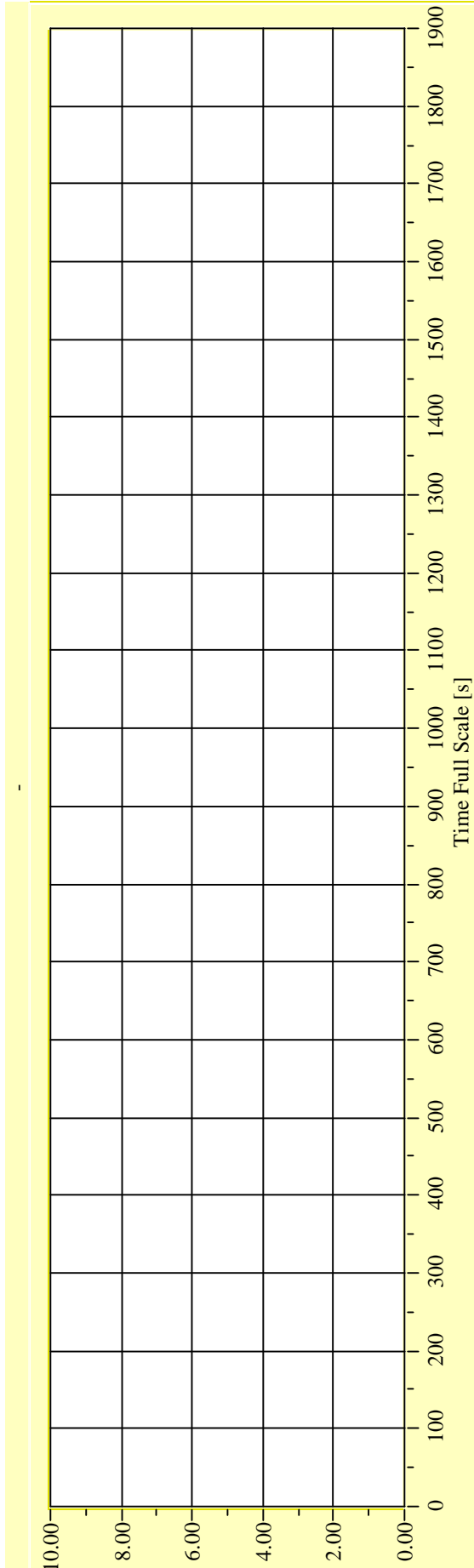
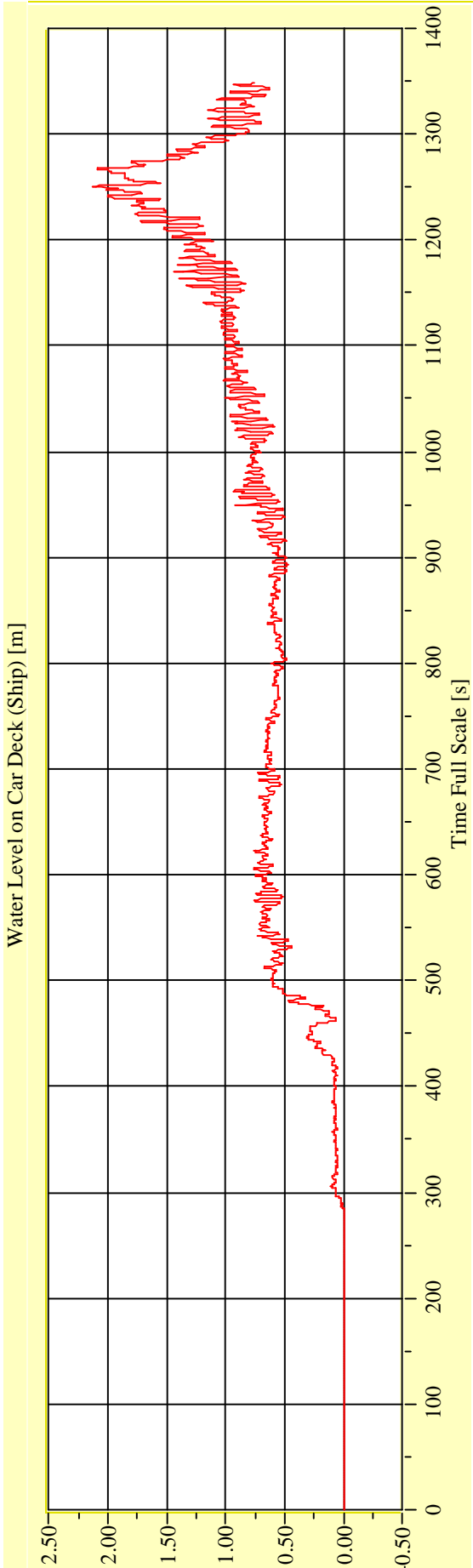


Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29738-08** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



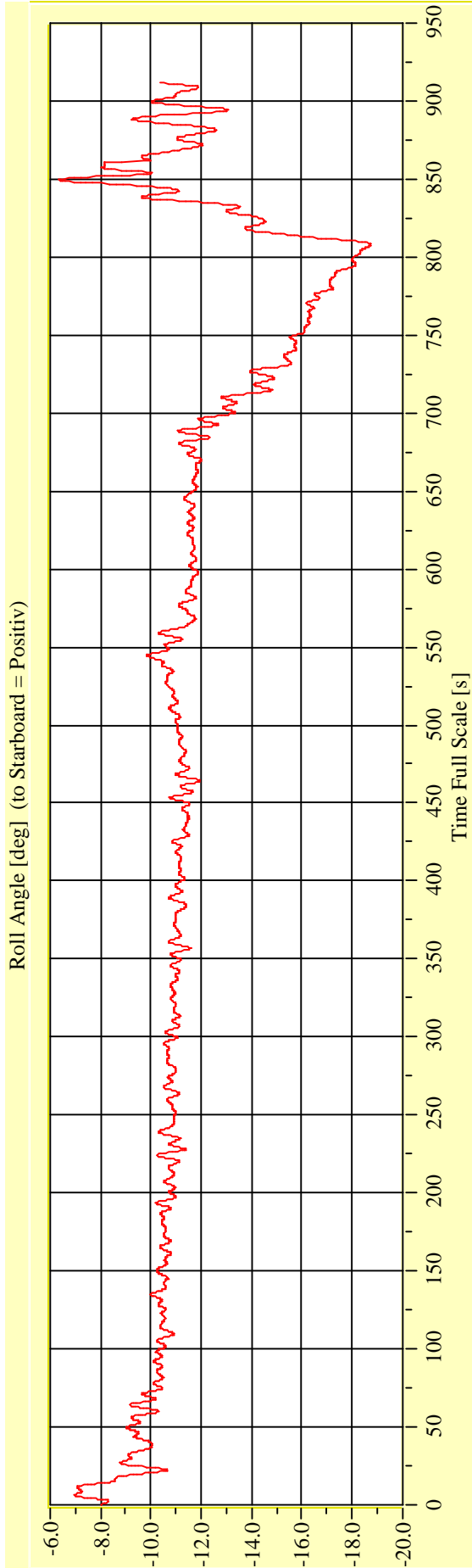
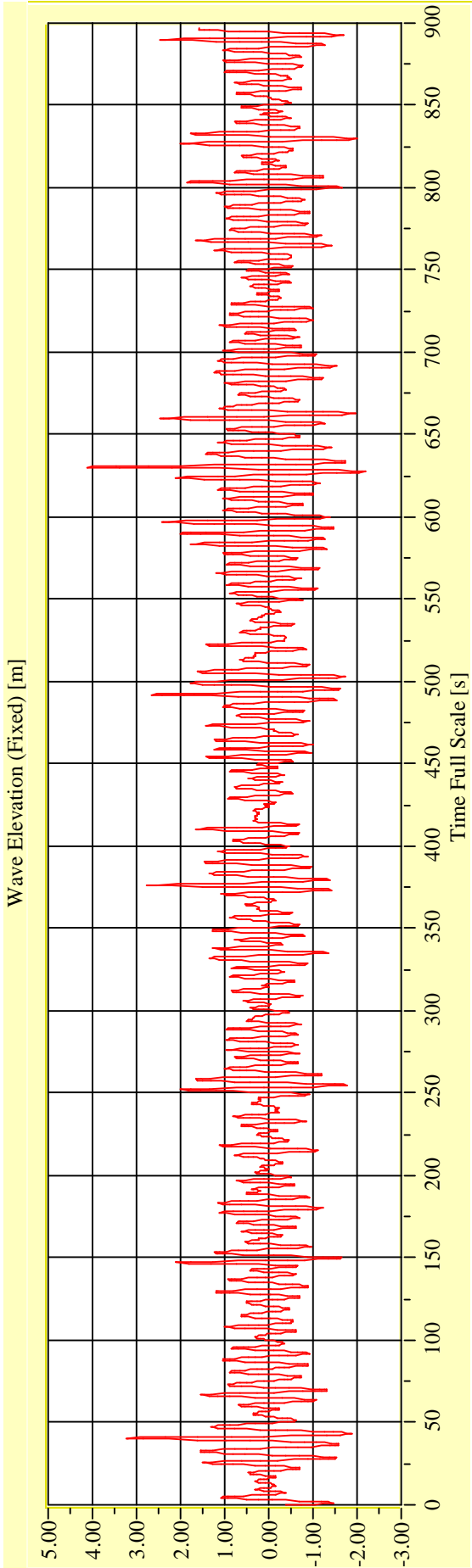
Date: 30.06.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

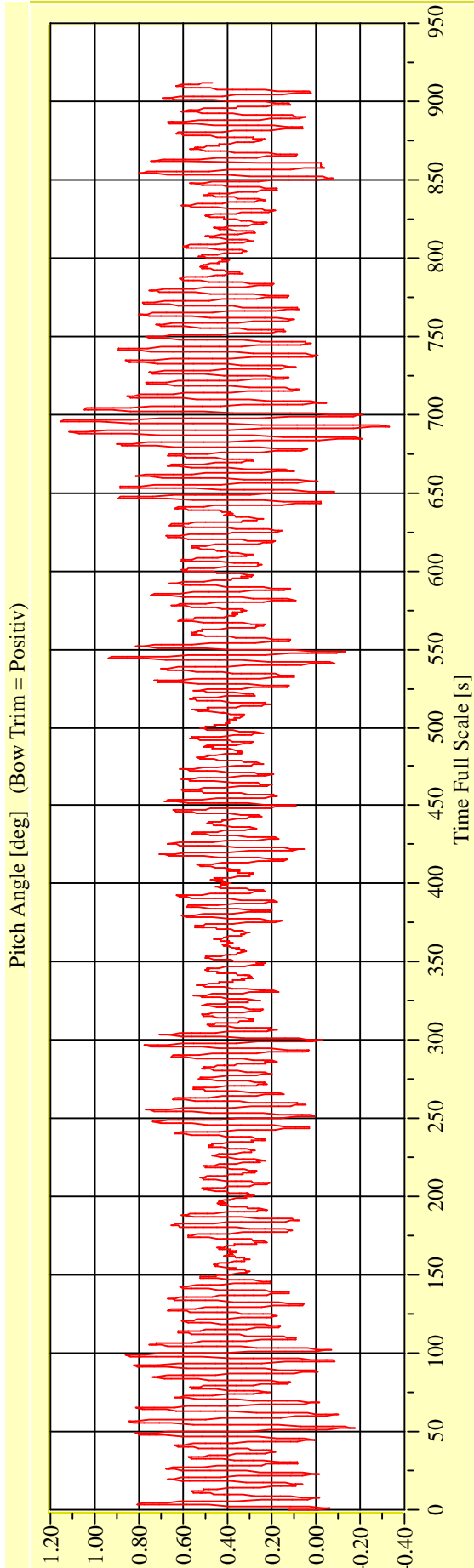
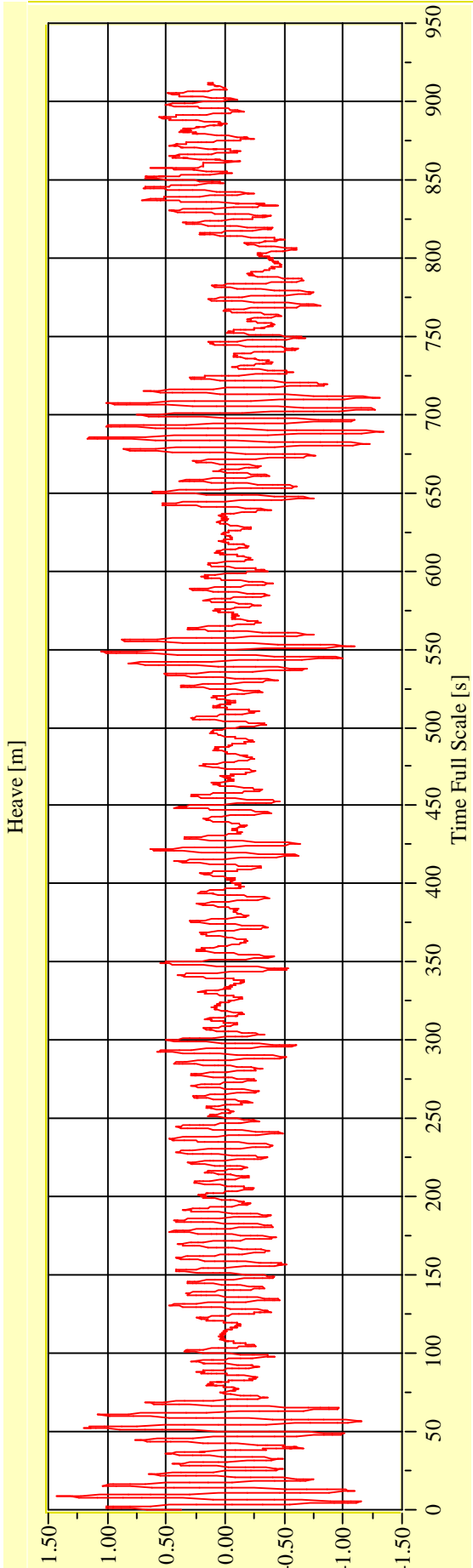
Vienna Model Basin **Model No. 2461** **Test No. 29738-09** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29738-09** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin

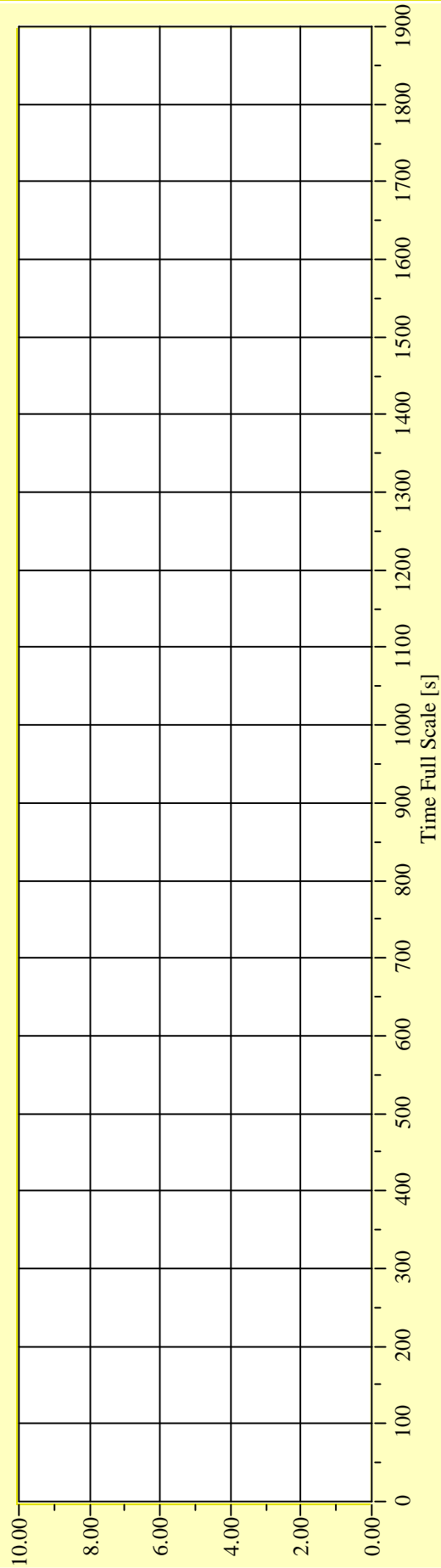
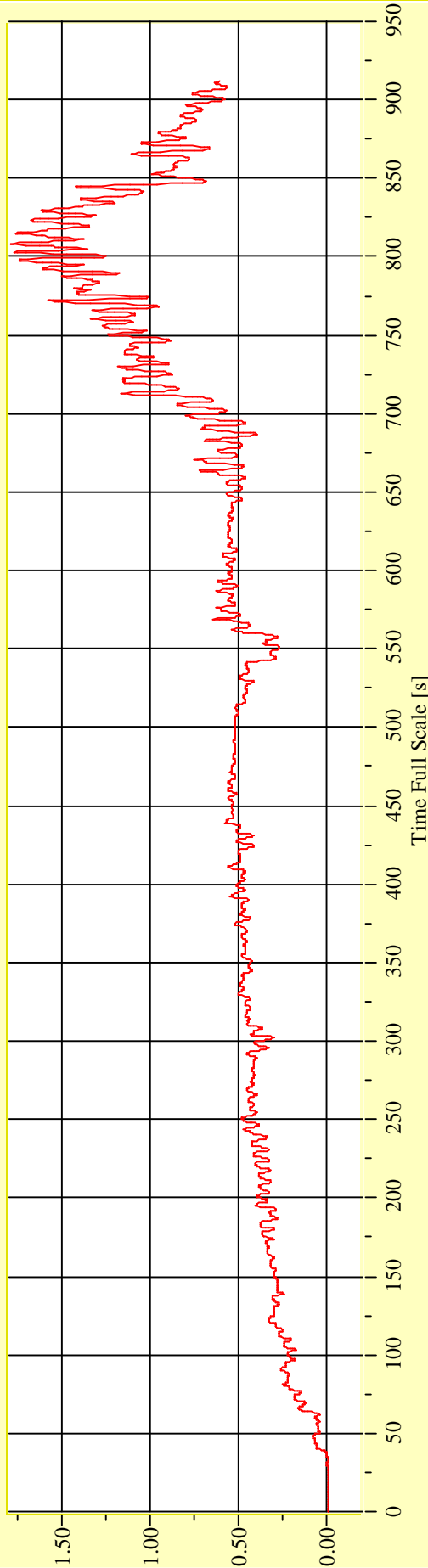
Model No. 2461

Test No. 29738-09

Target Waves: Hs = 3,0 m Tp = 6,9282 s

gamma = 3,3

Water Level on Car Deck (Ship) [m]



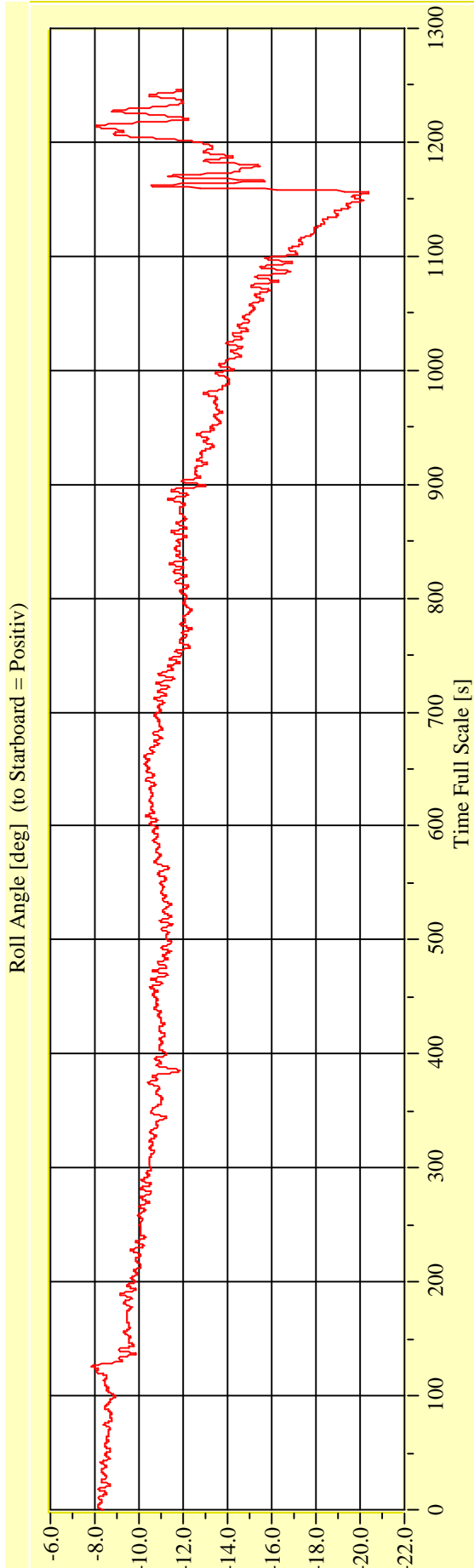
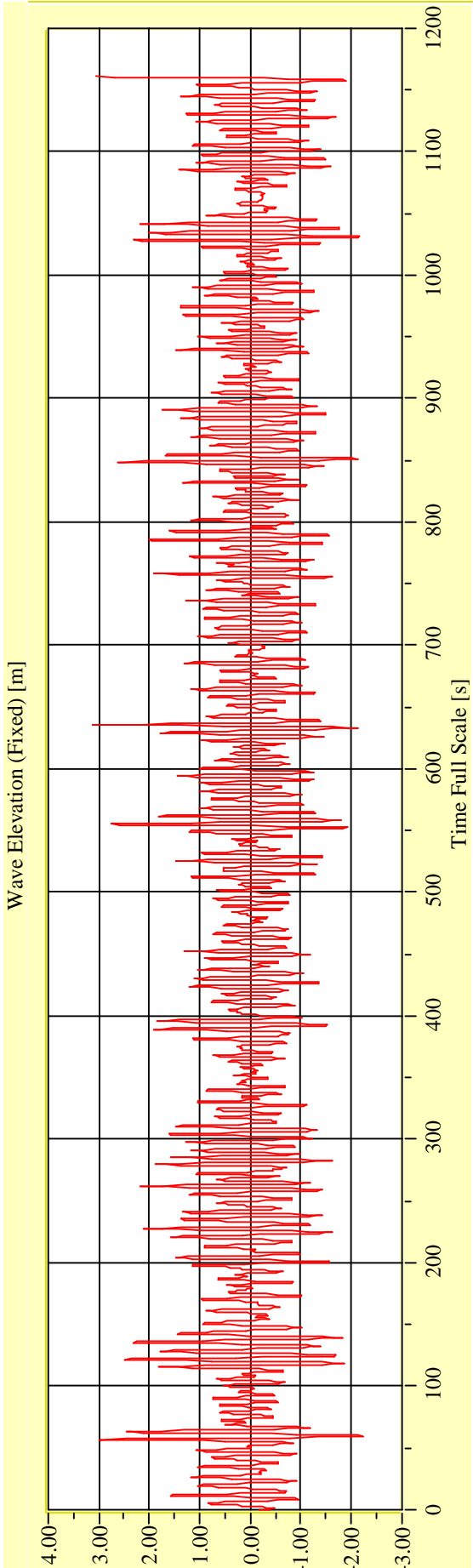
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

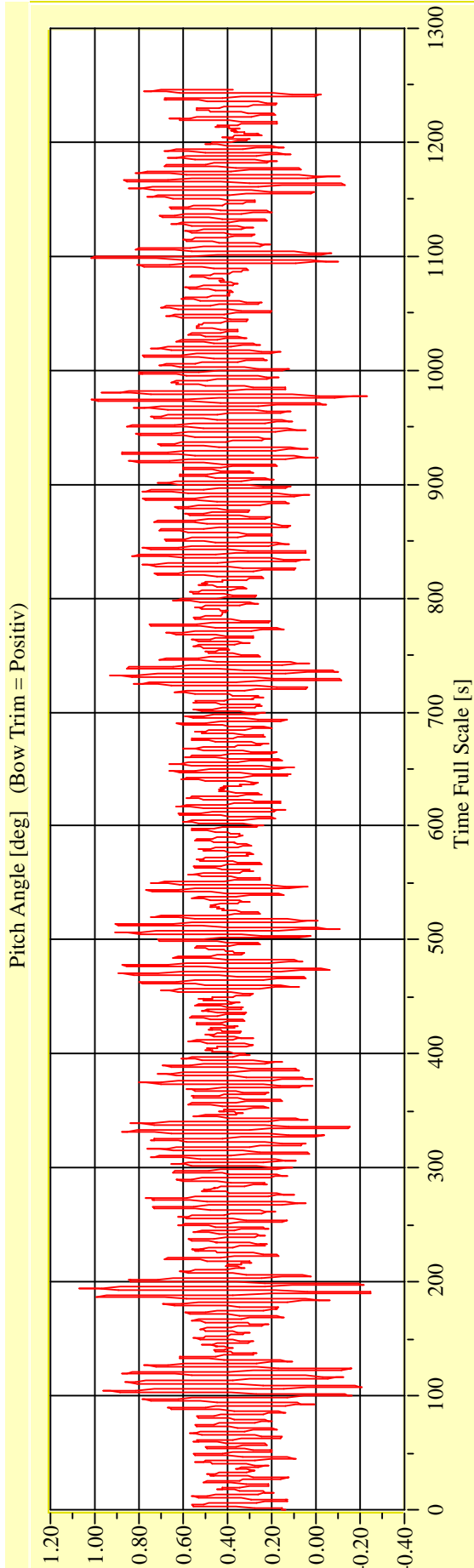
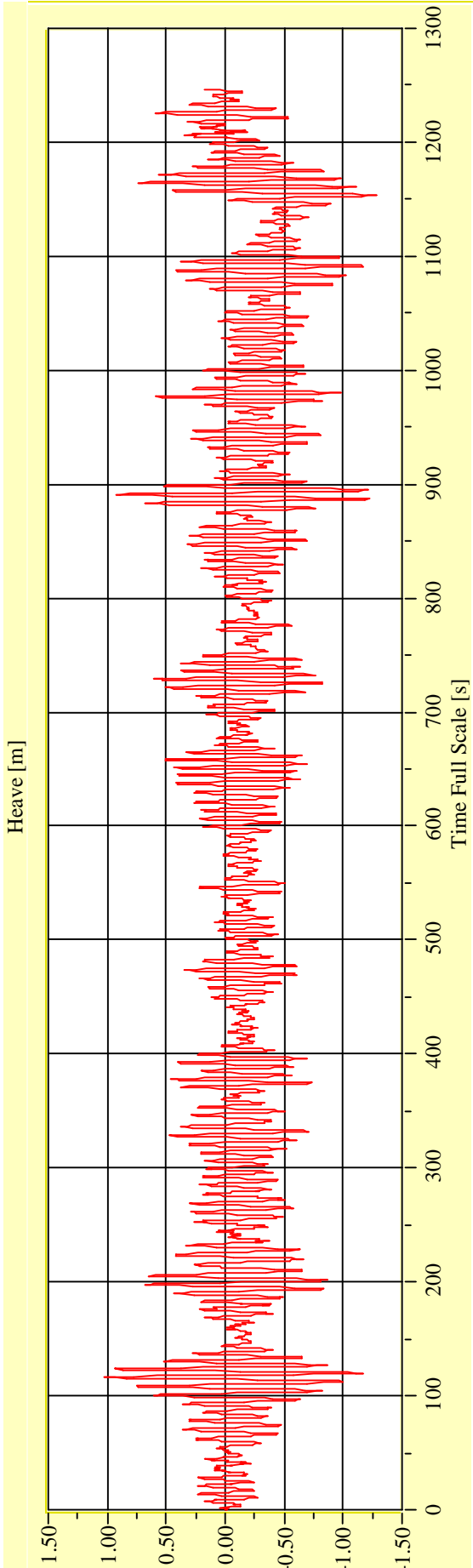
Vienna Model Basin **Model No. 2461** **Test No. 29738-10** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29738-10** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



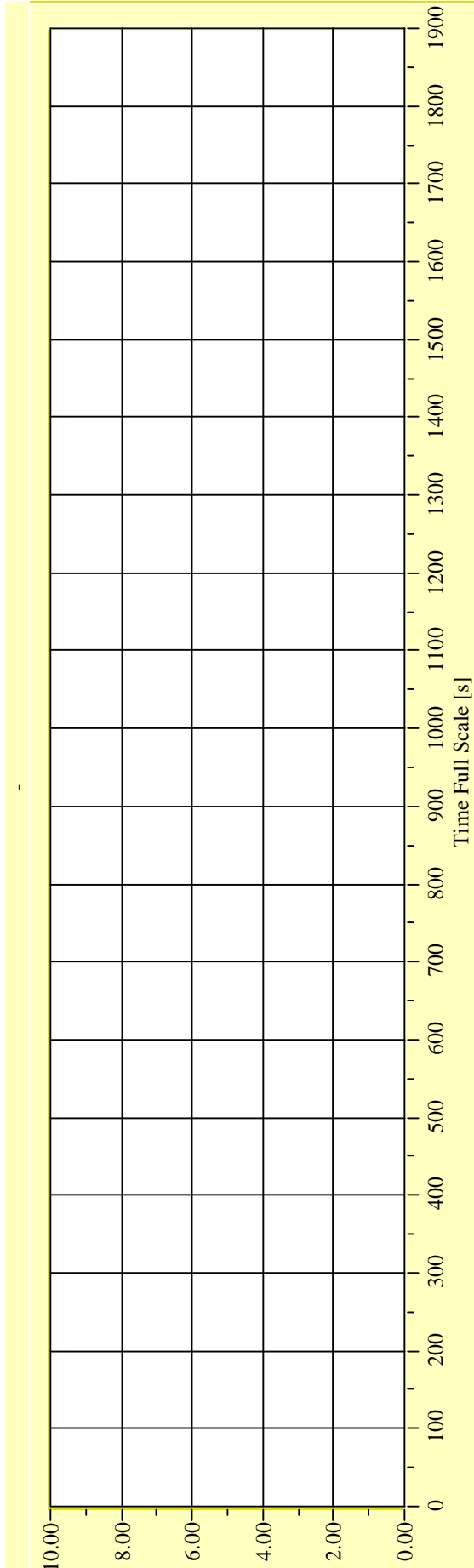
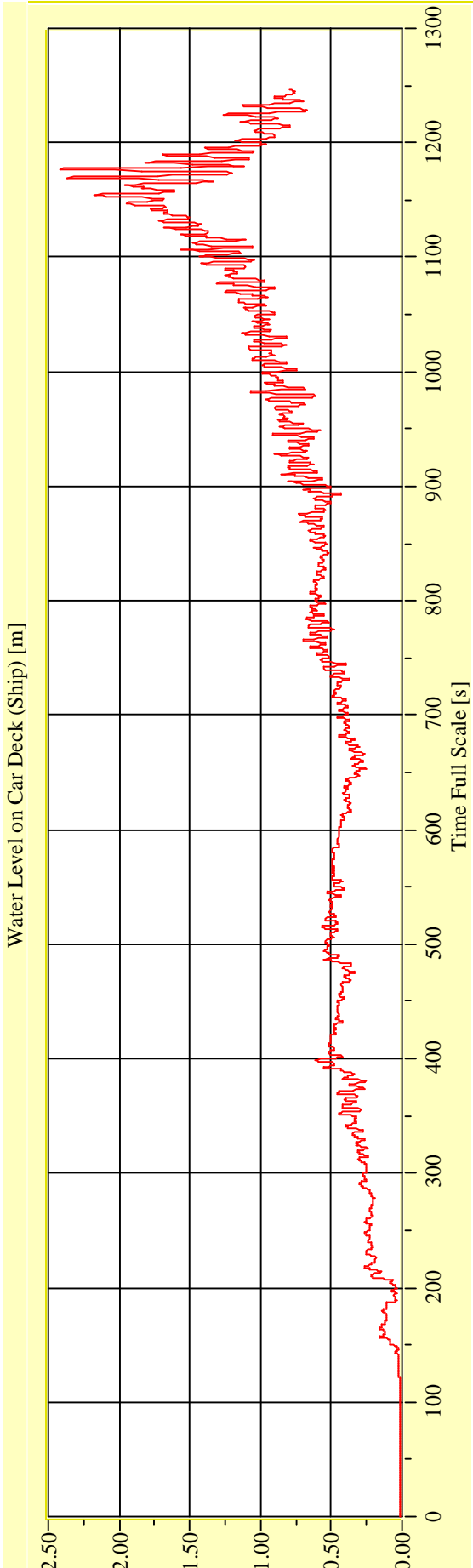
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29738-10** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



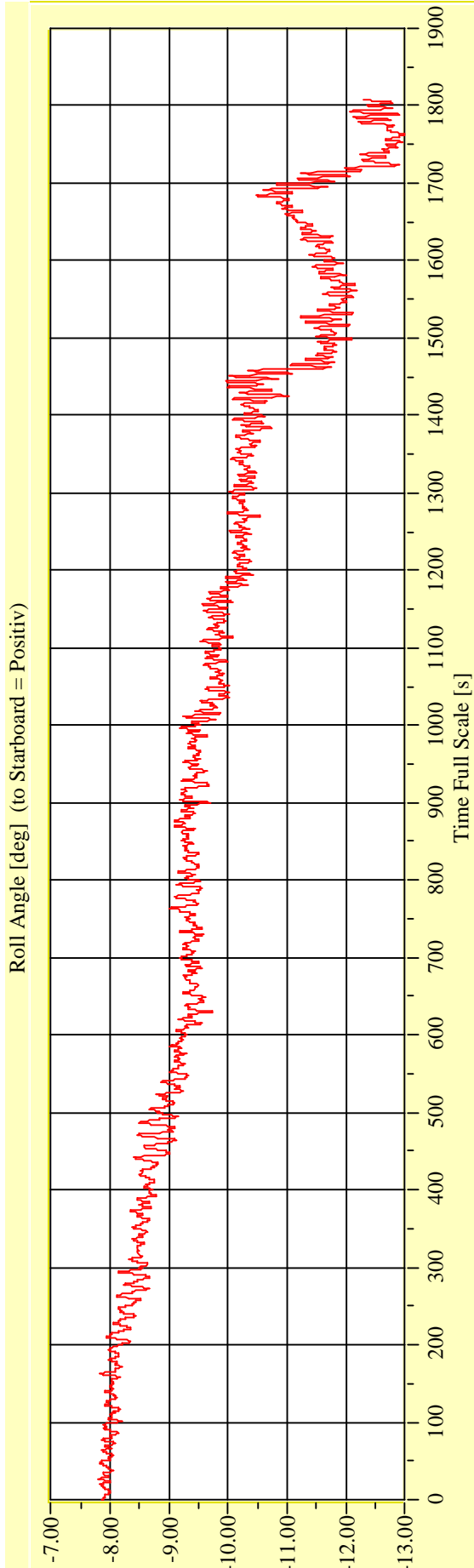
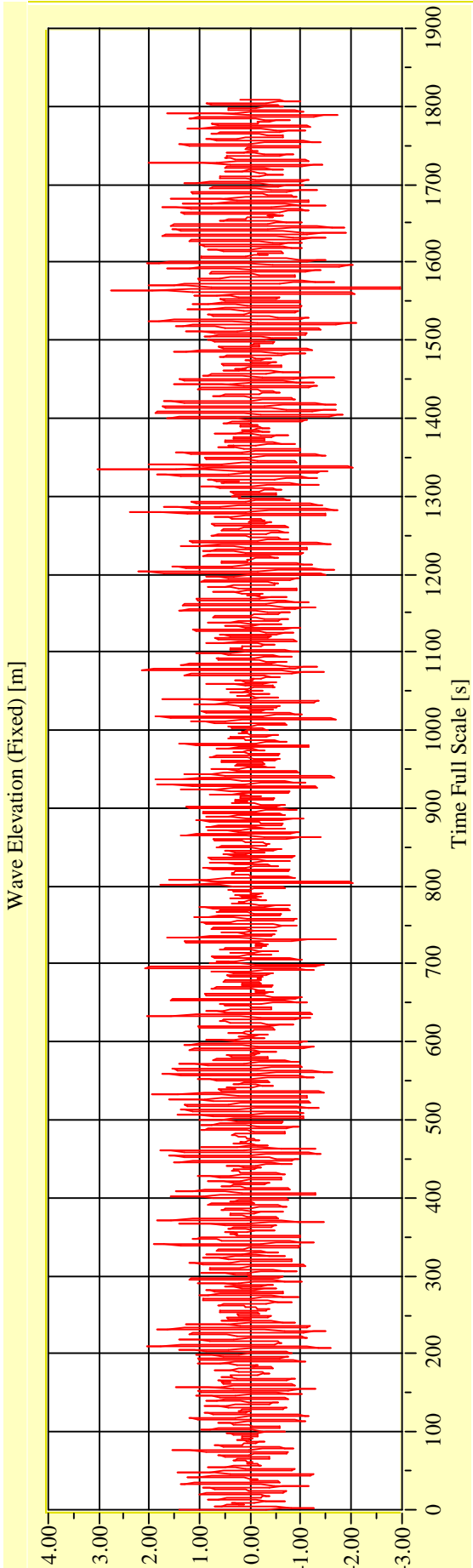
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-01** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

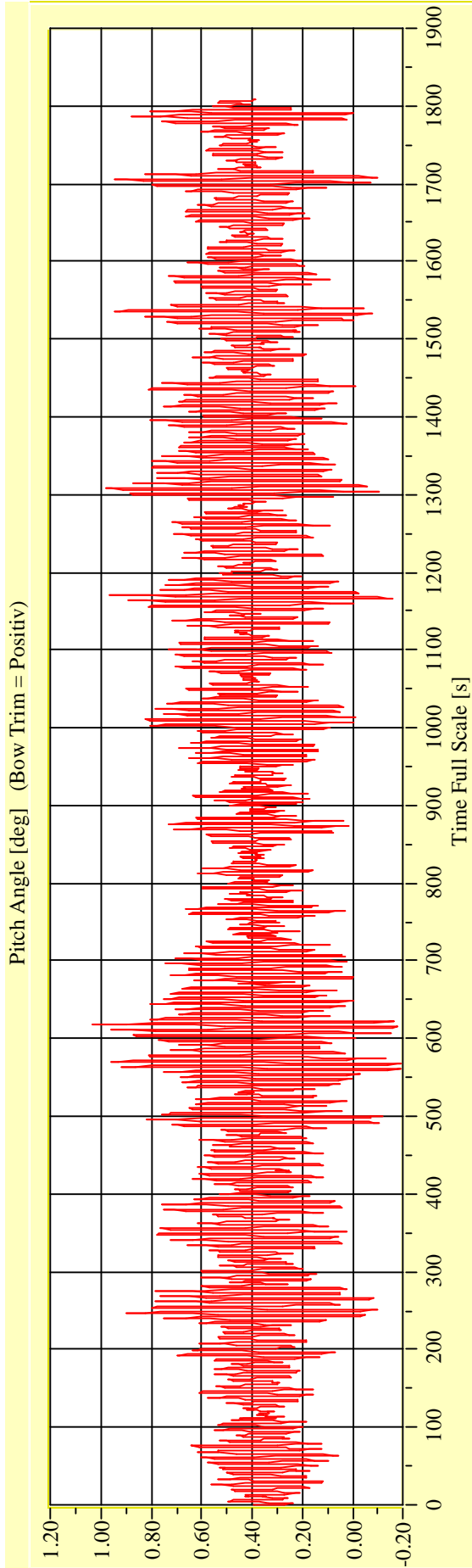
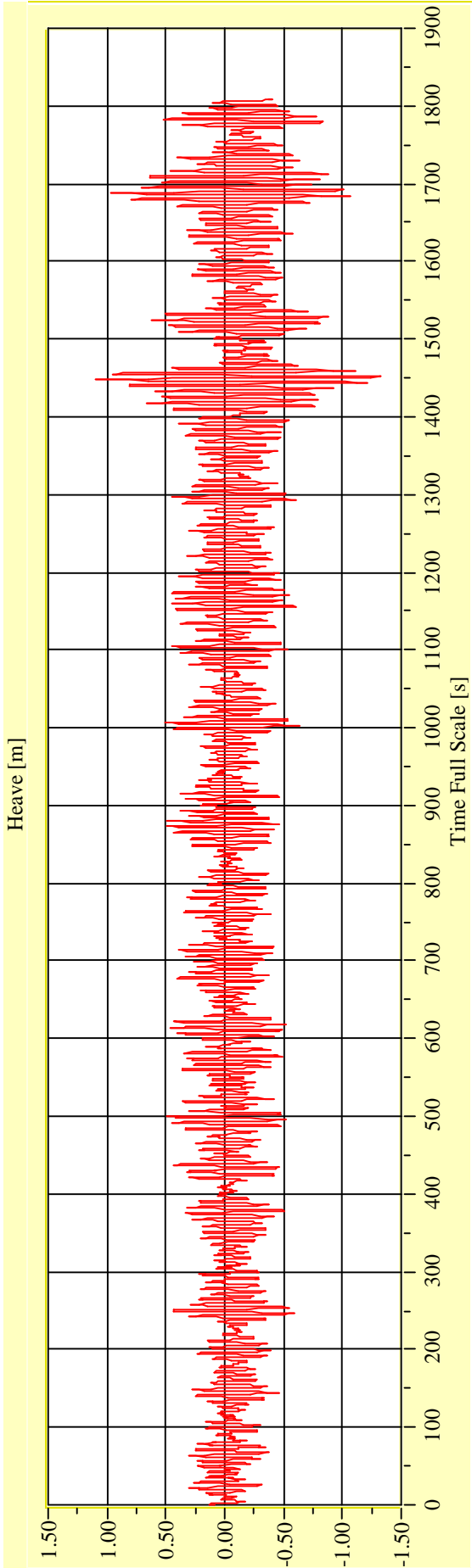
Vienna Model Basin

Model No. 2461

Test No. 29739-01

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



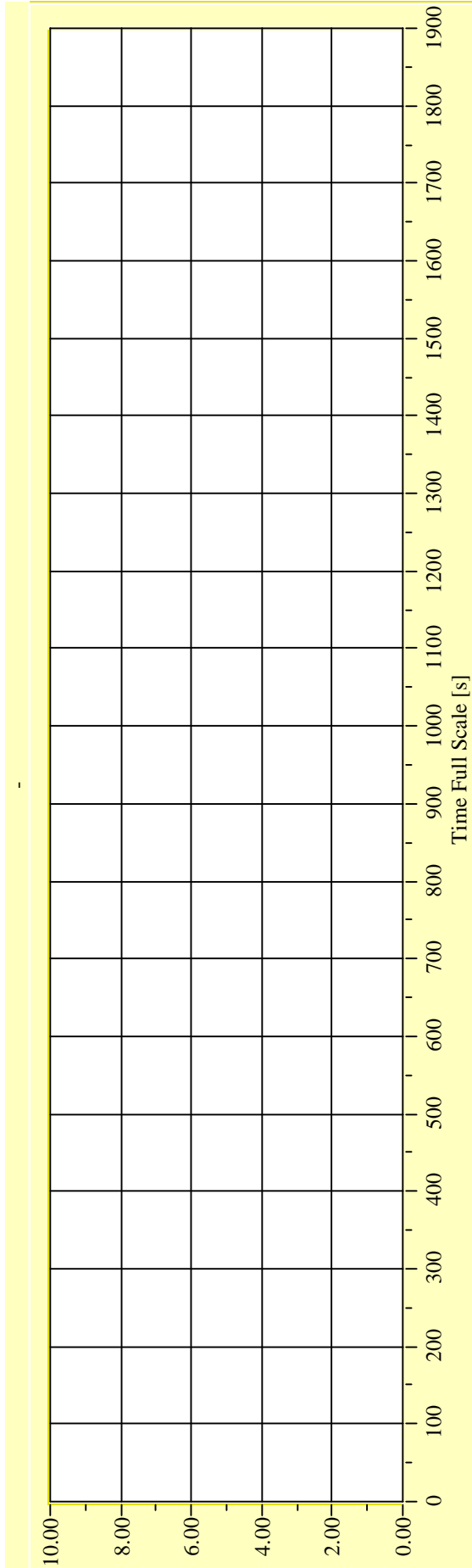
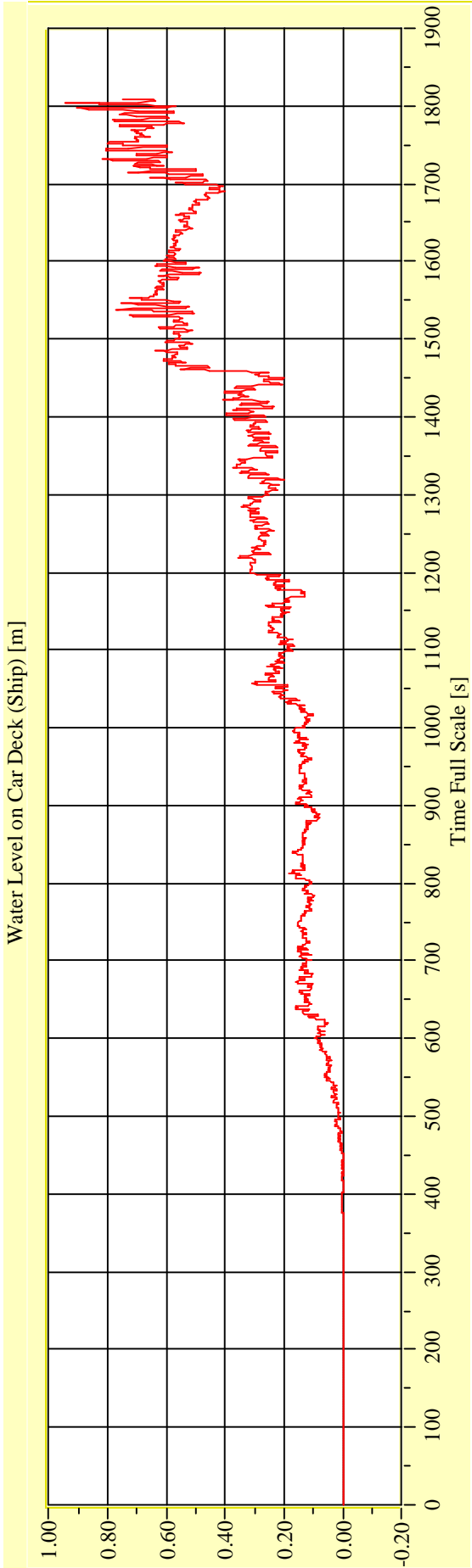
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-01** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



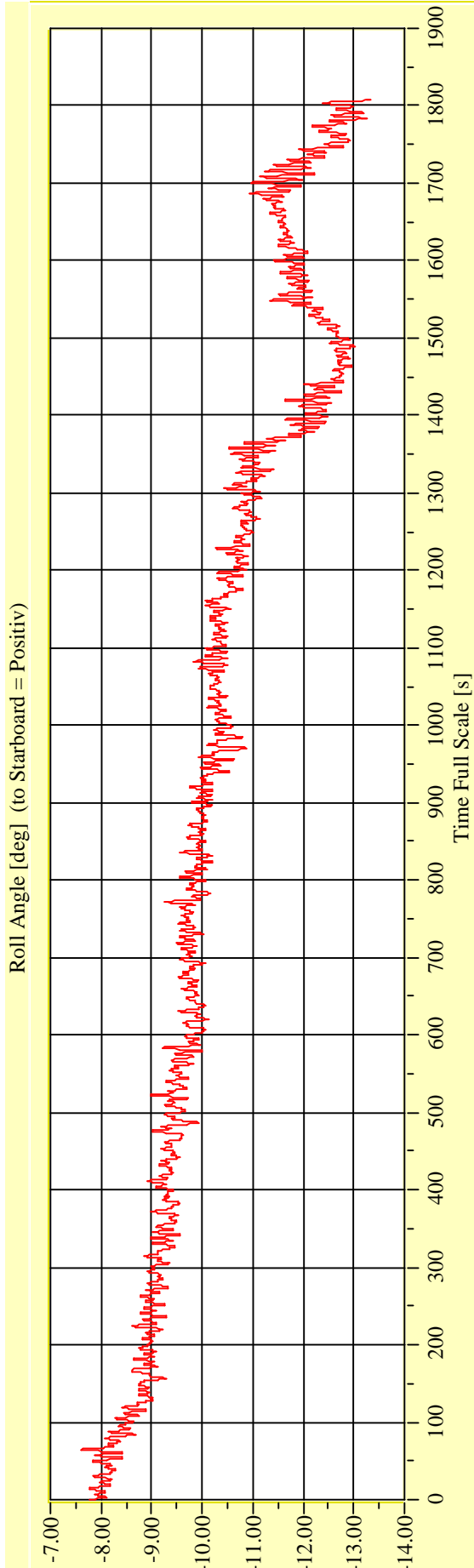
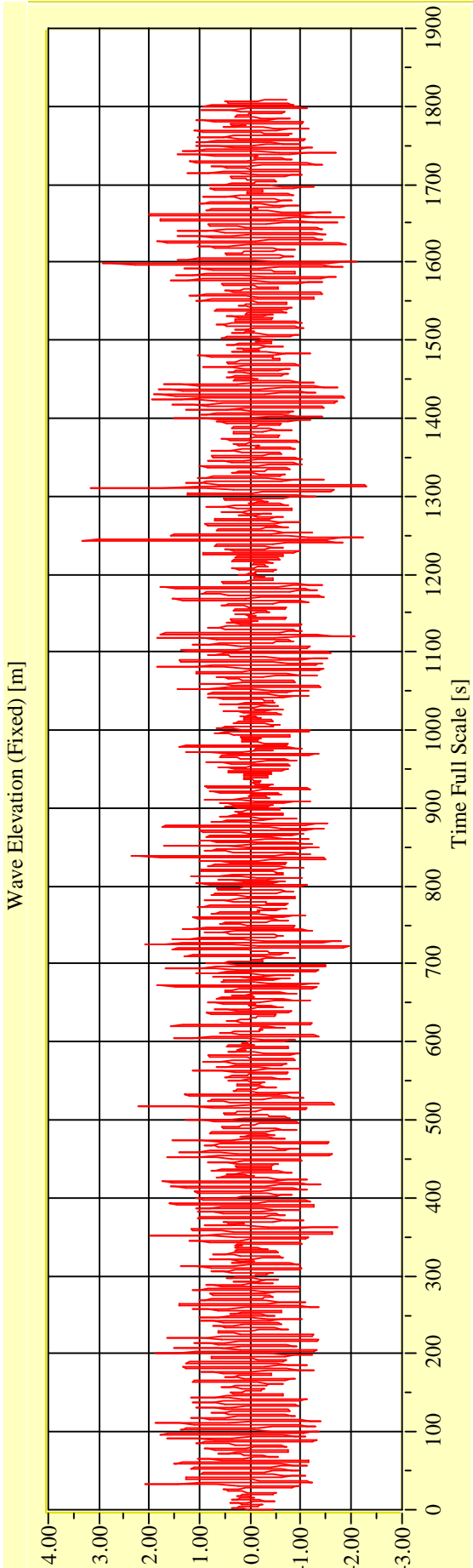
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

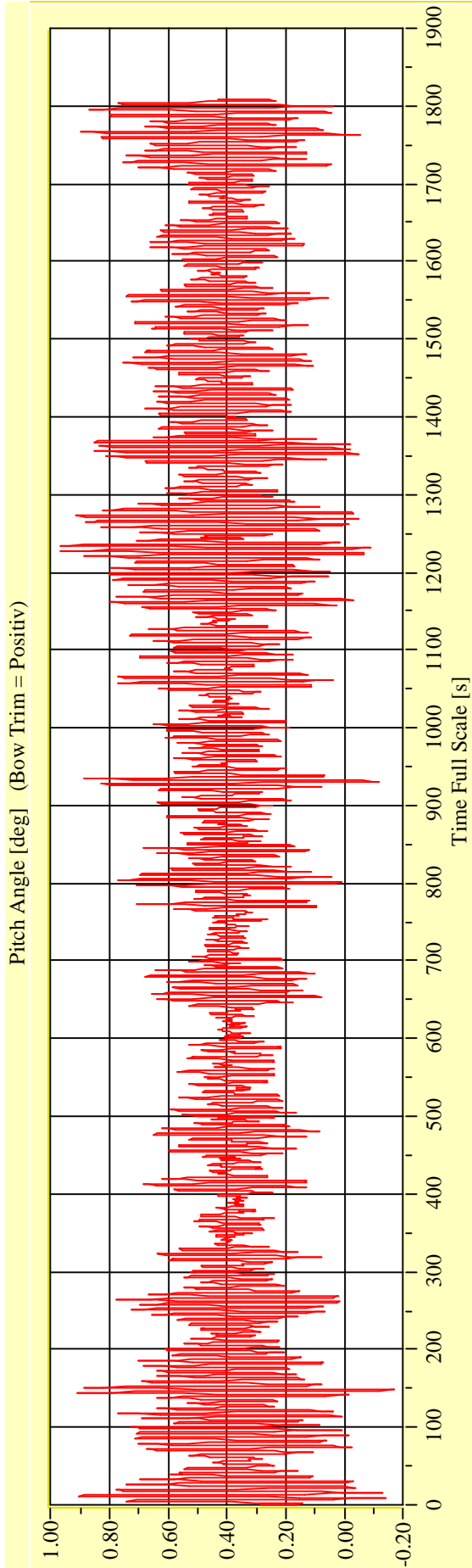
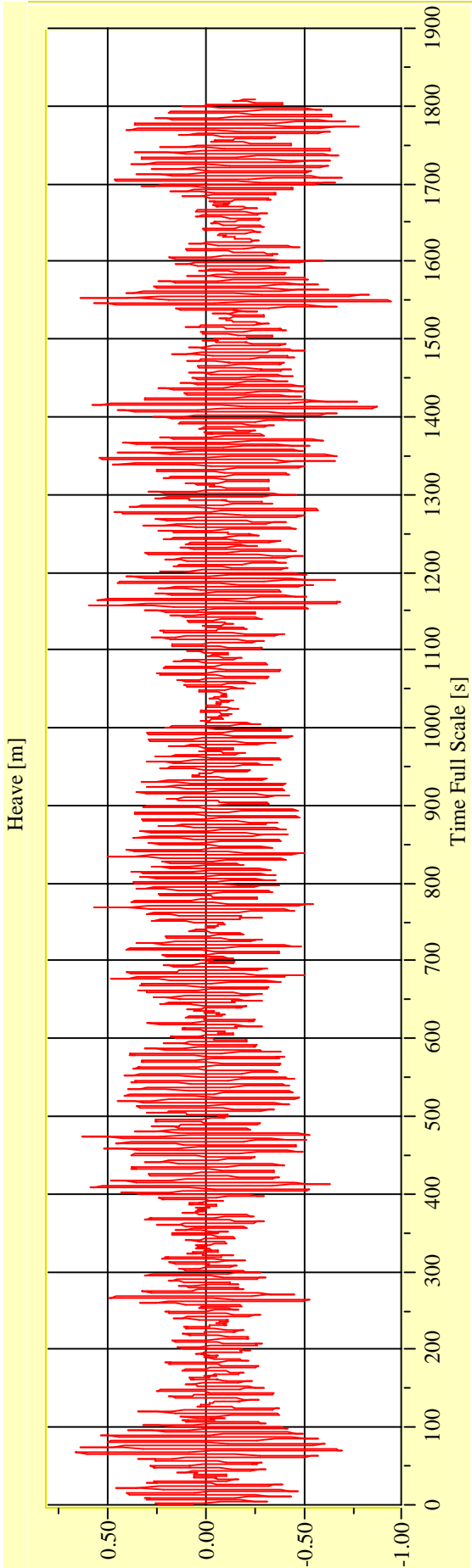
Vienna Model Basin **Model No. 2461** **Test No. 29739-02** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-02** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



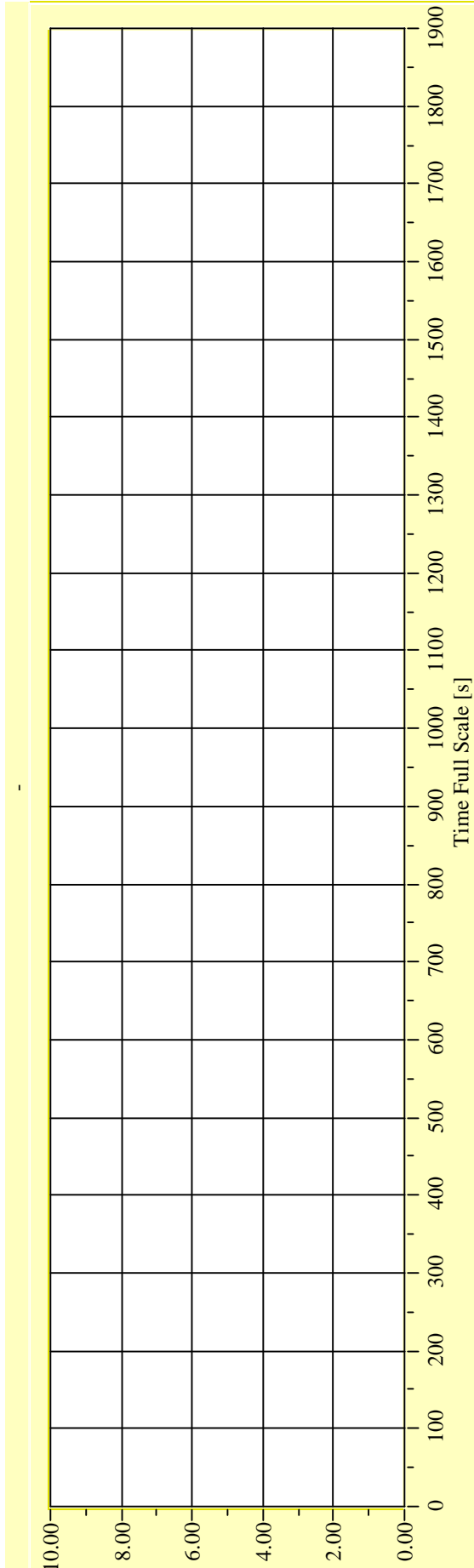
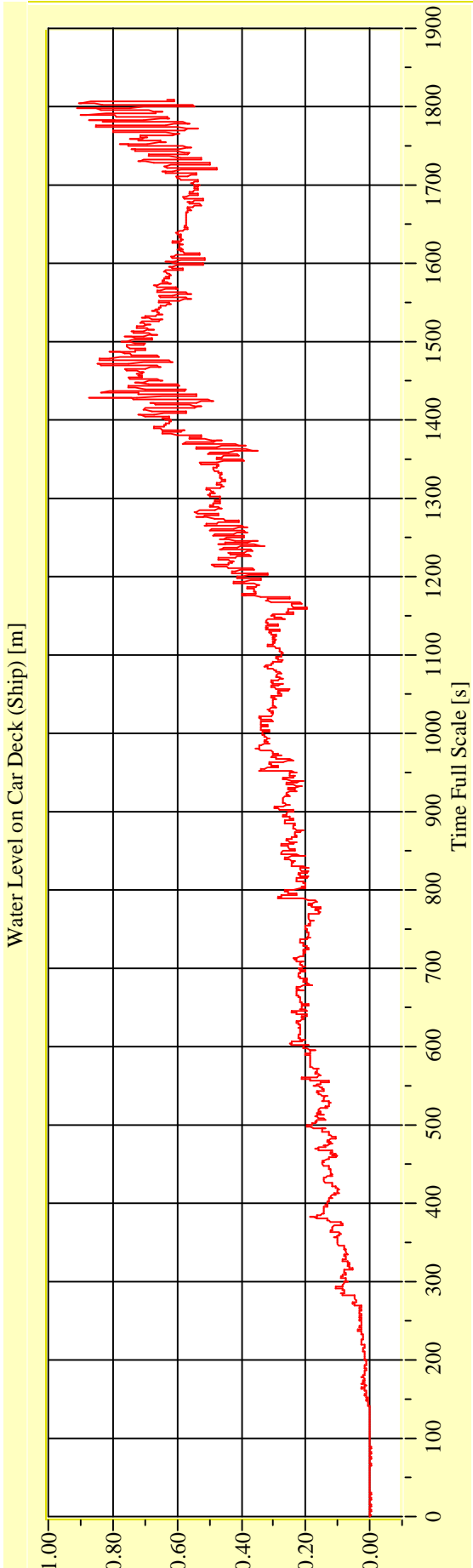
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

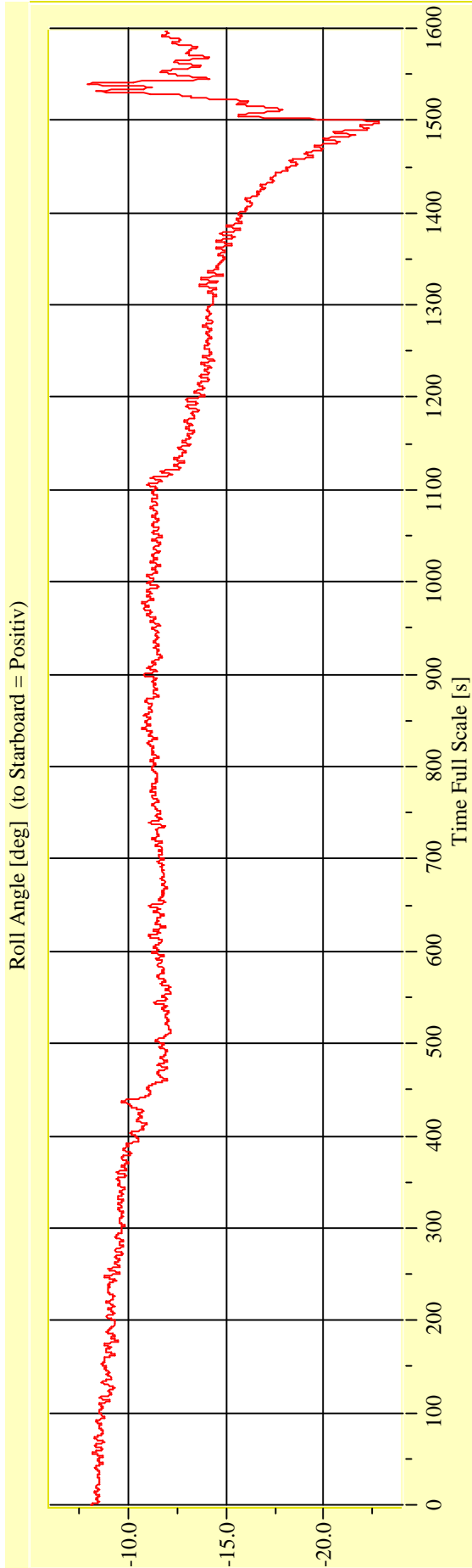
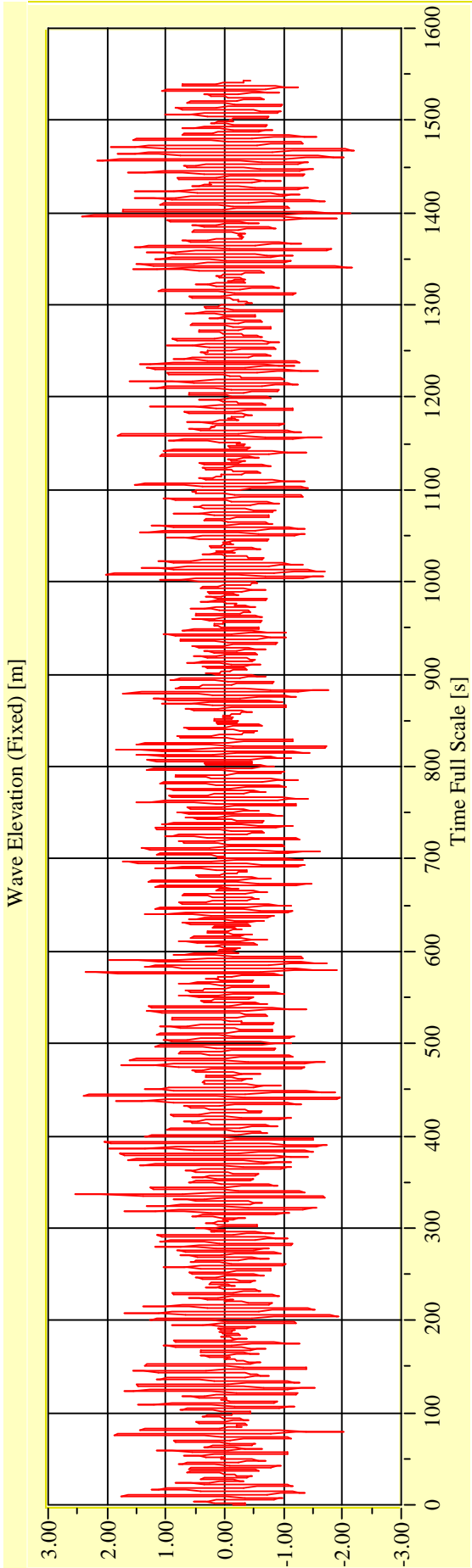
Vienna Model Basin **Model No. 2461** **Test No. 29739-02** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

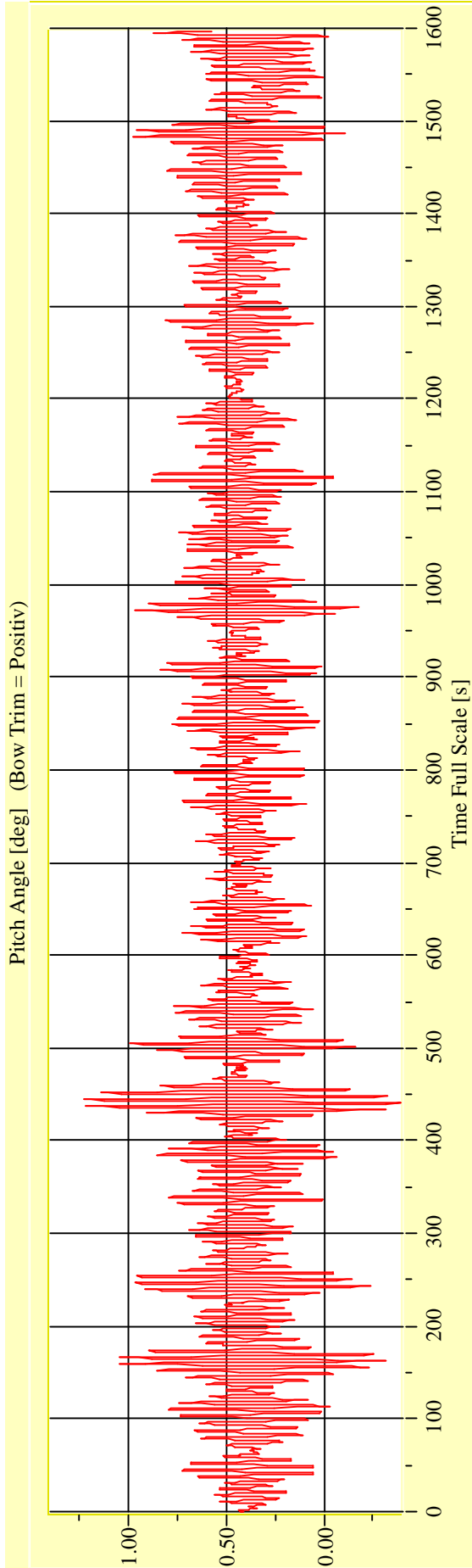
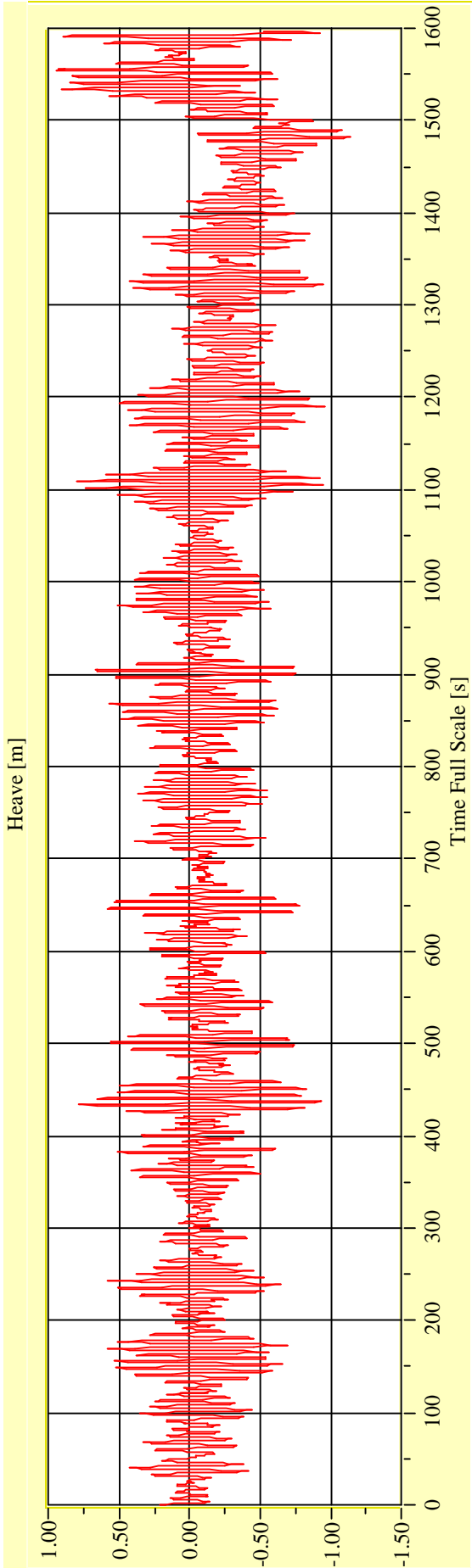
Vienna Model Basin **Model No. 2461** **Test No. 29739-03** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-03** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



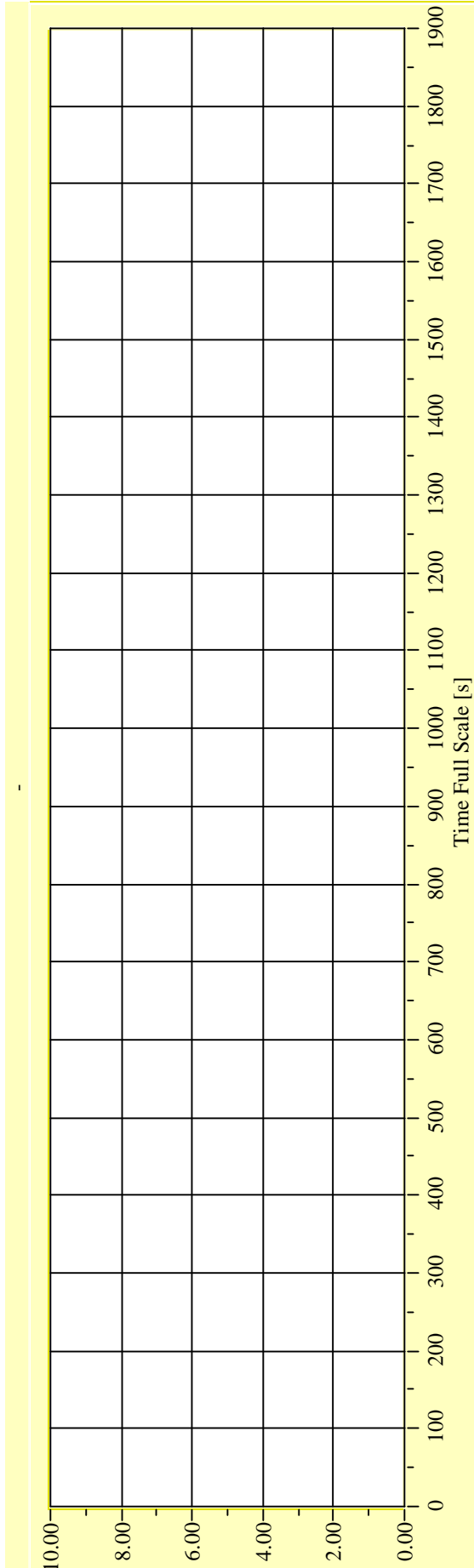
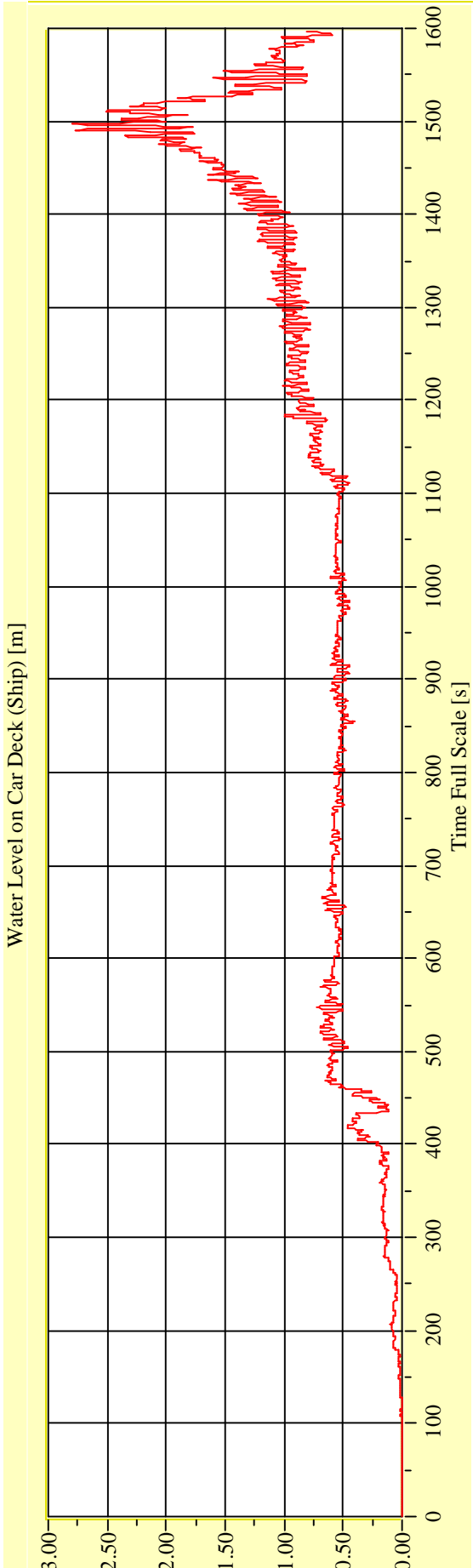
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-03** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

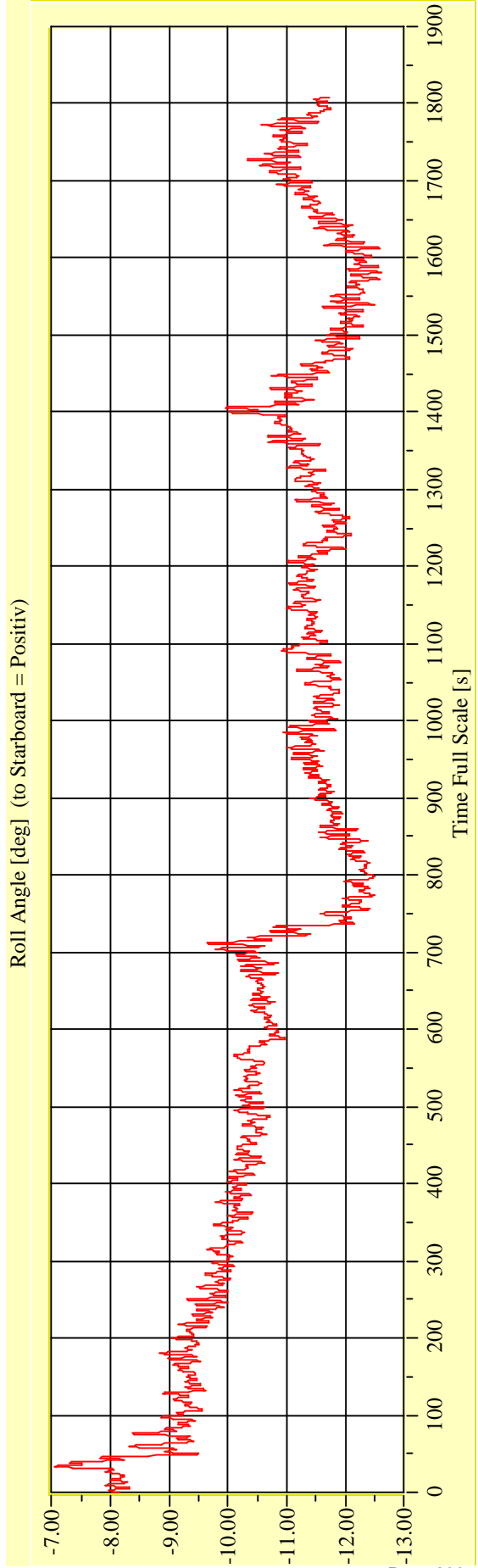
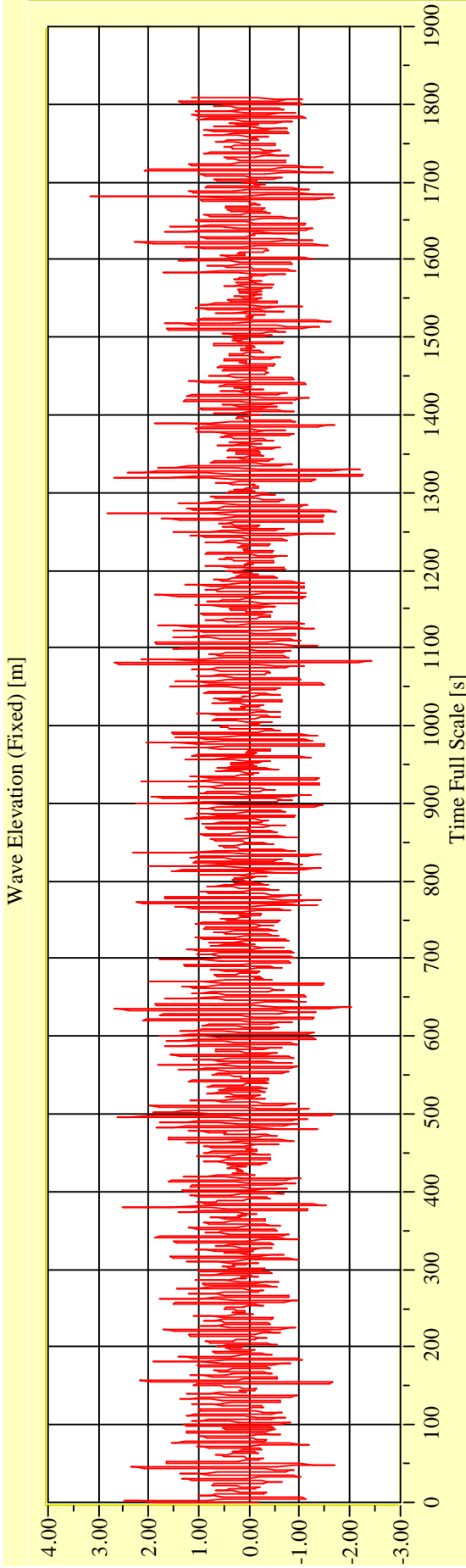
Vienna Model Basin

Model No. 2461

Test No. 29739-04

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



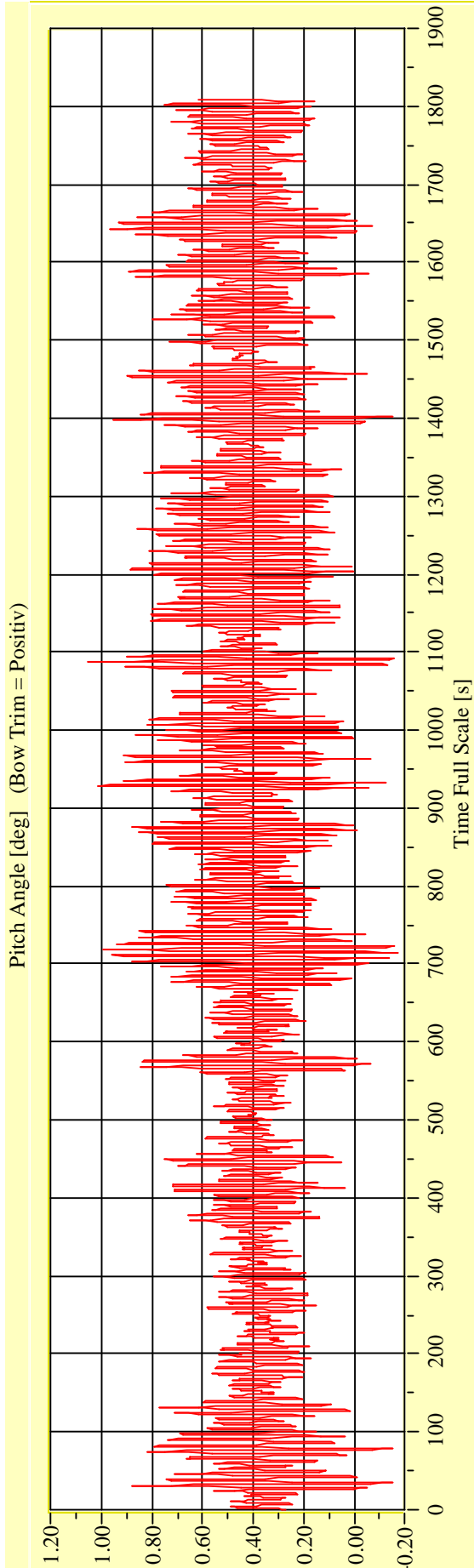
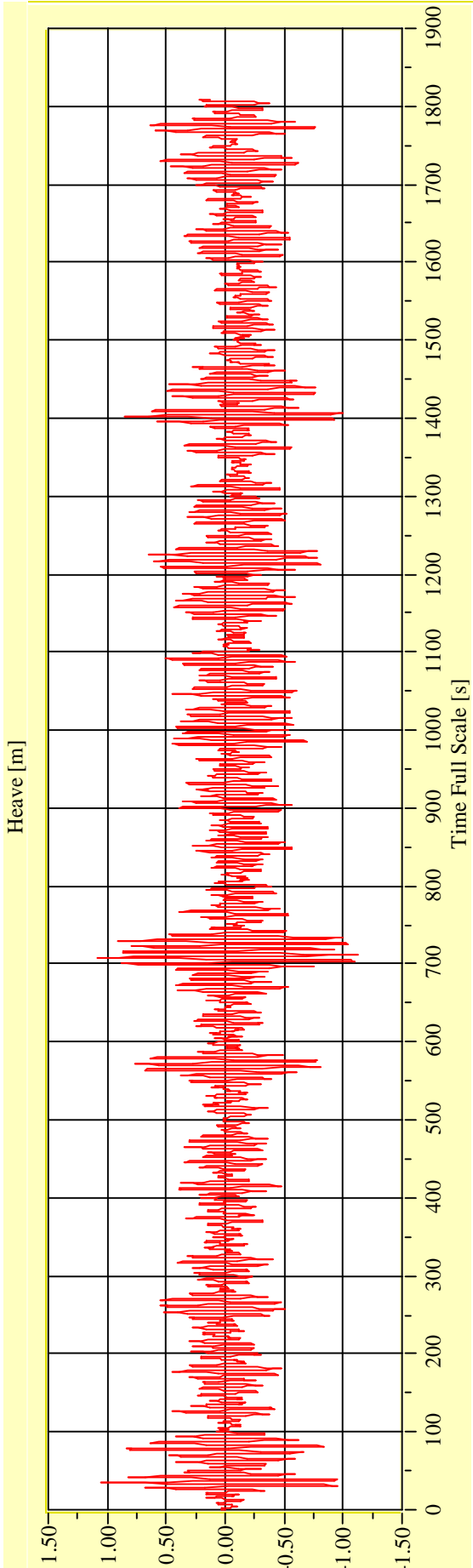
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-04** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



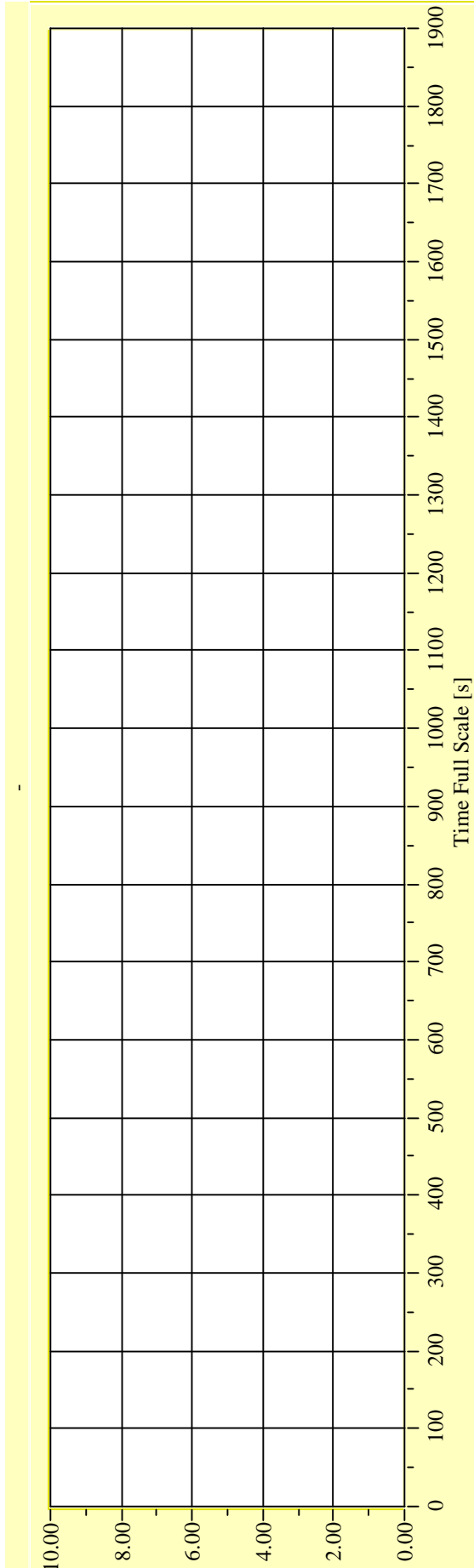
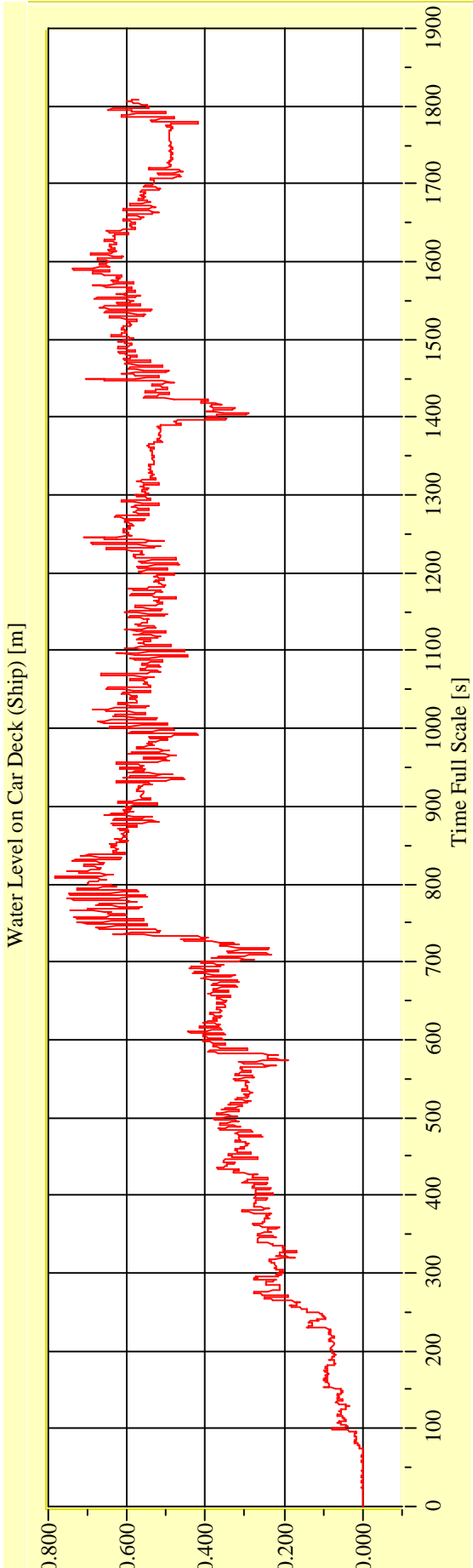
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-04** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

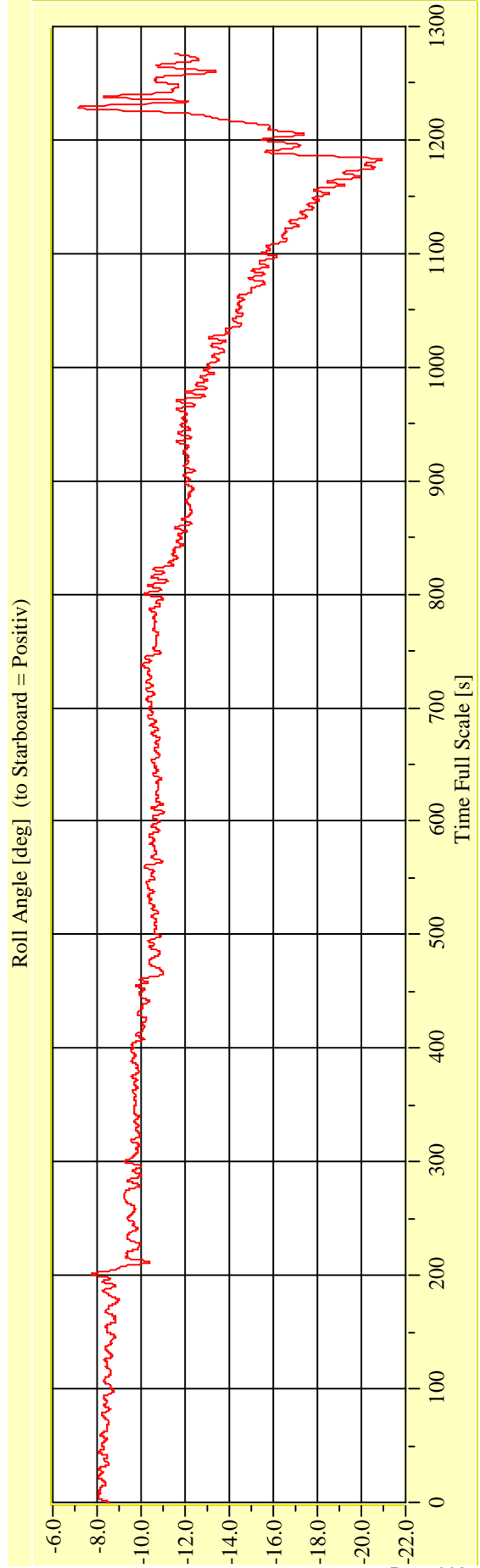
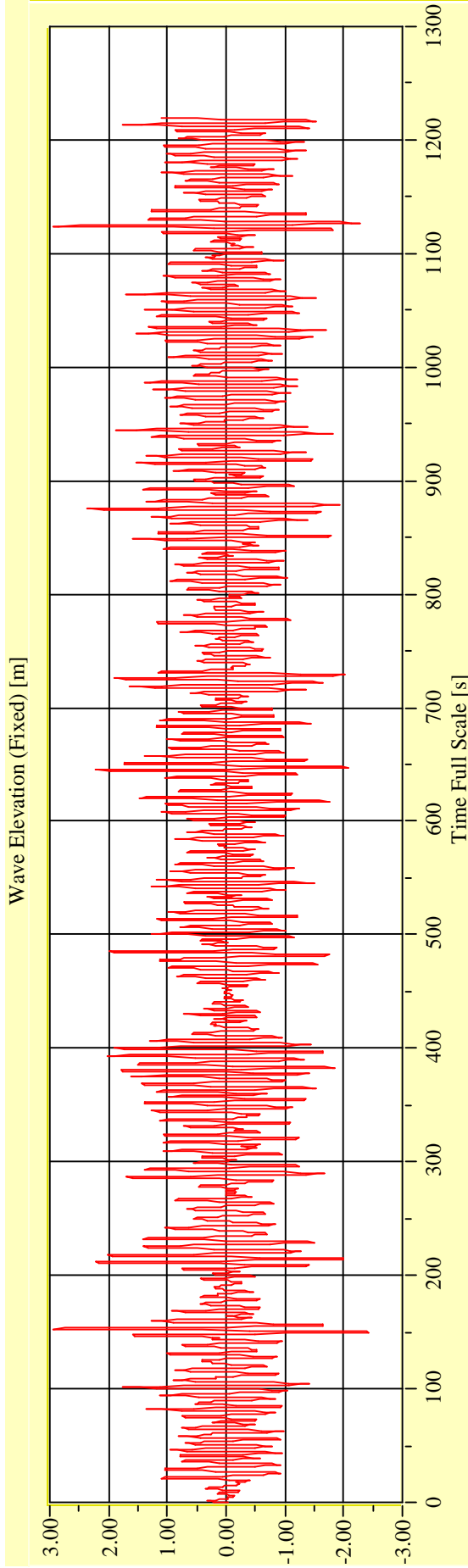
Vienna Model Basin

Model No. 2461

Test No. 29739-05

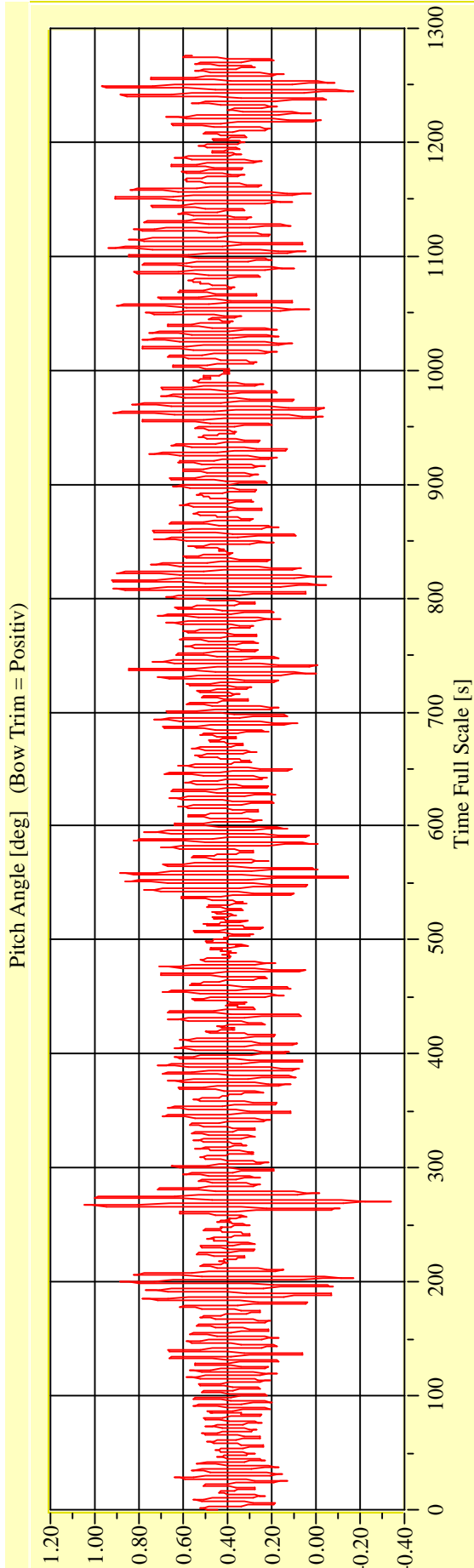
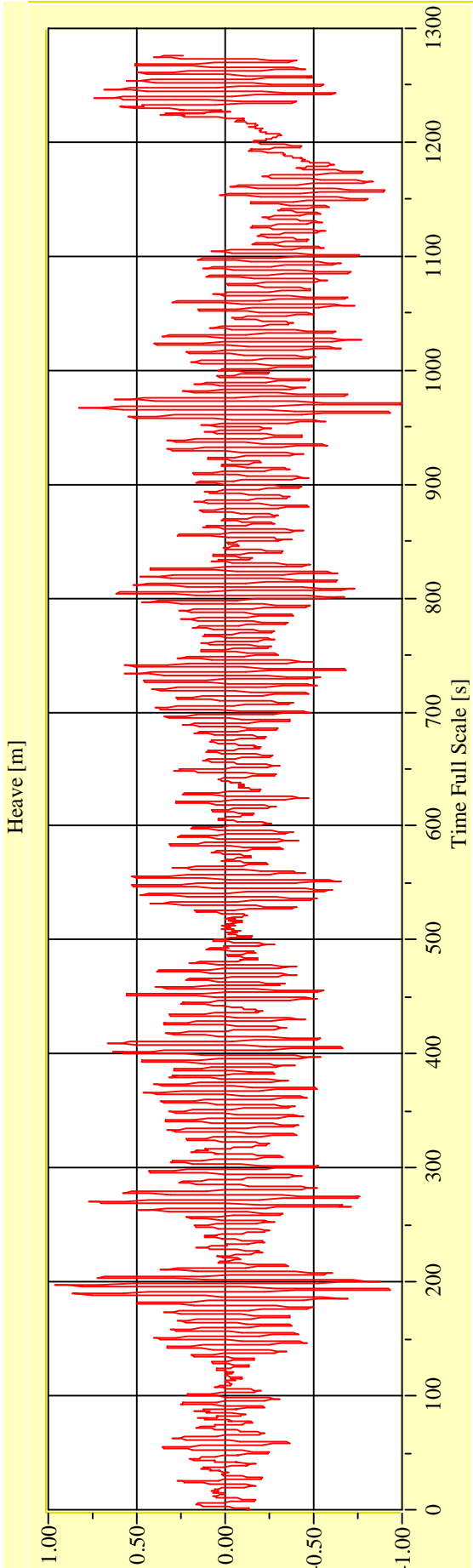
Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-05** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



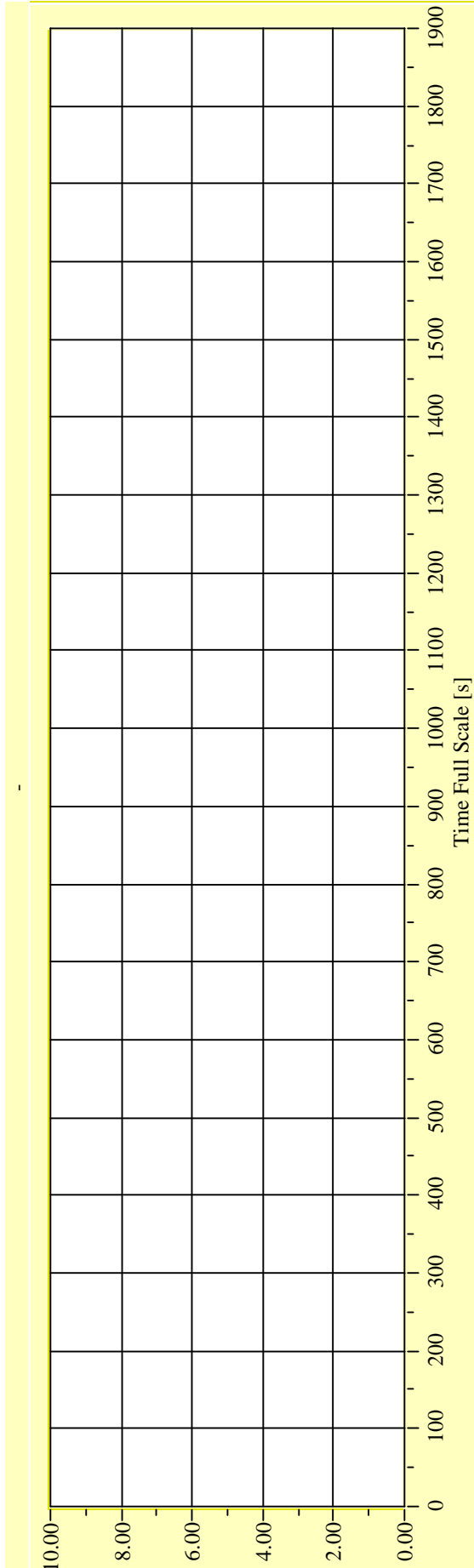
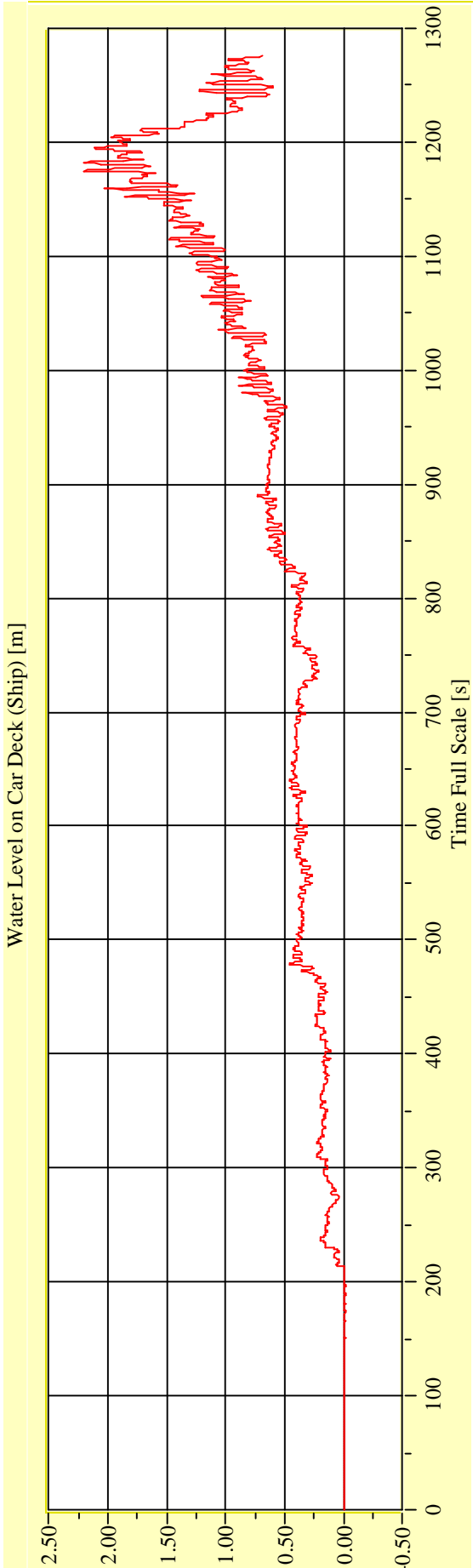
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-05** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



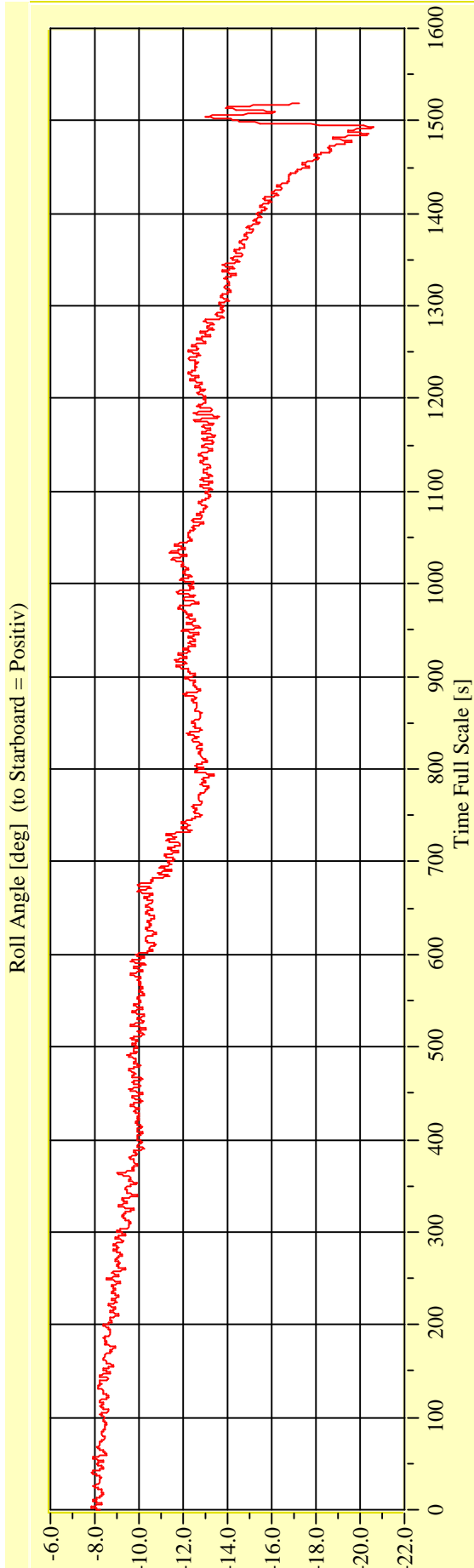
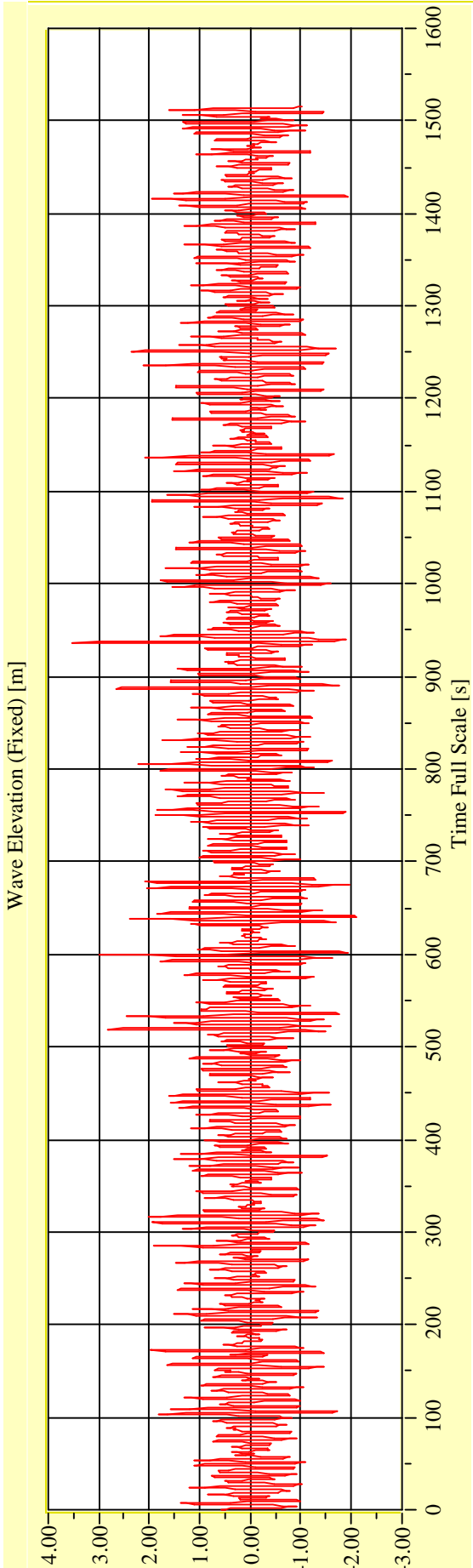
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-06** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

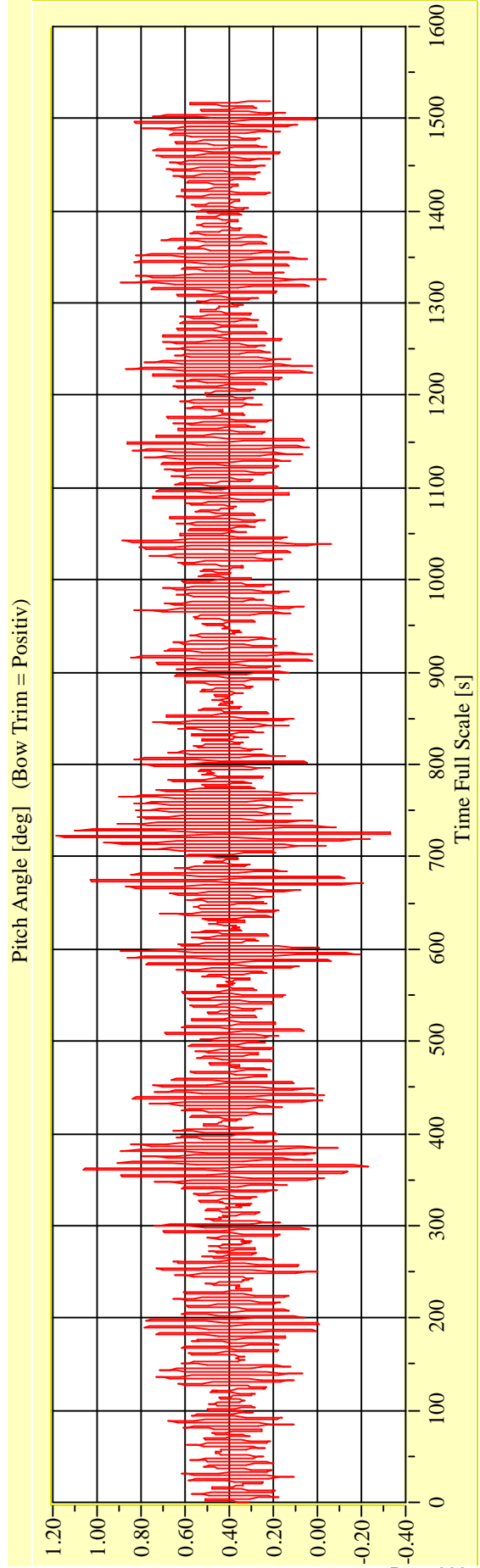
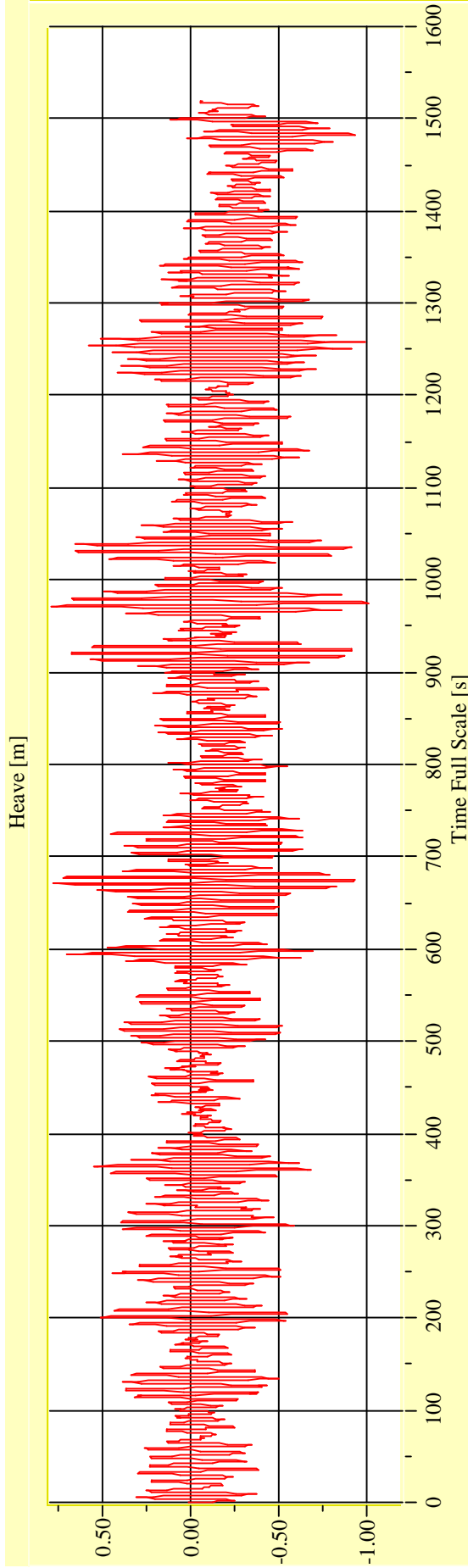
Vienna Model Basin

Model No. 2461

Test No. 29739-06

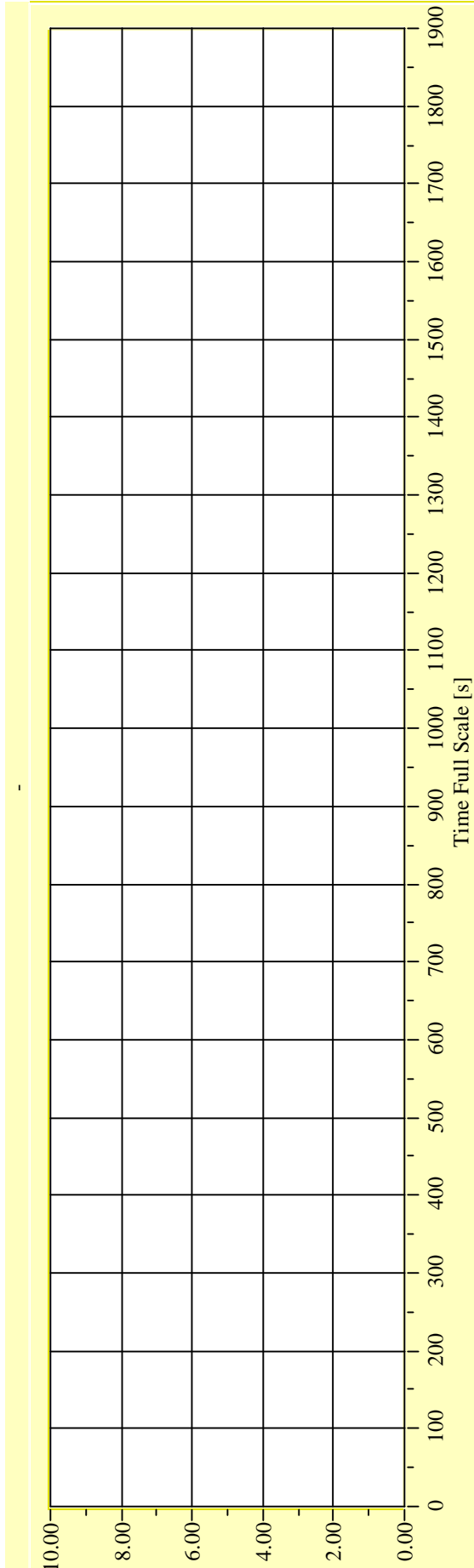
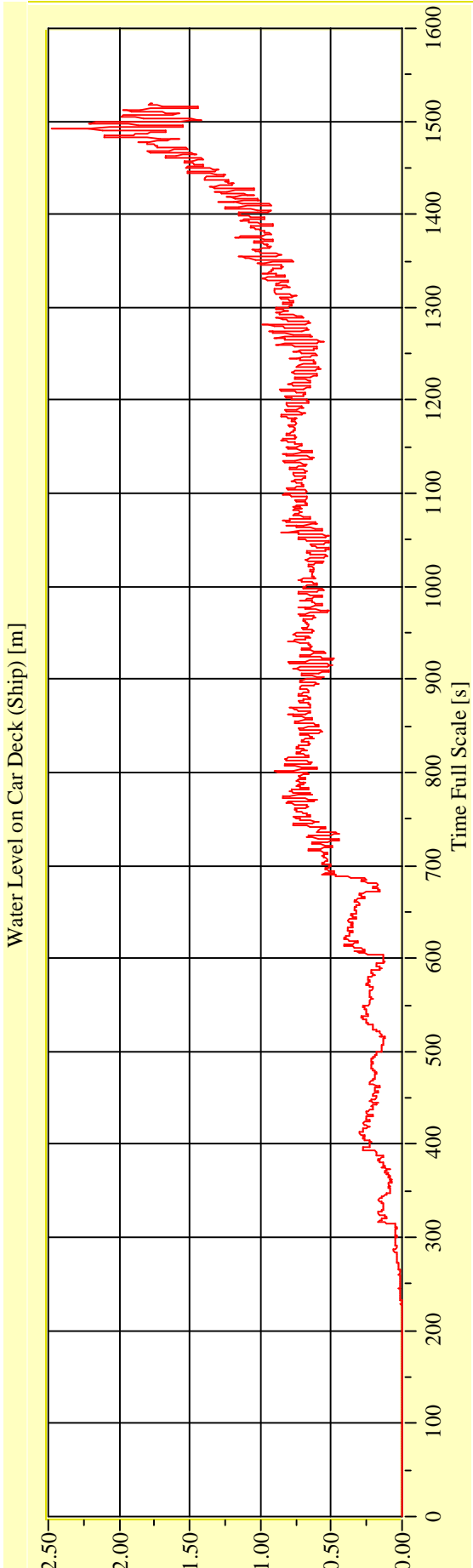
Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



Irregular Beam Seas

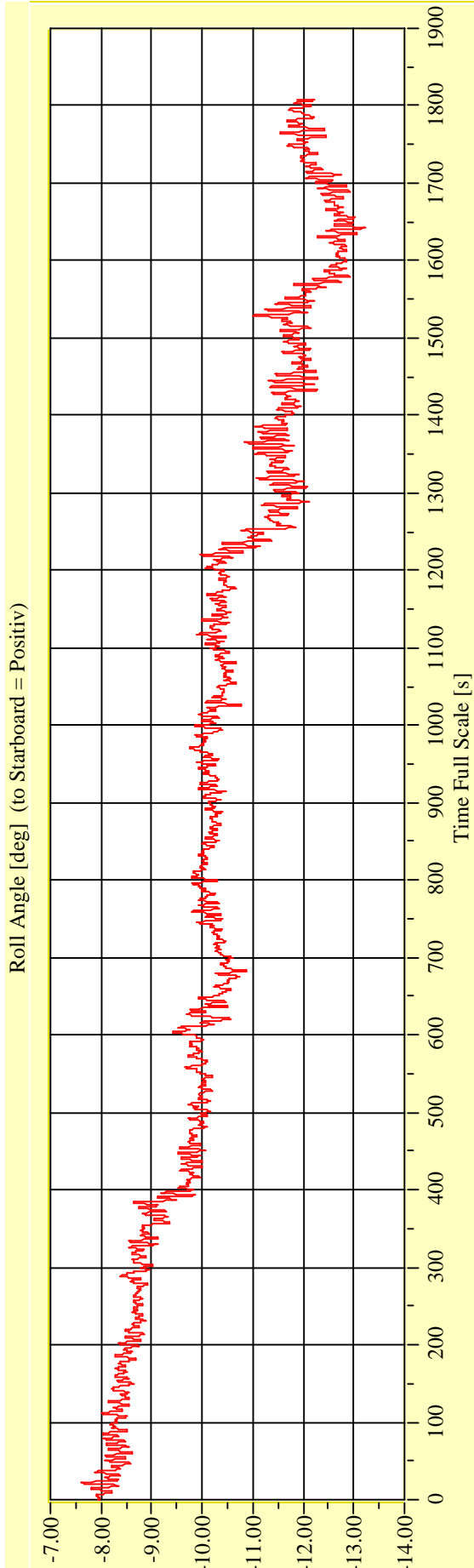
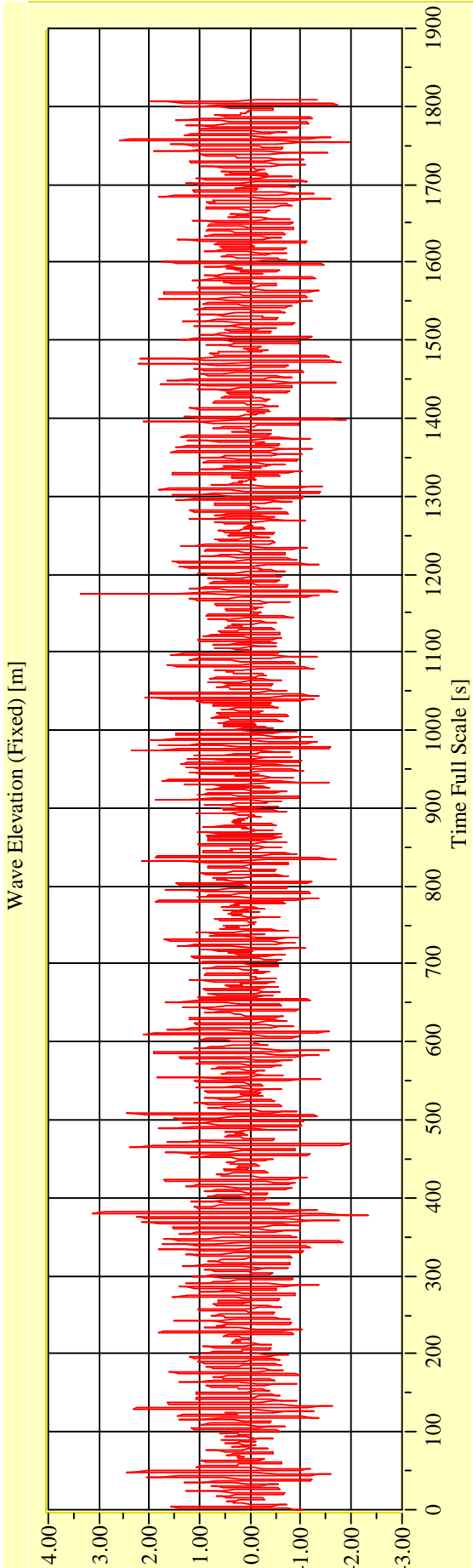
Vienna Model Basin **Model No. 2461** **Test No. 29739-06** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

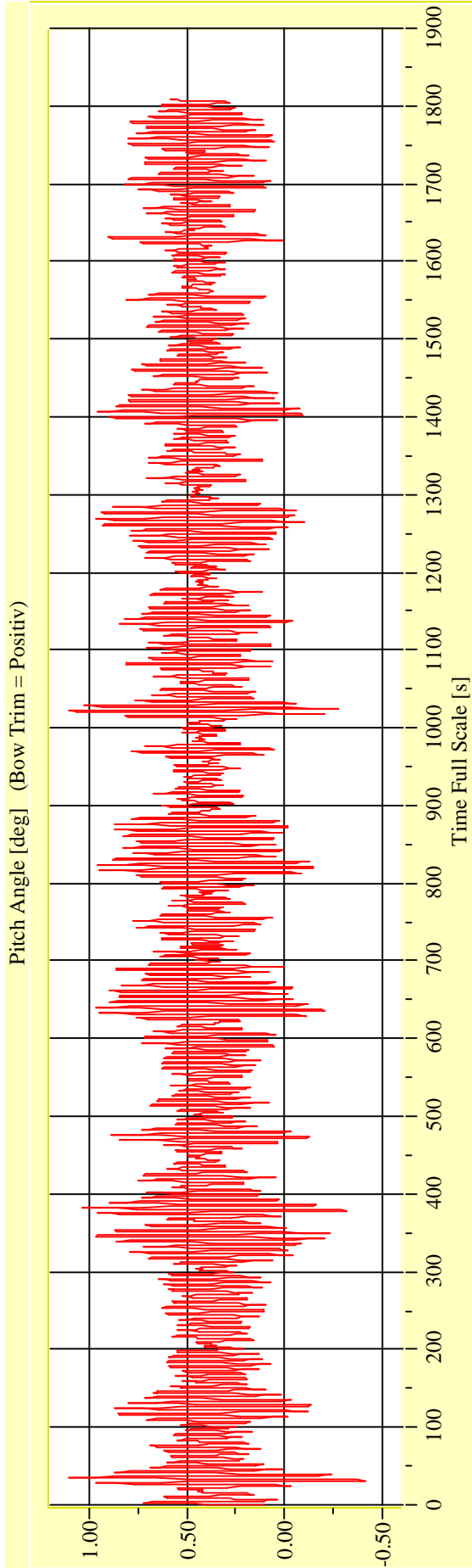
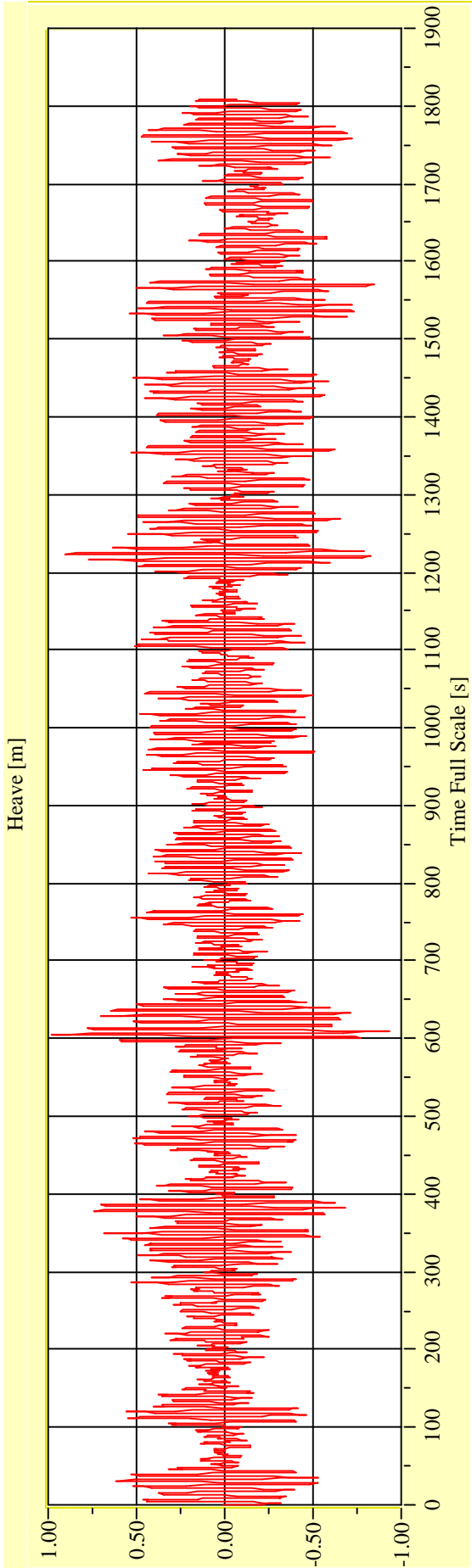
Vienna Model Basin **Model No. 2461** **Test No. 29739-07** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-07** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



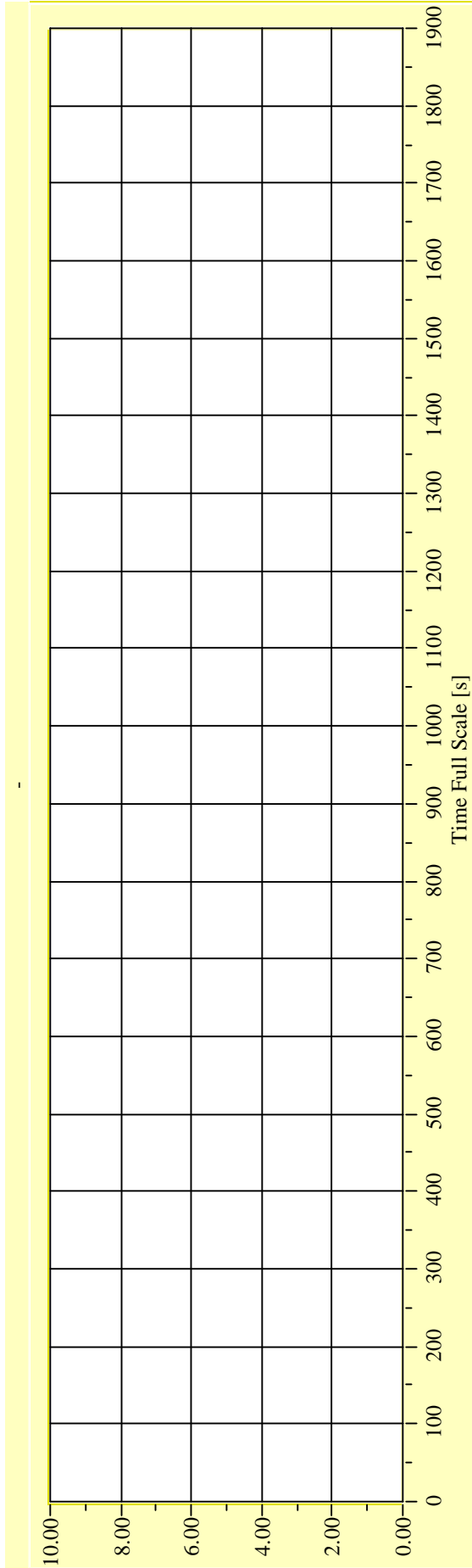
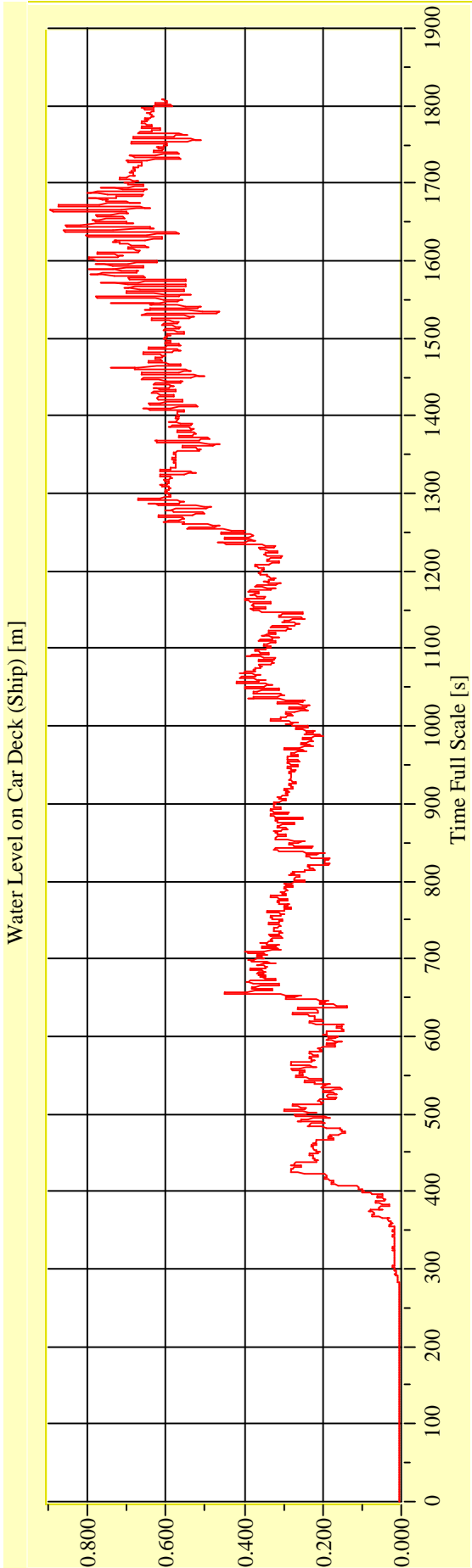
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

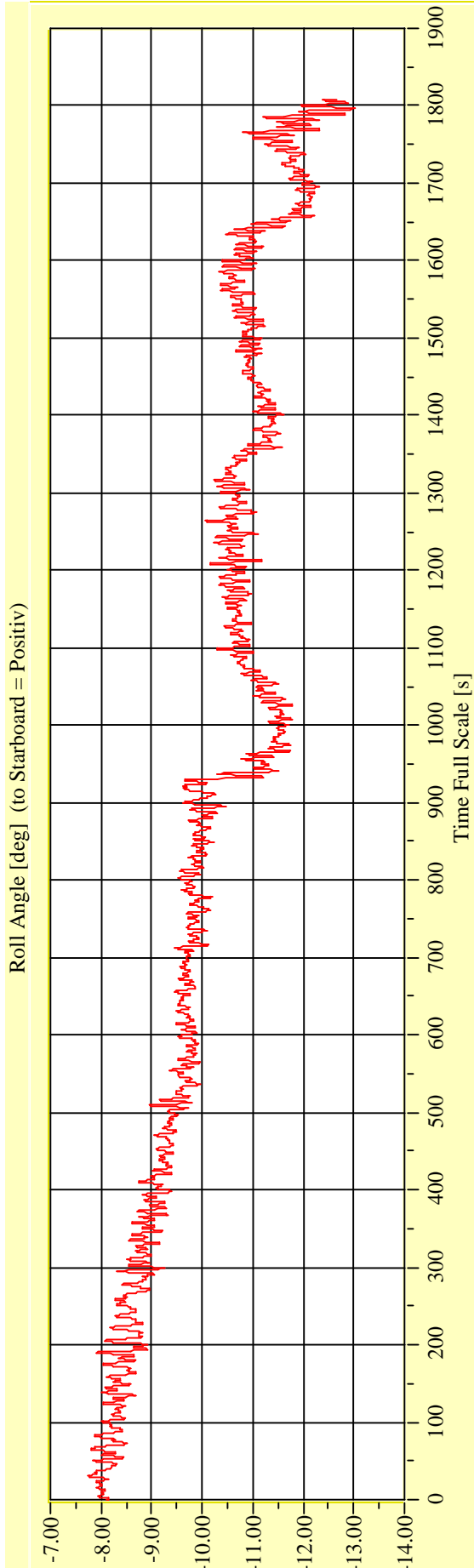
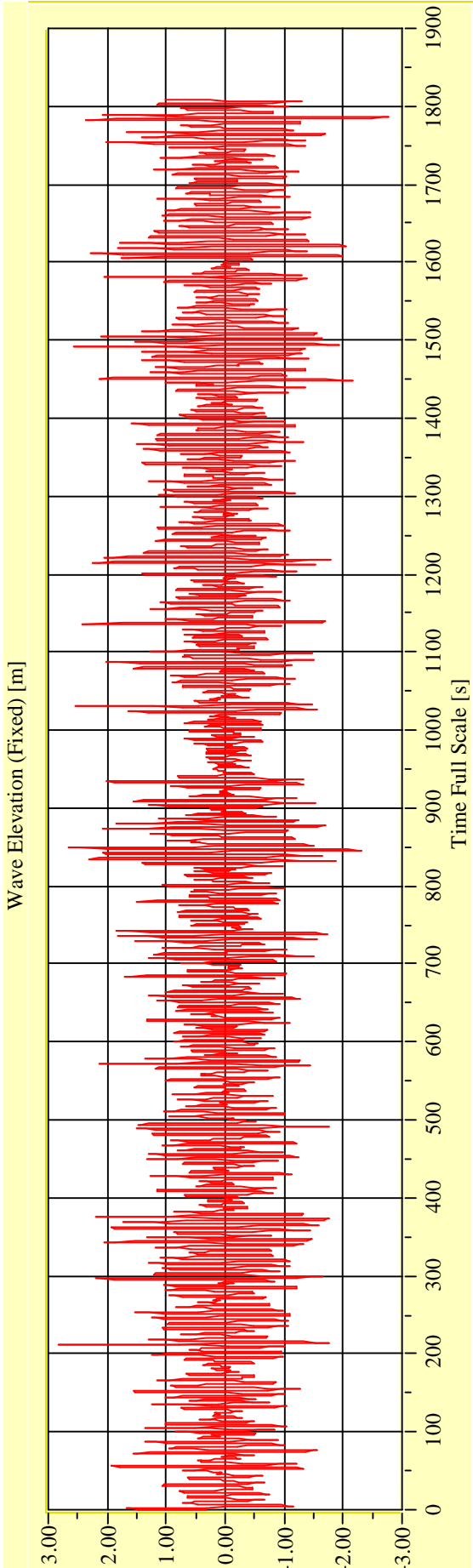
Vienna Model Basin **Model No. 2461** **Test No. 29739-07** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

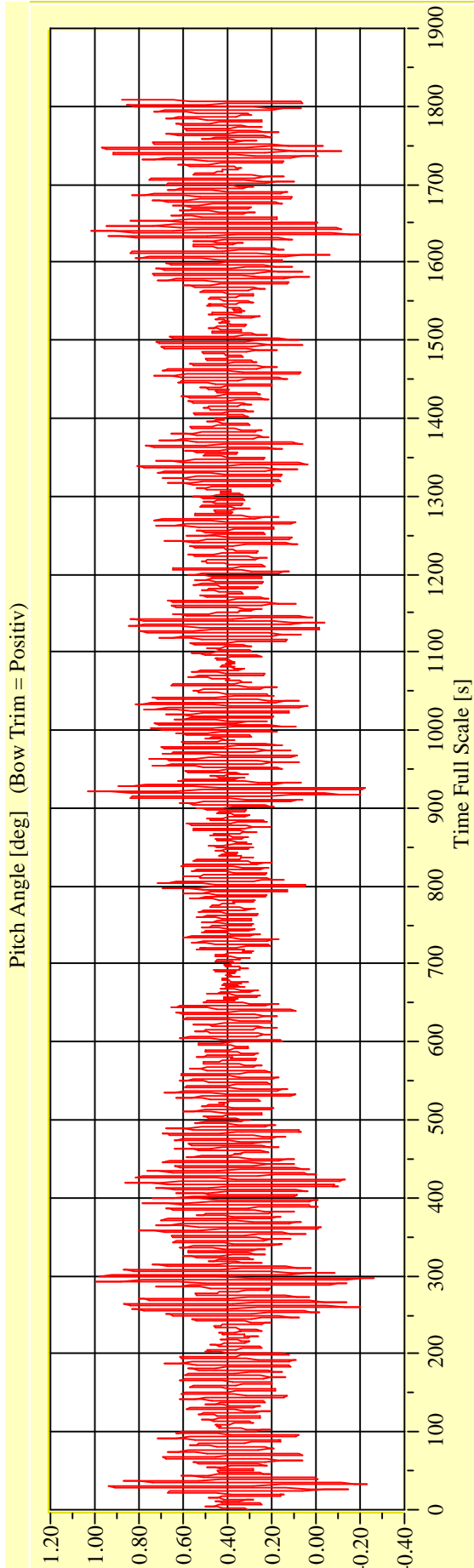
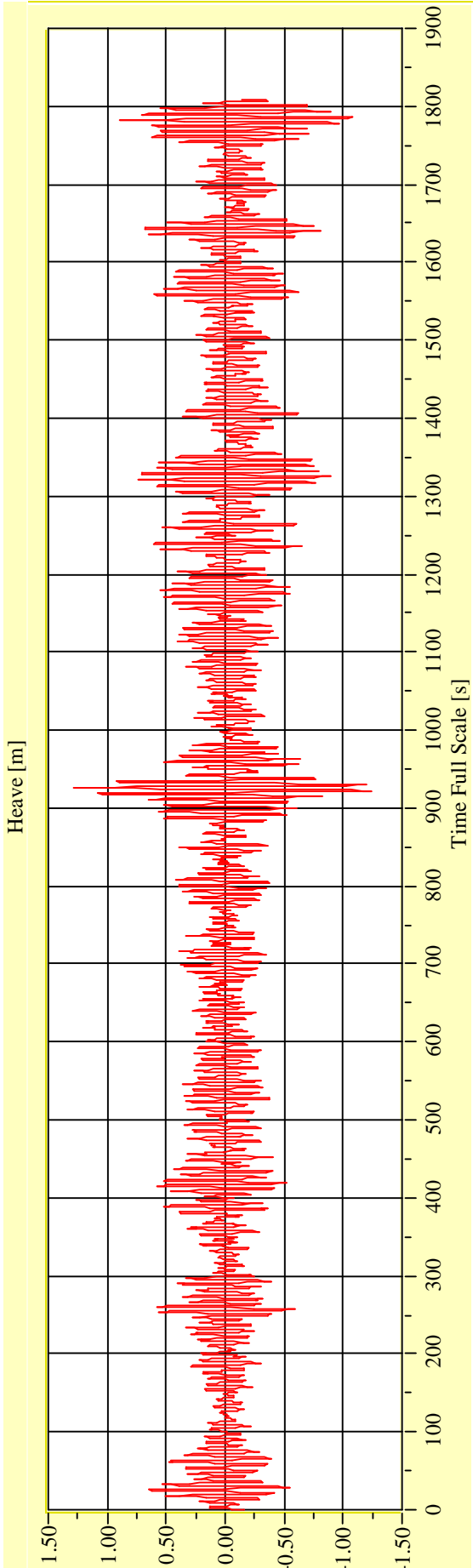
Vienna Model Basin **Model No. 2461** **Test No. 29739-08** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

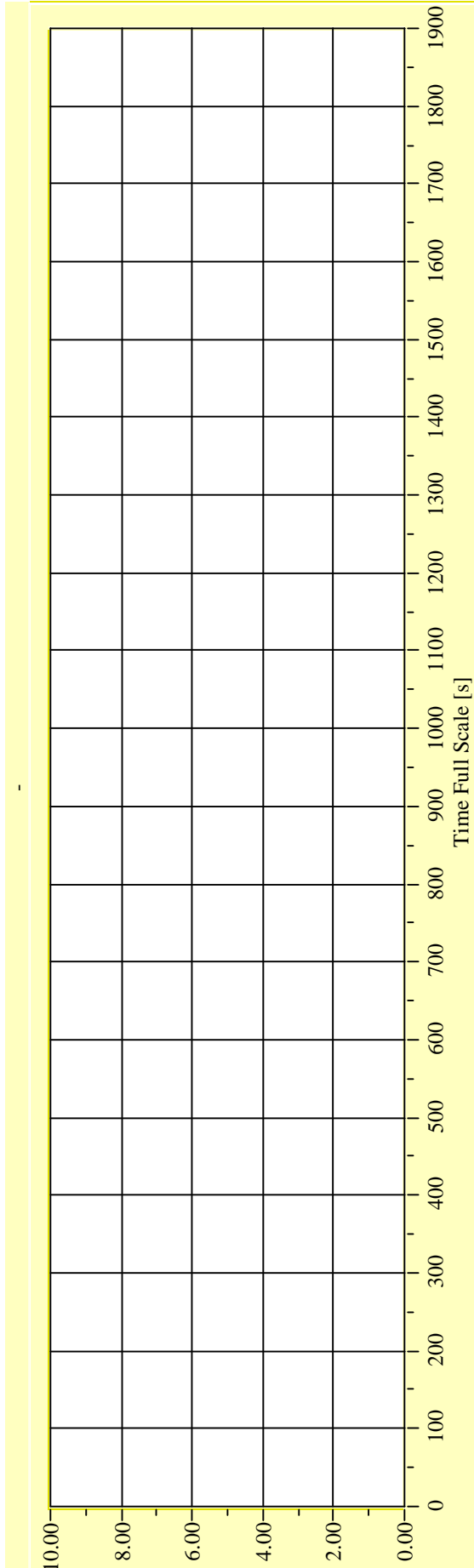
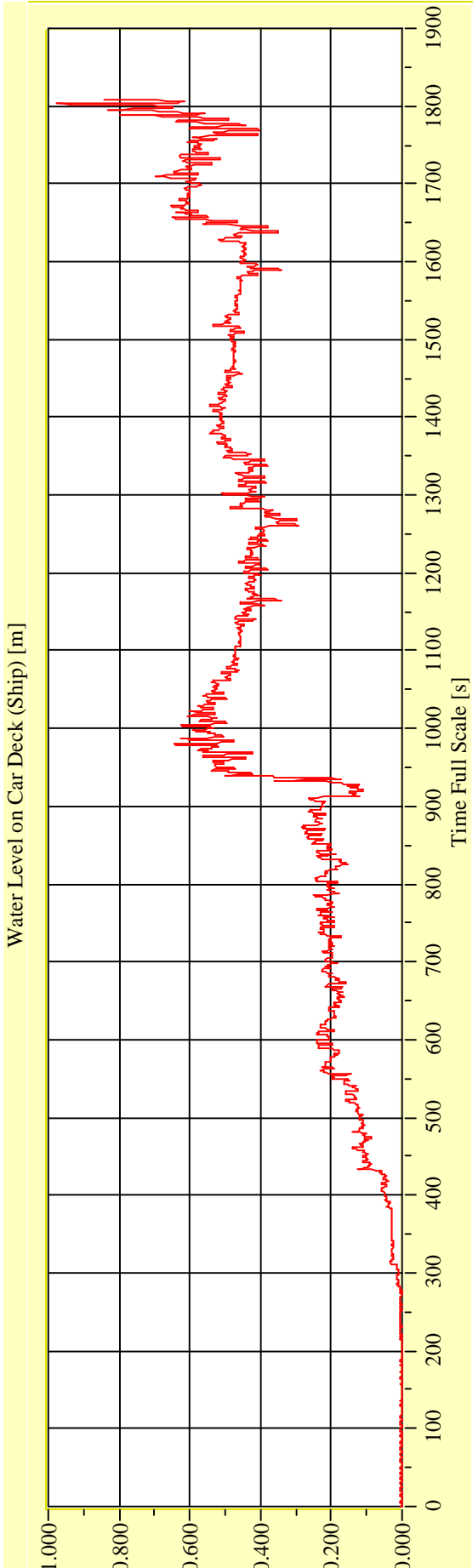
Vienna Model Basin **Model No. 2461** **Test No. 29739-08** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

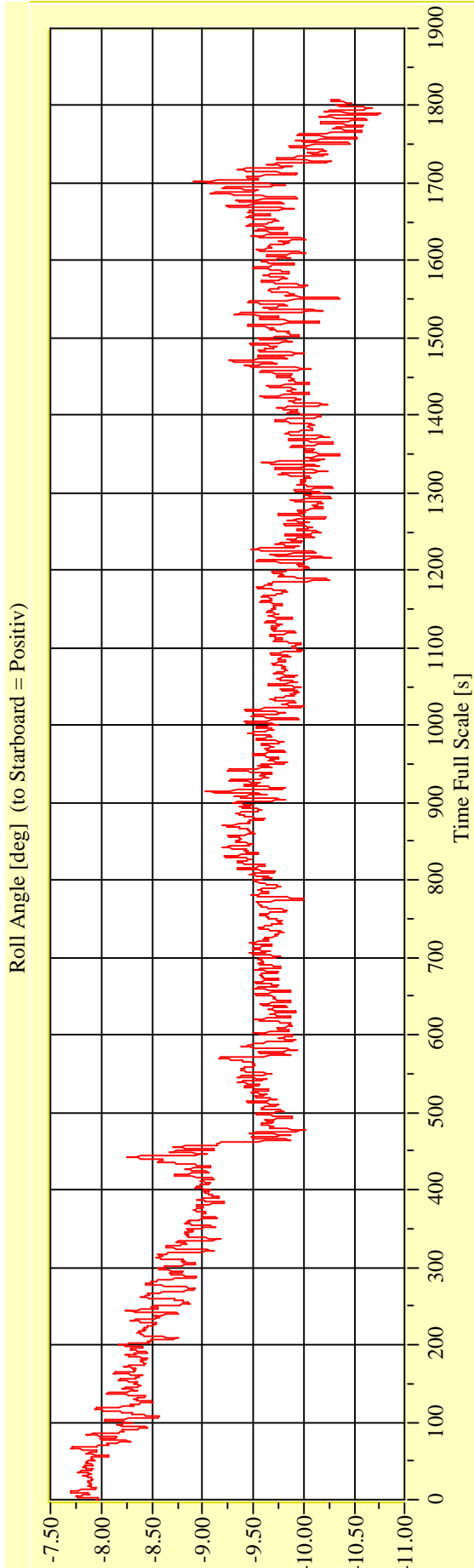
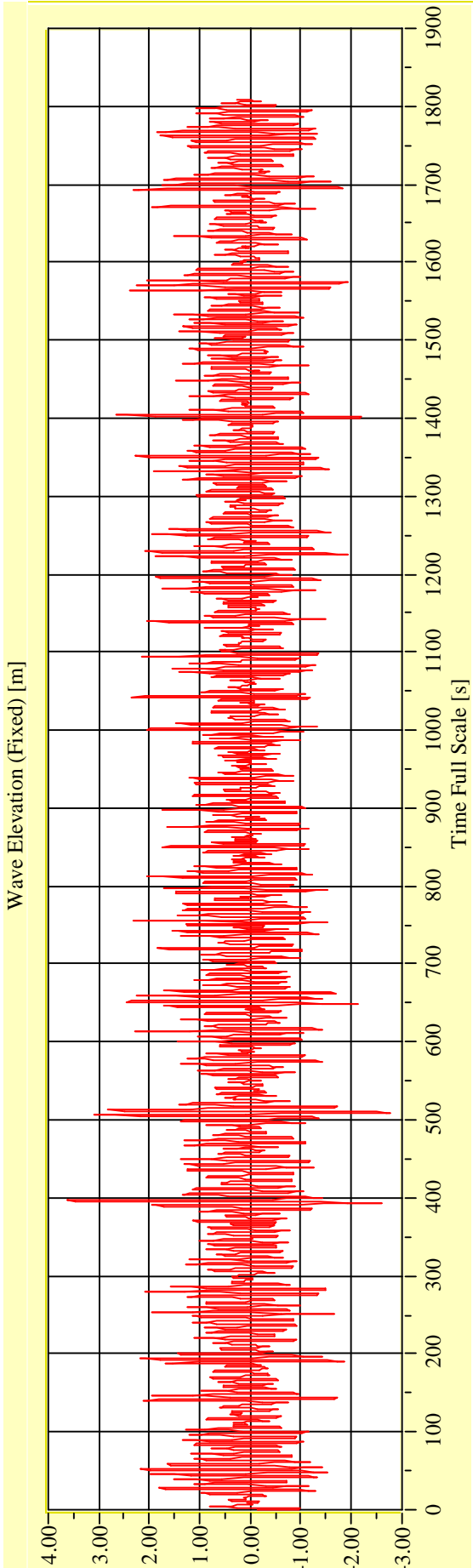
Vienna Model Basin **Model No. 2461** **Test No. 29739-08** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-09** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

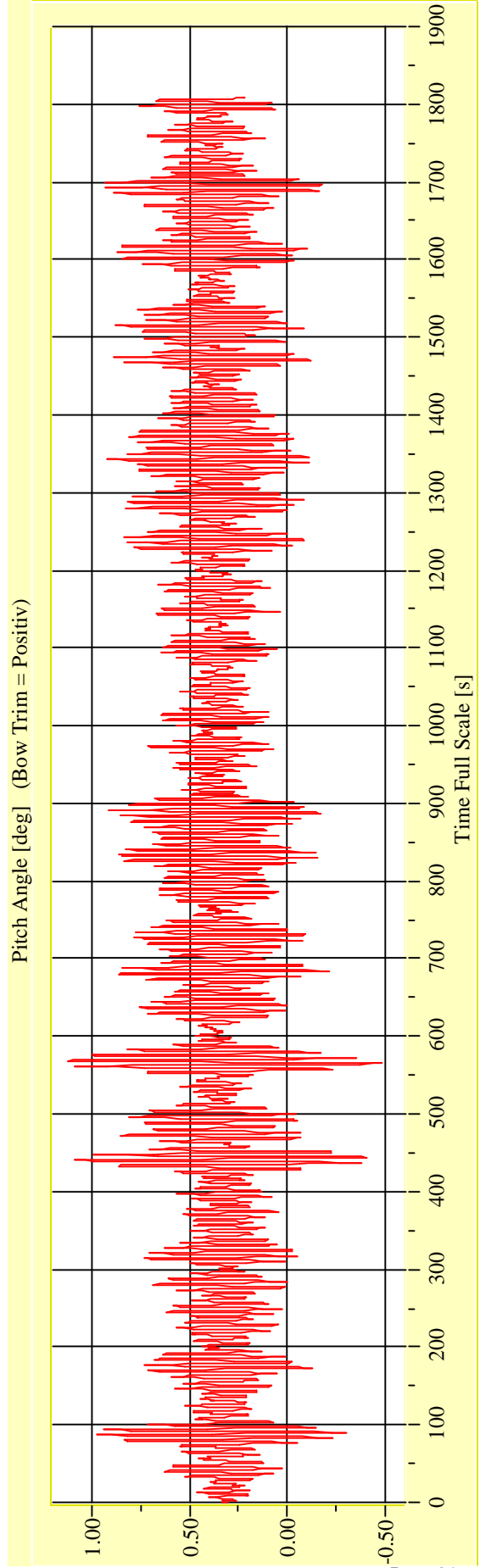
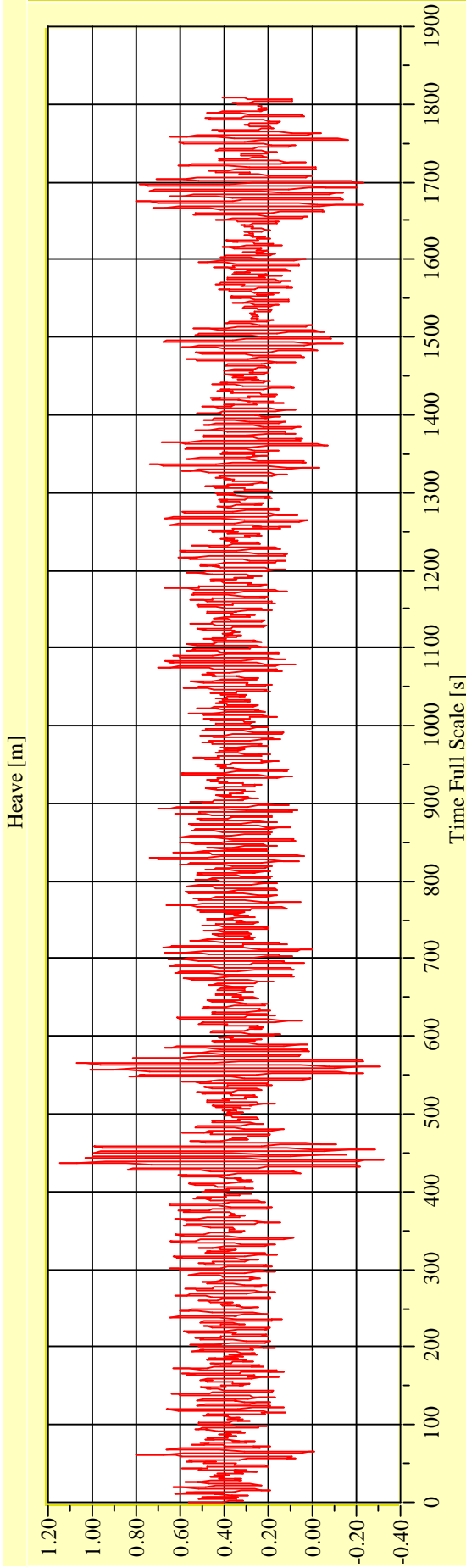
Vienna Model Basin

Model No. 2461

Test No. 29739-09

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



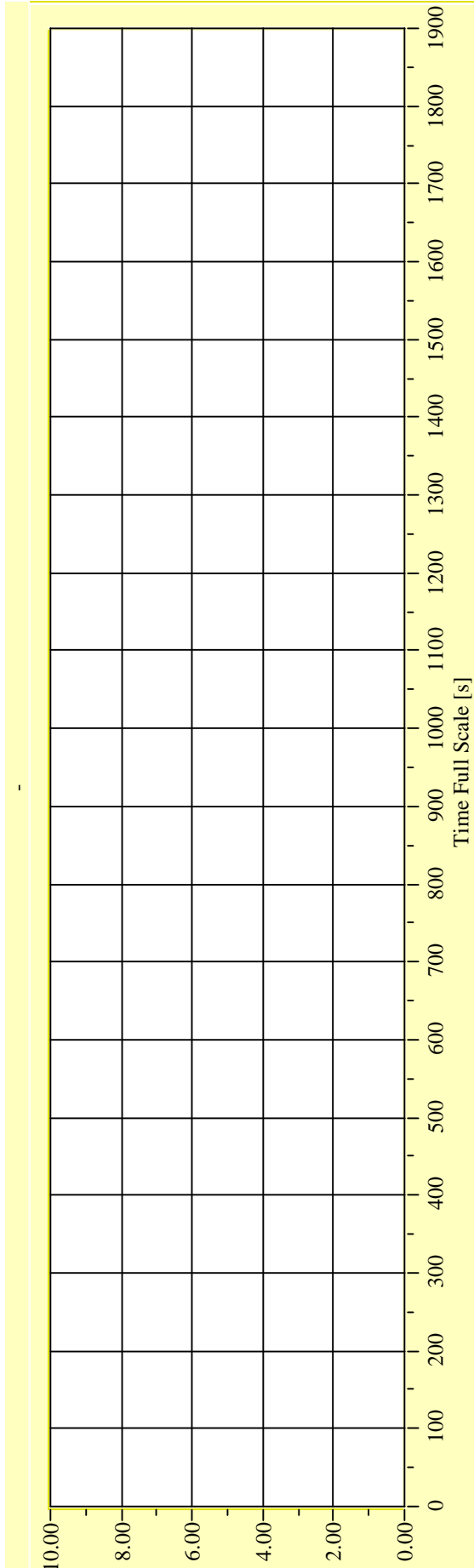
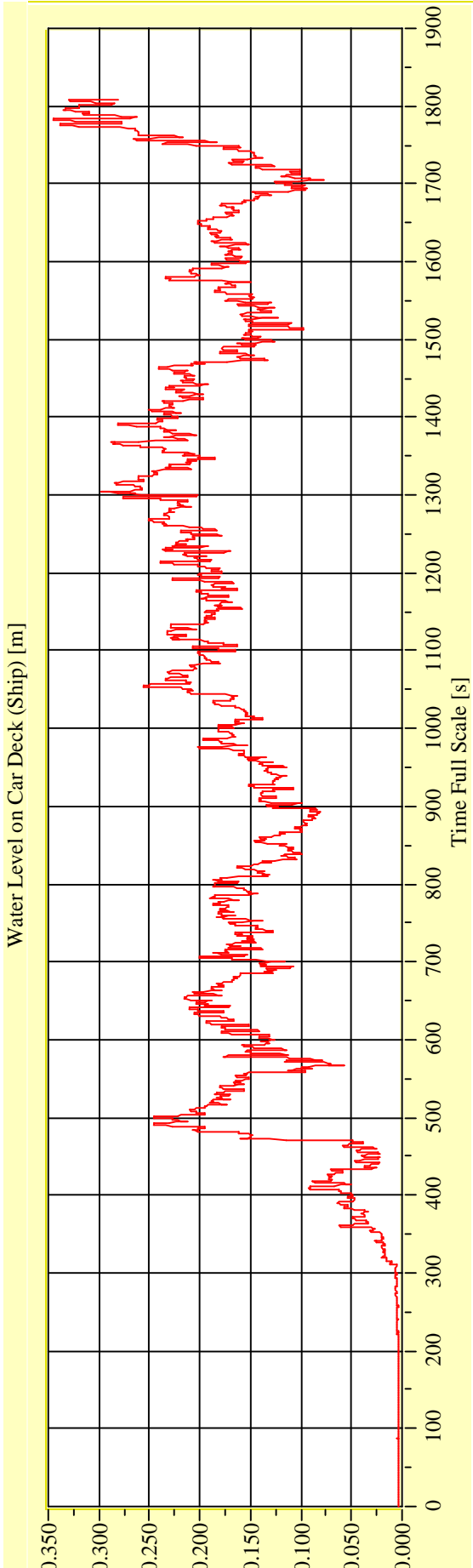
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

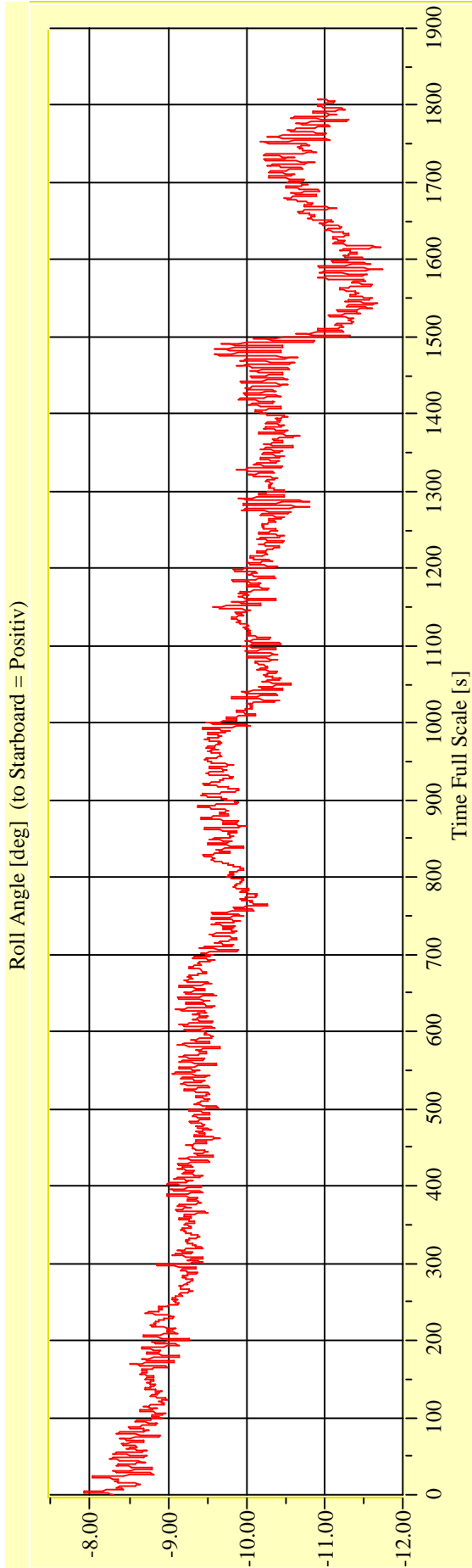
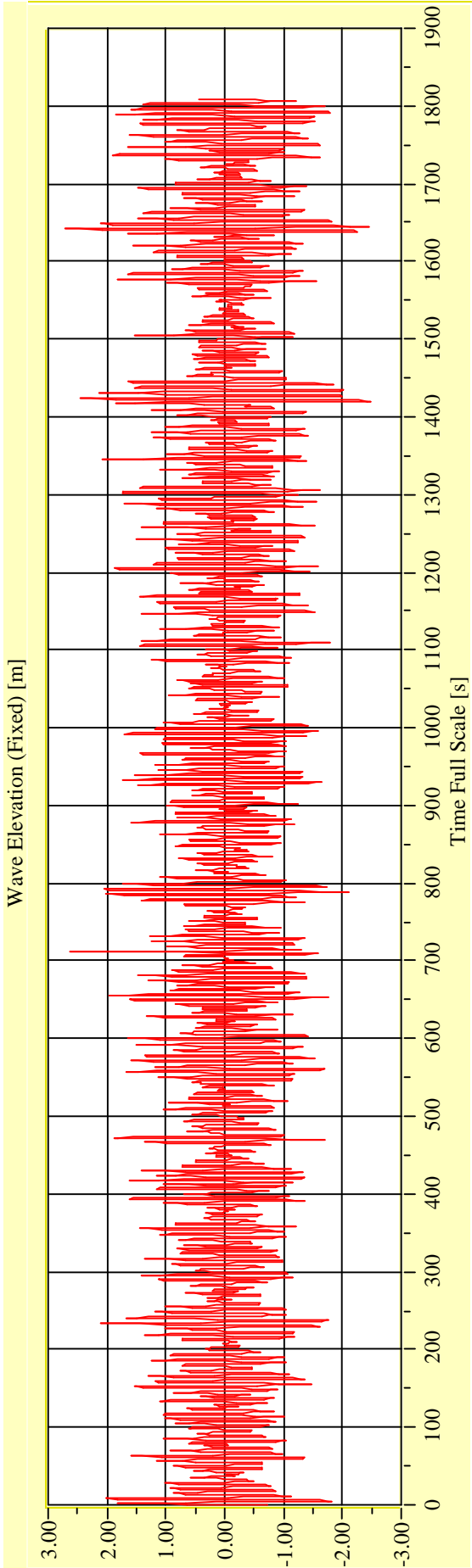
Vienna Model Basin **Model No. 2461** **Test No. 29739-09** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-10** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

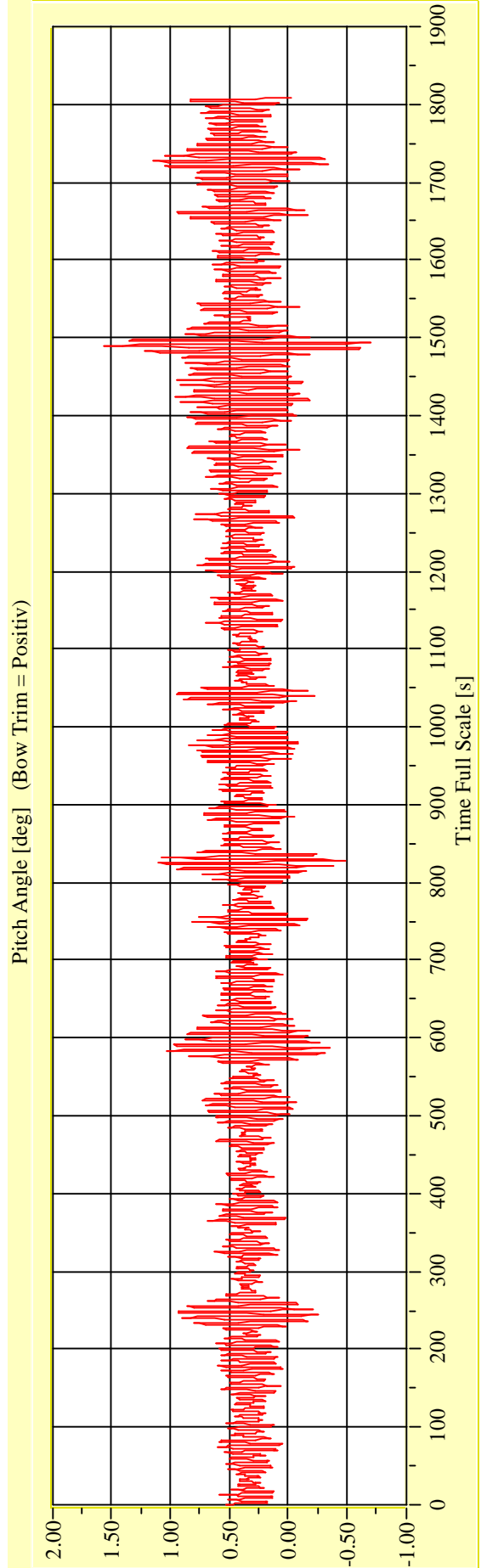
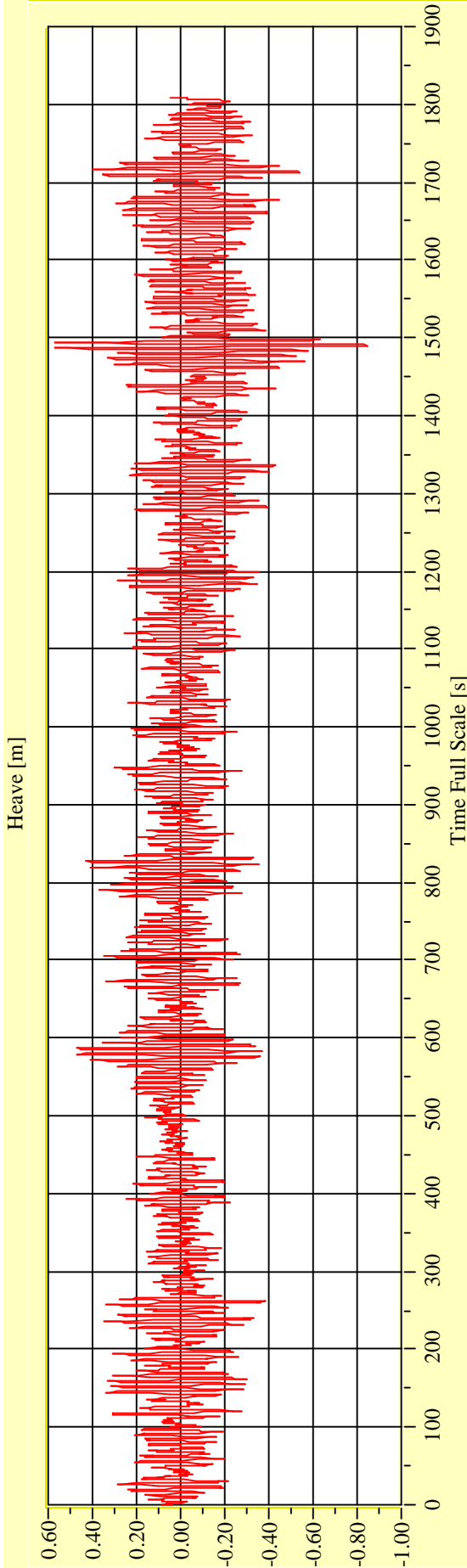
Vienna Model Basin

Model No. 2461

Test No. 29739-10

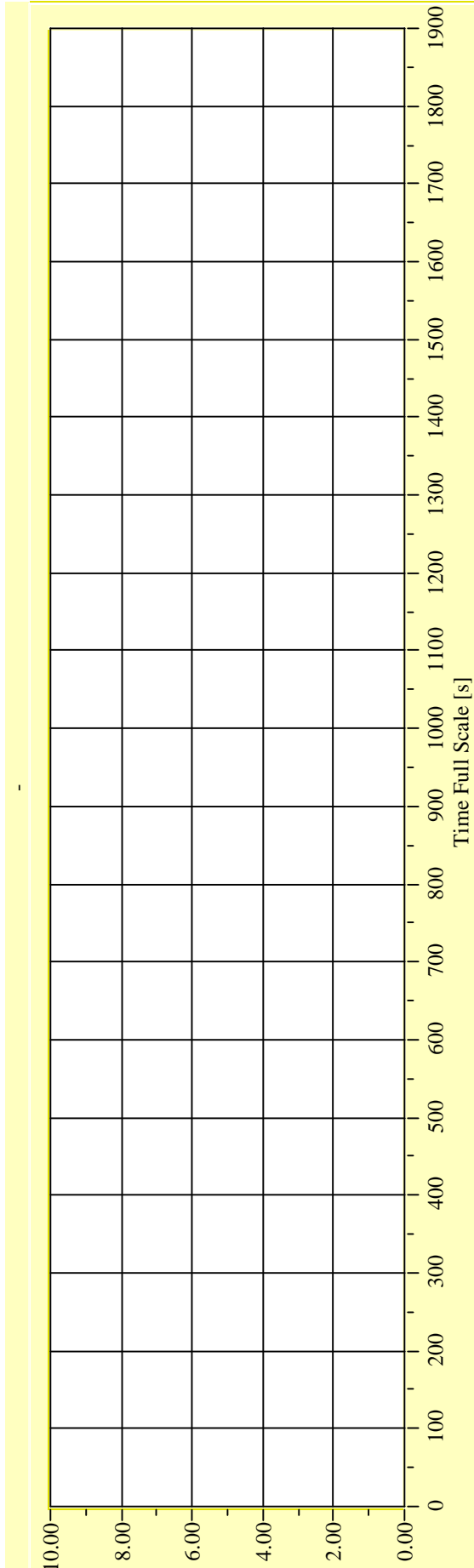
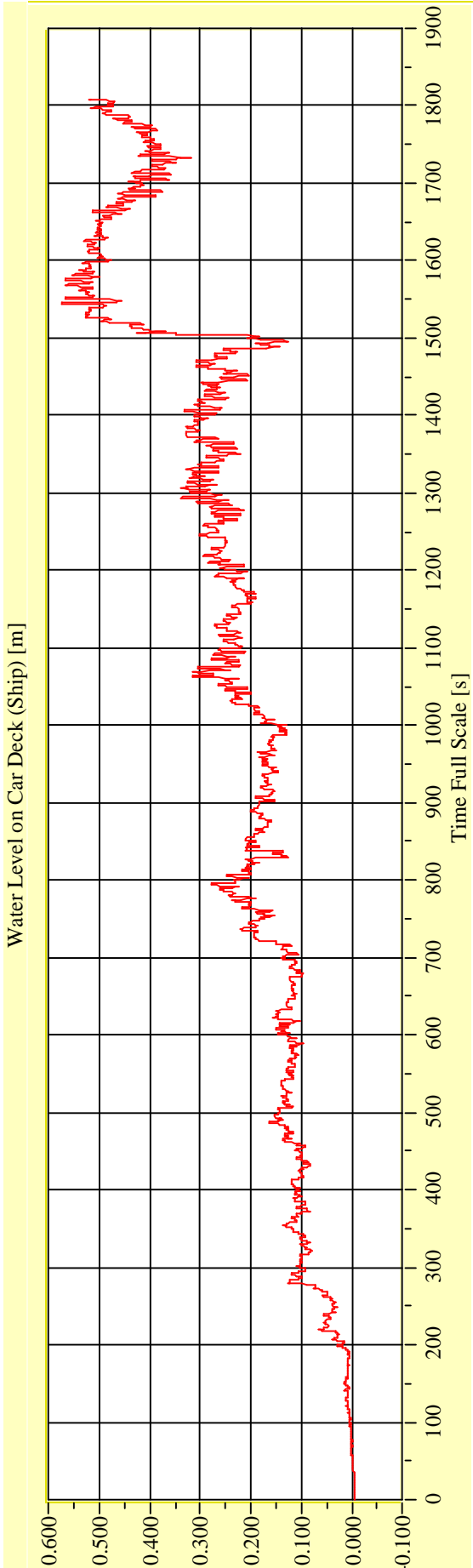
Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



Irregular Beam Seas

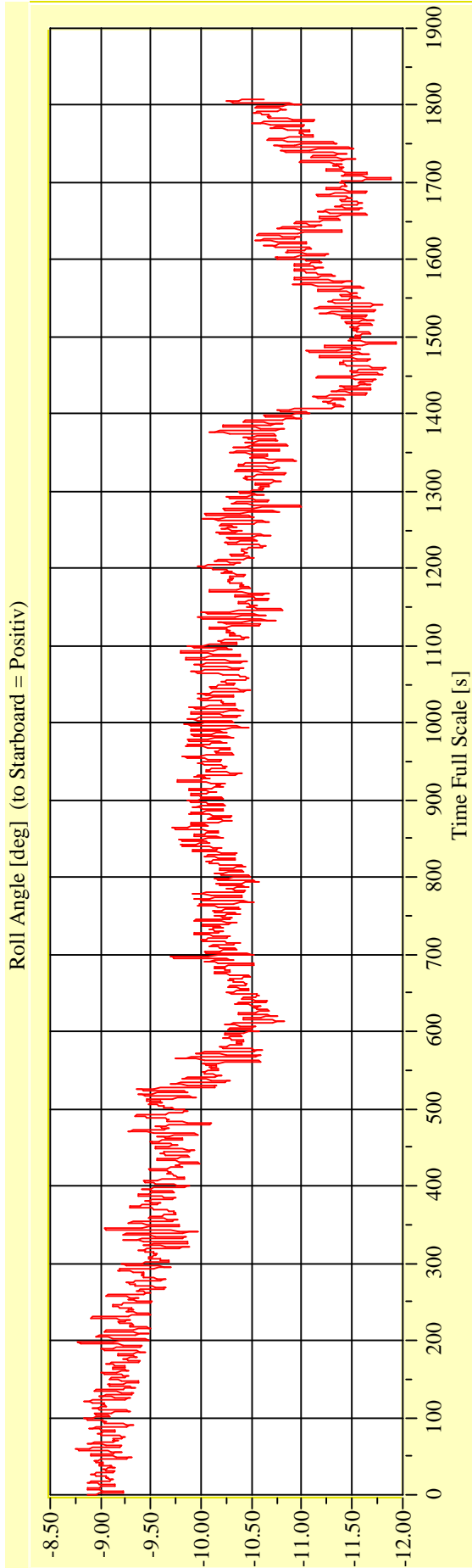
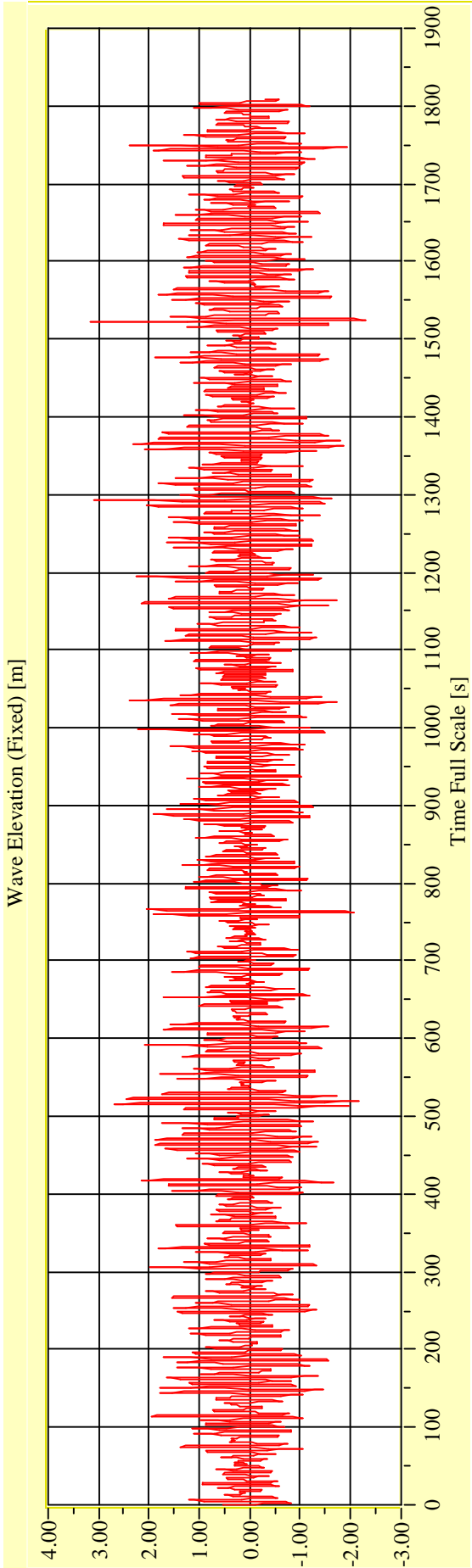
Vienna Model Basin **Model No. 2461** **Test No. 29739-10** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

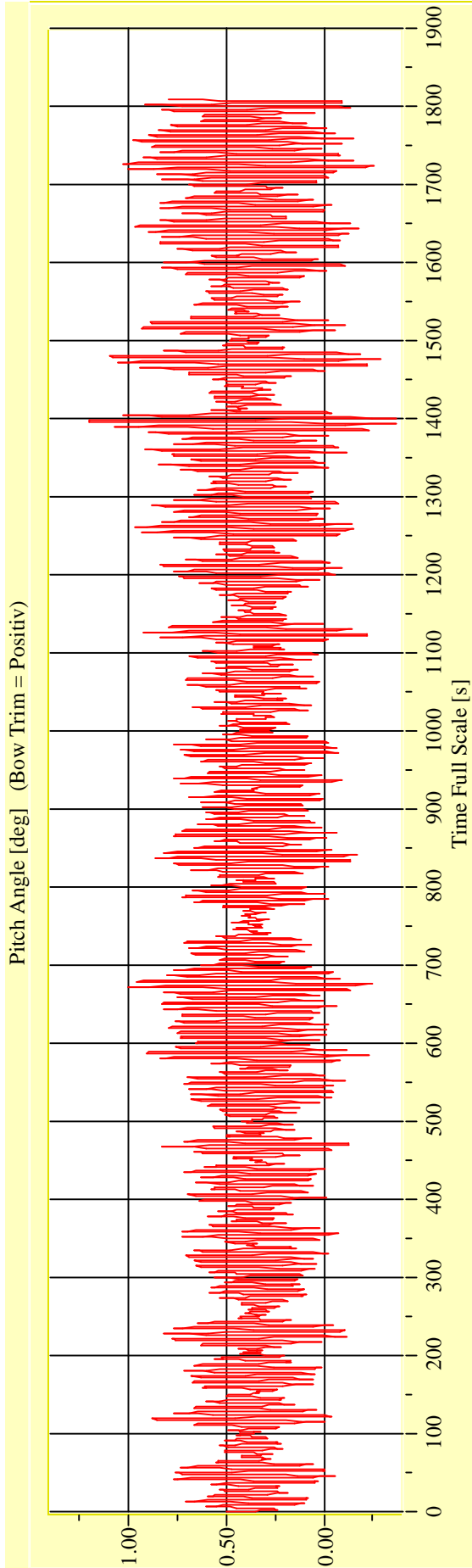
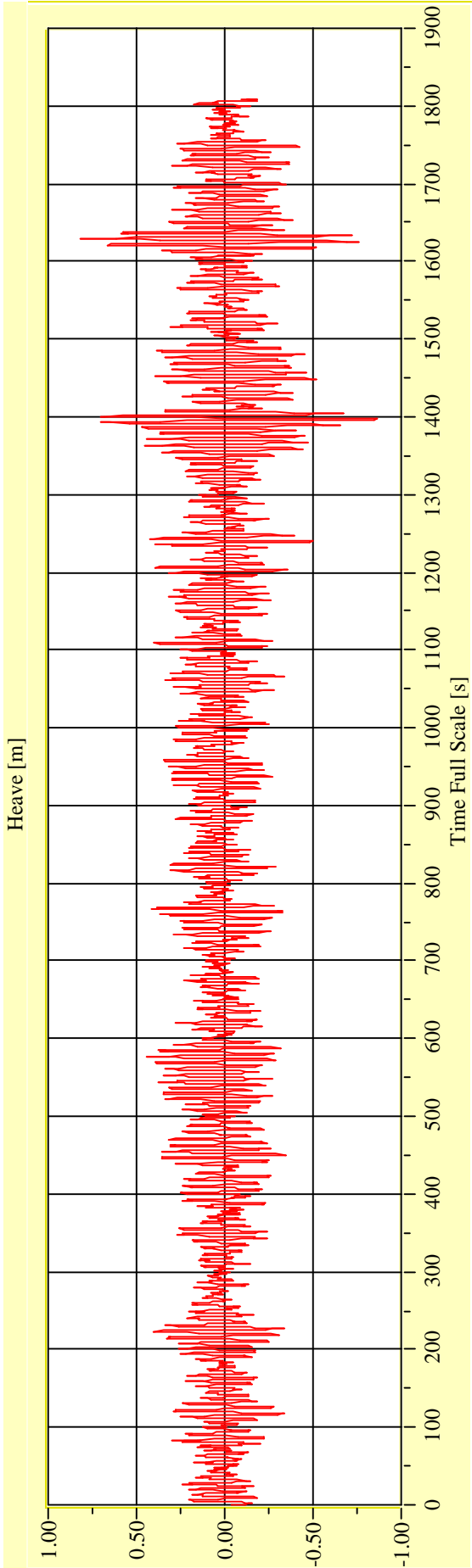
Vienna Model Basin **Model No. 2461** **Test No. 29739-11** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-11** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



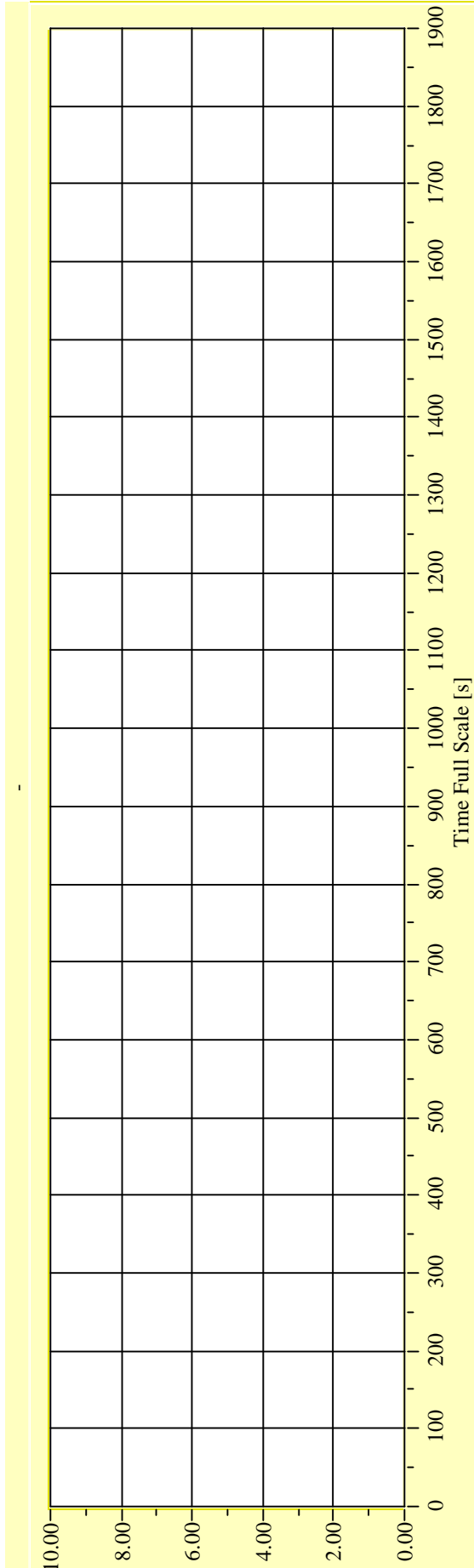
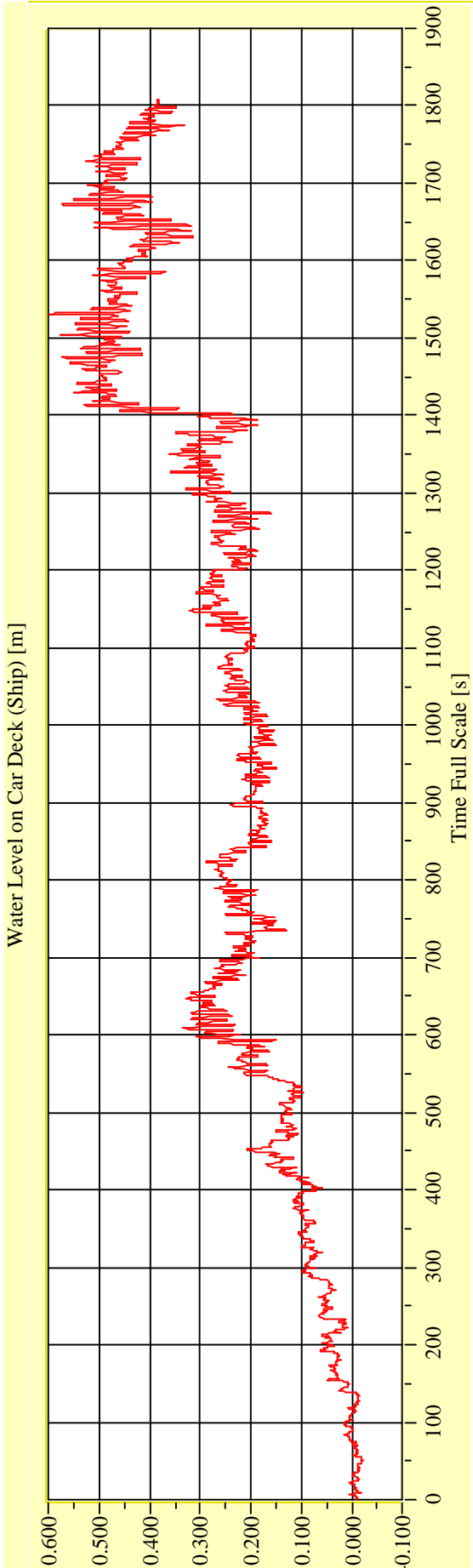
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-11** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



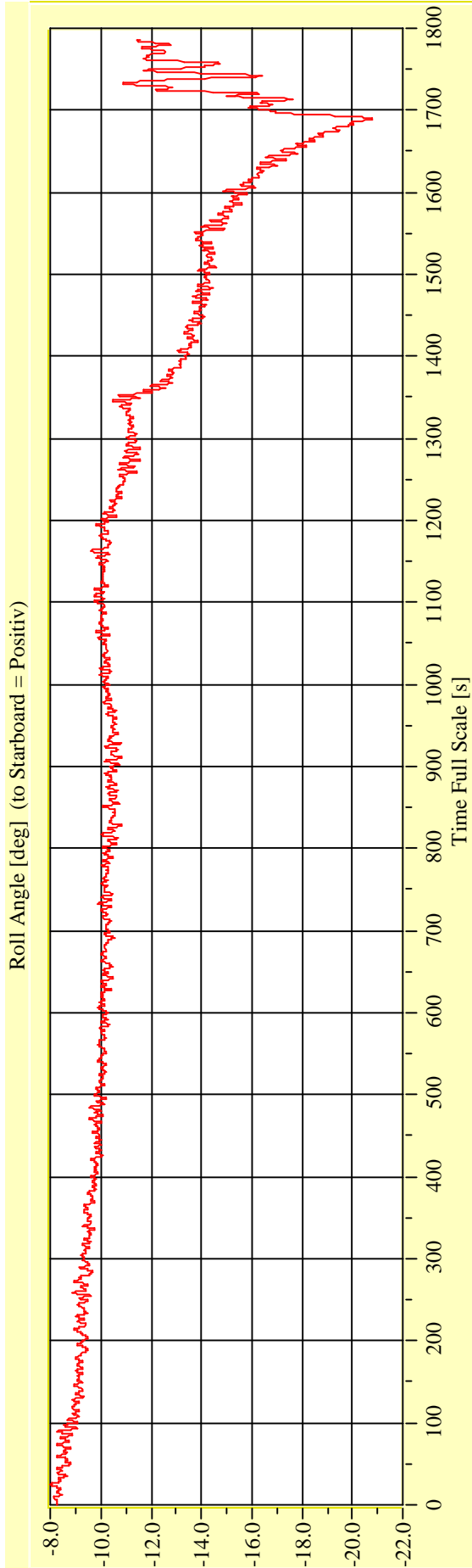
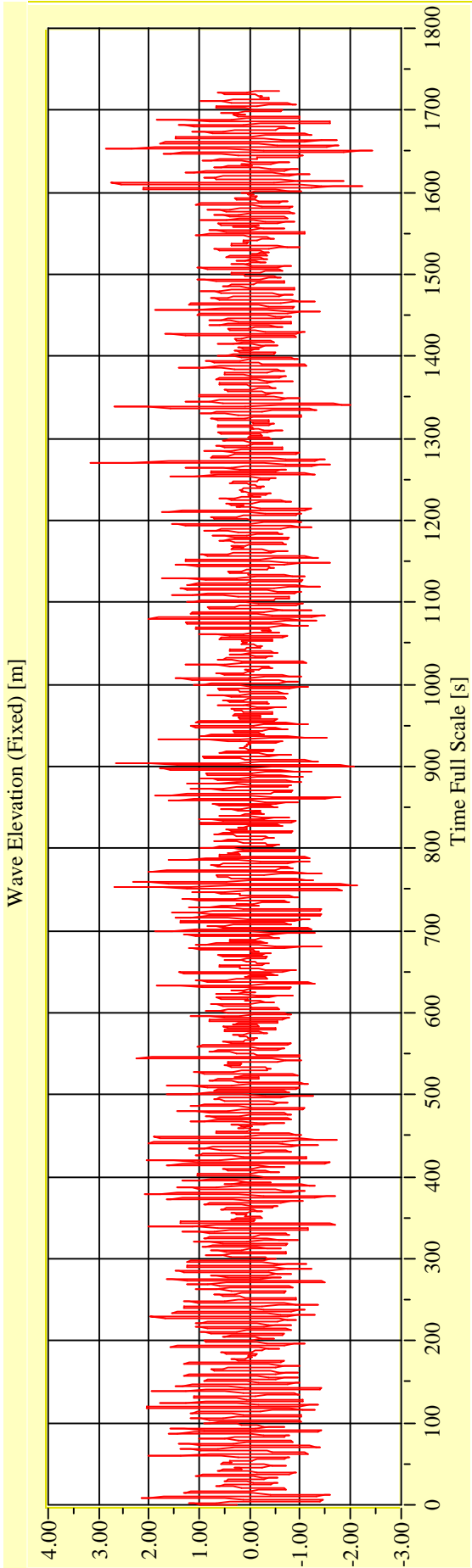
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-12** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

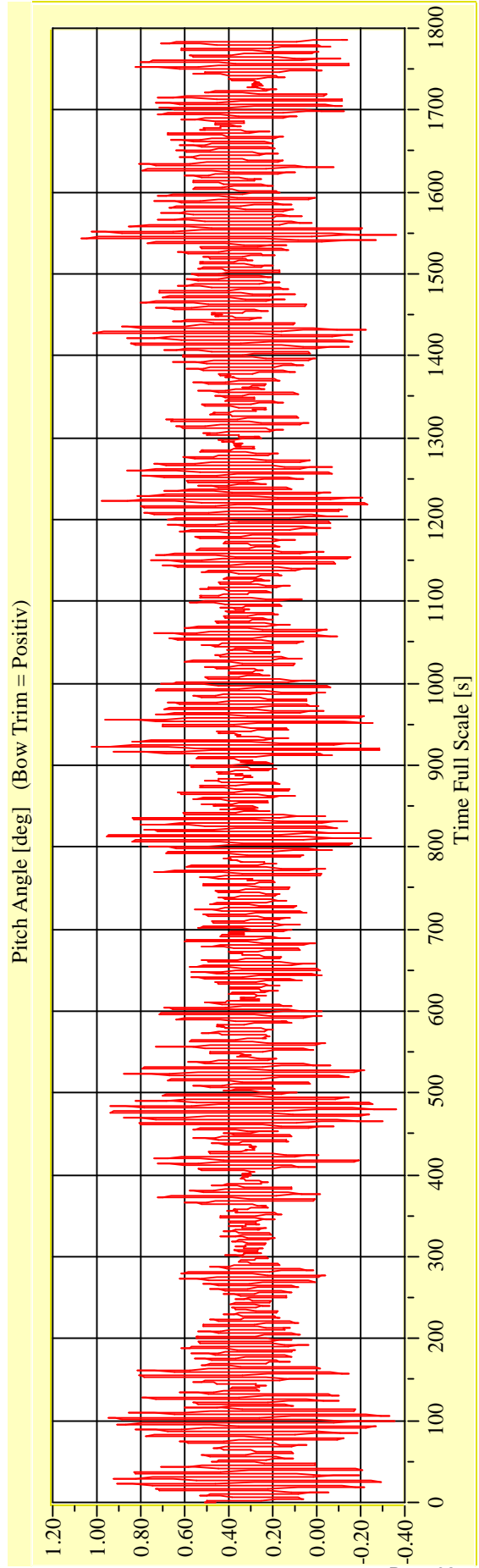
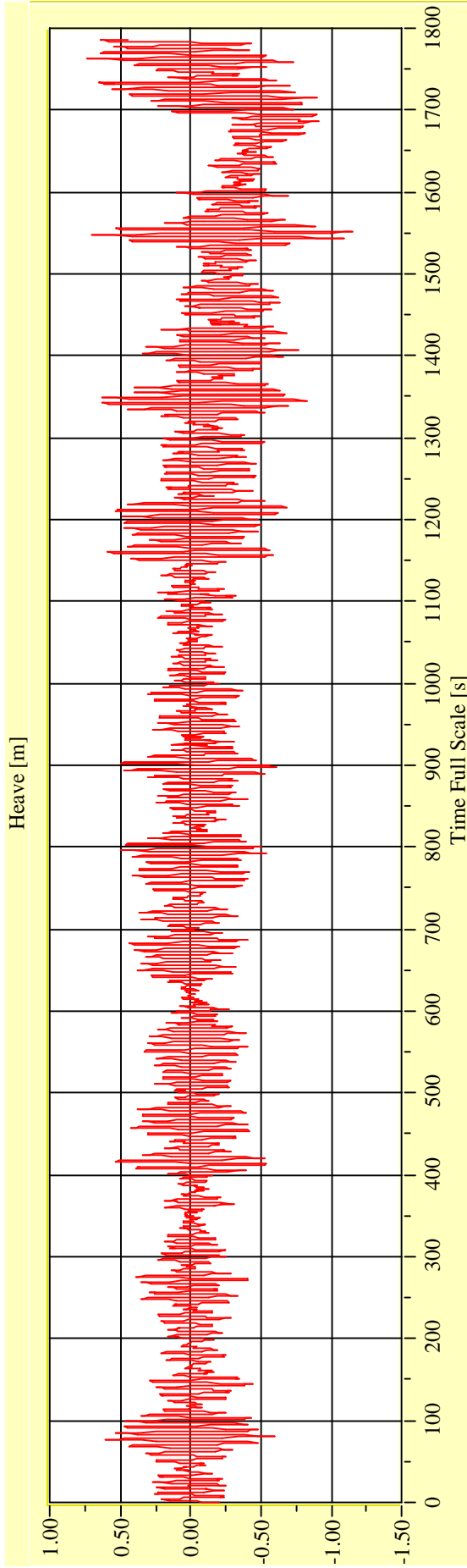
Vienna Model Basin

Model No. 2461

Test No. 29739-12

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin

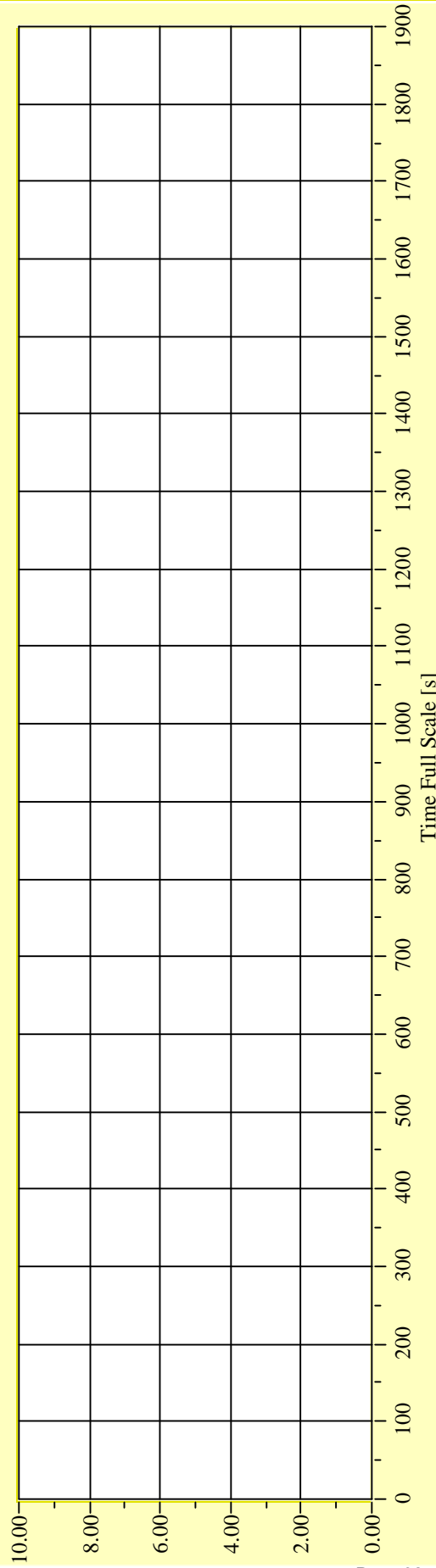
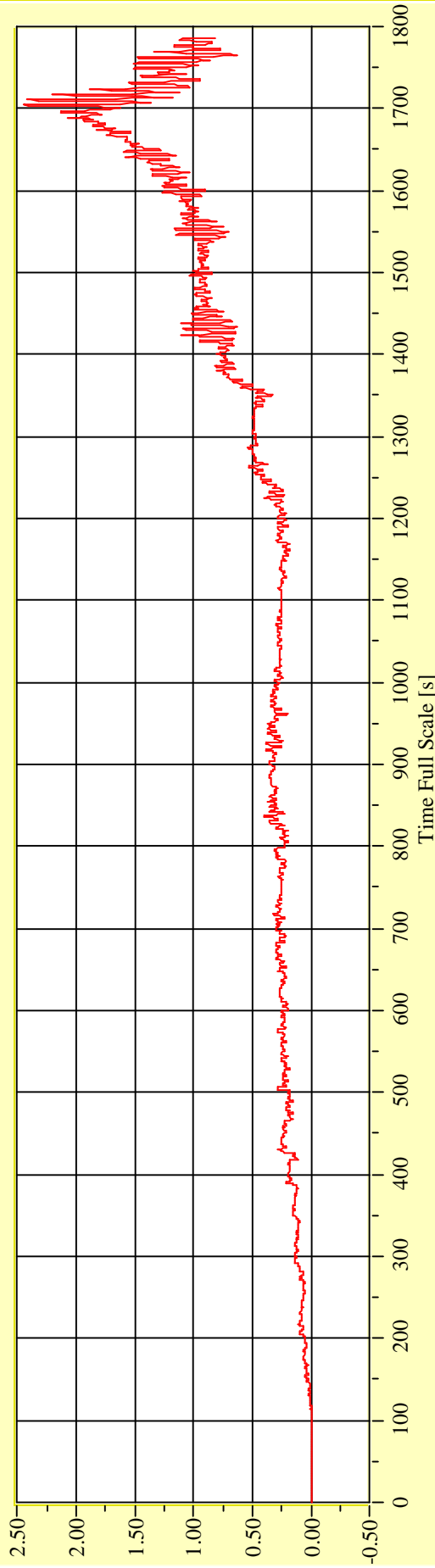
Model No. 2461

Test No. 29739-12

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3

Water Level on Car Deck (Ship) [m]



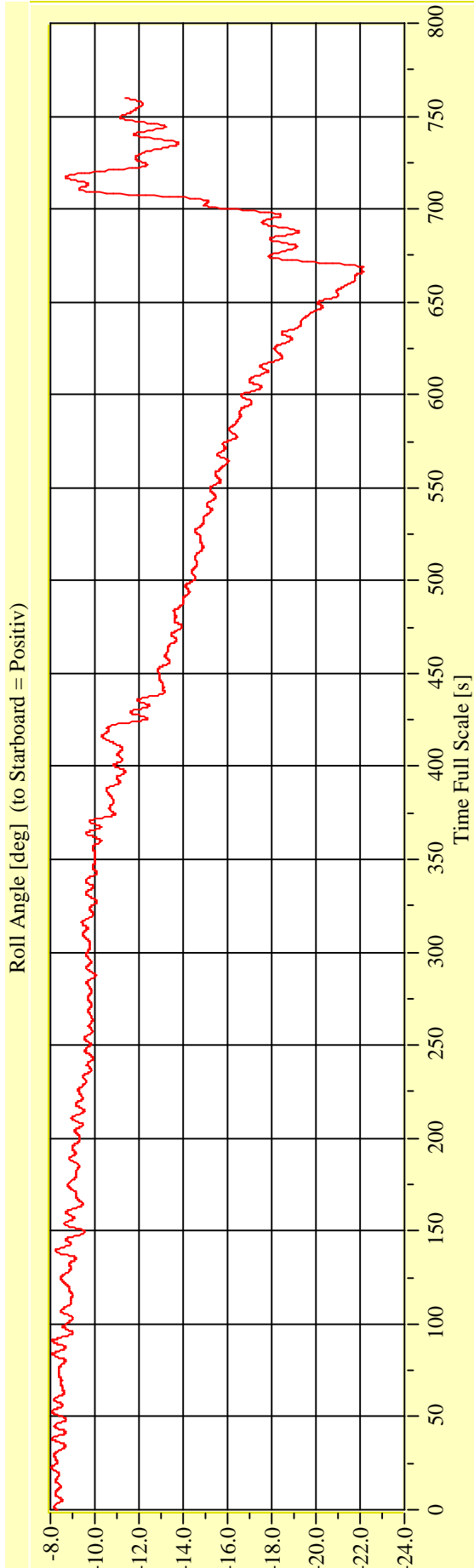
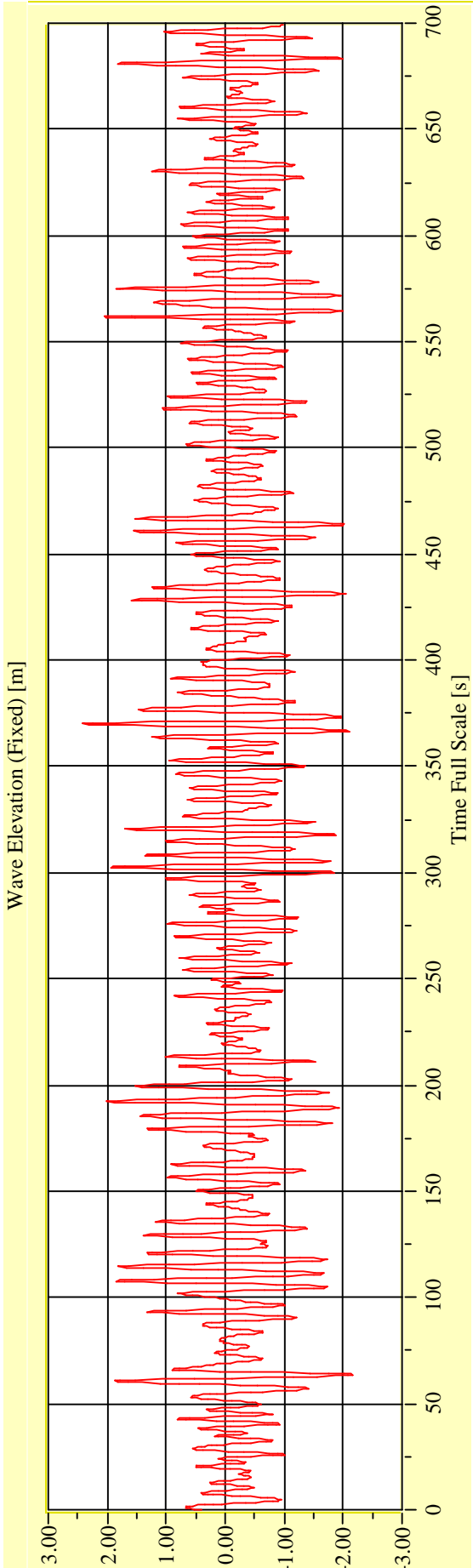
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

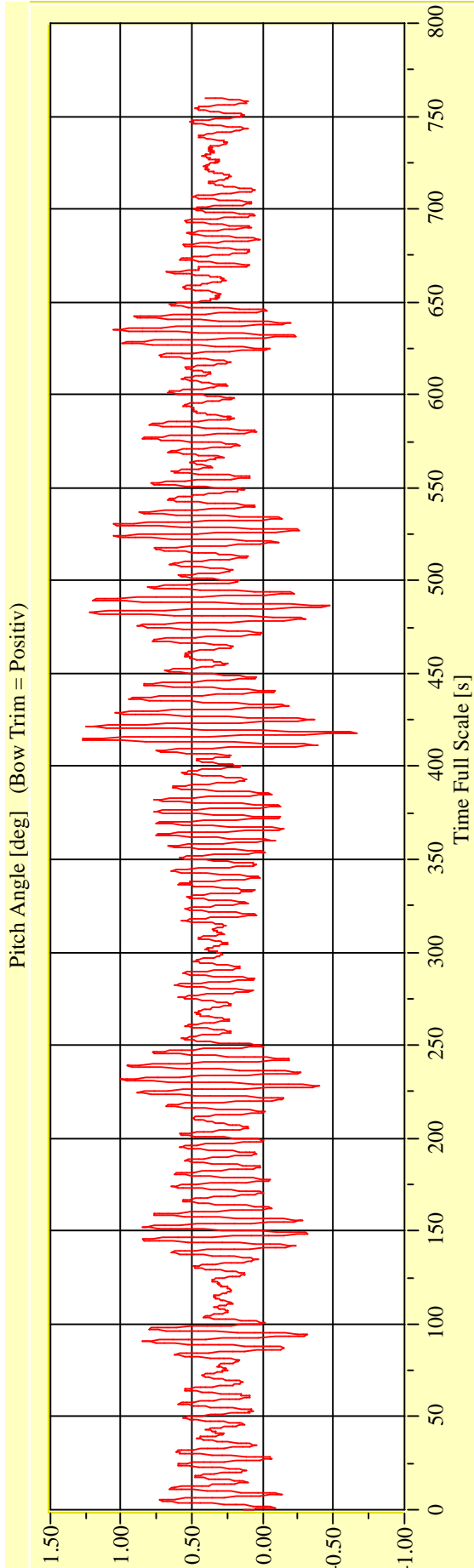
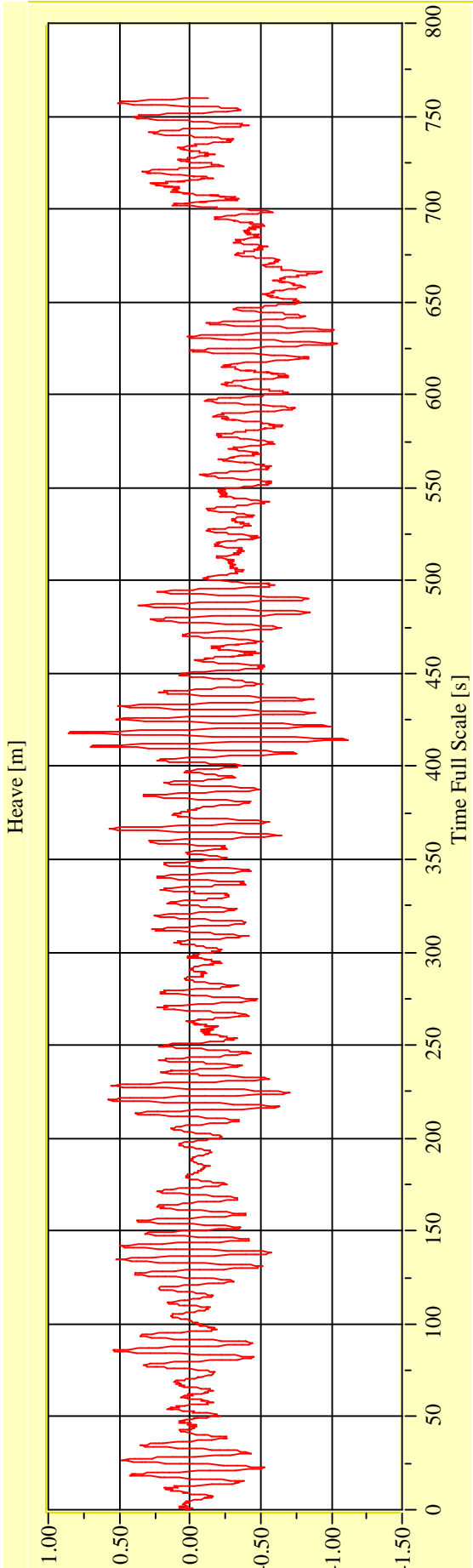
Vienna Model Basin **Model No. 2461** **Test No. 29739-13** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-13** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



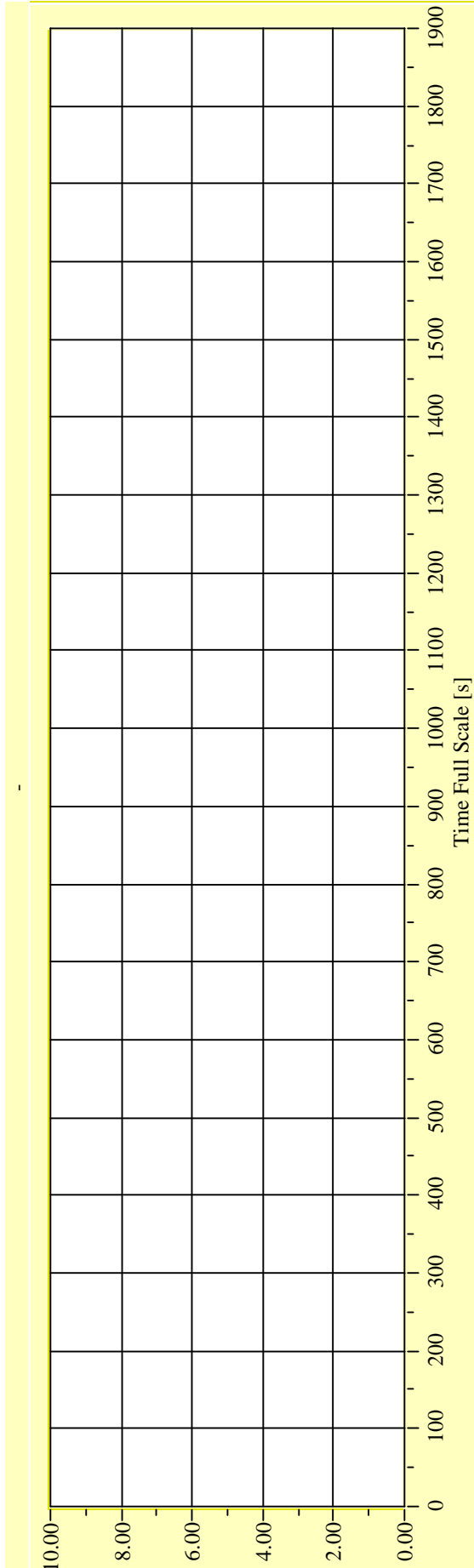
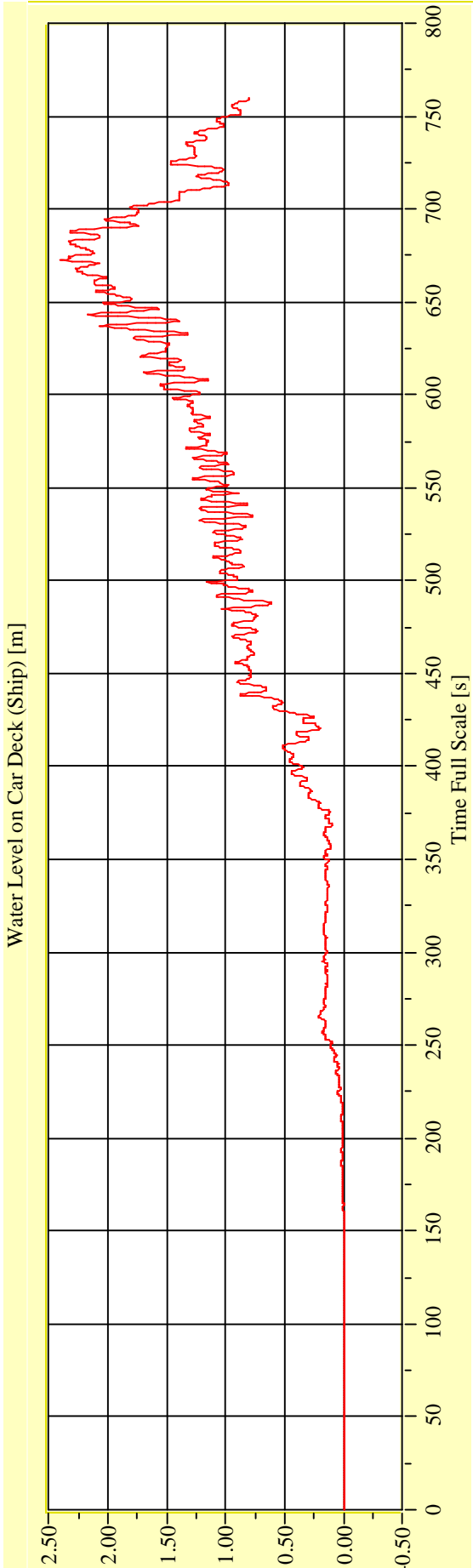
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

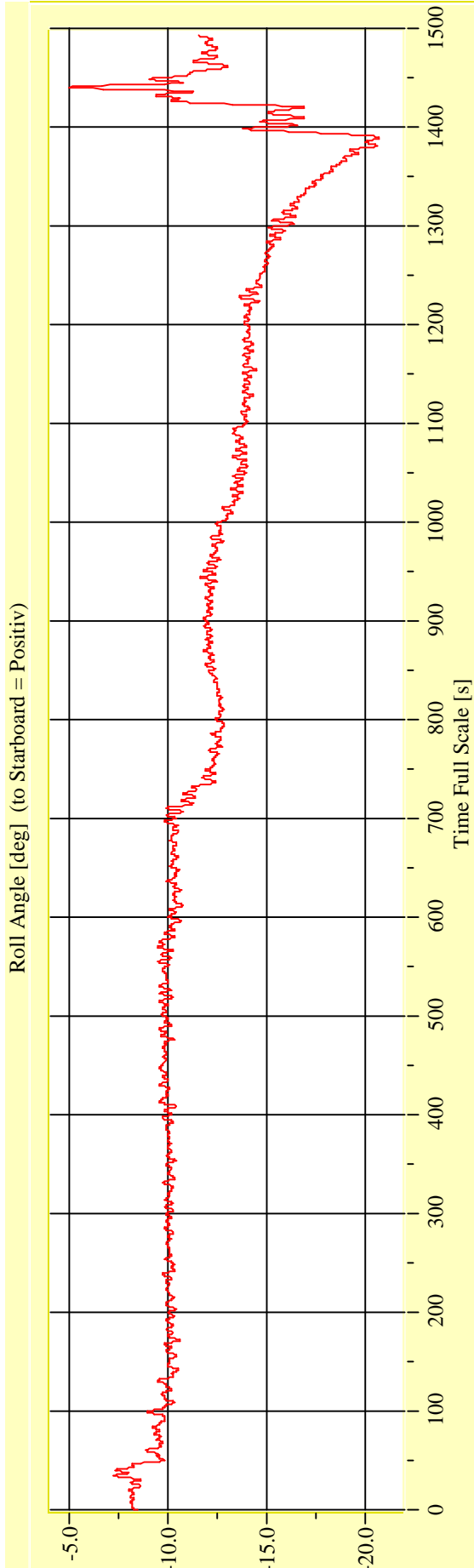
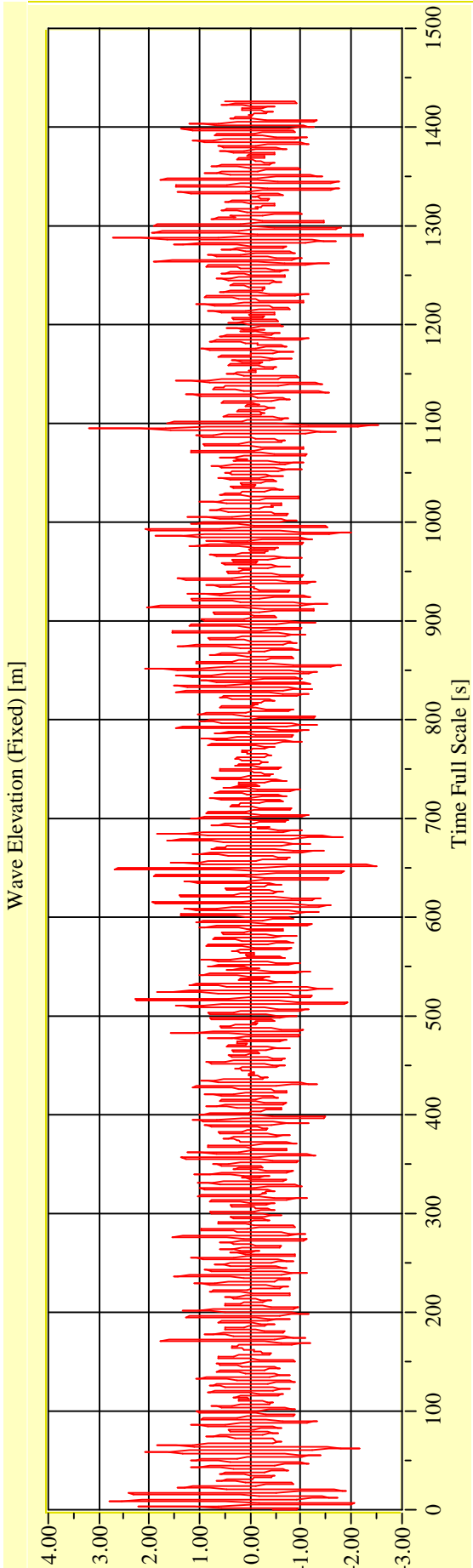
Vienna Model Basin **Model No. 2461** **Test No. 29739-13** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-14** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

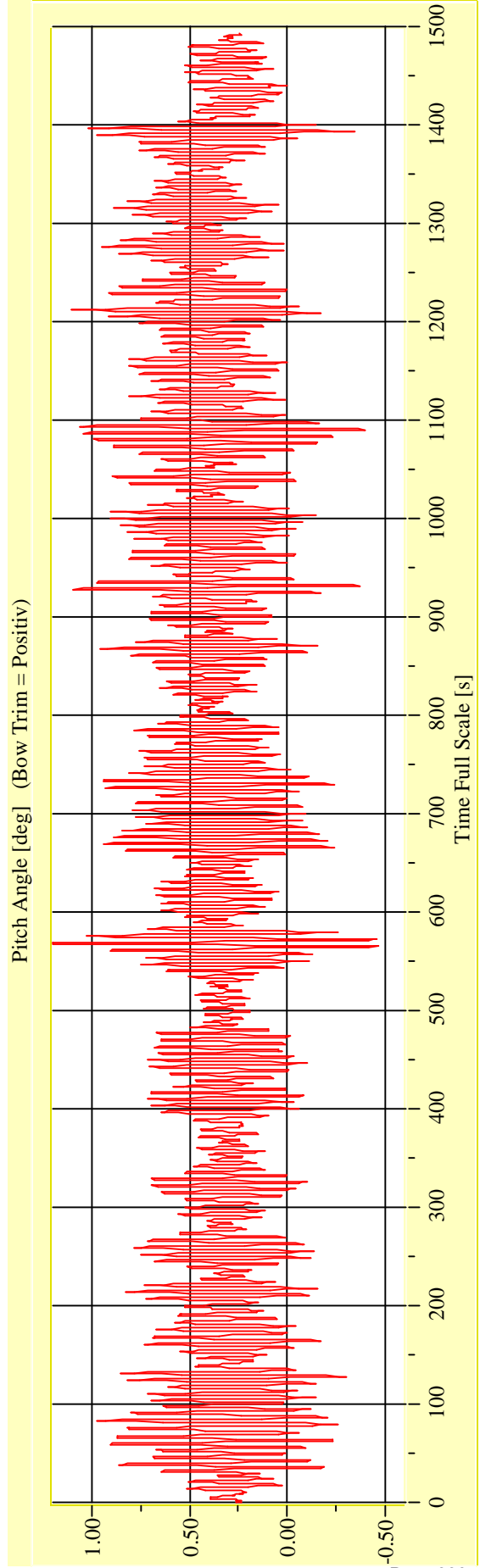
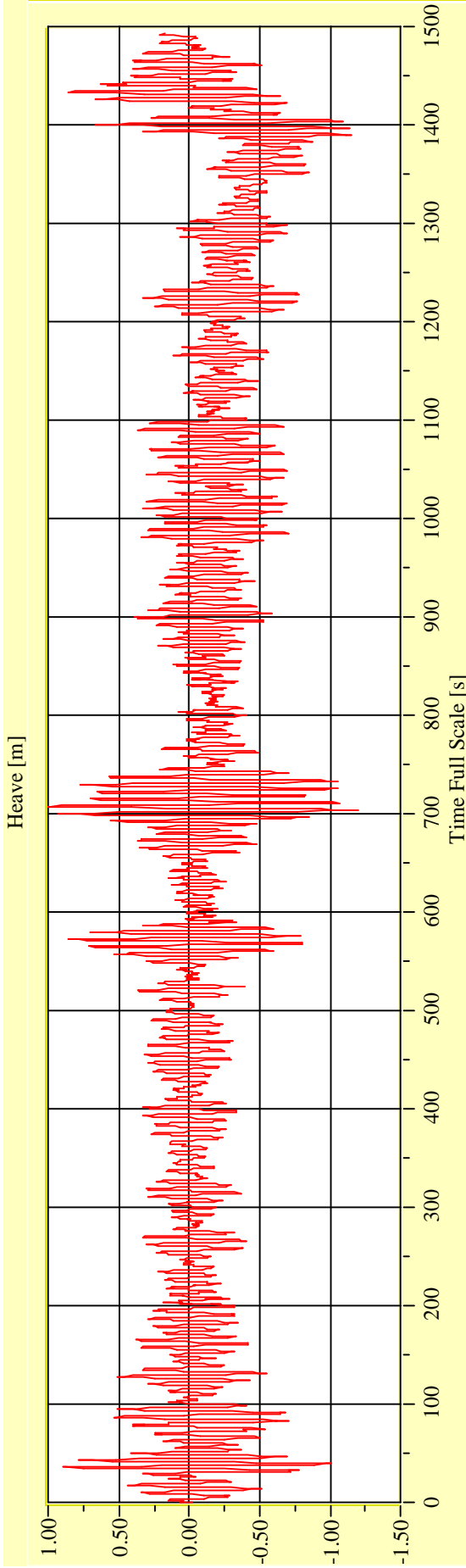
Vienna Model Basin

Model No. 2461

Test No. 29739-14

gamma = 3,3

Target Waves: Hs = 2,90 m Tp = 6,8118 s



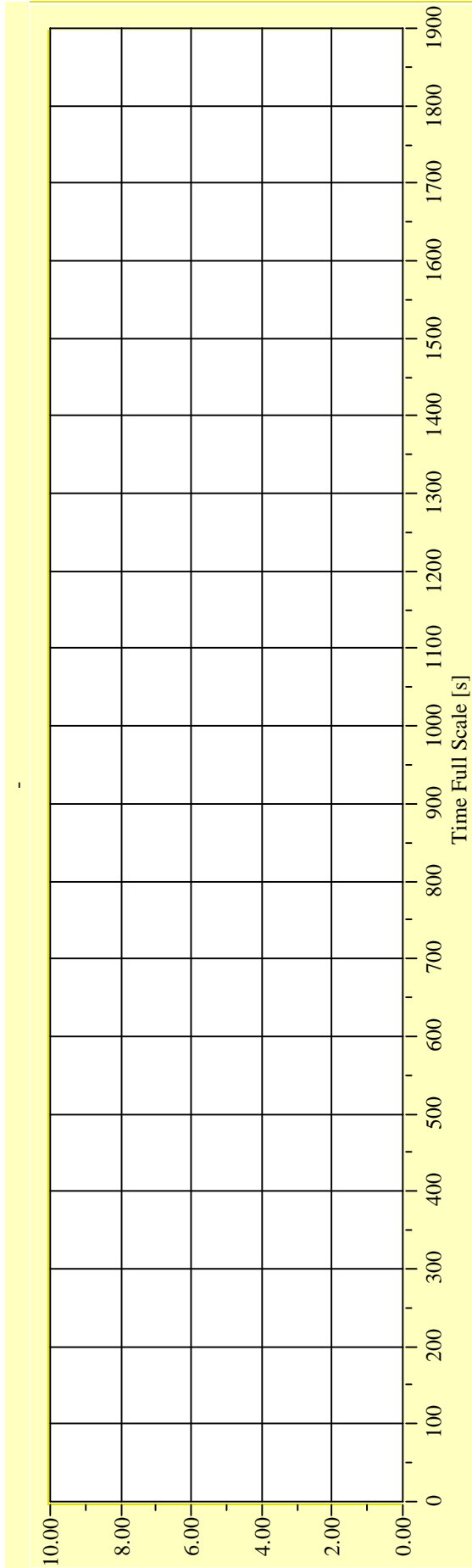
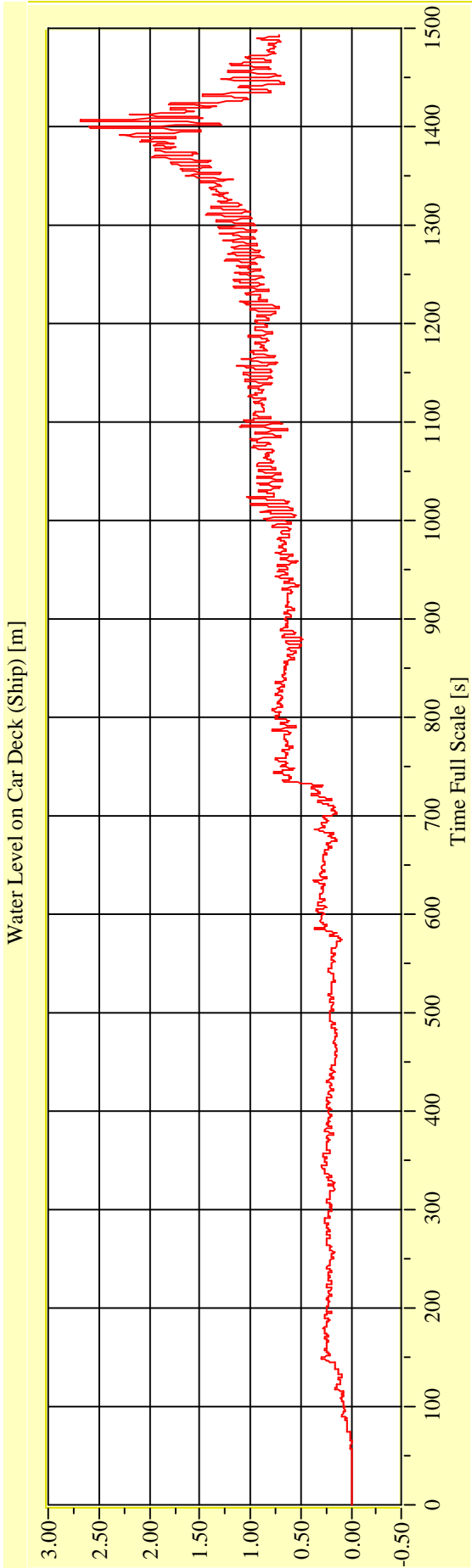
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

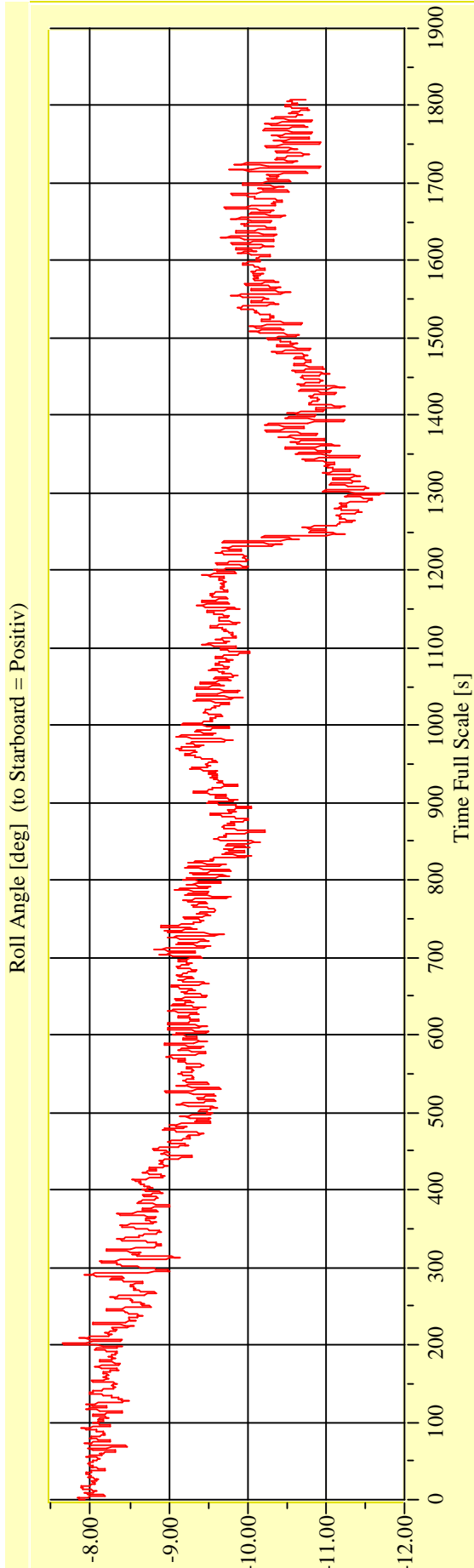
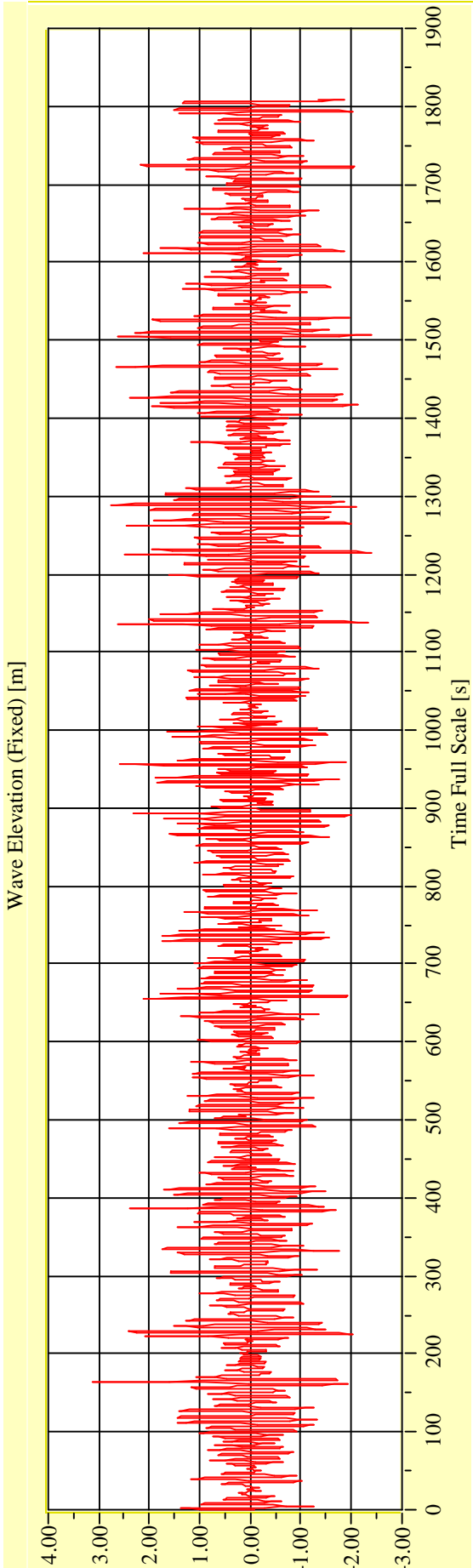
Vienna Model Basin **Model No. 2461** **Test No. 29739-14** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

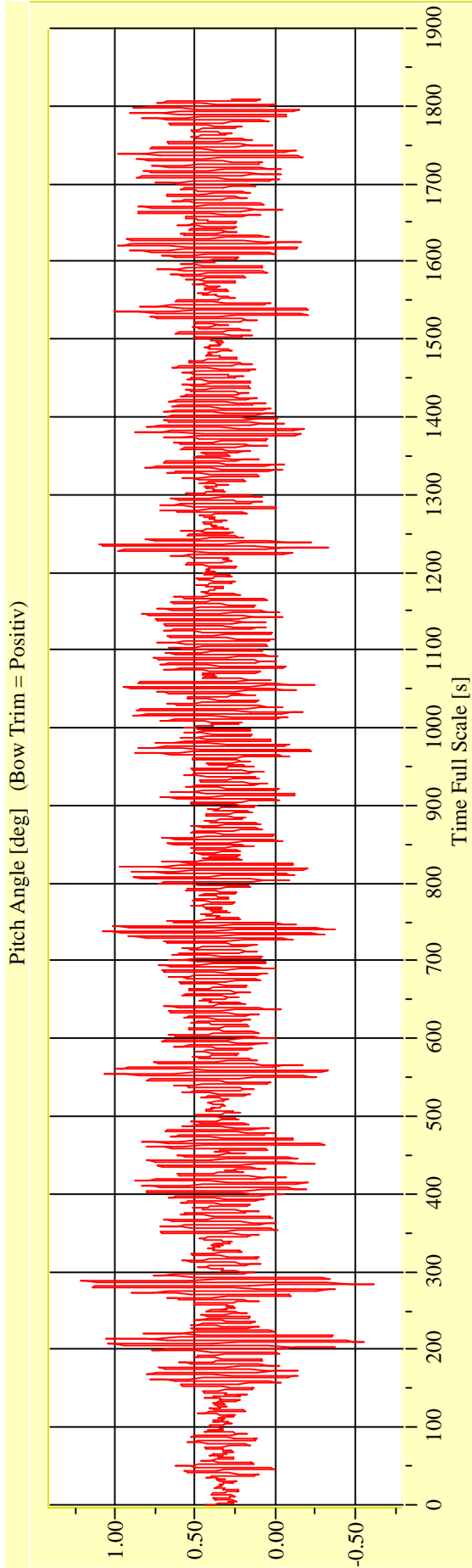
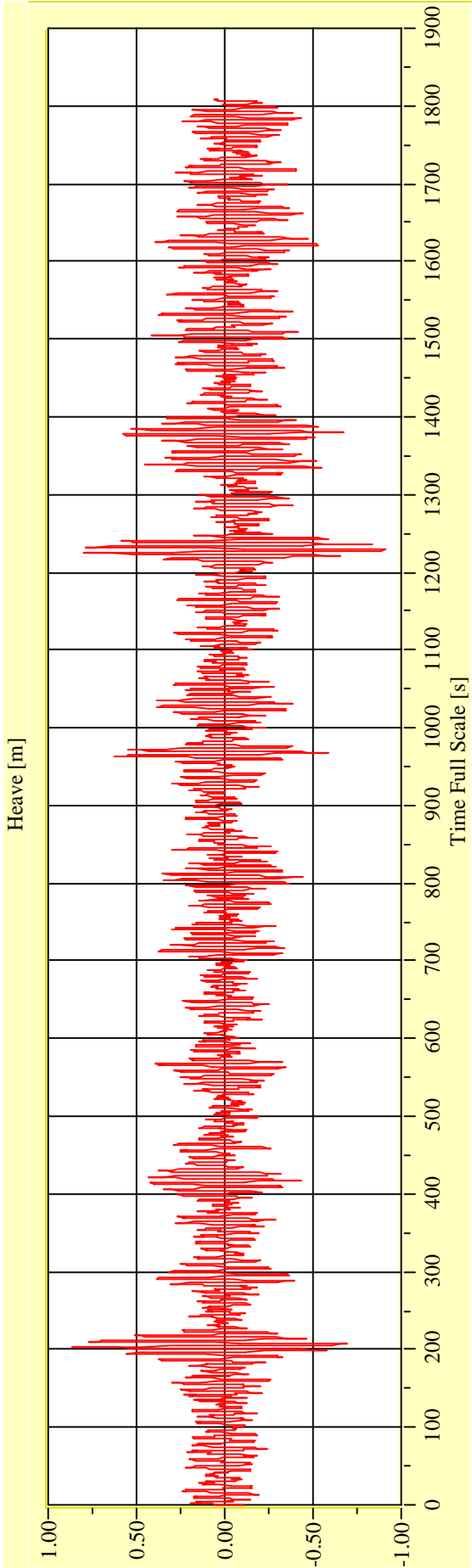
Vienna Model Basin **Model No. 2461** **Test No. 29739-15** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-15** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



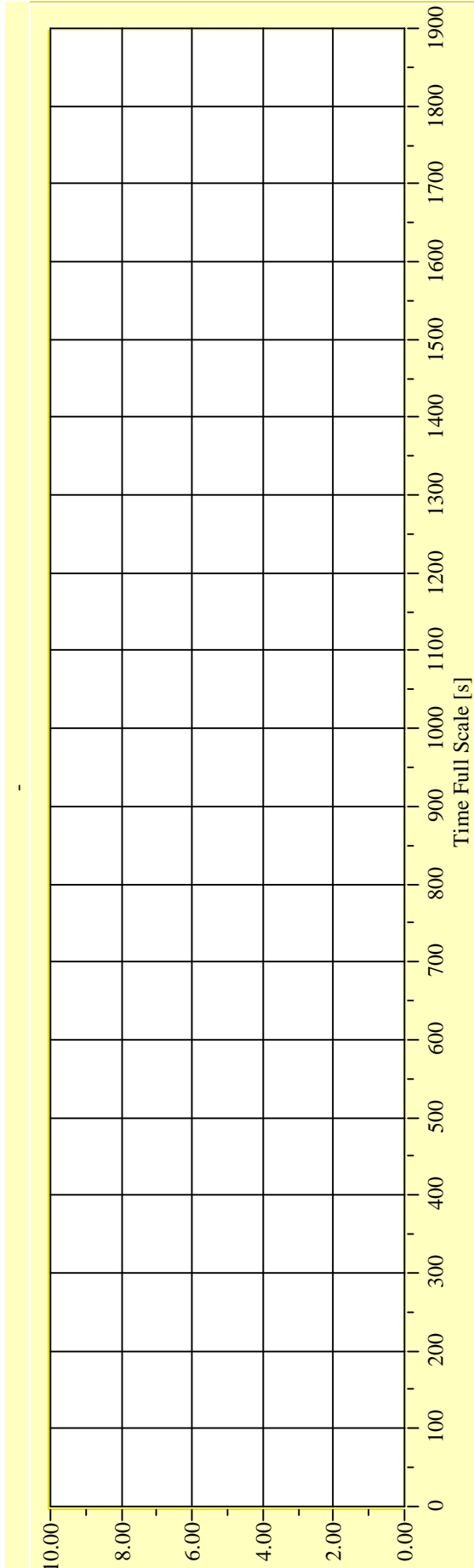
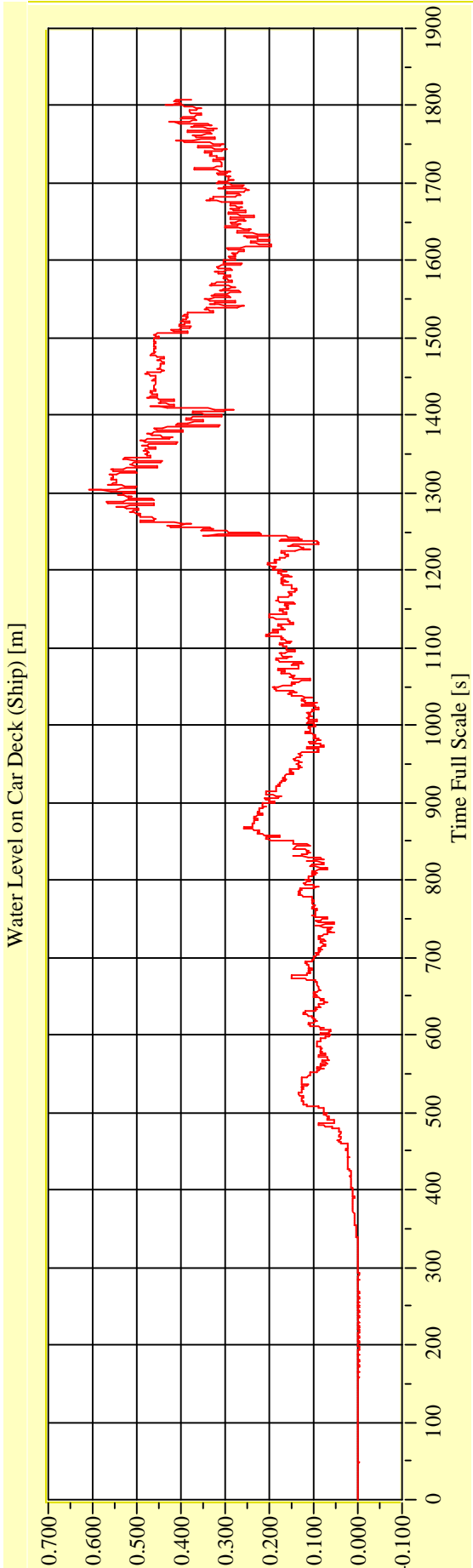
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-15** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



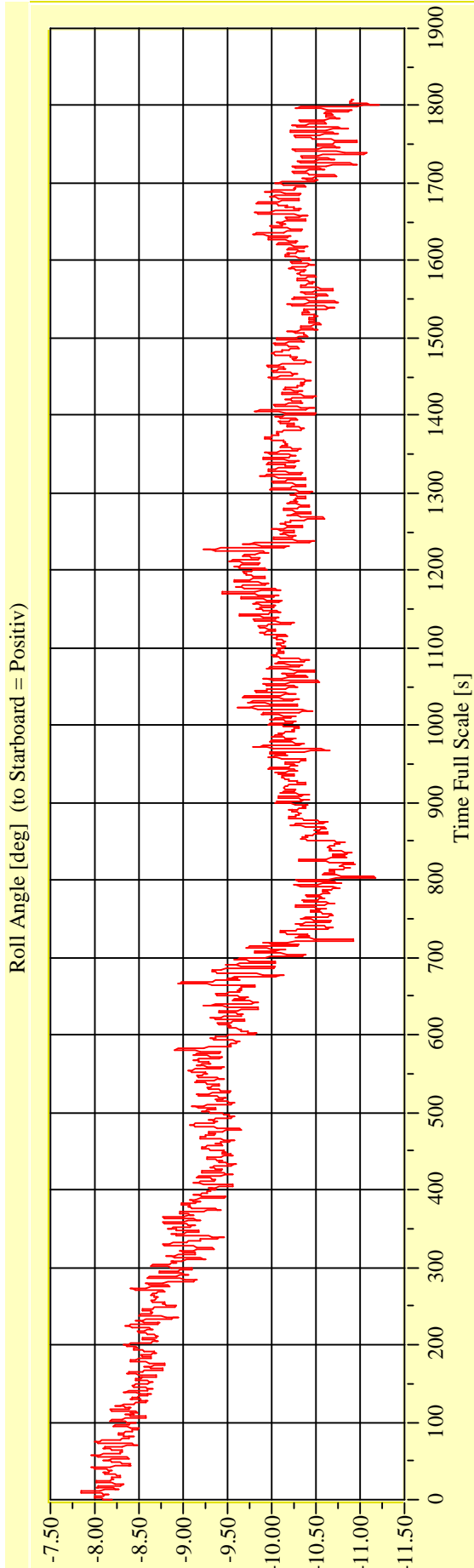
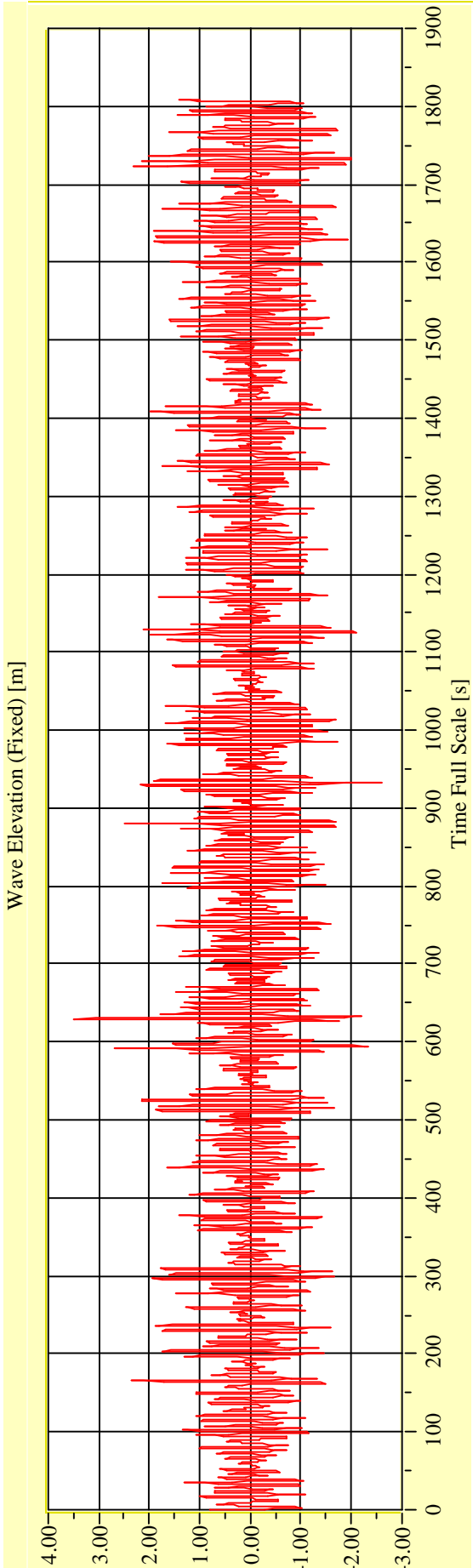
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

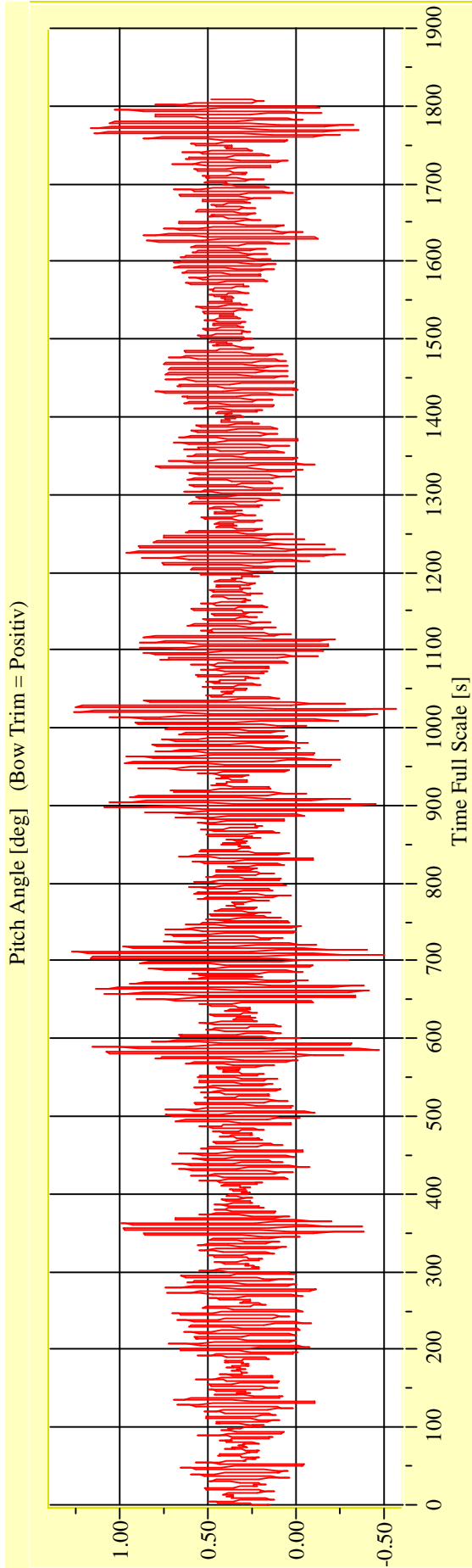
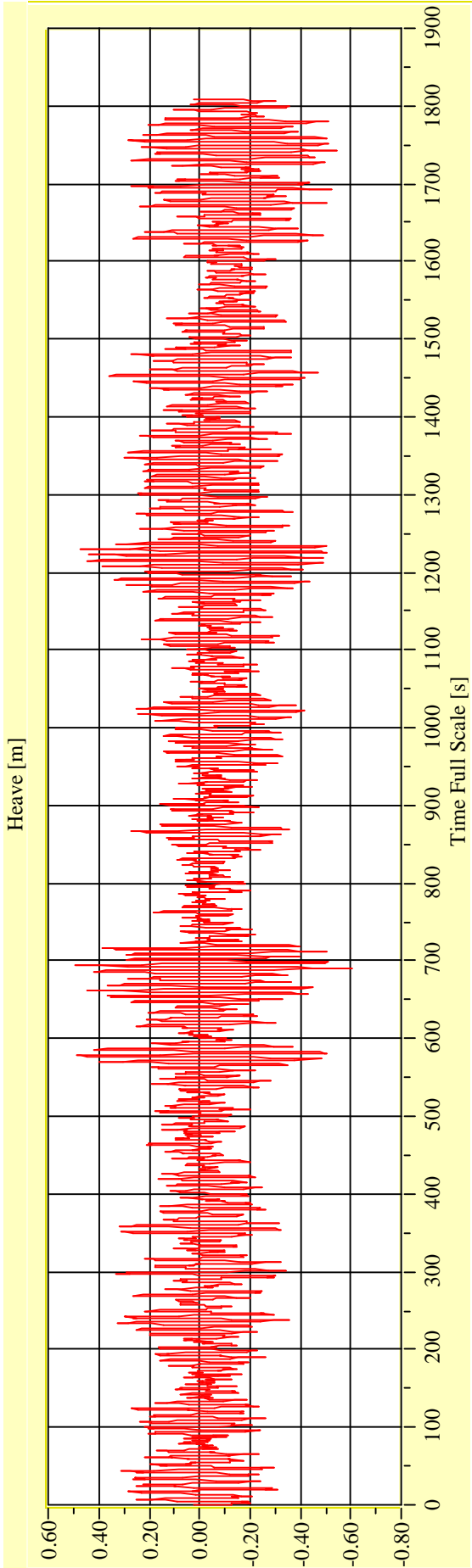
Vienna Model Basin **Model No. 2461** **Test No. 29739-16** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 01.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-16** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



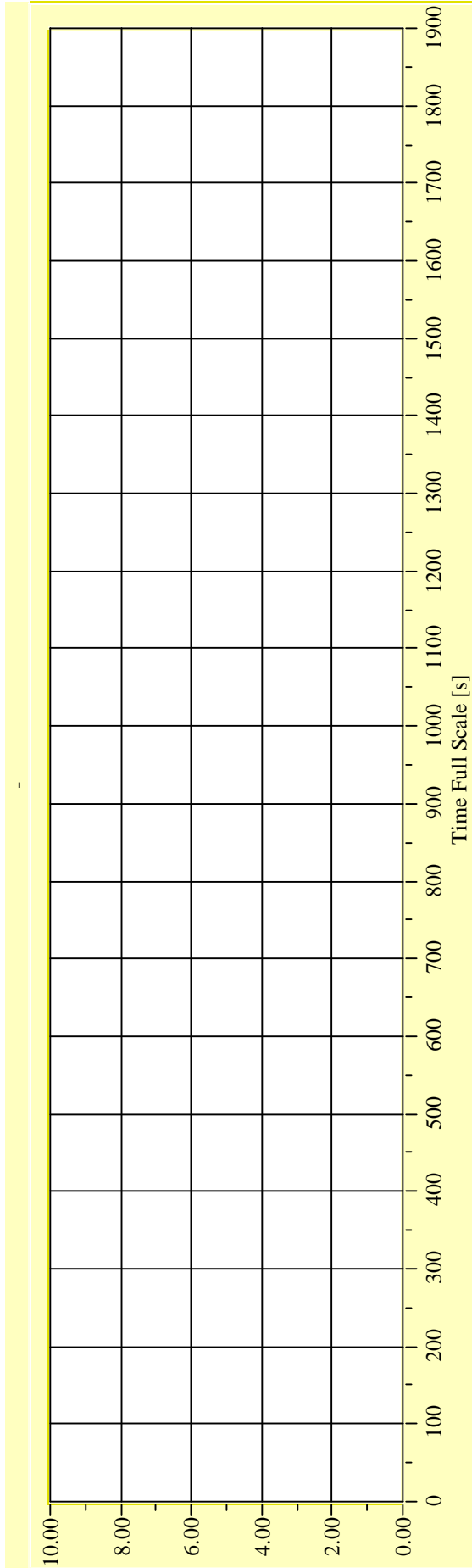
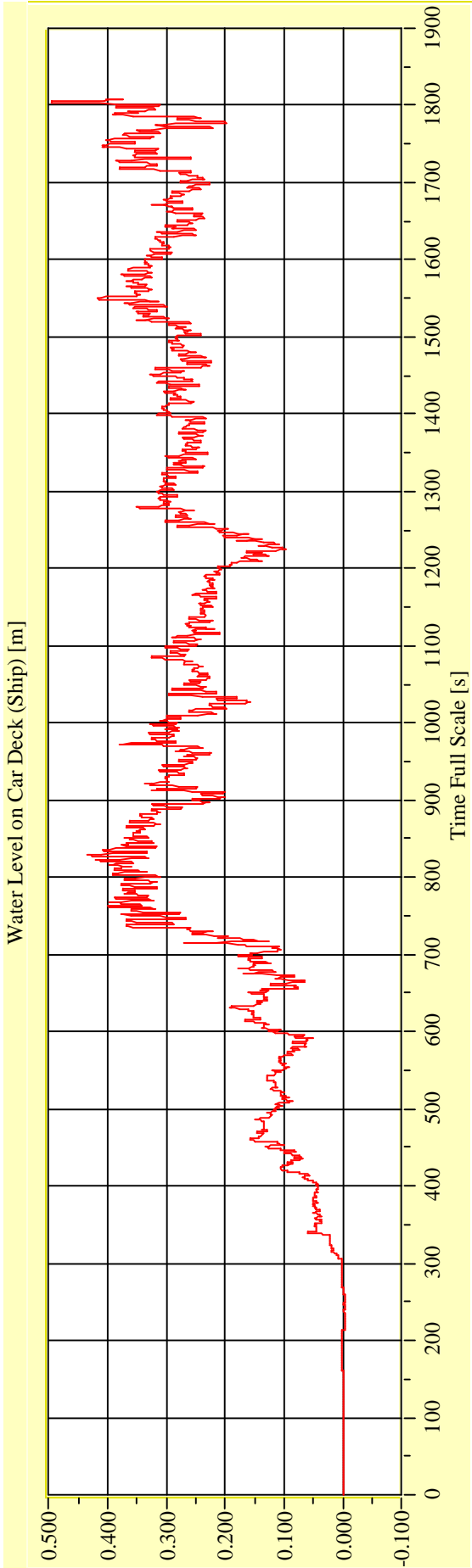
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-16** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



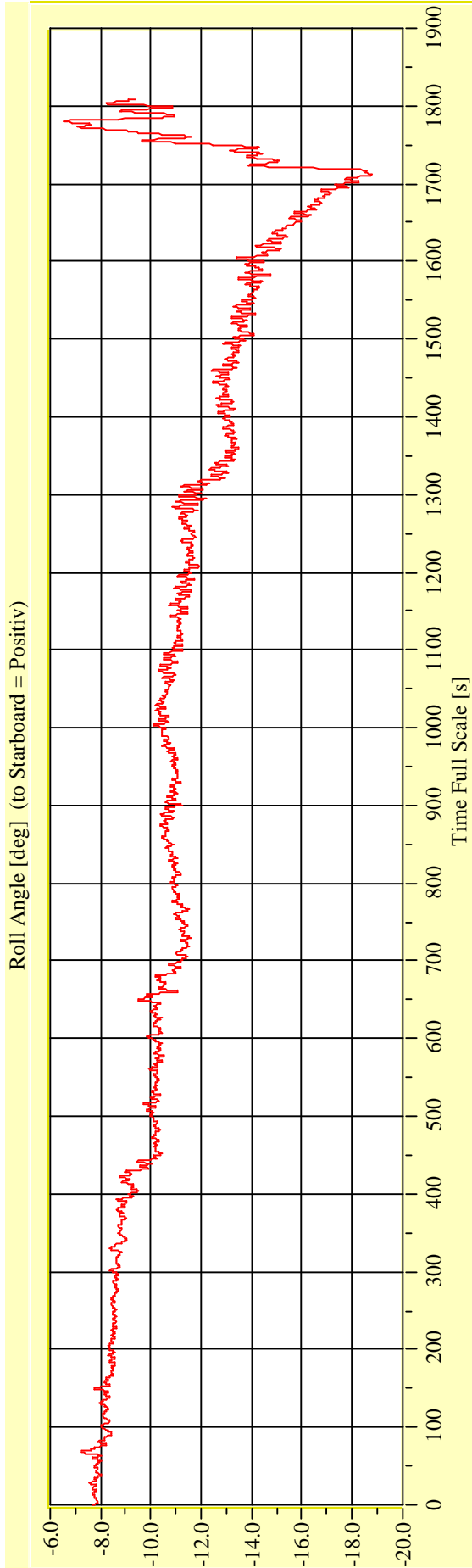
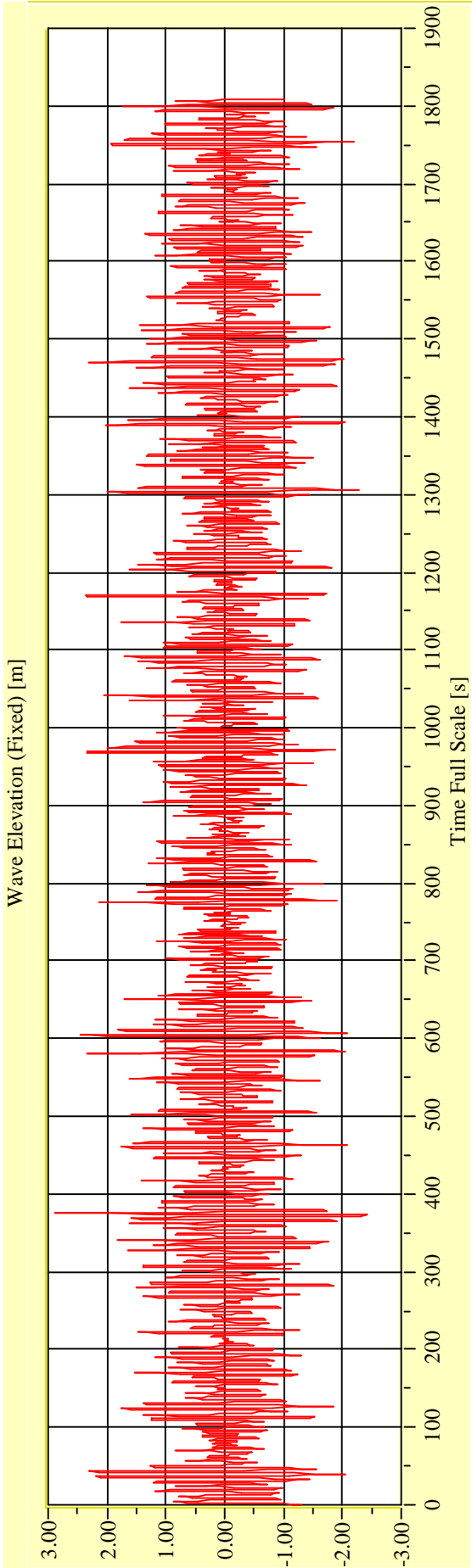
Date: 01.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-17** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

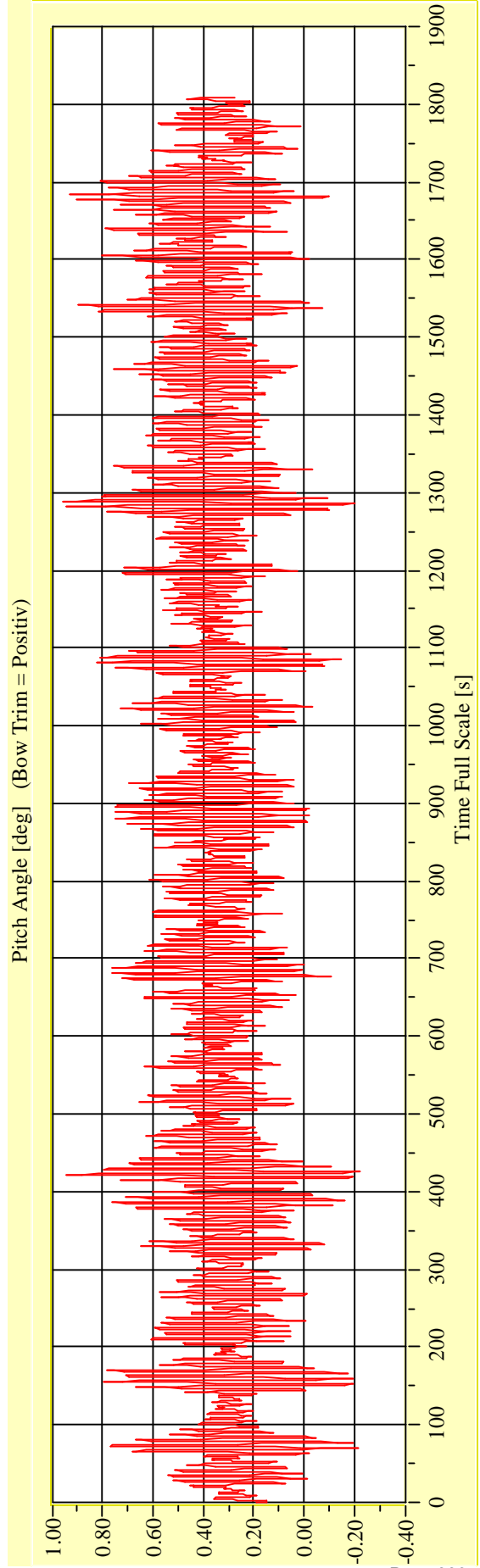
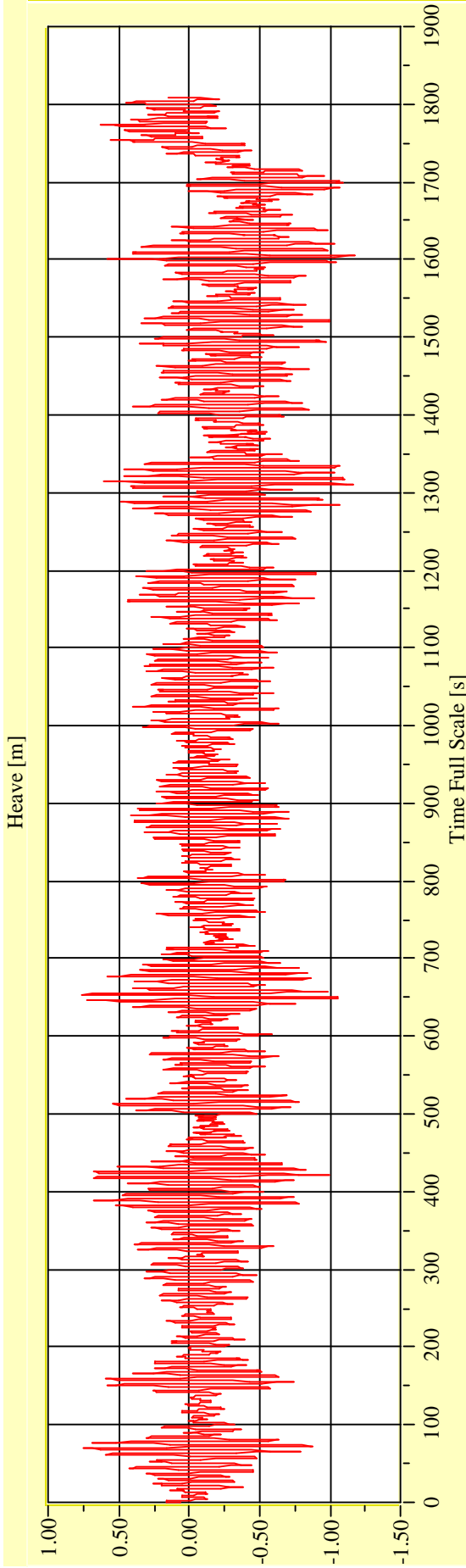
Vienna Model Basin

Model No. 2461

Test No. 29739-17

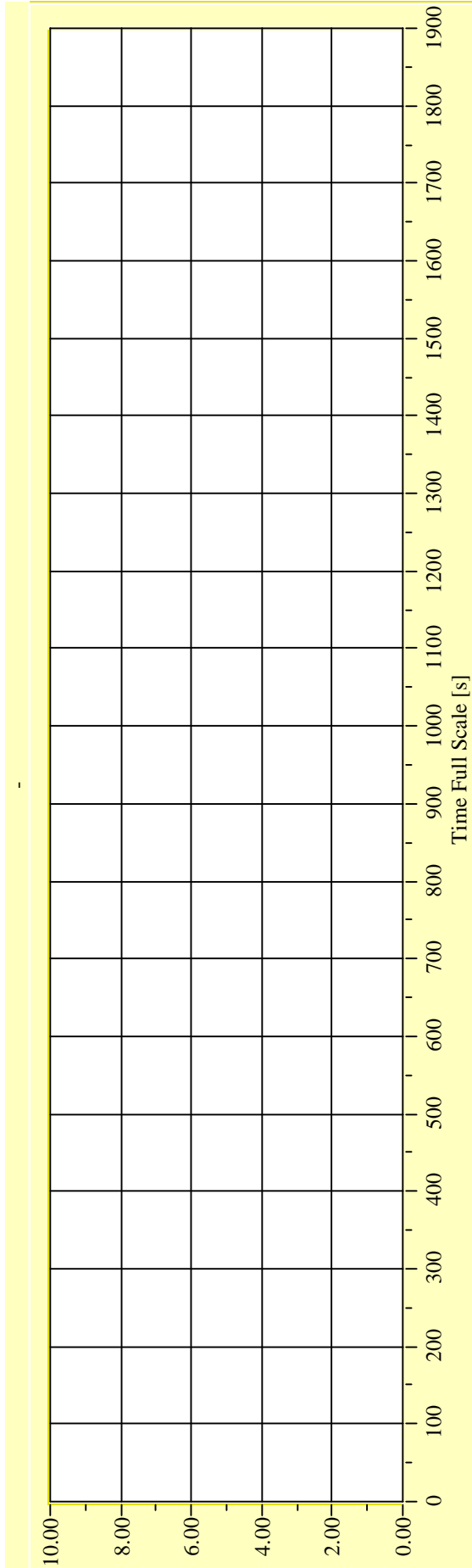
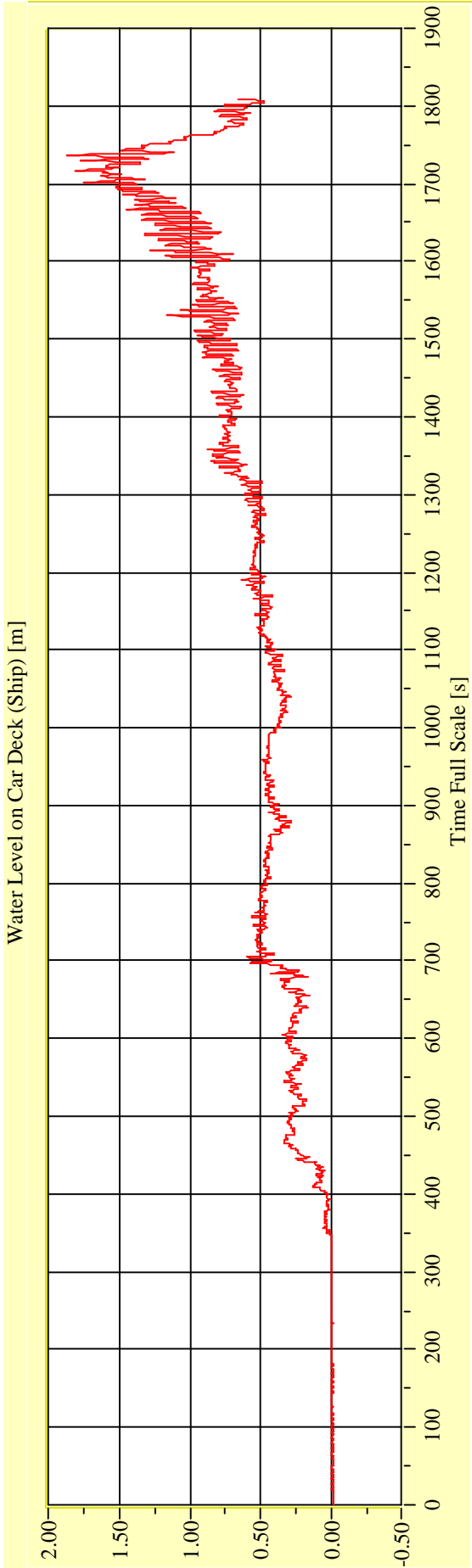
Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-17** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



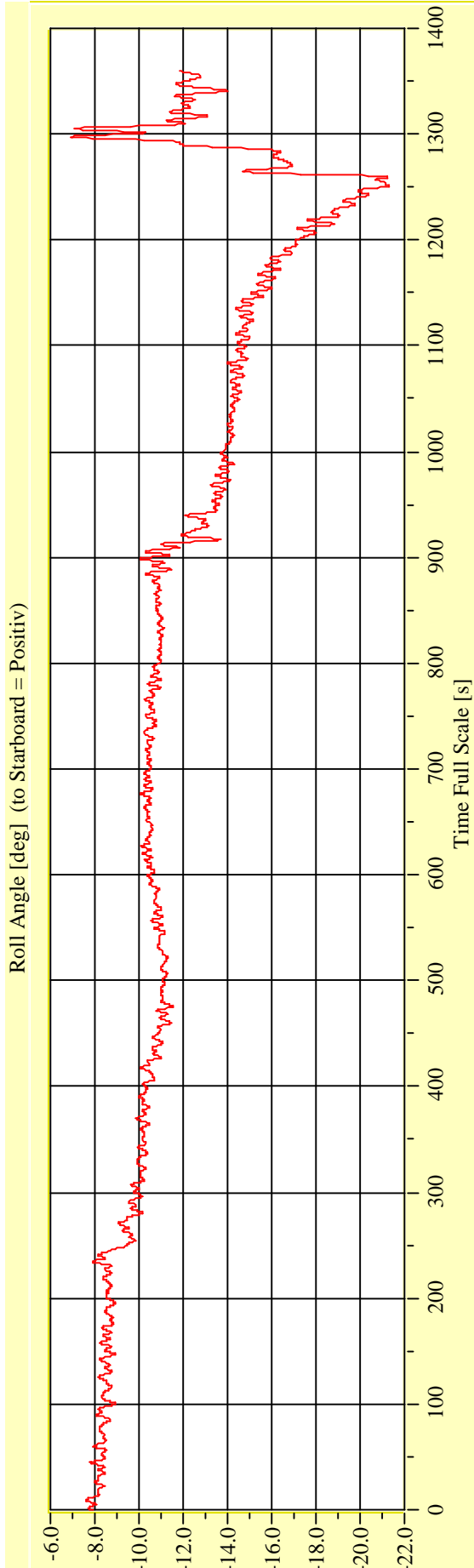
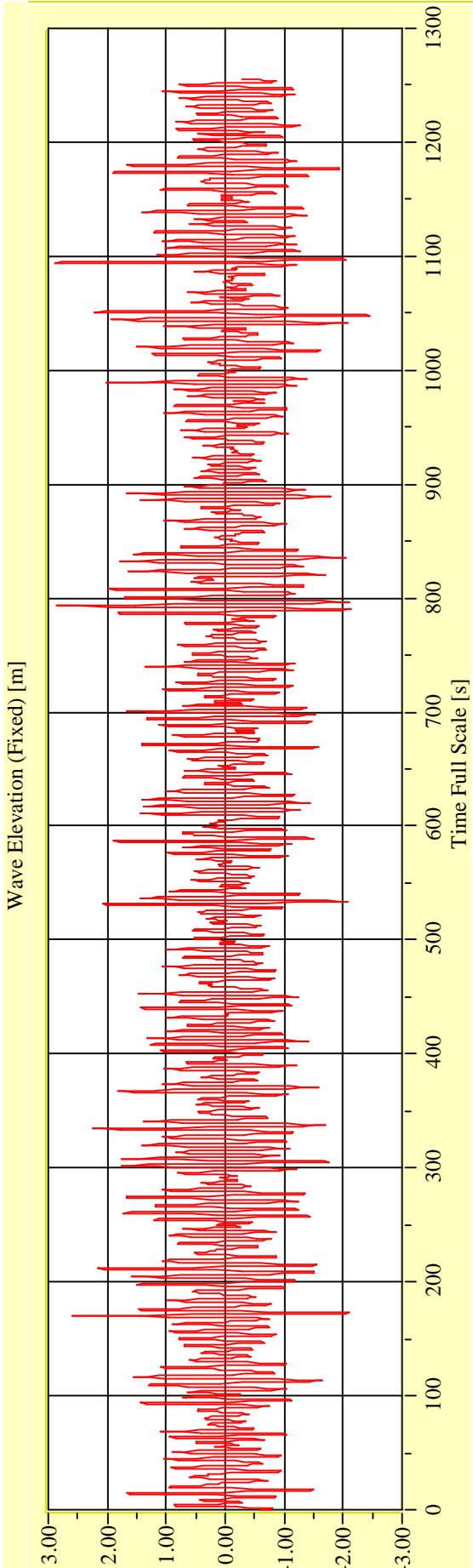
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

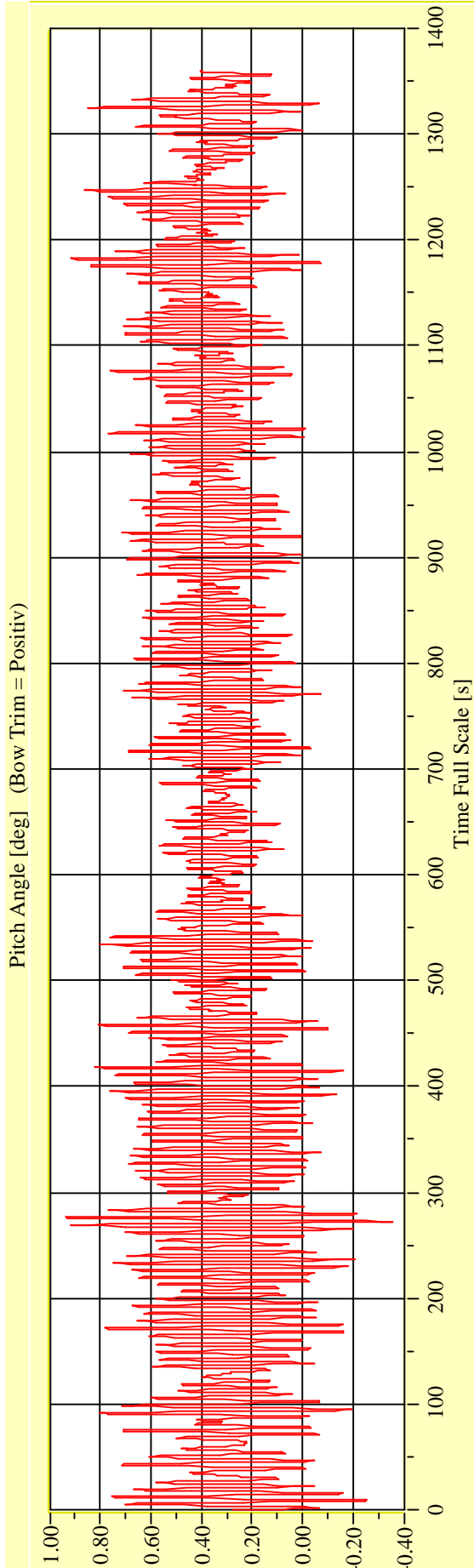
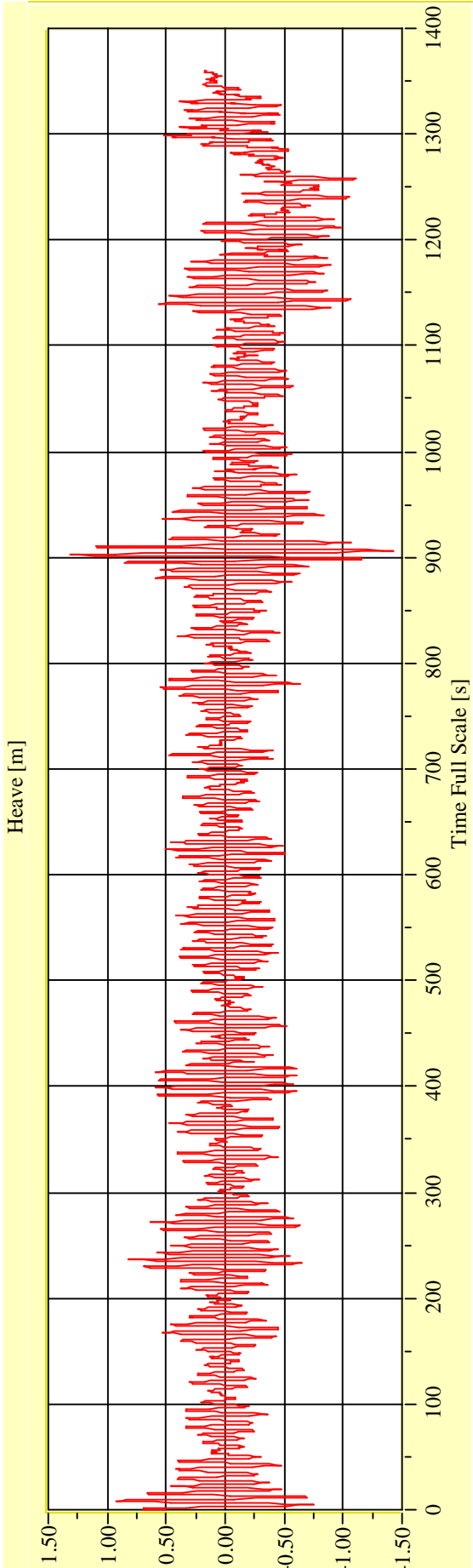
Vienna Model Basin **Model No. 2461** **Test No. 29739-18** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-18** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



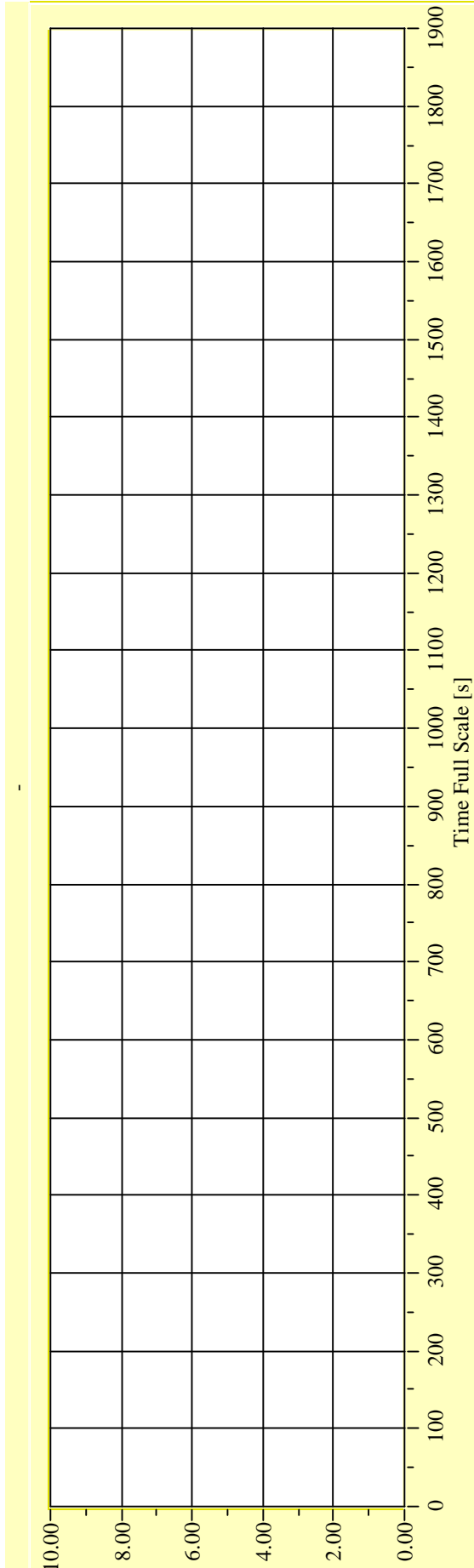
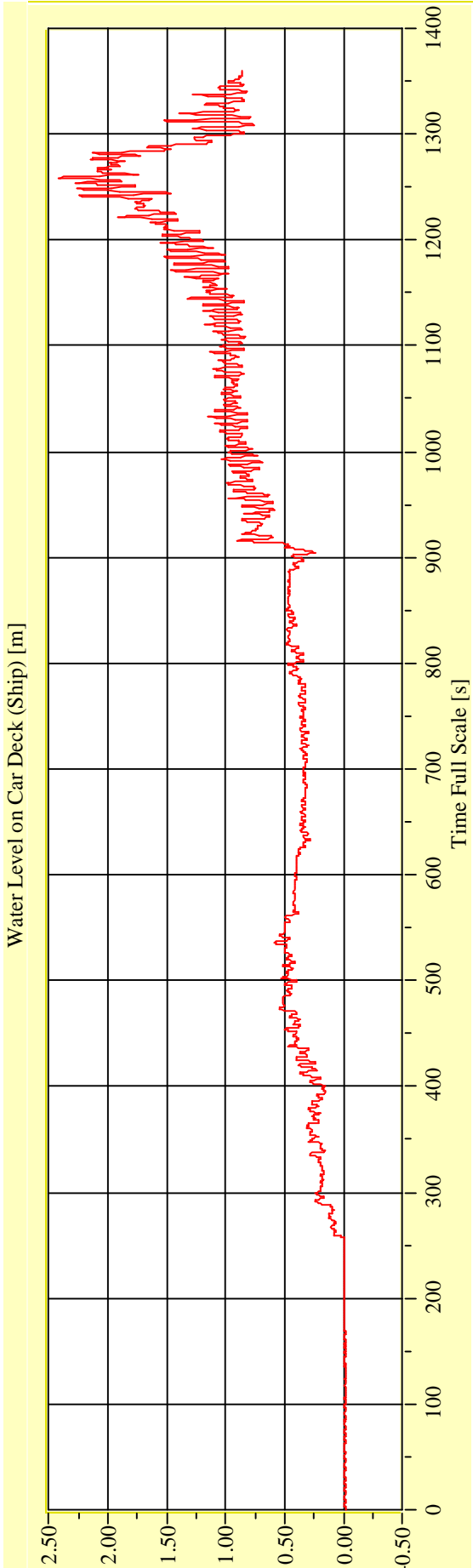
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

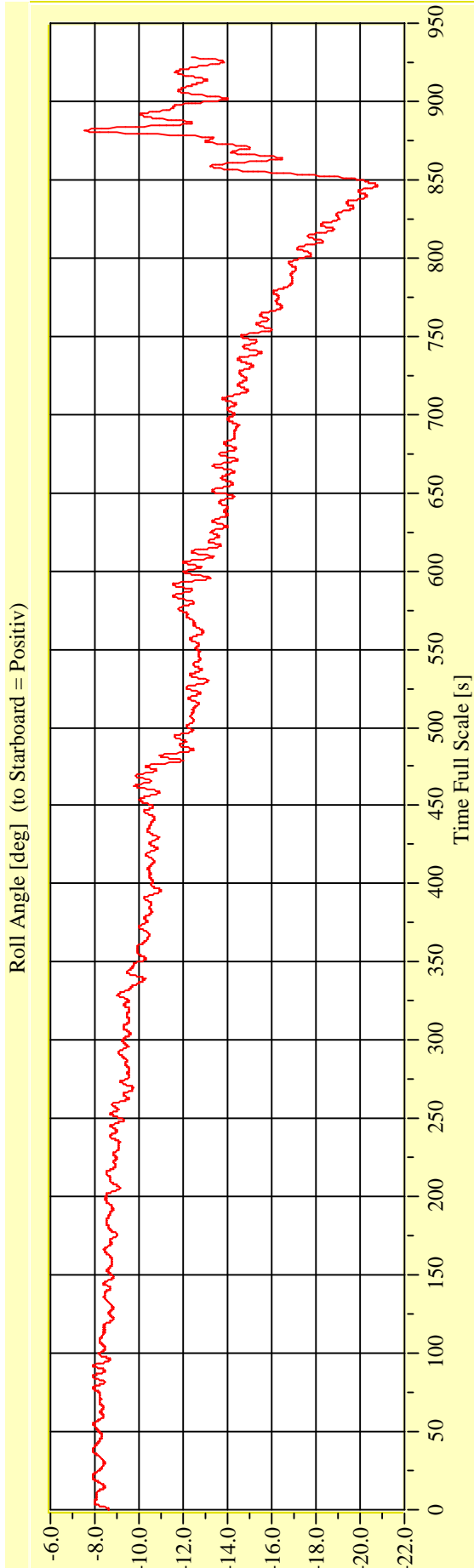
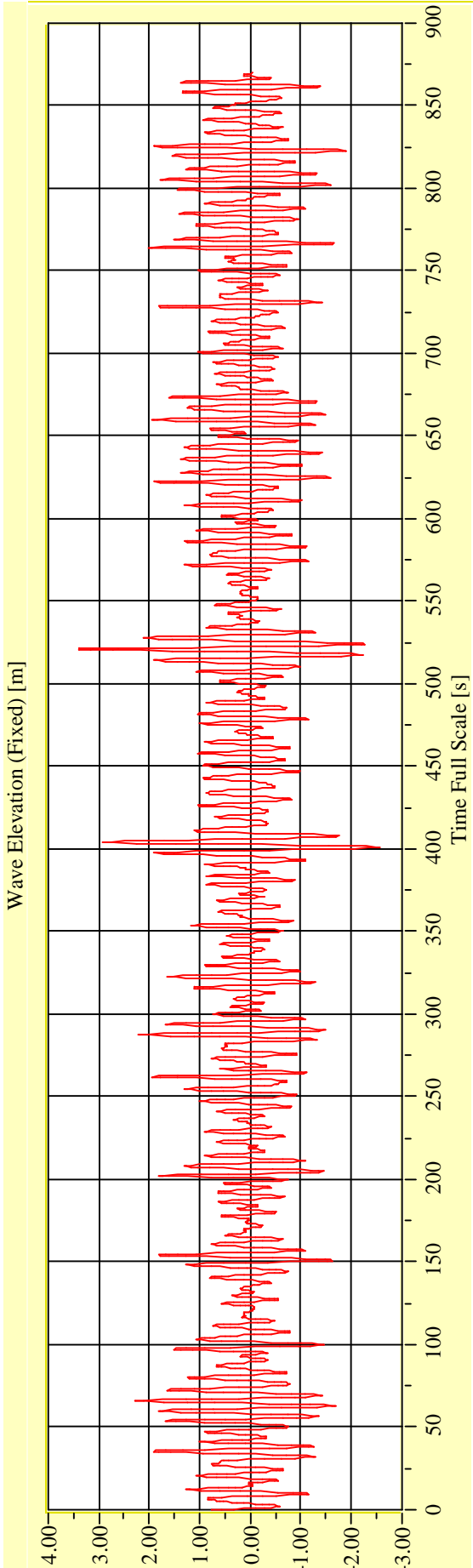
Vienna Model Basin **Model No. 2461** **Test No. 29739-18** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-19** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

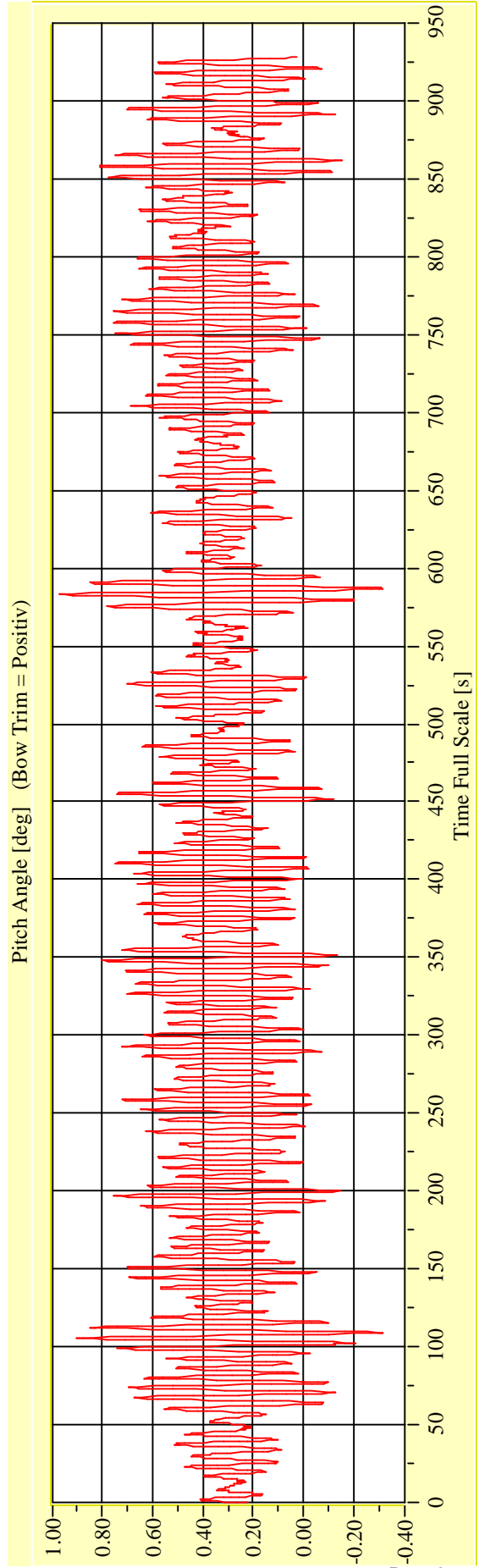
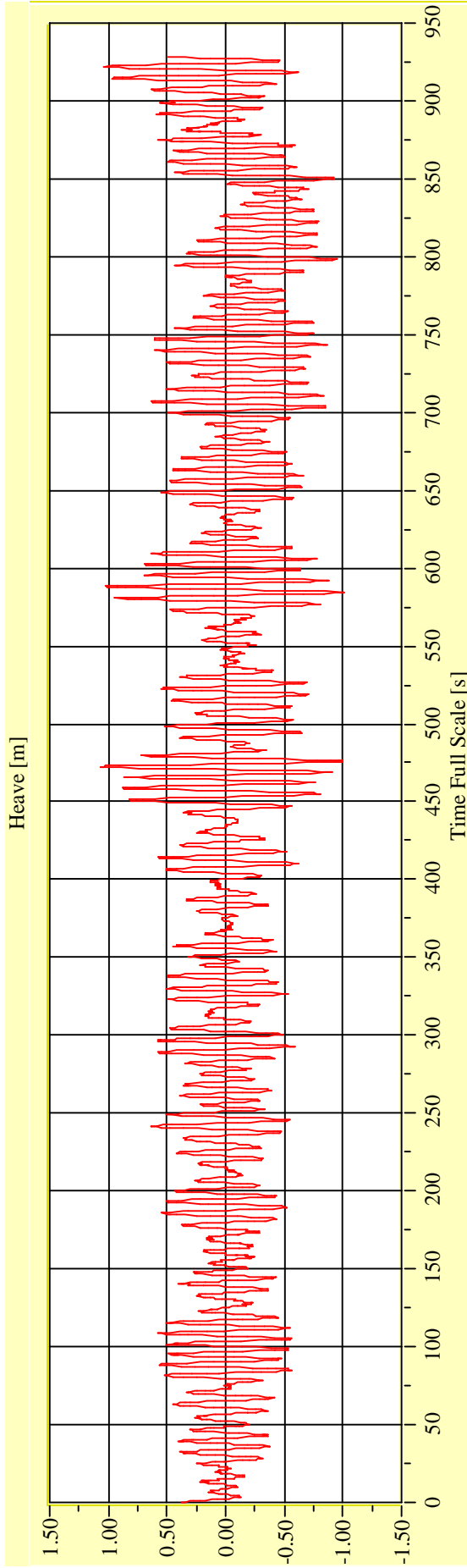
Vienna Model Basin

Model No. 2461

Test No. 29739-19

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



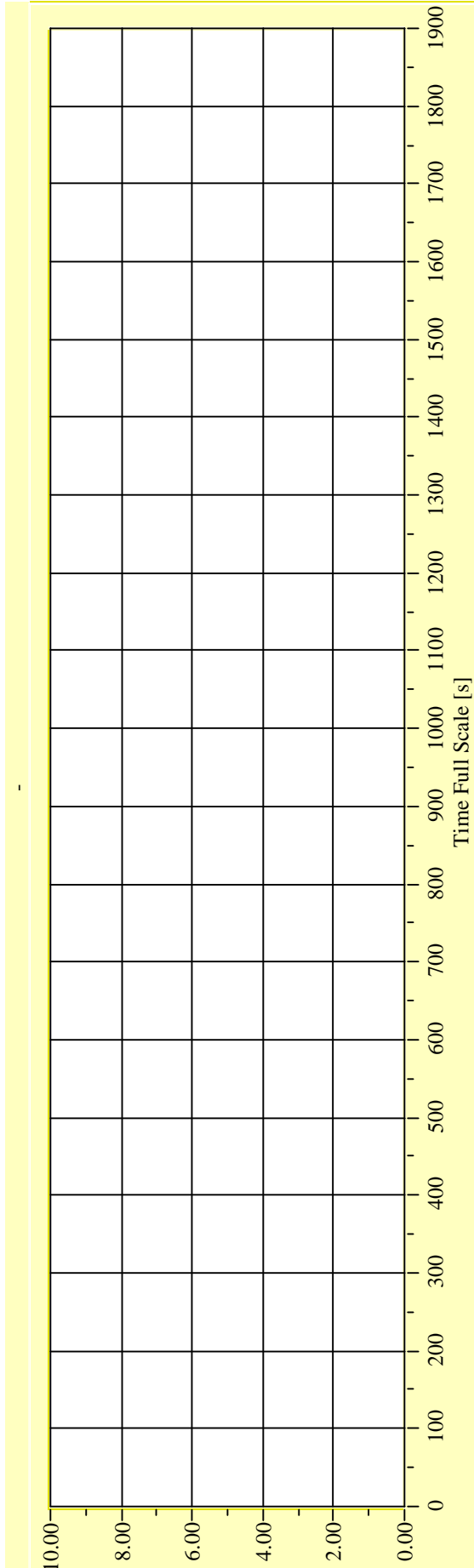
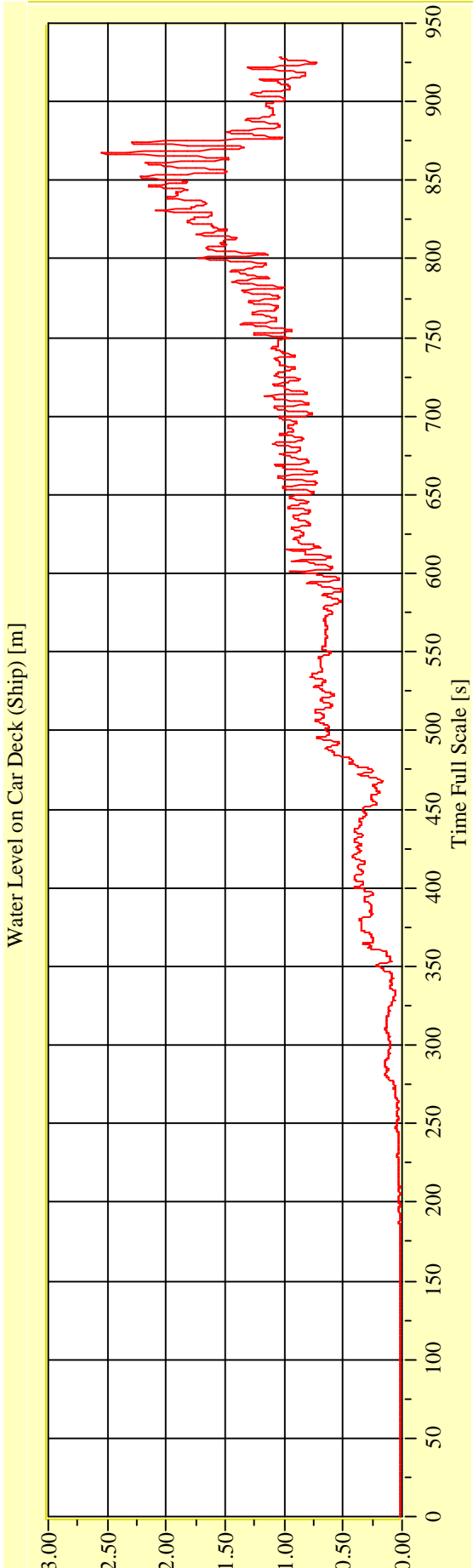
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-19** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



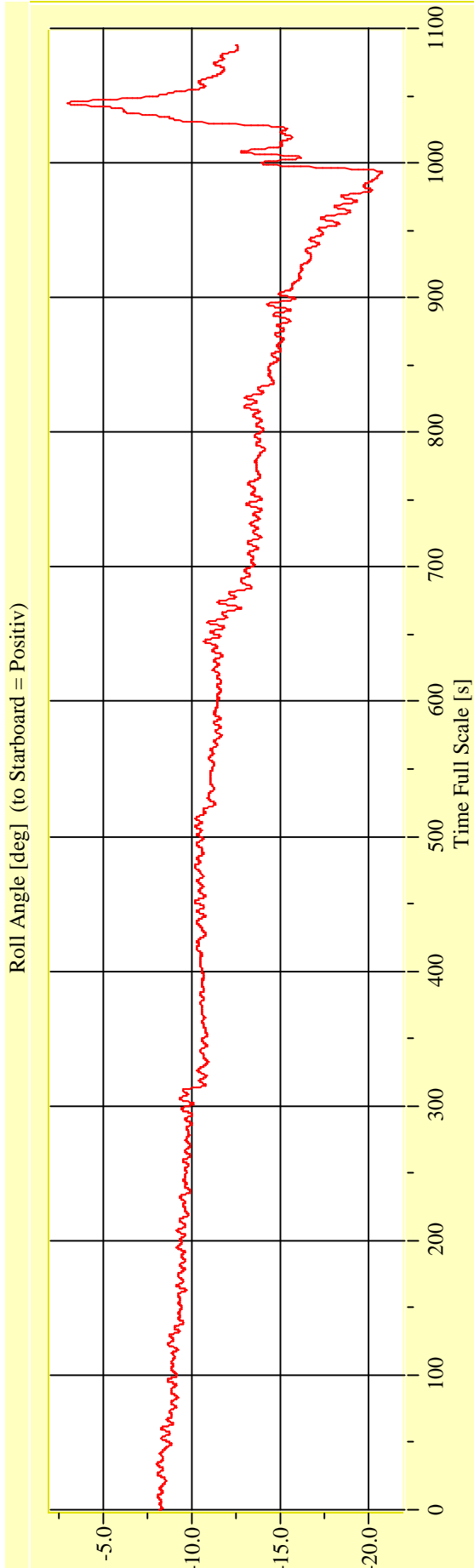
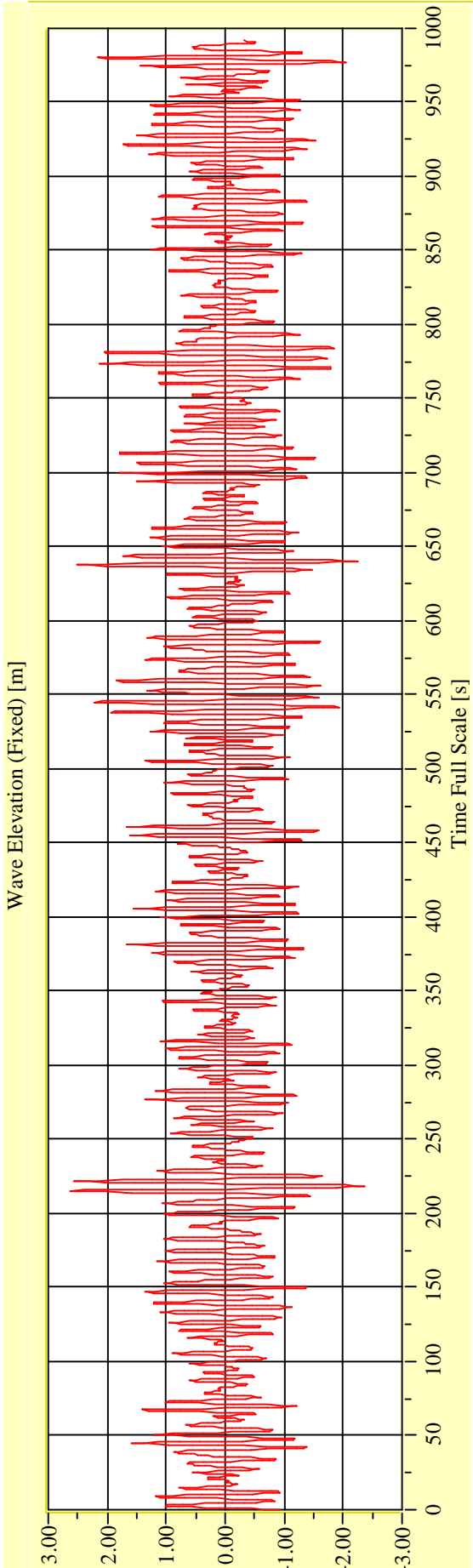
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

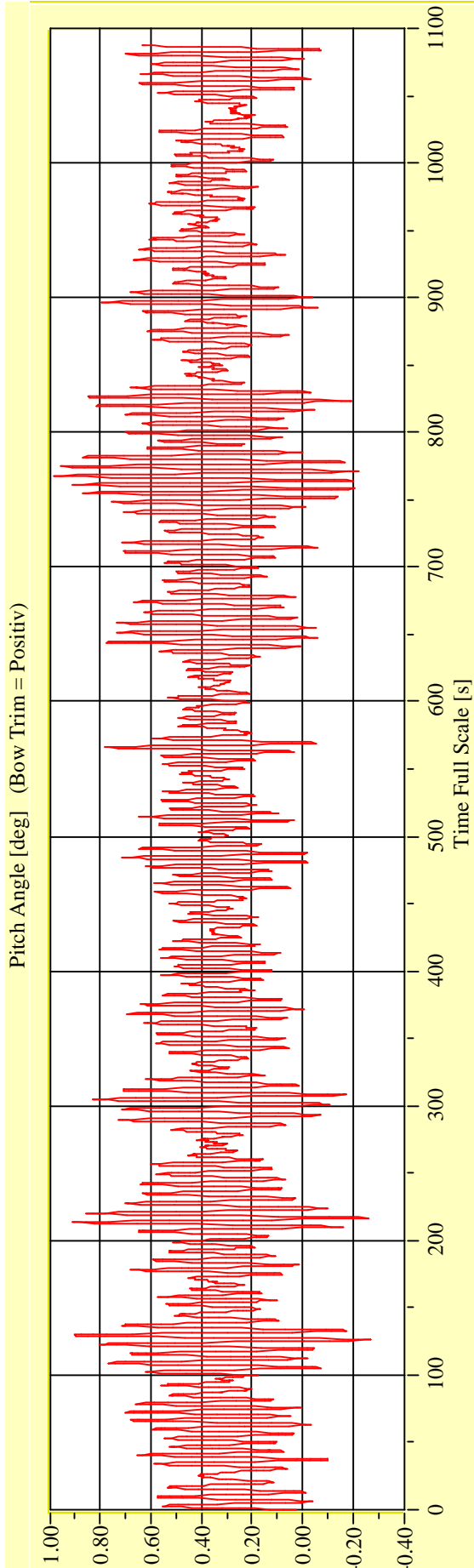
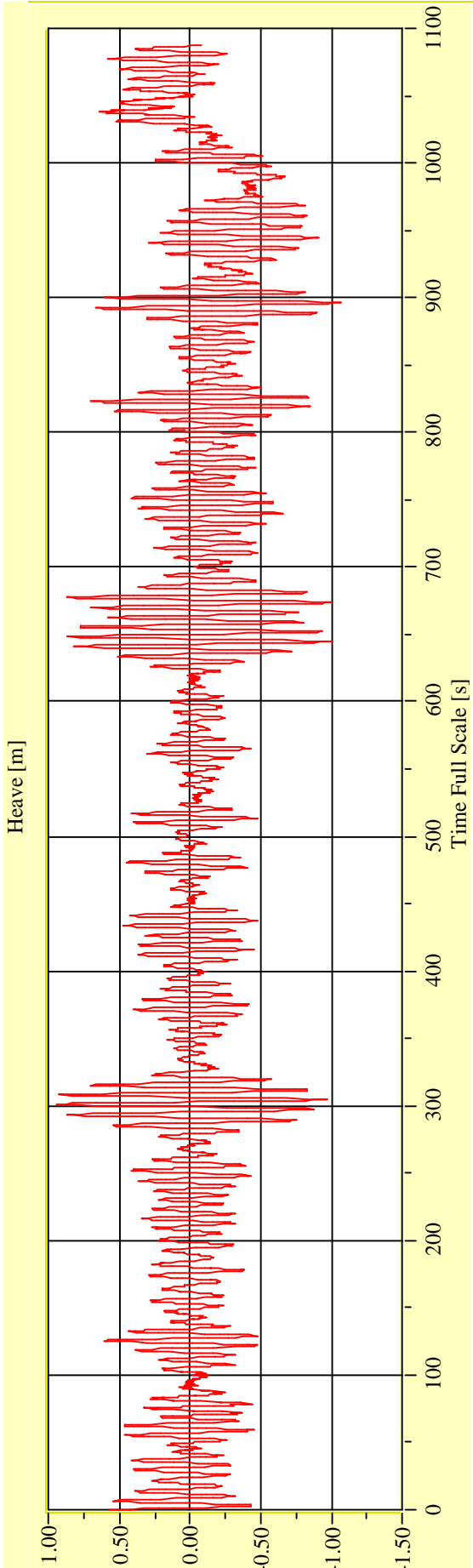
Vienna Model Basin **Model No. 2461** **Test No. 29739-20** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-20** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



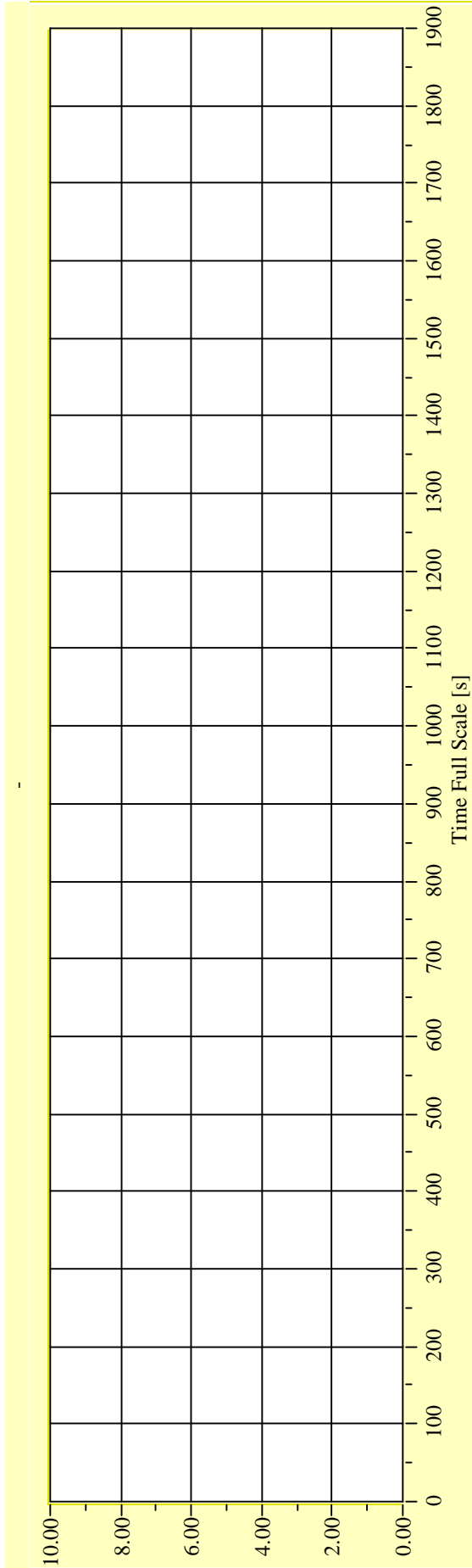
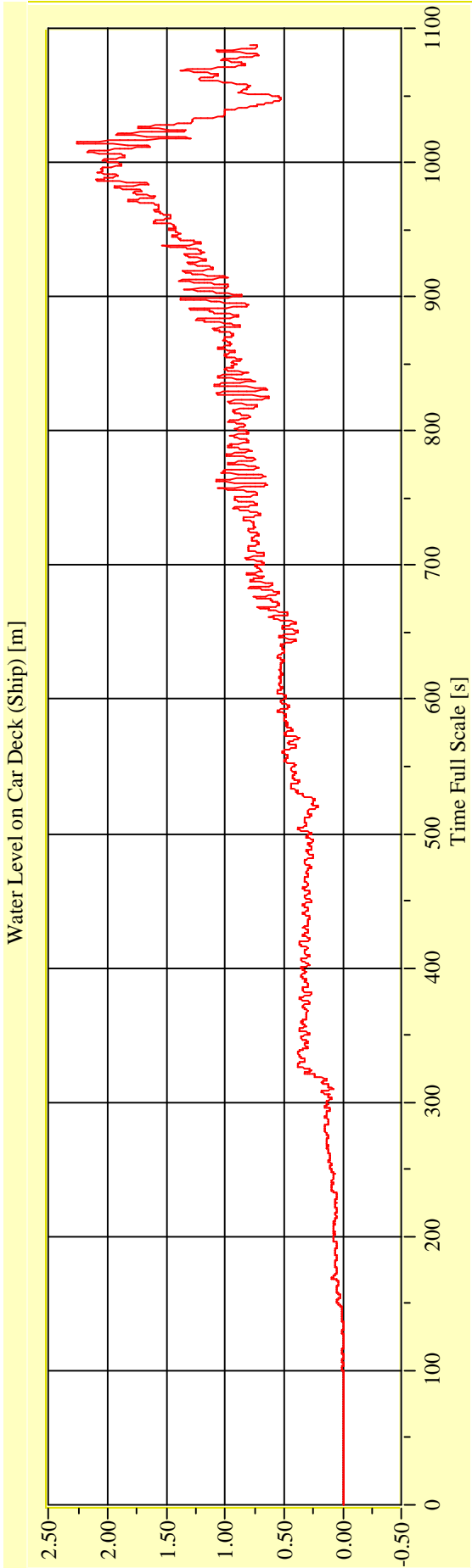
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

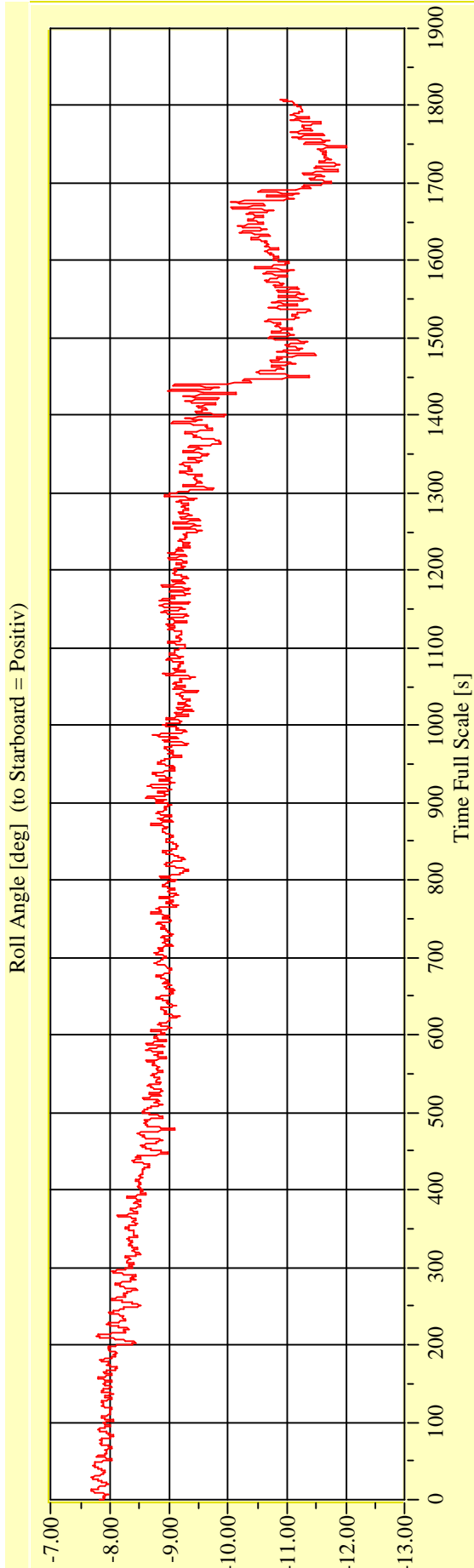
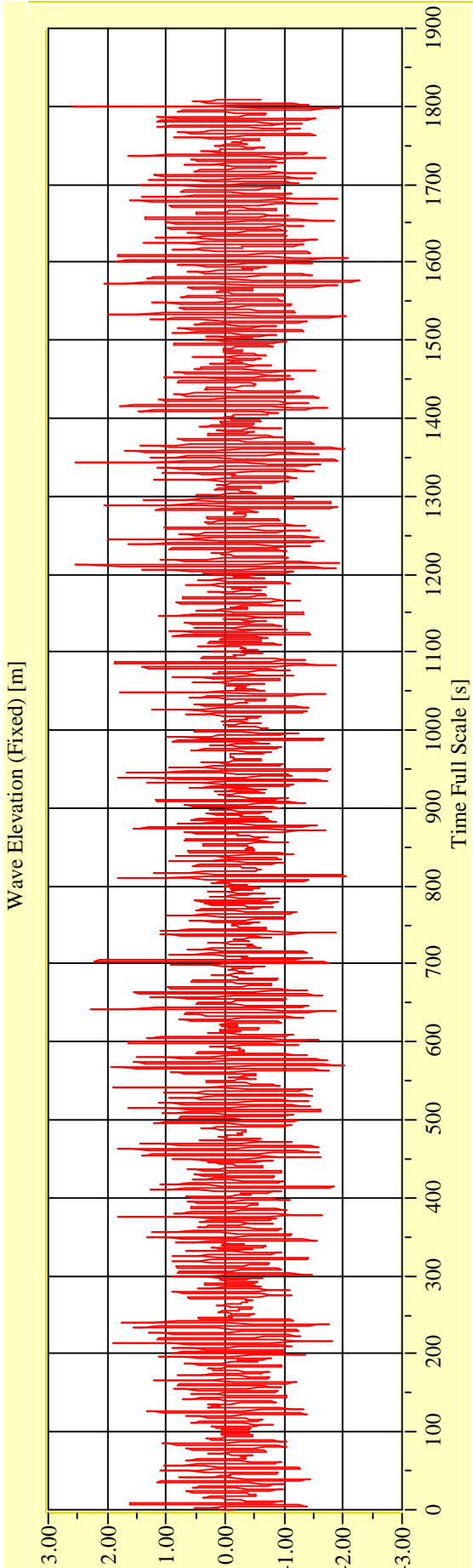
Vienna Model Basin **Model No. 2461** **Test No. 29739-20** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-21** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



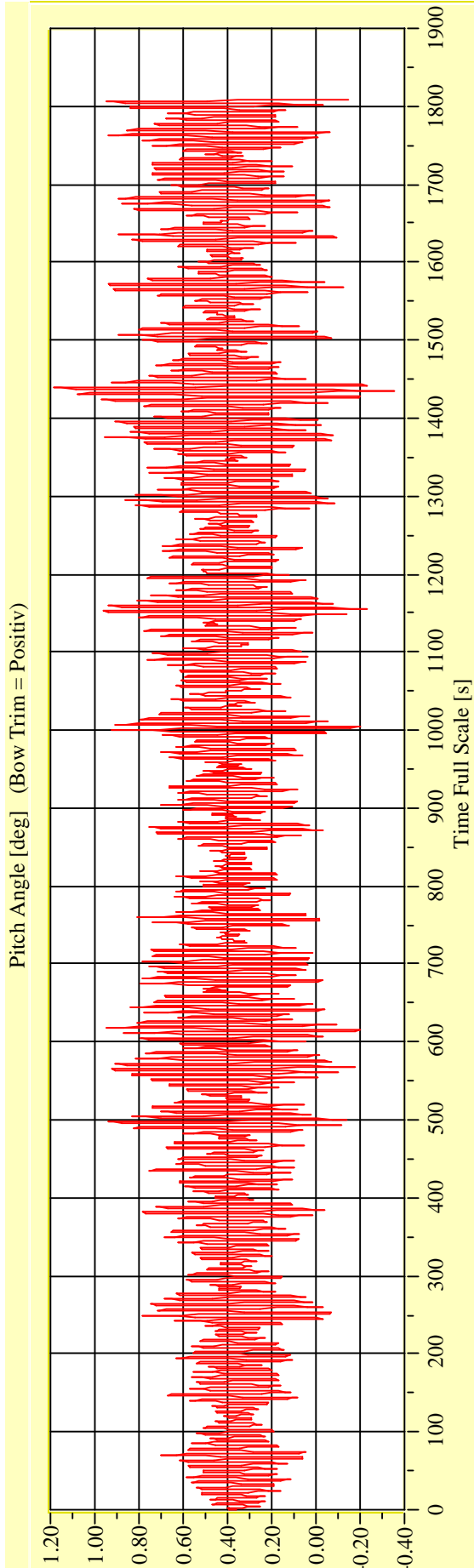
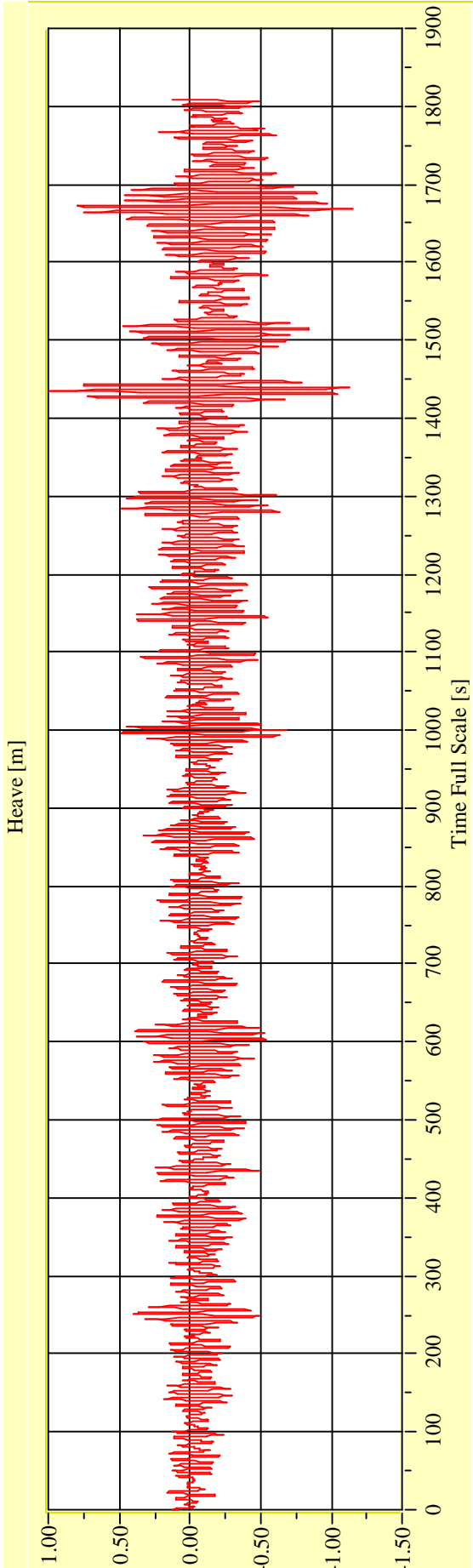
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-21** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



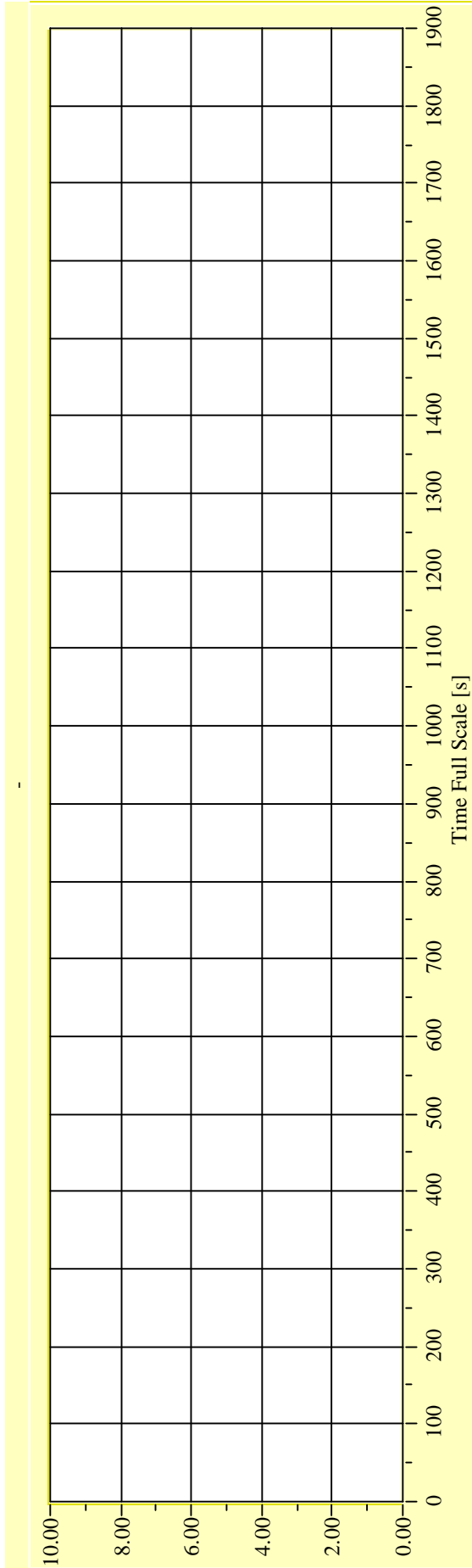
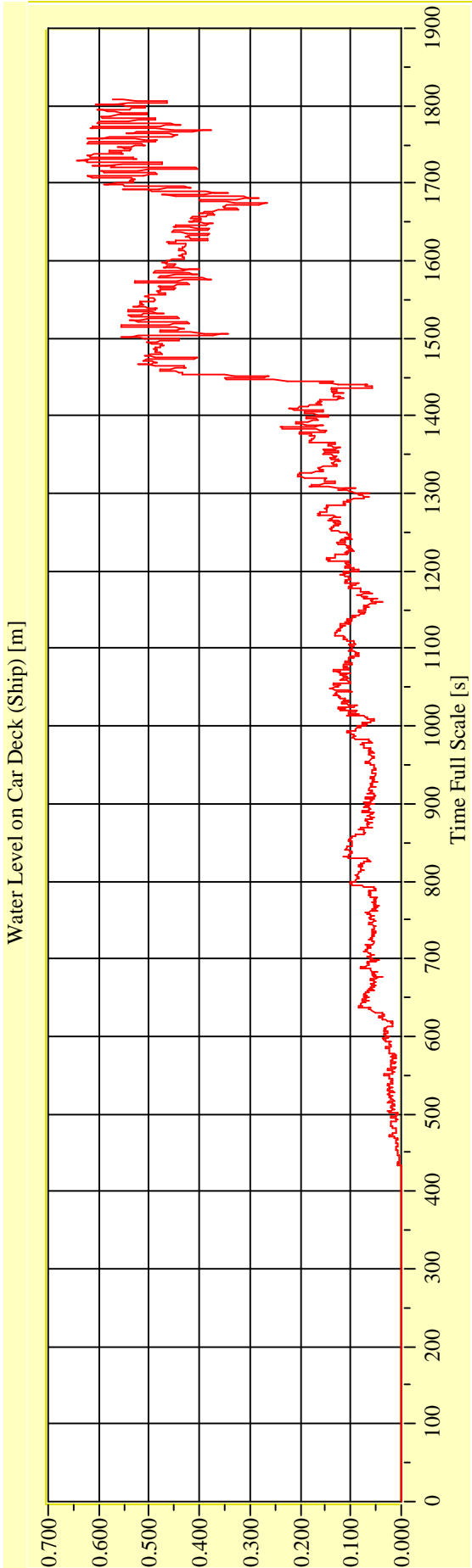
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

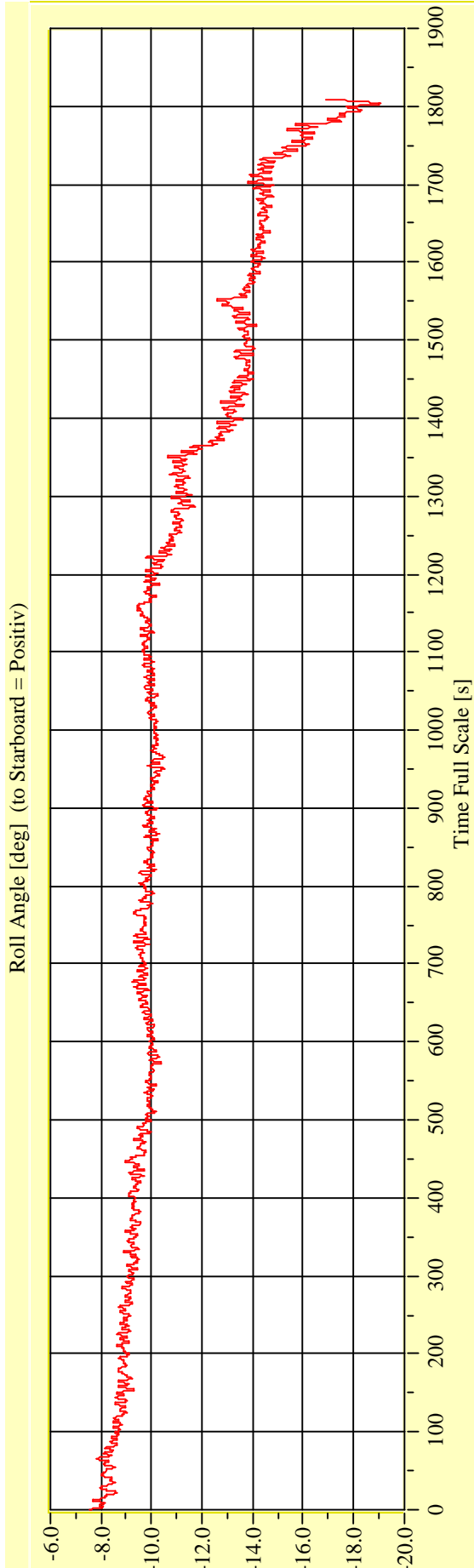
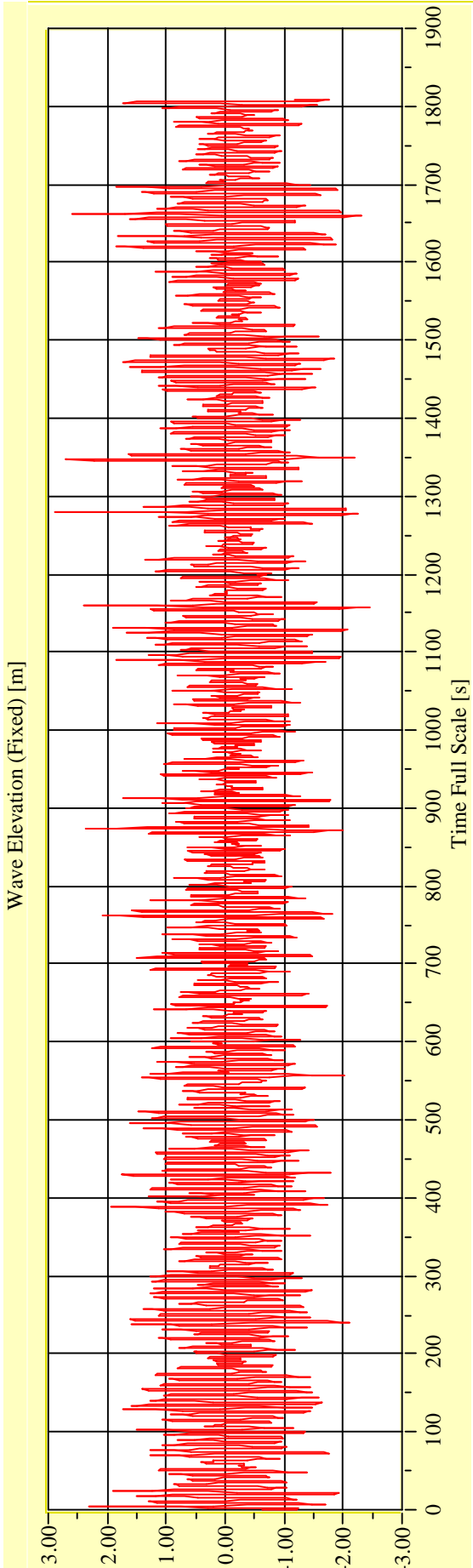
Vienna Model Basin **Model No. 2461** **Test No. 29739-21** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-22** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

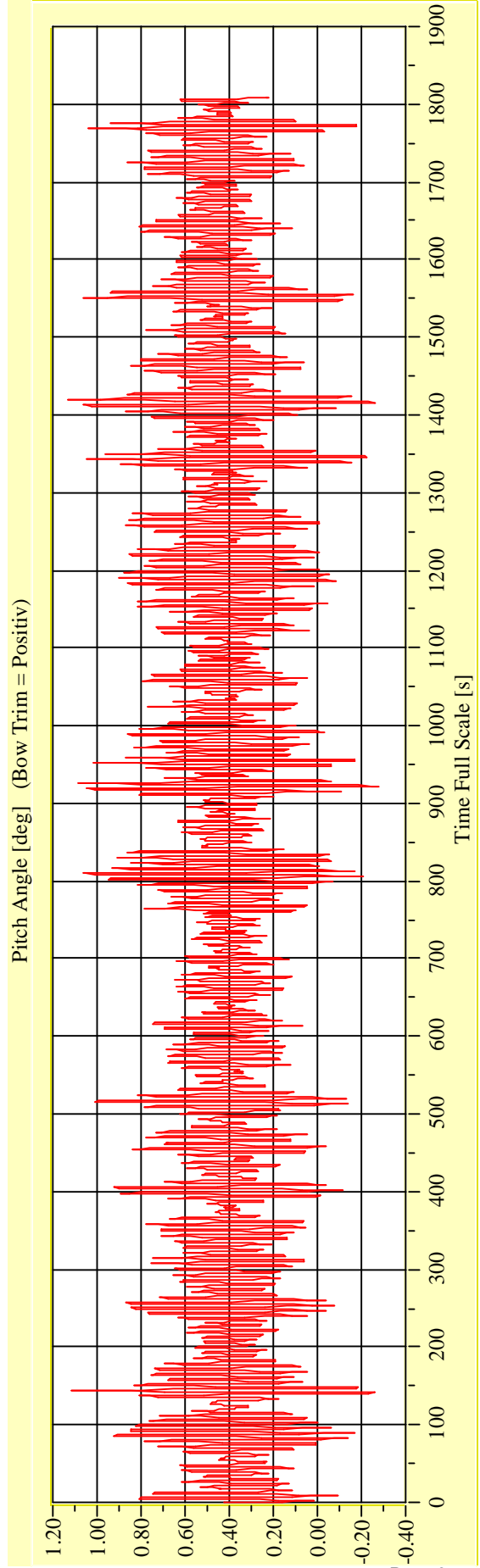
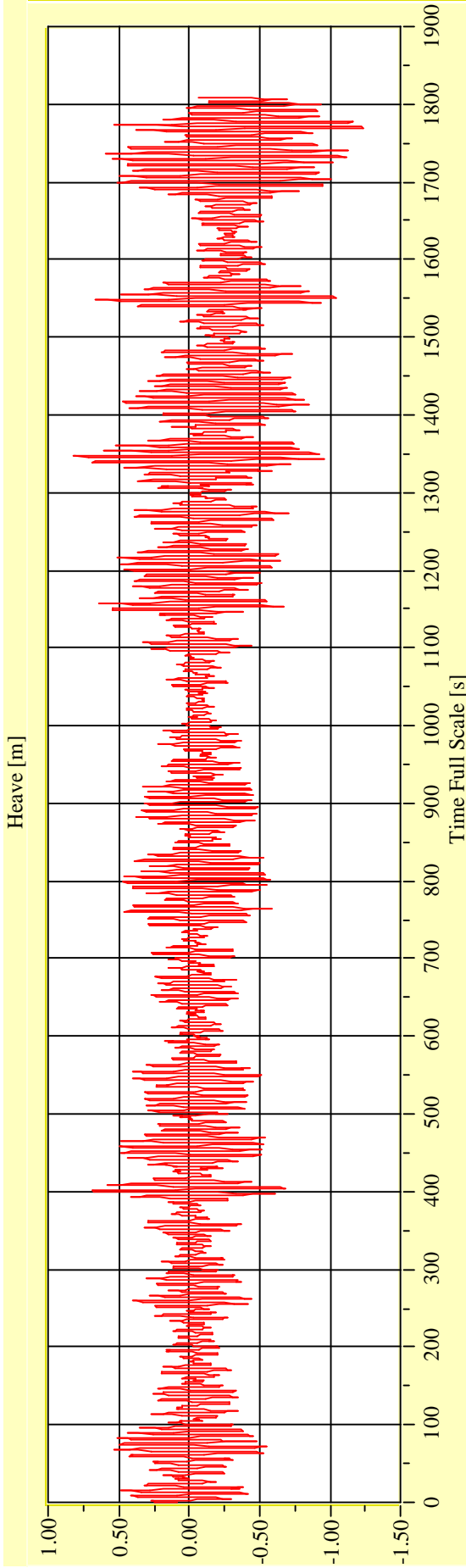
Vienna Model Basin

Model No. 2461

Test No. 29739-22

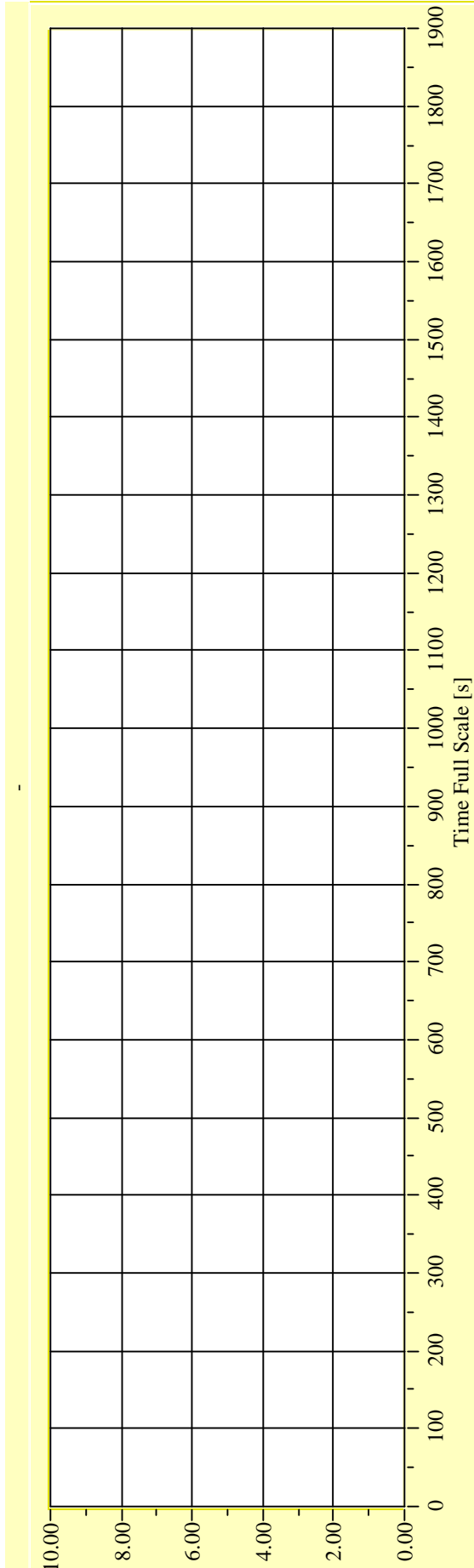
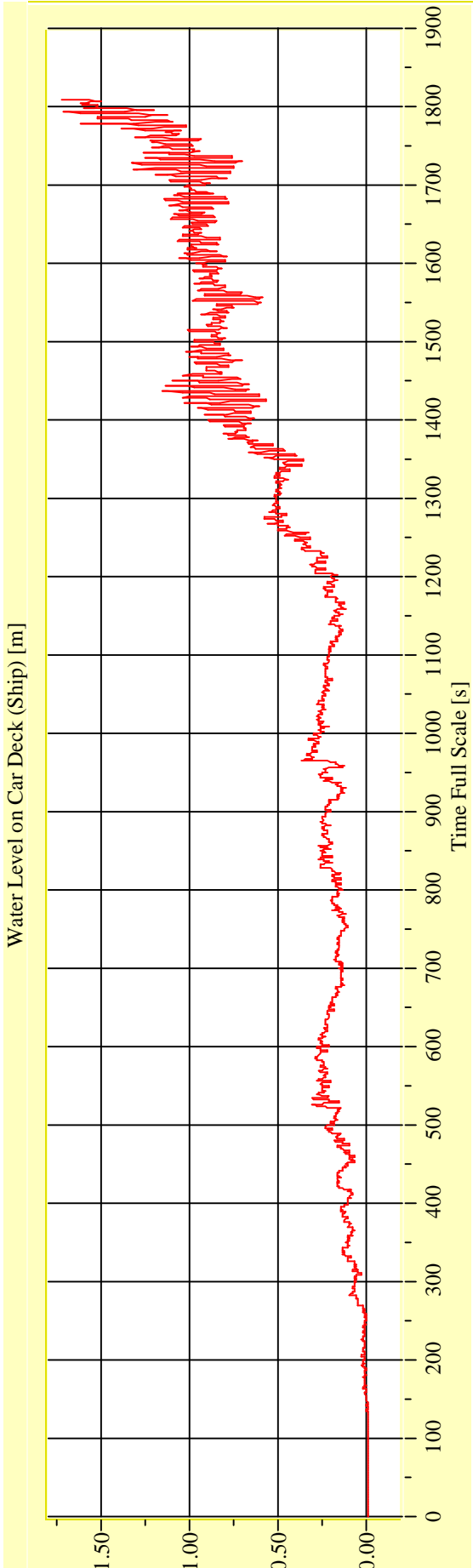
Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-22** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



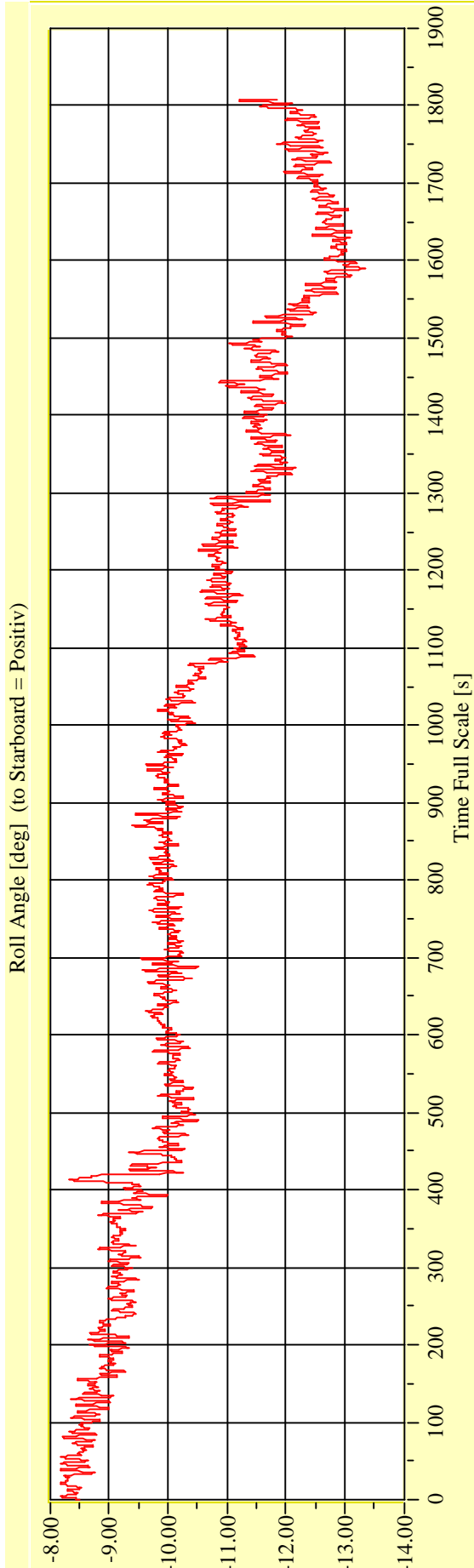
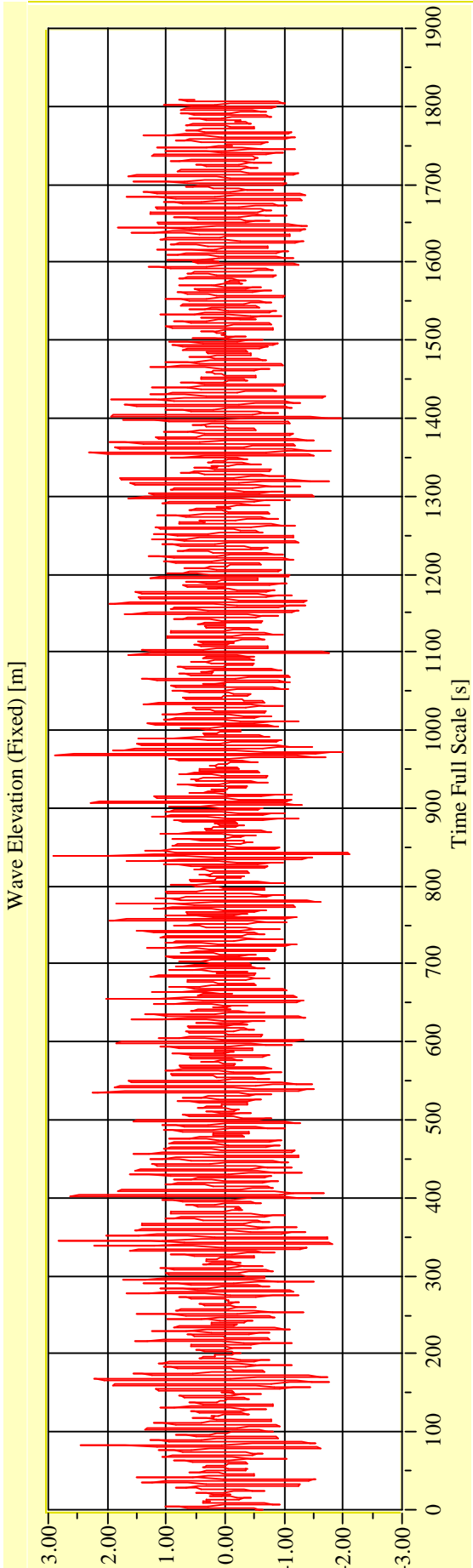
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29739-23** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

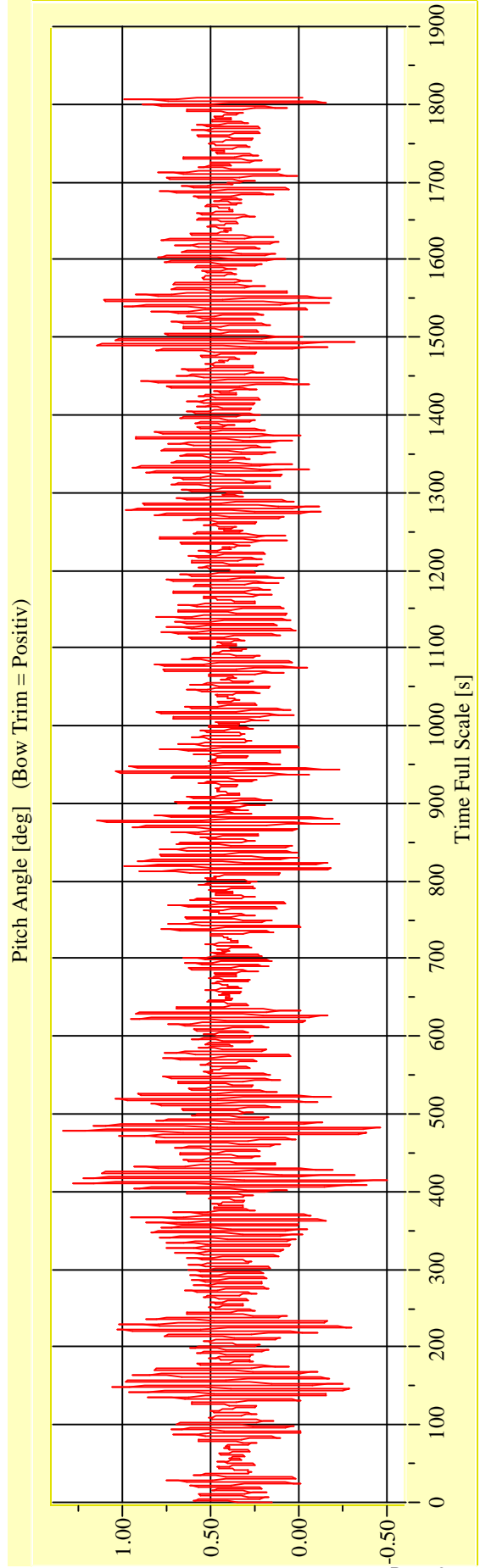
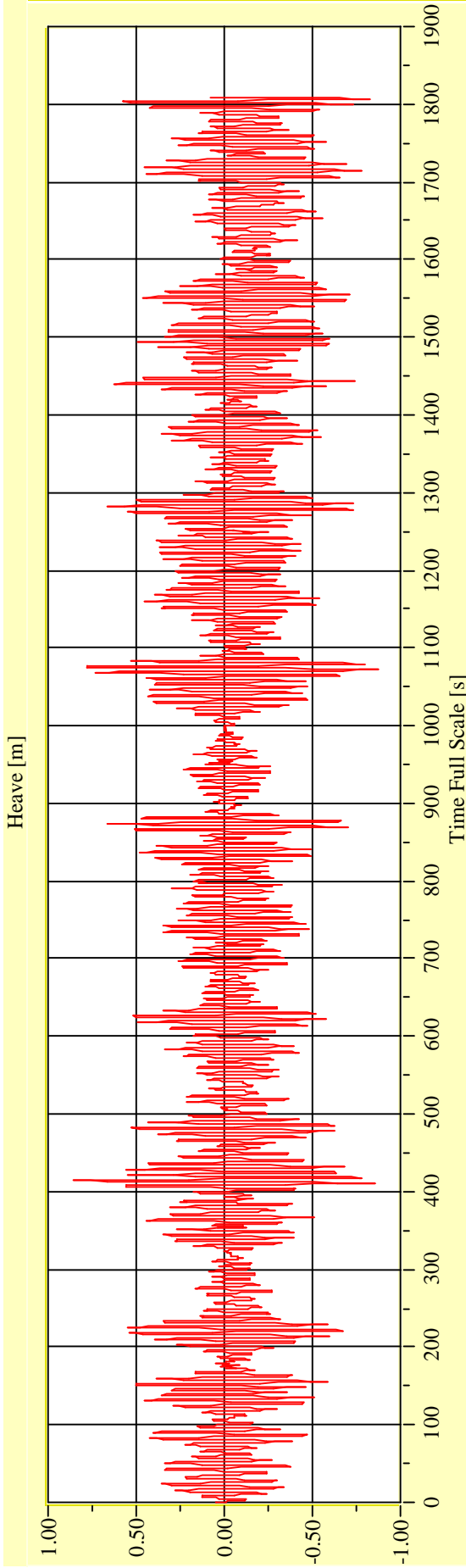
Vienna Model Basin

Model No. 2461

Test No. 29739-23

Target Waves: Hs = 2,90 m Tp = 6,8118 s

gamma = 3,3



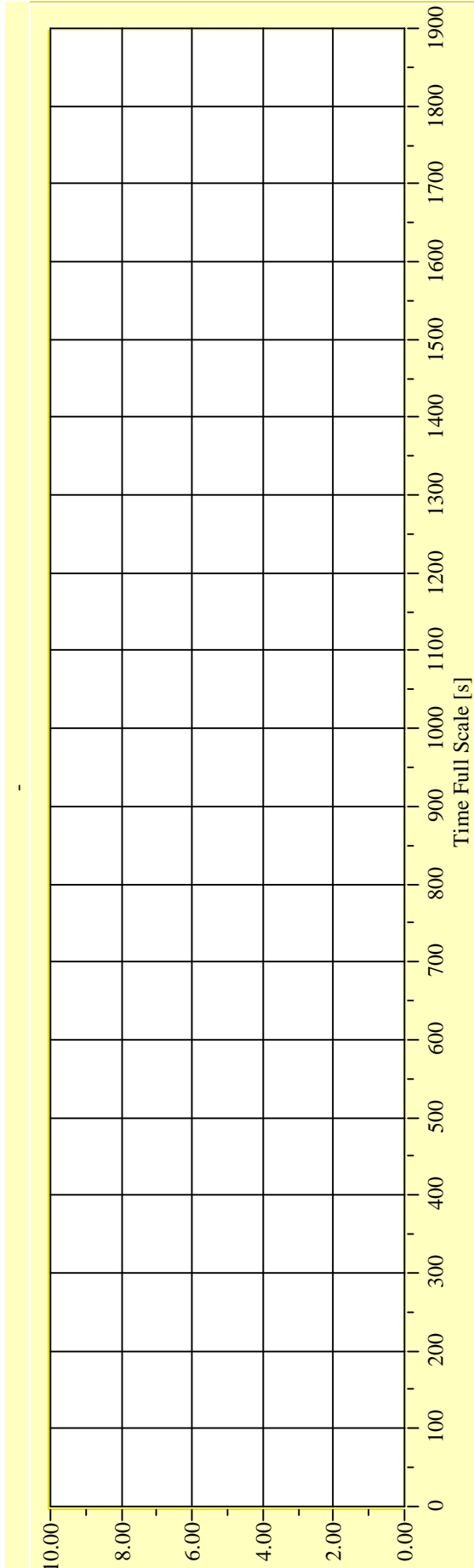
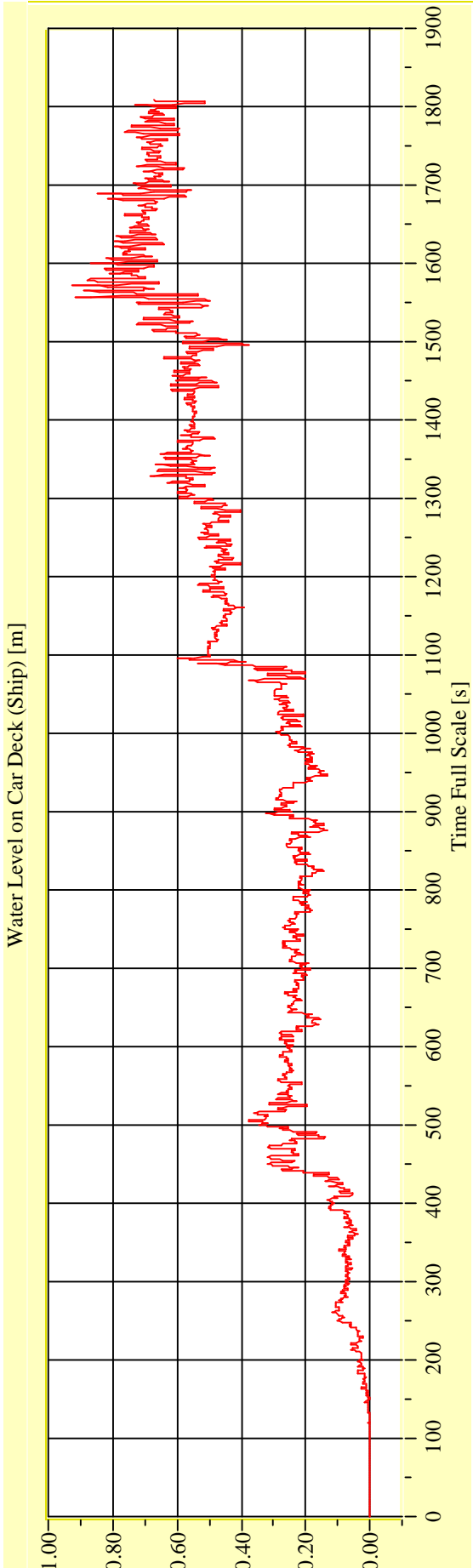
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

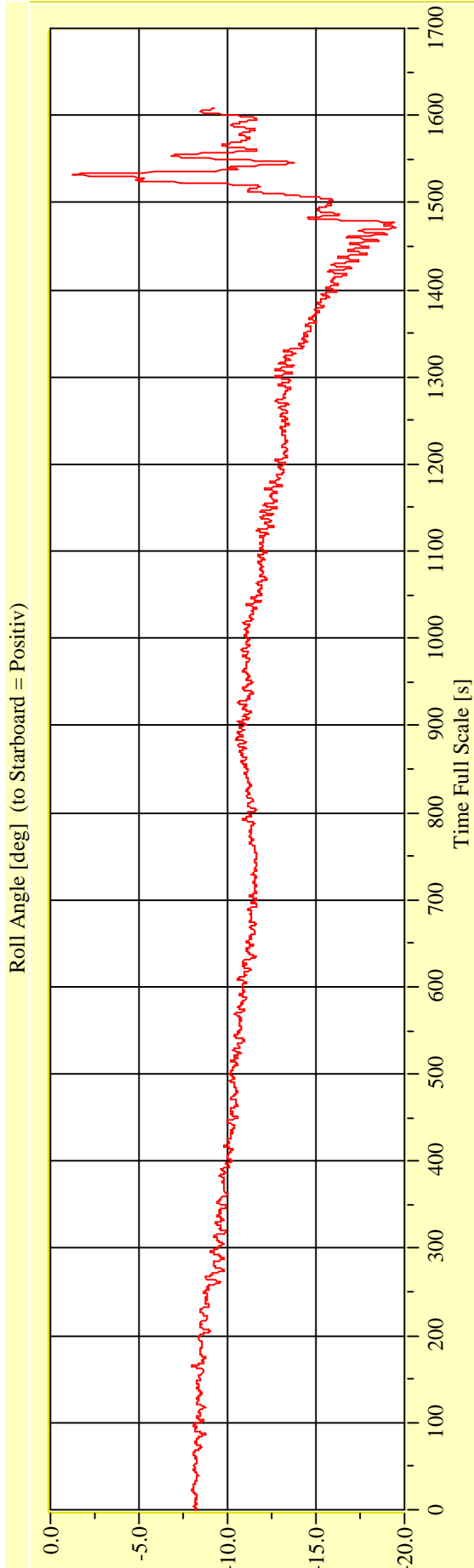
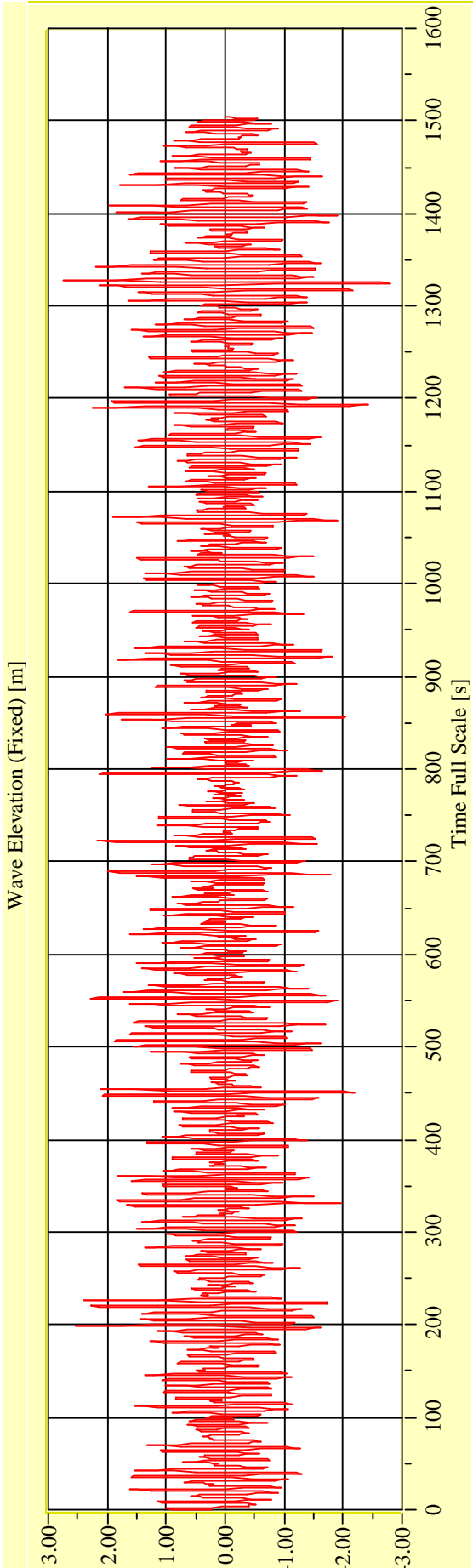
Vienna Model Basin **Model No. 2461** **Test No. 29739-23** **Target Waves: Hs = 2,90 m Tp = 6,8118 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29740-01** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

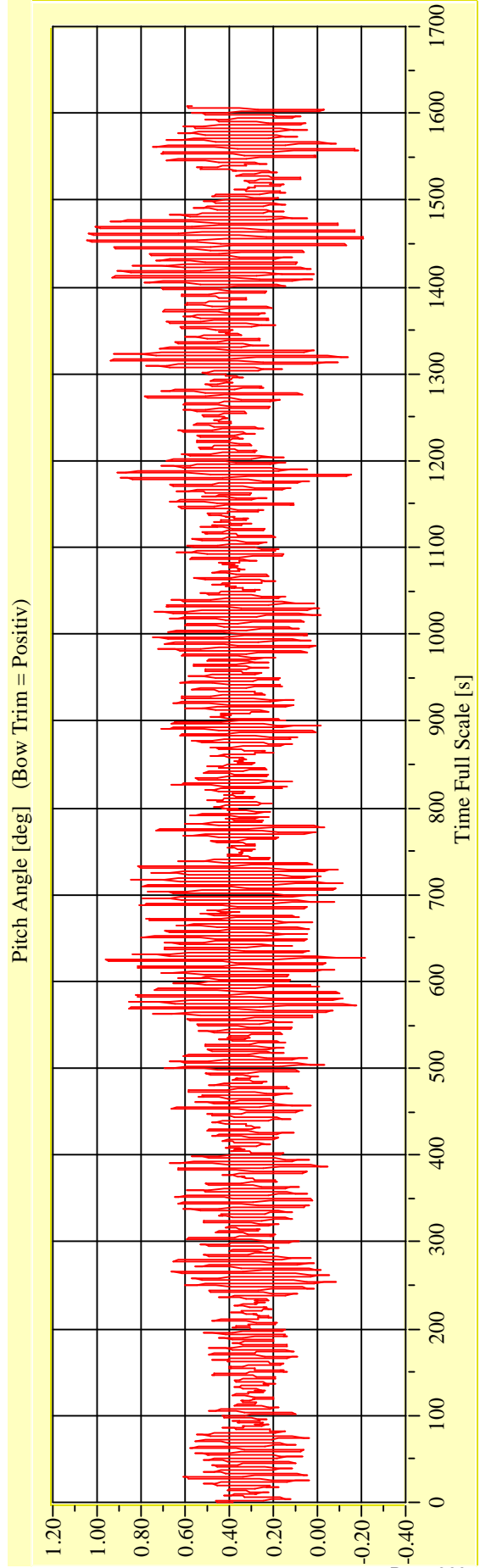
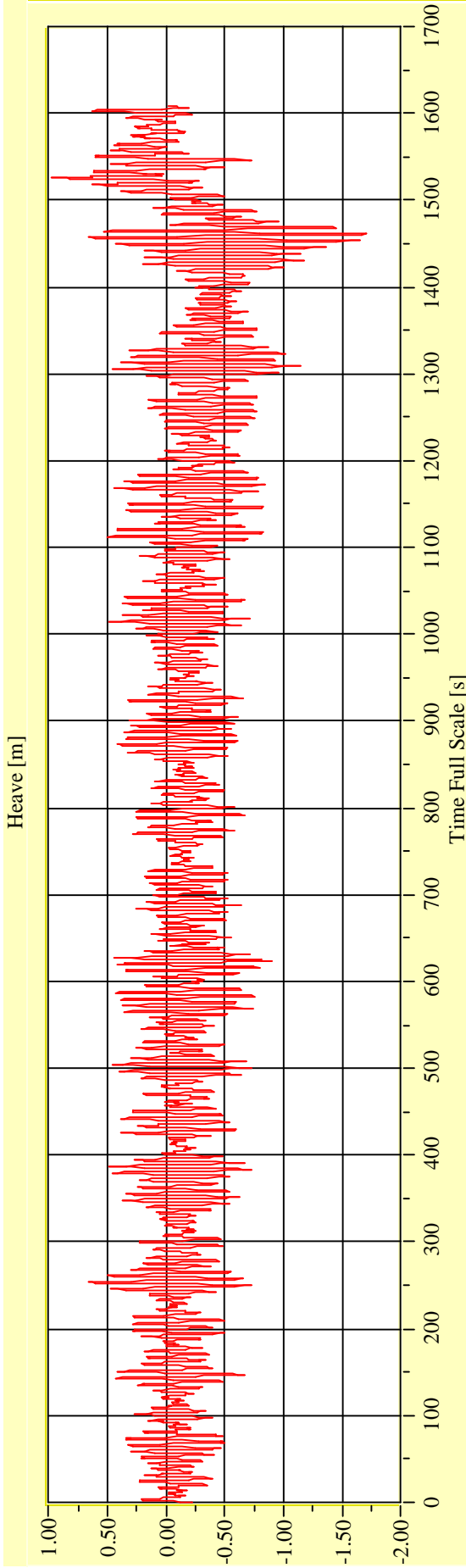
Vienna Model Basin

Model No. 2461

Test No. 29740-01

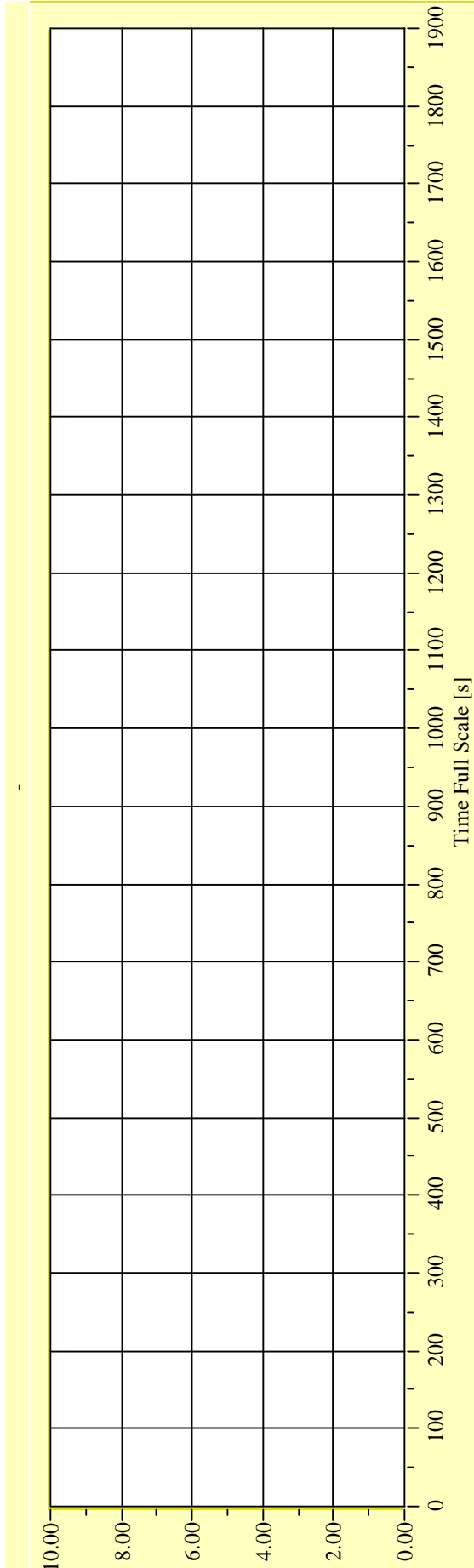
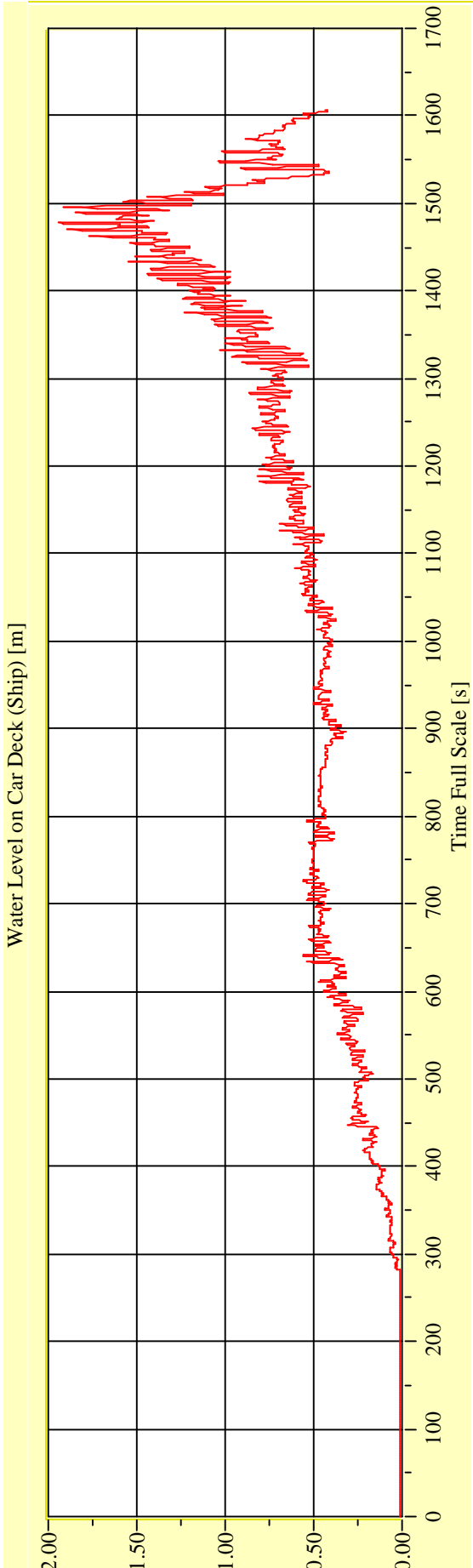
Target Waves: Hs = 3.0 m Tp = 6,9282 s

gamma = 3,3



Irregular Beam Seas

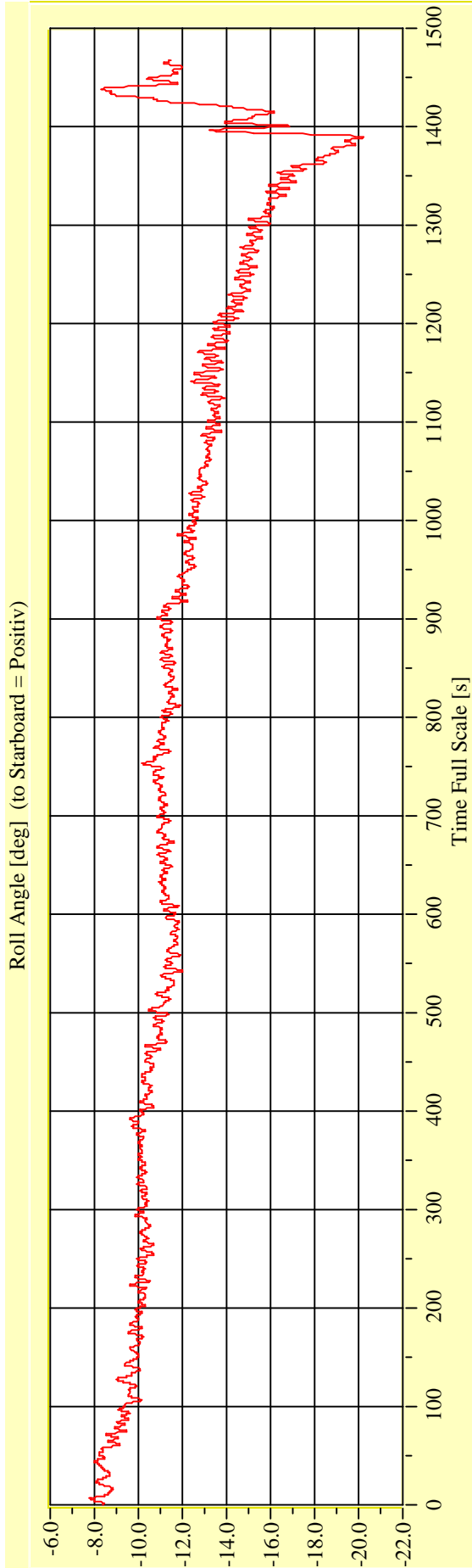
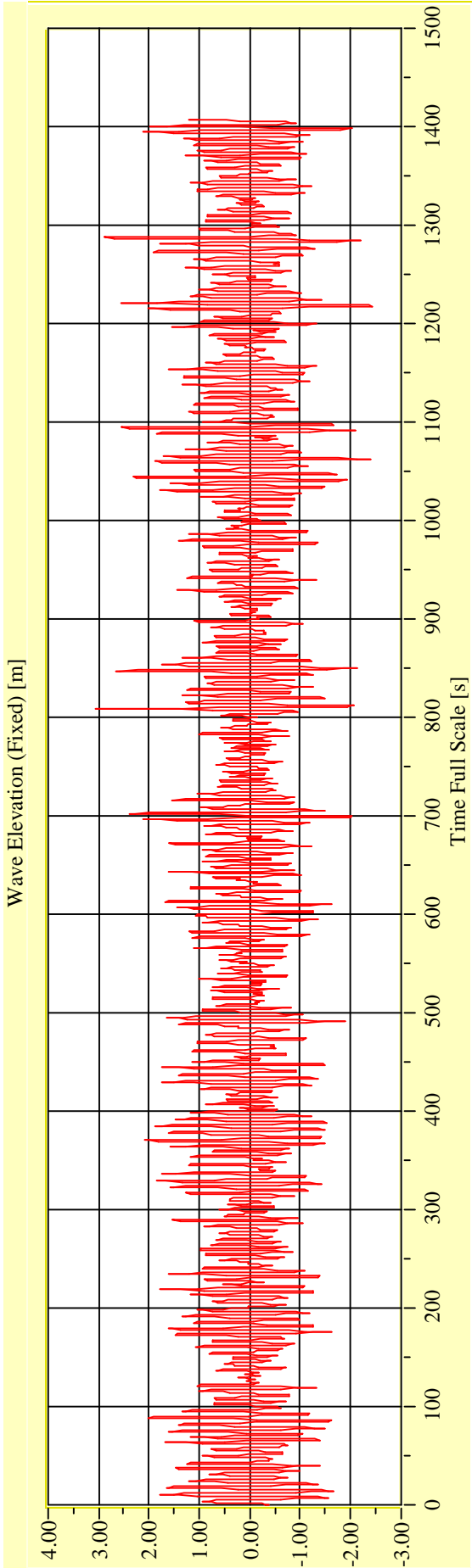
Vienna Model Basin **Model No. 2461** **Test No. 29740-01** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

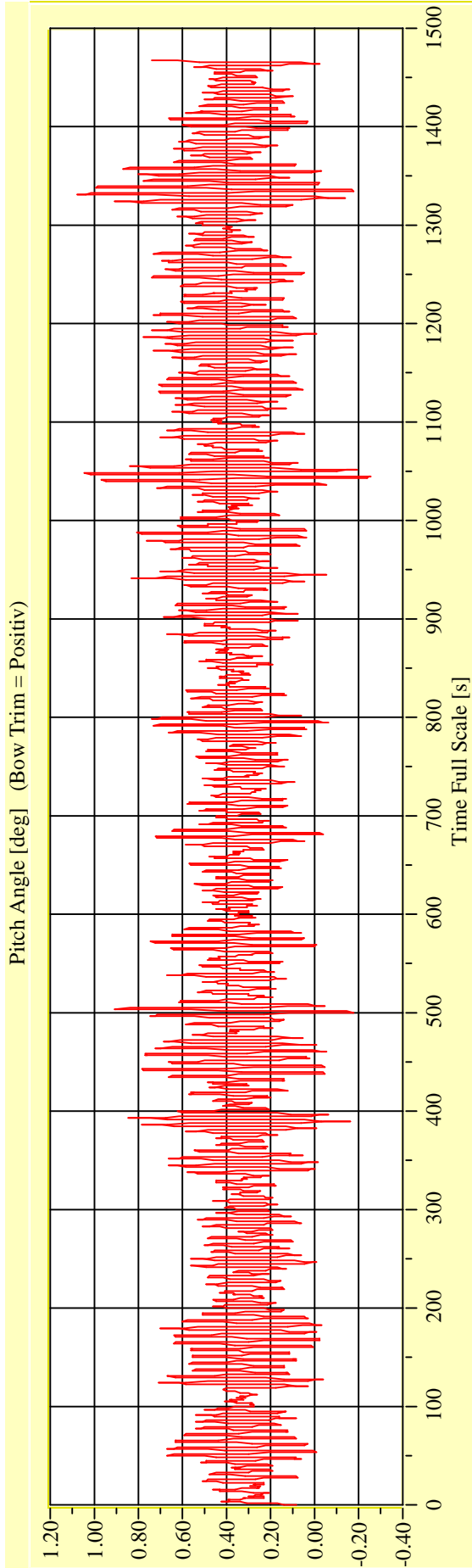
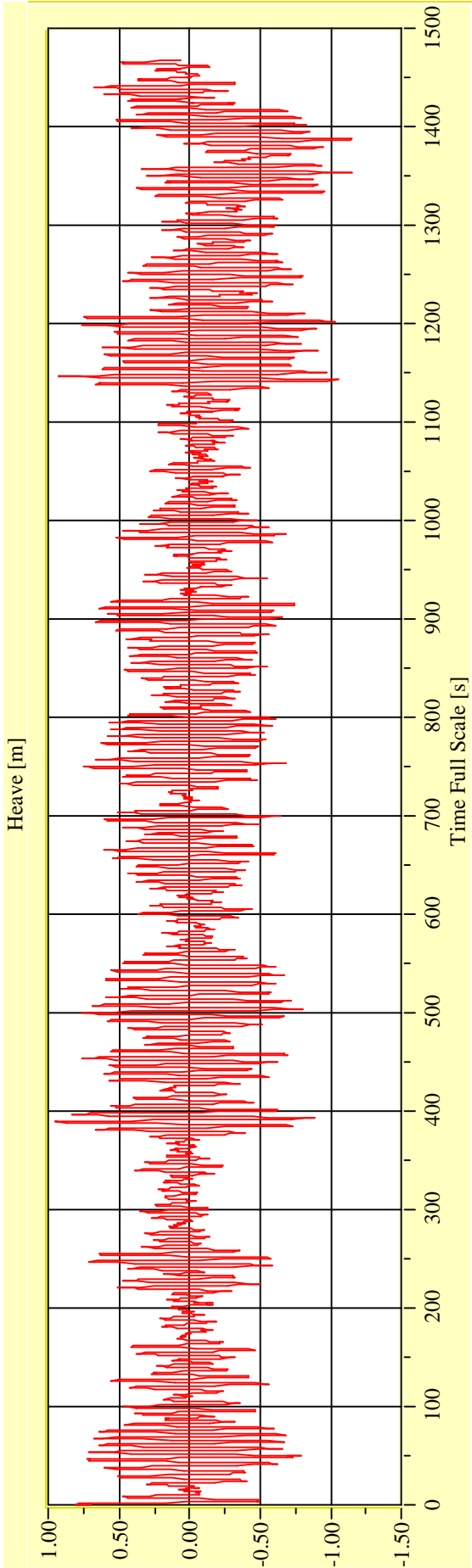
Vienna Model Basin **Model No. 2461** **Test No. 29740-02** **Target Waves: Hs = 3.0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29740-02** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



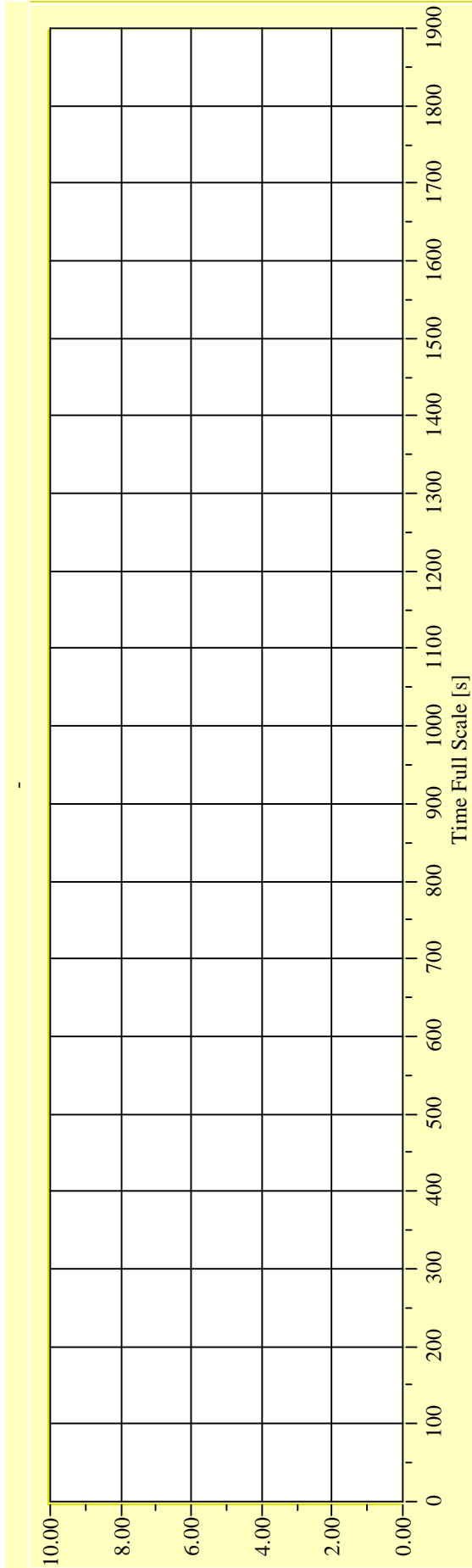
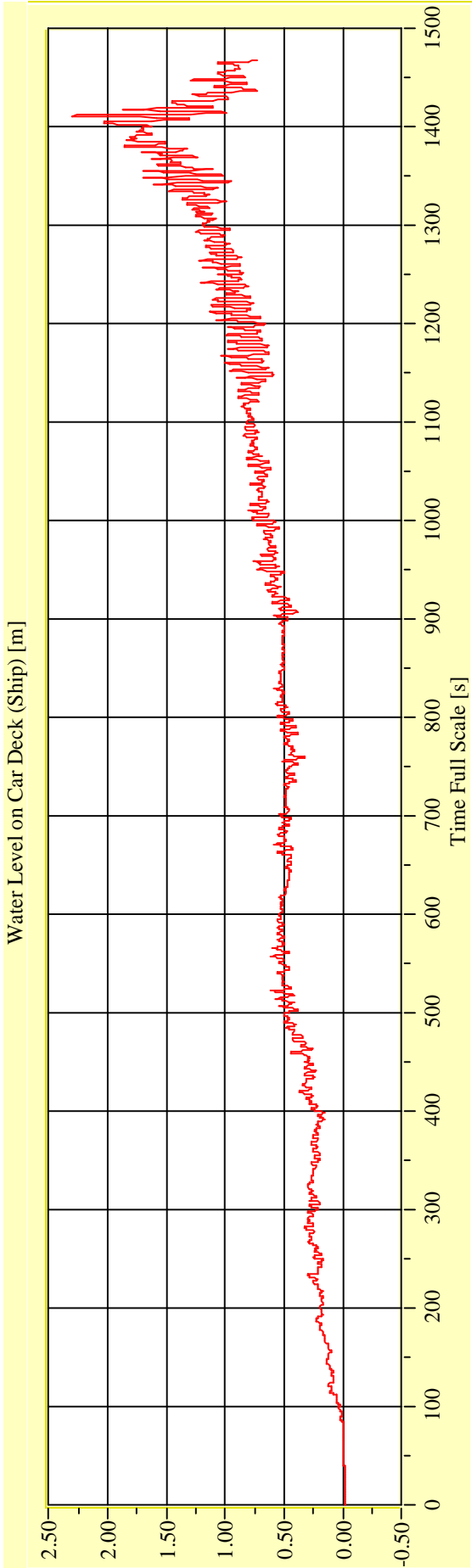
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29740-02** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

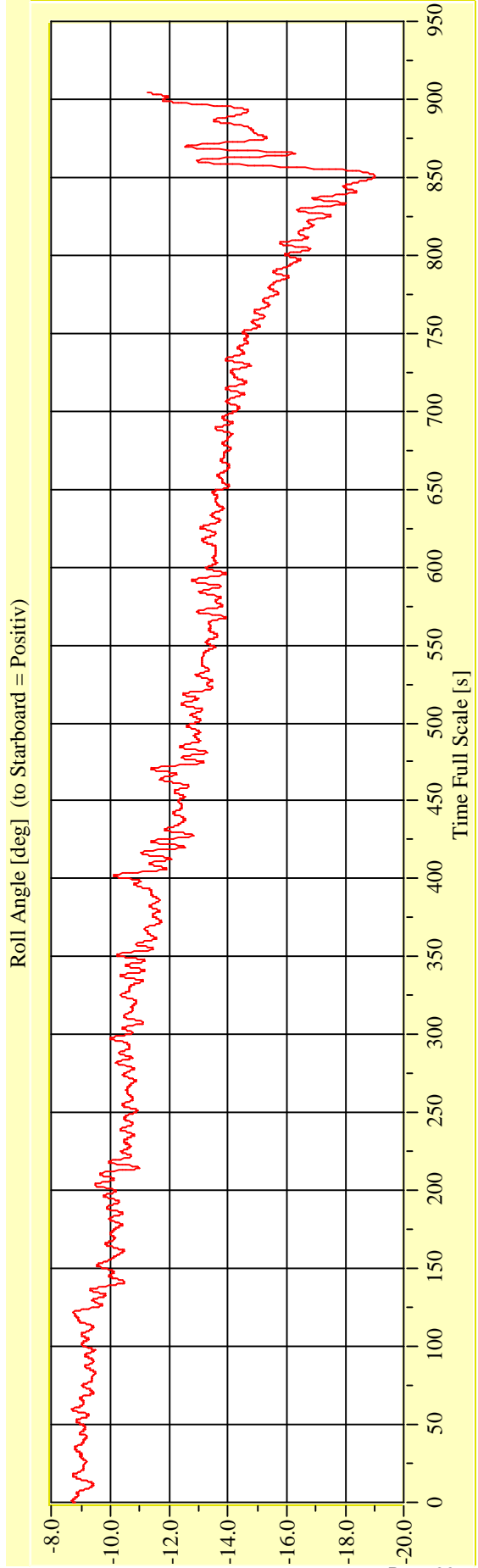
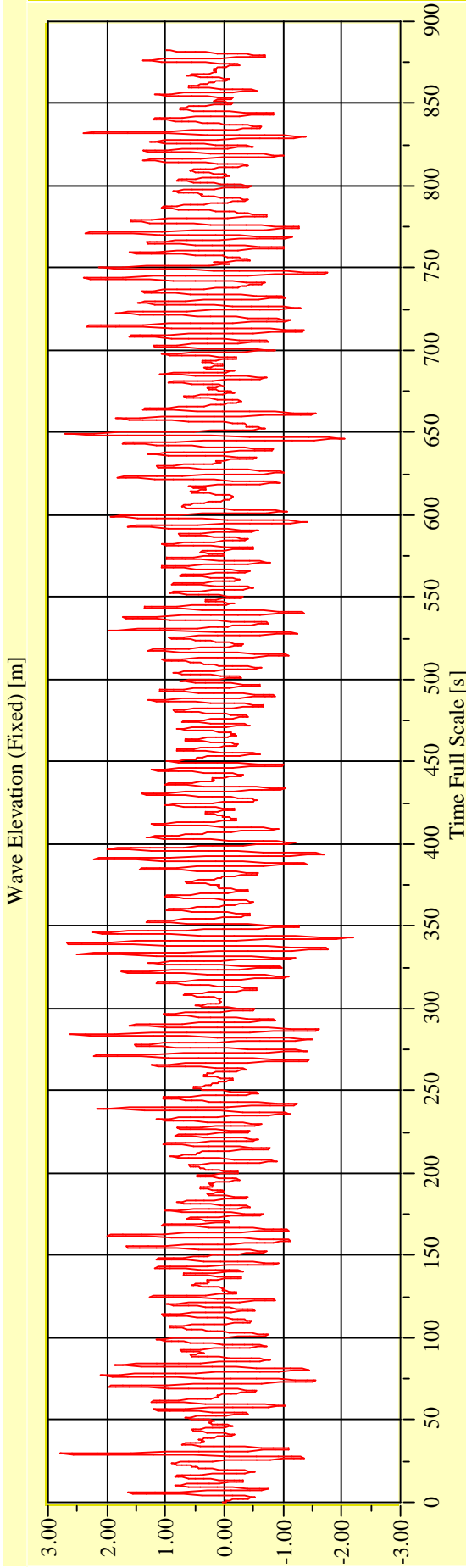
Vienna Model Basin

Model No. 2461

Test No. 29740-03

Target Waves: Hs = 3,0 m Tp = 6,9282 s

gamma = 3,3



Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

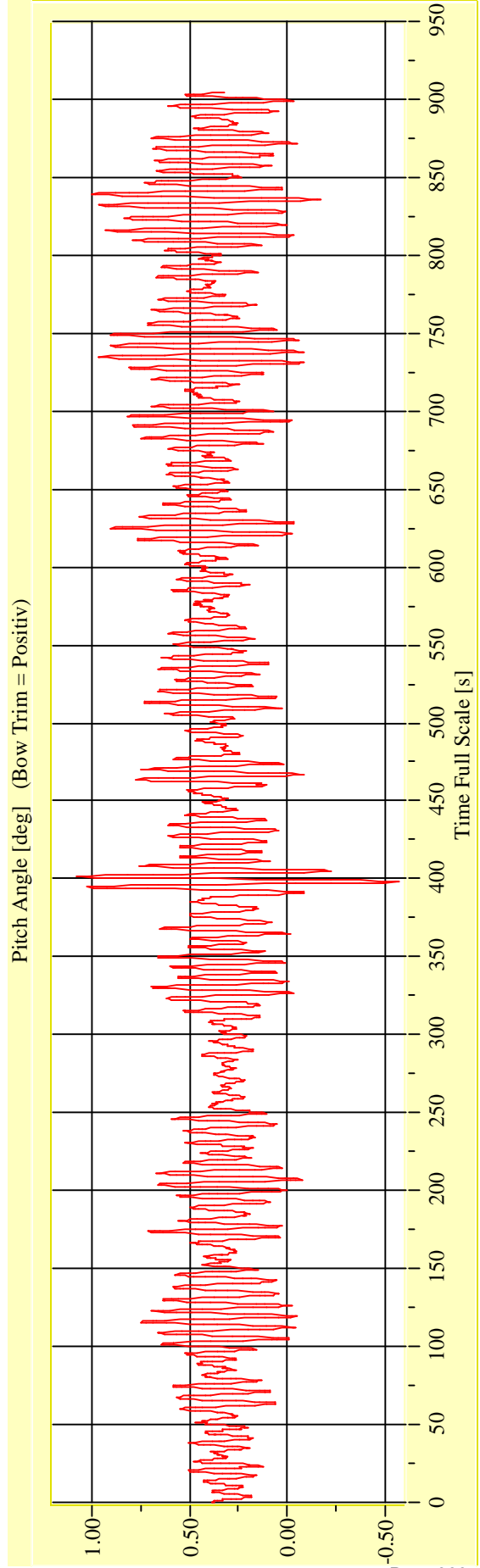
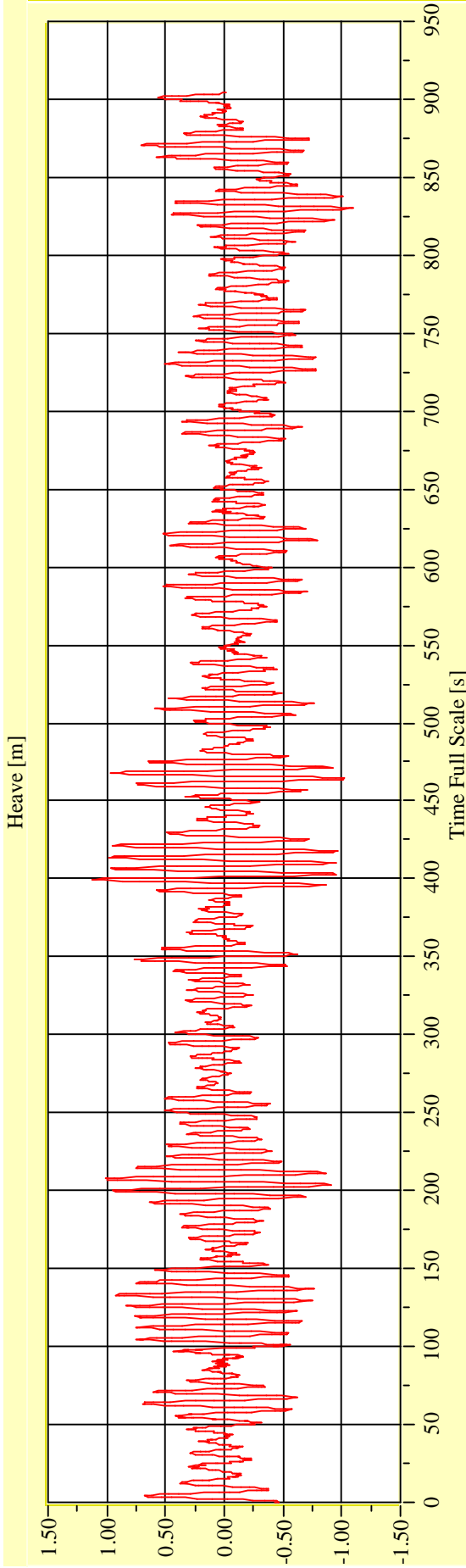
Vienna Model Basin

Model No. 2461

Test No. 29740-03

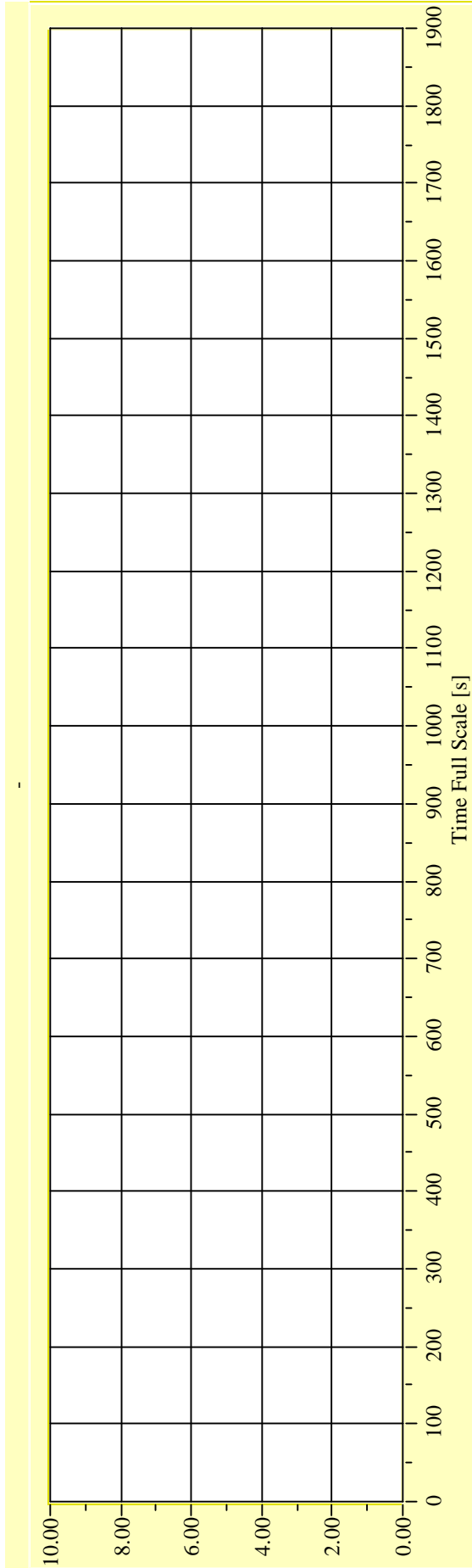
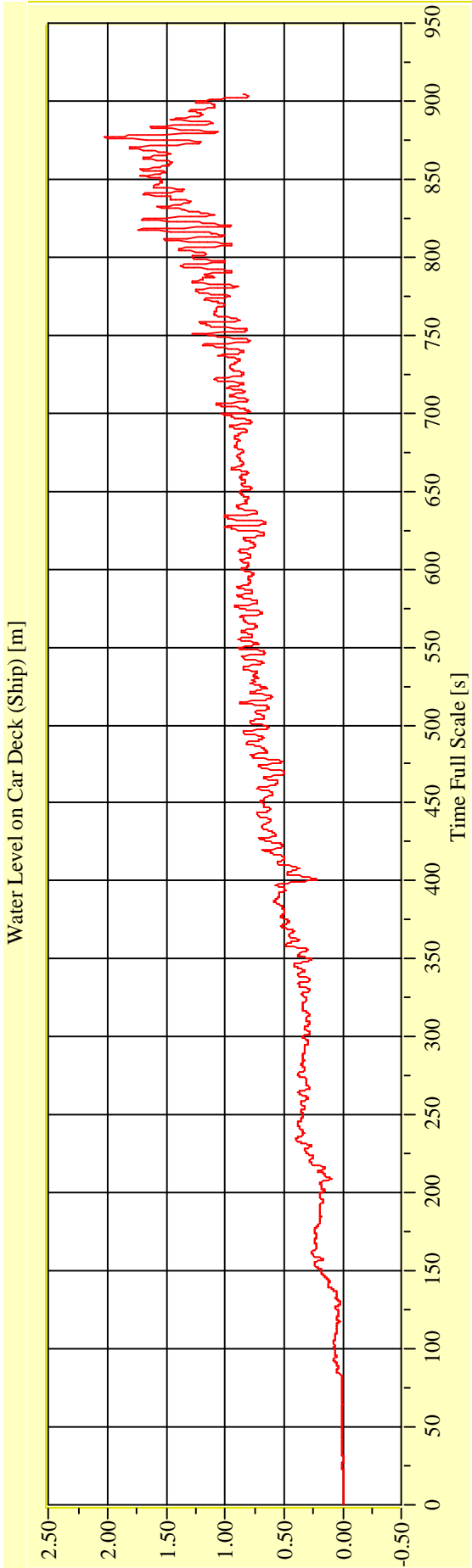
Target Waves: Hs = 3.0 m Tp = 6,9282 s

gamma = 3,3



Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29740-03** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

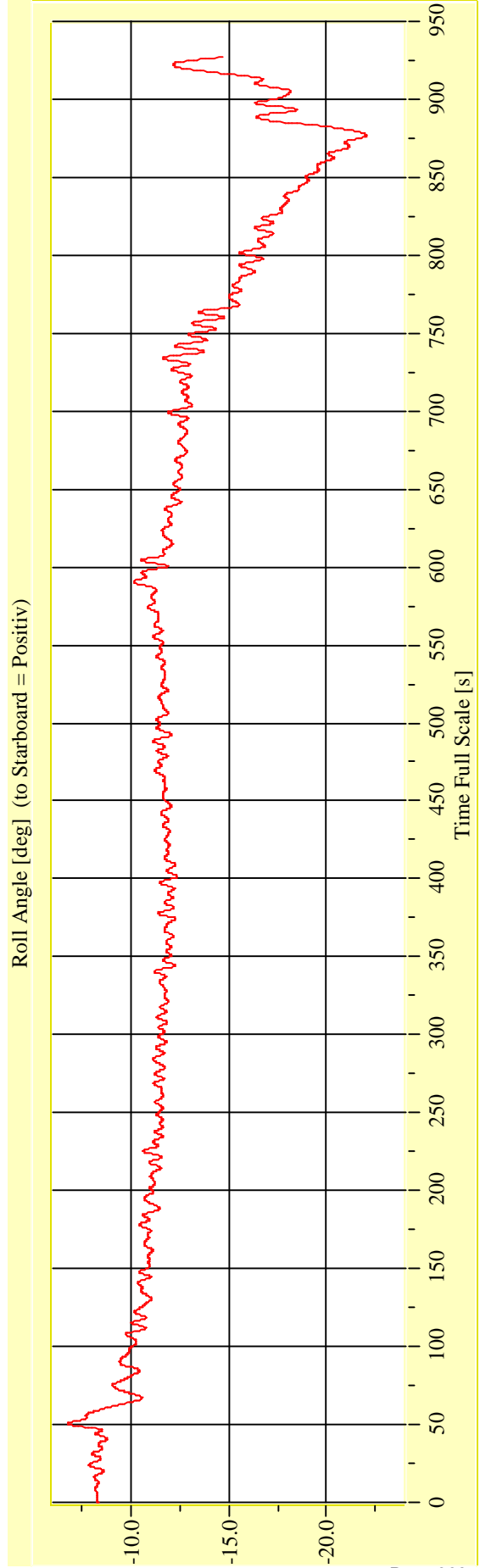
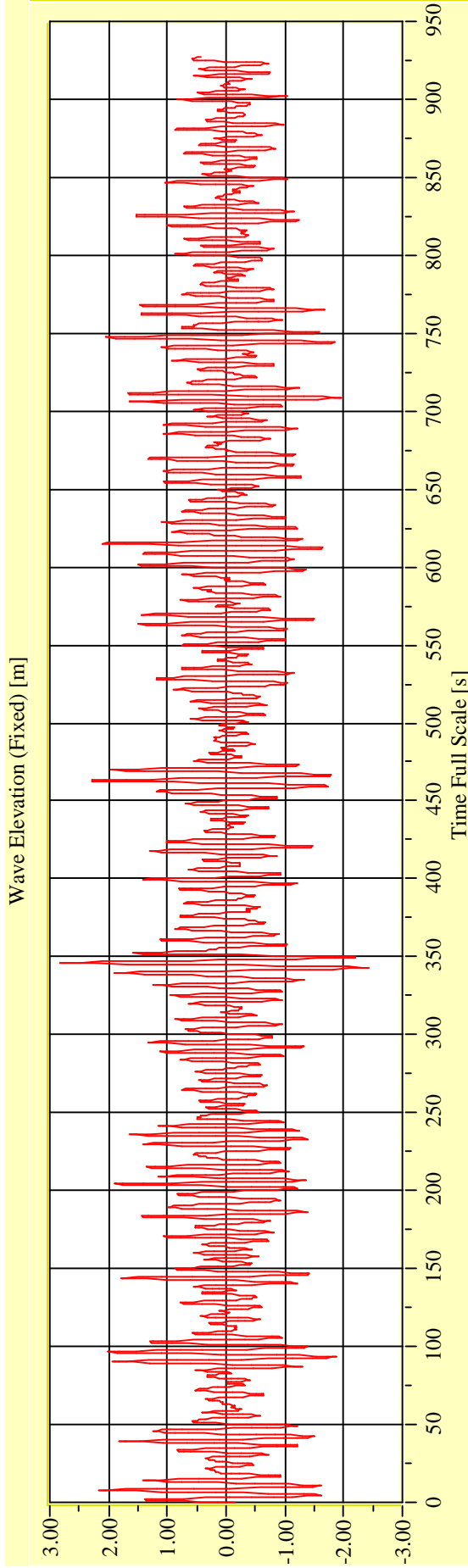
Vienna Model Basin

Model No. 2461

Test No. 29740-04

Target Waves: Hs = 3.0 m Tp = 6,9282 s

gamma = 3,3



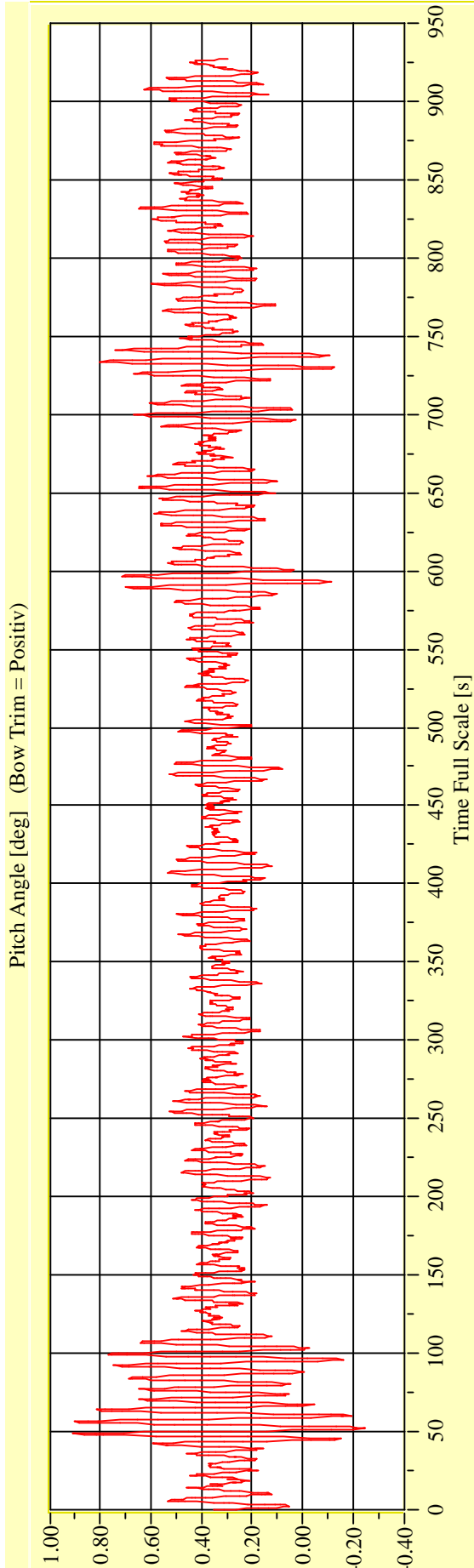
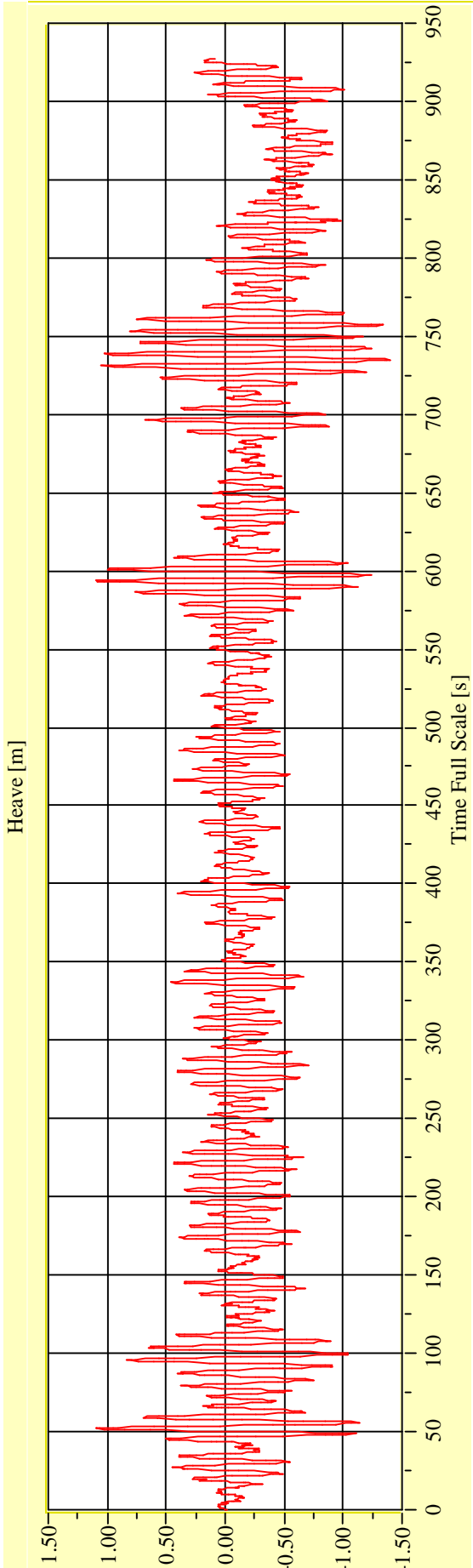
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

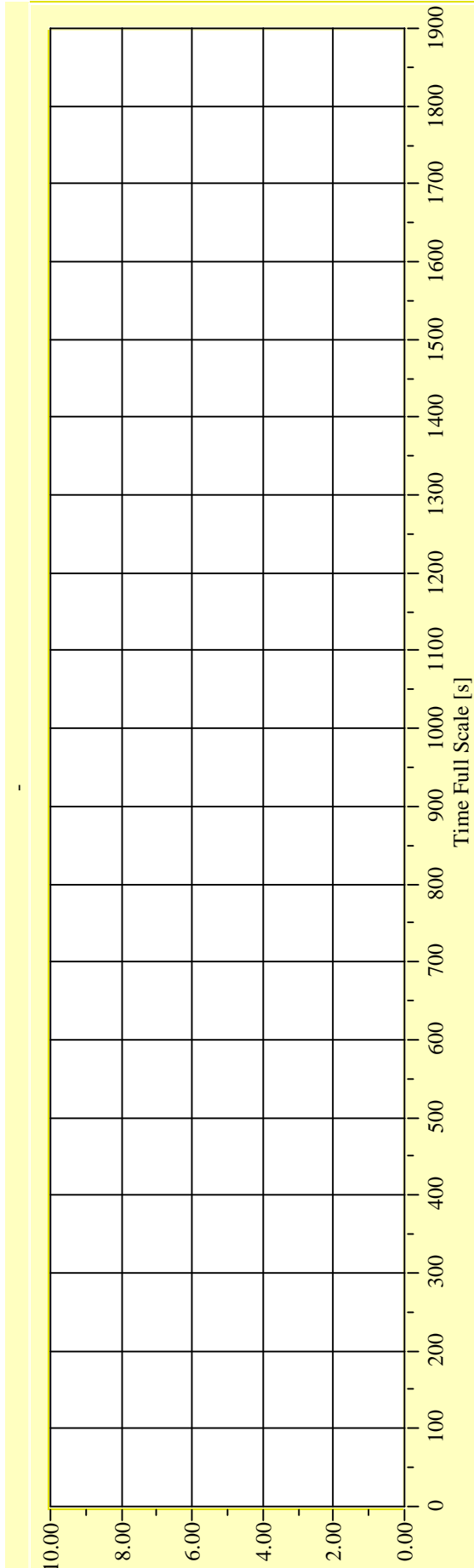
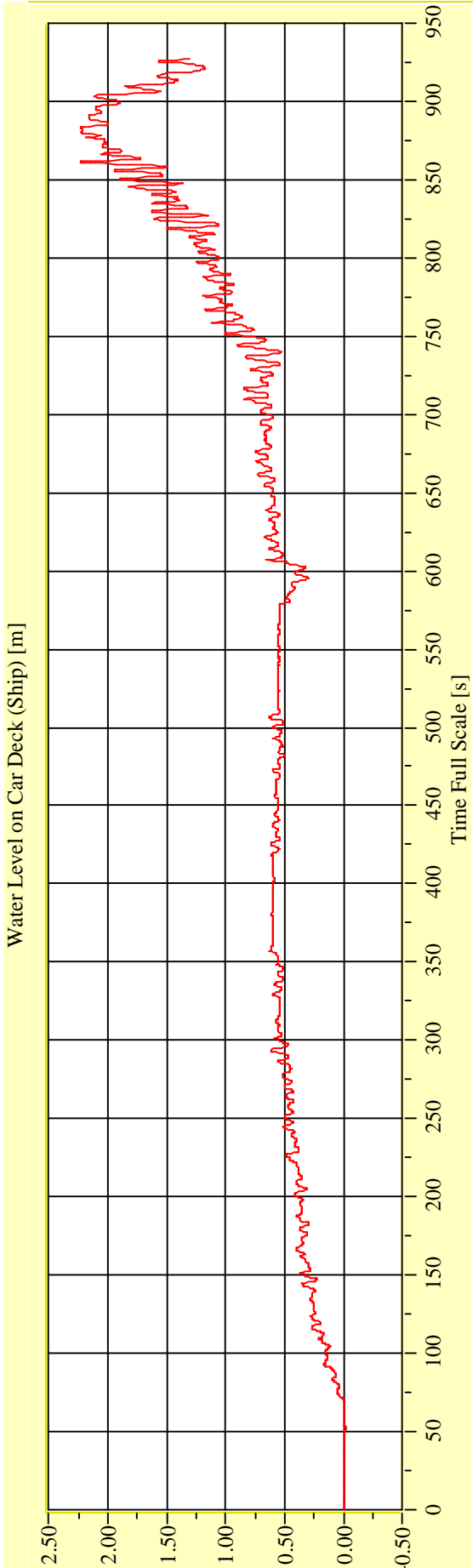
Vienna Model Basin **Model No. 2461** **Test No. 29740-04** **Target Waves: Hs = 3.0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

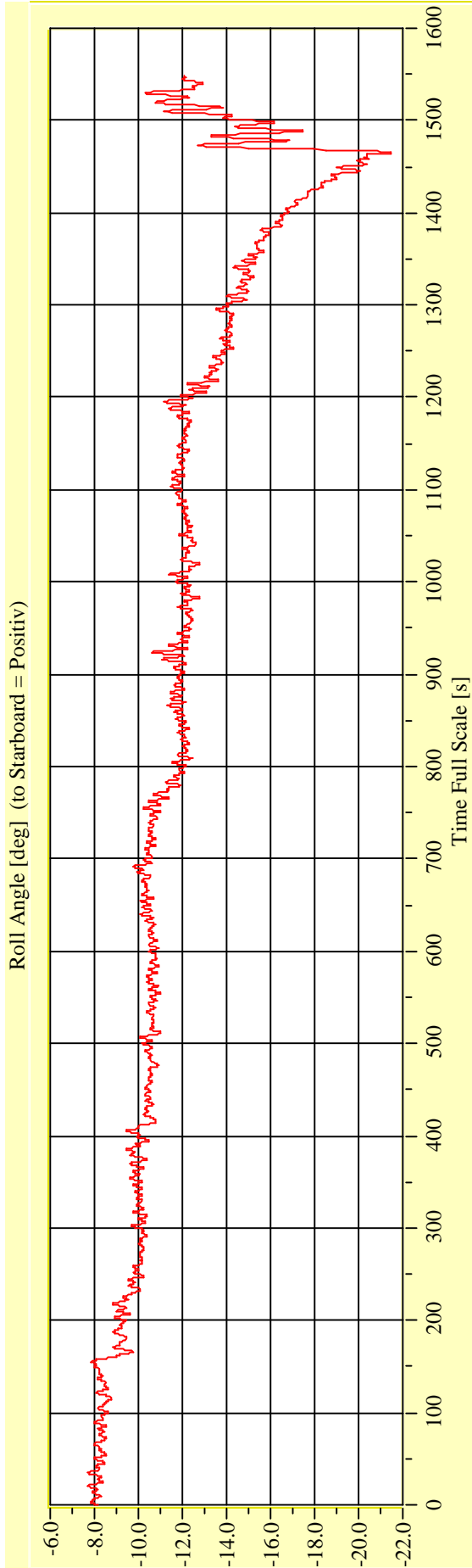
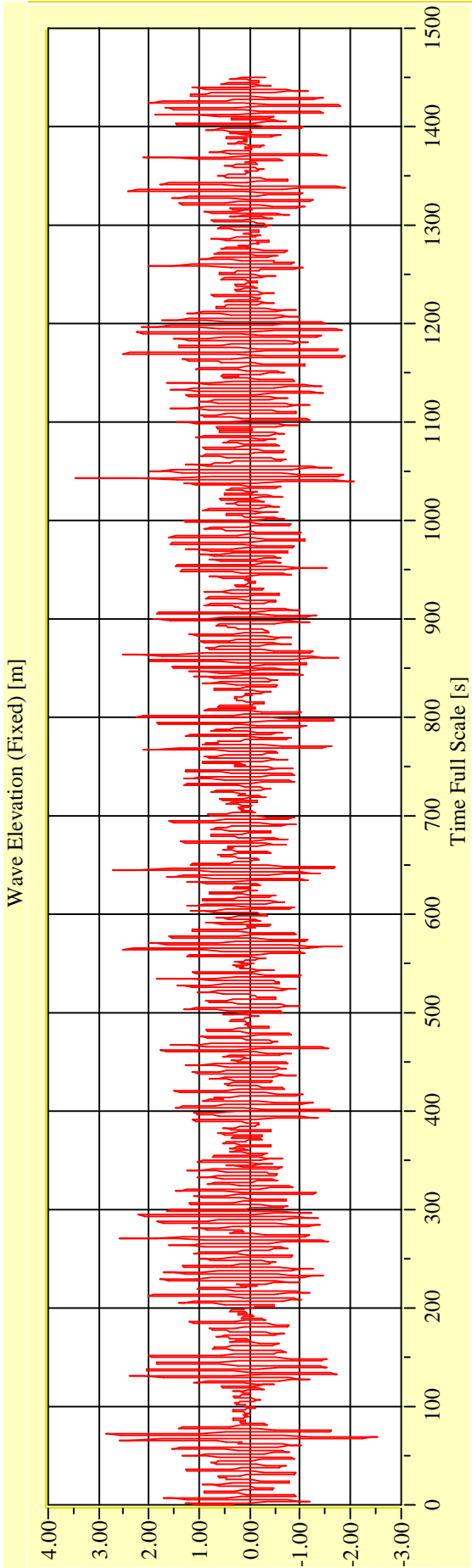
Vienna Model Basin **Model No. 2461** **Test No. 29740-04** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

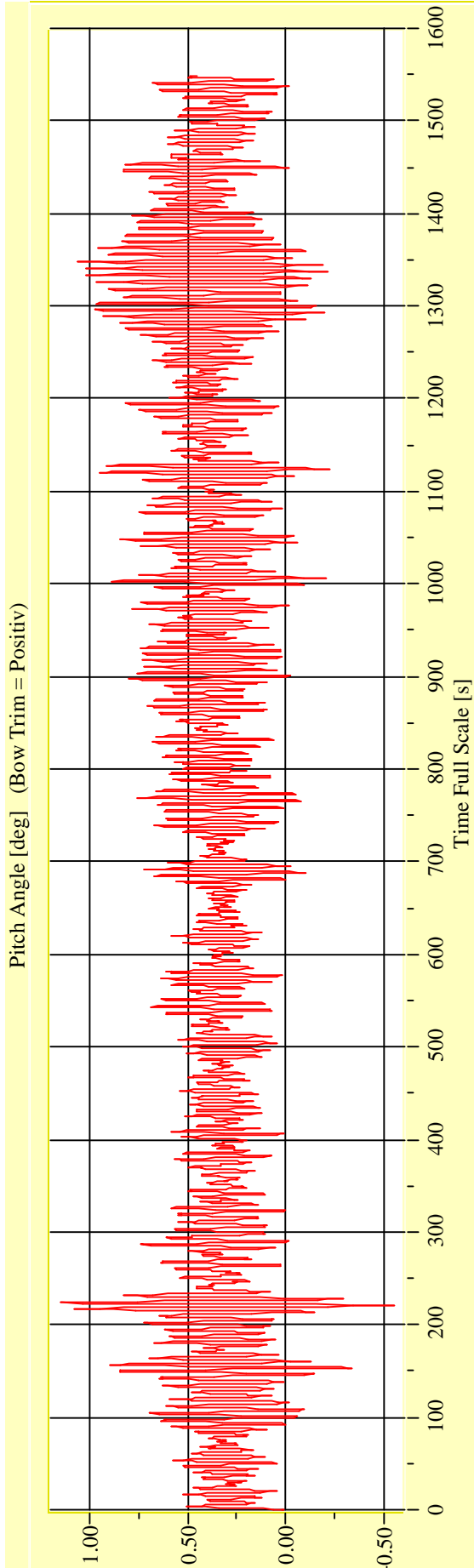
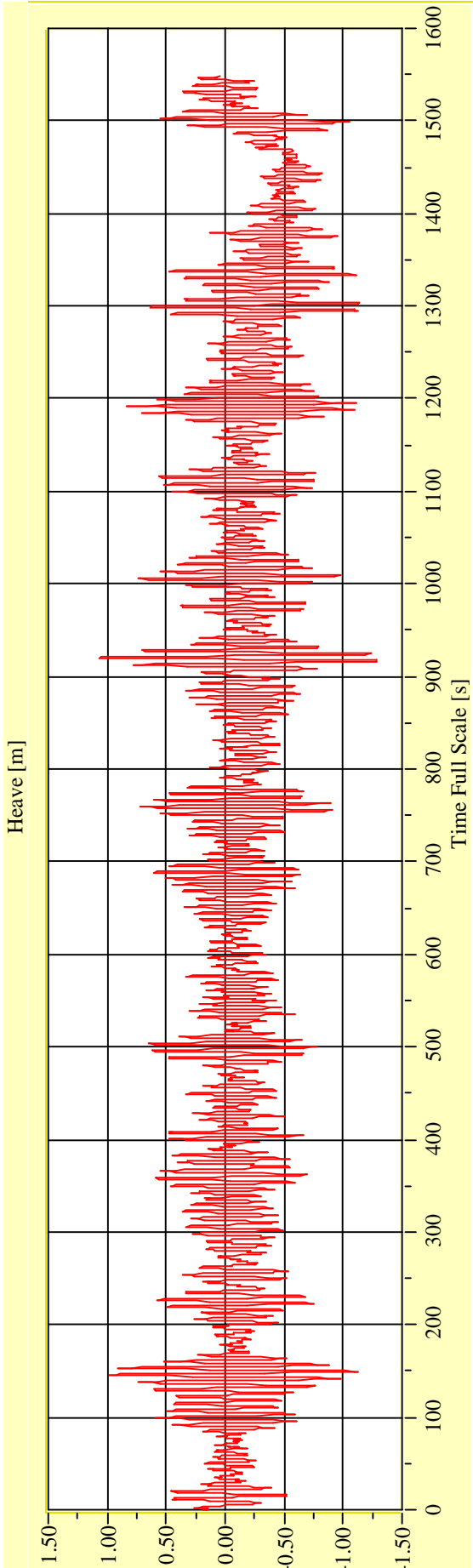
Vienna Model Basin **Model No. 2461** **Test No. 29740-05** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

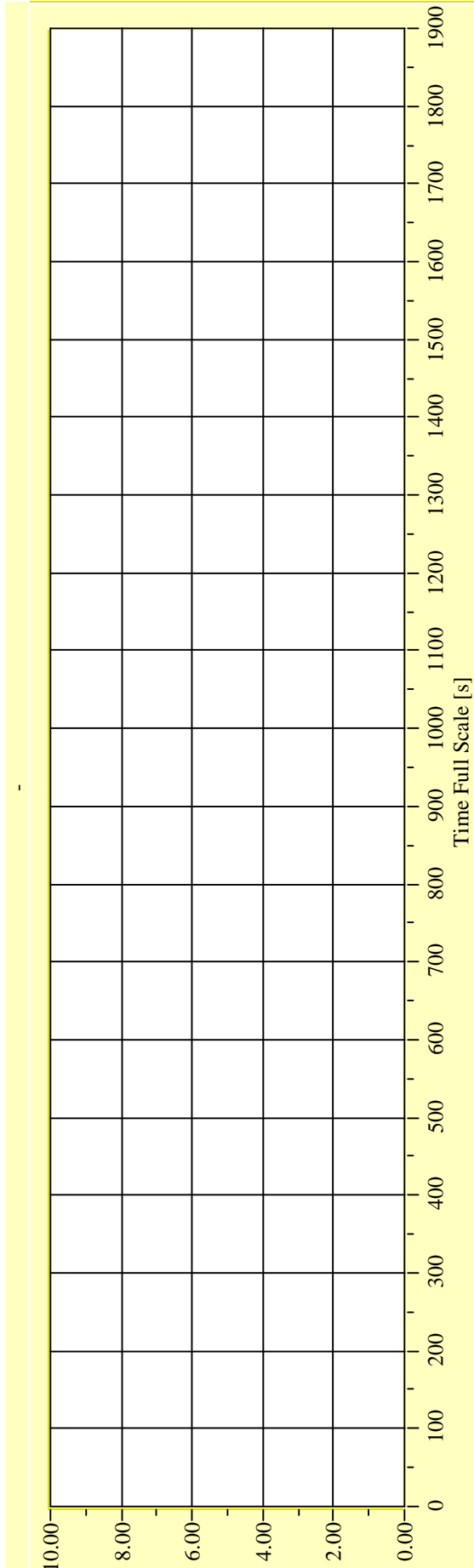
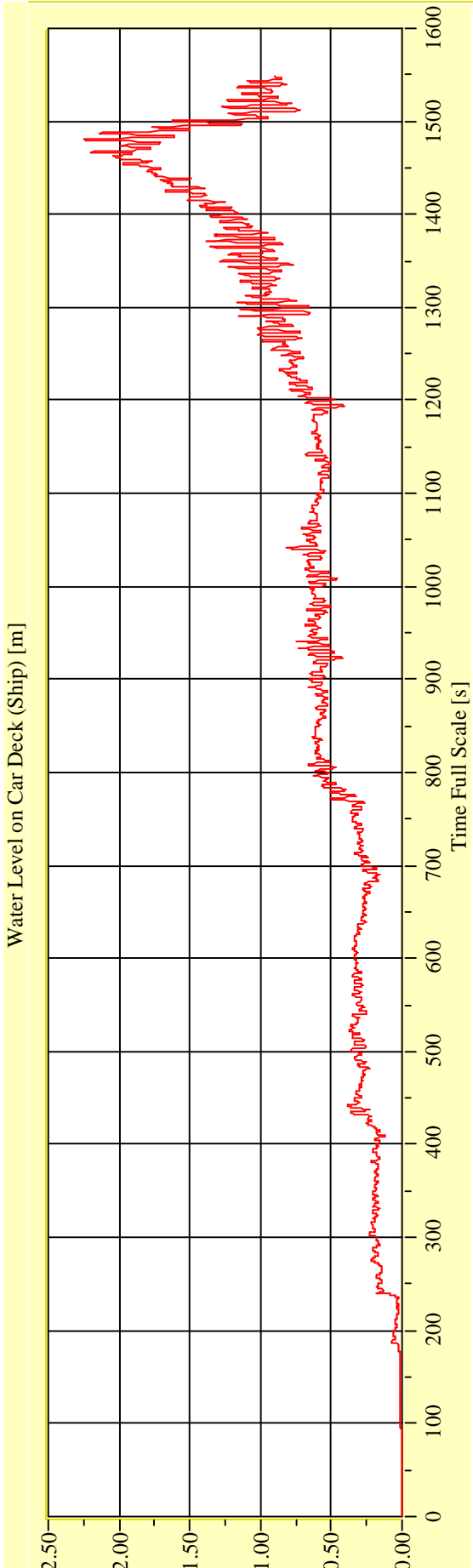
Vienna Model Basin **Model No. 2461** **Test No. 29740-05** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

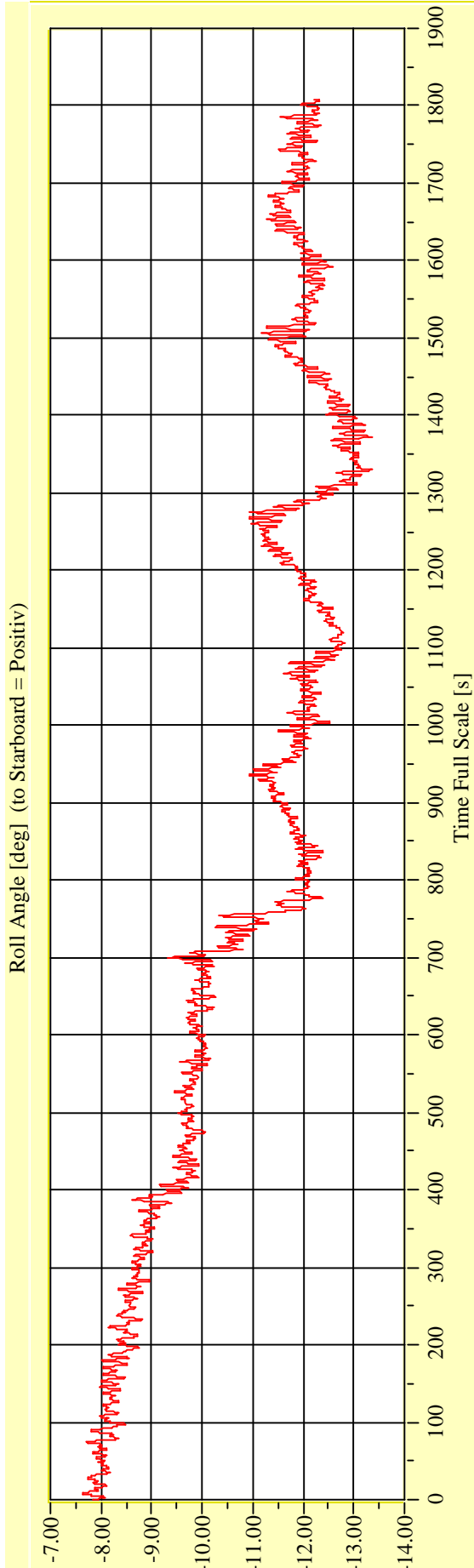
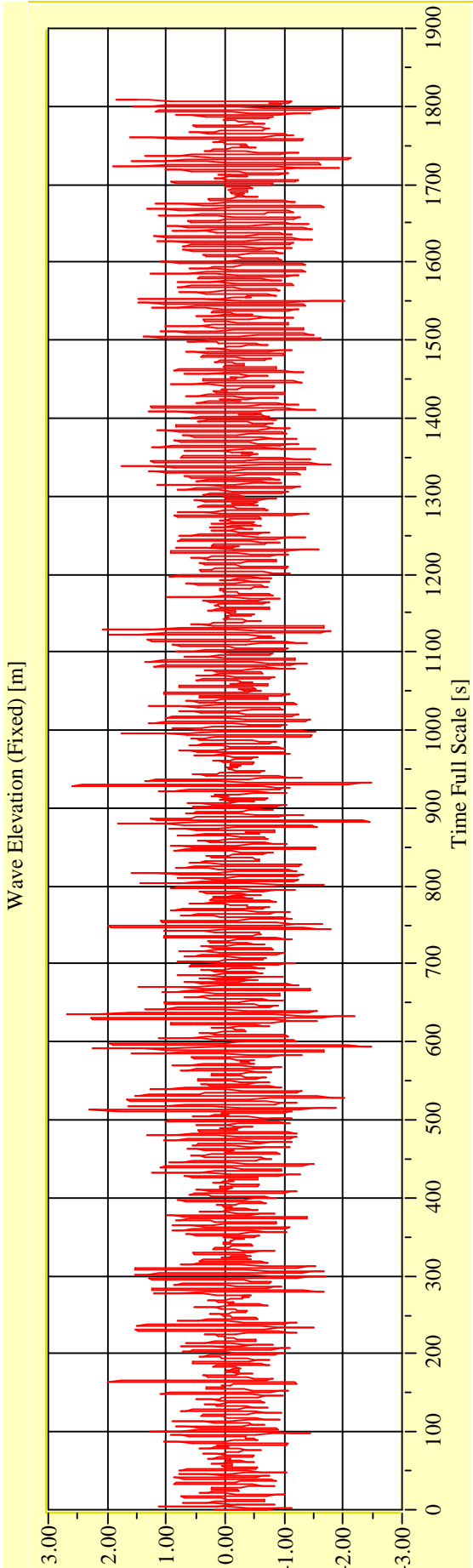
Vienna Model Basin **Model No. 2461** **Test No. 29740-05** **Target Waves: Hs = 3,0 m Tp = 6,9282 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-01** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

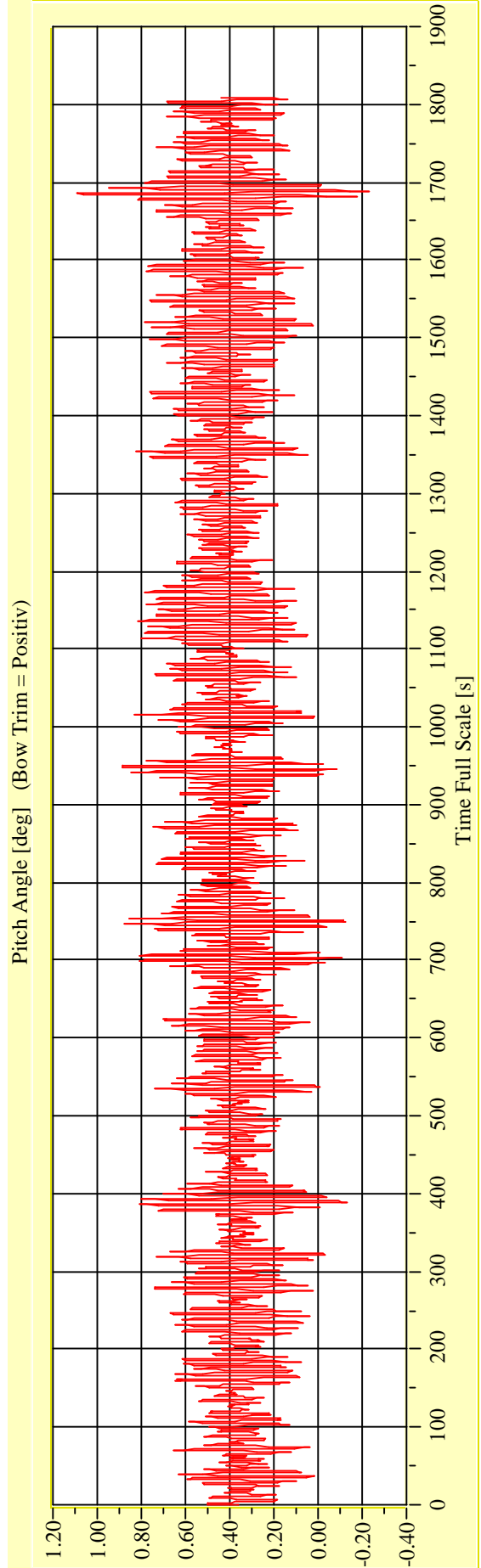
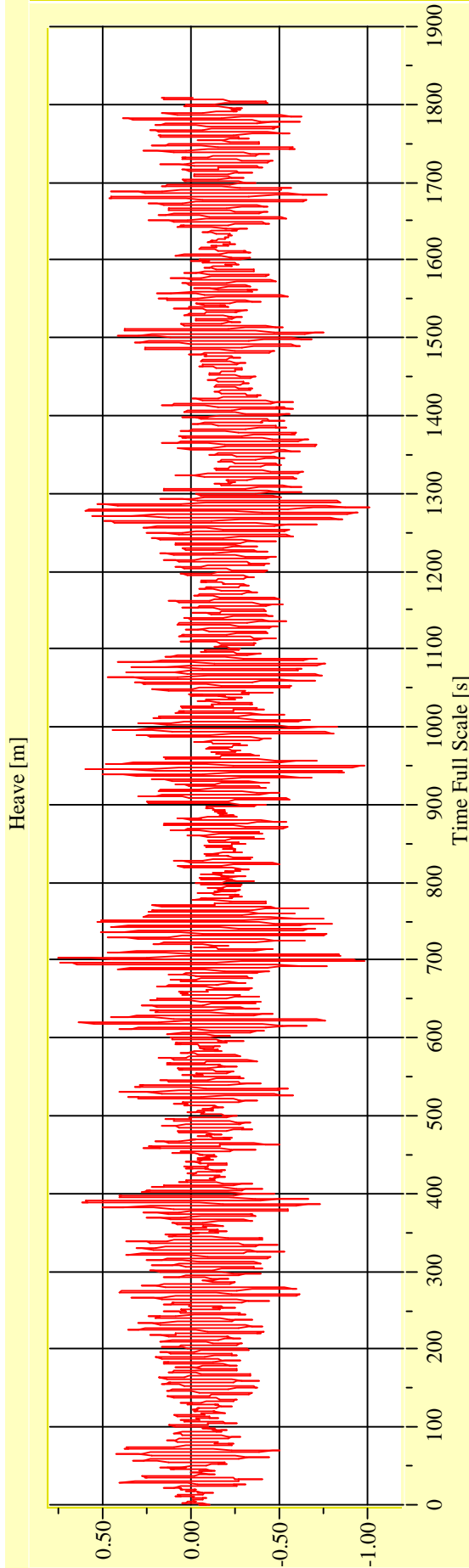
Vienna Model Basin

Model No. 2461

Test No. 29741-01

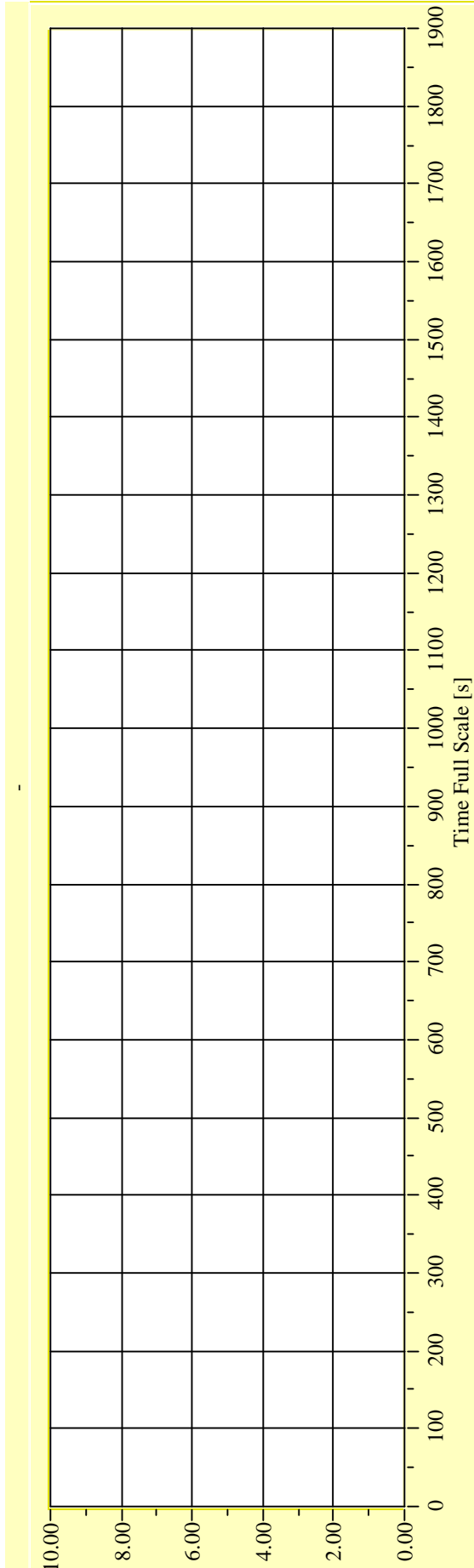
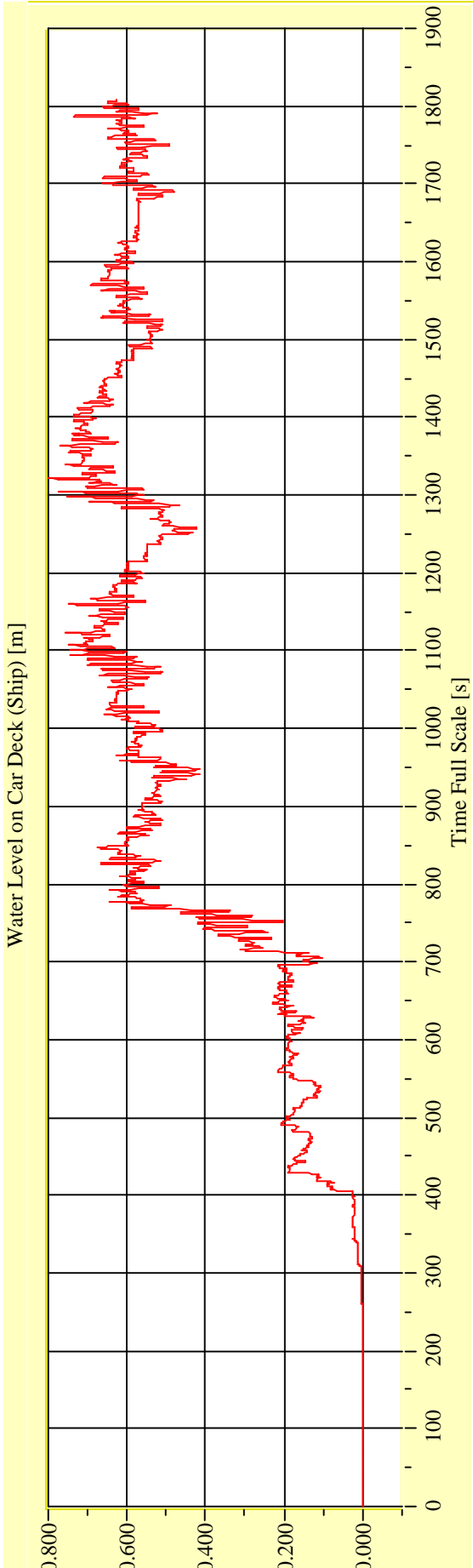
gamma = 3,3

Target Waves: Hs = 2,75 m Tp = 6,6332 s



Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-01** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



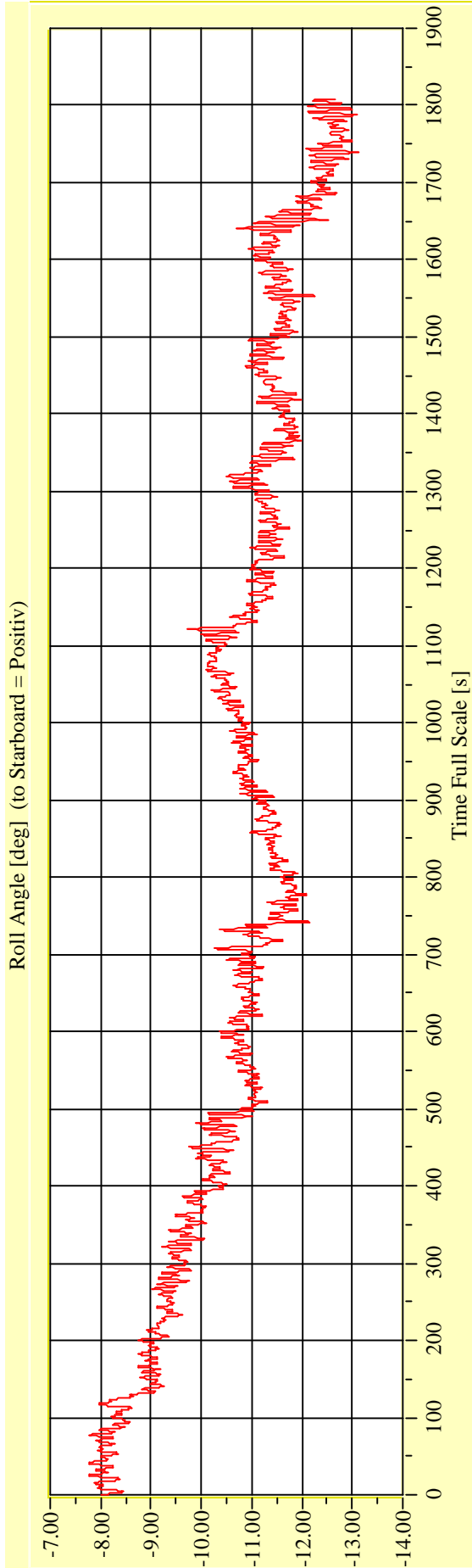
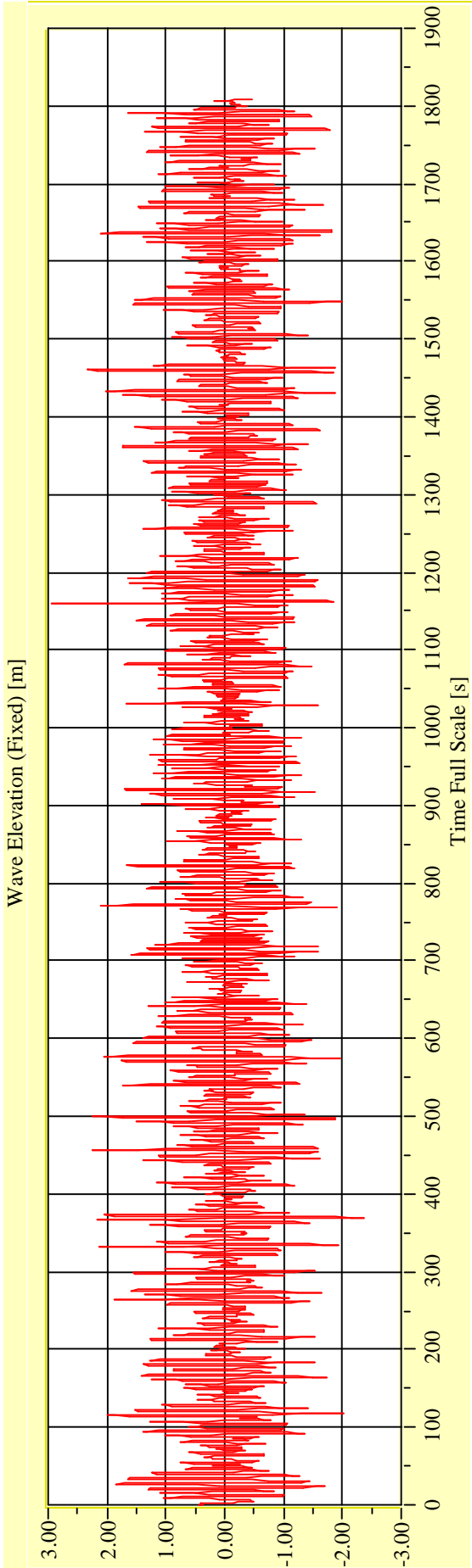
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

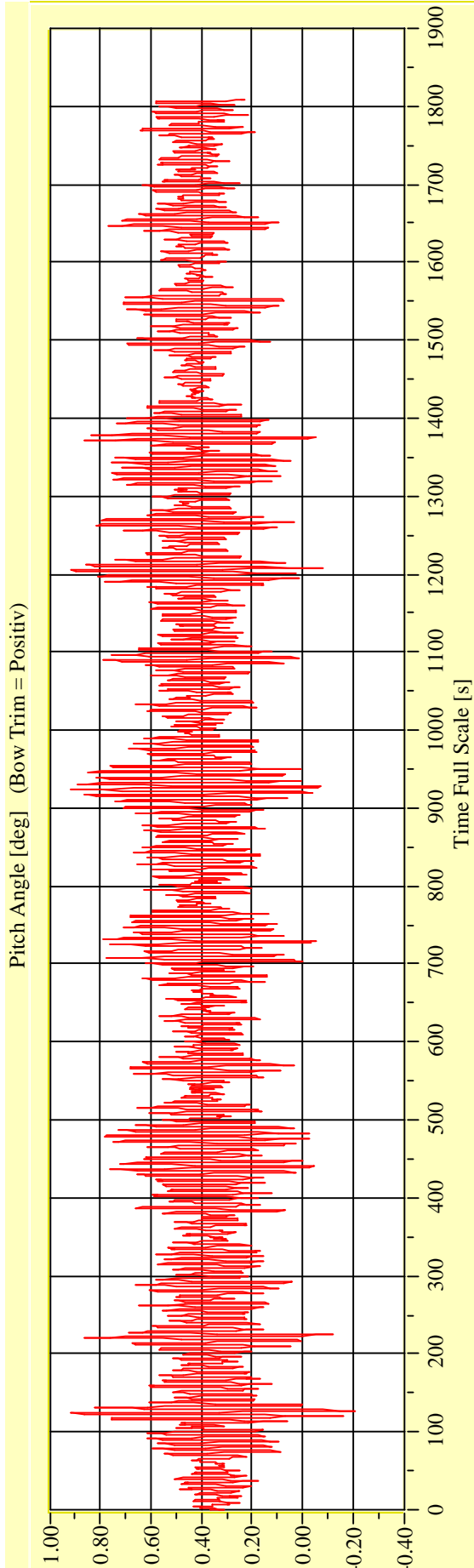
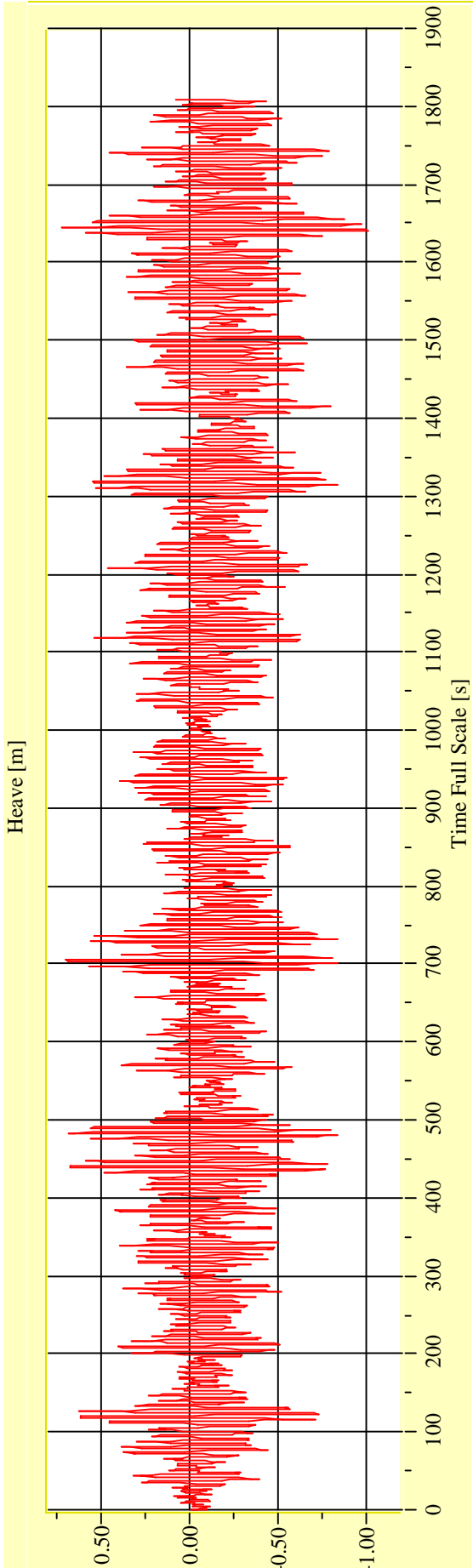
Vienna Model Basin **Model No. 2461** **Test No. 29741-02** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-02** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

Vienna Model Basin

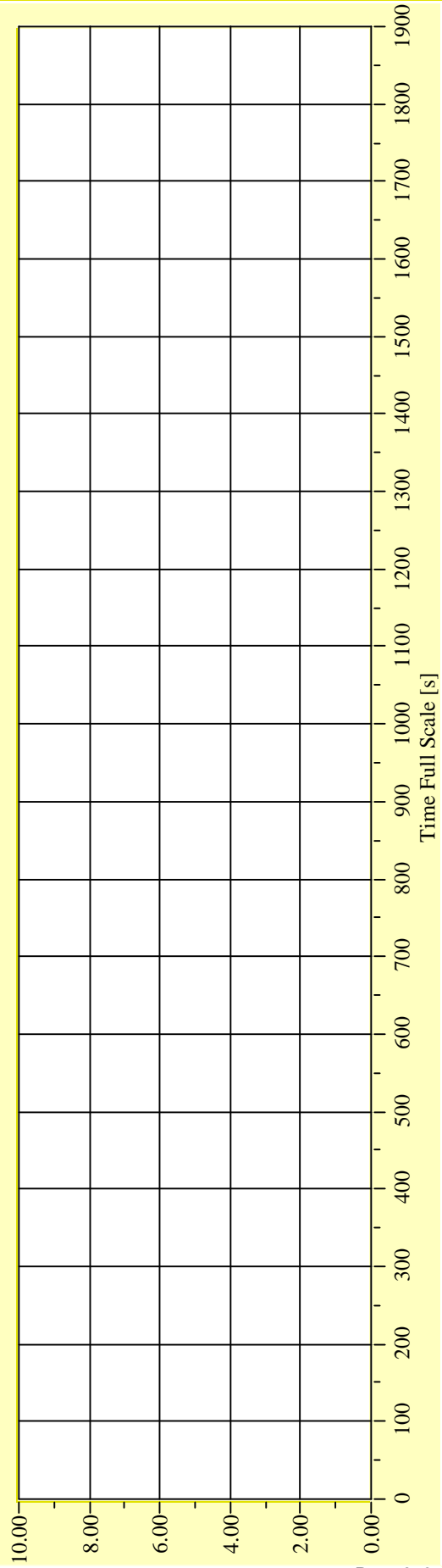
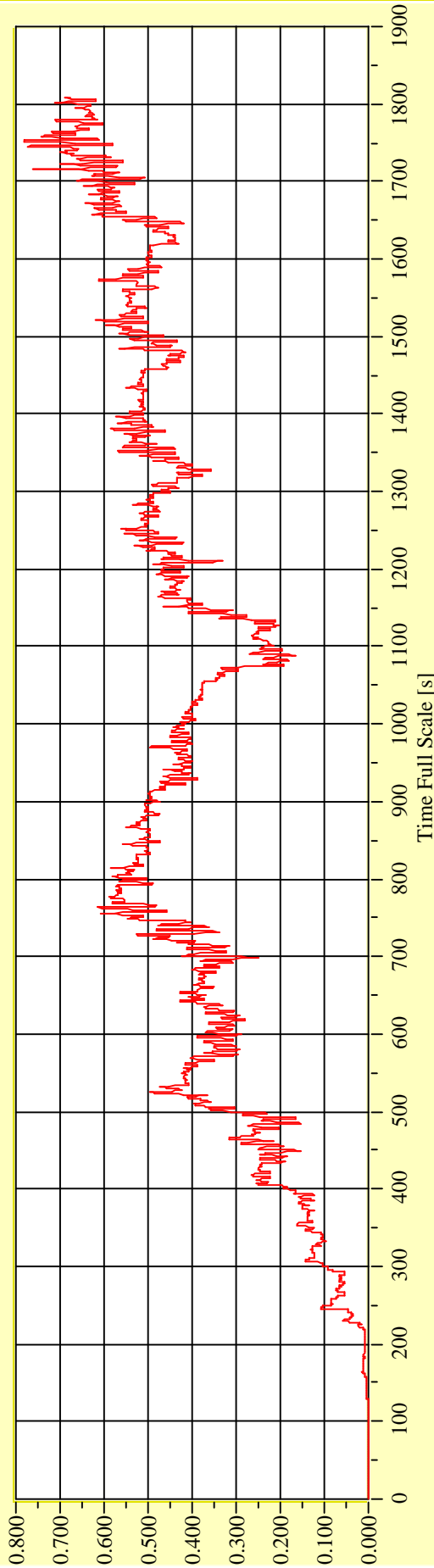
Model No. 2461

Test No. 29741-02

Target Waves: Hs = 2,75 m Tp = 6,6332 s

gamma = 3,3

Water Level on Car Deck (Ship) [m]



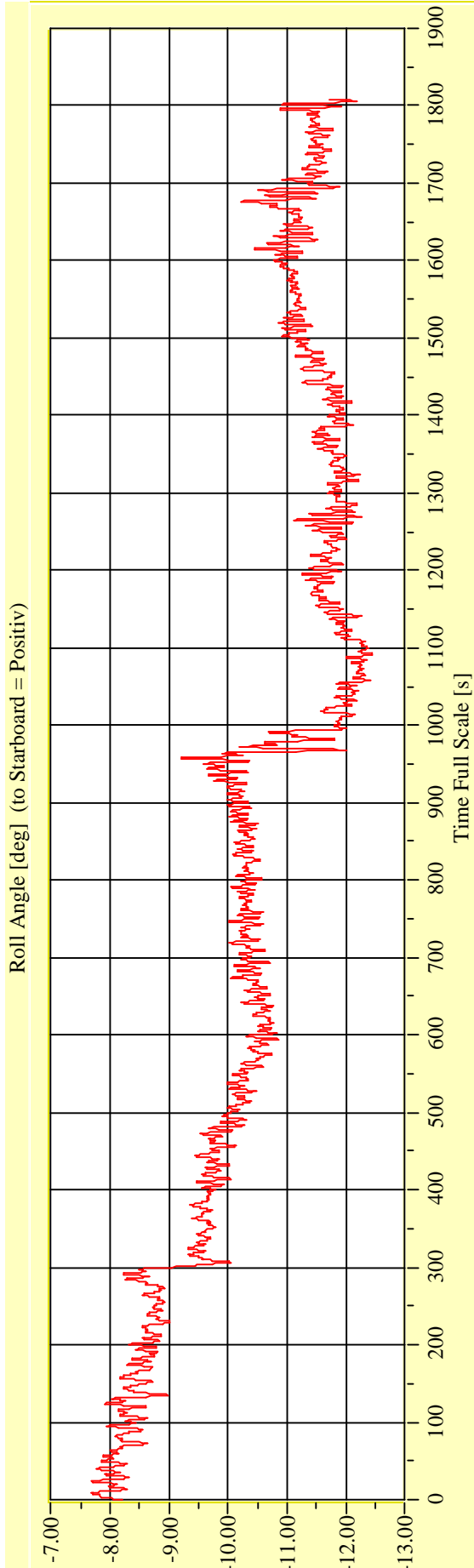
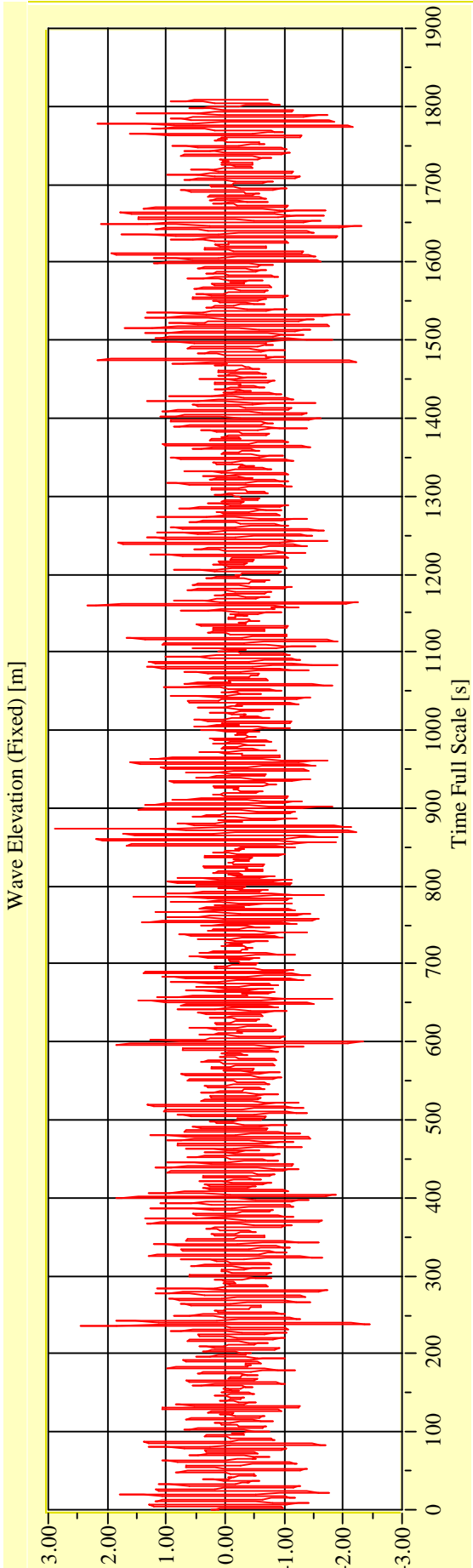
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-03** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

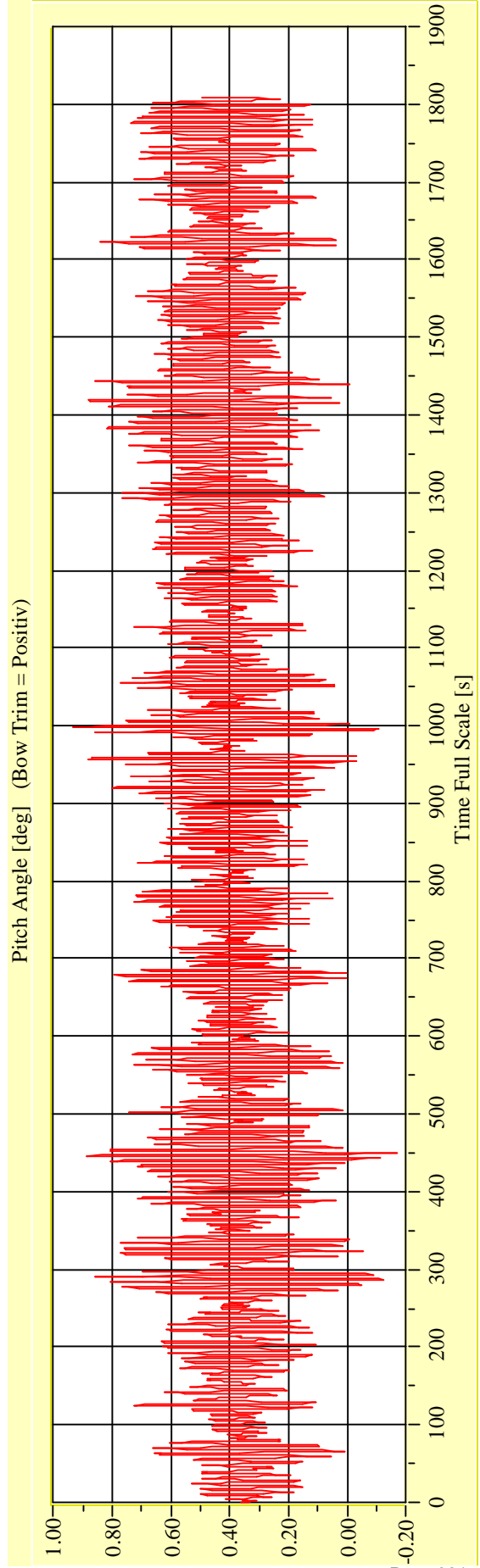
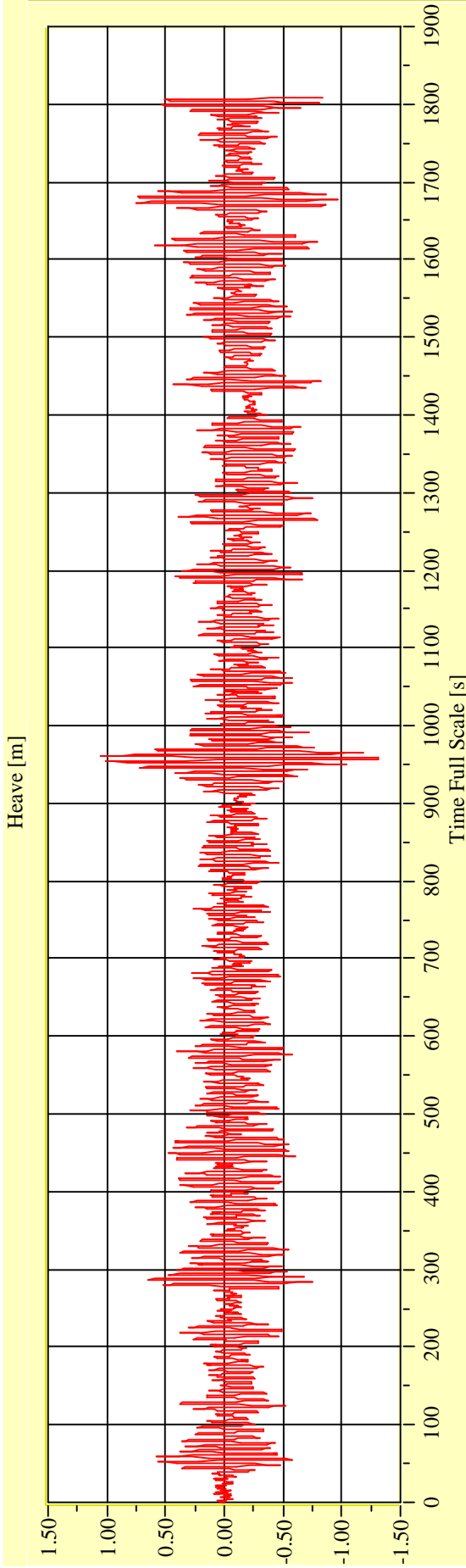
Vienna Model Basin

Model No. 2461

Test No. 29741-03

Target Waves: Hs = 2,75 m Tp = 6,6332 s

gamma = 3,3



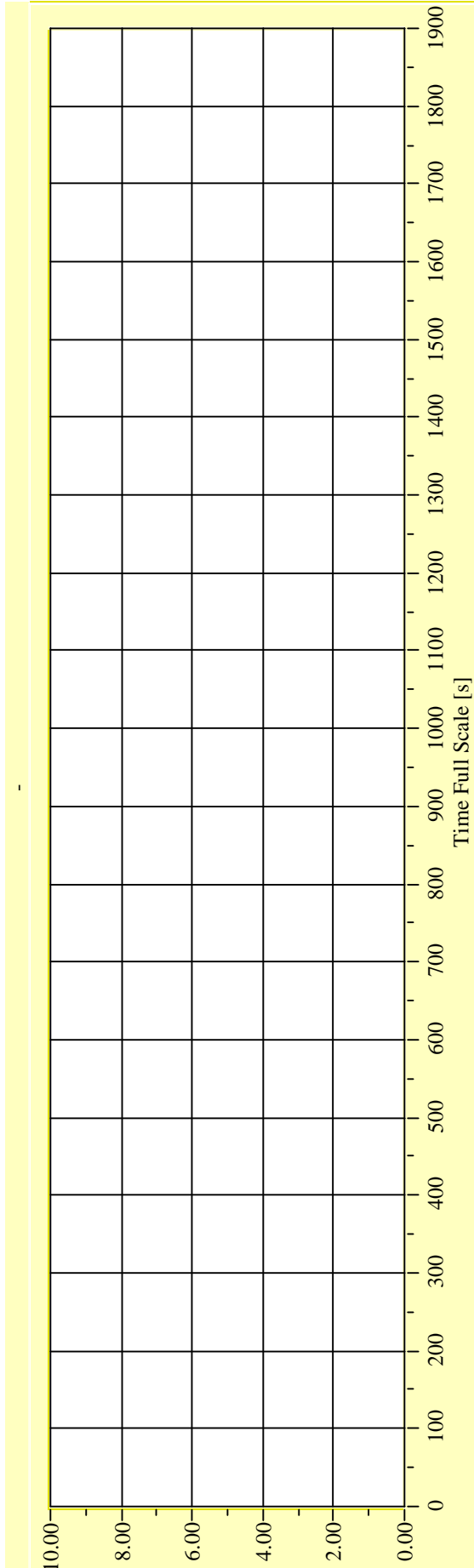
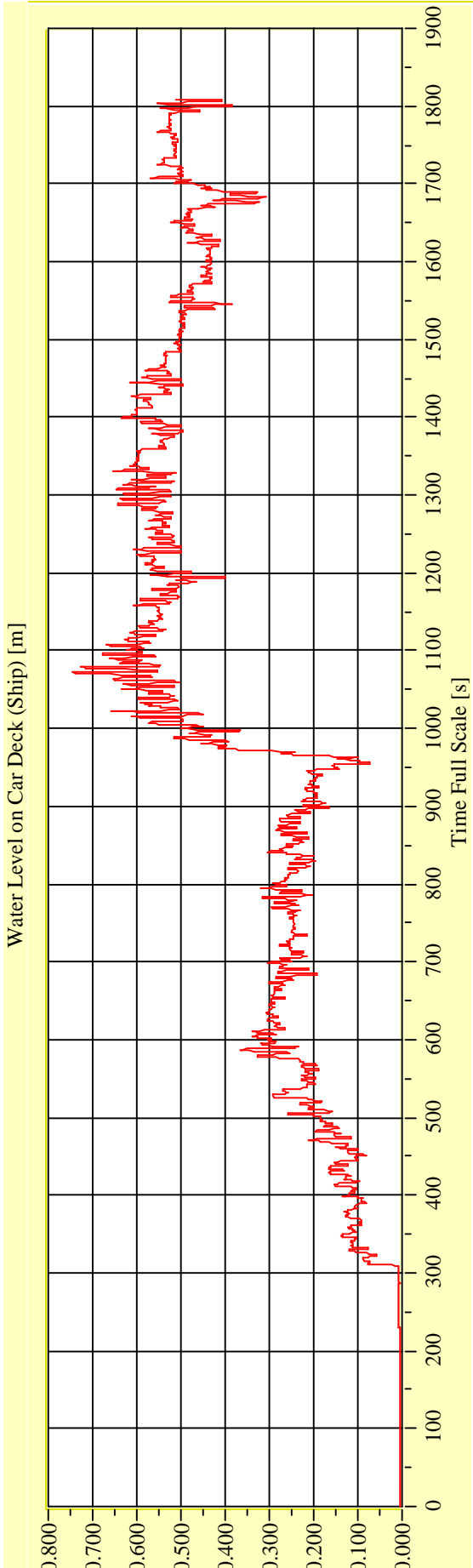
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-03** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



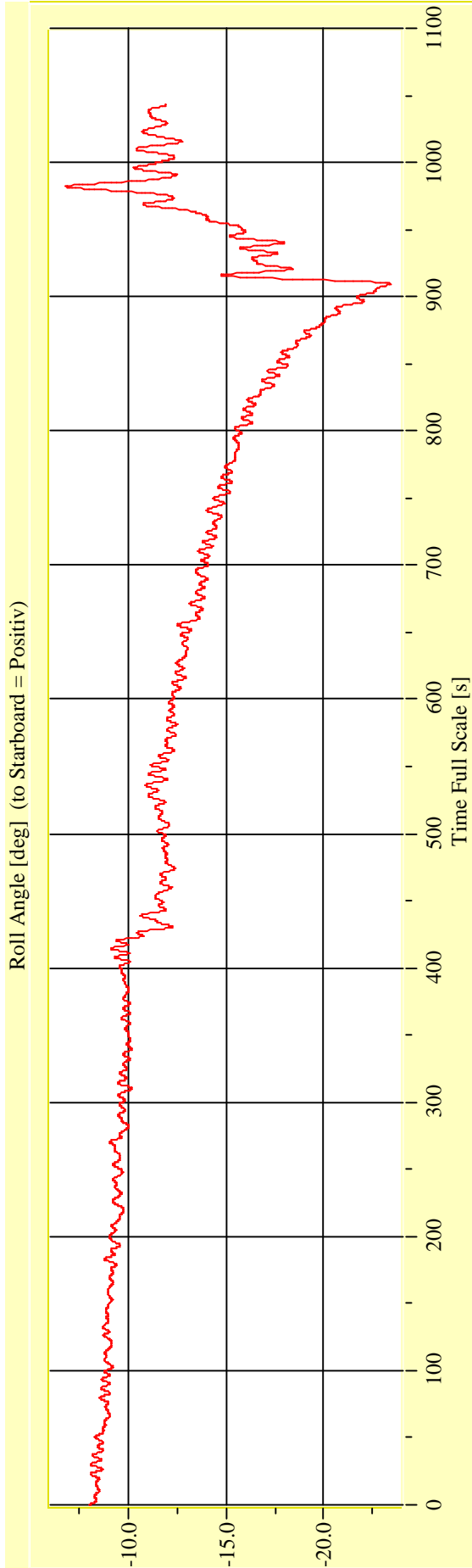
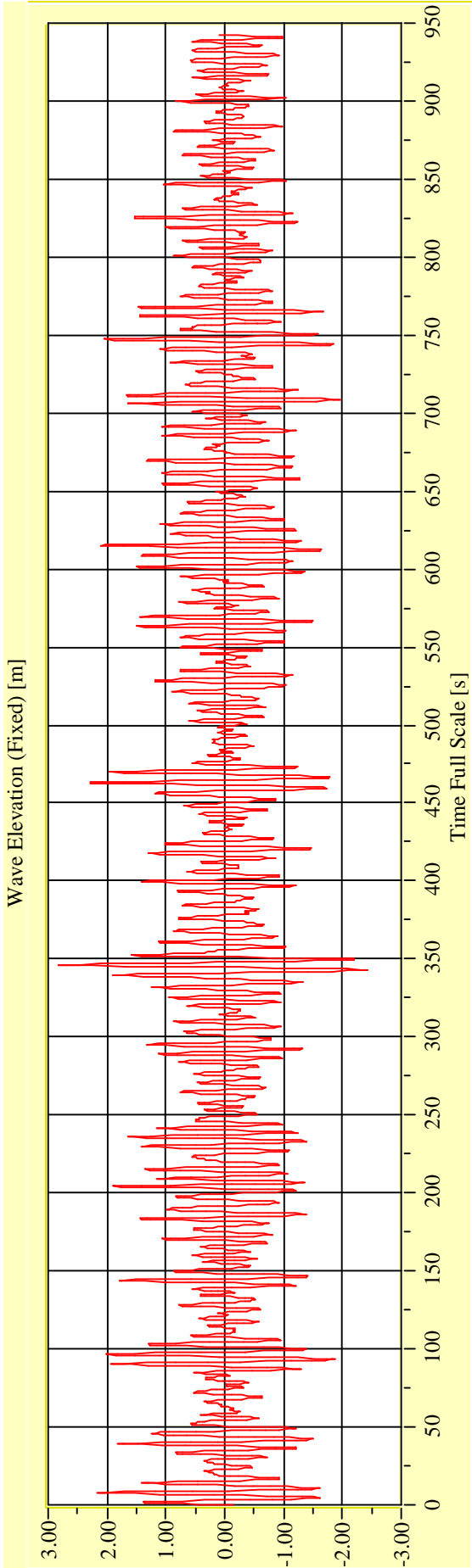
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-04** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



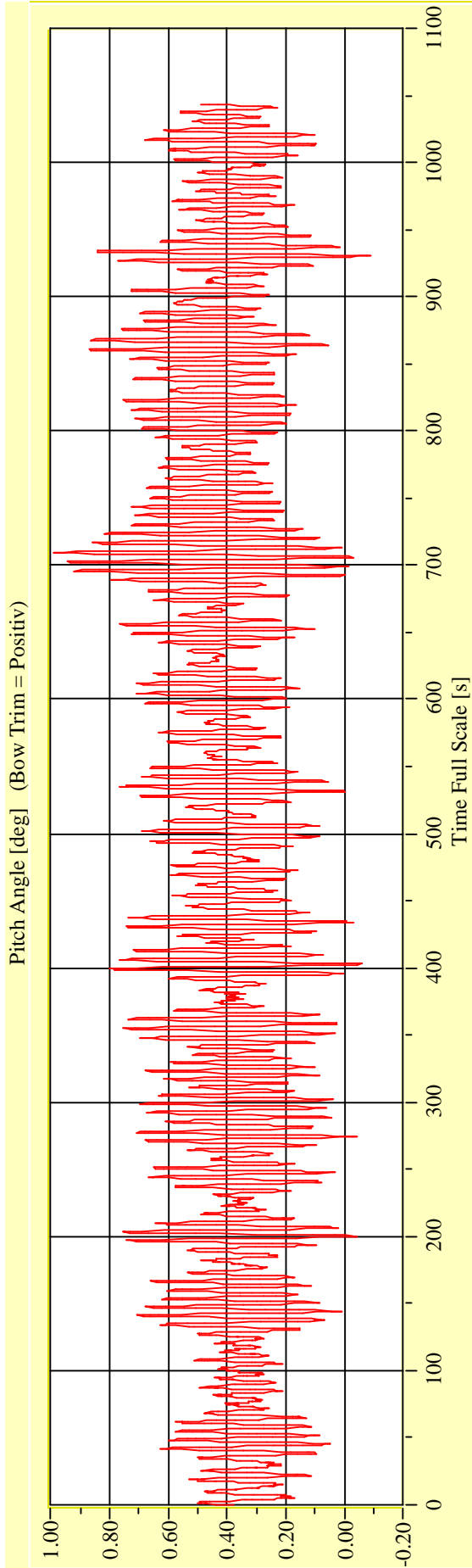
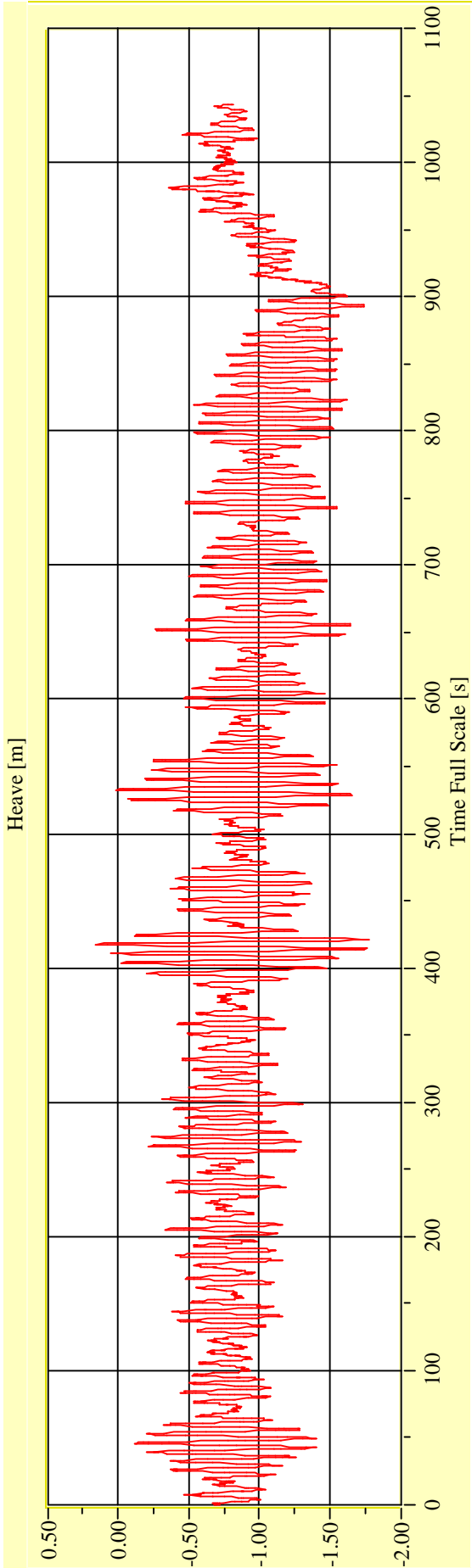
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-04** **Target Waves: Hs = 2,75 m Tp = 6.6332 s** **gamma = 3,3**



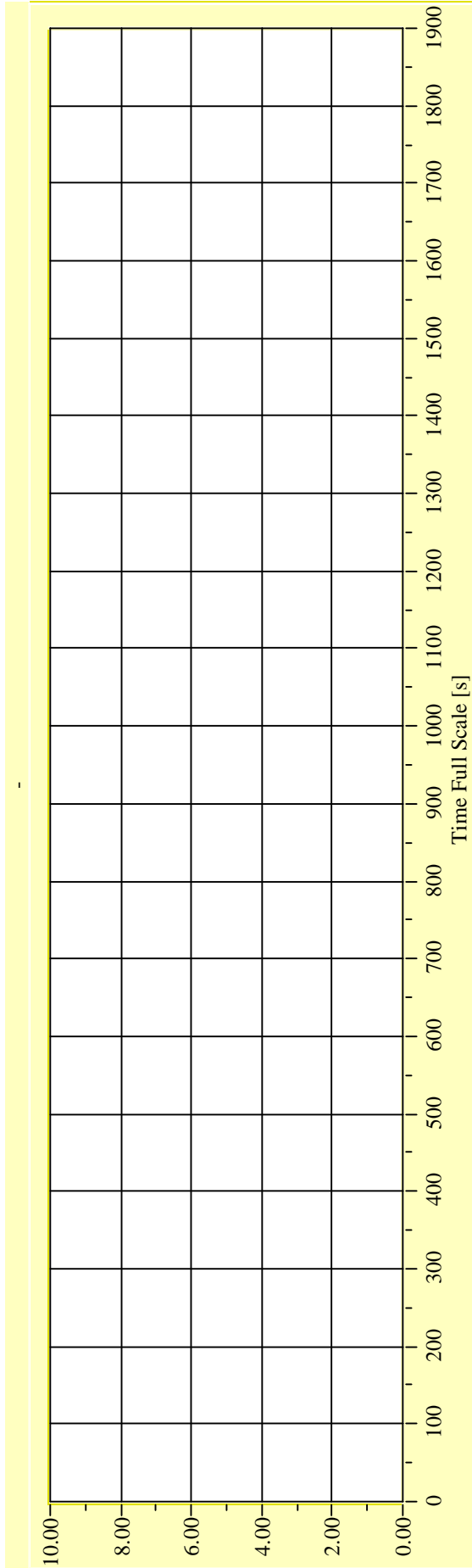
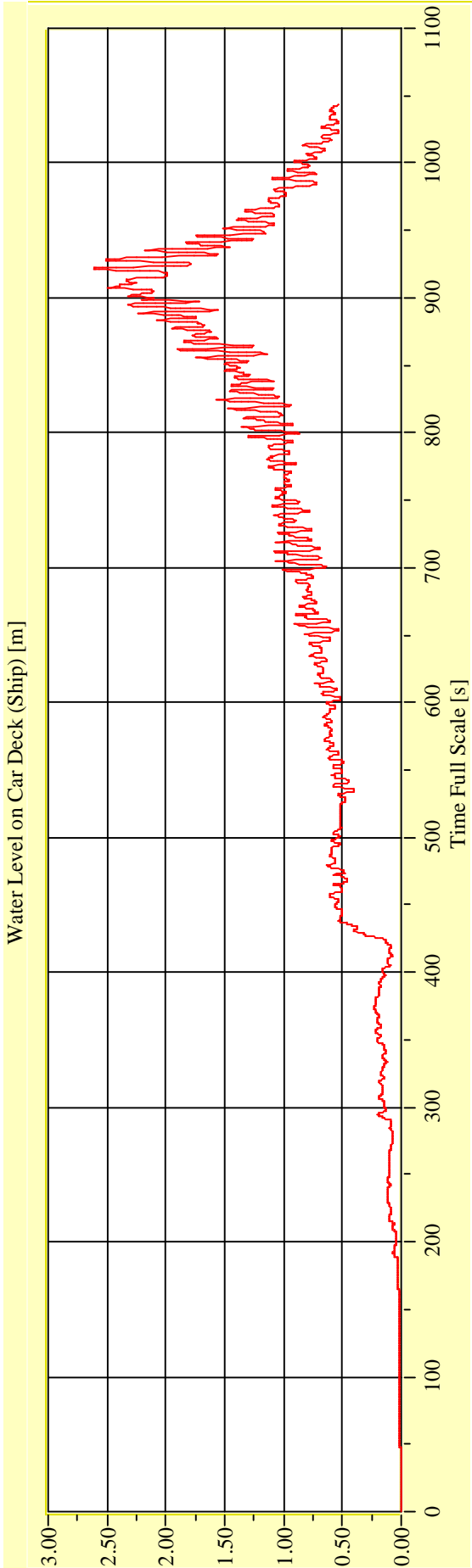
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-04** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**

Irregular Beam Seas

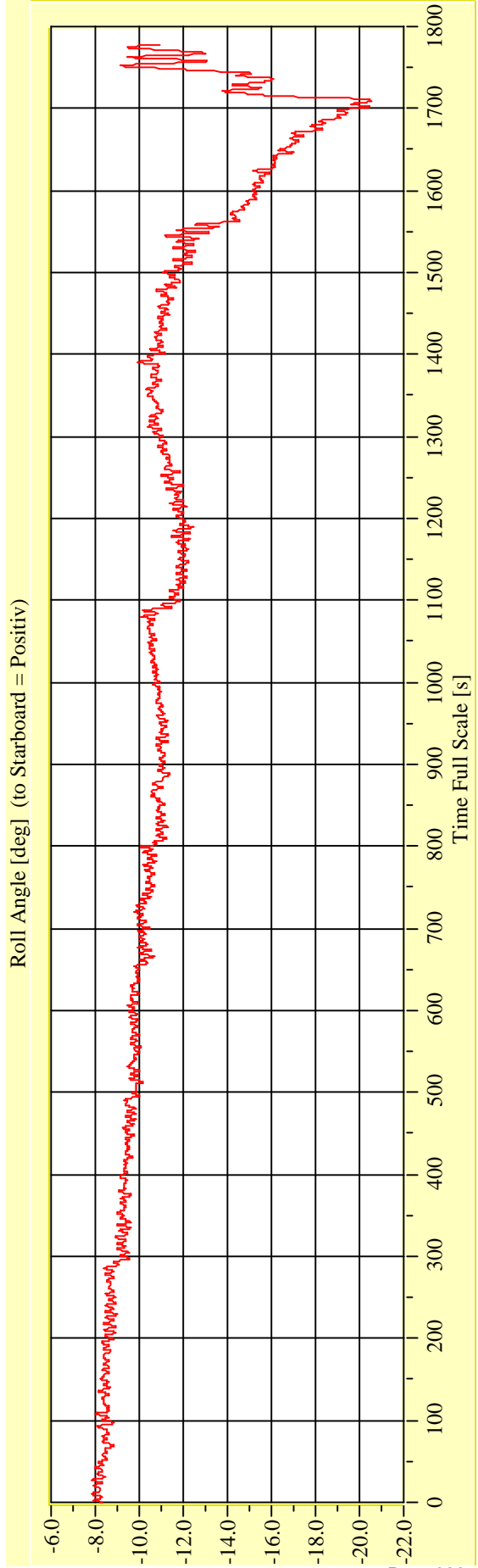
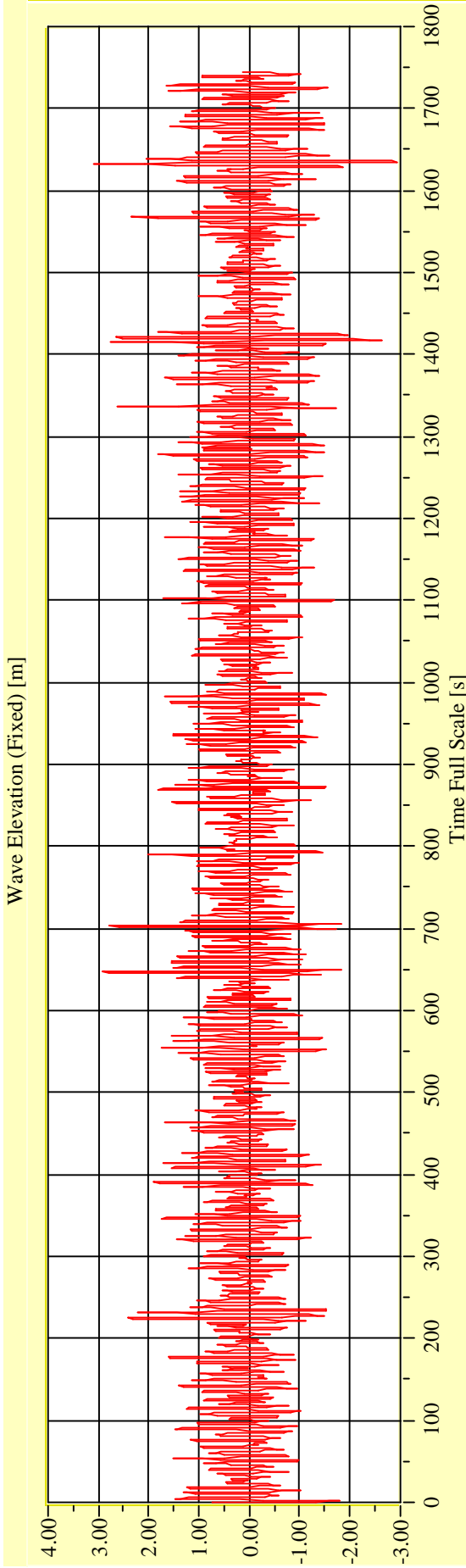
Vienna Model Basin

Model No. 2461

Test No. 29741-05

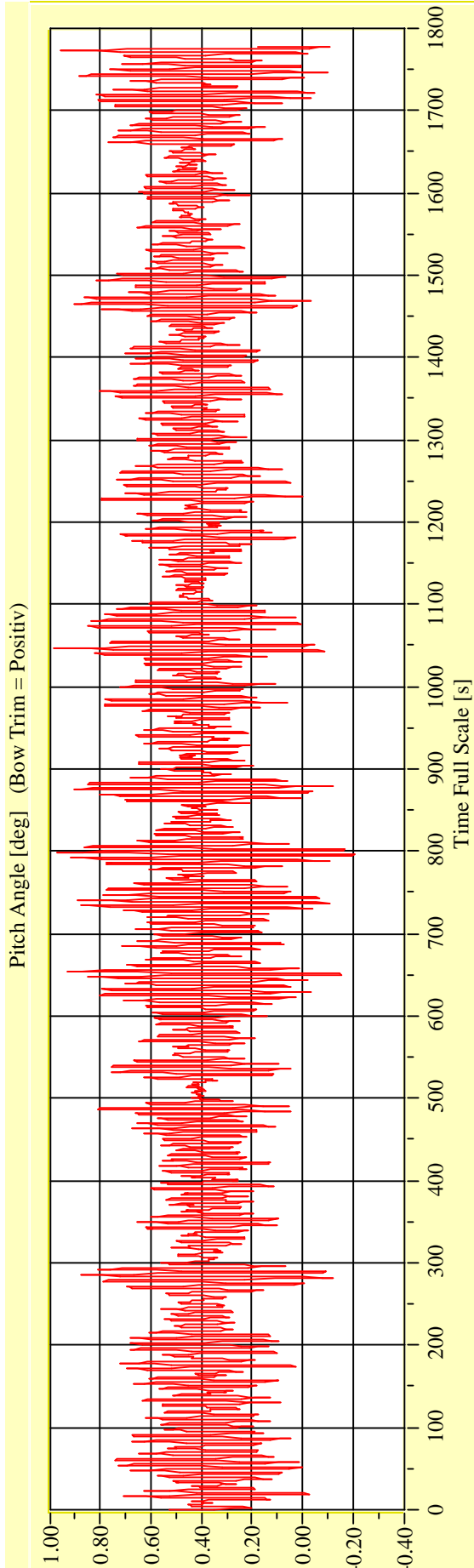
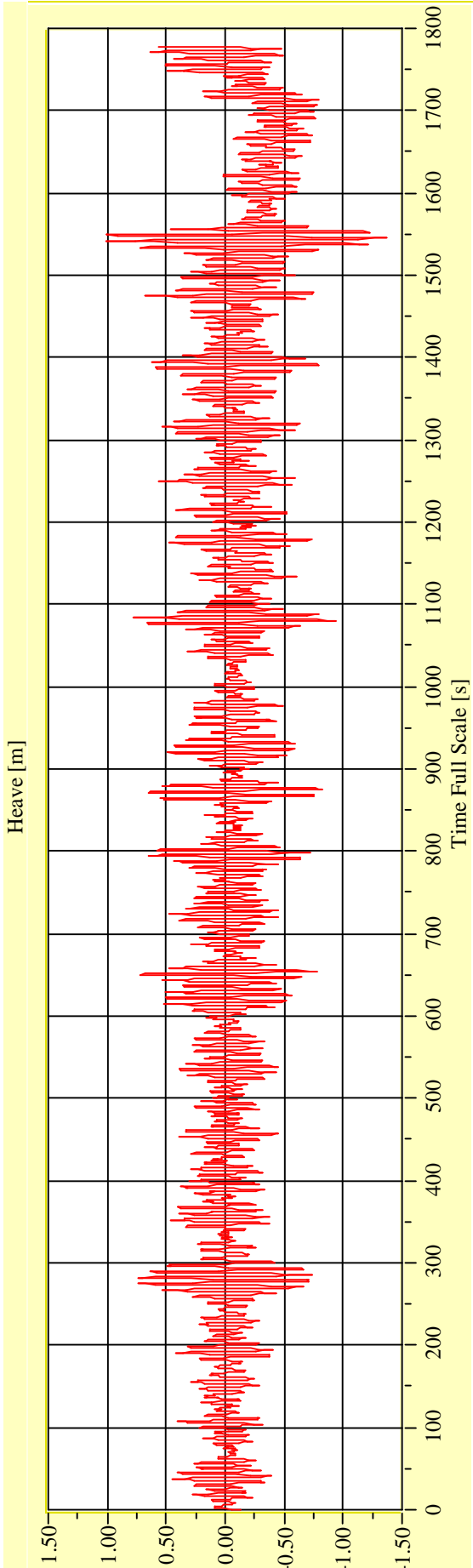
Target Waves: Hs = 2,75 m Tp = 6,6332 s

gamma = 3,3



Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-05** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



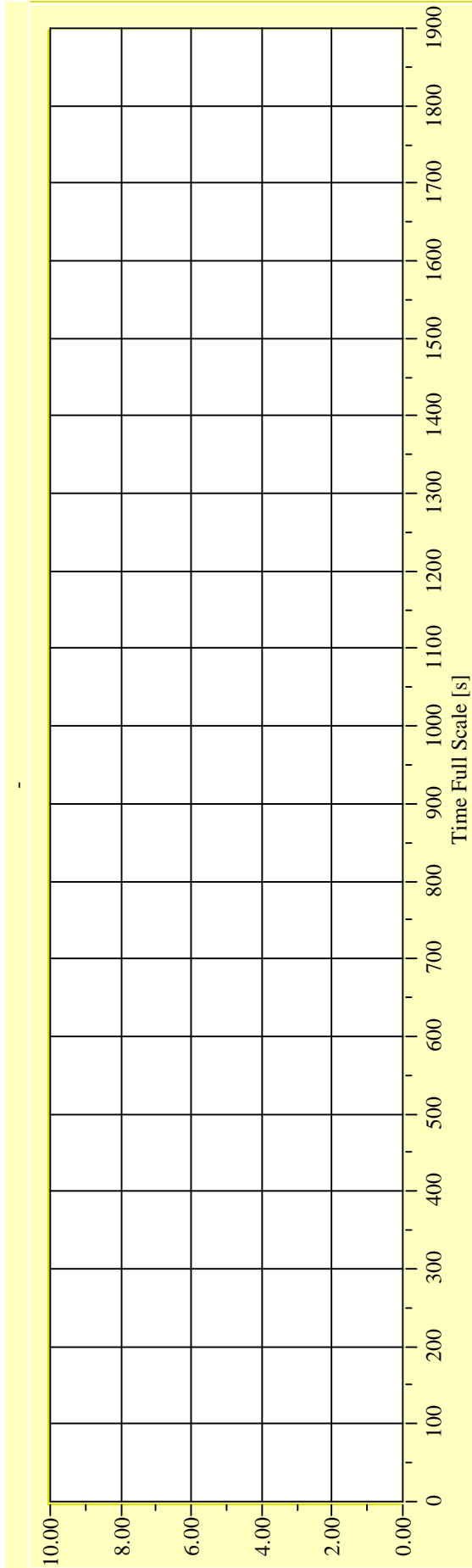
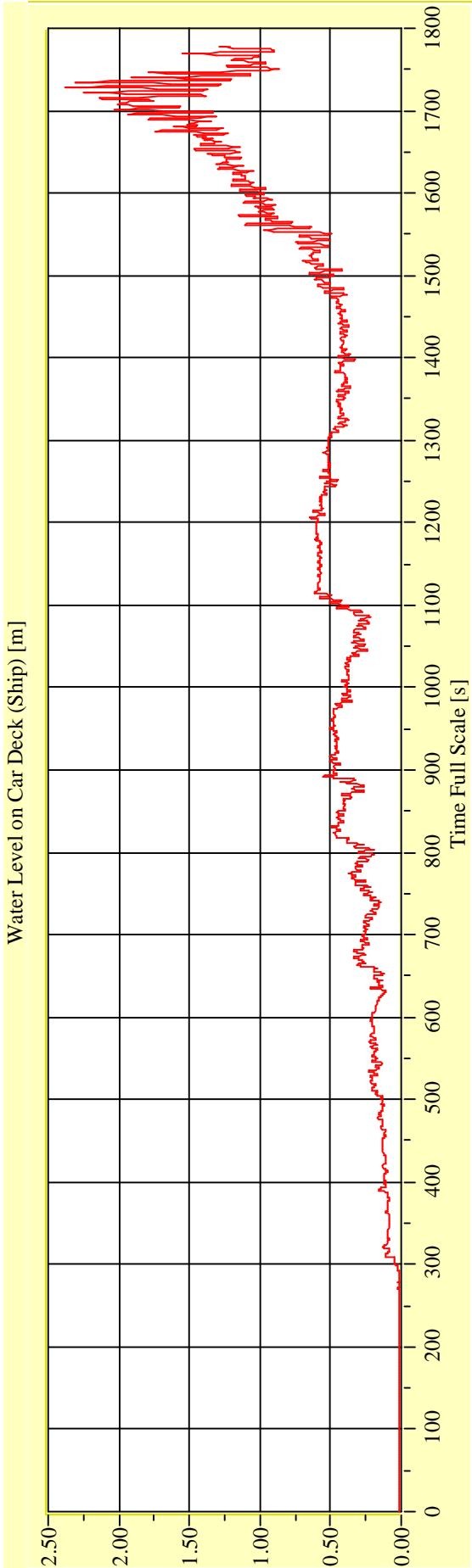
Date: 02.07.2010

Project: EMSA 3

Damage 1: R7_P8-9.3.0

Irregular Beam Seas

Vienna Model Basin **Model No. 2461** **Test No. 29741-05** **Target Waves: Hs = 2,75 m Tp = 6,6332 s** **gamma = 3,3**



Date: 02.07.2010 **Project: EMSA 3** **Damage 1: R7_P8-9.3.0**



APPENDIX C1

MODEL TEST PROTOCOL

Model No. 2461A

Project: "EMSA 4"

Damage Case-2 R7M4_P7-8.3.0

Details of the dimensions and the damage conditions

GENERAL PARTICULARS

Model Scale = 1: 40

	SHIP (m)	MODEL (mm)	NOTES	CHECKED
MAIN DIMENSIONS				
LMOD	199.016	4975.4		4975.5
LBP	190.000	4750.0		4750.0
BMLD	29.400	735.0		736.0

LONGITUDINAL POSITION OF COLLISION DAMAGE				
Aft Upper Vehicle Deck Bulkhead	29.250	731.3		-
Aft Long Lower Hold Bulkhead	40.500	1012.5		1012
Aft Bulkhead	56.250	1406.3		1404
Mid Bulkhead	72.000	1800.0		1800
Fwd Bulkhead	87.750	2193.8		2194
Fwd Long Lower Hold Bulkhead	132.750	3318.8		3320
Fwd Upper Vehicle Deck Bulkhead	103.500	2587.5		2587

INTACT DRAUGHTS - DAMAGE 2

Marked in BLACK pen

FP	
Full Size	6.400 m
Model	160.0 mm
Check	160.0 mm

Port

Starboard



Midship	
Full Size	6.400 m
Model	160.0 mm
Check	160.0 mm

Midship	
Full Size	6.400 m
Model	160.0 mm
Check	160.0 mm

Quarter	
Full Size	6.400 m
Model	160.0 mm
Check	160.0 mm

Quarter	
Full Size	6.400 m
Model	160.0 mm
Check	160.0 mm

AP	
Full Size	6.400 m
Model	160.0 mm
Check	- mm

AP	
Full Size	6.400 m
Model	160.0 mm
Check	- mm

DAMAGE DRAUGHTS - DAMAGE 2

Marked in RED pen

FP	
Full Size	8.439 m
Model	211.0 mm
Check	211 mm

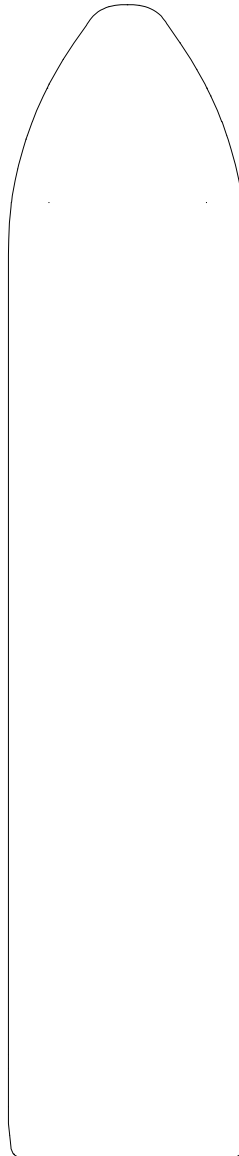
Static Heel	
8.844	degree(s)

FP	
Full Size	8.502 m
Model	212.6 mm
Check	212.6 mm

FP	
Full Size	8.377 m
Model	209.4 mm
Check	209.4 mm

Port

Starboard



Midship	
Full Size	10.634 m
Model	265.9 mm
Check	265.9 mm

Midship	
Full Size	6.060 m
Model	151.5 mm
Check	152 mm

Quarter	
Full Size	10.588 m
Model	264.7 mm
Check	264.7 mm

Quarter	
Full Size	6.013 m
Model	150.3 mm
Check	150.3 mm

AP	
Full Size	10.425 m
Model	260.6 mm
Check	260.6 mm

AP	
Full Size	6.083 m
Model	152.1 mm
Check	- mm

DAMAGE OPENING - DAMAGE 2

	SHIP (m)	MODEL (mm)	NOTES	CHECKED
DAMAGE OPENING				
DMLD	10.00	250.0	Cardeck at V	247.0
Length	8.971	224.3	3%L _S + 3.0m	224.0
Dist from AP	72.00	1800.0		1800.0
B/5	8.820	220.5	from CL	-
	5.880	147.0	from B _M LD at FoS	147.0

INTACT STABILITY CHARACTERISTICS - DAMAGE 2

	SHIP (m)	MODEL (mm)	NOTES	CHECKED
VESSEL WEIGHT				
Displacement (fresh water)	23649.30 tonnes	369.5 kg		369

INTACT STABILITY CHARACTERISTICS				
GMT	3.750	93.8		94.0250
KG	13.371	334.3		
KM	17.121	428.0		-
LCB (from AP)	89.560	2239.0	From AP (#0) Level trim	

RADIUS OF GYRATION CHARACTERISTICS				
Kxx/B (Roll)	0.3645	0.3645	Allowable 0.35 - 0.40	
Kyy/LOA (Pitch)	0.2499	0.2499	Allowable 0.20 - 0.25	

INCLINE DATA				
Incline Weight	318400	4.975	kg	
Lever	8.000	0.200	m	

MEASURED ROLL PERIOD				
Intact (in water)	NA	NA	sec	
Damage (in water)	NA	NA	sec	

DAMAGE GZ CHECK				
Weight	4.975 kg			
LEVER (cm)	Heel (Check1)	Heel (Check2)	Heel (Check3)	Heel (Check4)
0	8.70	9.10		
5	9.35	9.60		
10	9.90	10.10		
15	10.60	10.50		
20	11.15	11.10		
25	11.80	11.90		
	before test	after test		

MODEL TEST EXPERIMENTS - DAMAGE 2

RUN	Hs TARGET	Hs FIX	TIME TO CAPSIZE	COMMENTS
29.01.1900				
29965-01	4.00	4.0800		Survived
02	4.00	4.0523		Survived
03	4.00	4.0542		Survived
04	4.00	4.0557		Survived
05	4.00	4.0326		Survived
06	4.00	4.0495		Survived
07	4.00	4.0490		Survived
08	4.00	4.0371		Survived
09	4.00	4.0500		Survived
10	4.00	4.0523		Survived



APPENDIX D1

STATISTICS OF WAVES AND ROLL MOTIONS

Model No. 2461A

Project: “EMSA 4”

Damage Case-2 R7M4_P7-8.3.0

Inclining Measurements

Roll Test in Air Measurements

Pitch Test in Air Measurements

Spectral Characteristics of the Target and Measured Waves

Summary of the Measured Wave and Roll Time Realisations



Inclining Measurements

Model No. 2461A

Project: "EMSA 4"

Damage Case-2 R7M4_P7-8.3.0

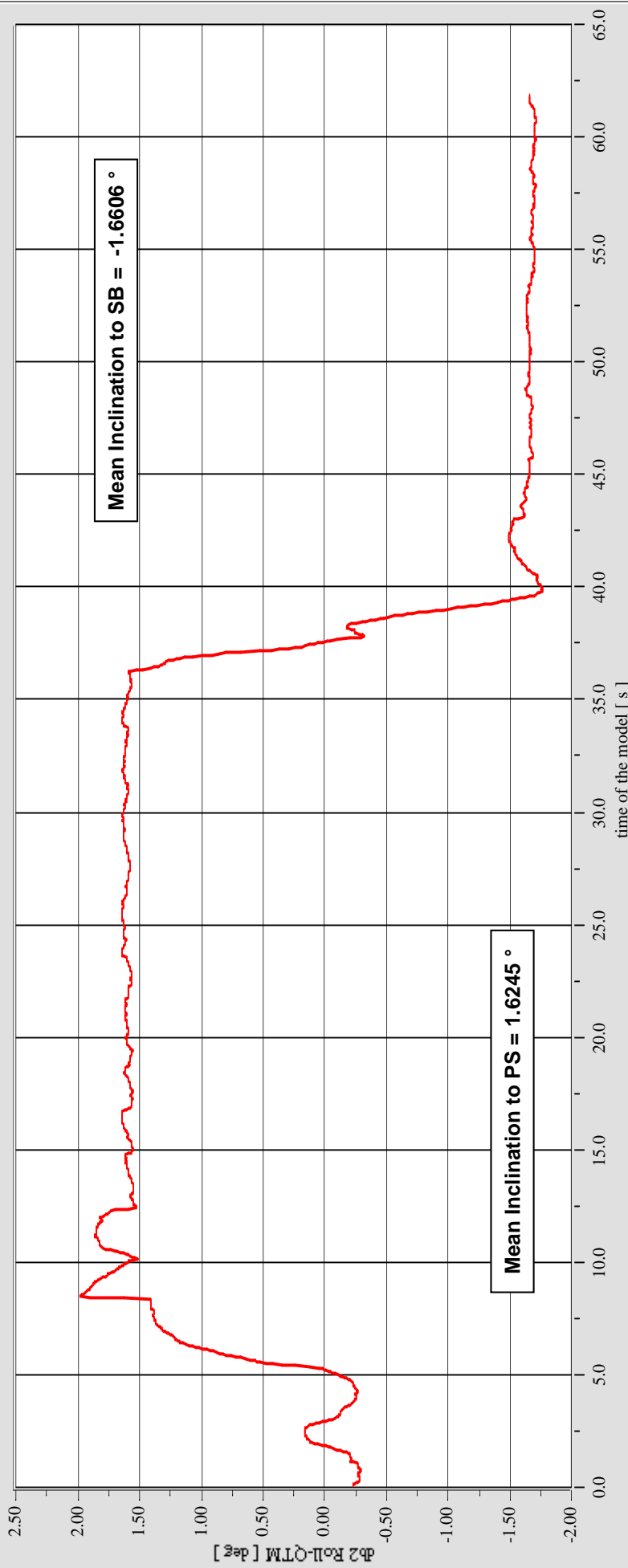
Vienna Model Basin Ltd.

Inclining Test

Model No. 2461A

Test No. 29964-01

Intact Draught = 6,40 m



Overall Mean Inclination = -1.6426 °

Shifted Weight (Model) = 4,953 kg

Distance to One Side (Model) = 0,25 m

Volume of the Model = 370,0 kg

Target of GM = 3,750 m (Ship)

Measured GM = 3,761 m (Ship)

accepted



Roll in Air Measurements

Model No. 2461A

Project: "EMSA 4"

Damage Case-2 R7M4_P7-8.3.0

Vienna Model Basin Ltd.

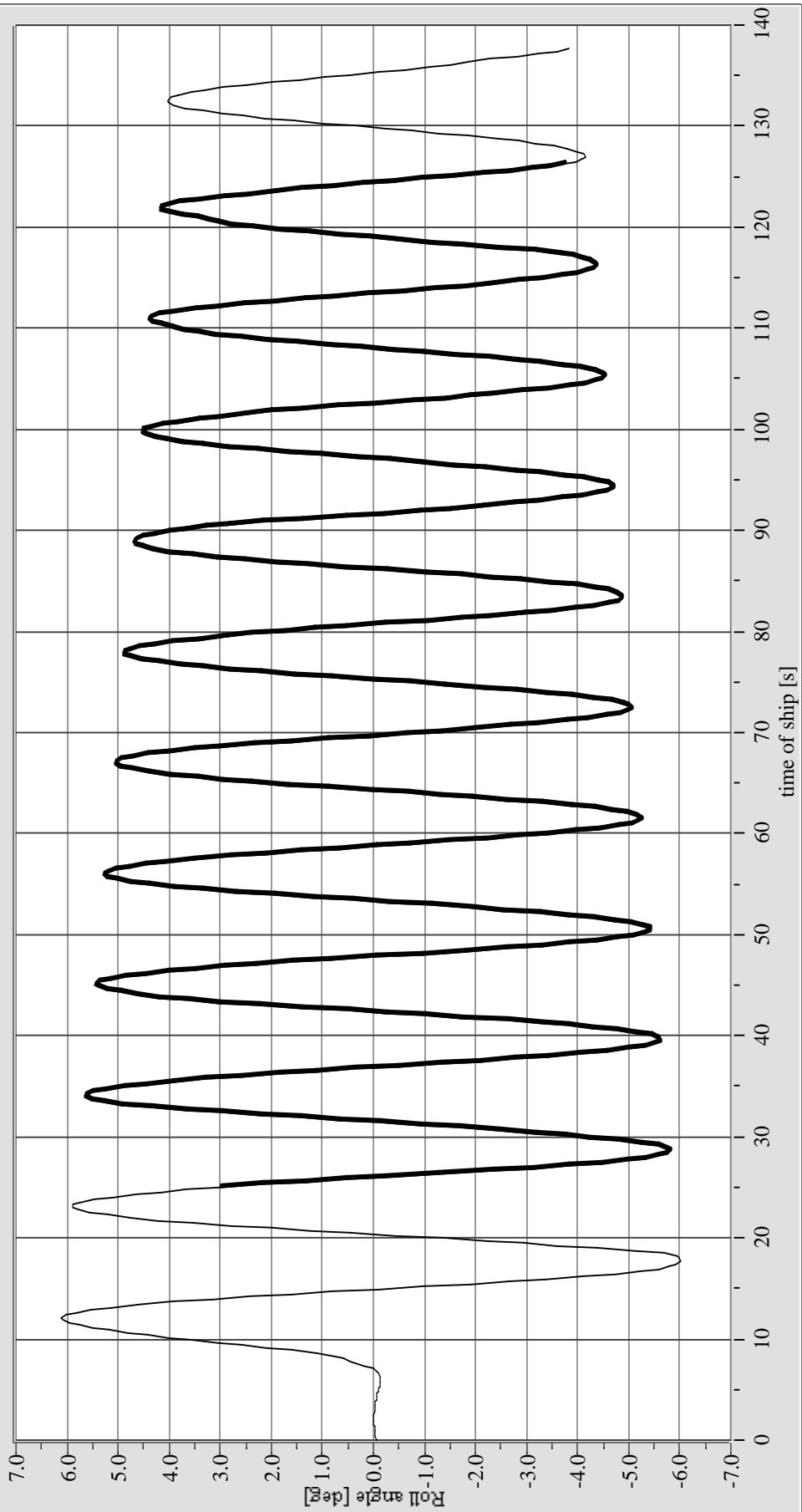
Roll Test in Air

Model No. 2461A

Test No. 29964-02

No bilge keels

PLOT_1



Period (Model / Ship) = 1.7300 s / 10.9415 s

Project: EMSA 3

Damage: R7M4_P7-8.3.0



Pitch in Air Measurements

Model No. 2461A

Project: "EMSA 4"

Damage Case-2 R7M4_P7-8.3.0

Vienna Model Basin Ltd.

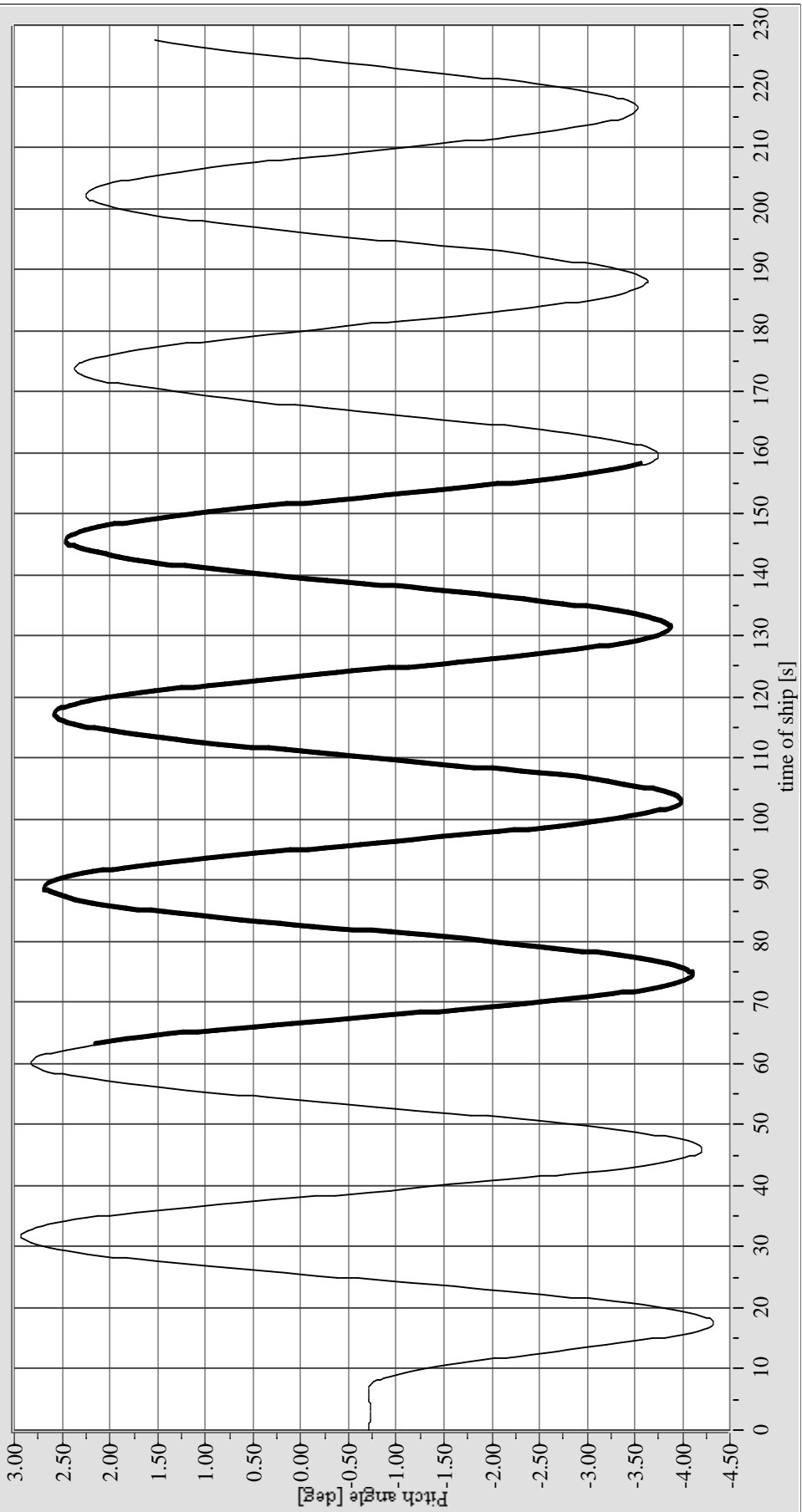
Pitch Test in Air

Model No. 2461A

Test No. 29964-03

No bilge keels

PLOT_1



Period (Model / Ship) = 4.5000 s / 28.4605 s

Project: EMSA 3

Damage: R7M4_P7-8.3.0



Summary of the Measured Wave and Roll Time Realisations

Model No. 2461A

Project: “EMSA 4”

Damage Case-2 R7M4_P7-8.3.0



Sea Keeping Test in Irregular Seas (Statistics)

Evaluation of Worst Solas Damage (Ship Values)

Model No.: 2461A

Test No.: 29965-01 to 10

Project: EMSA 4

Hs [m] = 4.00

Damage 2: R7M4_P7-8.3.0

Scale = 40.00

Test No.	Description	RMS (SD) Value	Significant Value	max	min	mean	Drift [m]	Duration of the Tests [min]
29965-01	Roll Angle [deg]*	0.408	1.63	11.57	7.819	9.448	706	30
	Pitch Angle [deg]**	0.255	1.019	1.026	-0.843	0.065		
	Heave	0.443	1.771	1.626	-1.562	-0.041		
	Wave Elevation (fix) [m]	-	-	4.016	-3.506	-0.3088		
-02	Roll Angle [deg]*	0.371	1.485	9.536	6.828	8.16	646.7	30
	Pitch Angle [deg]**	0.264	1.055	1.069	-0.875	0.068		
	Heave	0.428	1.71	1.437	-1.322	0.079		
	Wave Elevation (fix) [m]	-	-	4.1232	-3.1224	0.0896		
-03	Roll Angle [deg]*	0.362	1.449	10.329	7.334	8.788	675.2	30
	Pitch Angle [deg]**	0.33	1.32	1.159	-0.998	0.066		
	Heave	0.398	1.592	1.813	-1.624	0.089		
	Wave Elevation (fix) [m]	-	-	5.4452	-3.3692	0.0475		
-04	Roll Angle [deg]*	0.326	1.305	10.19	8.088	9.119	593.4	30
	Pitch Angle [deg]**	0.31	1.238	1.249	-1.149	0.067		
	Heave	0.351	1.403	1.325	-1.43	0.025		
	Wave Elevation (fix) [m]	-	-	4.2508	-3.1168	0.0746		
-05	Roll Angle [deg]*	0.469	1.877	10.431	6.813	8.954	632.8	30
	Pitch Angle [deg]**	0.244	0.976	0.972	-0.893	0.066		
	Heave	0.41	1.604	1.643	-1.634	0.008		
	Wave Elevation (fix) [m]	-	-	4.5652	-3.018	0.1021		
-06	Roll Angle [deg]*	1.143	4.571	19.86	2.533	8.456	705.5	30
	Pitch Angle [deg]**	0.265	1.06	0.95	-0.936	0.014		
	Heave	0.479	1.917	1.939	-1.955	0.005		
	Wave Elevation (fix) [m]	-	-	4.4412	-3.3724	0.0662		
-07	Roll Angle [deg]*	0.966	3.865	19.942	-1.133	9.068	674.1	30
	Pitch Angle [deg]**	0.282	1.126	1.008	-0.872	0.049		
	Heave	0.472	1.888	1.67	-1.334	0.15		
	Wave Elevation (fix) [m]	-	-	3.582	-3.044	0.0375		
-08	Roll Angle [deg]*	0.524	2.095	13.718	3.253	9.496	677.1	30
	Pitch Angle [deg]**	0.321	1.286	1.249	-1.026	0.067		
	Heave	0.472	1.889	2.331	-2.008	0.122		
	Wave Elevation (fix) [m]	-	-	3.622	-3.004	0.0775		
-09	Roll Angle [deg]*	0.534	2.134	13.258	8.517	10.069	738.2	30
	Pitch Angle [deg]**	0.256	1.026	0.813	-0.713	0.074		
	Heave	0.561	2.244	1.842	-1.742	0.013		
	Wave Elevation (fix) [m]	-	-	3.9364	-3.1616	0.0489		
-10	Roll Angle [deg]*	0.549	2.195	12.382	8.498	10.064	753.6	30
	Pitch Angle [deg]**	0.294	1.174	1	-0.846	0.071		
	Heave	0.551	2.205	2.091	-1.819	0.117		
	Wave Elevation (fix) [m]	-	-	3.6536	-2.99	-0.0203		

* to Port Side = positiv

** Stern Trim = positiv



Spectral Characteristics of the Target and Measured Waves

Model No. 2461A

Project: "EMSA 4"

Damage Case-2 R7M4_P7-8.3.0

Test No. 29965-01 to 10, Hs = 4.00 m



WAVE MEASUREMENT DURING THE TESTS

Location 1 (Arc 29) Wave Probe-1 DHI-834

Model No.: 2461A

Test No.: 29965-01 to 10

Project: EMSA 4

Damage 2: R7M4_P7-8.3.0

Wave Type: Jonswap

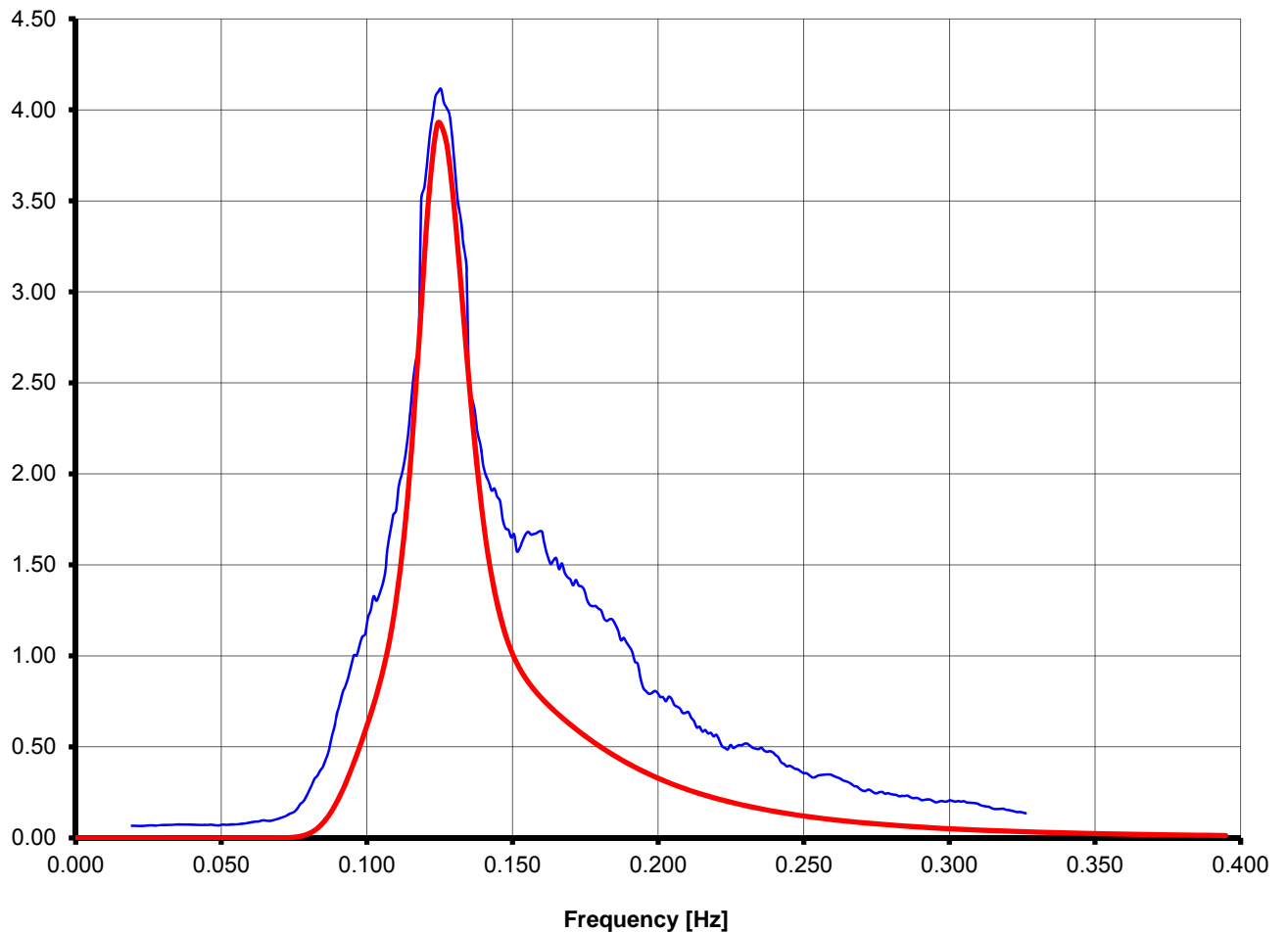
Scale: 40.00

Short Waves

Parameter	Value	Units
H_s	4.000	m
gamma	3.300	
T_p	8.000	s
T_z	6.226	s

Spectral Characteristics

Spectral Density $S(\omega)$ [m².s]



— Measured Wave Spectrum — Target Wave Spectrum

WAVE MEASUREMENT DURING THE TESTS (FIXED WAVE PROPE)

Model No.: 2461A

Test No.: 29965-01 to 10

Project: EMSA 4

Damage 2: R7M4_P7-8.3.0

Wave Type: Jonswap, $\gamma = 3.3$

Scale: 40.00

Target of the Waves			Variation of the Waves		
H _s	T _p	T _z	H _s	T _p	T _z
[m]	[s]	[s]	[m]	[s]	[s]
4.000	8.000	6.226	4.000 - 4.100	7.800 - 8.200	5.914 - 6.537

No. of the Test	Wave No.	Location 1 (Wave Probe-1 DHI-834)			Location 2 (Wave Probe-2 DHI-835)			Location 3 (Wave Probe-3 DHI-836)		
		H _s	T _p	T _z	H _s	T _p	T _z	H _s	T _p	T _z
[]		[m]	[s]	[s]	[m]	[s]	[s]	[m]	[s]	[s]
29965-01	29965-01	4.0800	8.134	6.434						
-02	-02	4.0523	7.814	5.937						
-03	-03	4.0542	8.180	6.505						
-04	-04	4.0557	7.967	6.174						
-05	-05	4.0326	7.905	6.078						
-06	-06	4.0495	8.052	6.306						
-07	-07	4.0940	7.885	6.047						
-08	-08	4.0371	7.905	6.077						
-09	-09	4.0500	7.832	5.965						
-10	-10	4.0523	7.982	6.198						



APPENDIX E1

TIME HISTORIES OF THE EXPERIMENTS WAVE AND ROLL TIME HISTORIES

Model No. 2461A

Project: "EMSA 4"

Damage Case-2 R7M4_P7-8.3.0

Irregular Beam Seas

Vienna Model Basin Ltd

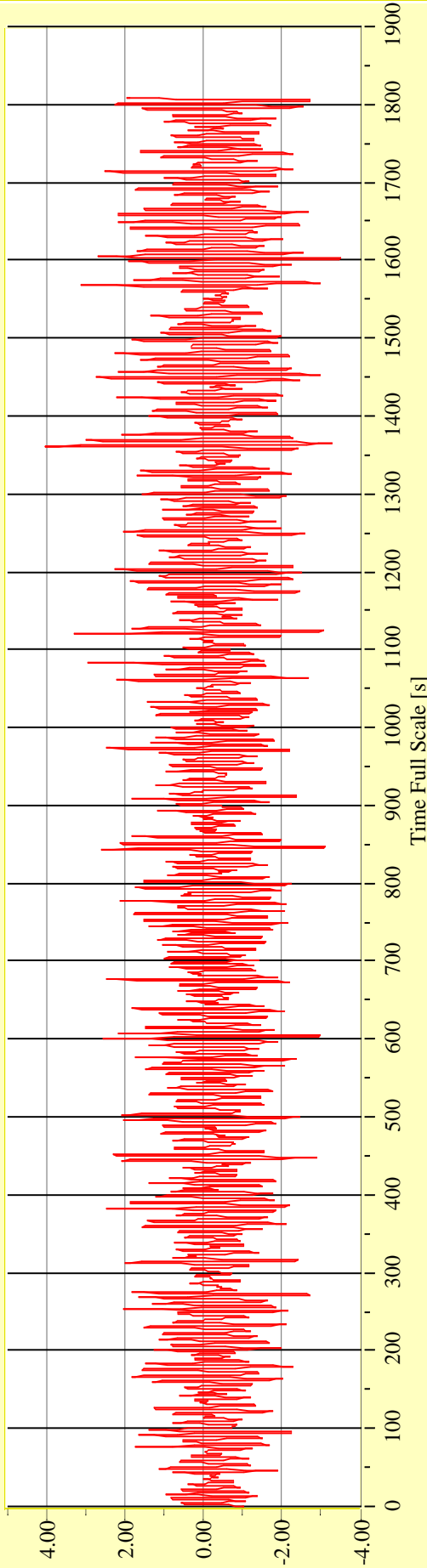
Model No. 2461A

Test No. 29965-01

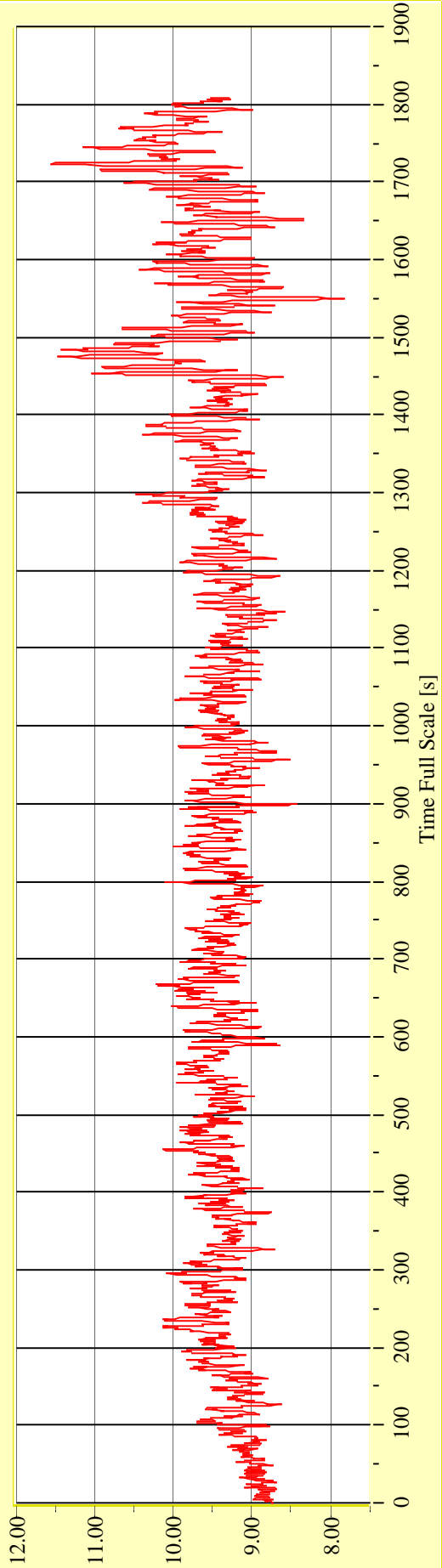
Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3

Wave Elevation (Fixed) [m]



Roll Angle [deg] (to SB = Positiv)



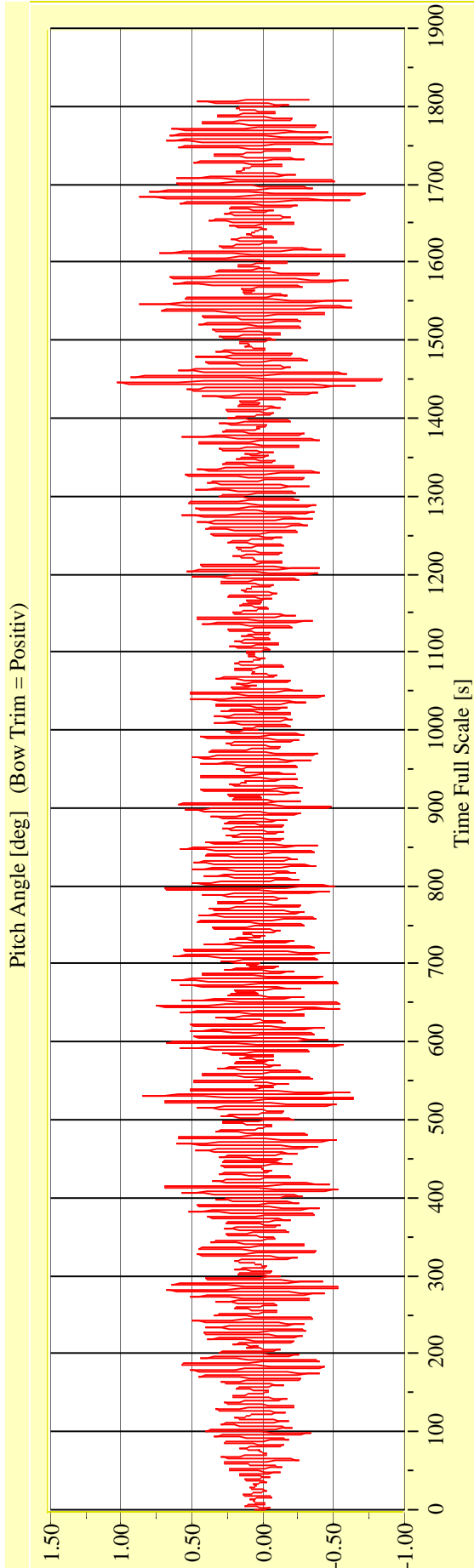
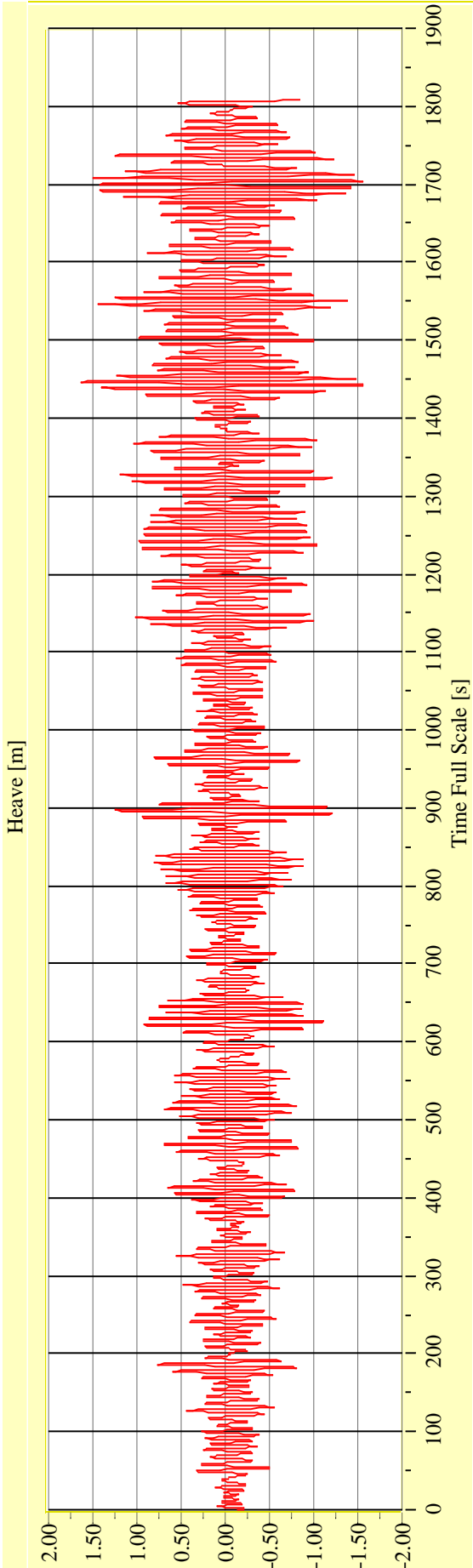
Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-01** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

Vienna Model Basin Ltd

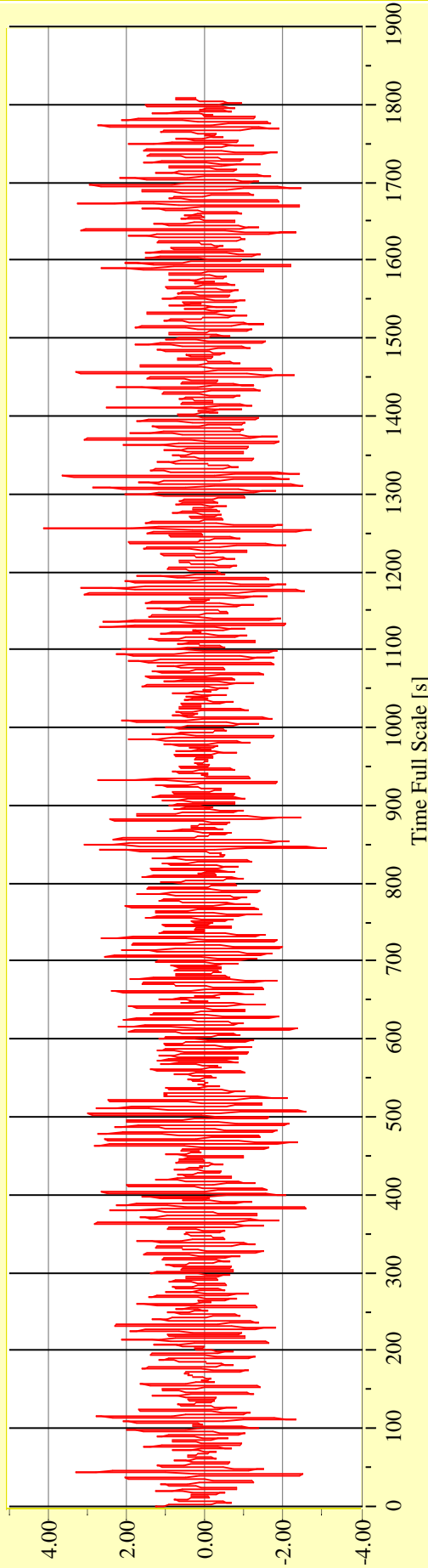
Model No. 2461A

Test No. 29965-02

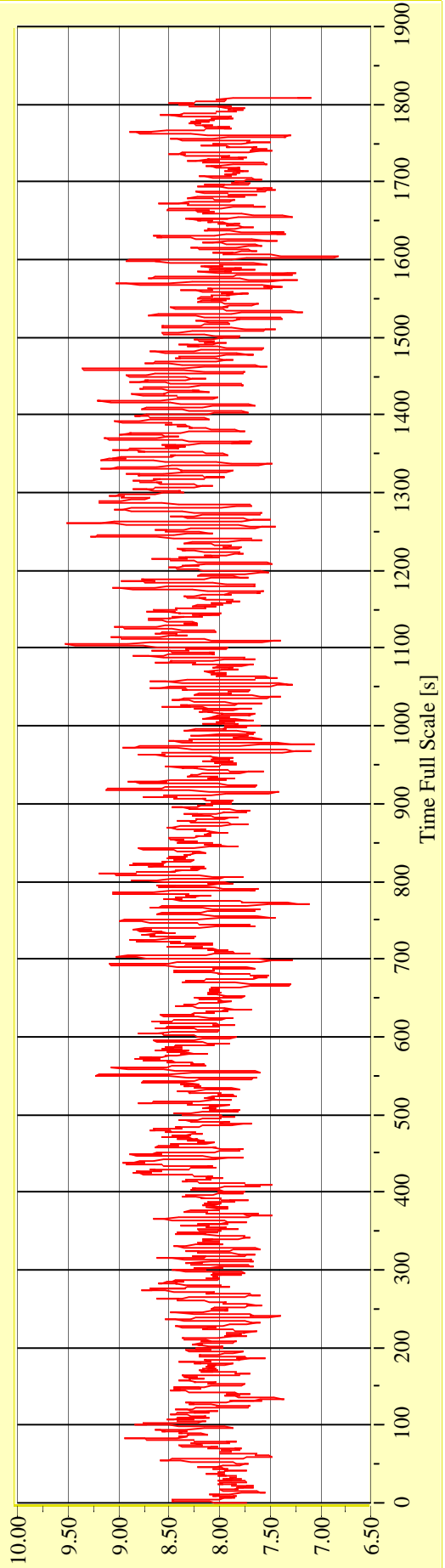
Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3

Wave Elevation (Fixed) [m]



Roll Angle [deg] (to SB = Positiv)



Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

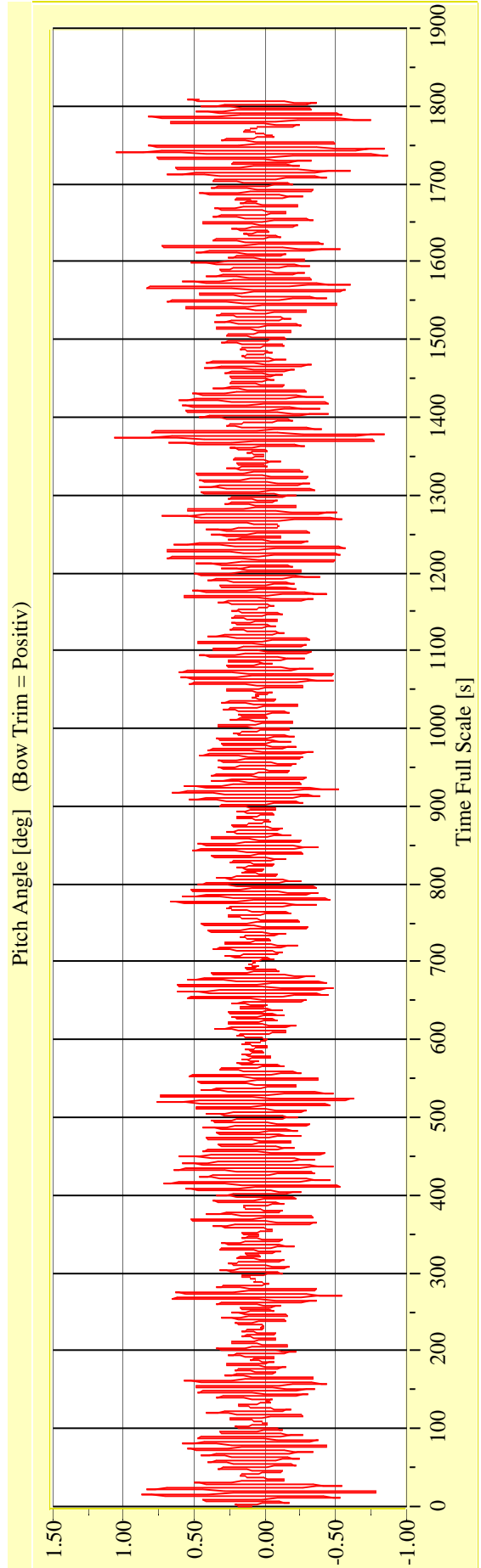
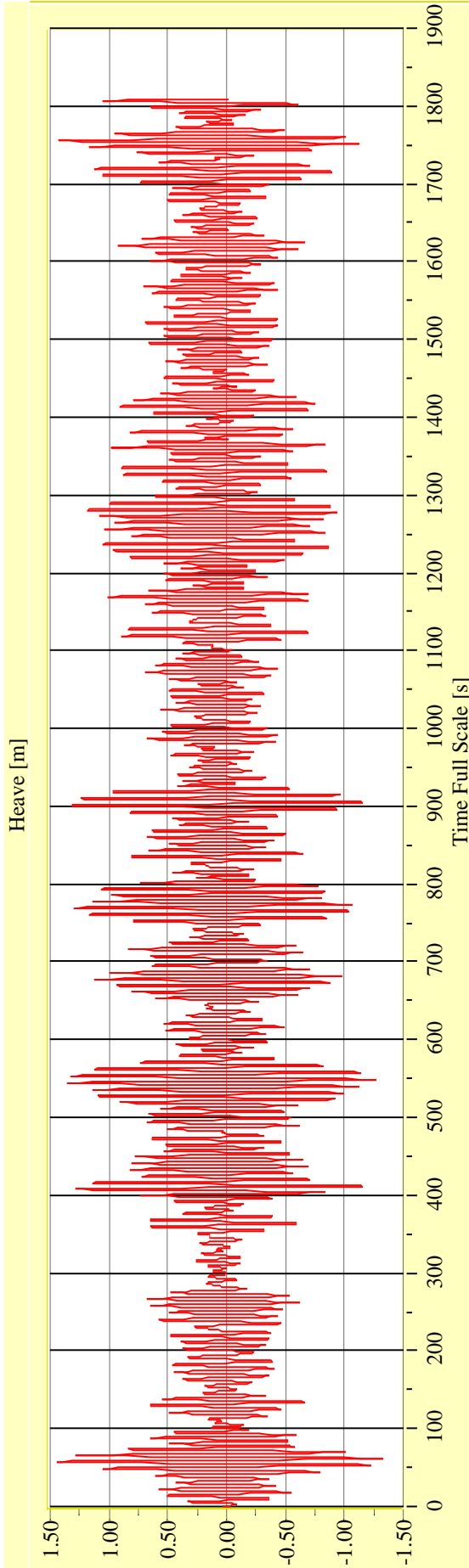
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-02

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



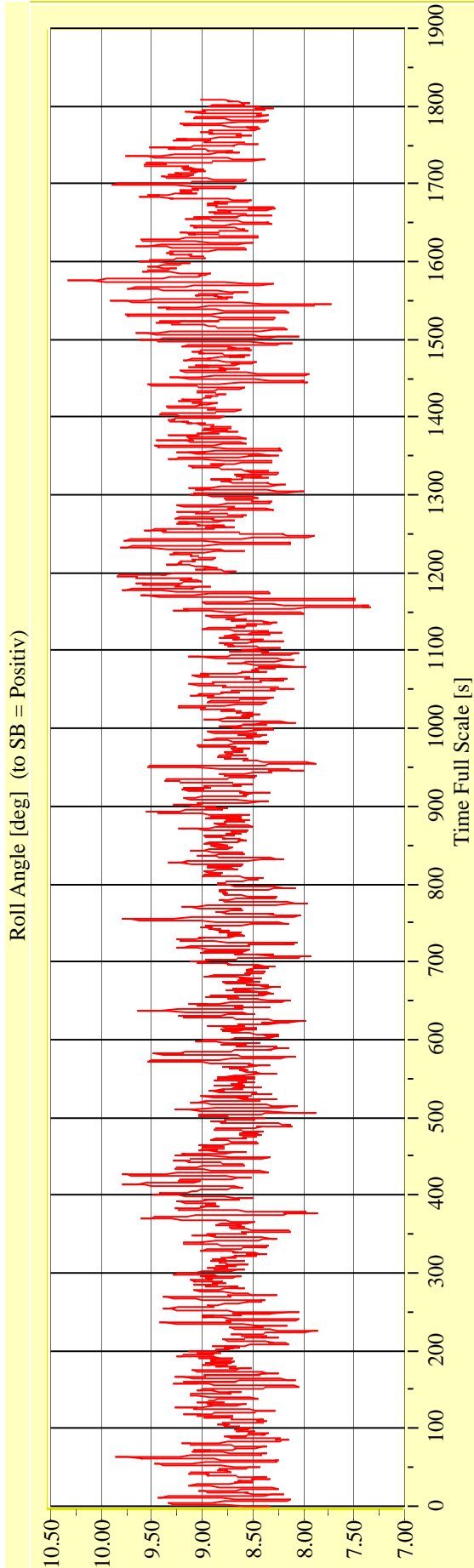
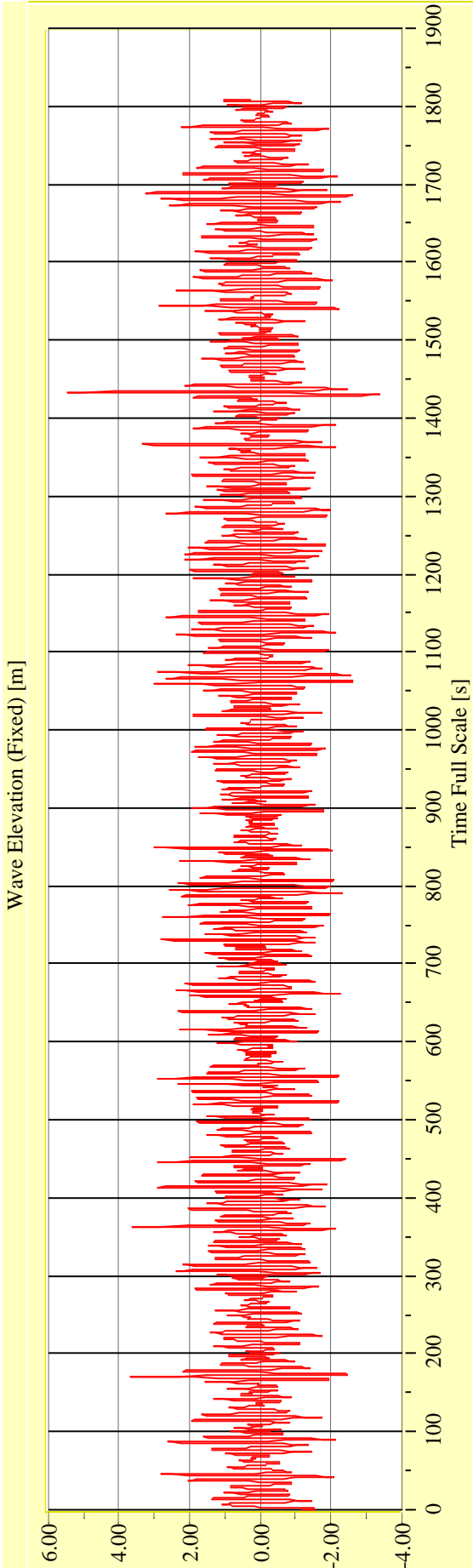
Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-03** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

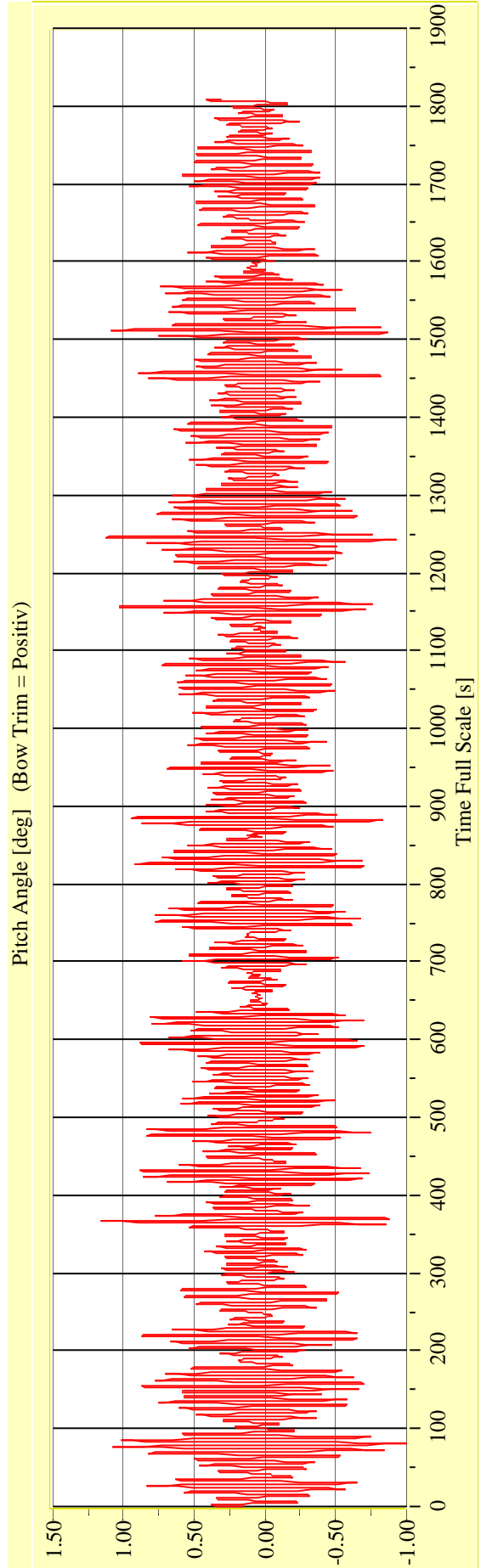
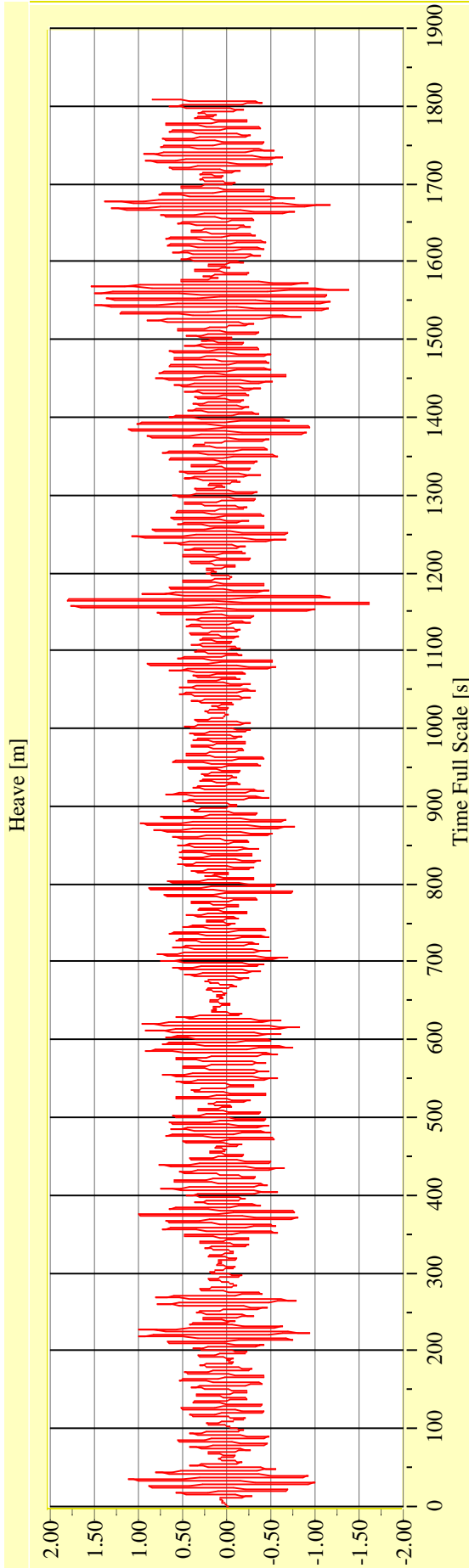
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-03

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

Vienna Model Basin Ltd

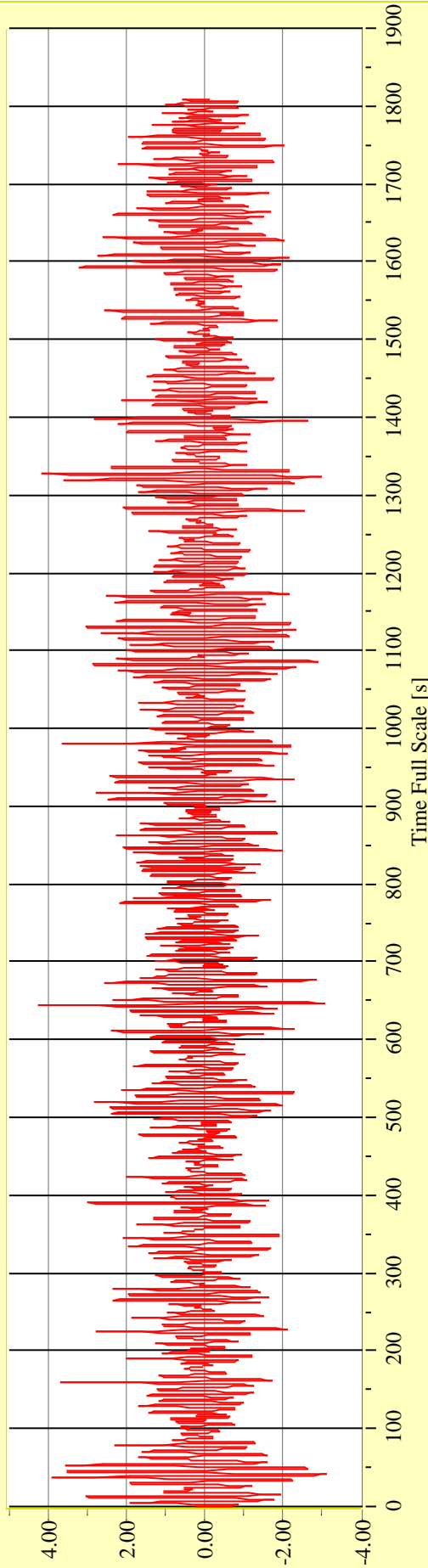
Model No. 2461A

Test No. 29965-04

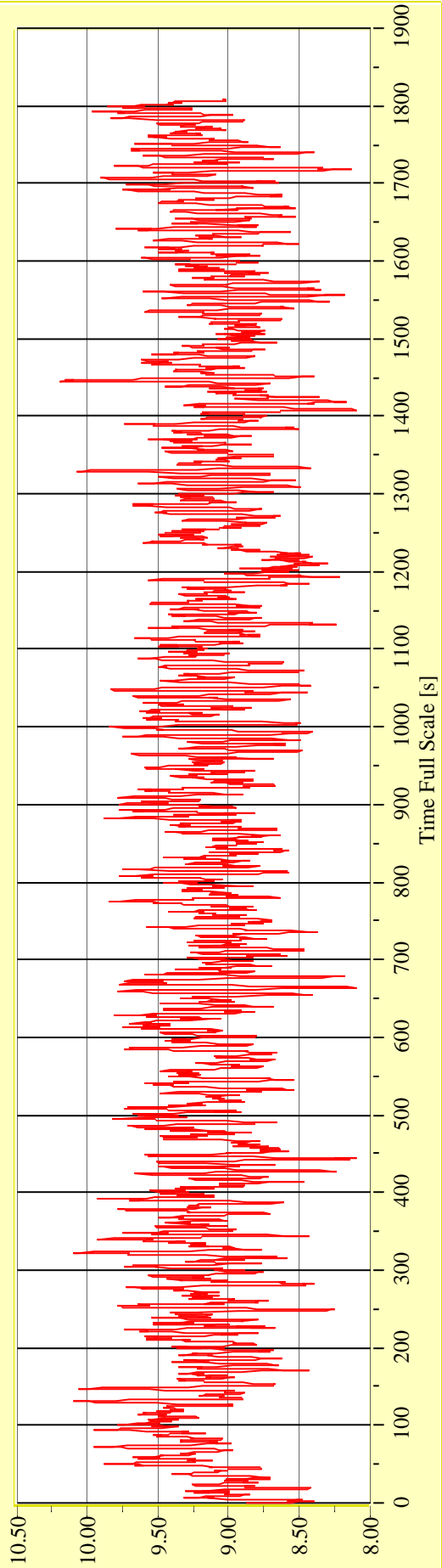
Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3

Wave Elevation (Fixed) [m]



Roll Angle [deg] (to SB = Positiv)



Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

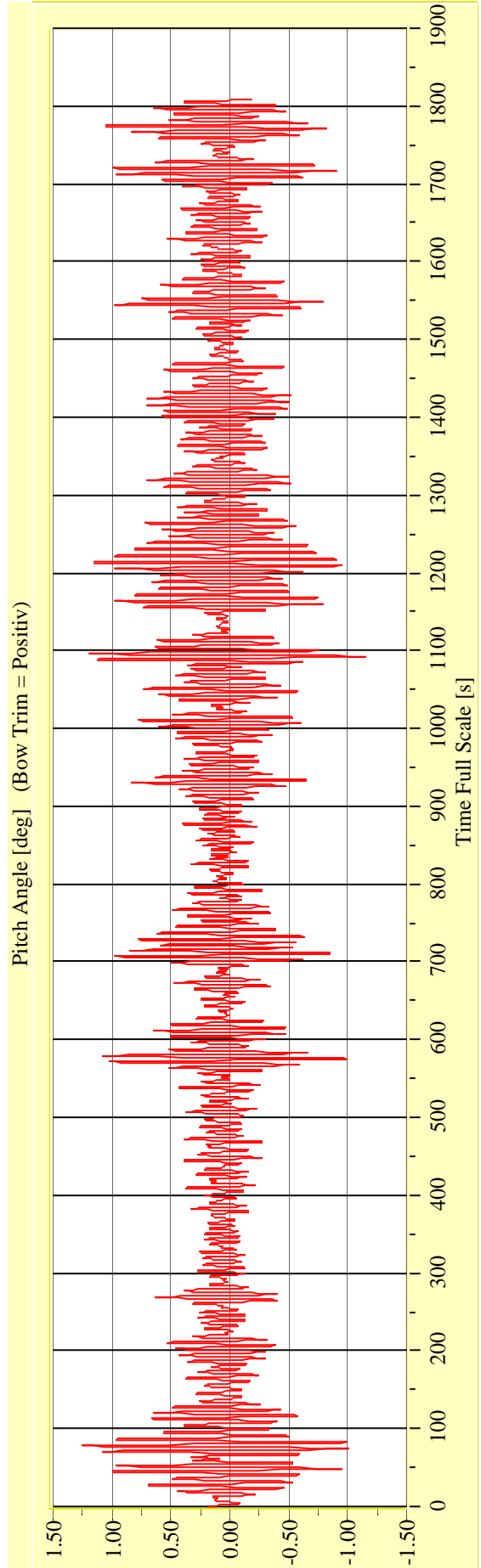
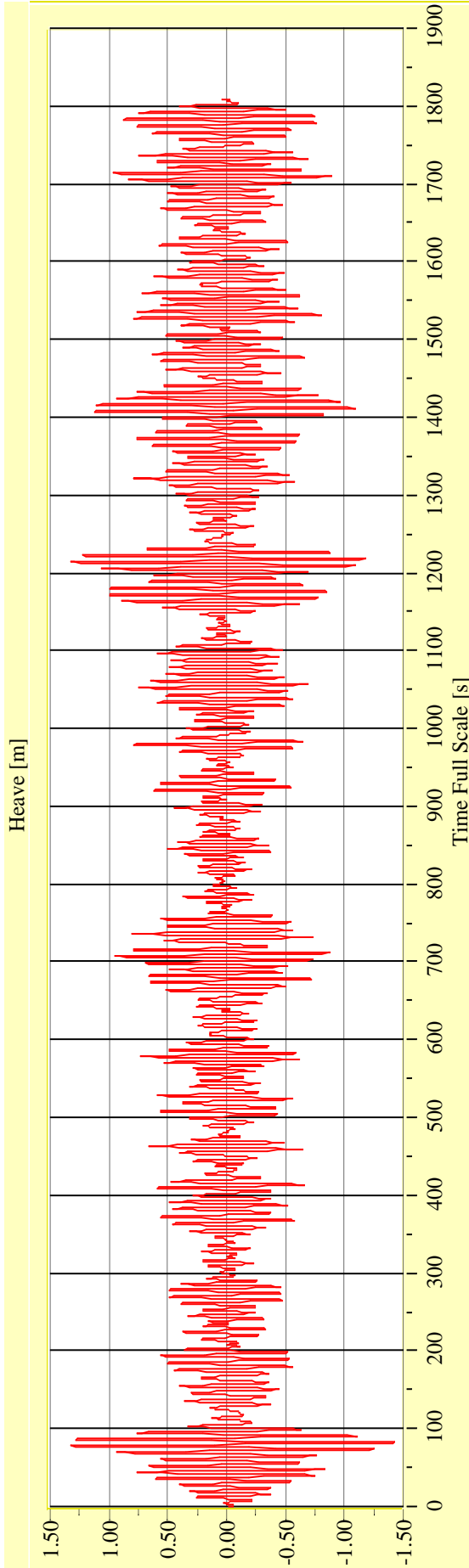
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-04

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



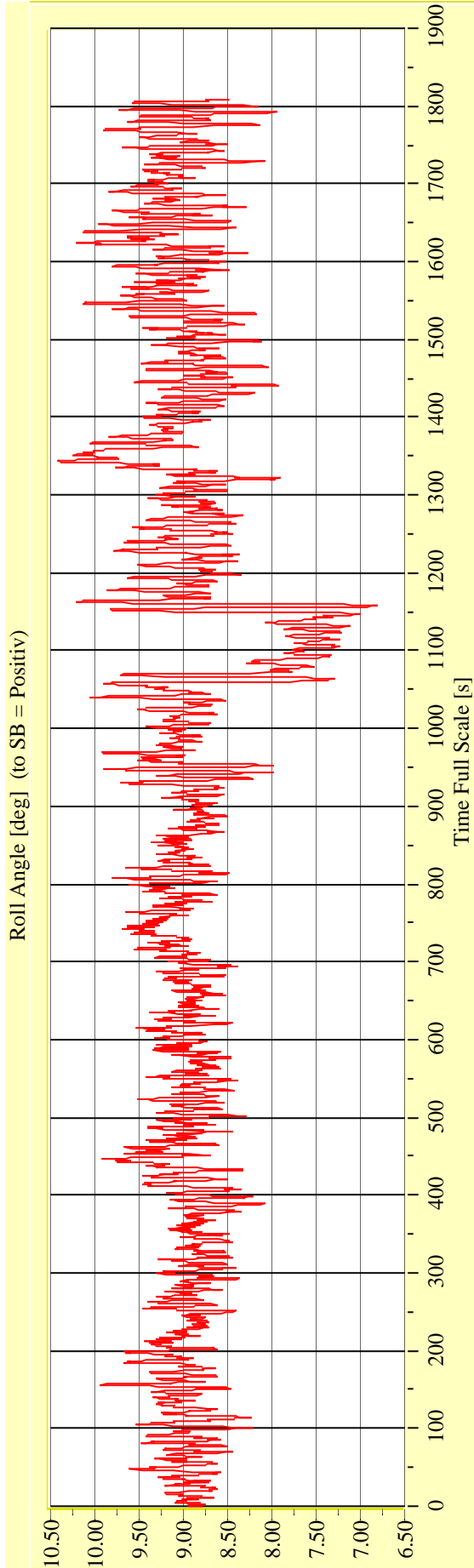
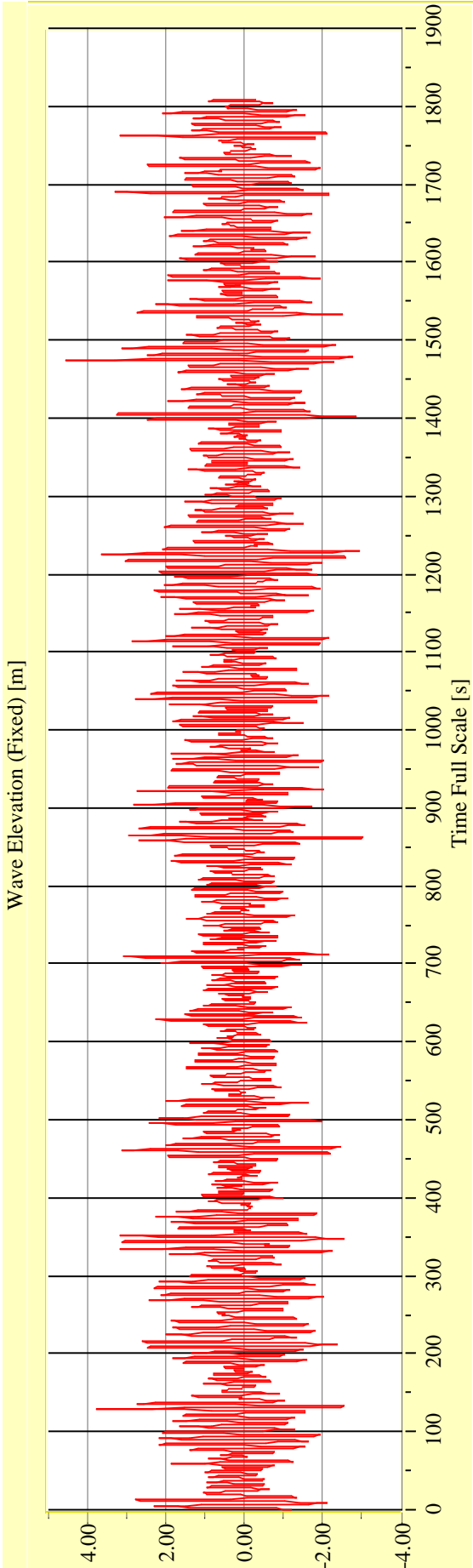
Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-05** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

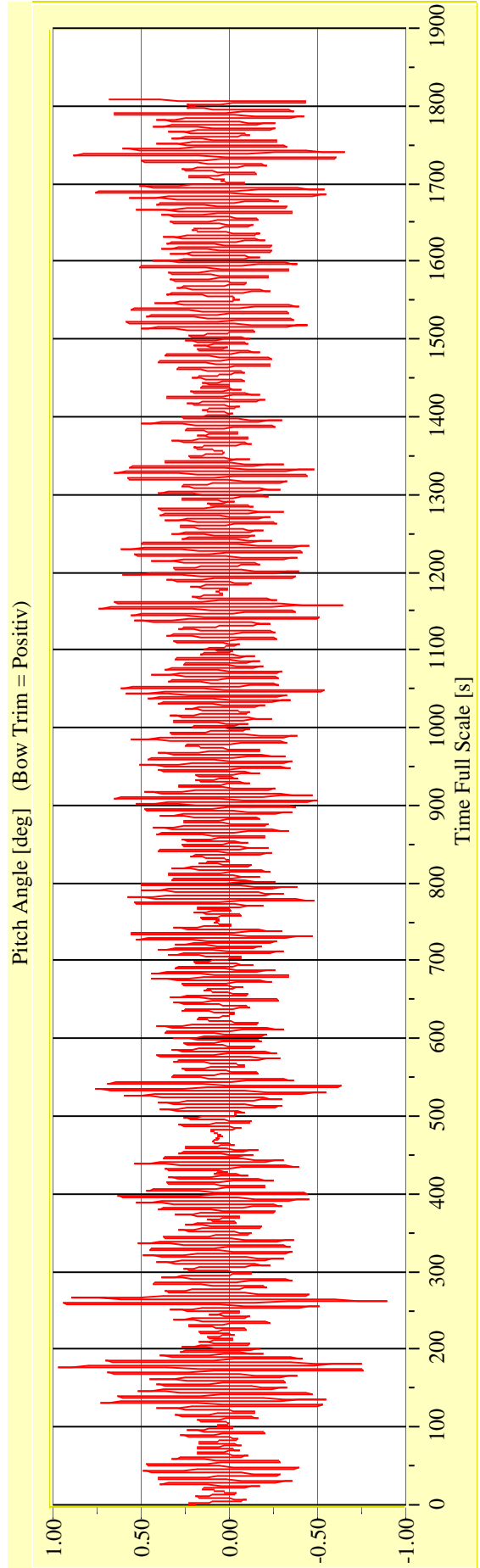
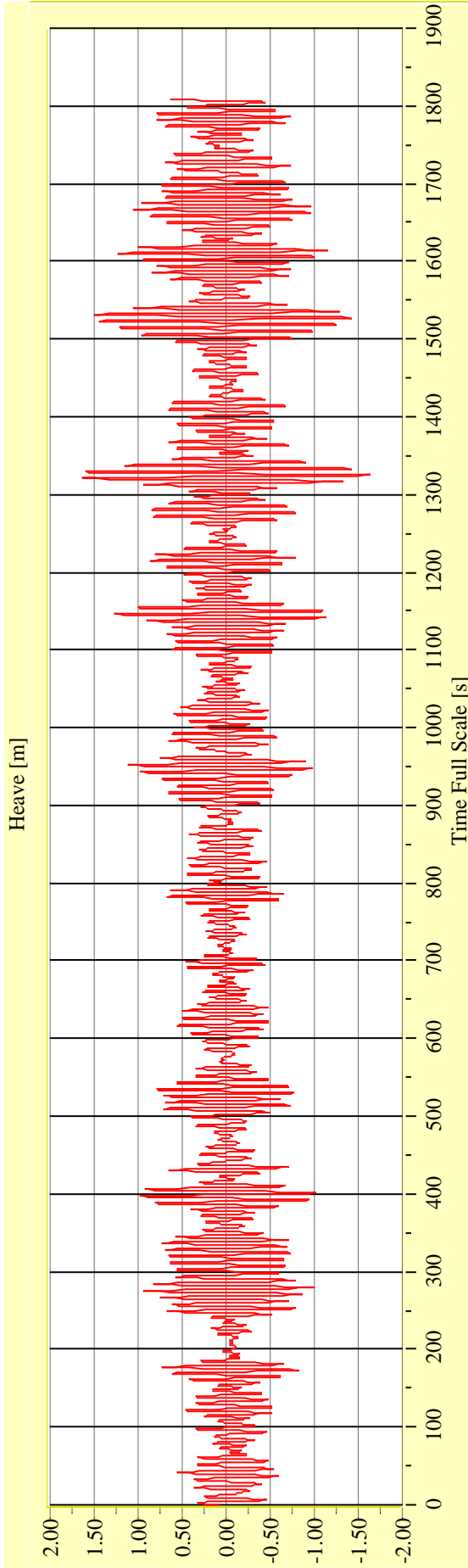
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-05

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



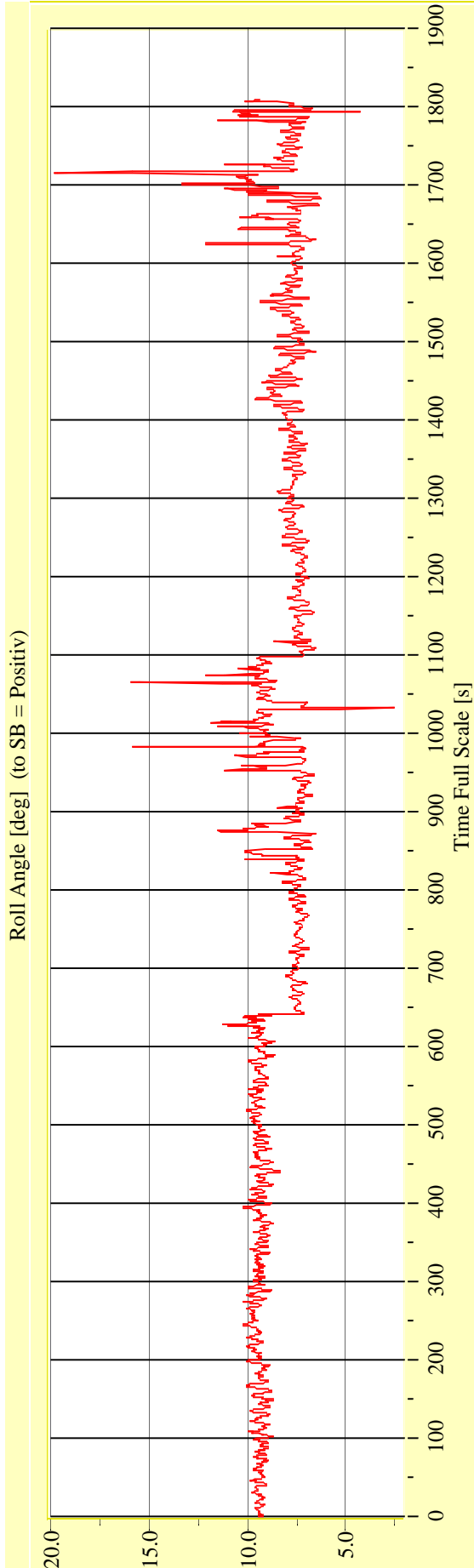
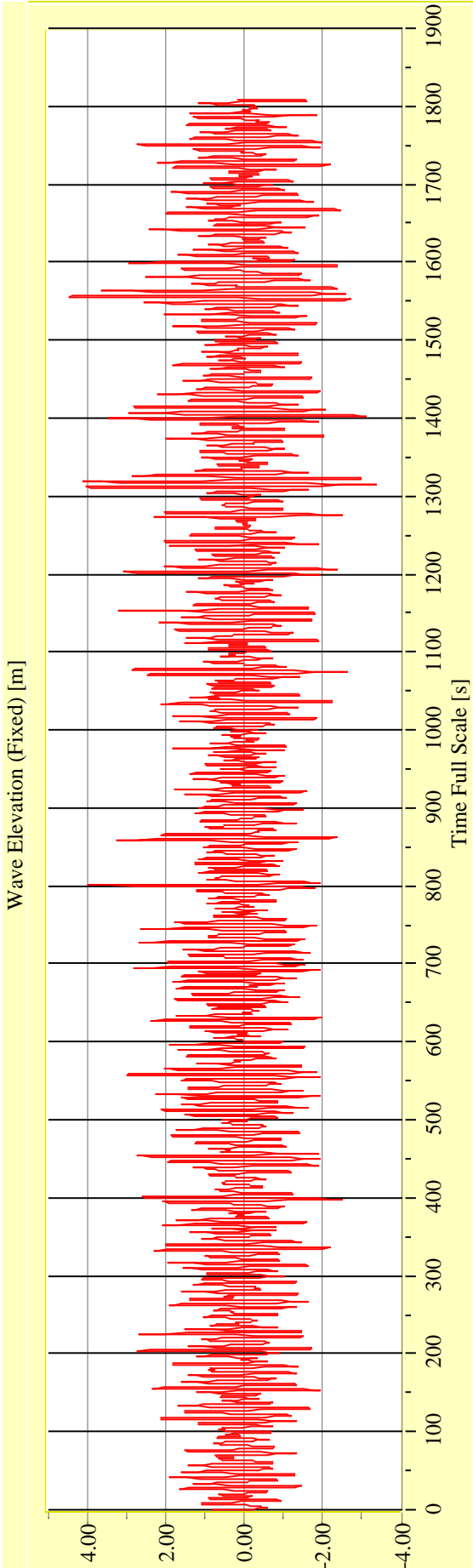
Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-06** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

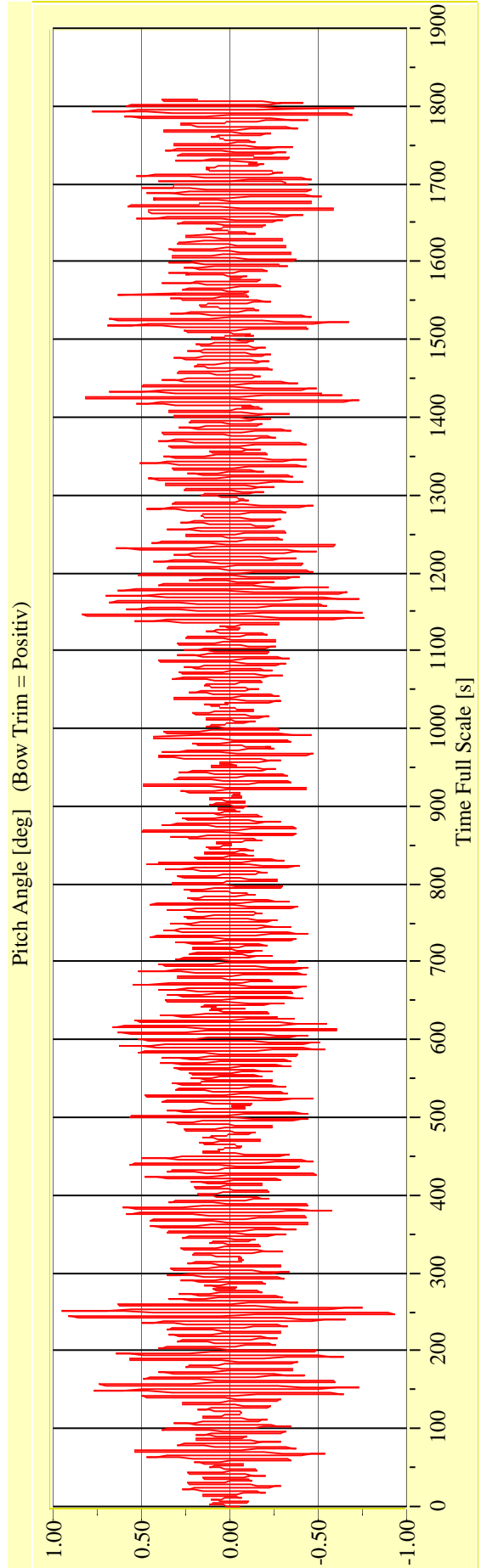
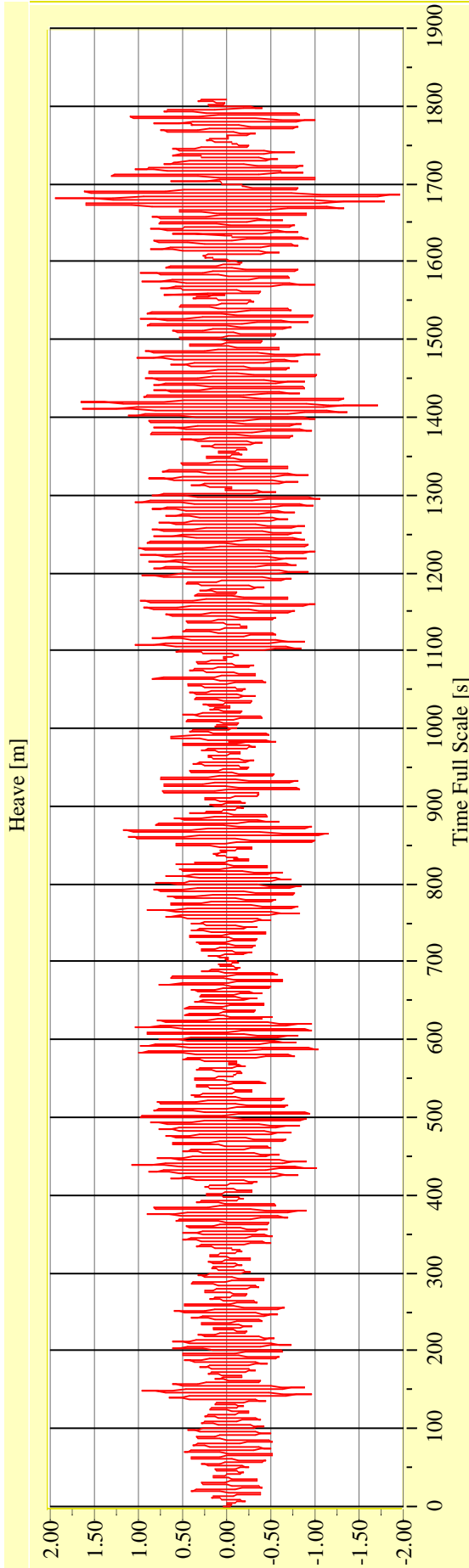
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-06

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

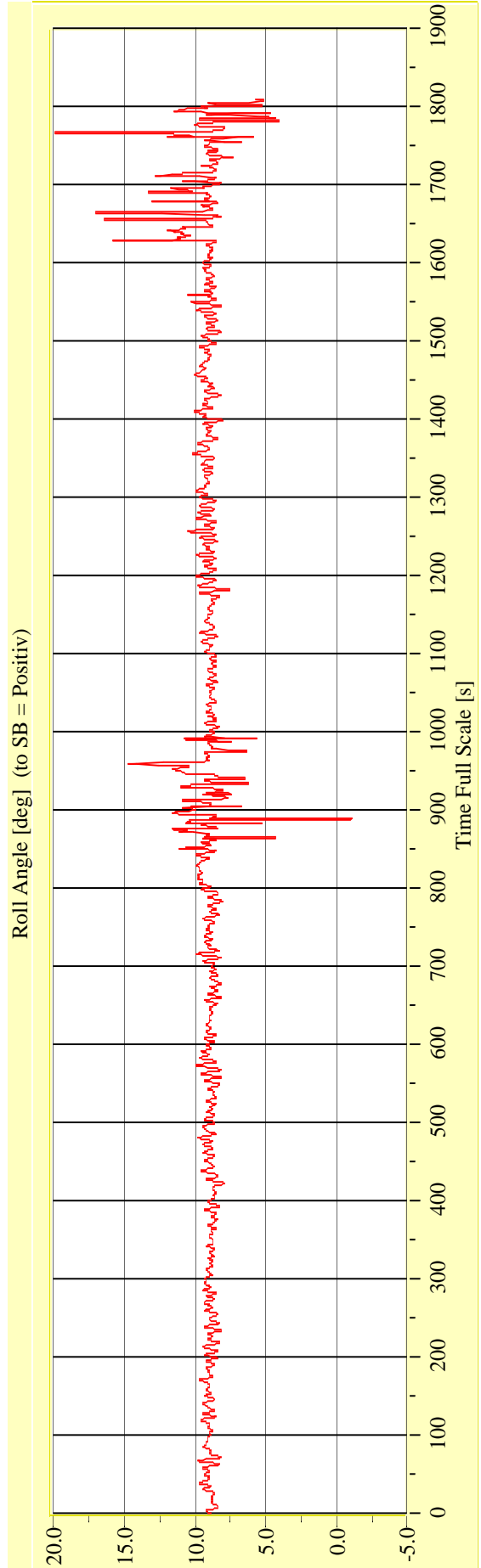
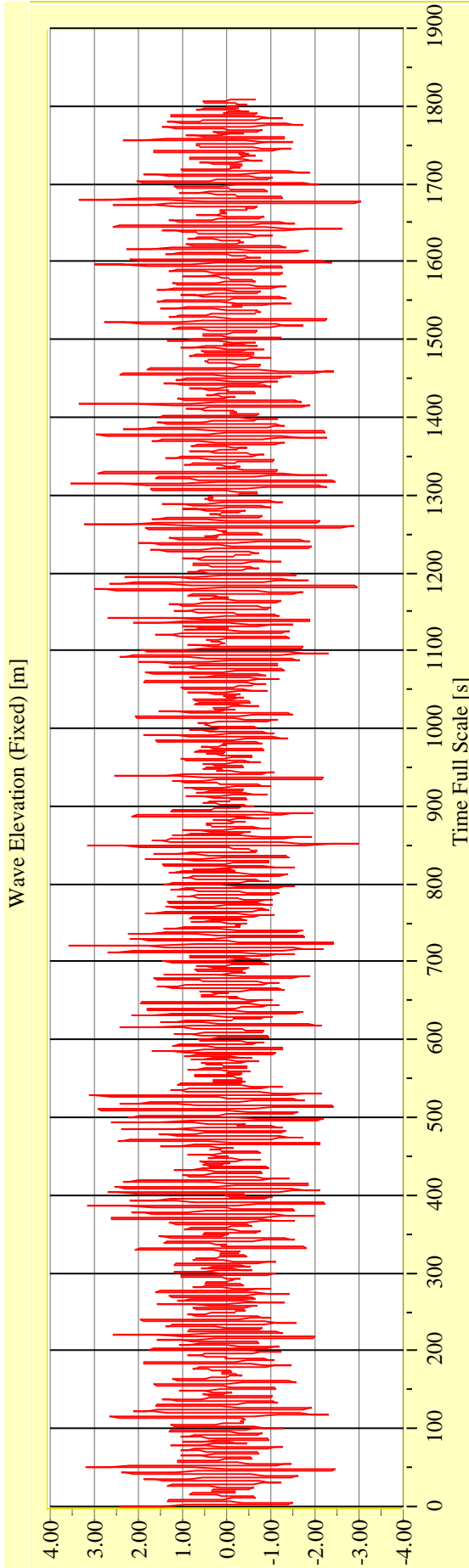
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-07

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

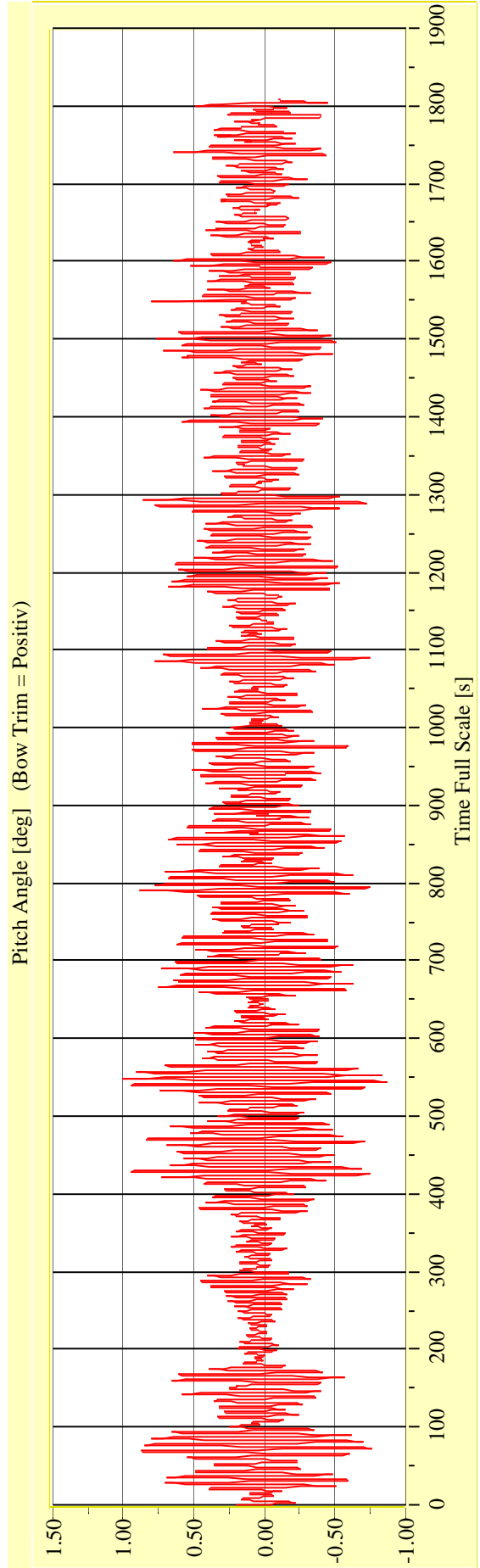
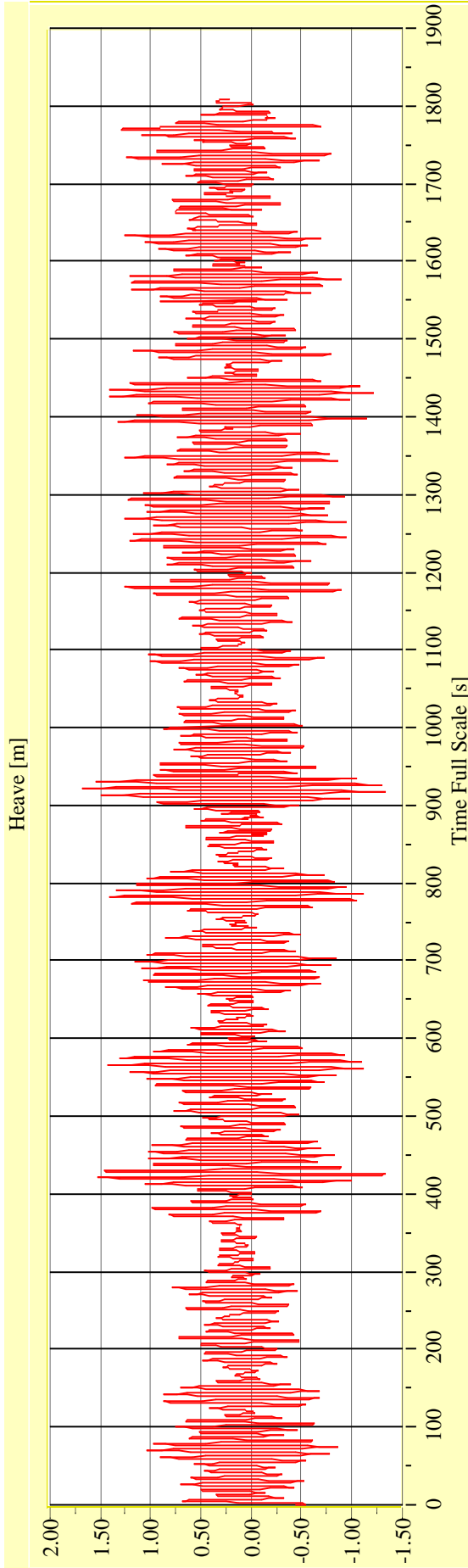
Vienna Model Basin Ltd

Model No. 2461A

Test No. 29965-07

Target Waves: Hs = 4.0 m Tp = 8.0 s

gamma = 3,3



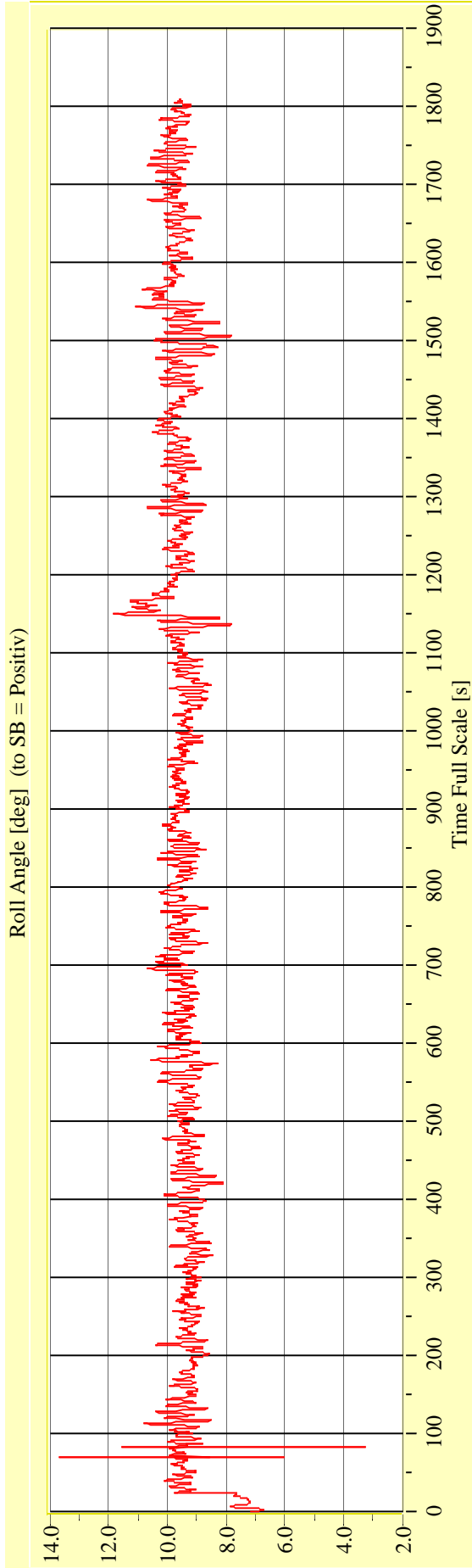
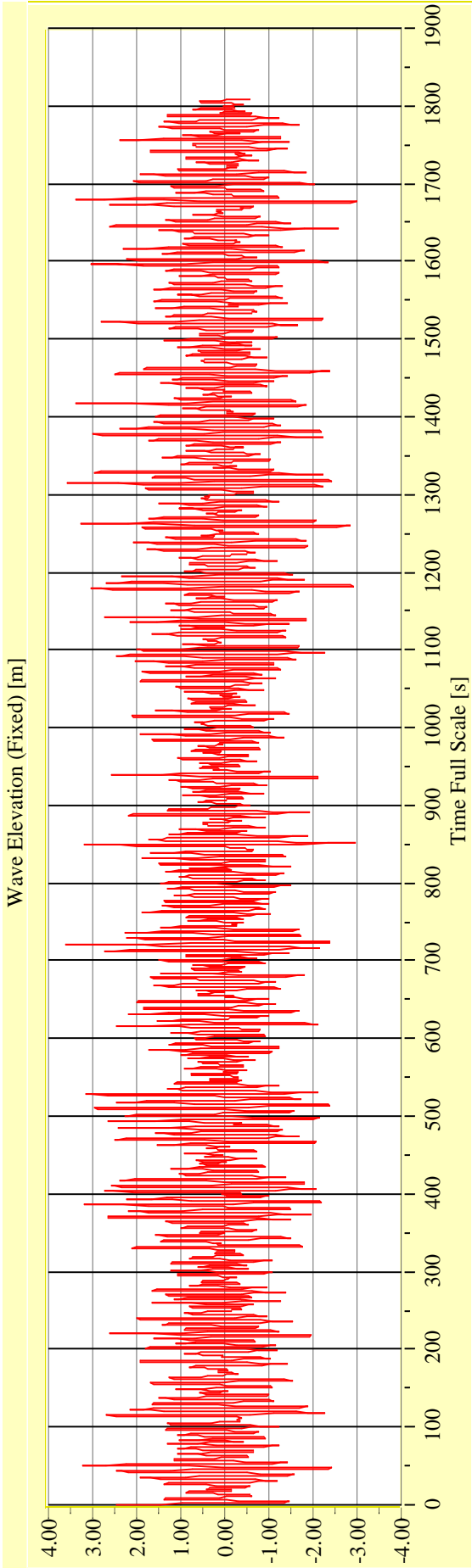
Date: 08.02.2011

Project: EMSA 3

Damage 2: R7M4_P7-8.3.0

Irregular Beam Seas

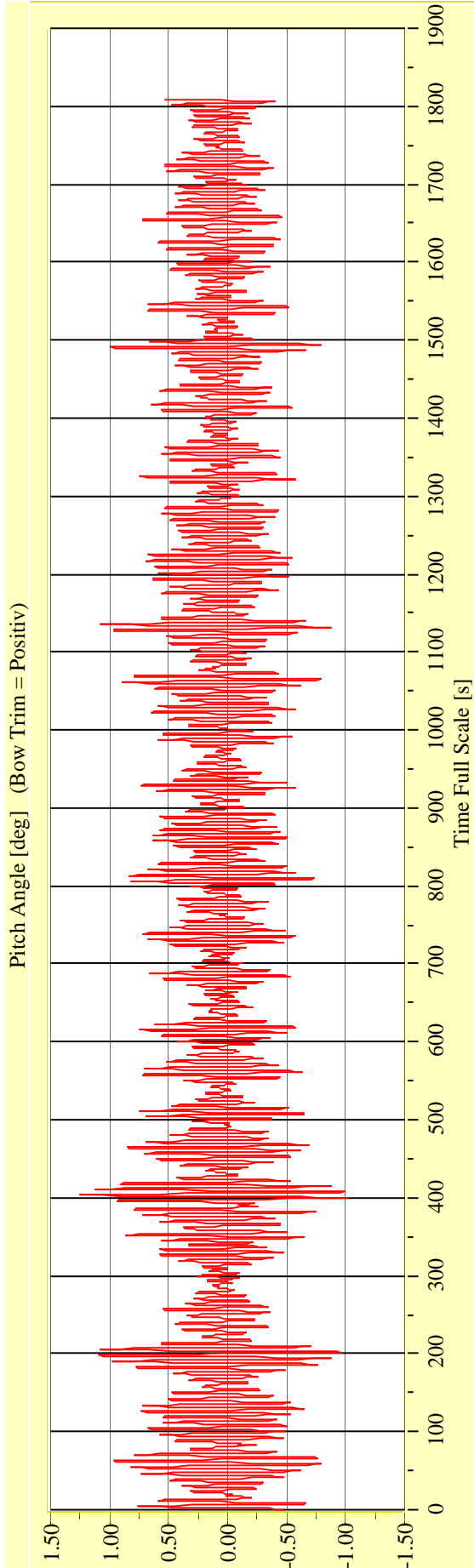
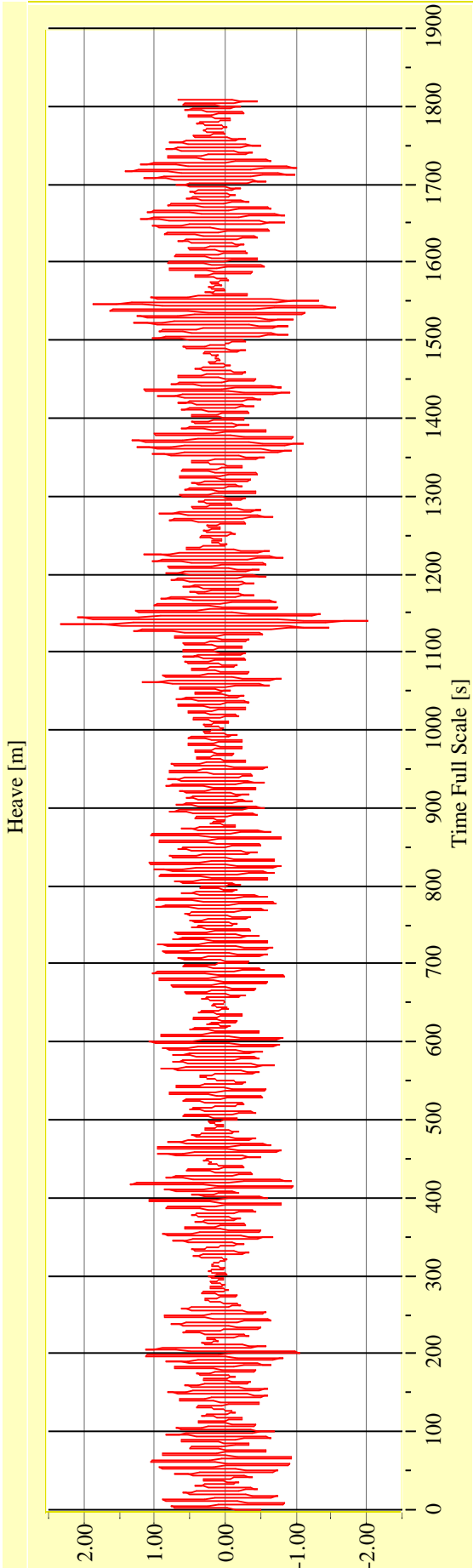
Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-08** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

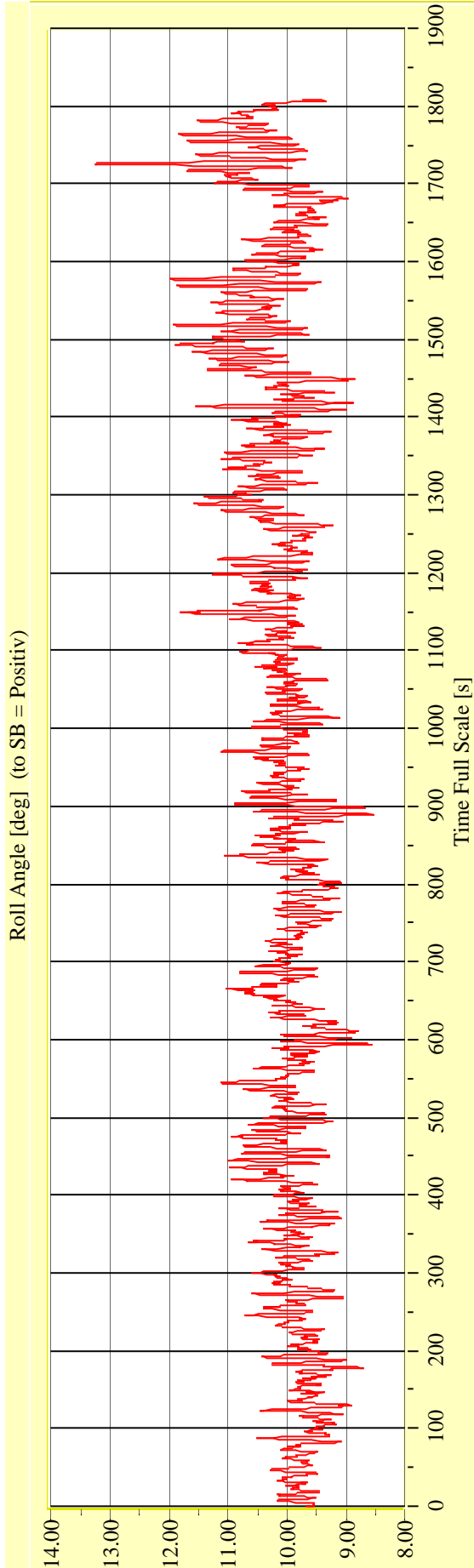
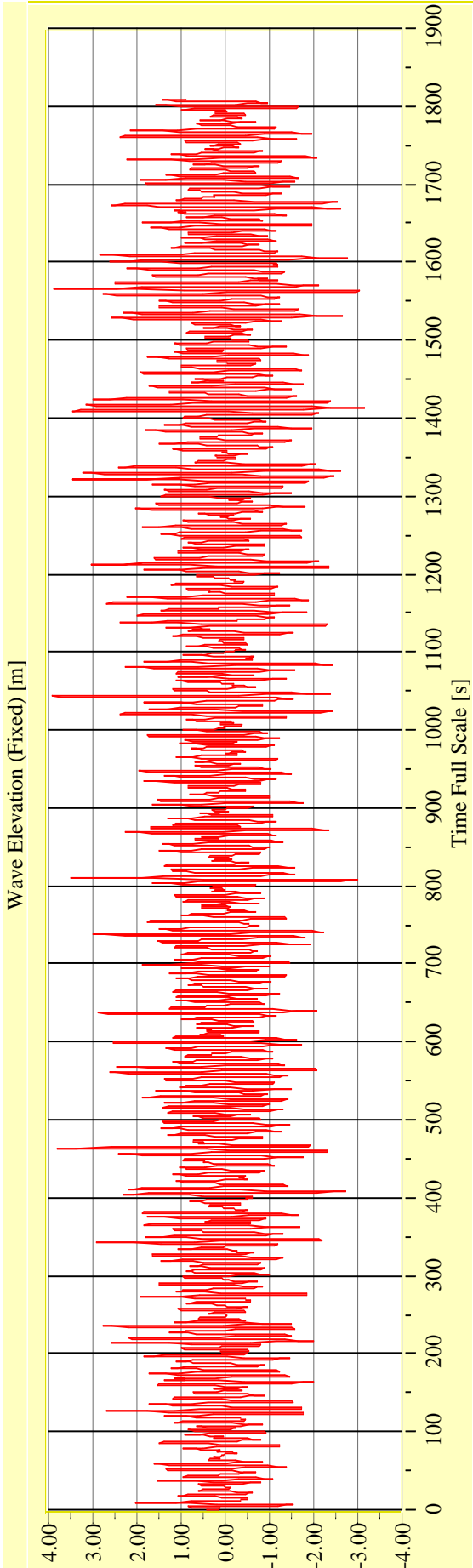
Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-08** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

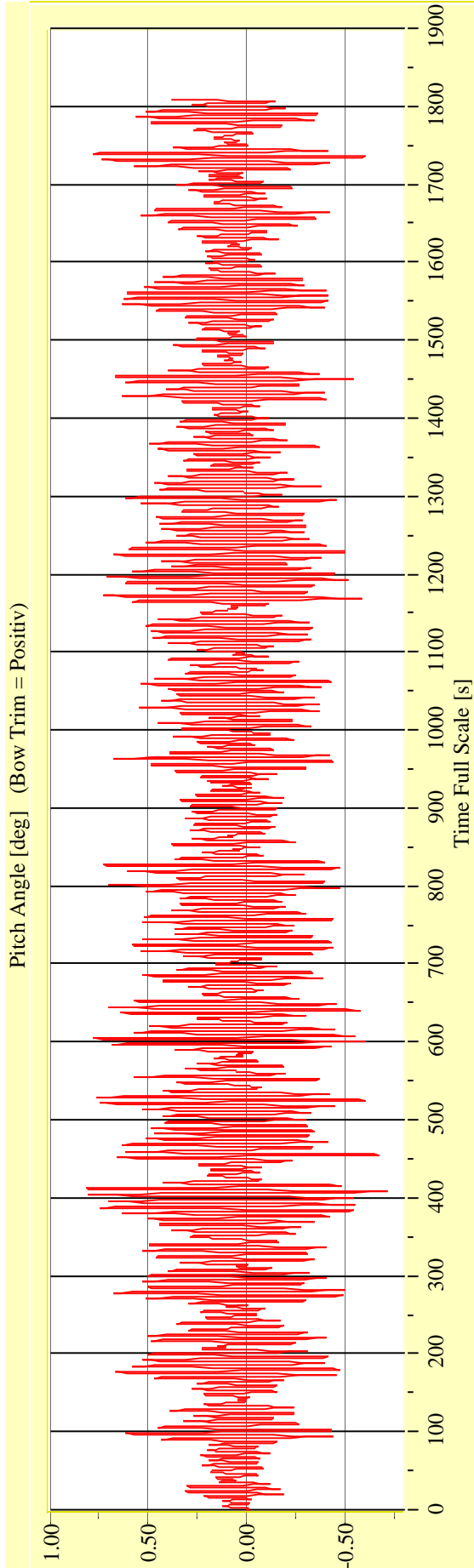
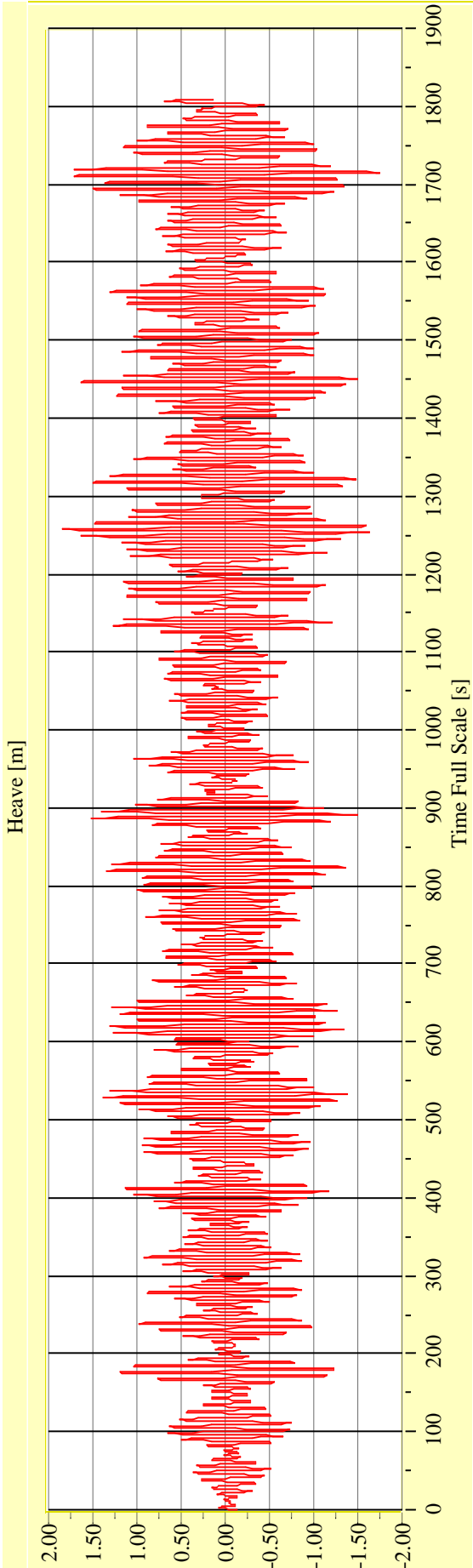
Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-09** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

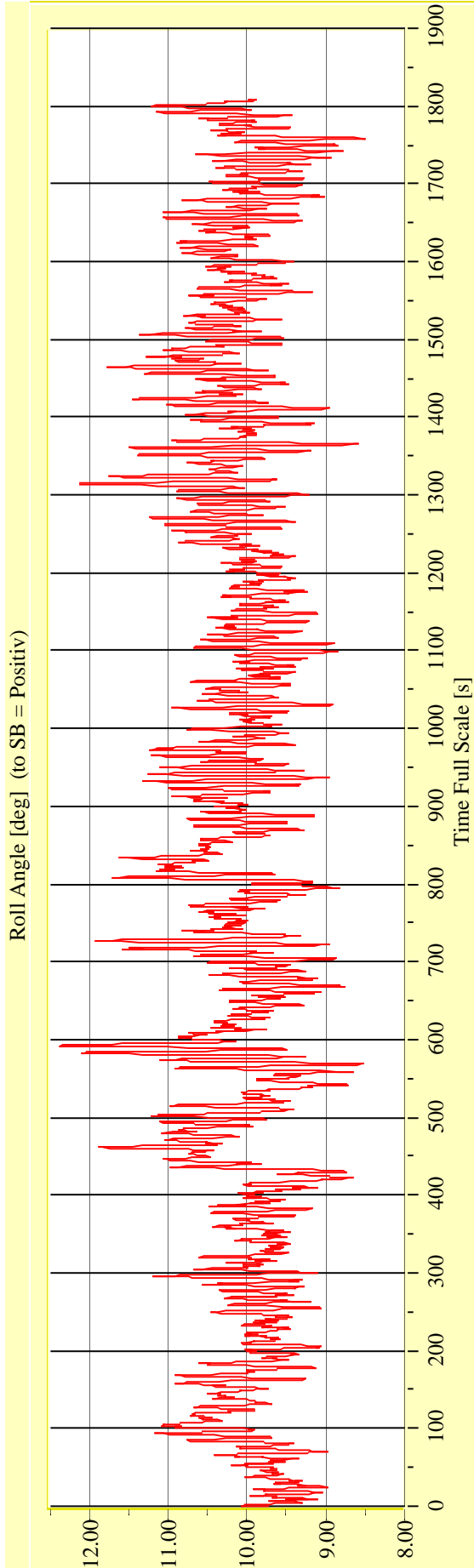
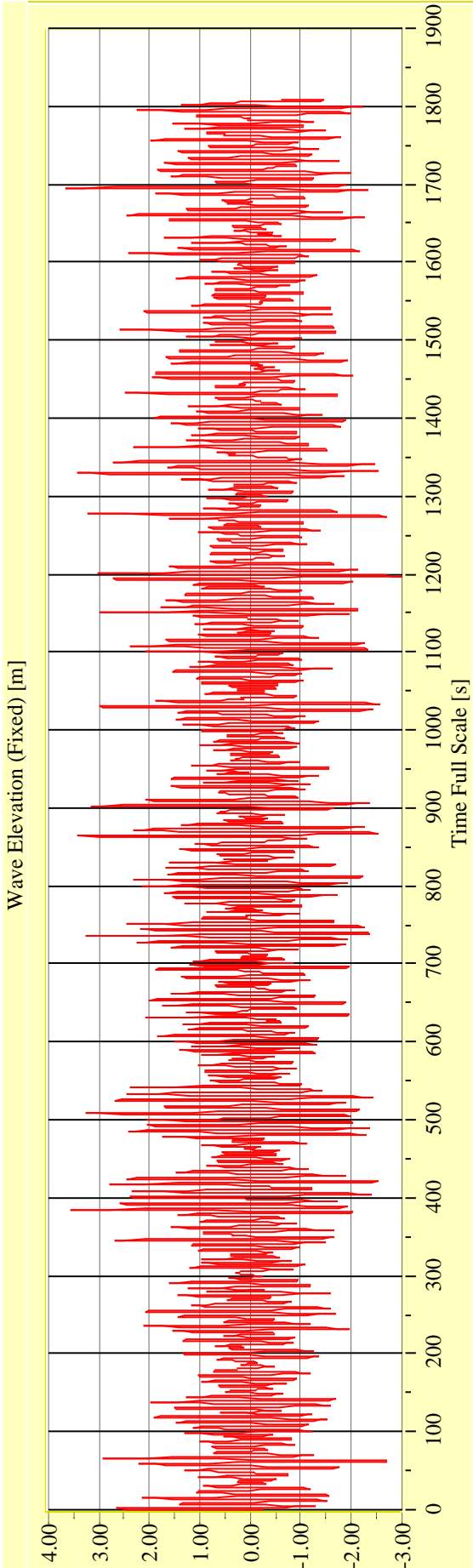
Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-09** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

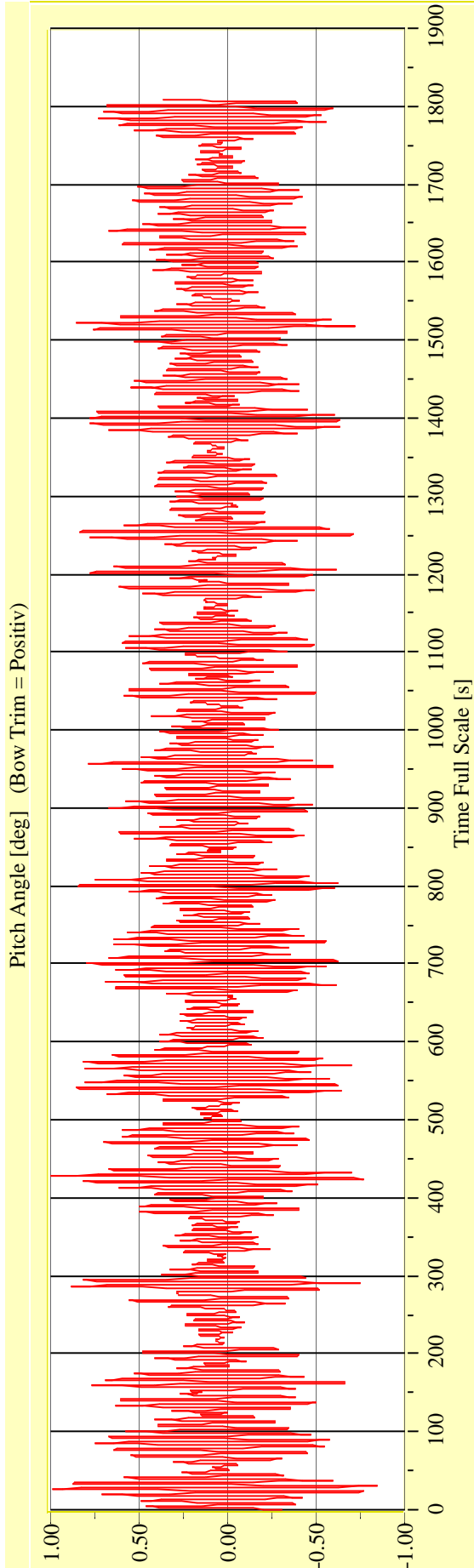
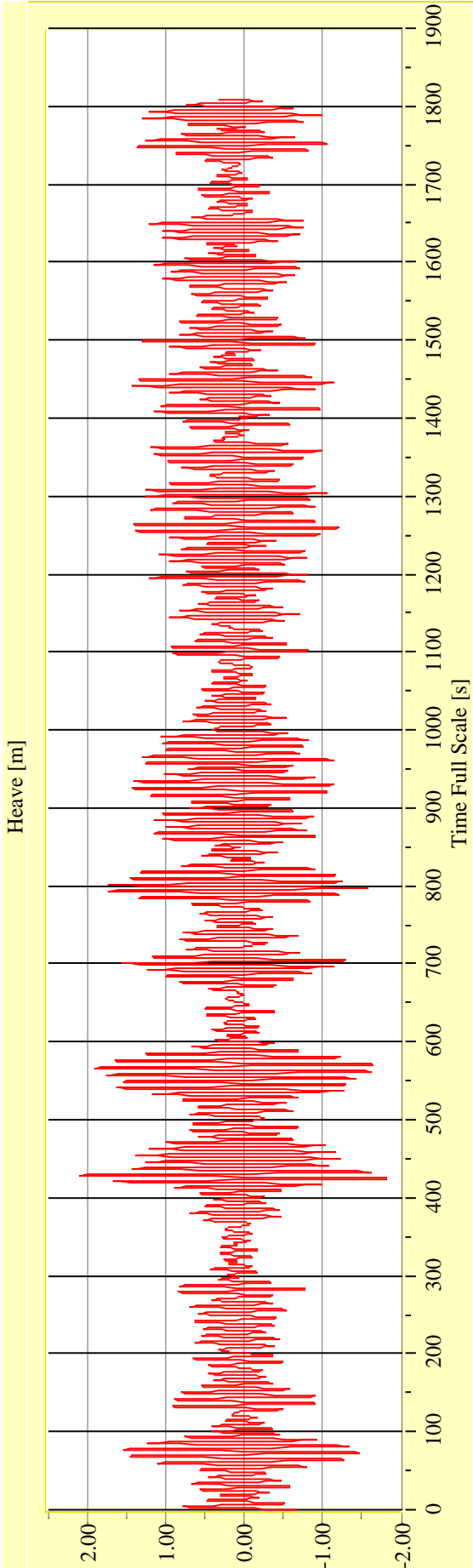
Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-10** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**

Irregular Beam Seas

Vienna Model Basin Ltd **Model No. 2461A** **Test No. 29965-10** **Target Waves: Hs = 4.0 m Tp = 8.0 s** **gamma = 3,3**



Date: 08.02.2011 **Project: EMSA 3** **Damage 2: R7M4_P7-8.3.0**