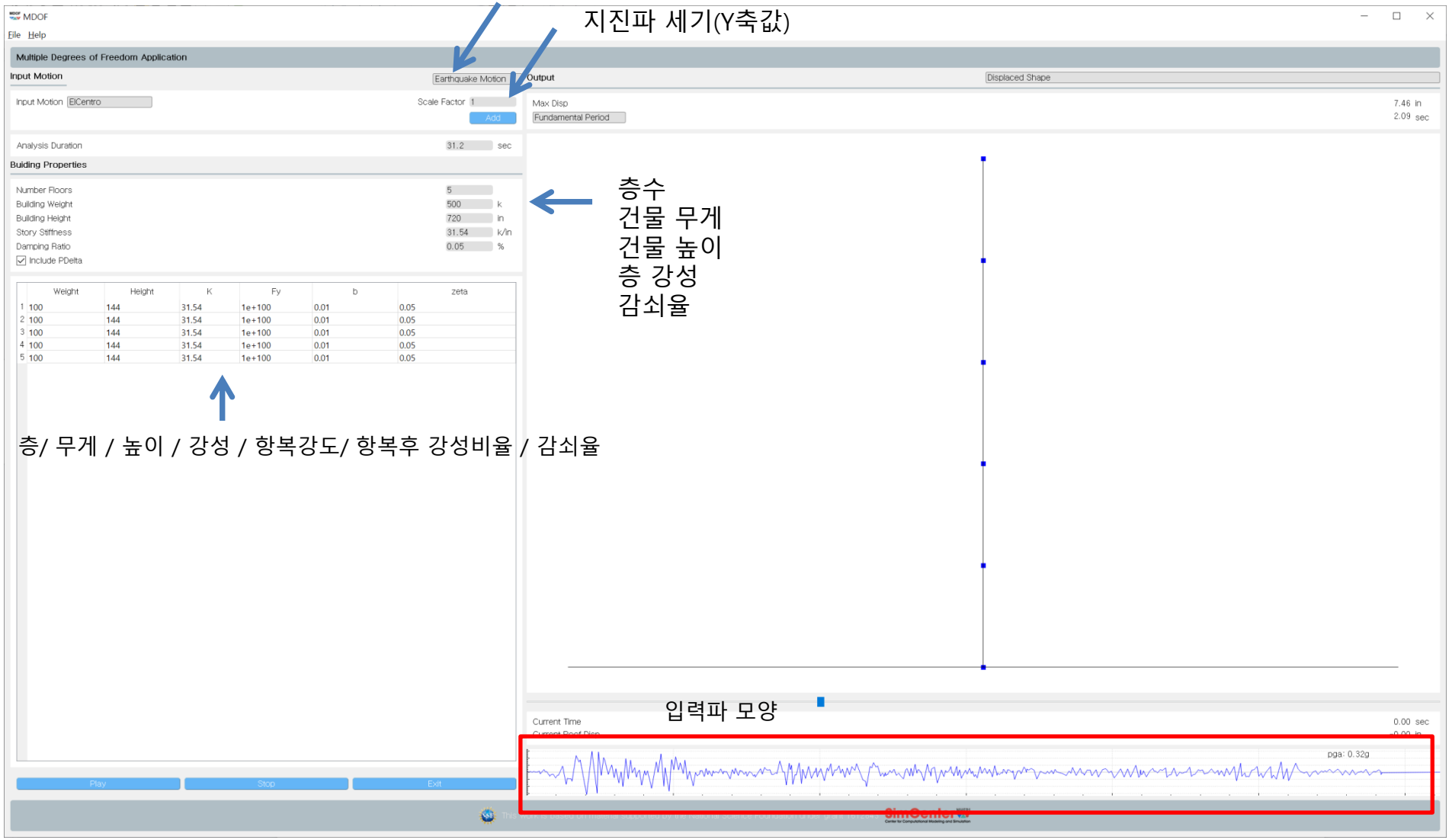
MDOF
-메뉴설명(지진파 선택 화면)

입력 운동 종류(지진파, 정현파, 충격파 중 선택)

지진파 세기(Y축값)

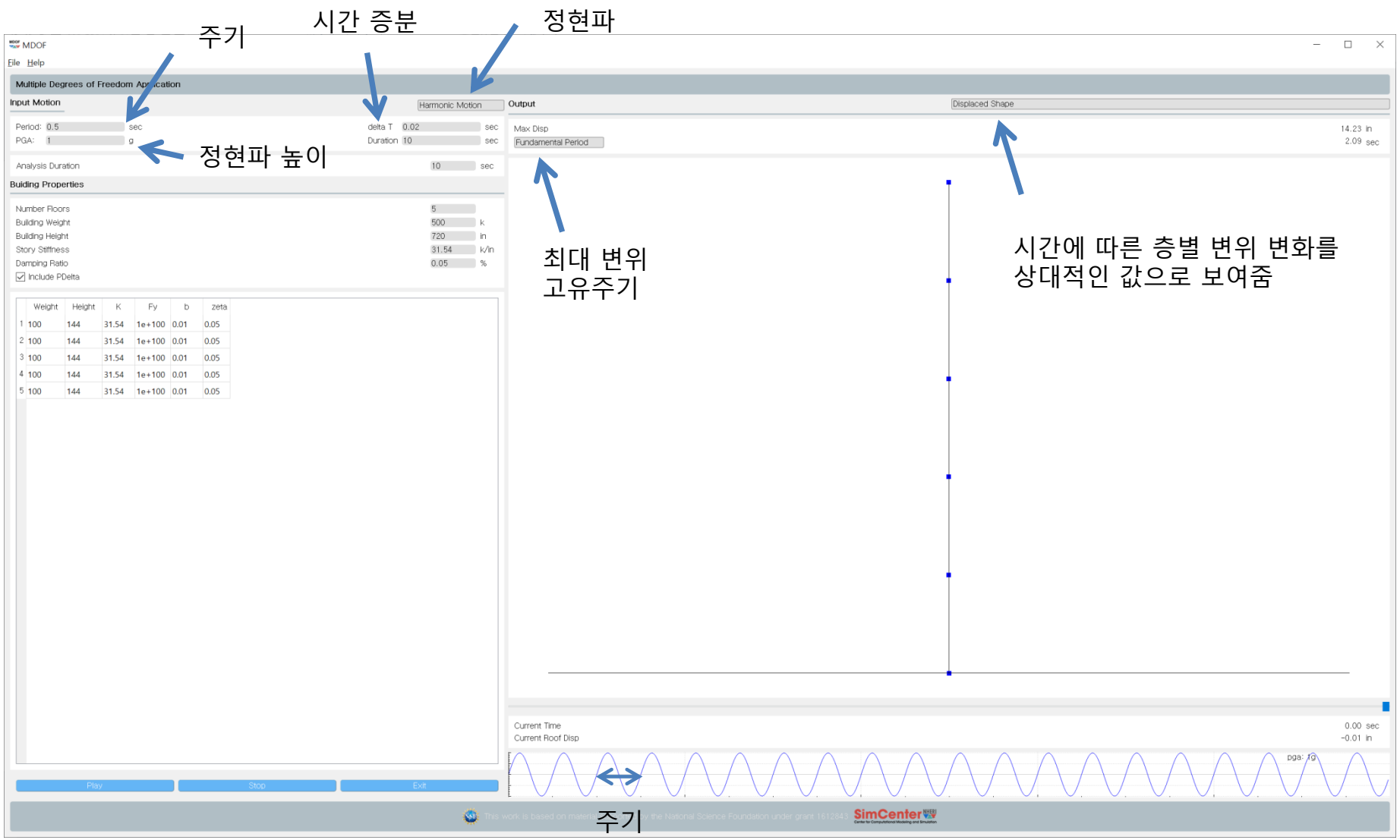


층수
건물 무게
건물 높이
층 강성
감쇠율

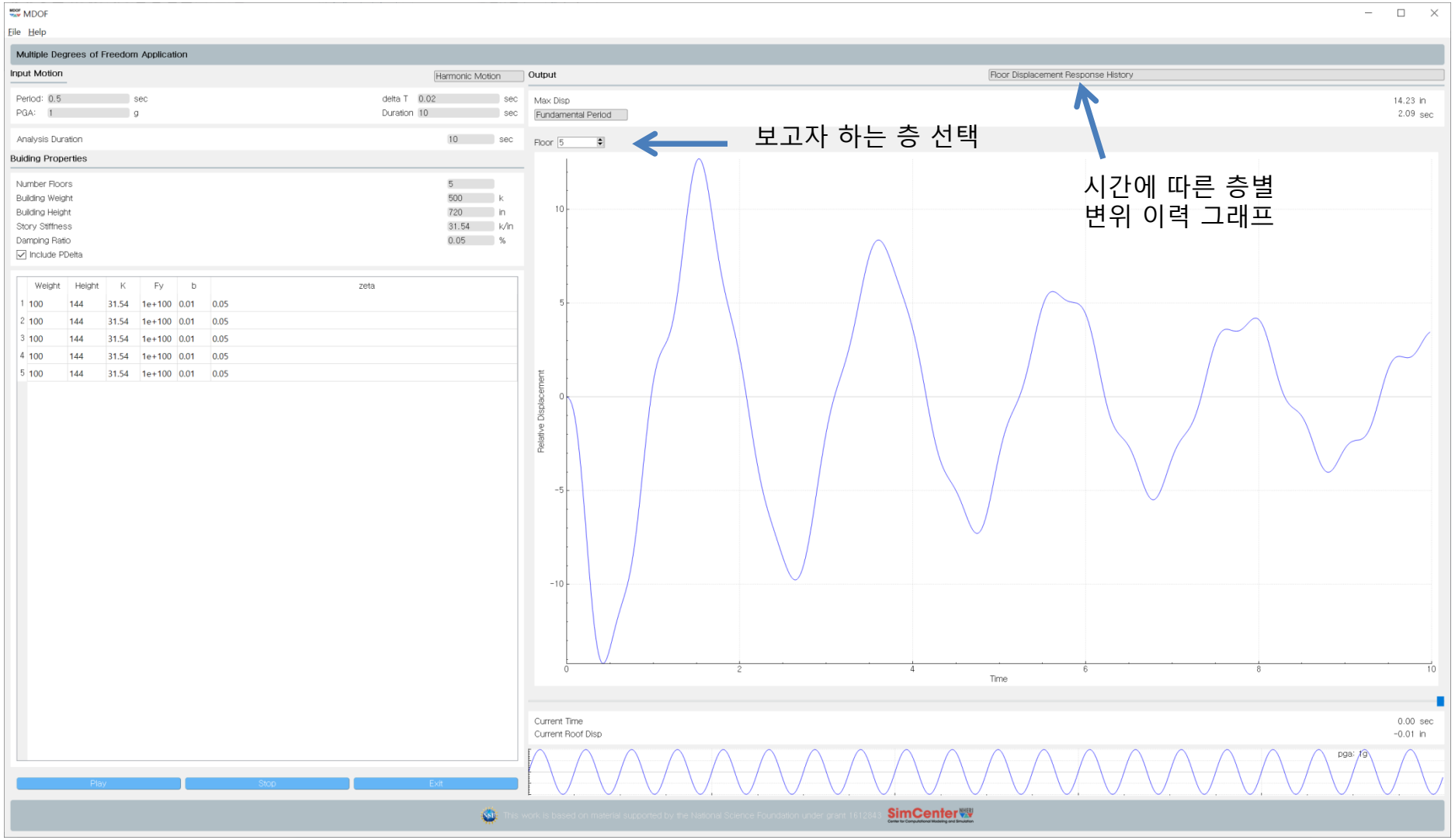
층/ 무게 / 높이 / 강성 / 항복강도/ 항복후 강성비율 / 감쇠율

입력파 모양

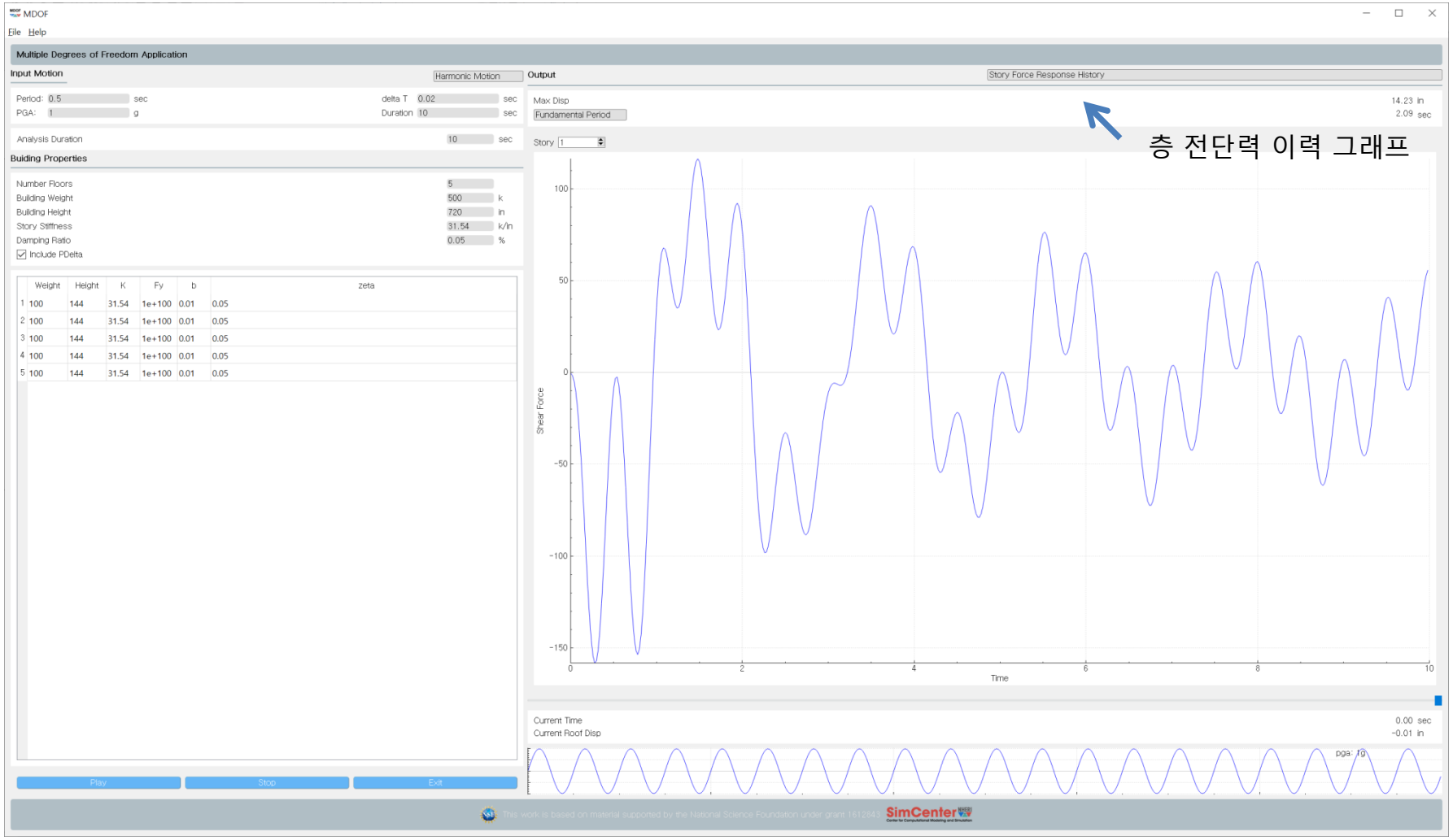
MDOF
-메뉴설명 (정현파 시 선택 화면)



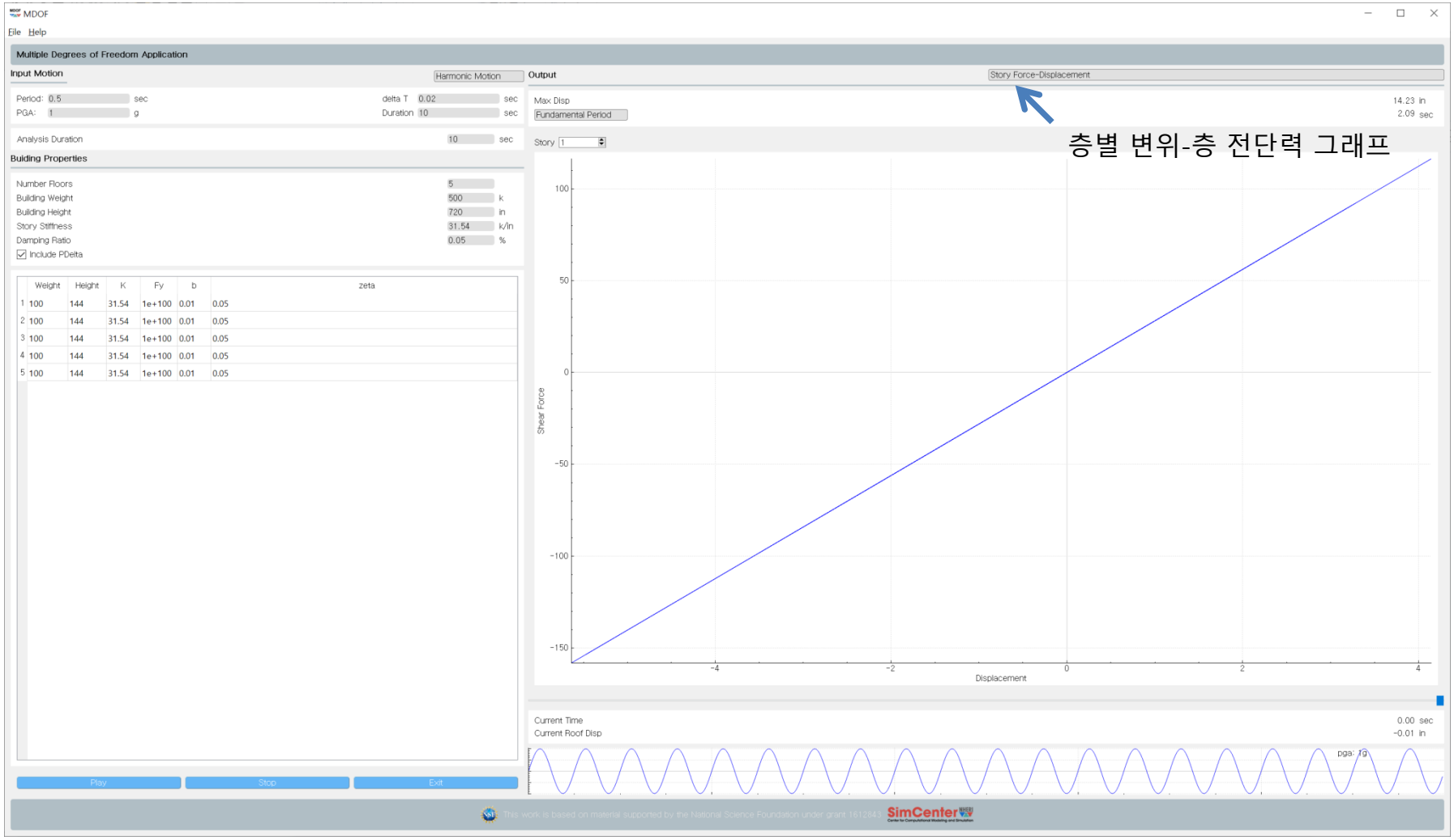
MDOF
-메뉴설명 (정현파 시 선택 화면)



MDOF
-메뉴설명 (정현파 시 선택 화면)



MDOF
-메뉴설명 (정현파 시 선택 화면)



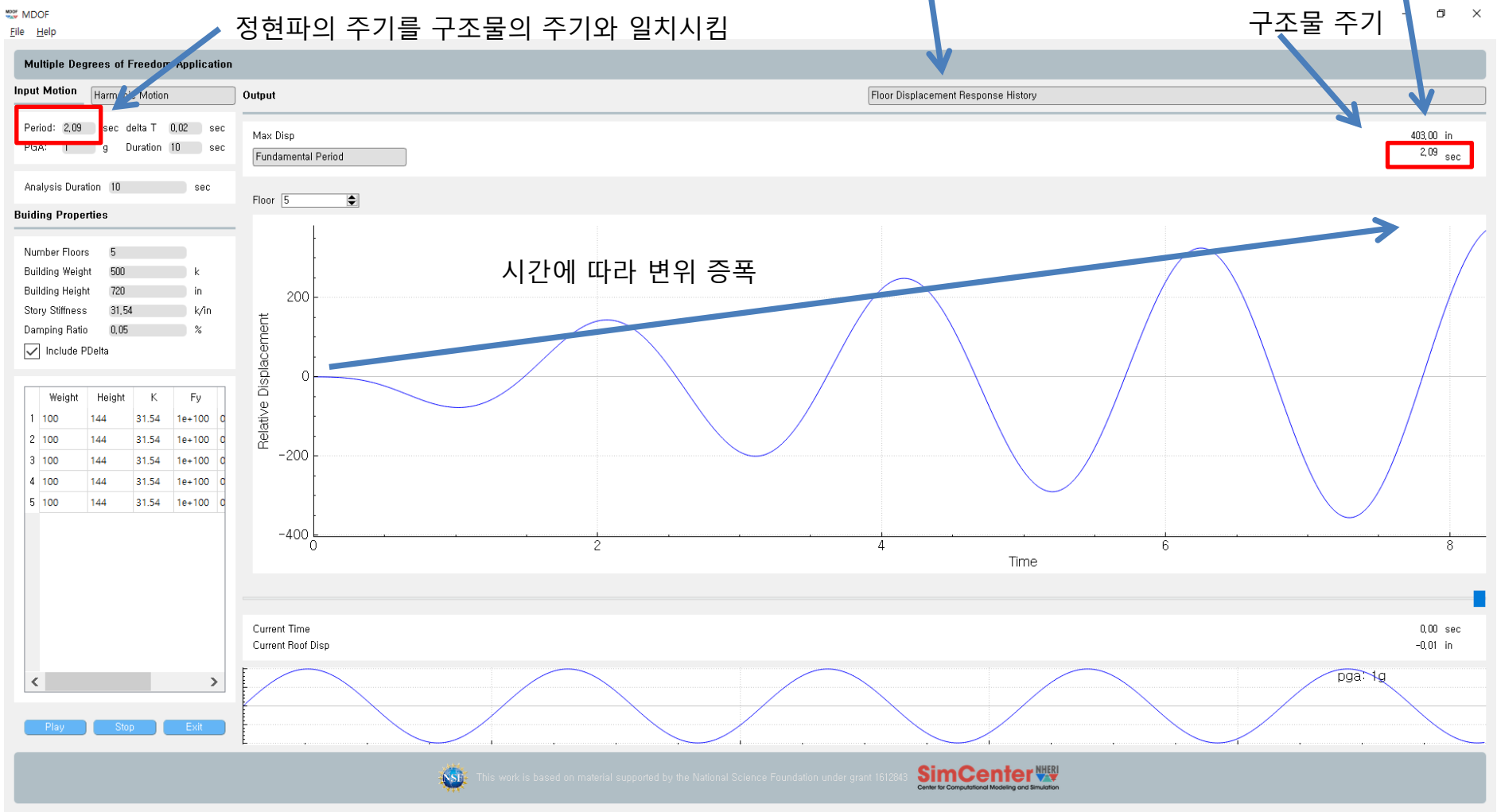
MDOF
-공진

최대변위
403.00

층별 변위 이력

정현파의 주기를 구조물의 주기와 일치시킴

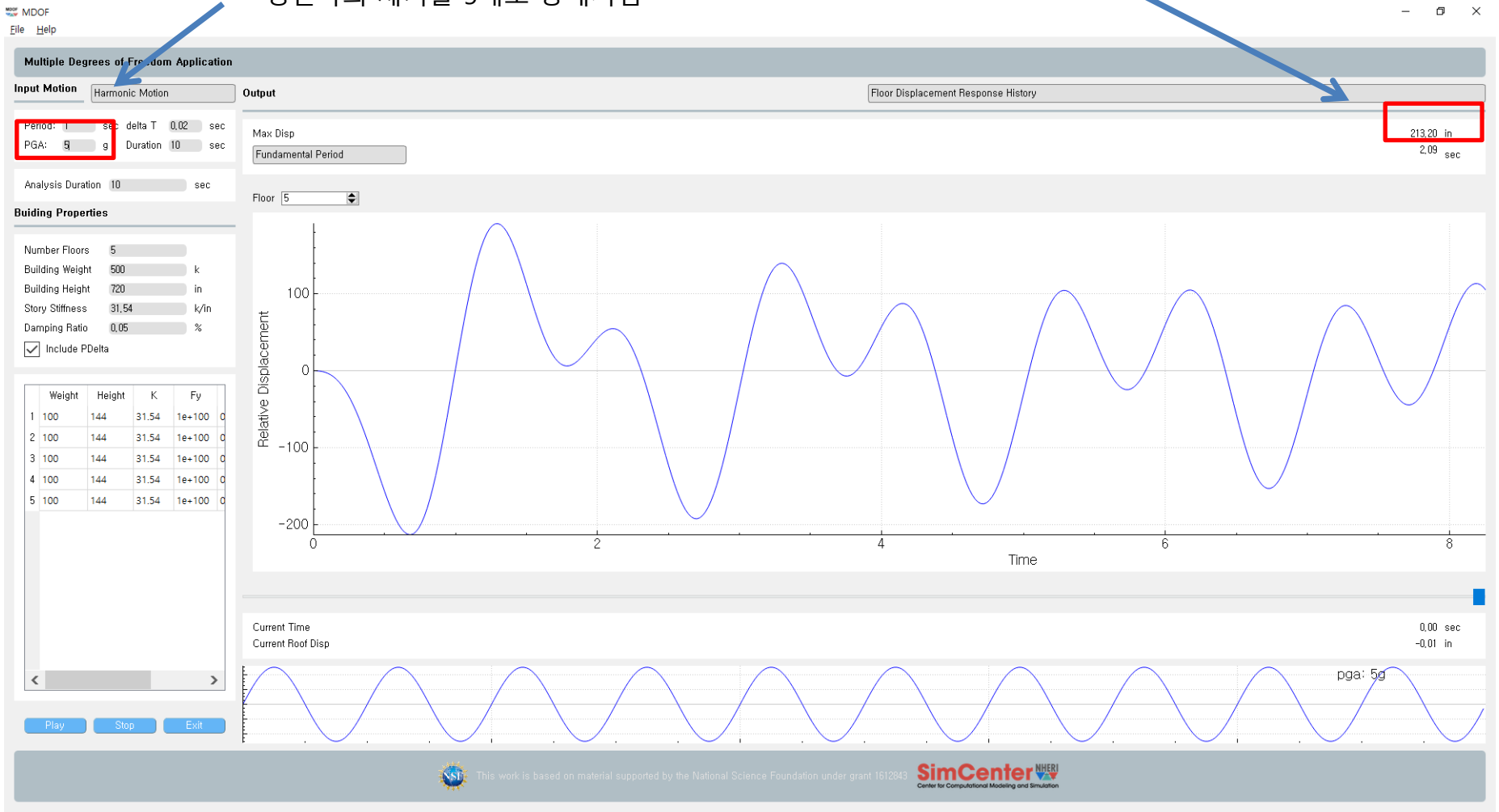
구조물 주기



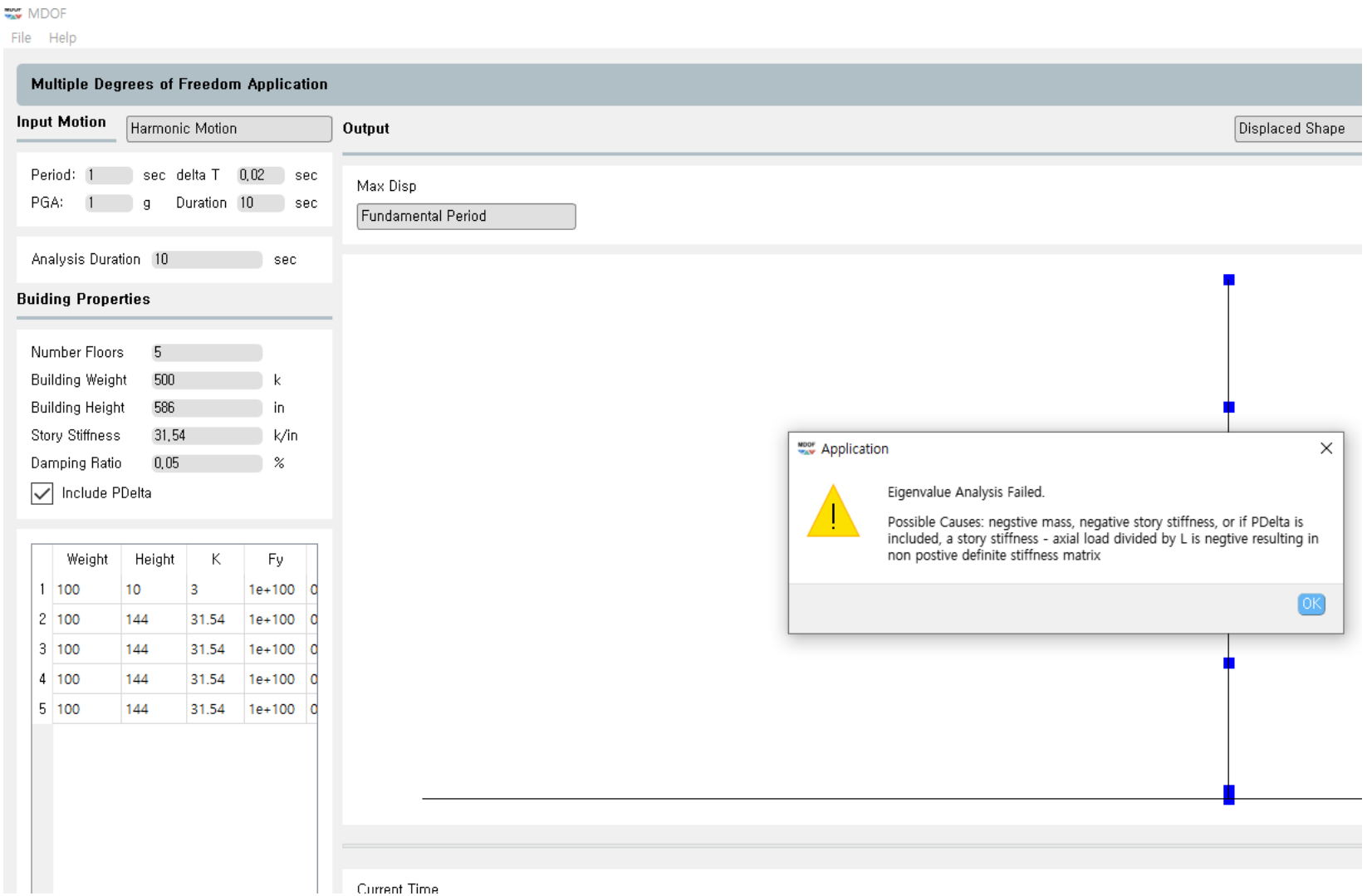
MDOF
-공진

정현파의 세기를 5배로 증대시킴

최대 변위 213.20

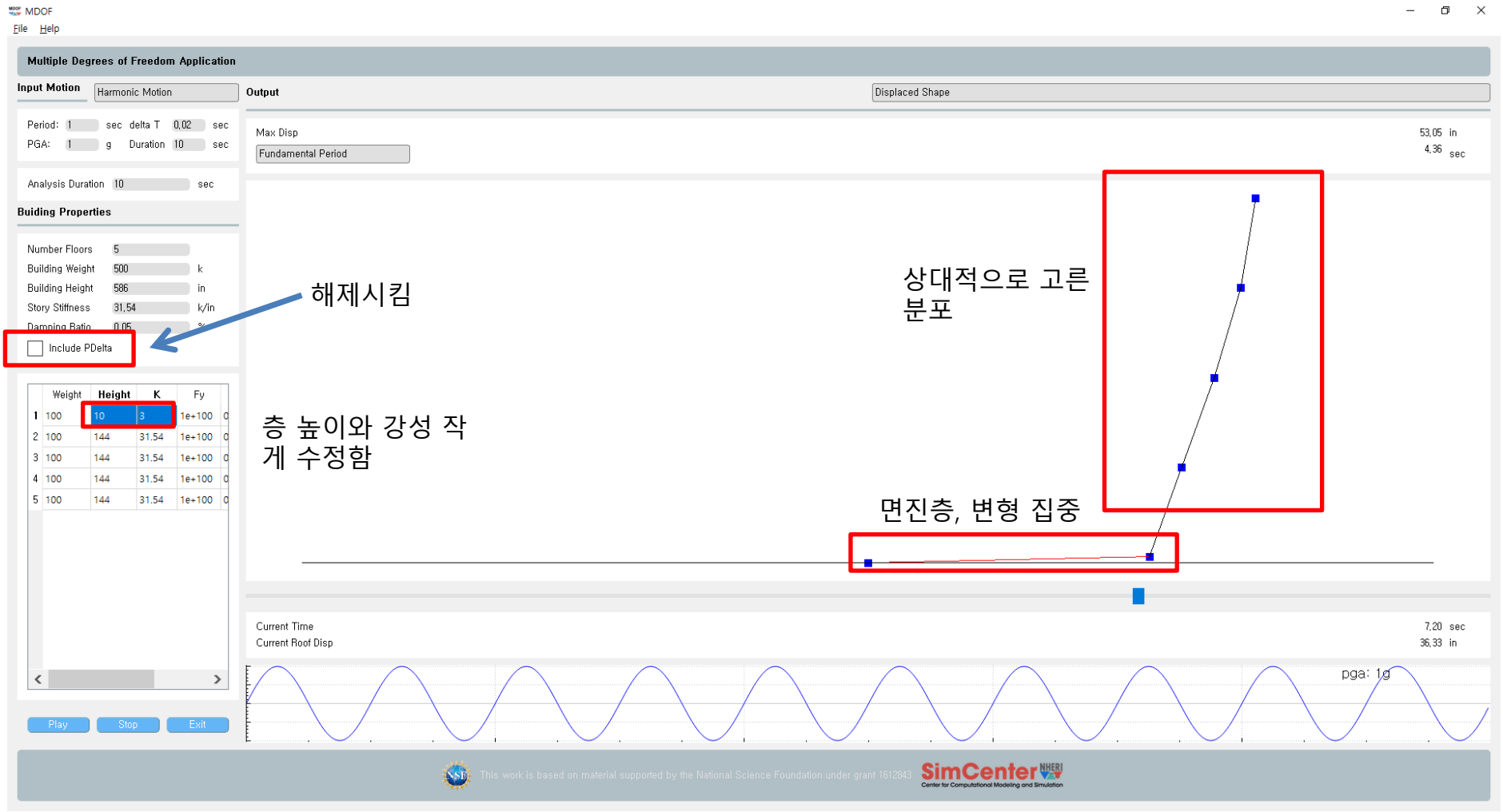


MDOF
-면진



	Weight	Height	K	Fy	
1	100	10	3	1e+100	0
2	100	144	31.54	1e+100	0
3	100	144	31.54	1e+100	0
4	100	144	31.54	1e+100	0
5	100	144	31.54	1e+100	0

MDOF
-면진


MDOF
File Help
Multiple Degrees of Freedom Application
Input Motion
Harmonic Motion
Output
Displaced Shape
Period: 1 sec delta T 0,02 sec
PGA: 1 g Duration 10 sec
Max Disp
Fundamental Period
53,05 in
4,36 sec
Analysis Duration 10 sec
Buiding Properties
Number Floors 5
Building Weight 500 k
Building Height 586 in
Story Stiffness 31,54 k/in
Damping Ratio 0,05
Include PDelta
해제시킴
상대적으로 고른 분포
층 높이와 강성 작게 수정함
면진층, 변형 집중
Weight Height K Fy
1 100 10 3 1e+100
2 100 144 31.54 1e+100
3 100 144 31.54 1e+100
4 100 144 31.54 1e+100
5 100 144 31.54 1e+100
Current Time
Current Roof Disp
7,20 sec
36,33 in
pga: 1g
Play
Stop
Exit
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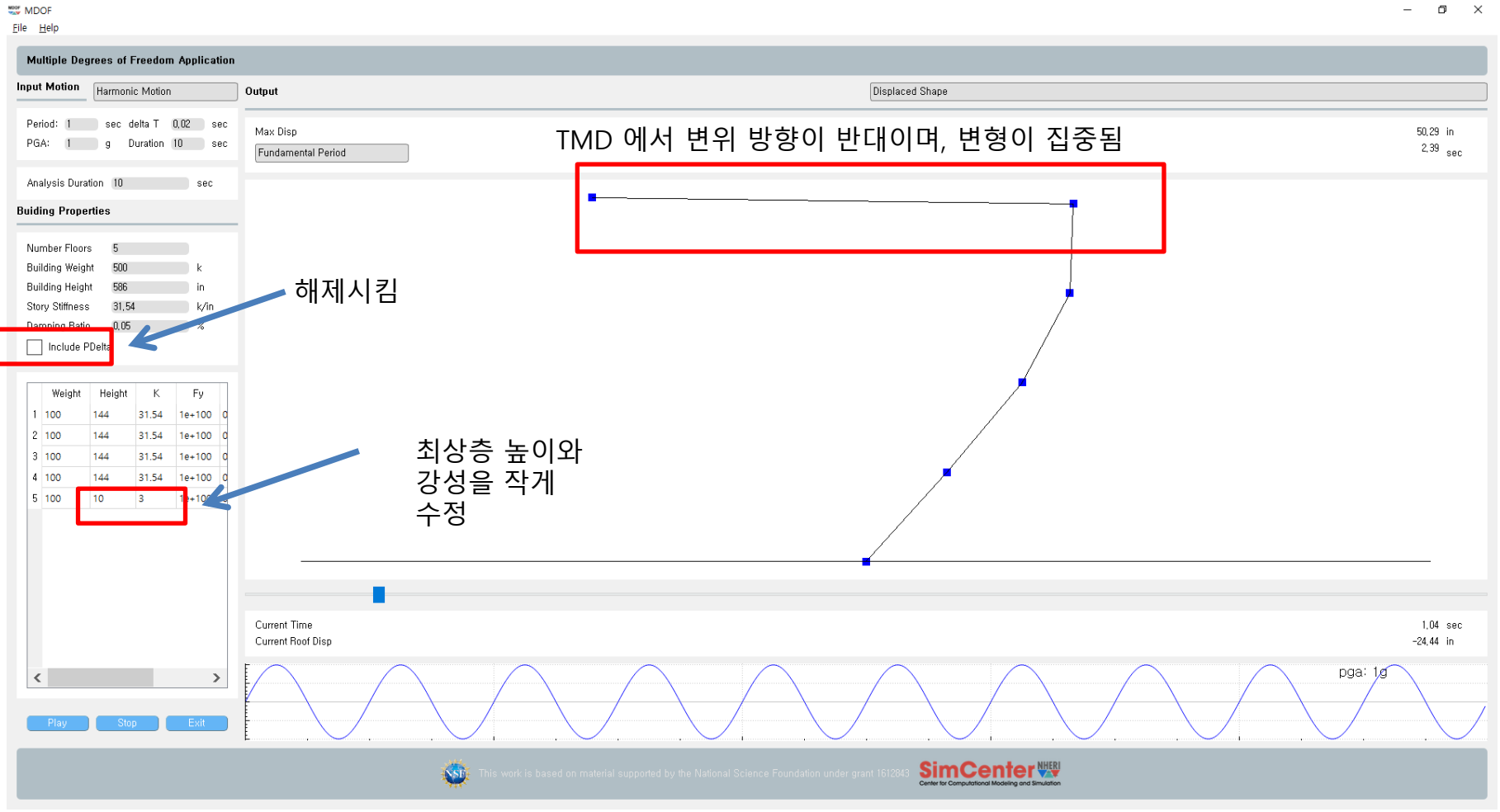
MDOF
-제진(TMD)


MDOF
File Help
Multiple Degrees of Freedom Application
Input Motion
Harmonic Motion
Output
Displaced Shape
Period: 1 sec delta T 0,02 sec
PGA: 1 g Duration 10 sec
Max Disp
Fundamental Period
50,29 in
2,39 sec
TMD 에서 변위 방향이 반대이며, 변형이 집중됨
Analysis Duration 10 sec
Buiding Properties
Number Floors 5
Building Weight 500 k
Building Height 586 in
Story Stiffness 31,54 k/in
Damping Ratio 0,05 %
Include PDelta
해제시킴
Weight Height K Fy
1 100 144 31.54 1e+100
2 100 144 31.54 1e+100
3 100 144 31.54 1e+100
4 100 144 31.54 1e+100
5 100 10 3
최상층 높이와
강성을 작게
수정
Current Time
Current Roof Disp
1,04 sec
-24,44 in
pga: 1g
Play
Stop
Exit
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MDOF
-제진(층별 댐퍼)


MDOF
File Help
감쇠율이 증가함에 따라 최대 변위 감소
Multiple Degrees of Freedom Application
Input Motion
Harmonic Motion
Output
Displaced Shape
Period: 1 sec delta T 0,02 sec
PGA: 1 g Duration 10 sec
Max Disp
Fundamental Period
33,36 in
2,00 sec
Analysis Duration 10 sec
Buiding Properties
감쇠율 증가
Number Floors 5
Building Weight 500 k
Building Height 720 in
Story Stiffness 31,54 k/in
Damping Ratio 0,2 %
Include Delta
ight K Fy b zeta
1 31.54 1e+100 0.01 0.2
2 31.54 1e+100 0.01 0.2
3 31.54 1e+100 0.01 0.2
4 31.54 1e+100 0.01 0.2
5 31.54 1e+100 0.01 0.2
Current Time 0,00 sec
Current Roof Disp -0,00 in
pga: 1g
Play
Stop
Exit
This work is based on material supported by the National Science Foundation under grant 1612843
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