SIMBAD POST-PROCESSING PROGRAM

Foreword

The SIMBAD post-processing program provides, from the SIMBAD calculation results:

- Plots of time series of Mooring line and fender loads
- Plots of motions, speeds and accelerations at the center of gravity and at other possible points of the ship

These results can be also post-processed, in order to obtain:

- Tables of results, including:
  - Minimum and maximum values over the time series, F1/3 and F1/10 values that are the mean of 3^{RD} or 10^{TH} highest part of the time series distribution
  - For motions, speeds and accelerations, the maximum and minimum statistical values given respectively by: average value + or – 3.8 x standard deviation

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The input data are read from the SIMBAD output files: "*.RES"

Results are written into different output files:

- "Max_Min.txt", for mooring line and fender loads
- "MotionCG.txt", for the motions, velocities or accelerations of centre of gravity
- "MotionPT.txt", for the motions, velocities or accelerations of a specific point

These files are described in details hereafter.

Running the SIMBAD post-processing program:
An example of run is given hereafter

```
1: Tensions in lines,
2: Motions of CG,
3: Velocities of CG,
4: Accelerations of CG,
5: Motions of a particular point,
6: Velocities of a particular point,
7: Accelerations of a particular point
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Reading the file results in the LINES.RES file
Time start (in s), default = 400s:
Time end (in s), default = 14300s:
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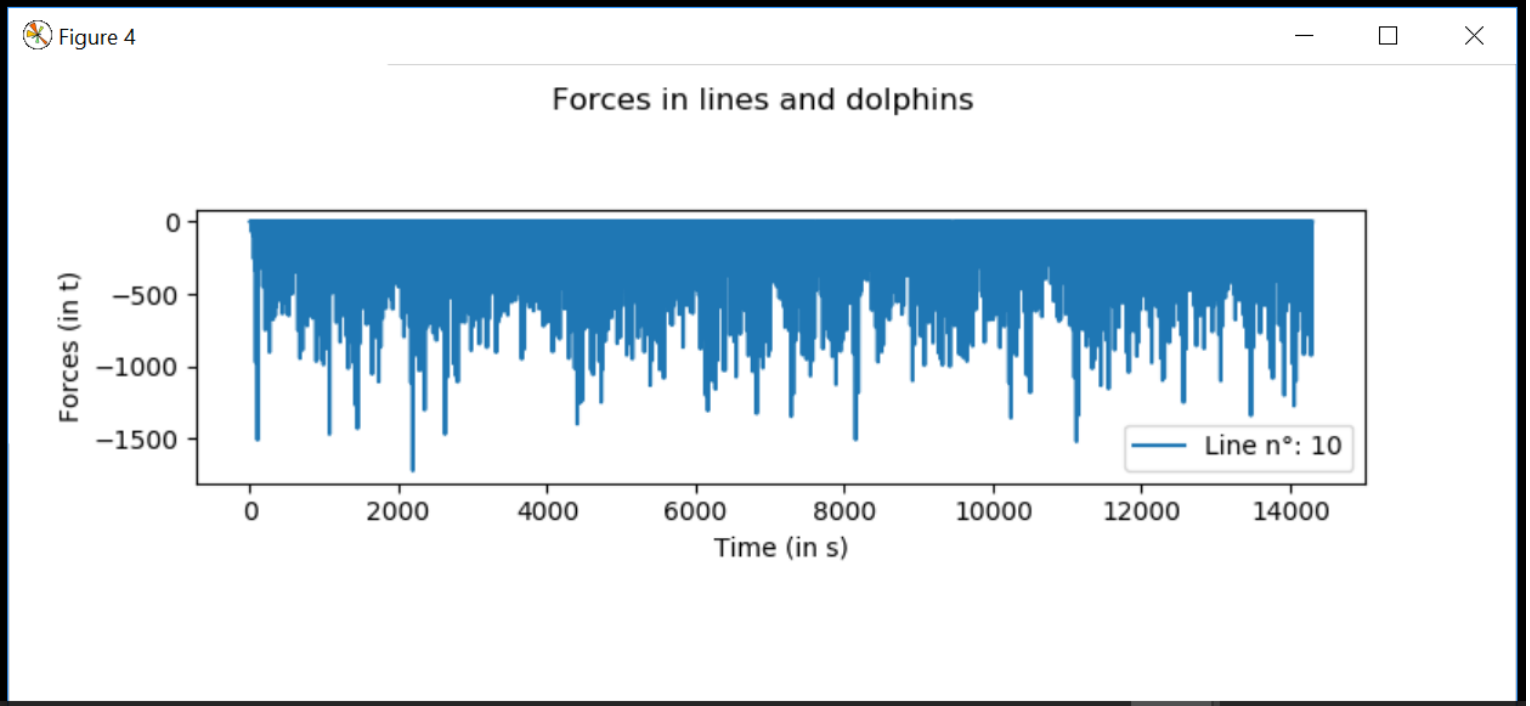
Choice of parameter to be plotted and analysed

Determination of time start and end for the plots and analysis. Generally, the time start is the ramp-up time introduced in the SIMBAD program and the time end the length of the time series. Nevertheless, it is recommended to cut off the last 100 s as this last time period may be affected by numerical inconsistencies due to the calculation range of radiation damping IRF (95s).



RUNNING THE SIMBAD POST-PROCESSING PROGRAM: RESULT FILE "MAX_MIN.TXT", FOR MOORING LINE AND FENDER LOADS

	Forces			
Line n°:	Min	Max	F1/3	F1/10
1	0.00	112.10	65.15	77.77
2	0.00	118.40	68.84	82.36
3	0.00	113.80	66.07	78.82
4	17.99	42.29	32.02	34.48
5	16.55	50.38	36.81	40.20
6	0.00	153.30	84.34	101.36
7	0.00	158.60	86.85	104.66
8	0.00	151.50	83.51	100.69
9	-1521.00	0.00	-813.07	-1013.06
10	-1720.00	0.00	-890.24	-1125.18

MINIMUM AND MAXIMUM VALUES, F1/3 AND F1/10 VALUES

Running the SIMBAD post-processing program: Result file "MotionCG.txt", for the motions, velocities or accelerations of centre of gravity

Motion						
Type:	Min	Max	Minst.	Maxst.	F1/3	F1/10
SURGE	-0.049	0.0724	-0.062	0.0815	0.0458	0.0567
SWAY	-2.676	1.12	-2.193	1.6435	-1.274	-1.668
HEAVE	-1.281	1.381	-1.284	1.2818	-0.671	-0.857
ROLL	-3.81	3.443	-3.760	3.5198	-2.010	-2.520
PITCH	-0.034	0.0414	-0.037	0.0403	0.0220	0.0274
YAW	-0.494	0.3937	-0.498	0.4167	-0.268	-0.335

Minimum and maximum values, Maximum and minimum statistical values, F1/3 and F1/10 values

RUNNING THE SIMBAD POST-PROCESSING PROGRAM: RESULT FILE "MOTIONPT.TXT", FOR THE MOTIONS, VELOCITIES OR ACCELERATIONS OF A PARTICULAR POINT

	Motion					
Type:	Min	Max	Minst.	Maxst.	F1/3	F1/10
X	-2.772	1.215	-2.763	1.7640	-1.423	-1.761
Y	-1.156	0.5952	-0.981	0.6425	-0.556	-0.728
Z	-0.986	0.7788	-0.849	0.7255	-0.469	-0.584

MINIMUM AND MAXIMUM VALUES, MAXIMUM AND MINIMUM STATISTICAL VALUES, F1/3 AND F1/10 VALUES