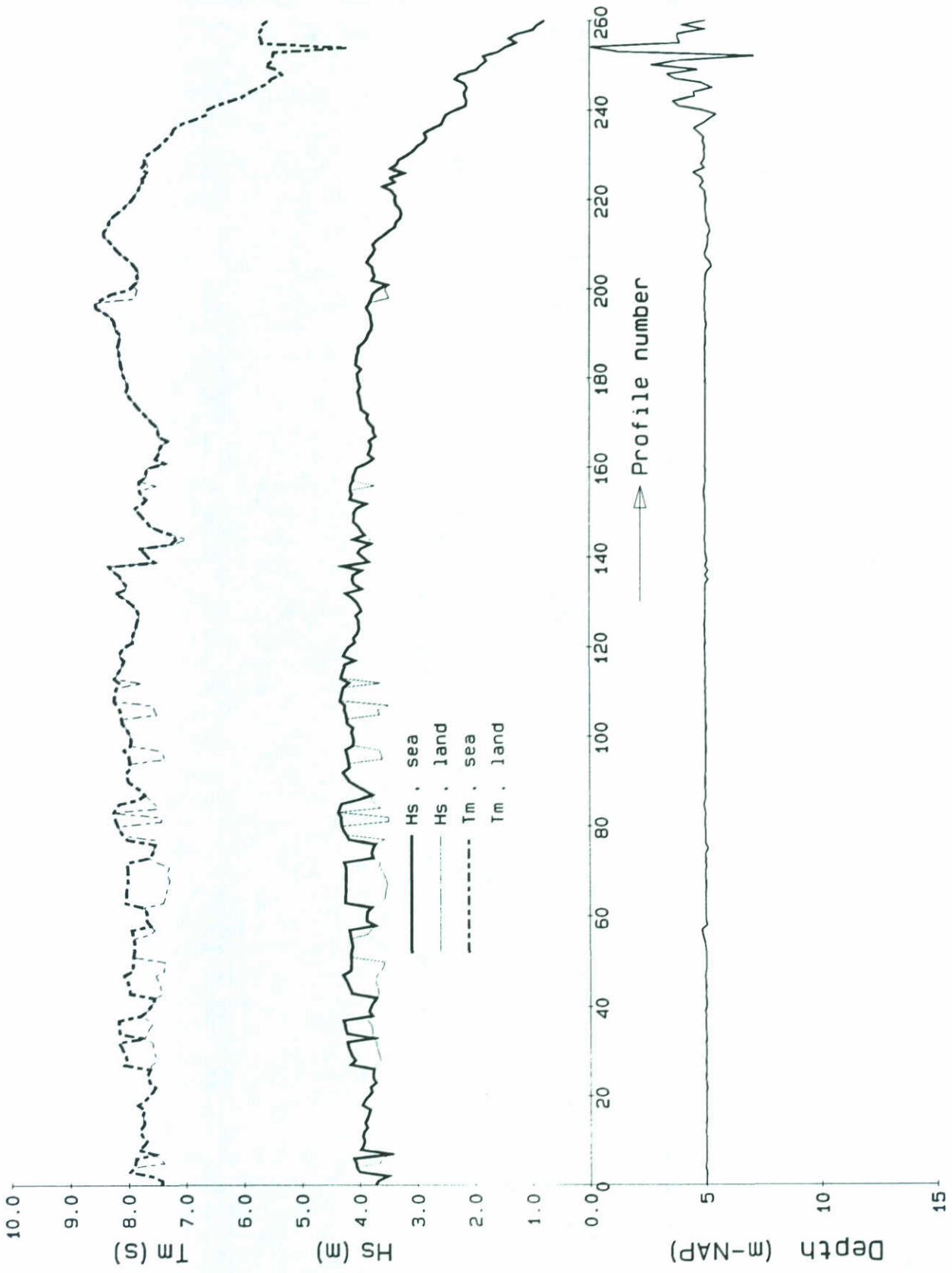
DELFT HYDRAULICS | H1355 | FIG 6.8b

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-10 M CONTOUR COAST OF NORTH-HOLLAND

HYDRA-HISWA | Z02

DELFT HYDRAULICS | H1355 | FIG 6.9a

MAIN WAVE DIRECTION AT NAP-10 M CONTOUR COAST OF NORTH-HOLLAND	HYDRA-HISWA	Z02
DELFT HYDRAULICS	H1355	FIG 6.9b



SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-5 M CONTOUR COAST OF NORTH-HOLLAND

HYDRA-HISWA | Z02

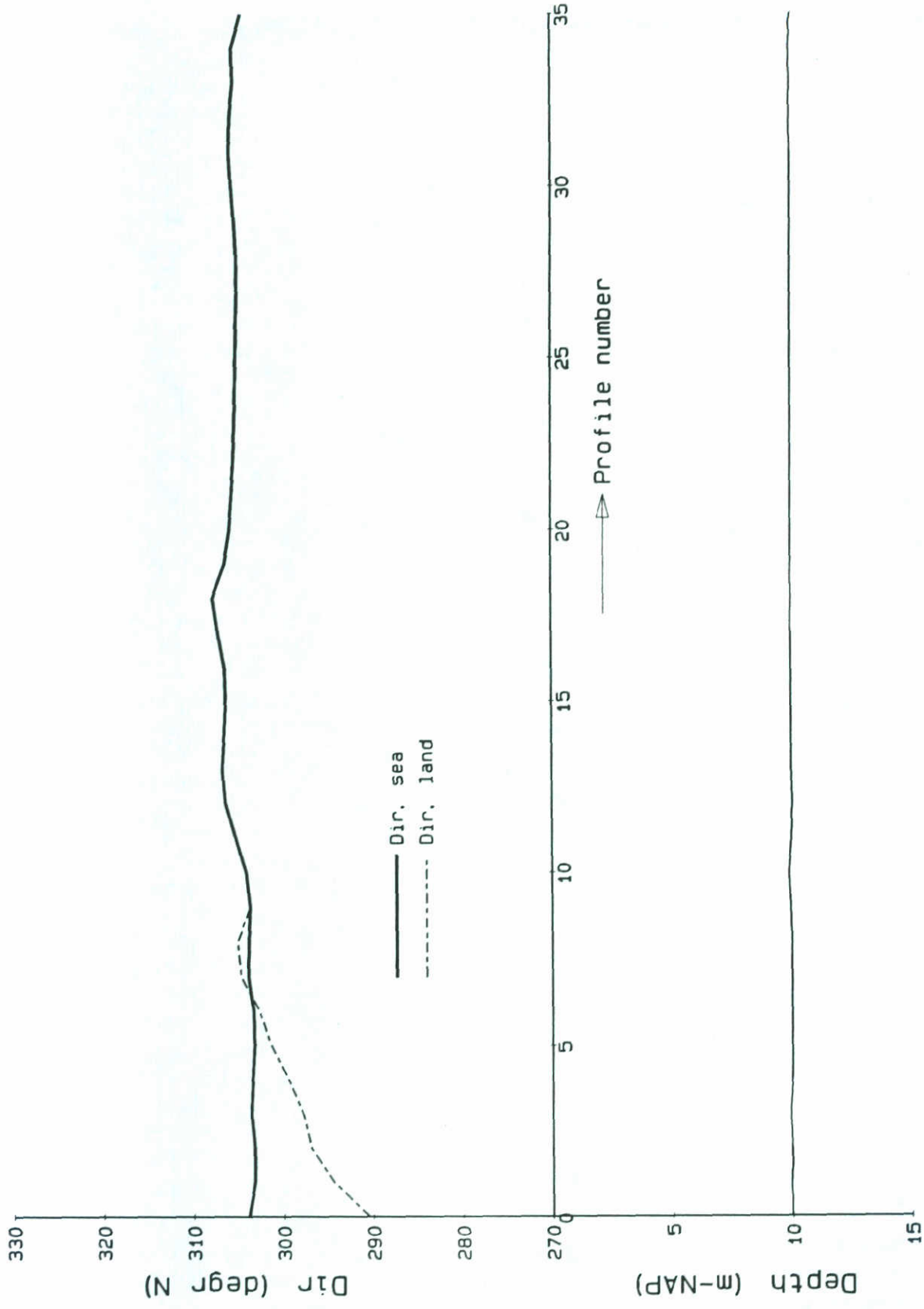
DELFT HYDRAULICS | H1355 | FIG 6.10a

MAIN WAVE DIRECTION AT NAP-5 M CONTOUR COAST OF NORTH-HOLLAND	HYDRA-HISWA	Z02
DELFT HYDRAULICS	H1355	FIG 6.10b

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-10 M CONTOUR COAST OF TEXEL

HYDRA-HISWA | Z02

DELFT HYDRAULICS | H1355 | FIG 6.11a

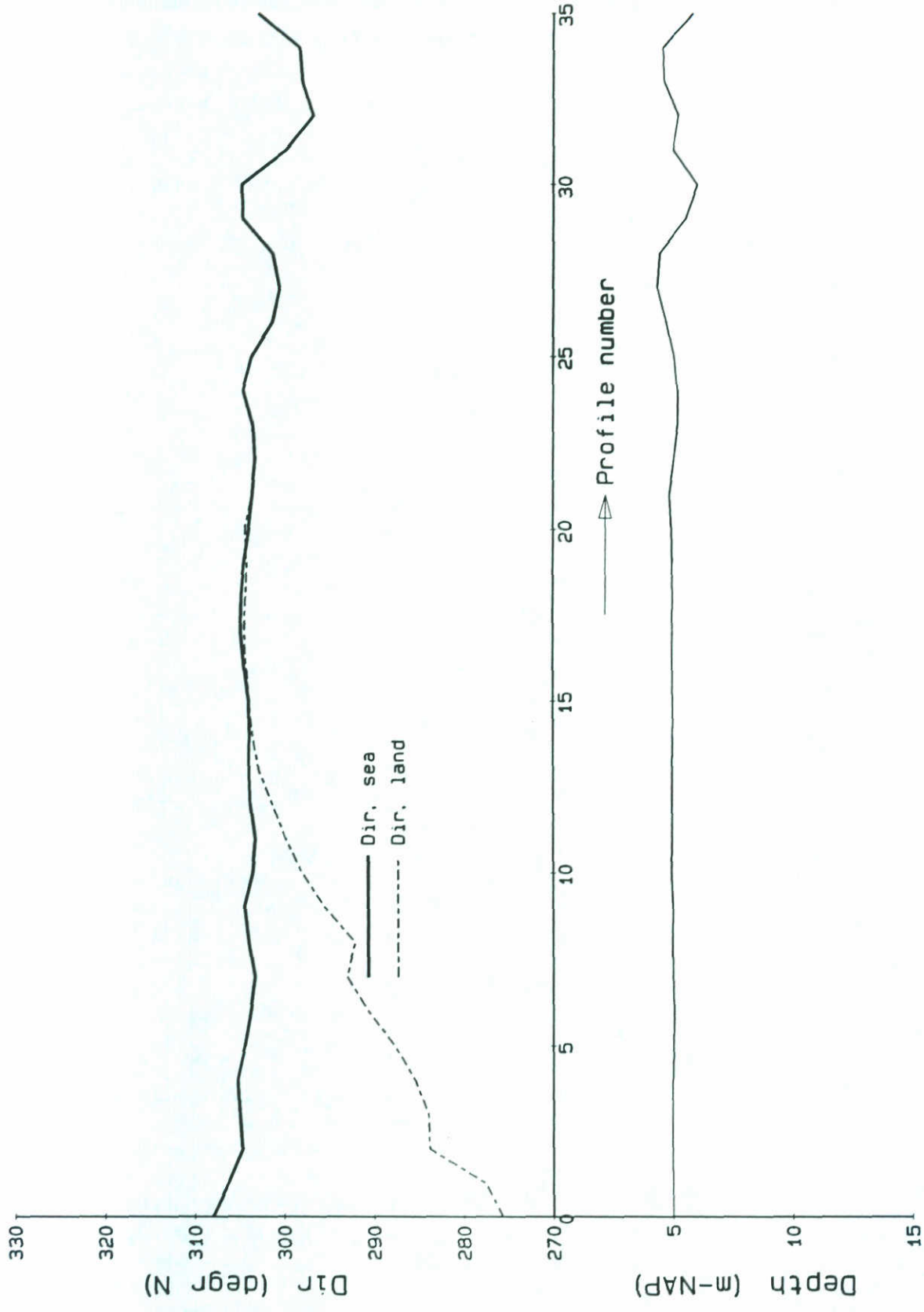


MAIN WAVE DIRECTION AT NAP-10 M CONTOUR COAST OF TEXEL	HYDRA-HISWA	Z02
DELFT HYDRAULICS	H1355	FIG 6.11b

SIGNIFICANT WAVE HEIGHT Hs AND MEAN WAVE PERIOD Tm AT NAP-5 M CONTOUR COAST OF TEXEL

HYDRA-HISWA | Z02

DELFT HYDRAULICS | H1355 | FIG 6.12a



MAIN WAVE DIRECTION AT NAP-5 M CONTOUR COAST OF TEXEL	HYDRA-HISWA	Z02
DELFT HYDRAULICS	H1355	FIG 6.12b

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