DATA USED IN 1993 PAPER

"Experimental investigation of wave propagation over a bar"

Beji, S. and Battjes, J.A., Coastal Engineering 19, 151-162, 1993.

Experimental sampling time: 0.0999648 second (**rate**: $\sim$ 10 Hz)

3000 data points (5 minutes of real time) for **SLN**, **SLS**, **SLP** and **SSN**, **SSS**, **SSP**

SLN: **S**inusoidal **L**ong **N**on-breaking waves. Period T=2.5 s, f=0.4 Hz.
SSN: **S**inusoidal **S**hort **N**on-breaking waves. Period T=1.0 s, f=1.0 Hz.
SLS: **S**inusoidal **L**ong **S**pilling waves. Period T=2.5 s, f=0.4 Hz.
SSS: **S**inusoidal **S**hort **S**pilling waves. Period T=1.0 s, f=1.0 Hz.
SLP: **S**inusoidal **L**ong **P**lunging waves. Period T=2.5 s, f=0.4 Hz.
SSP: **S**inusoidal **S**hort **P**lunging waves. Period T=1.0 s, f=1.0 Hz.

27000 data points (45 minutes of real time) for **JLN**, **JLS**, **JLP** and **JSN**, **JSS**, **JSP**

JLN: **J**ONSWAP type random **L**ong **N**on-breaking waves. Peak period T=2.5 s, f=0.4 Hz.
JSN: **J**ONSWAP type random **S**hort **N**on-breaking waves. Peak period T=1.0 s, f=1.0 Hz.
JLS: **J**ONSWAP type random **L**ong **S**pilling waves. Peak period T=2.5 s, f=0.4 Hz.
JSS: **J**ONSWAP type random **S**hort **S**pilling waves. Peak period T=1.0 s, f=1.0 Hz.
JLP: **J**ONSWAP type random **L**ong **P**lunging waves. Peak period T=2.5 s, f=0.4 Hz.
JSP: **J**ONSWAP type random **S**hort **P**lunging waves. Peak period T=1.0 s, f=1.0 Hz.

Wave Gage Locations: In this setup the first wave gage is located right at the toe of the upslope. It serves as the recorder of incident waves. There are total eight gages in these experiments. Wave gage locations as measured from the waveboard at x=0 m are

WG1: 6.0 m, **WG2: 11.0 m**, **WG3: 12.0 m**, **WG4: 13.0 m**,
WG5: 14.0 m, **WG6: 15.0 m**, **WG7: 16.0 m**, **WG8: 17.0 m**.

Bathymetry: First wave gage is located at x=6.0 m from the wave board and serves as the recorder for incident waves. In the experimental setup at x=28.95 m the depth becomes zero; however, if computational simulations are to be made it is recommended to set the depth to a constant value at some distance before x=28.95 m as waves numerically radiate better on a constant depth. For instance, at x=23.95 m from the waveboard the water depth is 0.2 m and from this point on the depth may be taken as 0.2 m constant.

Bathymetry as a part of FORTRAN program is given below.

```
      if(x.ge.0.0.and.x.le.6.0) h=0.4
      if(x.gt.6.0.and.x.le.12.0) h=0.4-0.05*(x-6.0)
      if(x.gt.12.0.and.x.le.14.0) h=0.1
      if(x.gt.14.0.and.x.le.17.0) h=0.1+0.1*(x-14.0)
      if(x.gt.17.0.and.x.le.18.95) h=0.4
      if(x.gt.18.95.and.x.le.28.95) h=0.4-0.04*(x-18.95)
```

All the recorded data are in meters. The FORTRAN program below reads them in binary from and writes in centimeters by multiplying by 100.

```
      open(30,file='jls',form='binary')
      open(40,file='jls.dat')
c
do i=1,27000
t=.0999648*float(i-1)
c
      read(30)s1,s2,s3,s4,s5,s6,s7,s8
c
write(40,10)t,100*s1,100*s2,100*s3,100*s4,100*s5,100*s6,100*s7,100*s8
c
enddo
   10 format(9(2x,f10.5))
c
stop; end
```

The original recorded files given in "Binary" folder are all in meters. The converted data files in text form in "Text" folder are all in centimeters. Time is in seconds. They are converted from the original records in binary form by using the above simple FORTRAN program. The FORTRAN program itself is also included in the "Binary" folder.