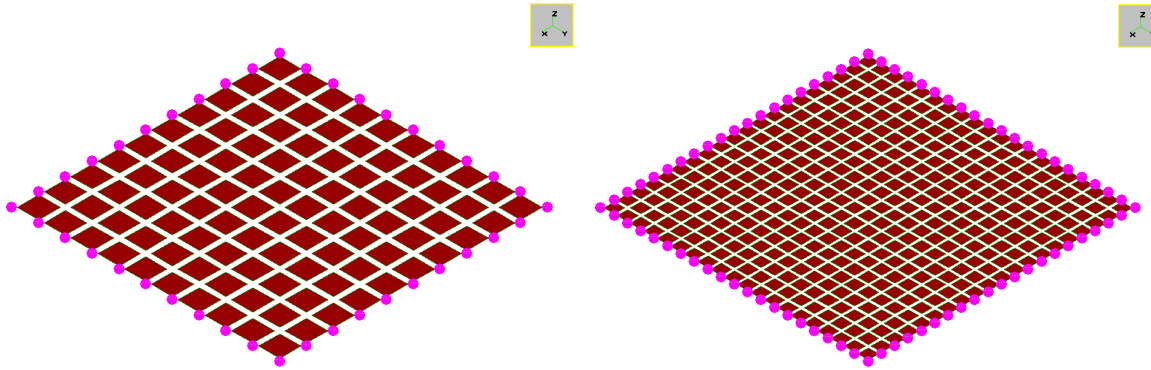


Comparison between Sargon (V8.42), NXNASTRAN and NEiNASTRAN - NORMAL MODES			
TEST 31	VALIDATION, CROSS CHECKS, RELIABILITY, BENCHMARK	Marco Croci	17/03/2008



	Sargon (Leda)	NX NASTRAN		NE NASTRAN	
Model Name	tes31.WSR	tes31000.dat		tes31.NAS	
Output file	tes31.dou	tes31000.f06		tes31.OUT	
(10x10 elements)	Frequency [Hz]	Frequency [Hz]	% errNX	Frequency [Hz]	% errNE
Mode 1	38,844023	38,39965	1,157	38,881069	-0,095
Mode 2	96,844545	95,51337	1,394	97,571823	-0,745
Mode 3	96,844545	95,51337	1,394	97,571823	-0,745
Mode 4	153,865779	148,9175	3,323	155,55479	-1,086
Mode 5	193,047349	190,9979	1,073	196,74339	-1,879
Mode 6	193,047891	190,9984	1,073	196,76440	-1,889
Mode 7	248,310161	239,1893	3,813	254,42970	-2,405
Mode 8	248,310161	239,1893	3,813	254,42970	-2,405
Mode 9	326,372116	320,9690	1,683	338,21429	-3,501
Mode 10	326,372116	324,8669	0,463	338,21429	-3,501
Model Name	tes31bis.WSR	tes31001.dat		tes31bis.NAS	
Output file	tes31bis.dou	tes31001.f06		tes31bis.OUT	
(20x20 elements)	Frequency [Hz]	Frequency [Hz]	% errNX	Frequency [Hz]	% errNE
Mode 1	38,932675	38,73035	0,522	38,884911	0,123
Mode 2	97,270778	96,69672	0,594	97,301826	-0,032
Mode 3	97,270778	96,69672	0,594	97,301826	-0,032
Mode 4	155,376496	153,3352	1,331	155,44991	-0,047
Mode 5	194,420421	193,3309	0,564	194,87839	-0,235
Mode 6	194,420431	193,3319	0,563	194,87940	-0,236
Mode 7	252,132049	247,9856	1,672	252,72820	-0,236
Mode 8	252,132049	247,9856	1,672	252,72820	-0,236
Mode 9	330,243907	328,5107	0,528	331,82559	-0,477
Mode 10	330,243907	328,5107	0,528	331,82559	-0,477

$$\% \text{ errNX} = (\text{Sargon} - \text{NX}) / \text{NX} * 100 ; \quad \% \text{ errNE} = (\text{Sargon} - \text{NE}) / \text{NE} * 100$$

Notes: in Sargon Kirchoff formulation was used for plate shell elements

in NX and NE NASTRAN CQUADR were not used

Constraints: simple supports

Copyright © Castalia srl – Milan – Italy – 2008 - All rights reserved: data may be used but citing the source and informing Castalia srl

<http://www.castaliaweb.com>

staff@castaliaweb.com