



ブラインド解析コンテスト2009

Blind Analysis Contest

審査結果

カテゴリー

- 以下のカテゴリーごとに最優秀者を表彰する。

カテゴリー1 立体骨組解析(鋼材ダンパー)

カテゴリー2 立体骨組解析(粘性ダンパー)

カテゴリー3 平面骨組解析(鋼材ダンパー)

カテゴリー4 平面骨組解析(粘性ダンパー)

採点方法

- 解析で予測する項目 (c.を除き, 大小加振別, XY方向別)
 - a. 各床レベルでの基礎からの相対変位、絶対加速度の絶対値の最大値
 - b. 各層の層せん断力、層間変形角の絶対値の最大値
 - c. 1層柱および2階梁中央のひずみの最大値
 - d. 1層および4層のダンパー力の最大値と最小値
 - e. 1層および4層のダンパー変形の最大値と最小値
- 予測項目 k の誤差の定義: 誤差の2乗和平方根 (RMS誤差)

$$E_k = \sqrt{\sum_j (F_{k,j} - F_{k,j}^*)^2}$$

$F_{k,j}$: 予測項目 k の第 j 層 (床レベル) の解析結果

$F_{k,j}^*$: 予測項目 k の第 j 層 (床レベル) の実験結果

- 各予測項目ごとに1位8点、2位5点、3位3点、4位1点が与えられ、合計点の大きさを競う

参加チーム数

- 延べ8カ国、52チームが参加

表：参加チーム数一覧

参加国\カテゴリ	カテゴリ-1	カテゴリ-2	カテゴリ-3	カテゴリ-4	合計
日本	8	2	3	2	15
台湾	3	4	4	4	15
米国	2	4	3	3	12
中国	2	4	0	0	6
ニュージーランド	1	0	0	0	1
イタリア	1	0	0	0	1
カナダ	0	0	1	0	1
UAE	0	0	0	1	1
合計	17	14	11	10	52

カテゴリ-1: 3D解析 鋼材ダンパー カテゴリ-3: 2D解析 鋼材ダンパー

カテゴリ-2: 3D解析 粘性ダンパー カテゴリ-4: 2D解析 粘性ダンパー

参加者リスト (1)

● Category1 : 立体骨組解析・鋼材ダンパー (敬称略)

清水秀哲ほか3名	安藤建設(株), 日本
修行稔	長崎大学, 日本
寺田岳彦ほか2名	清水建設(株), 日本
中尾彰宏ほか7名	(株)日本設計, 日本
中川貴文ほか3名	(独)建築研究所, 日本
中村尚弘ほか5名	(株)竹中工務店, 日本
諸石智彦ほか3名	前田建設工業(株), 日本
山下忠道ほか5名	(株)構造計画研究所, 日本
Gary S Prinzほか1名	Brigham Young University, 米国
Liling Caoほか3名	Thornton Tomasetti Inc., 米国
Shuguang Wangほか3名	Nanjing University of Technology, 中国
Xuchuan Linほか3名	Tsinghua University, 中国
Ming-Chieh Chuangほか4名	National Center for Research on Earthquake Eng., 台湾
Yi-Jer Yuほか3名	National Center for Research on Earthquake Eng., 台湾
Yuan-Tao Weng ほか4名	National Center for Research on Earthquake Eng., 台湾
Rui Pinhoほか3名	EUCENTRE Pavia, イタリア
Trevor Kellyほか1名	Holmes Consulting Group, ニュージーランド

参加者リスト (2)

● Category2 : 立体骨組解析・粘性ダンパー (敬称略)

中村尚弘ほか5名	竹中工務店(株), 日本
山下忠道ほか5名	(株)構造計画研究所, 日本
Bill Tremayne	Holmes Culley, 米国
Ganesh Thiagarajanほか1名	University of Missouri Kansas City, 米国
Liling Caoほか3名	Thornton Tomasetti Inc., 米国
Oh-Sung Kwonほか1名	Missouri University of Science and Technology, 米国
Dino Chen	South China Univ. of Tech, 中国
Dongsheng Duほか3名	Nanjing University of Technology, 中国
Jianrong Yangほか6名	Kunming University of Science and Technology, 中国
Panwenほか6名	Kunming University of Science and Technology, 中国
Ming-Chieh Chuangほか4名	National Center for Research on Earthquake Eng., 台湾
Tzu Kang Linほか4名	National Center for Research on Earthquake Eng., 台湾
Yi-Jer Yuほか3名	National Center for Research on Earthquake Eng., 台湾
Yuan-Tao Wengほか4名	National Center for Research on Earthquake Eng., 台湾

参加者リスト (3)

- Category3 : 平面骨組解析・鋼材ダンパー (敬称略)

永野康行ほか8名	福井工業大学, 日本
山下忠道ほか4名	(株)構造計画研究所, 日本
米田春美ほか5名	(株)竹中工務店, 日本
Bruce Maison	Structural Engineer, 米国
Liling Caoほか3名	Thornton Tomasetti Inc., 米国
Yushu Liuほか3名	Stanford University, 米国
Ming-Chieh Chuangほか4名	National Center for Research on Earthquake Eng., 台湾
Tzu Kang Linほか4名	National Center for Research on Earthquake Eng., 台湾
Yi-Jer Yuほか3名	National Center for Research on Earthquake Eng., 台湾
Yuan-Tao Wengほか4名	National Center for Research on Earthquake Eng., 台湾
Jack Wen Wei Guo	University of Toronto, カナダ

参加者リスト (4)

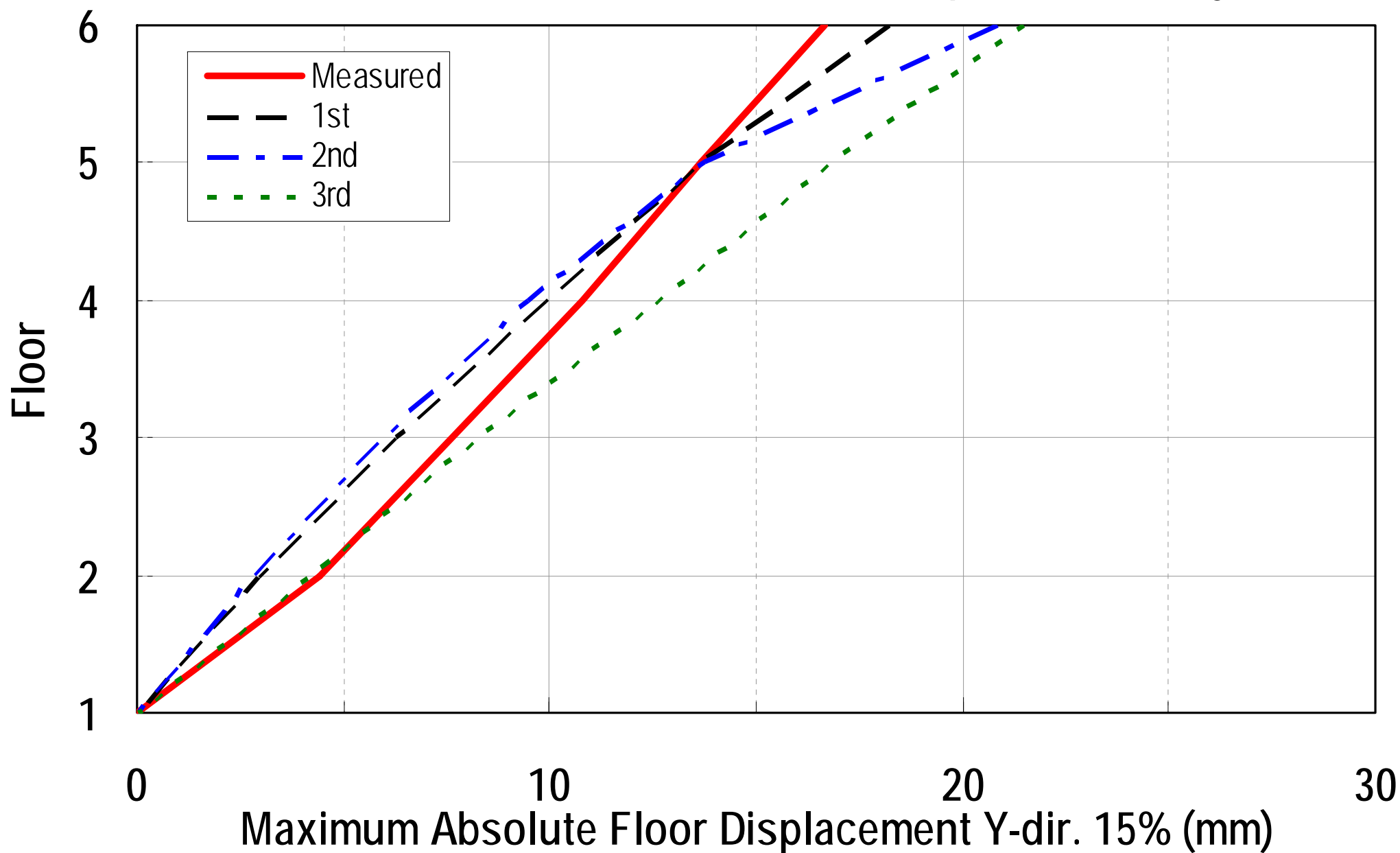
- Category4 : 平面骨組解析・粘性ダンパー (敬称略)

山下忠道ほか4名	(株)構造計画研究所, 日本
米田春美ほか5名	(株)竹中工務店, 日本
Bruce Maison	Structural Engineer, 米国
Dimitrios Lignosほか3名	Stanford University, 米国
Liling Caoほか3名	Thornton Tomasetti Inc., 米国
Ming-Chieh Chuangほか4名	National Center for Research on Earthquake Eng., 台湾
Yi-Jer Yuほか3名	National Center for Research on Earthquake Eng., 台湾
Yuan-Tao Wengほか4名	National Center for Research on Earthquake Eng., 台湾
Tzu Kang Linほか4名	National Center for Research on Earthquake Eng., 台湾
Mohamed Al Satari	American University of Sharjah, UAE



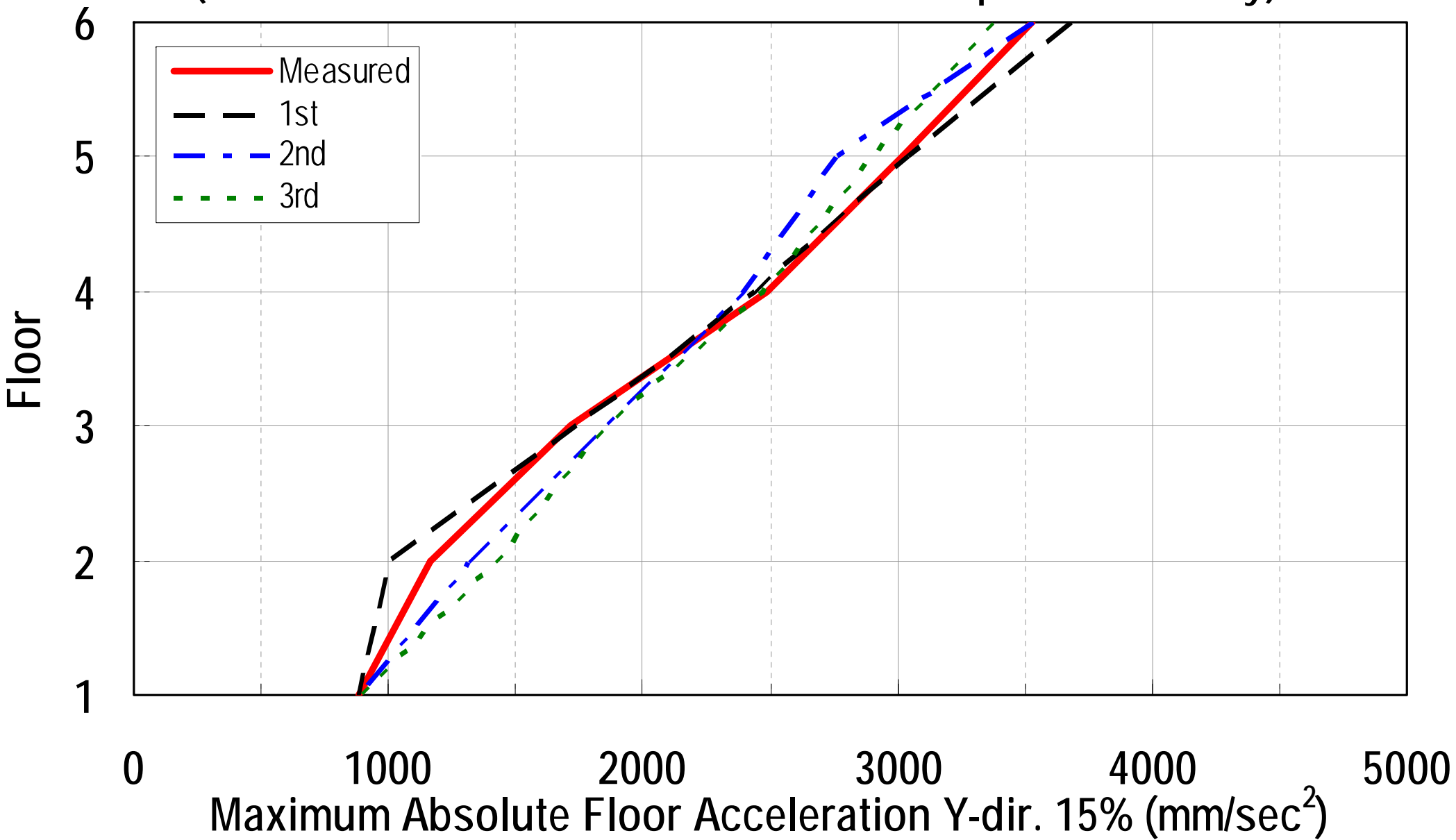
カテゴリー1: 立体骨組解析・鋼材ダンパー (実験結果及び各応答値上位3チーム)

3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



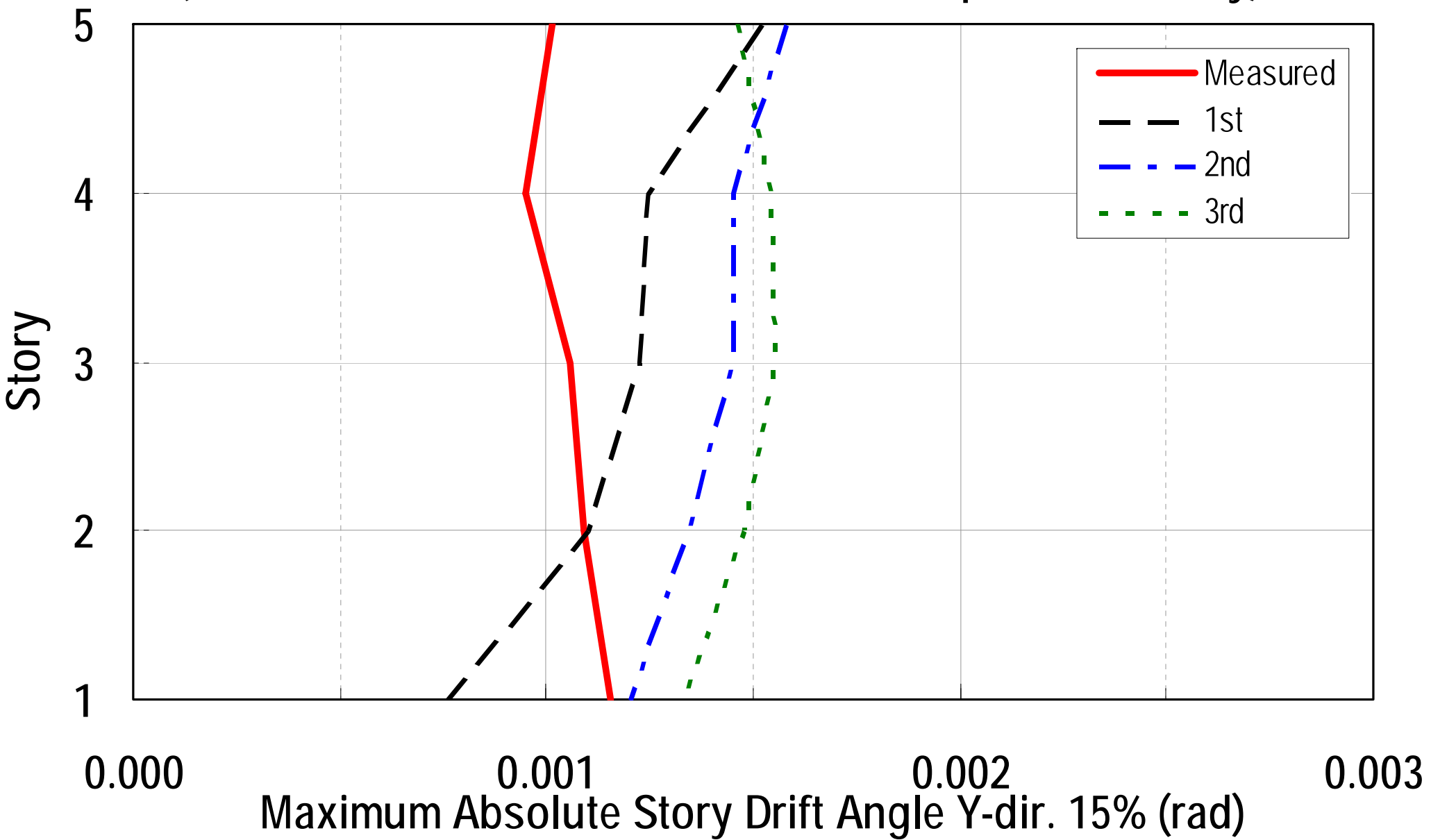


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



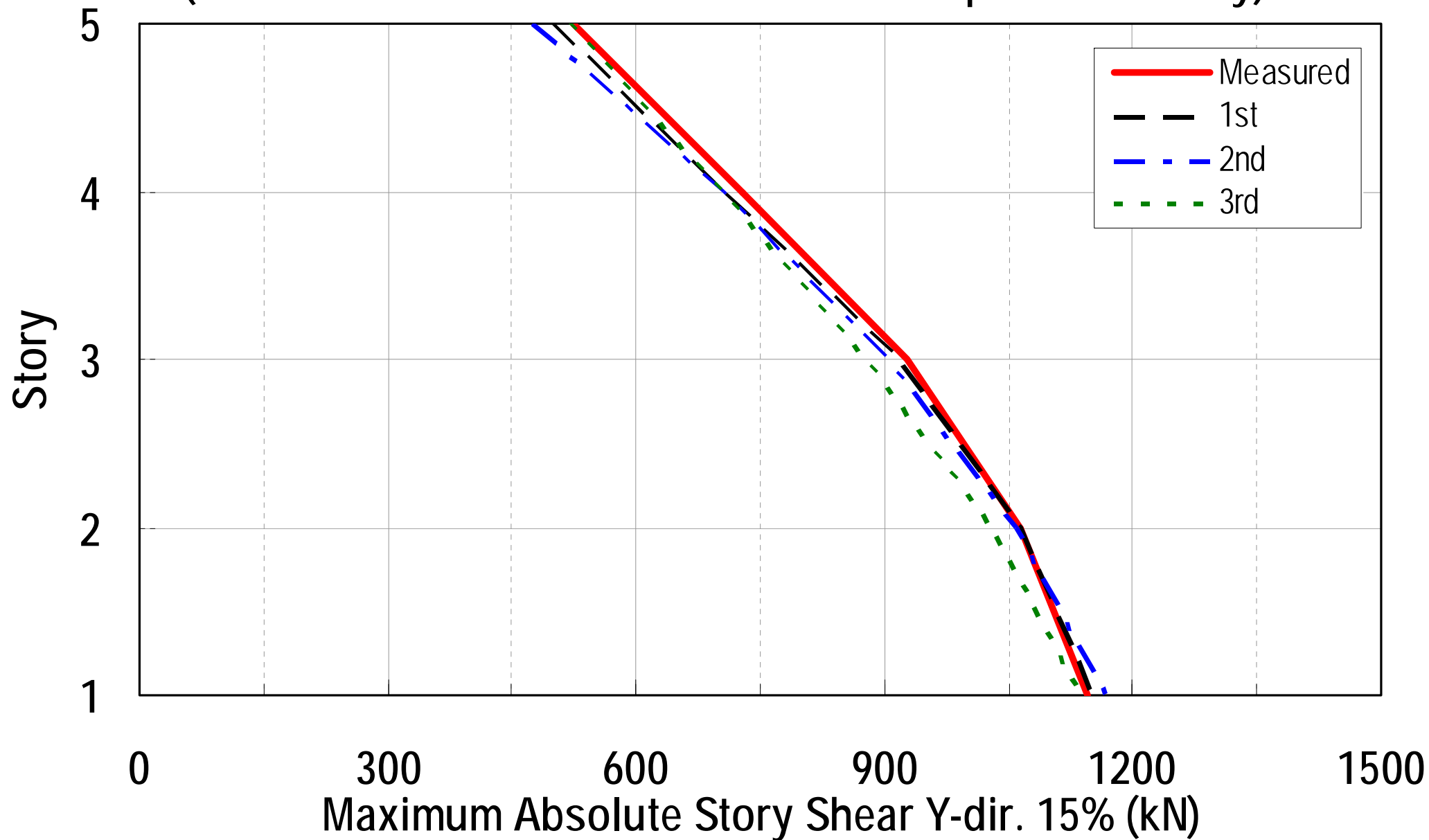


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



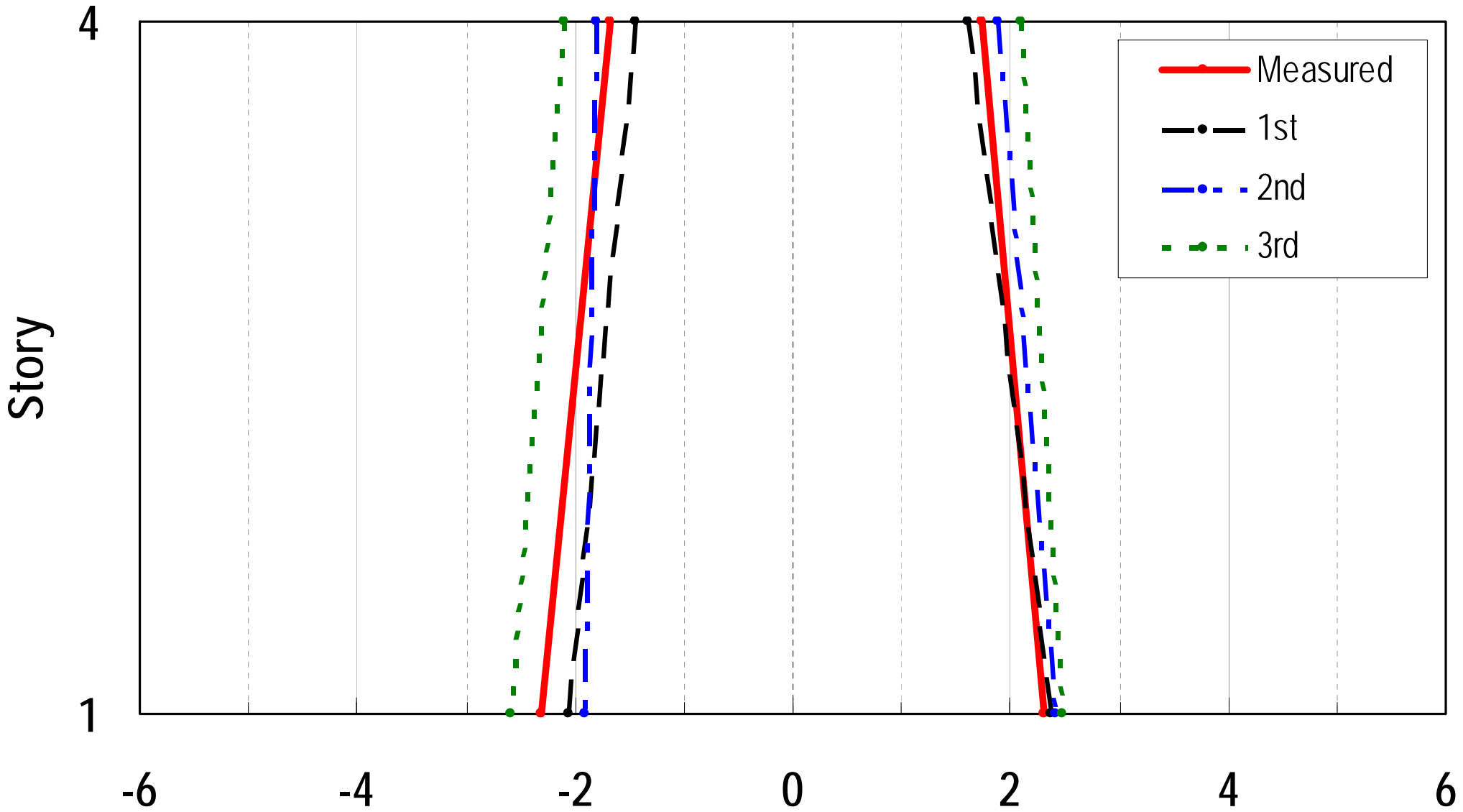


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



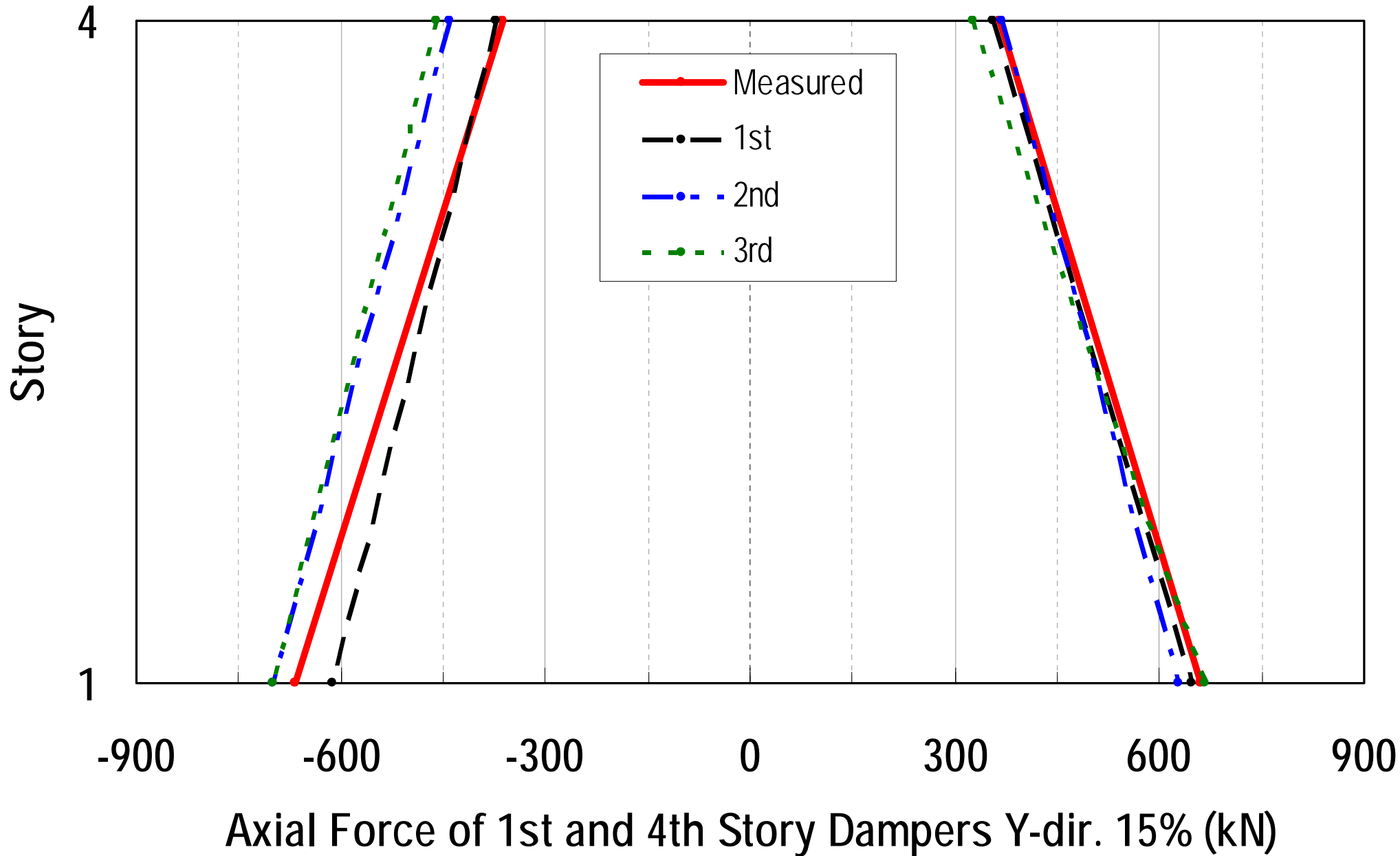


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



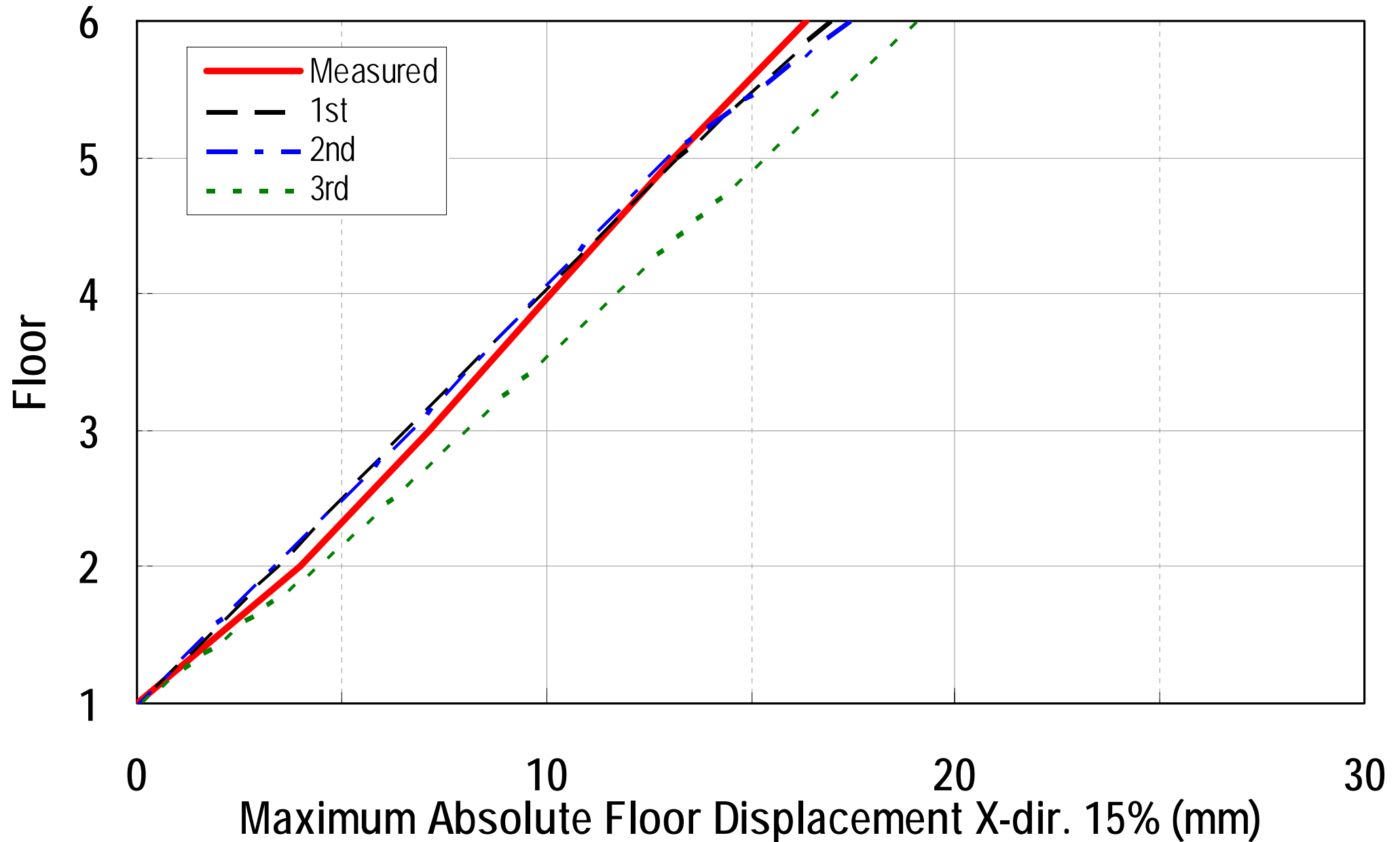
Axial Def. of 1st and 4th Story Dampers Y-dir. 15% (mm)

3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



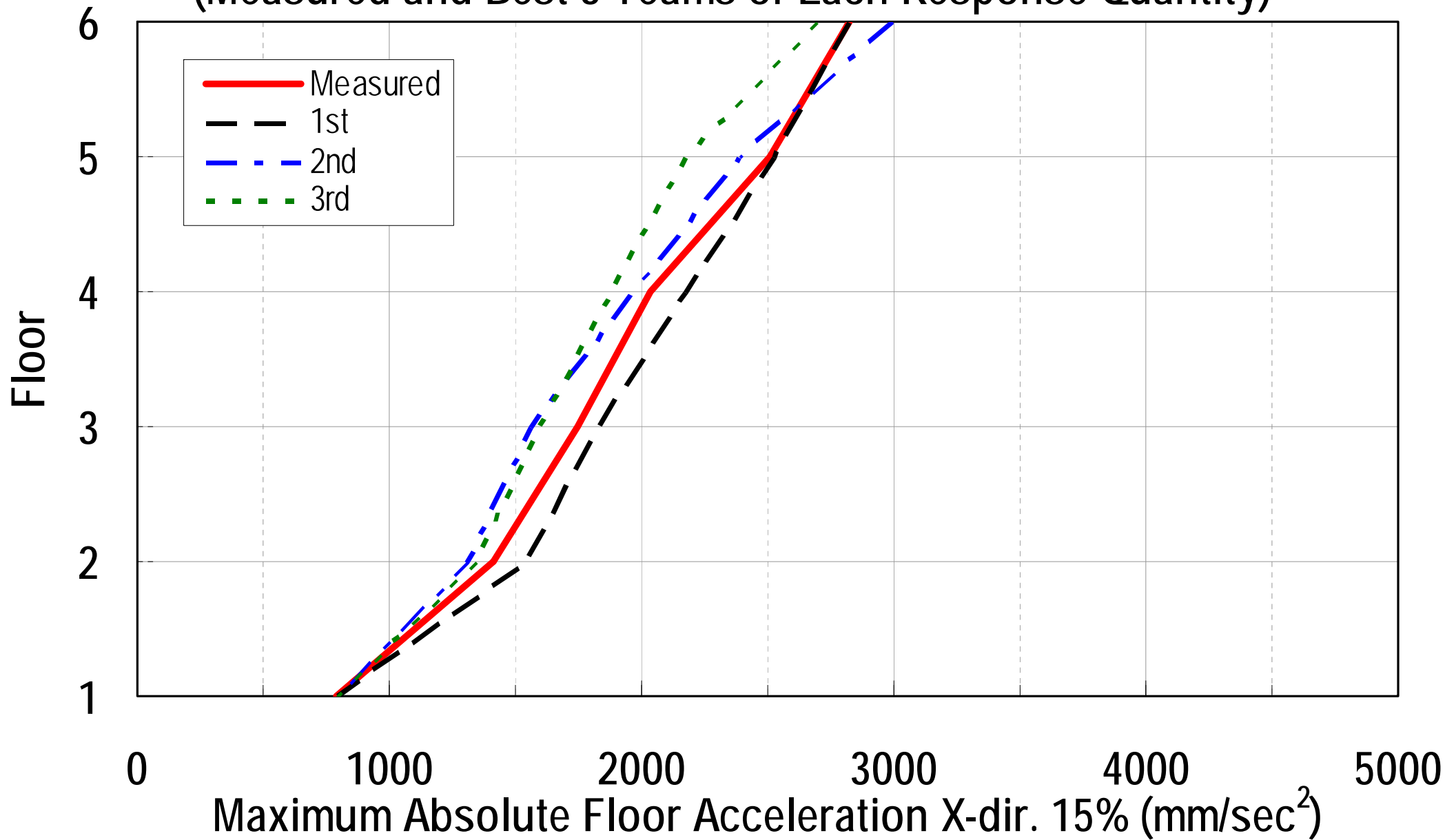


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



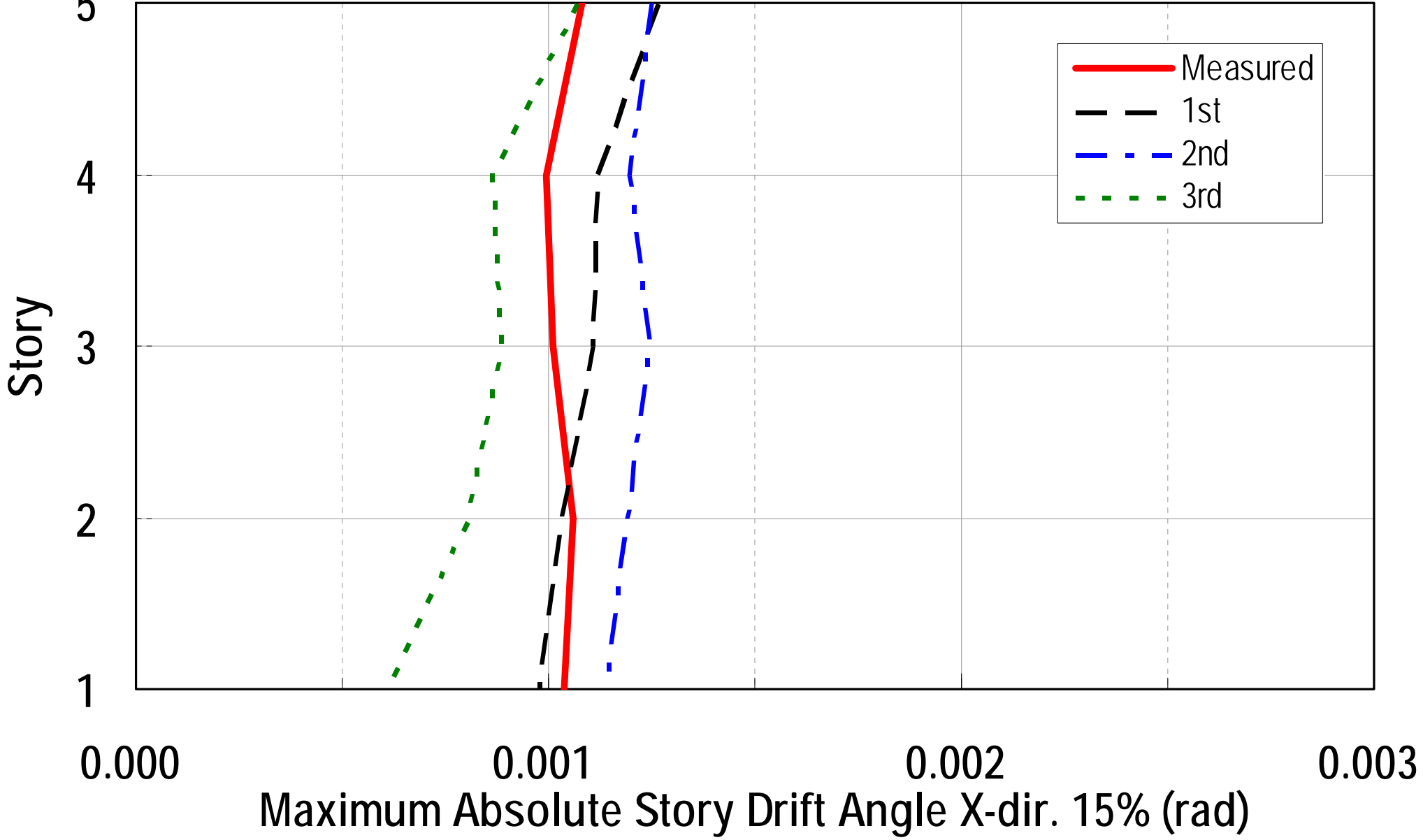


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



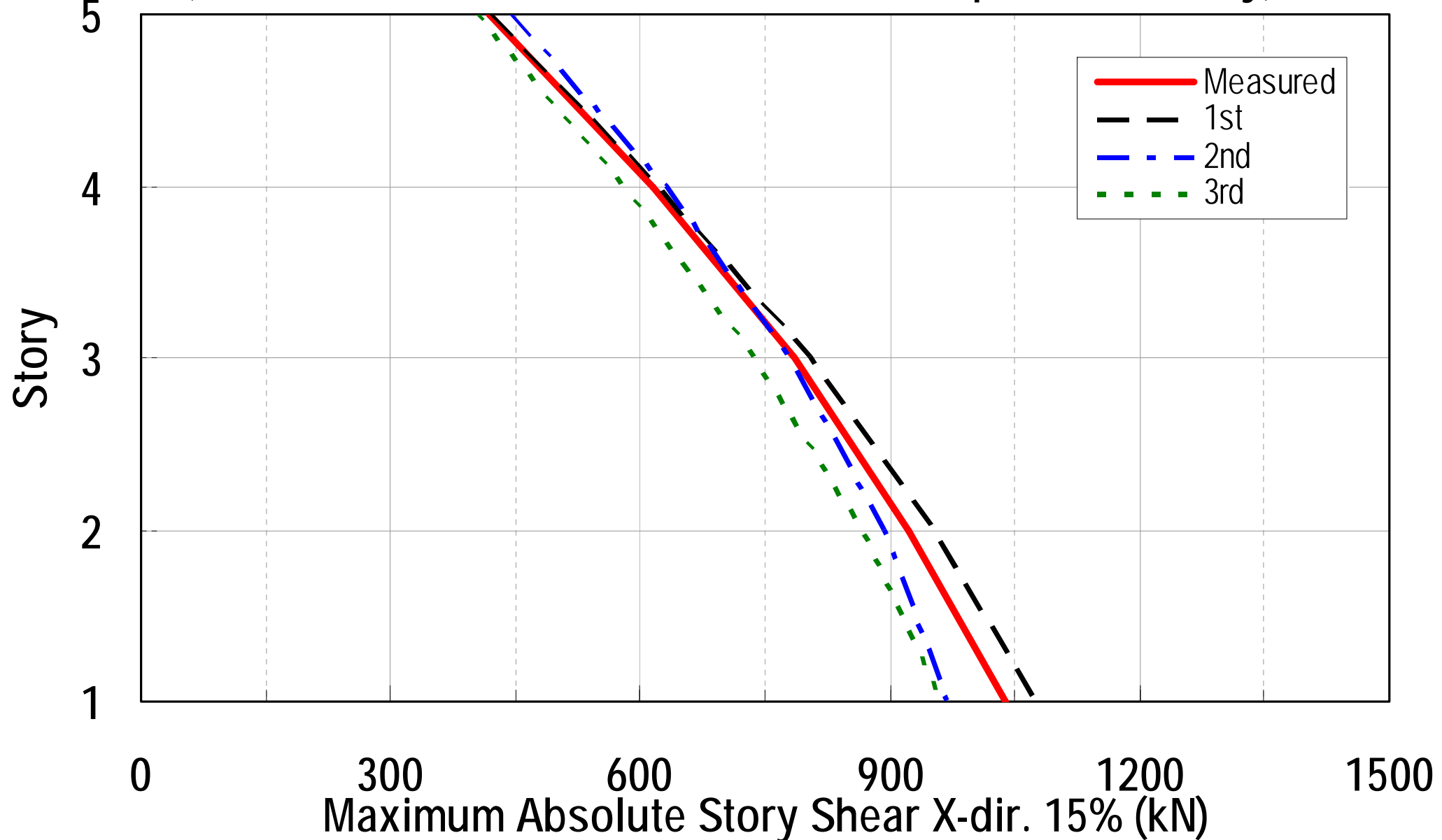


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



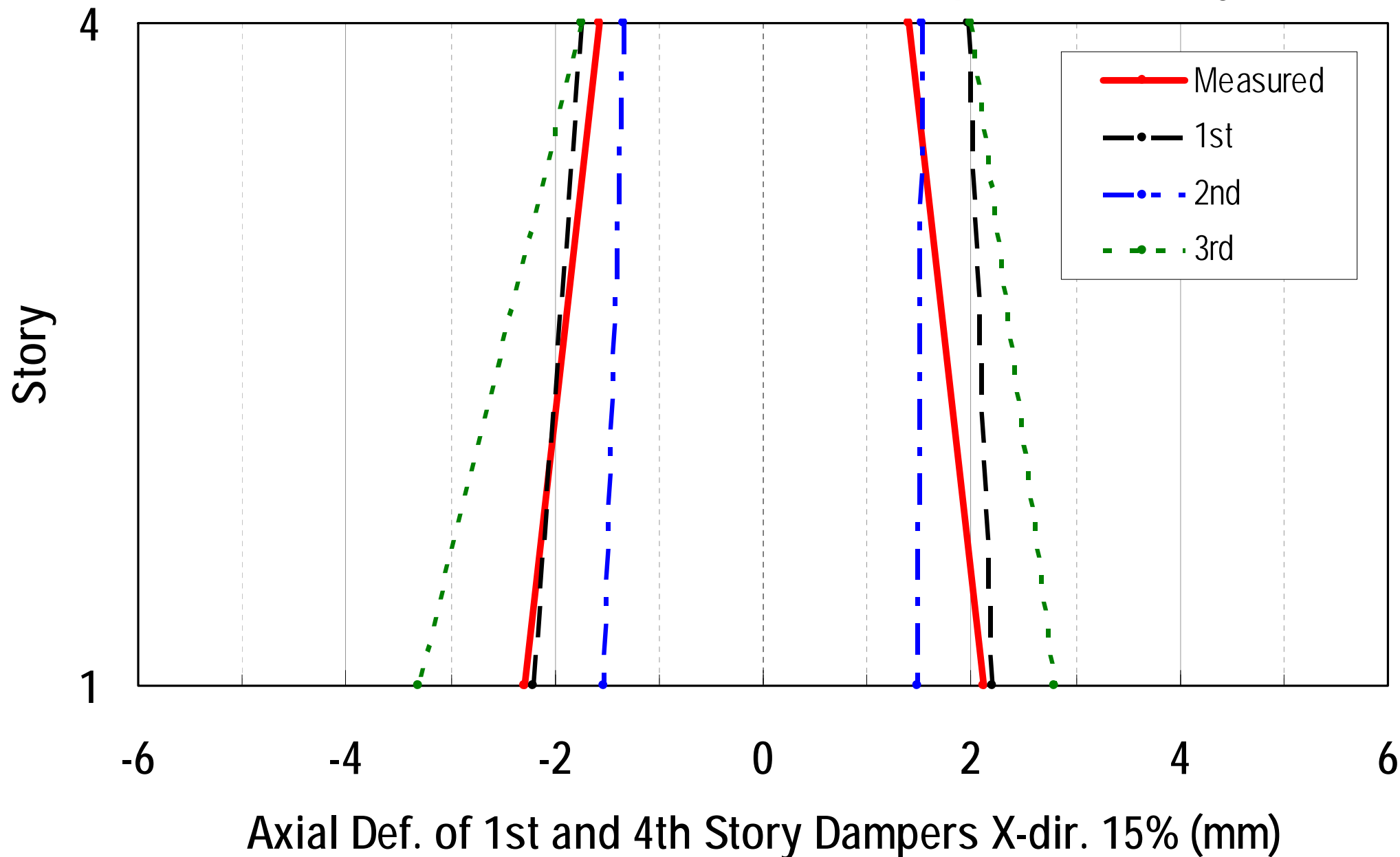


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

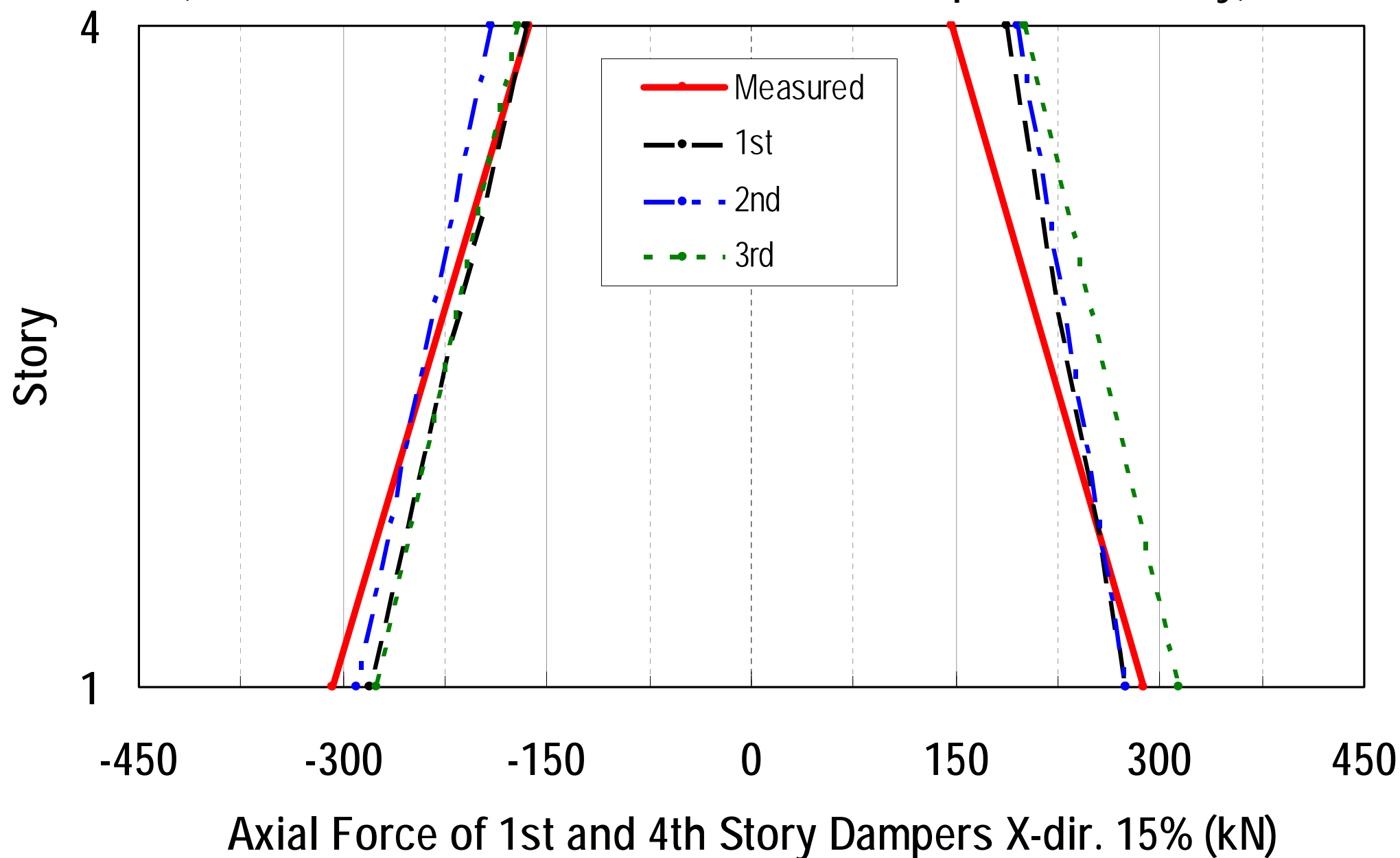




3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

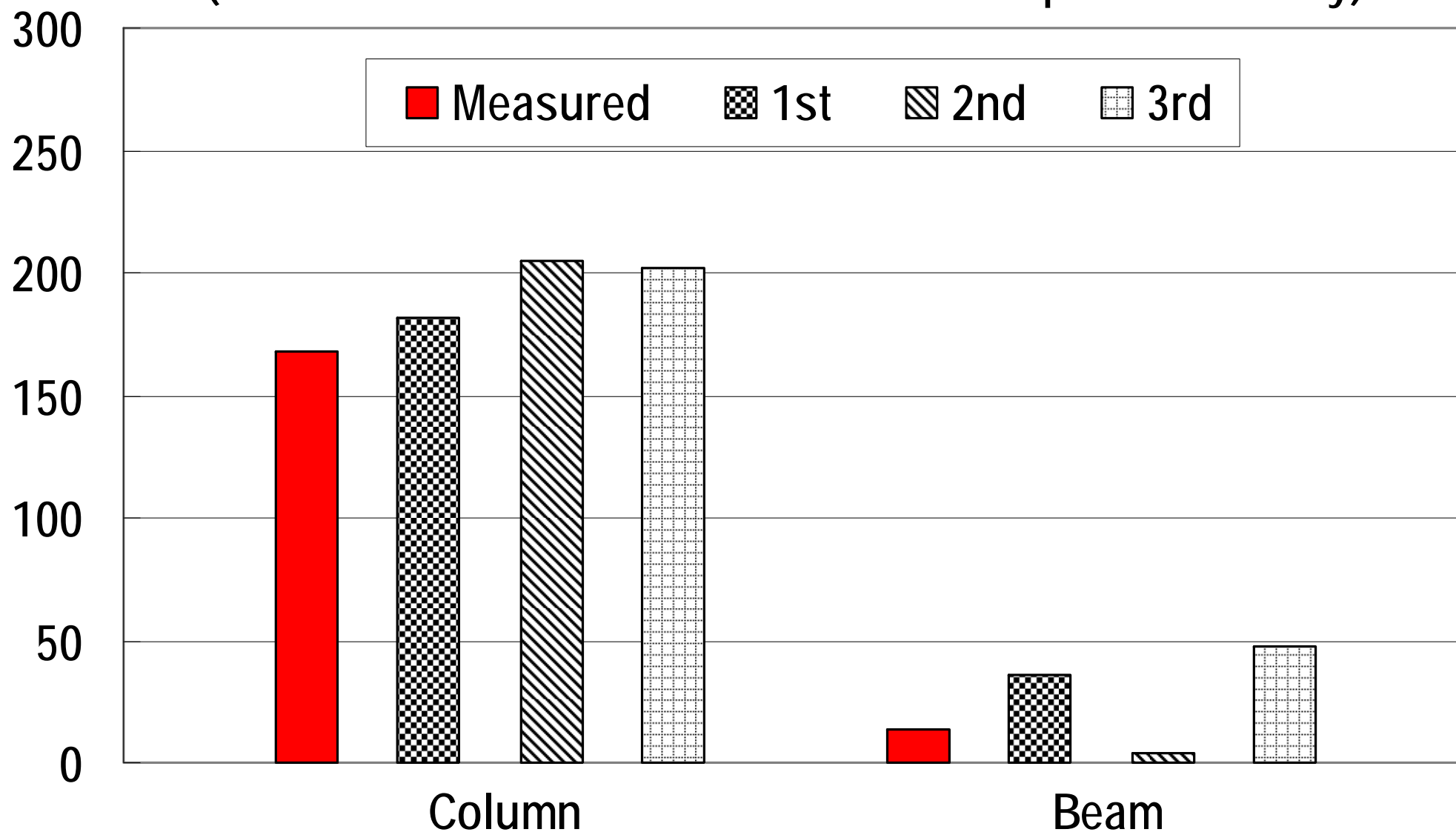


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



3D Steel Damper Blind Analysis Prediction Results

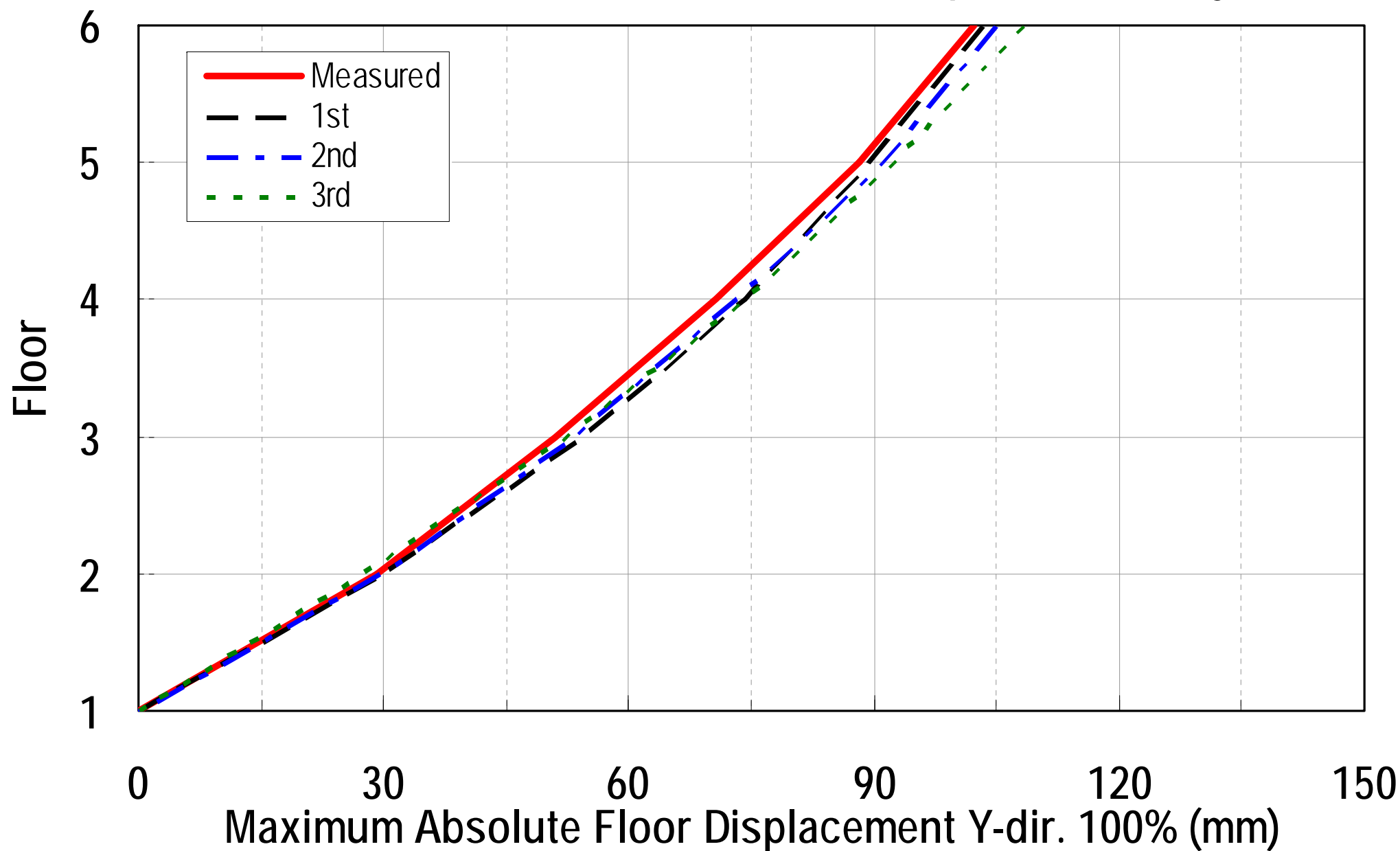
(μ) (Measured and Best 3 Teams of Each Response Quantity)



Axial Strain at the Designated Points of Colum and Beam 15%

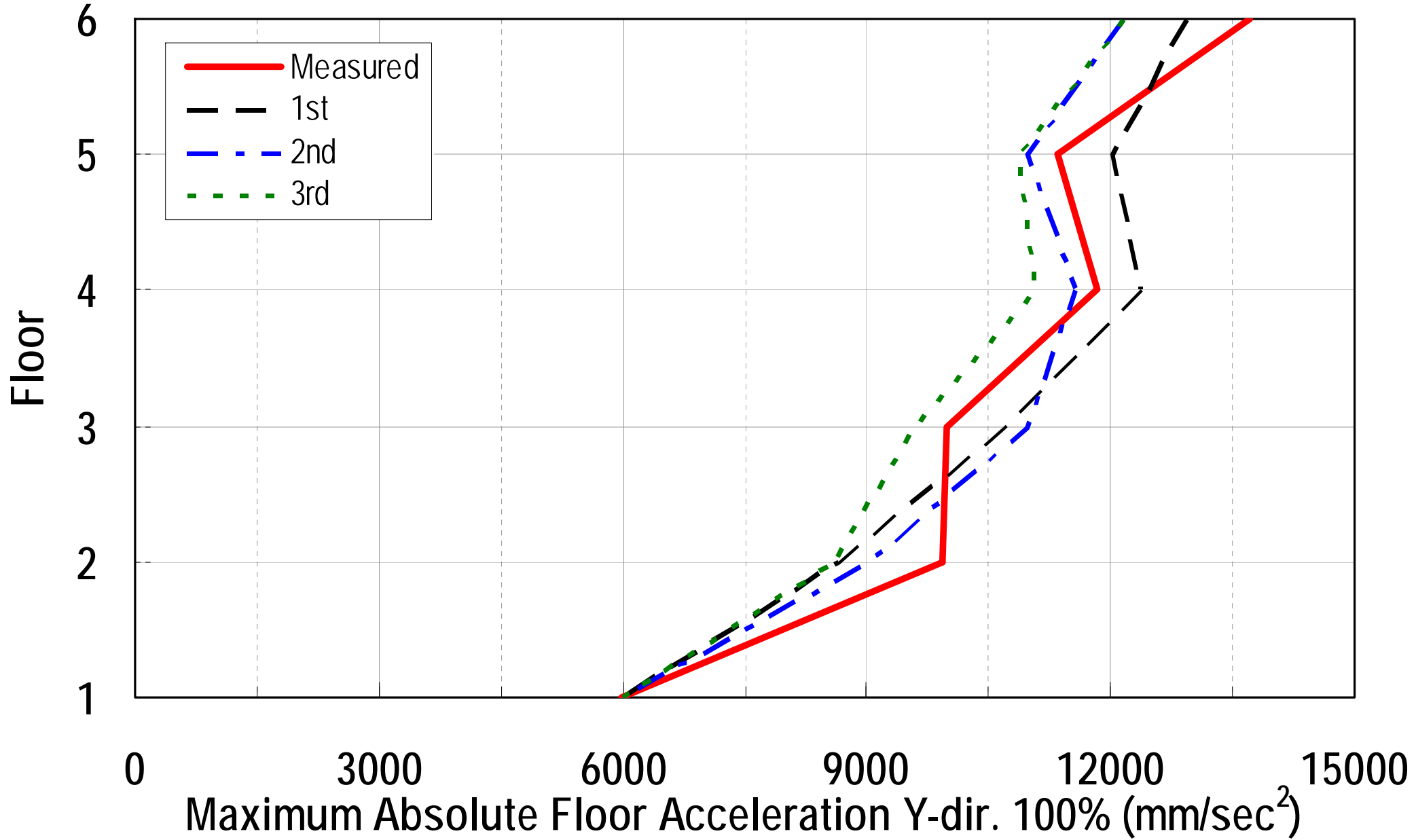


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



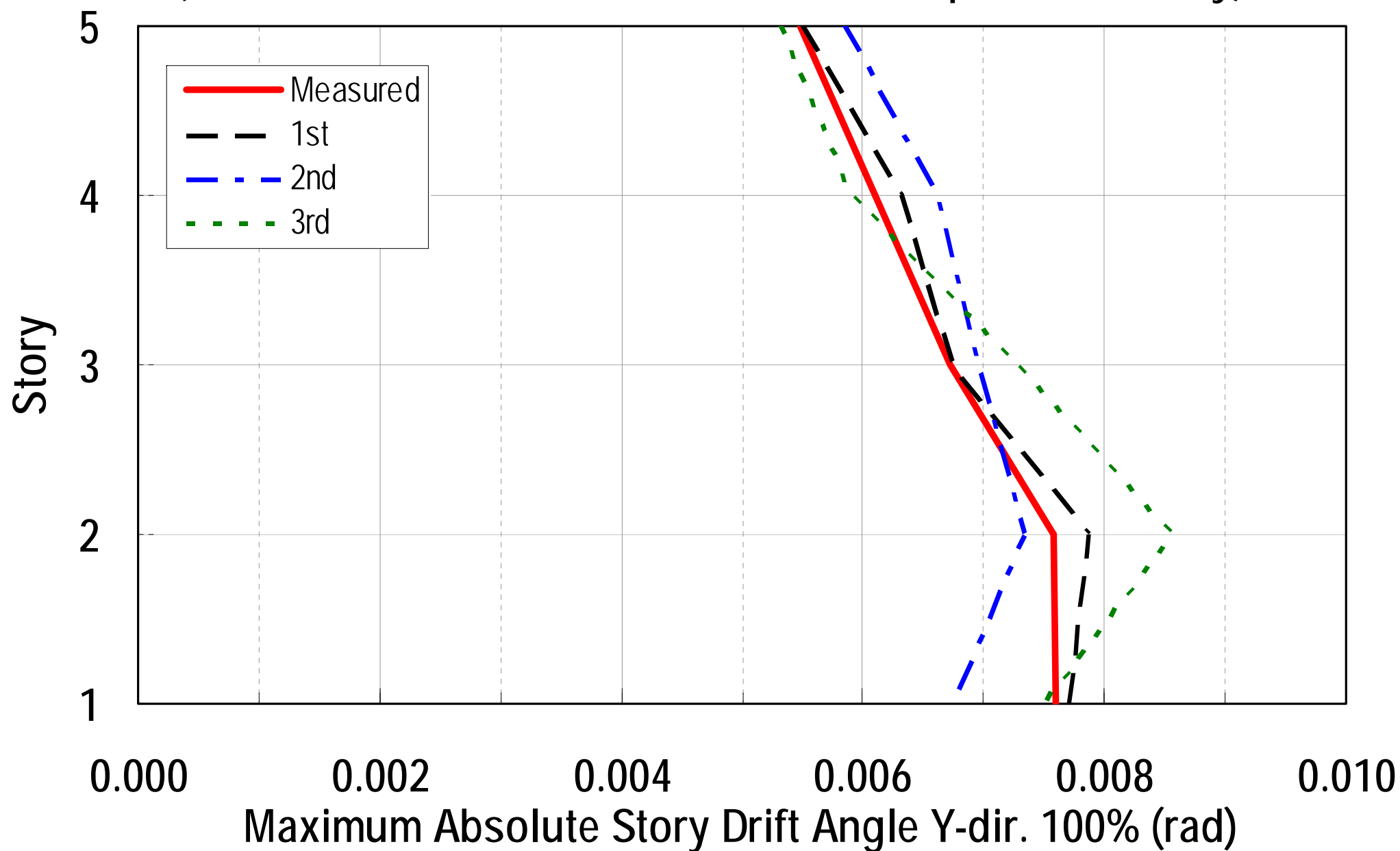


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



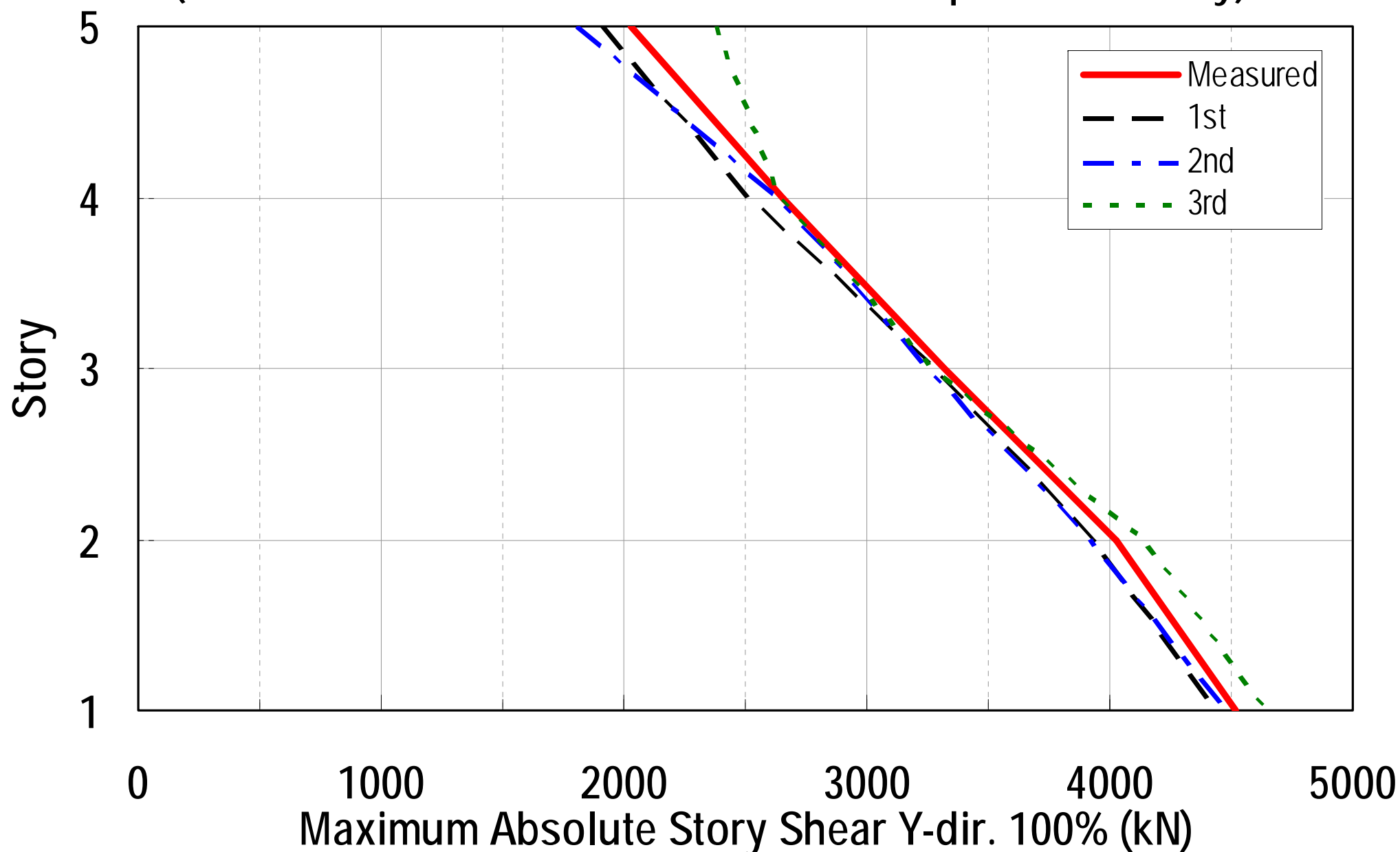


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



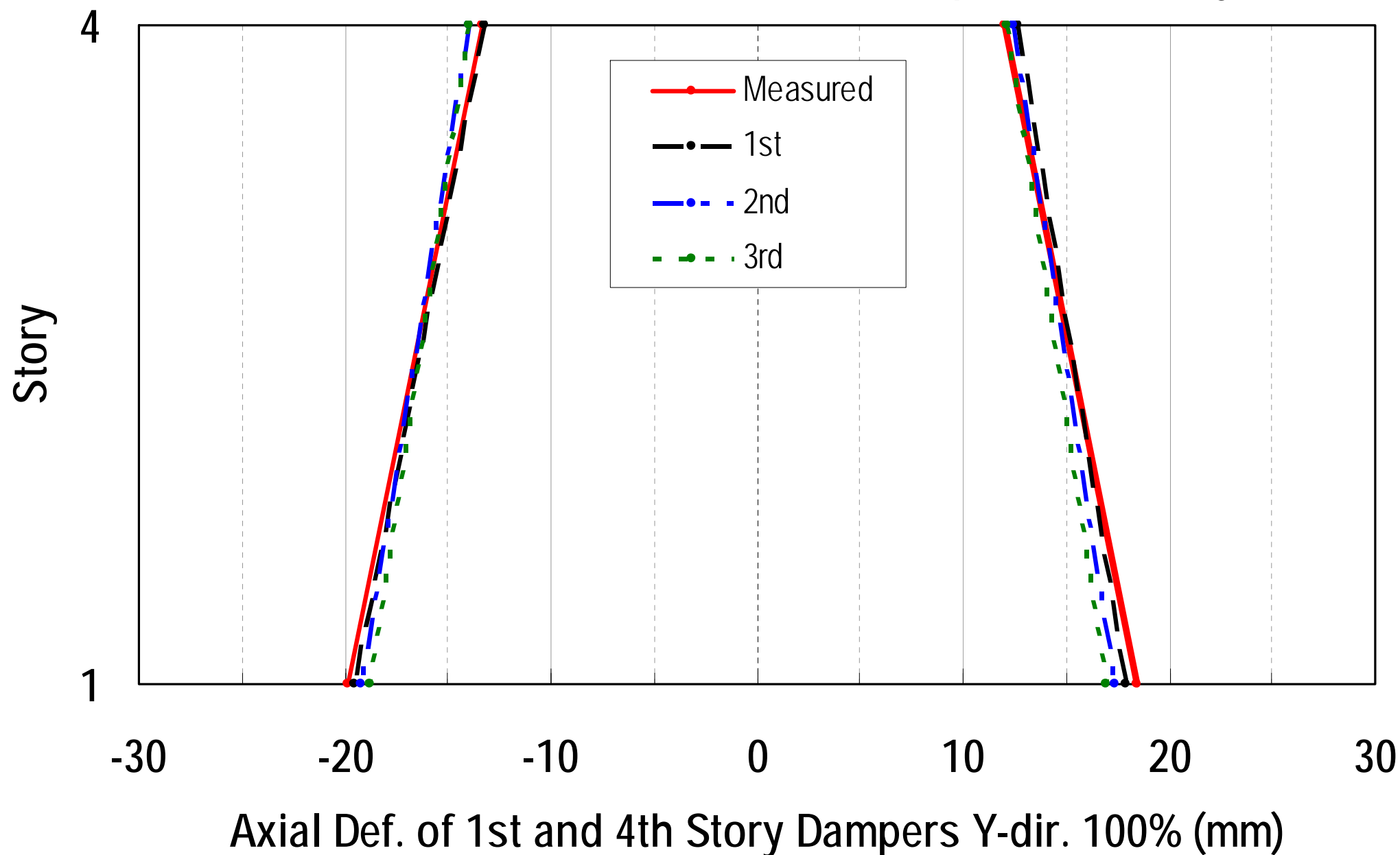


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



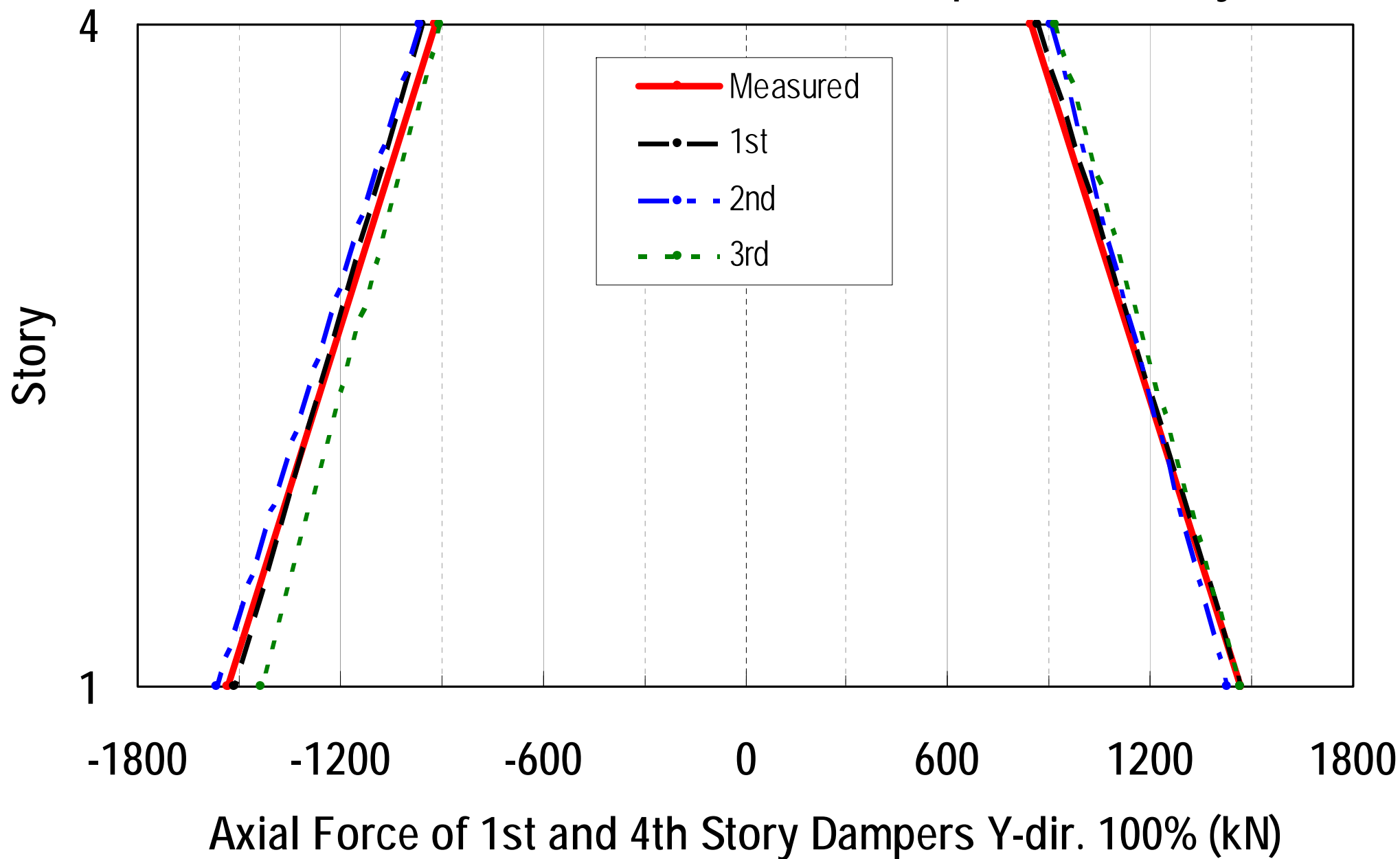


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



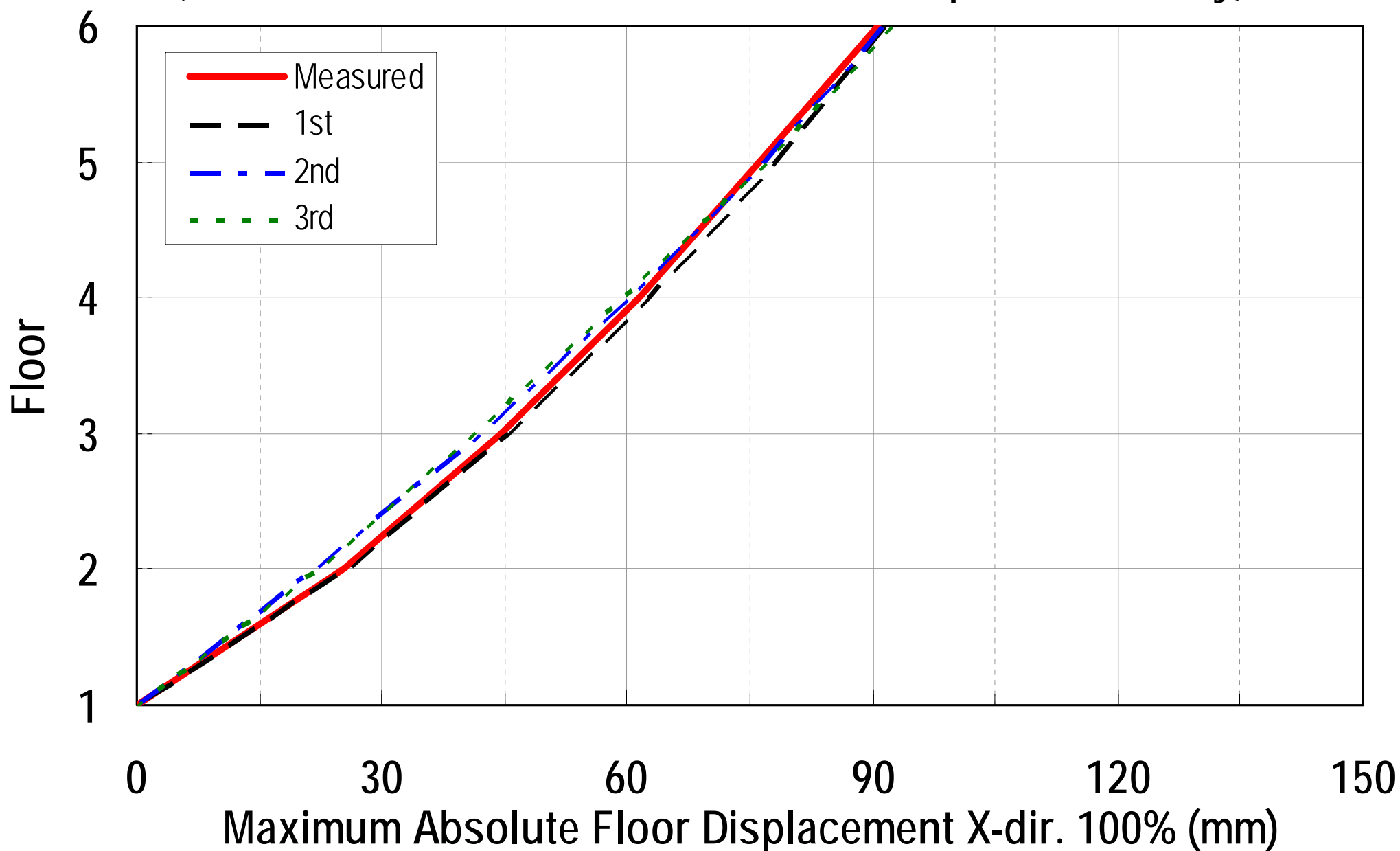


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



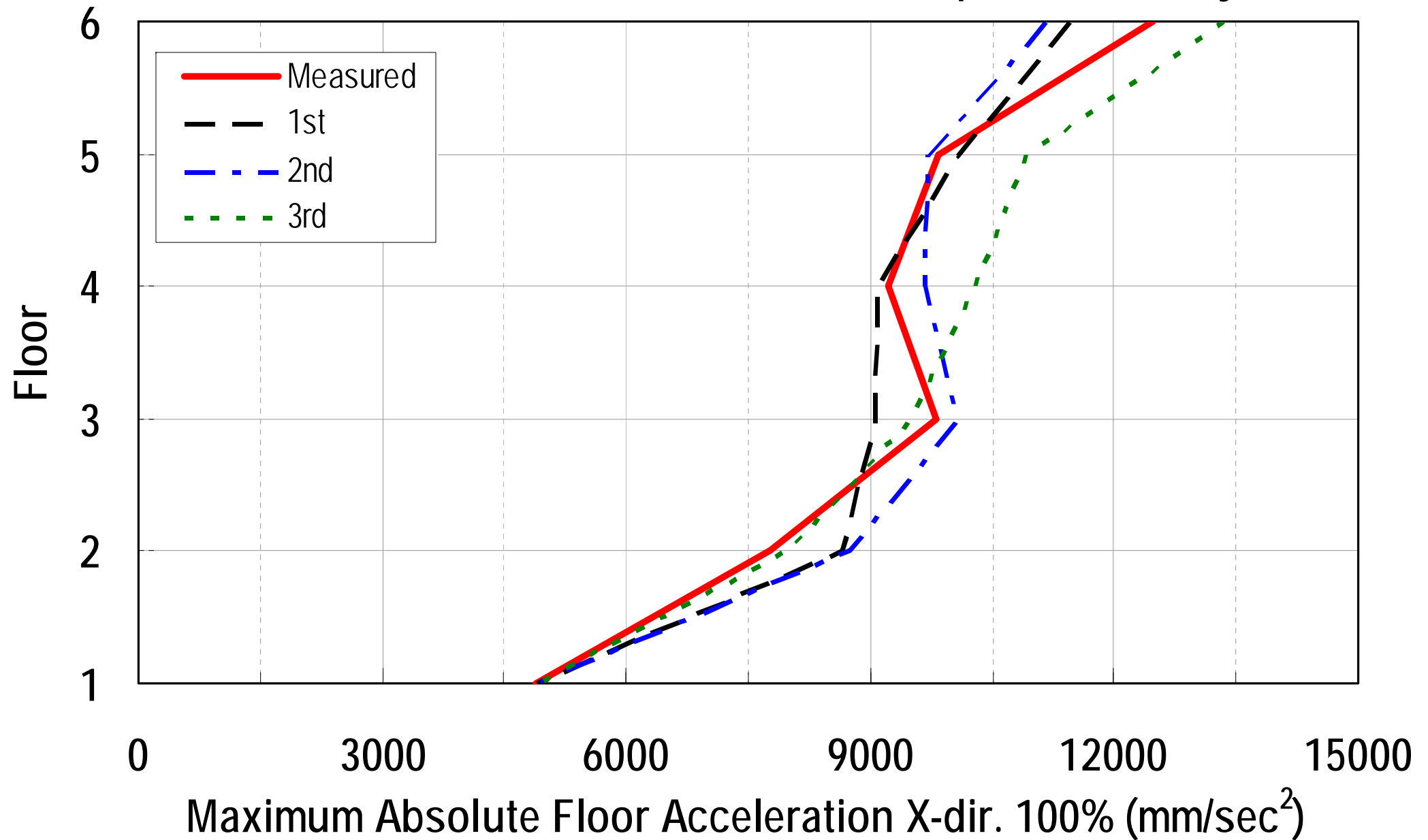


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



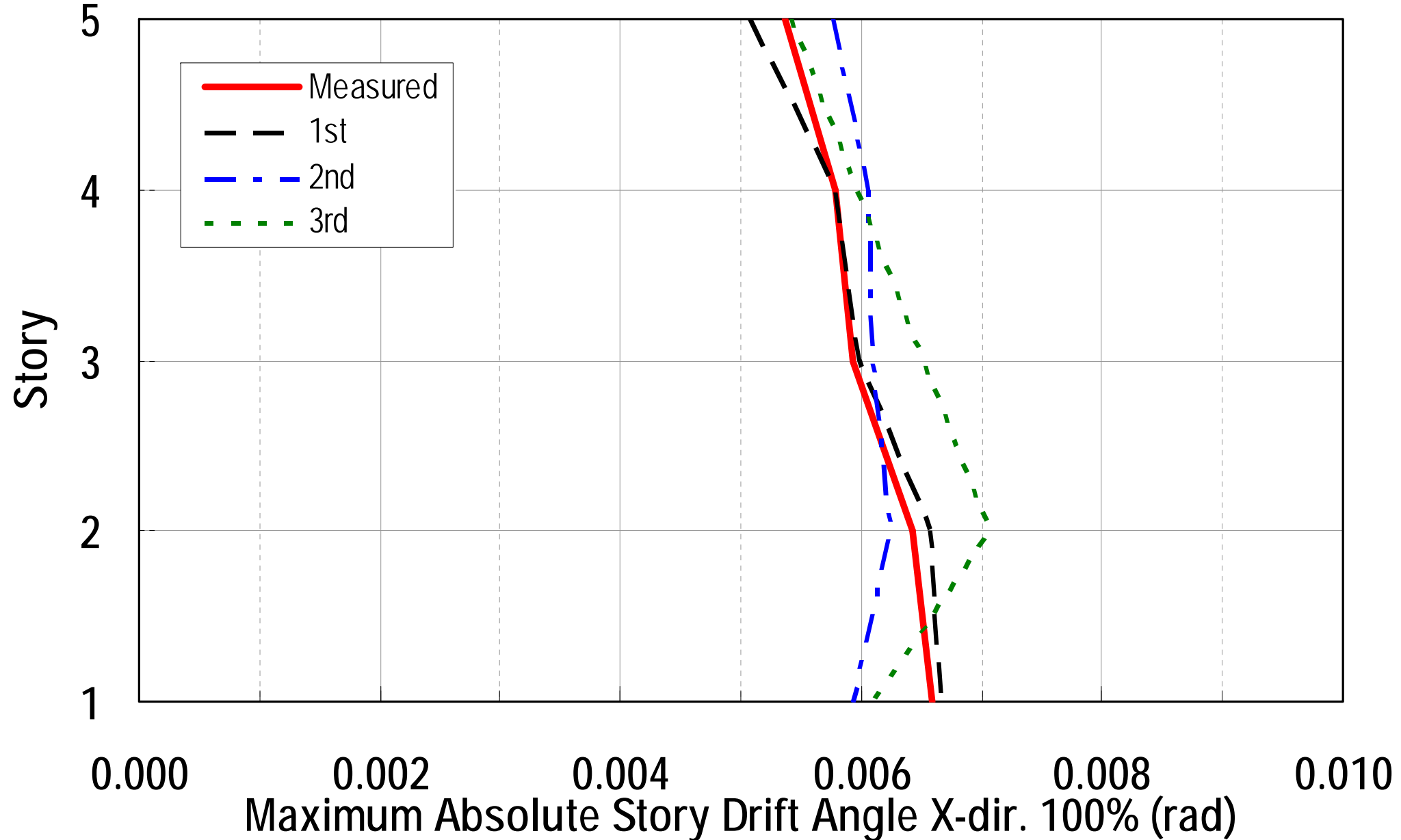


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



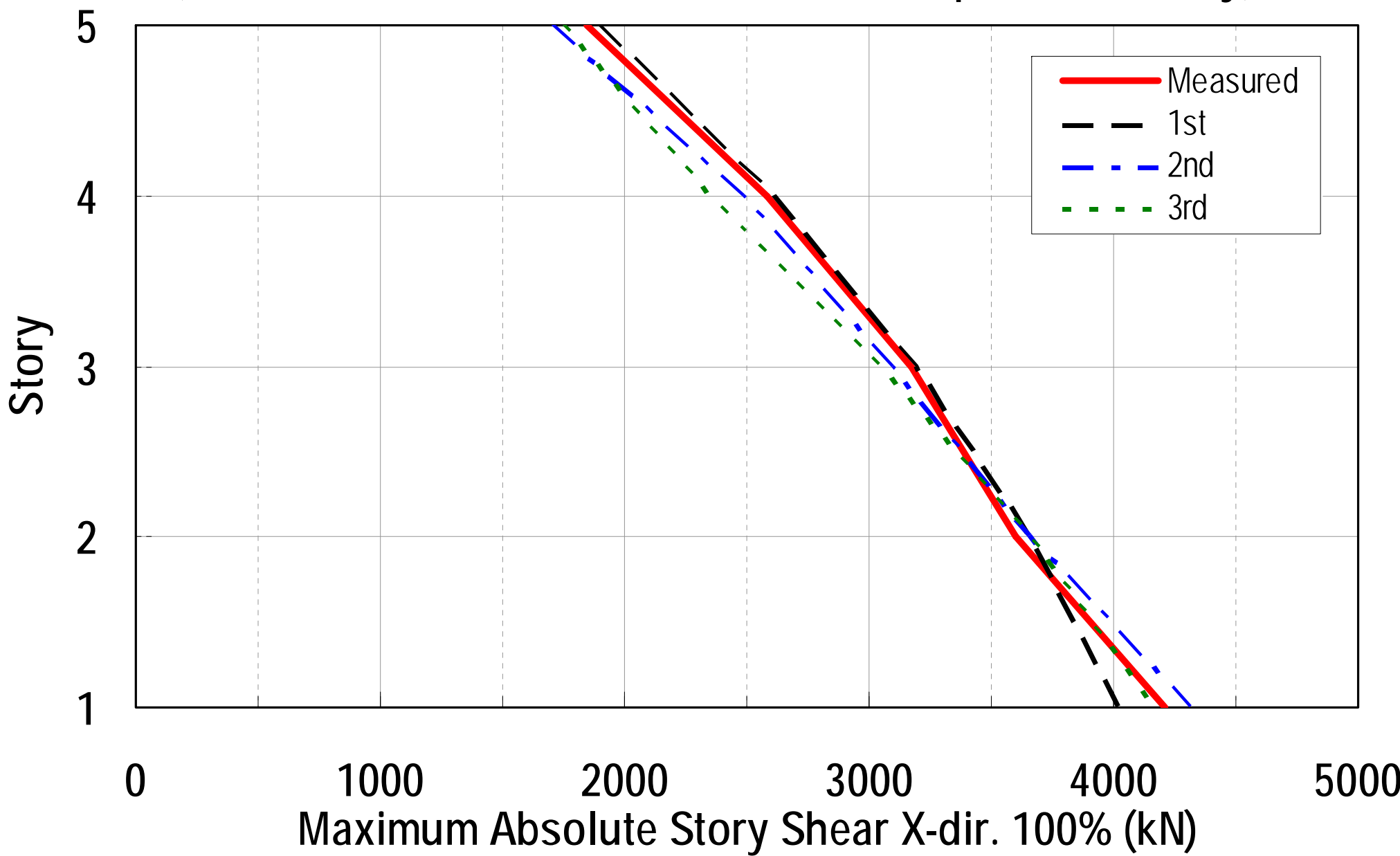


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



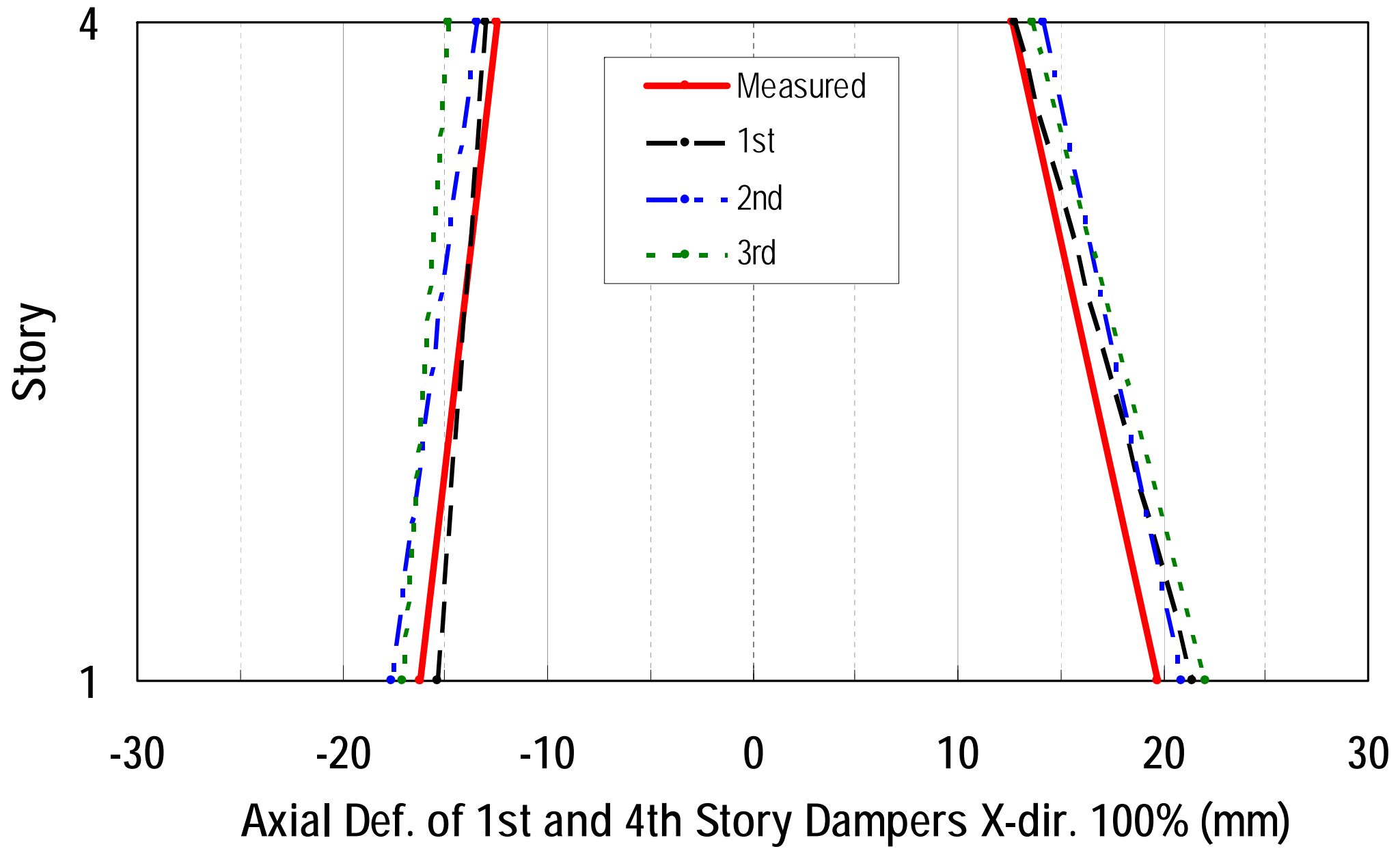


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



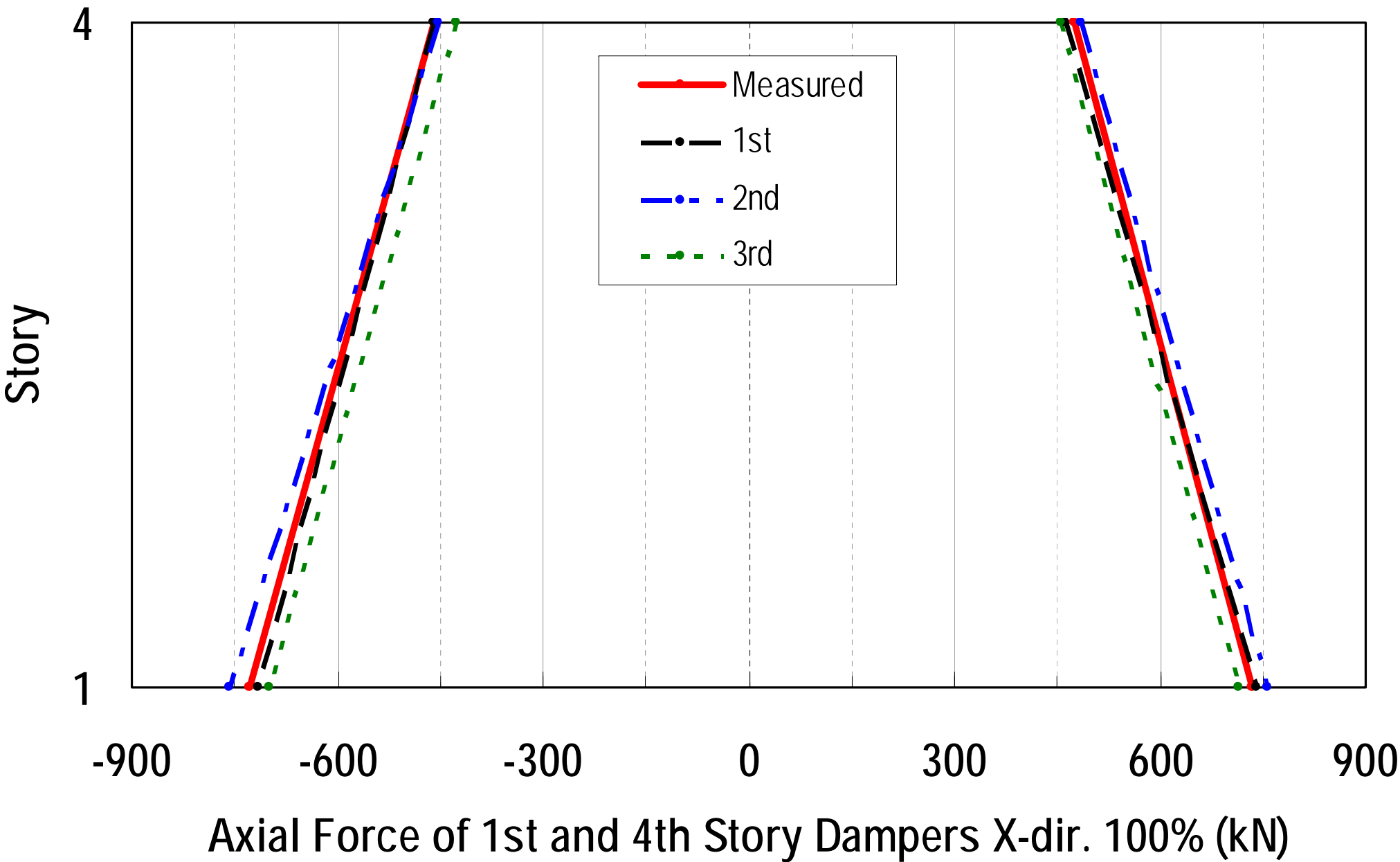


3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)





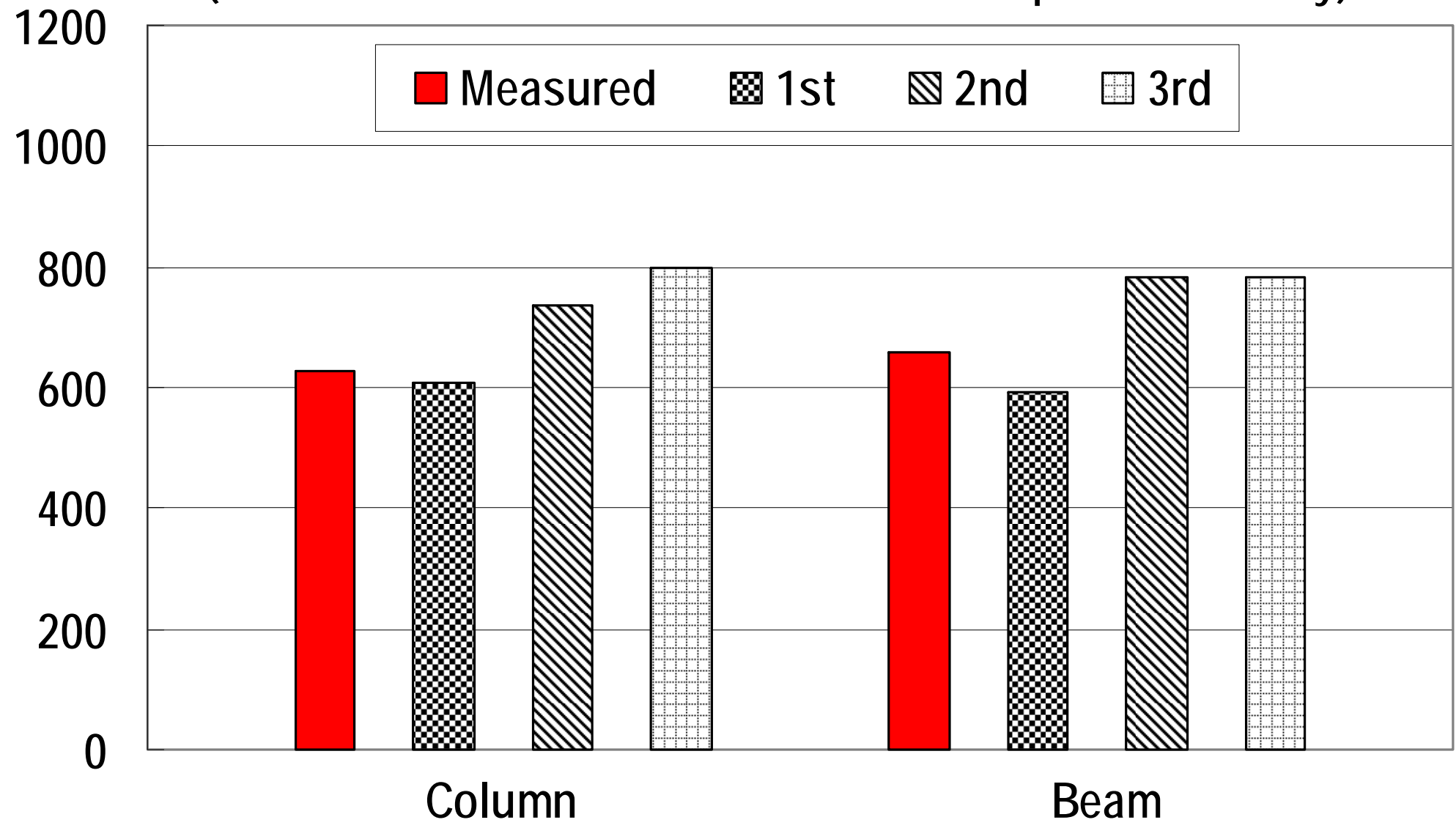
3D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)





3D Steel Damper Blind Analysis Prediction Results

(μ) (Measured and Best 3 Teams of Each Response Quantity)

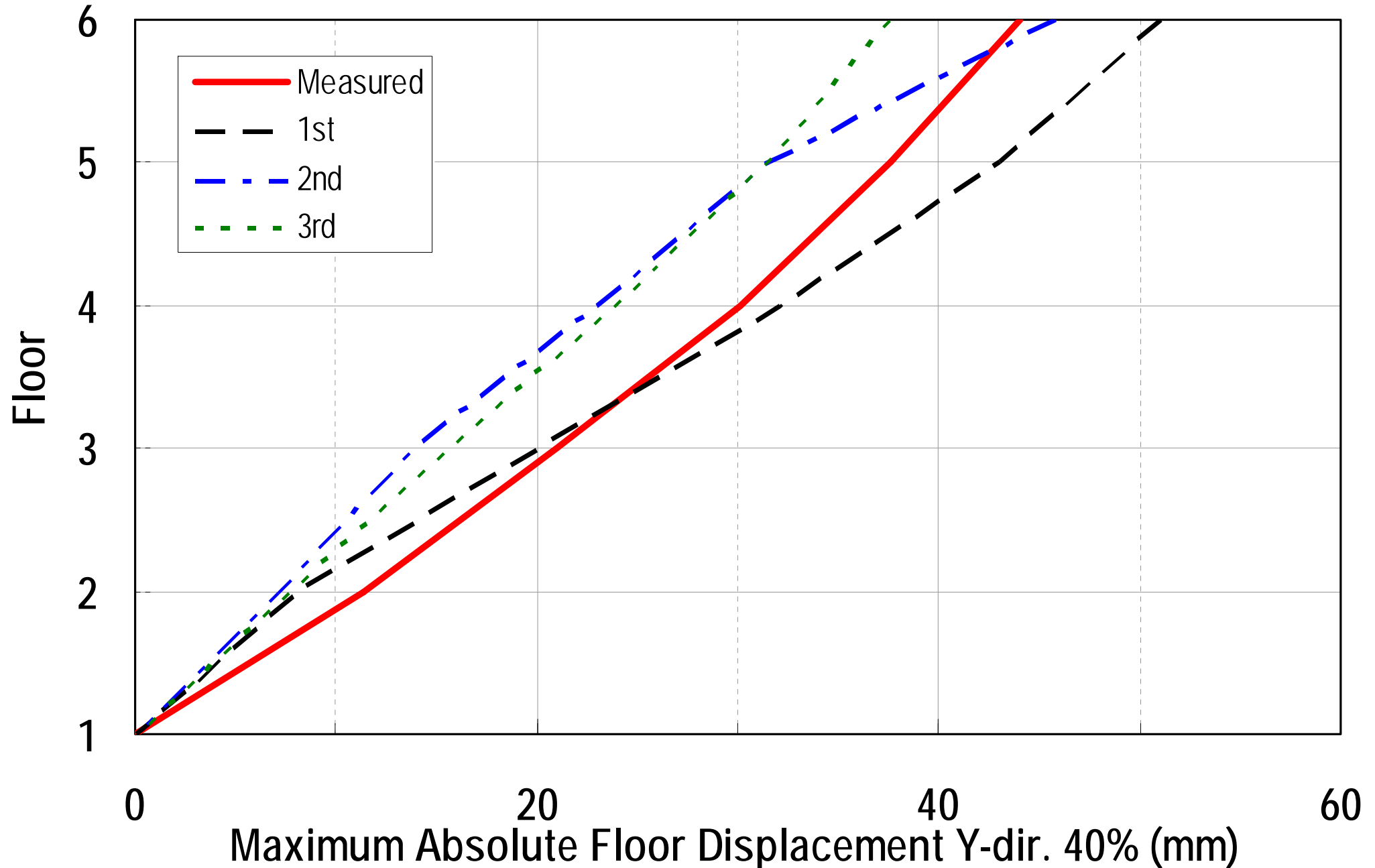


Axial Strain at the Designated Points of Colum and Beam 100%

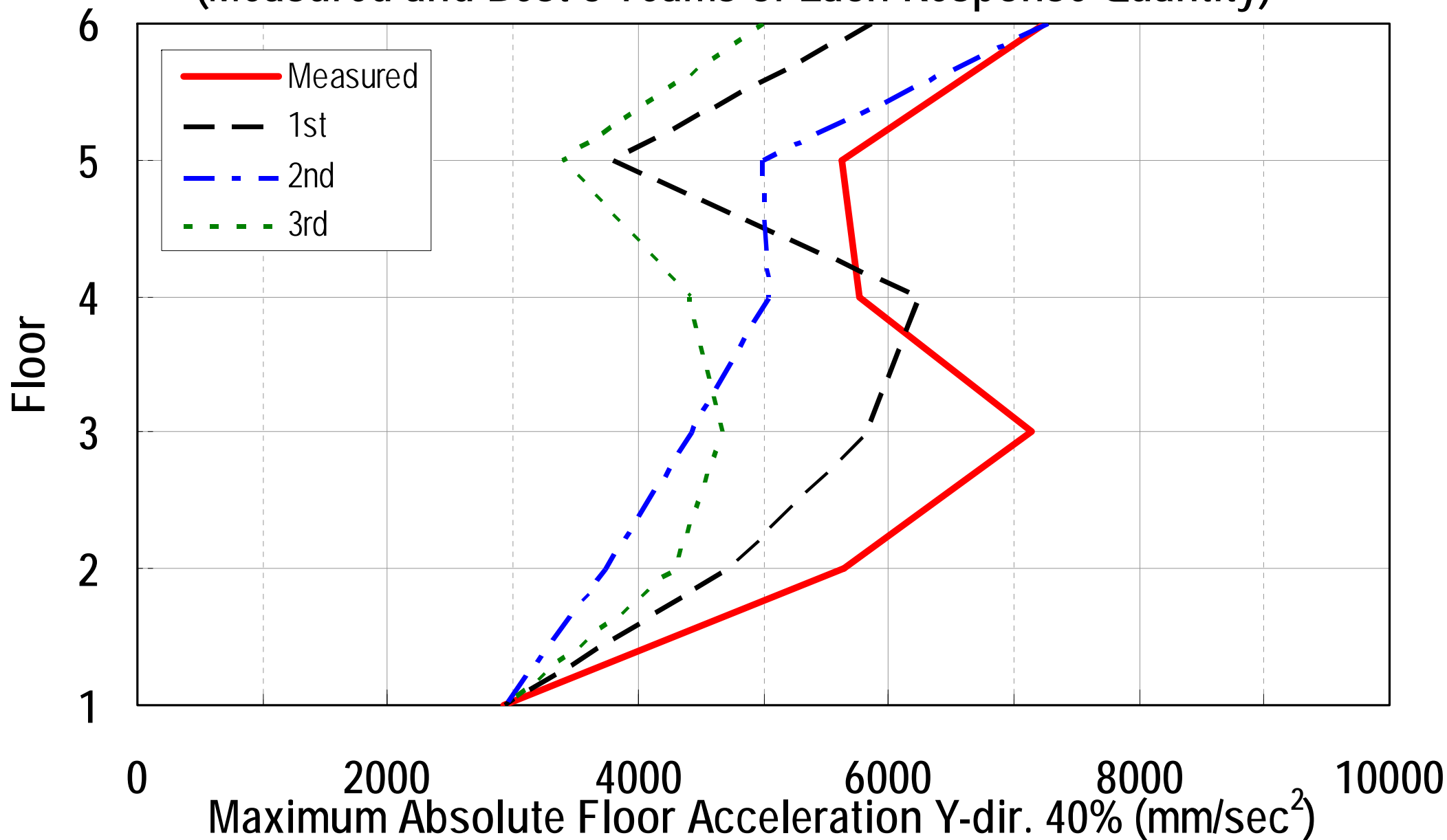


カテゴリー2: 立体骨組解析・粘性ダンパー (実験結果及び各応答値上位3チーム)

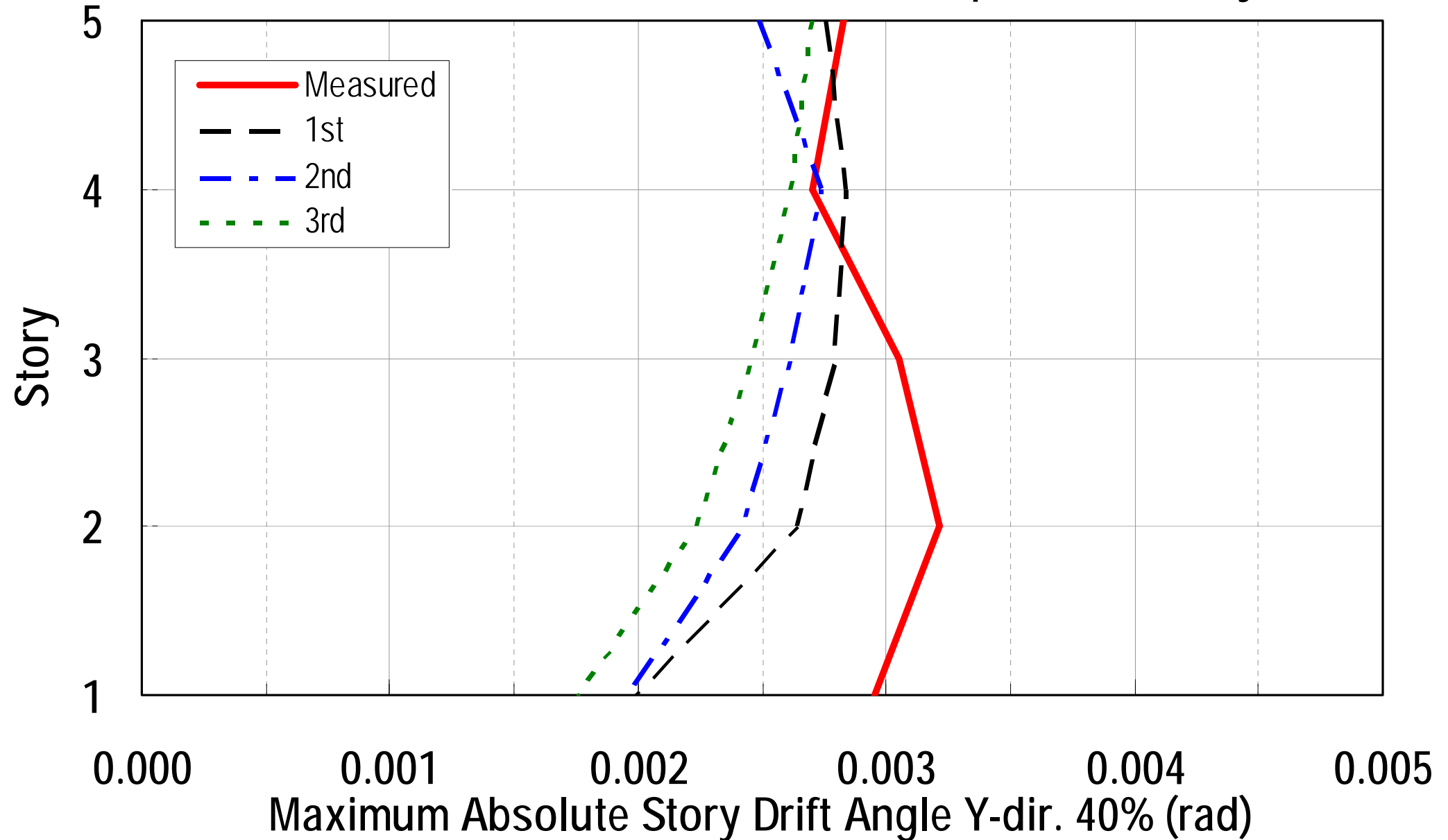
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



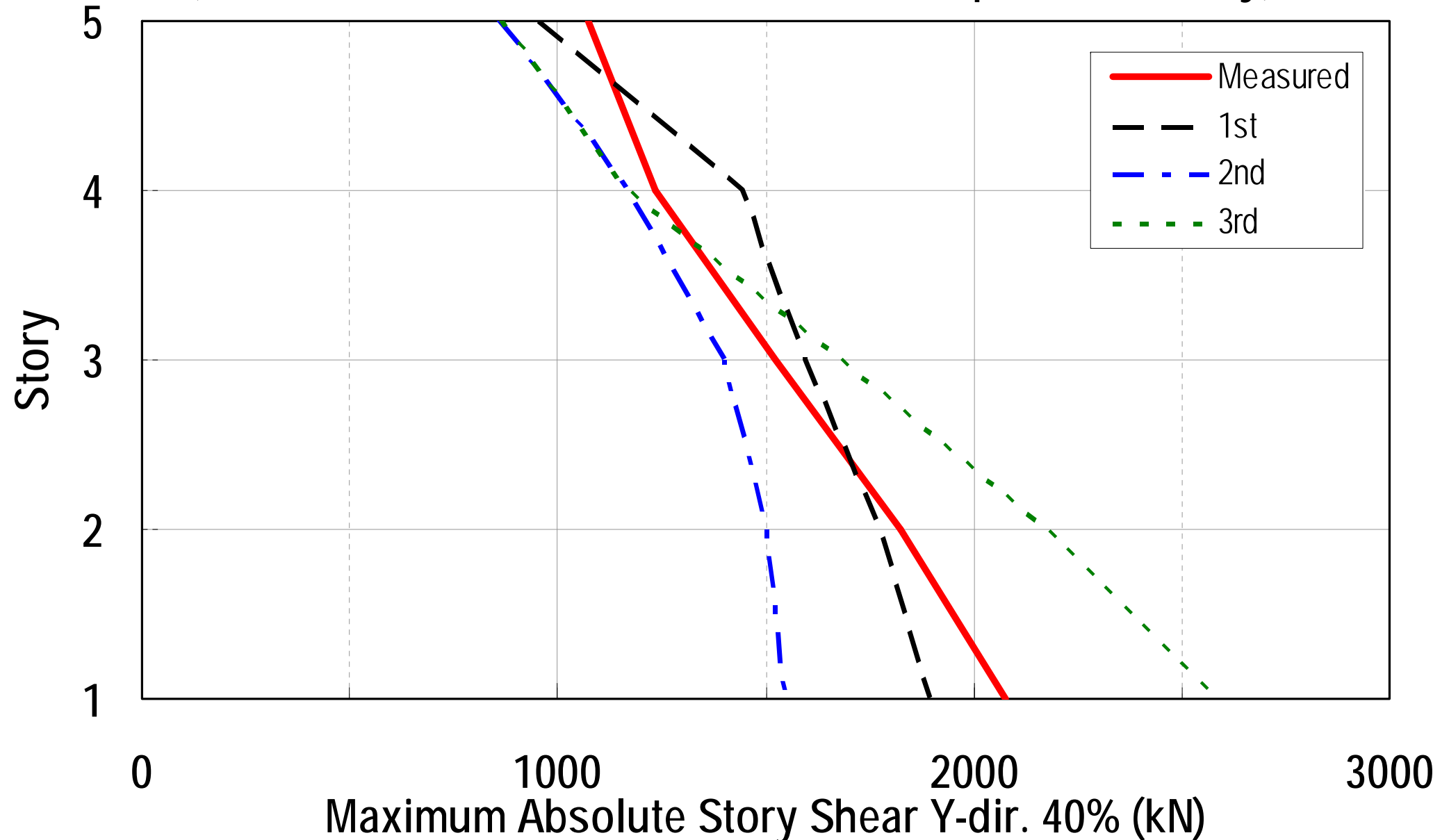
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



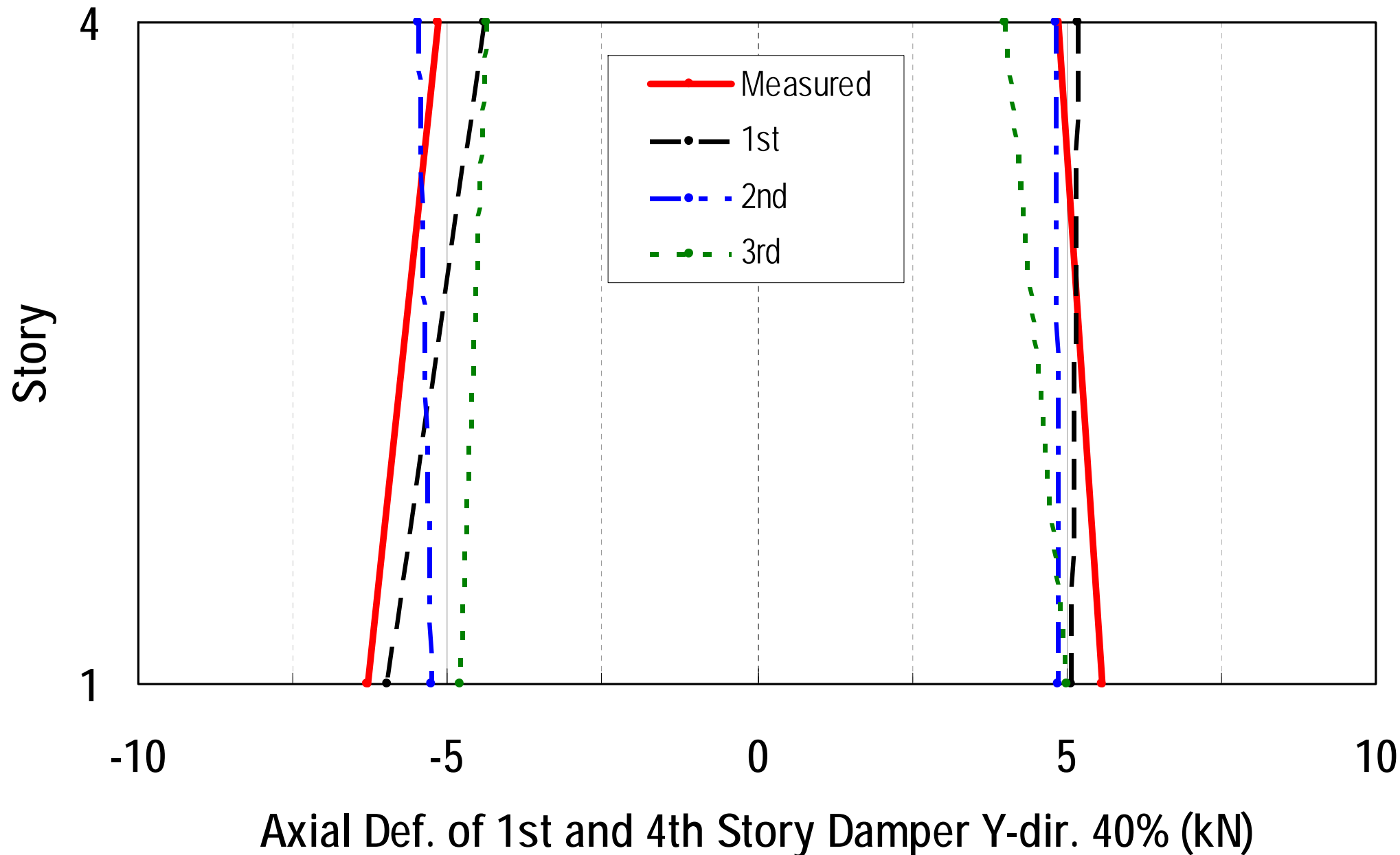
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



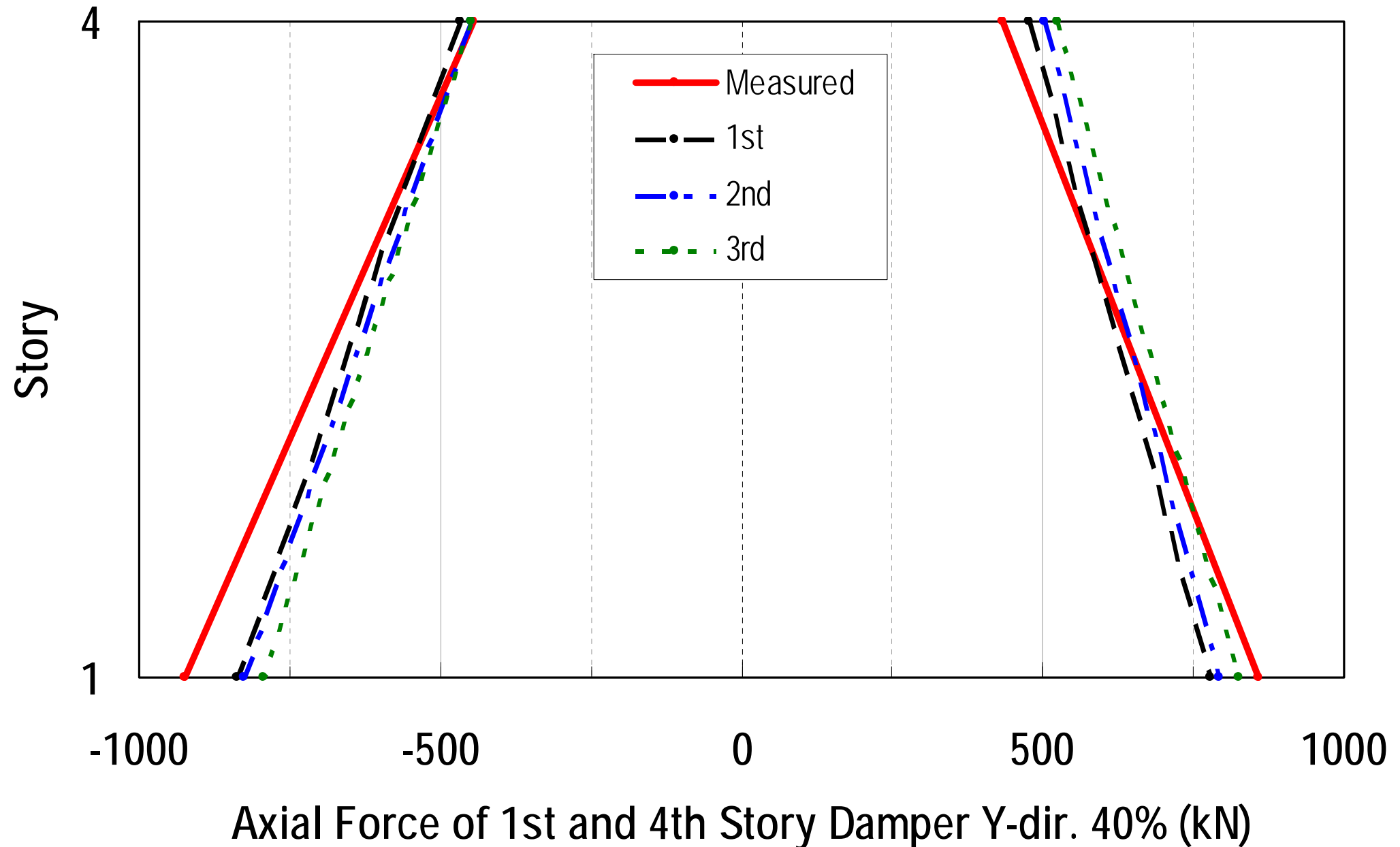
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



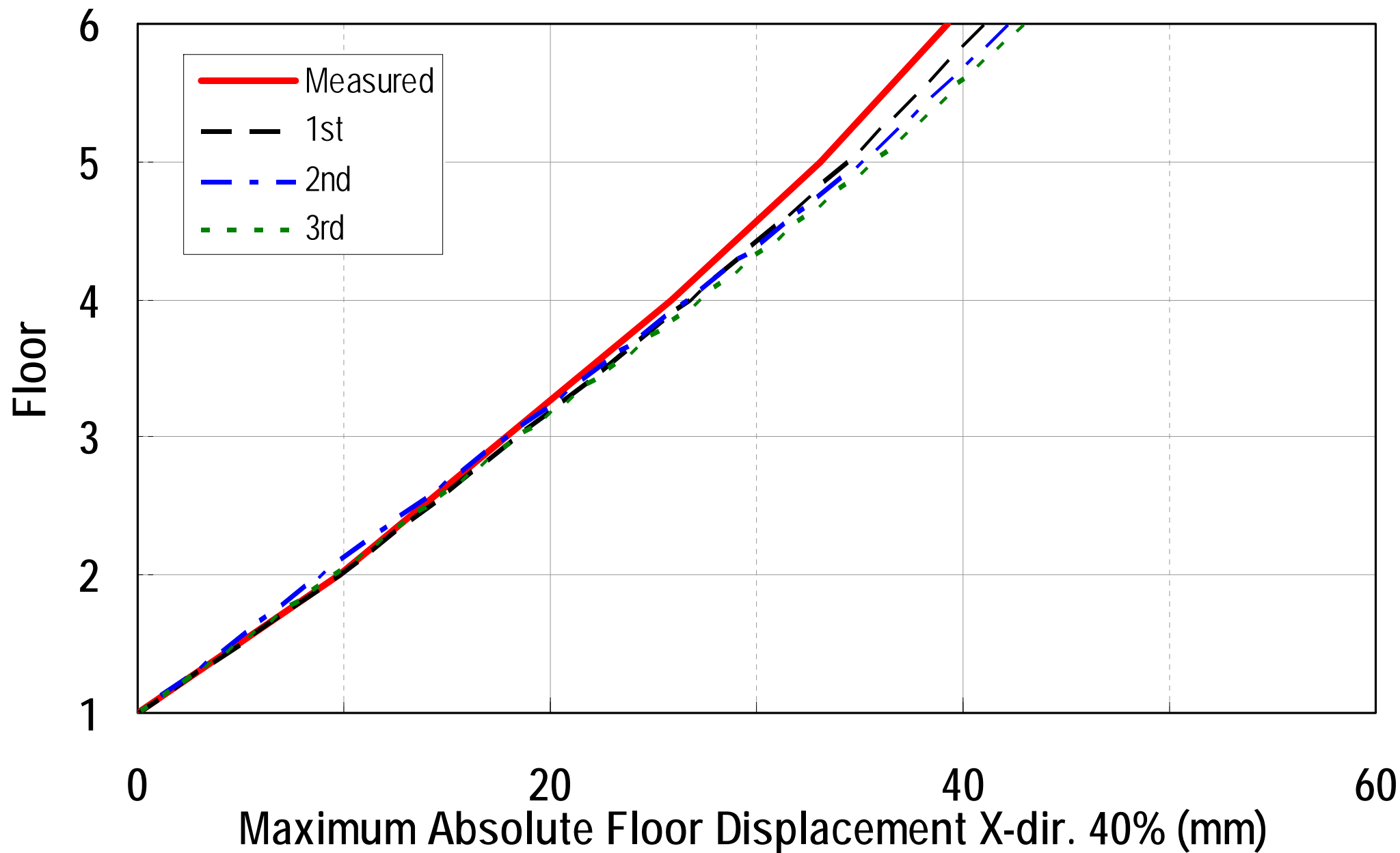
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



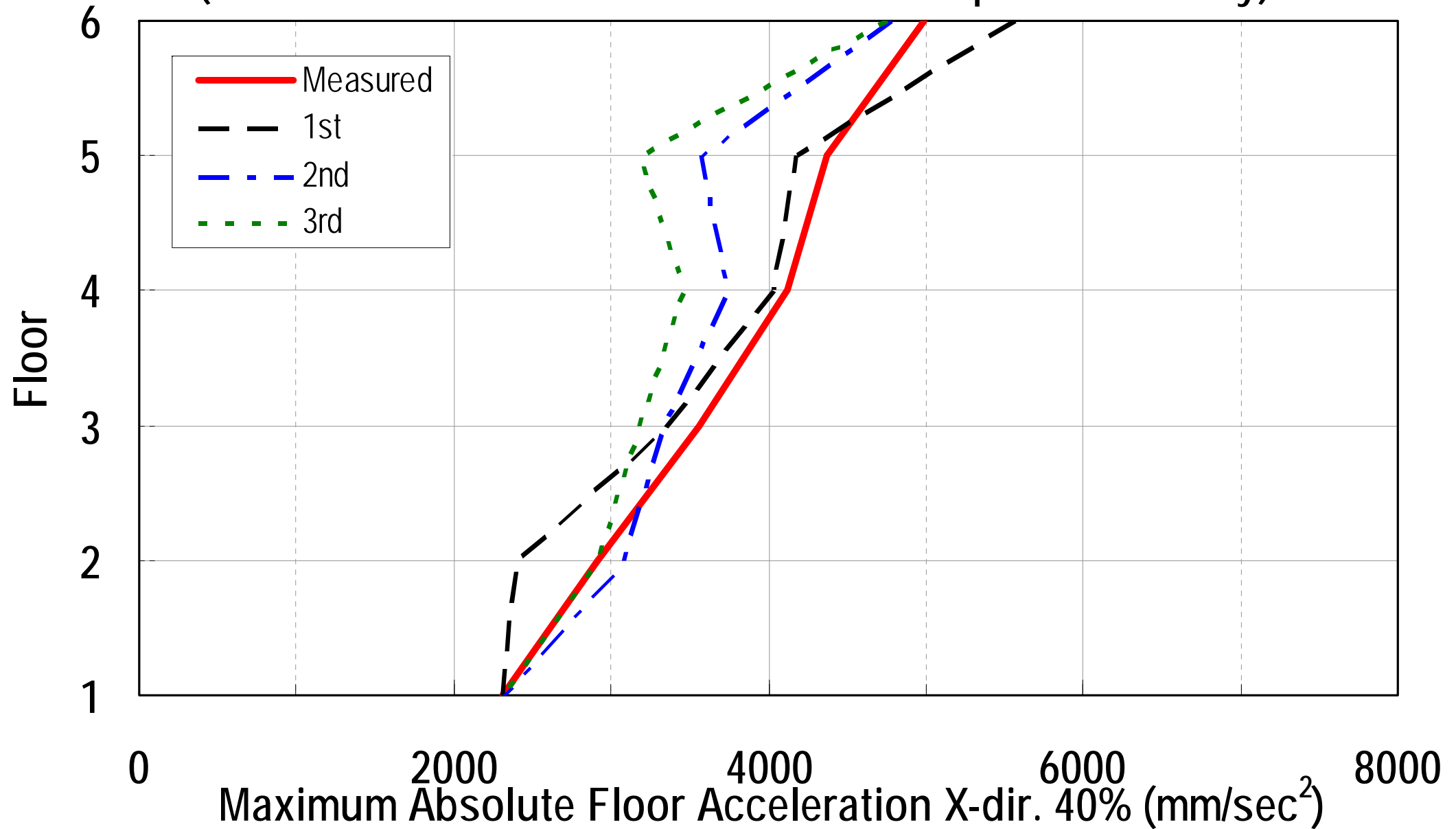
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



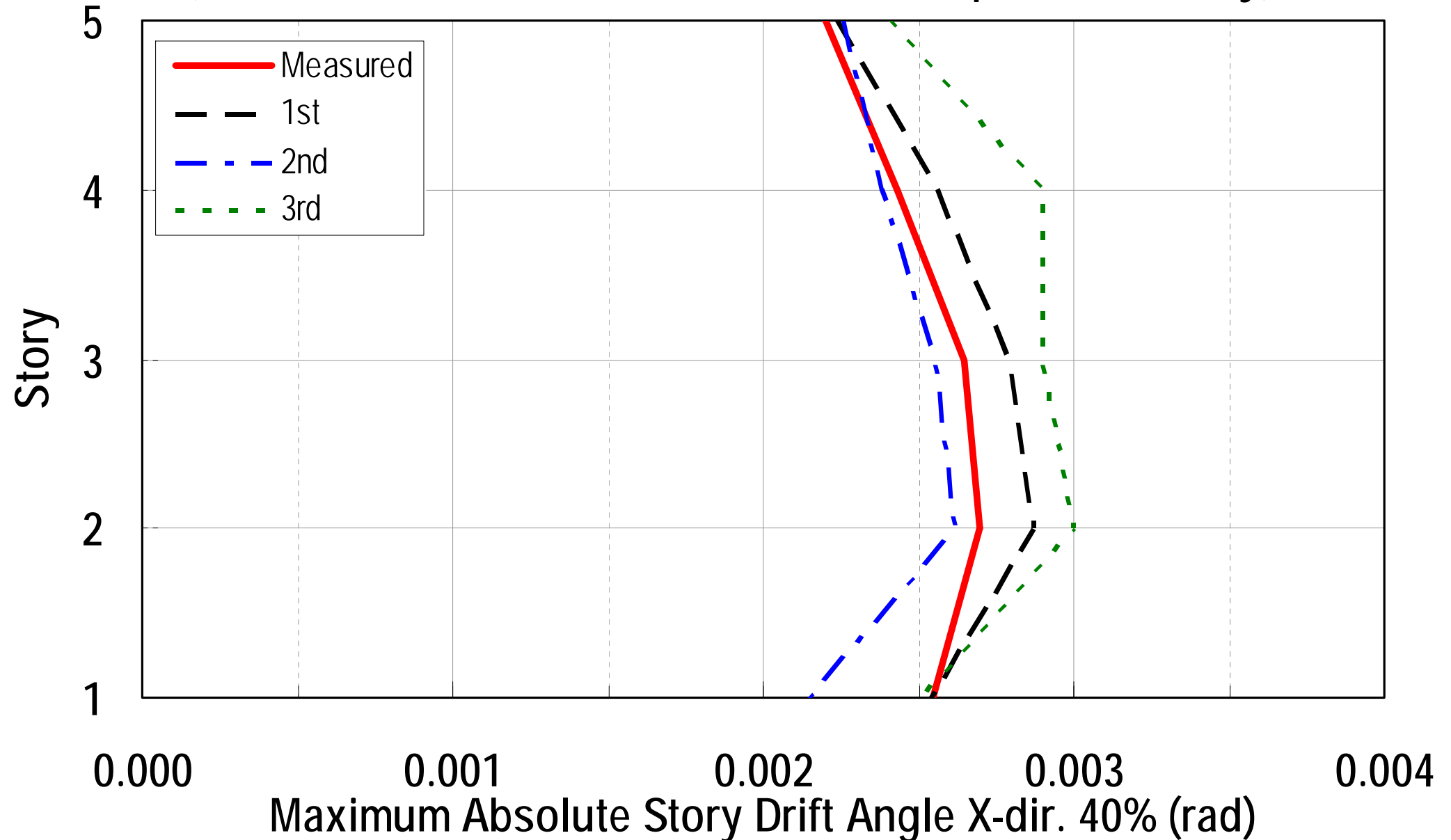
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



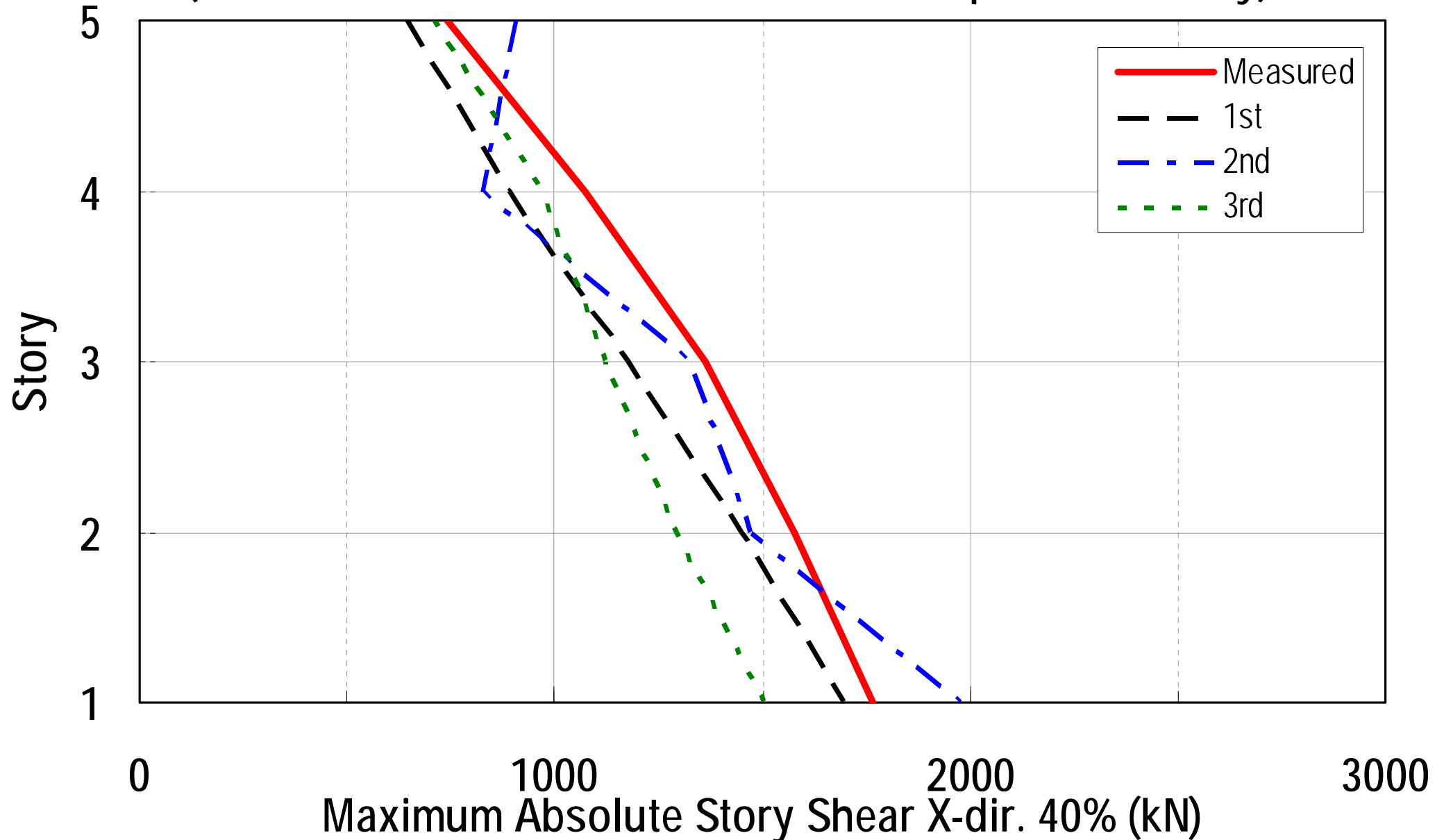
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



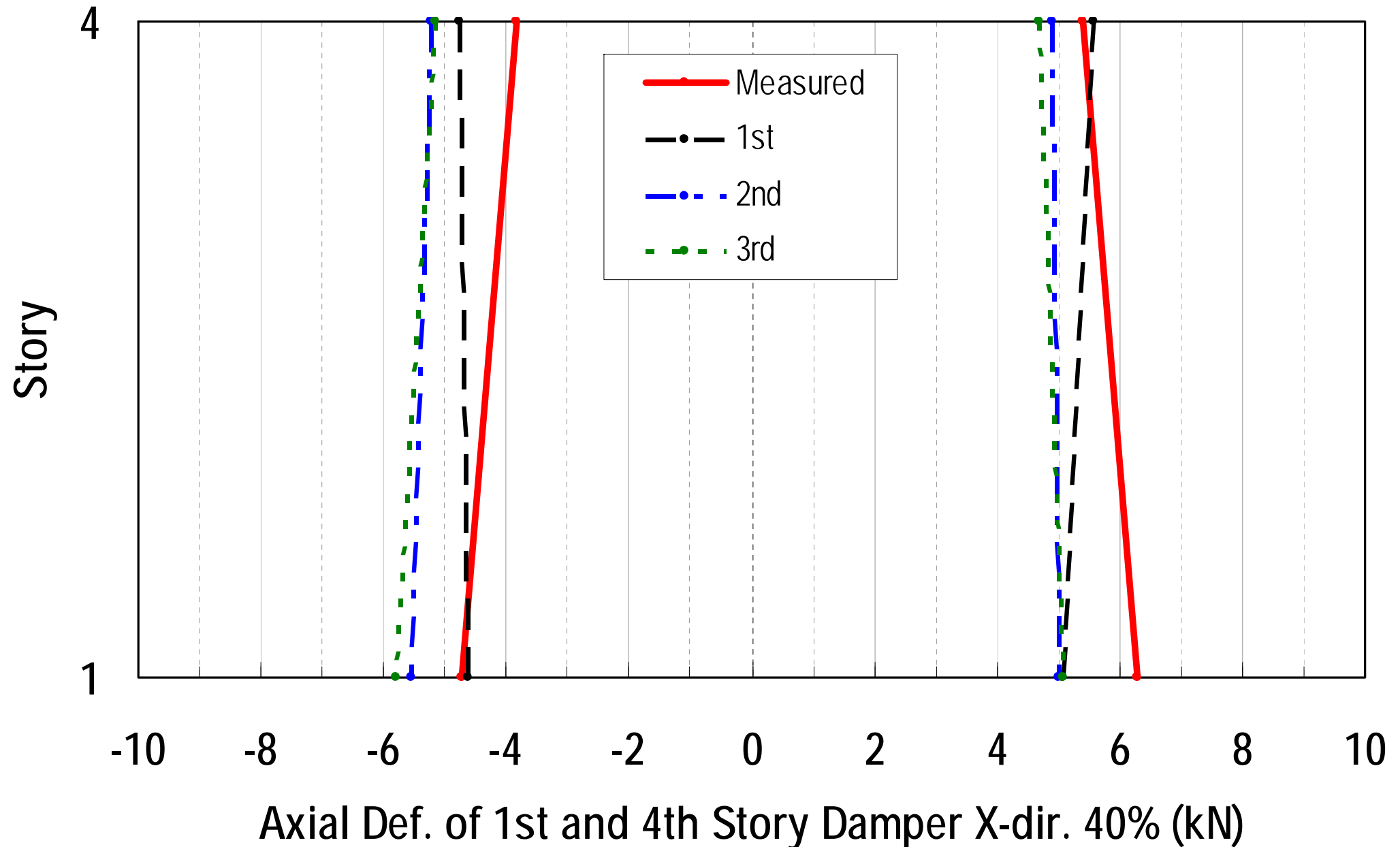
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



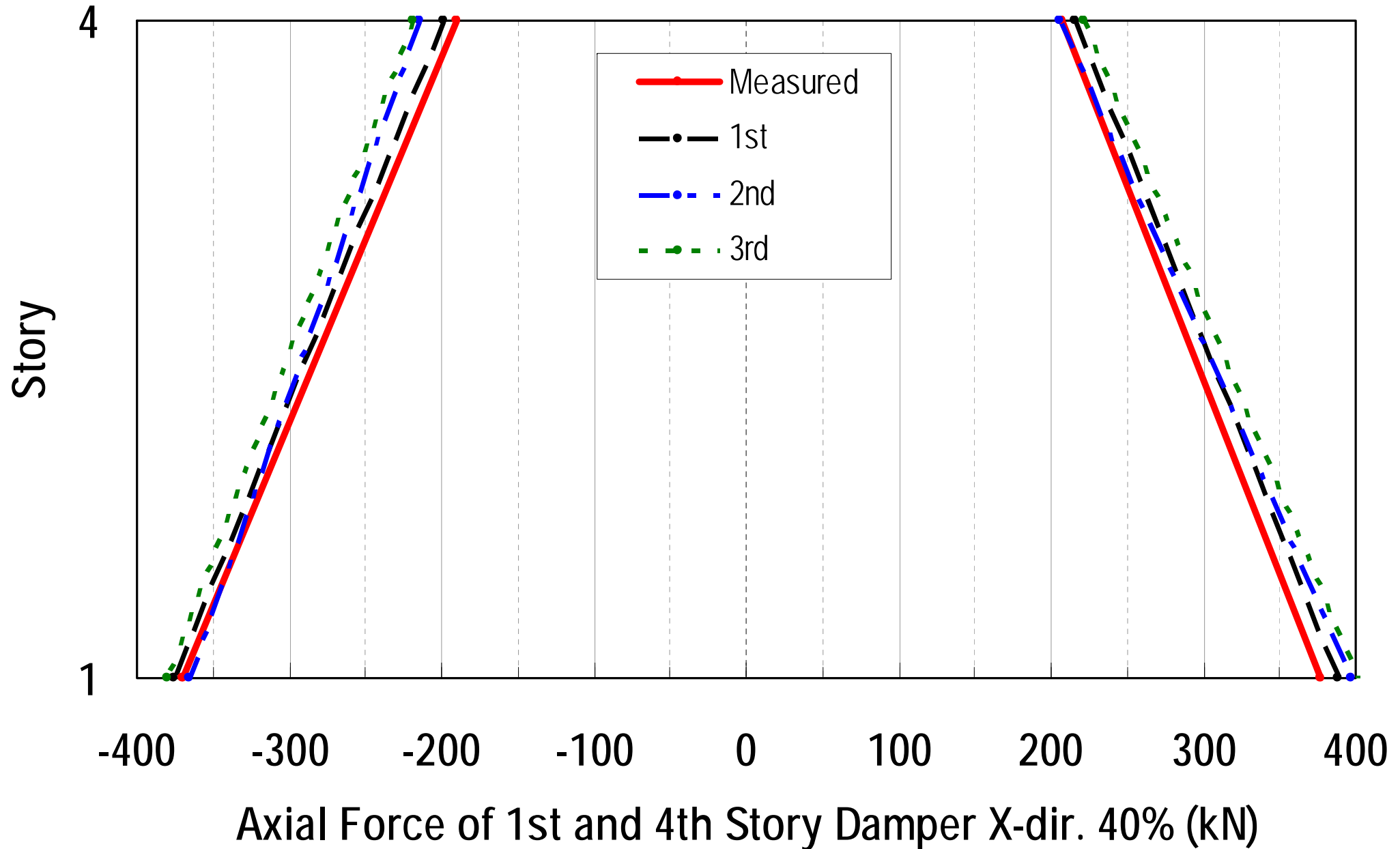
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



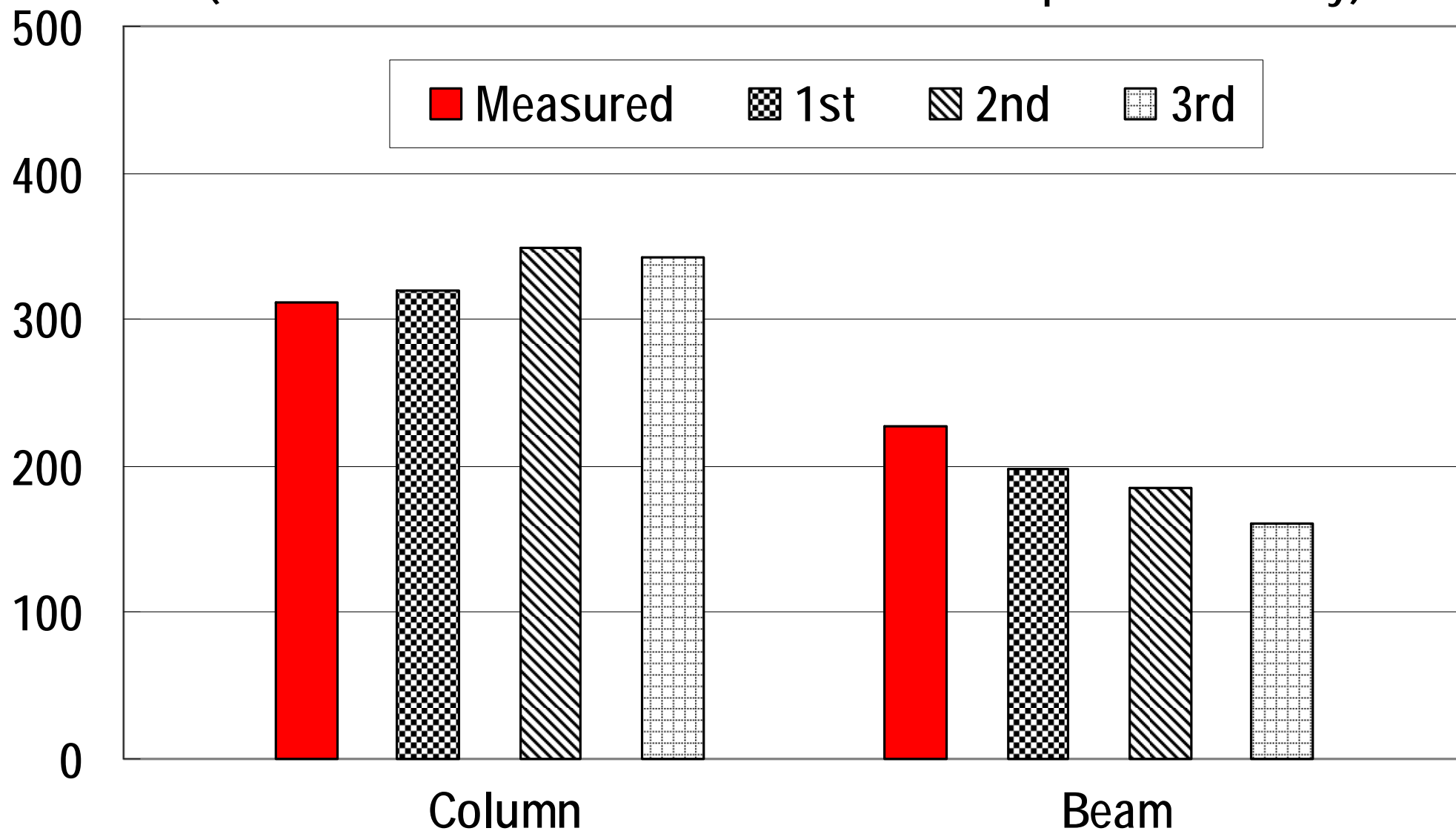
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

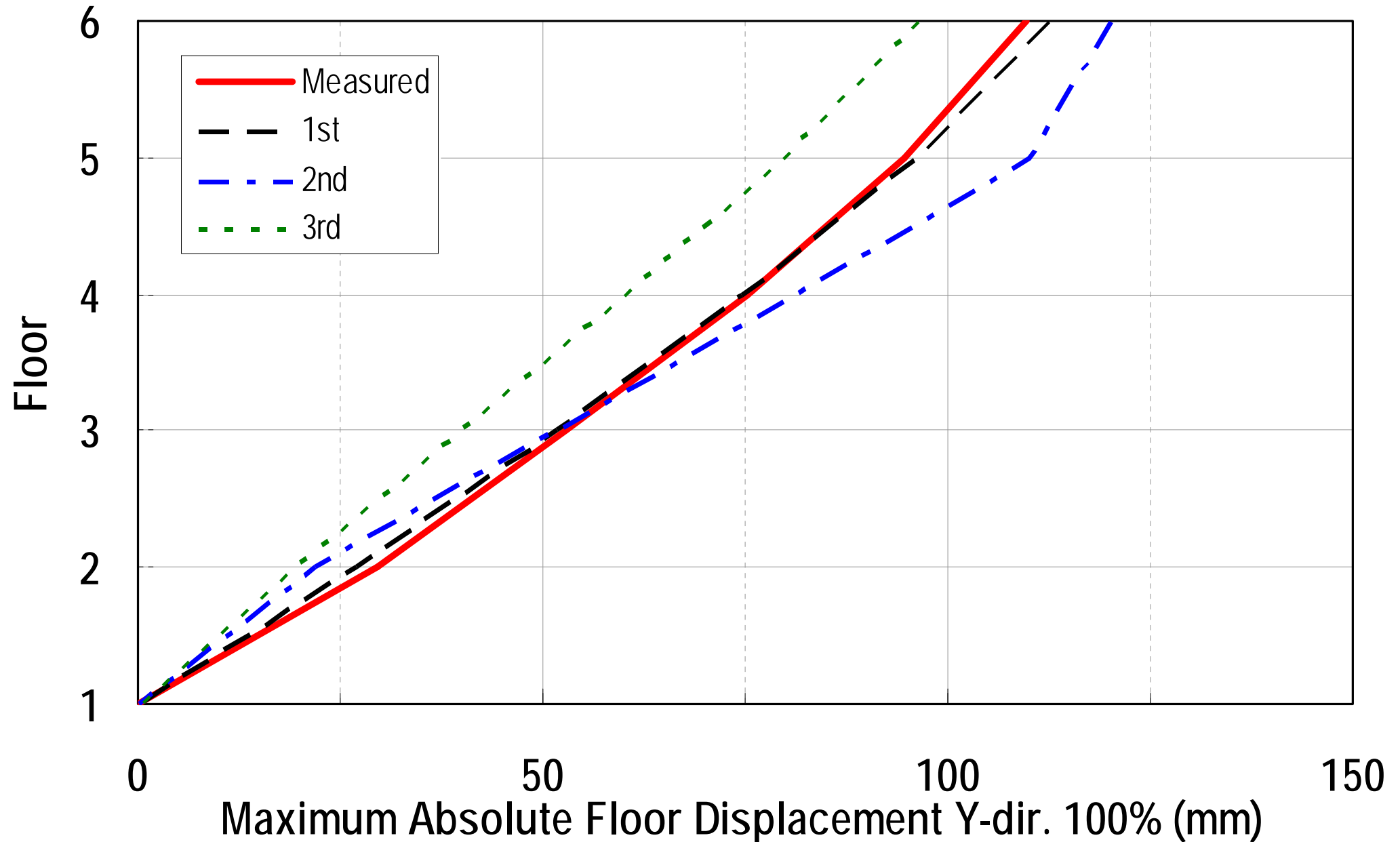


3D Viscous Damper Blind Analysis Prediction Results (μ) (Measured and Best 3 Teams of Each Response Quantity)

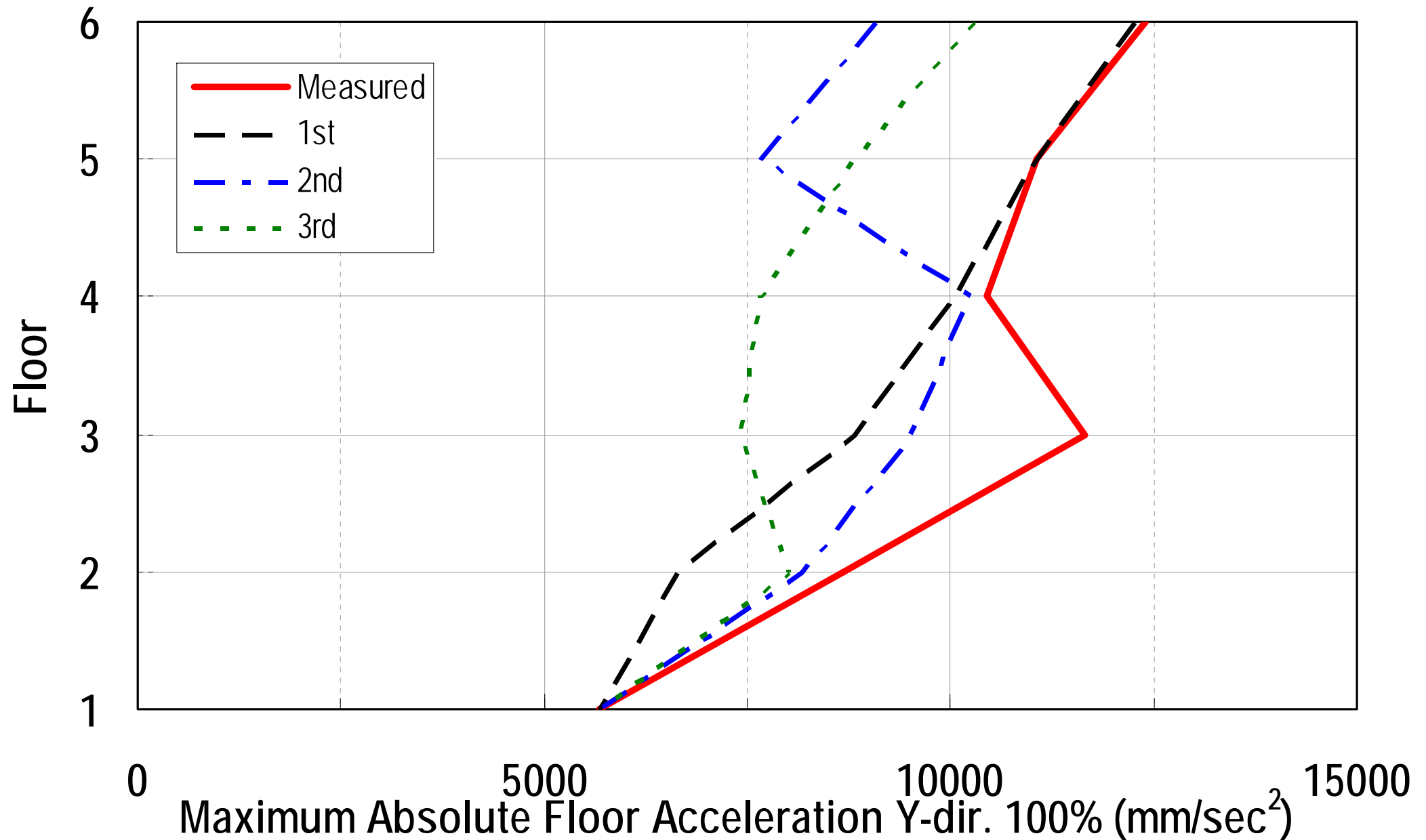


Axial Strain at the Designated Points of Colum and Beam 40%

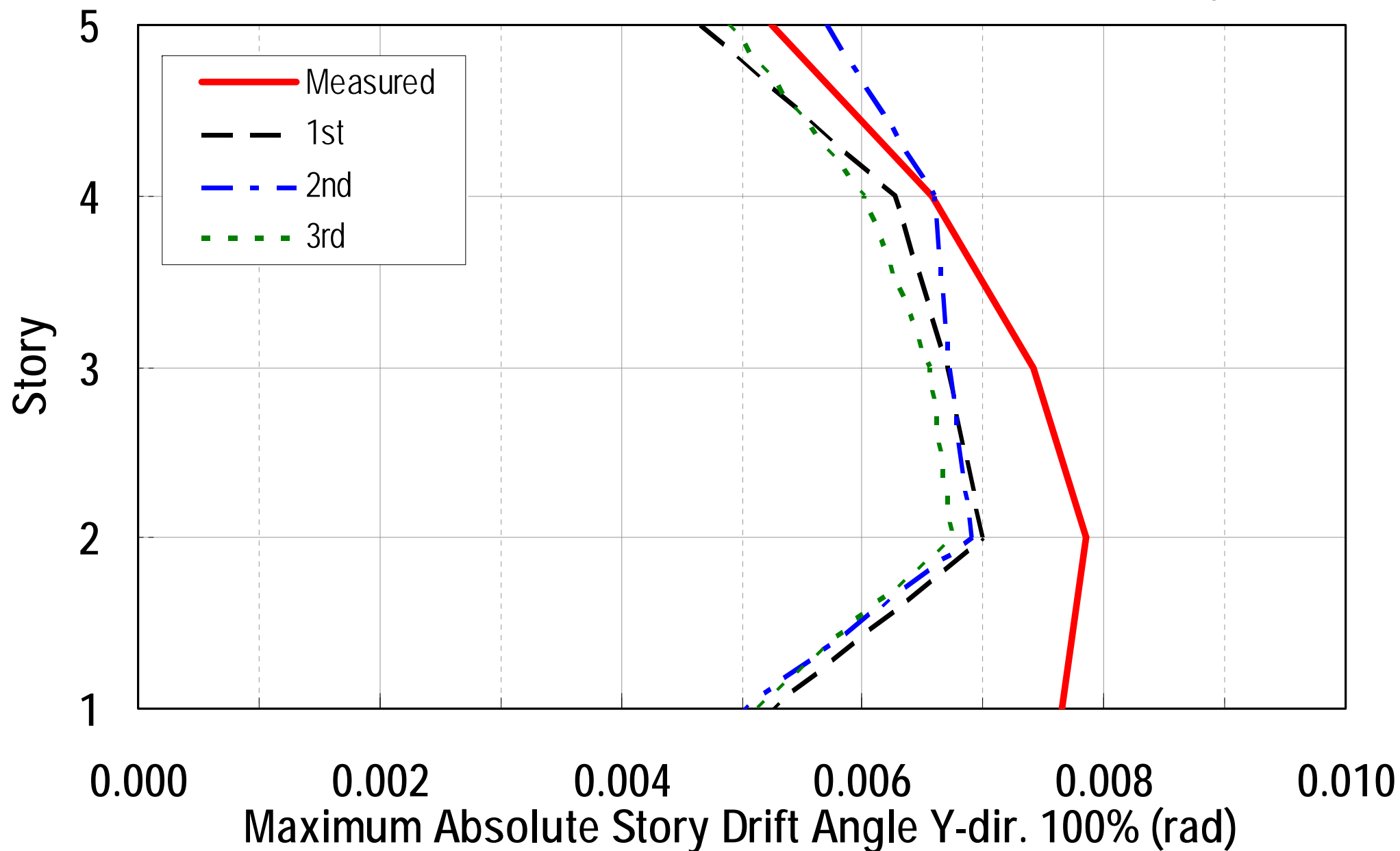
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



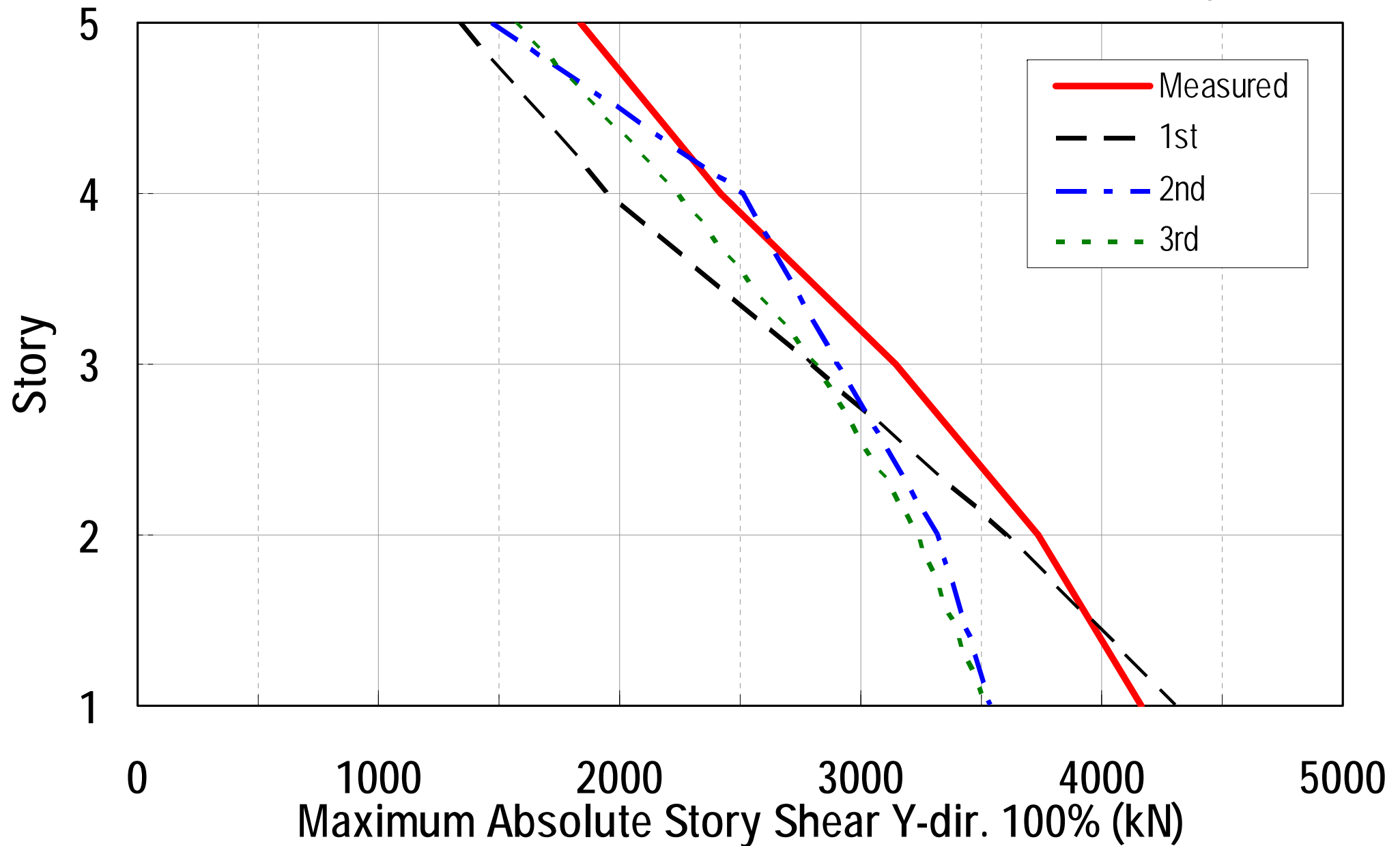
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



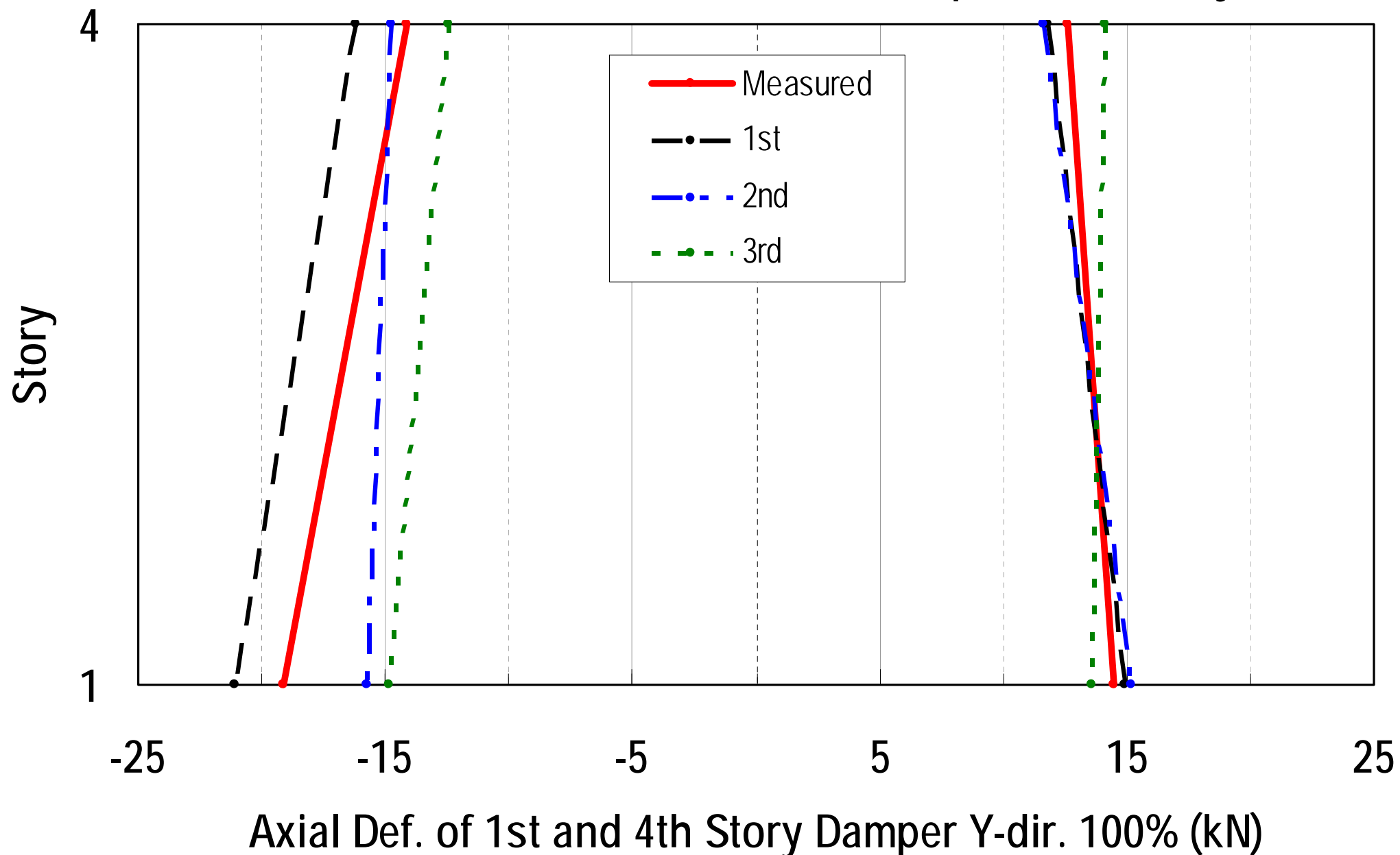
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



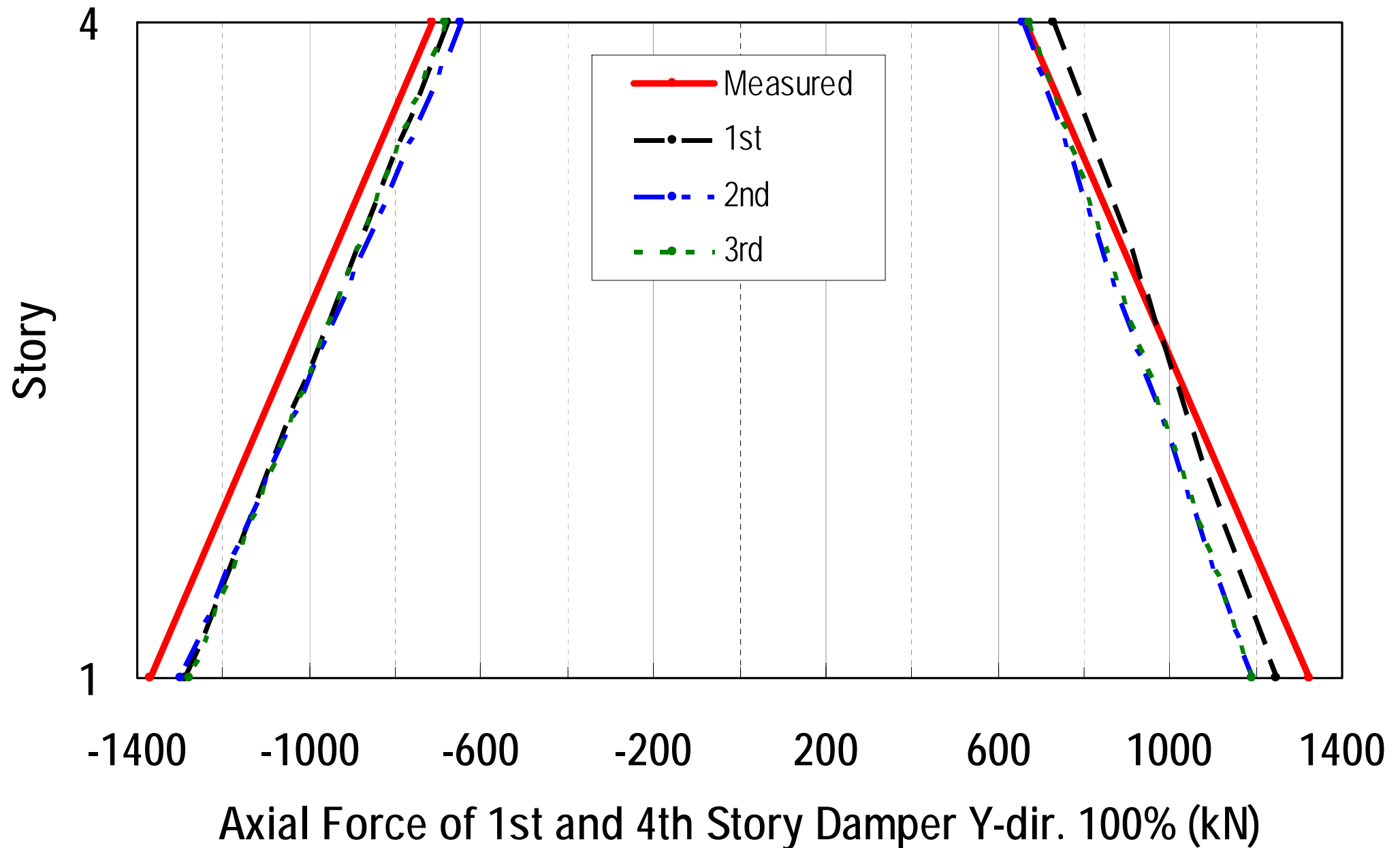
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



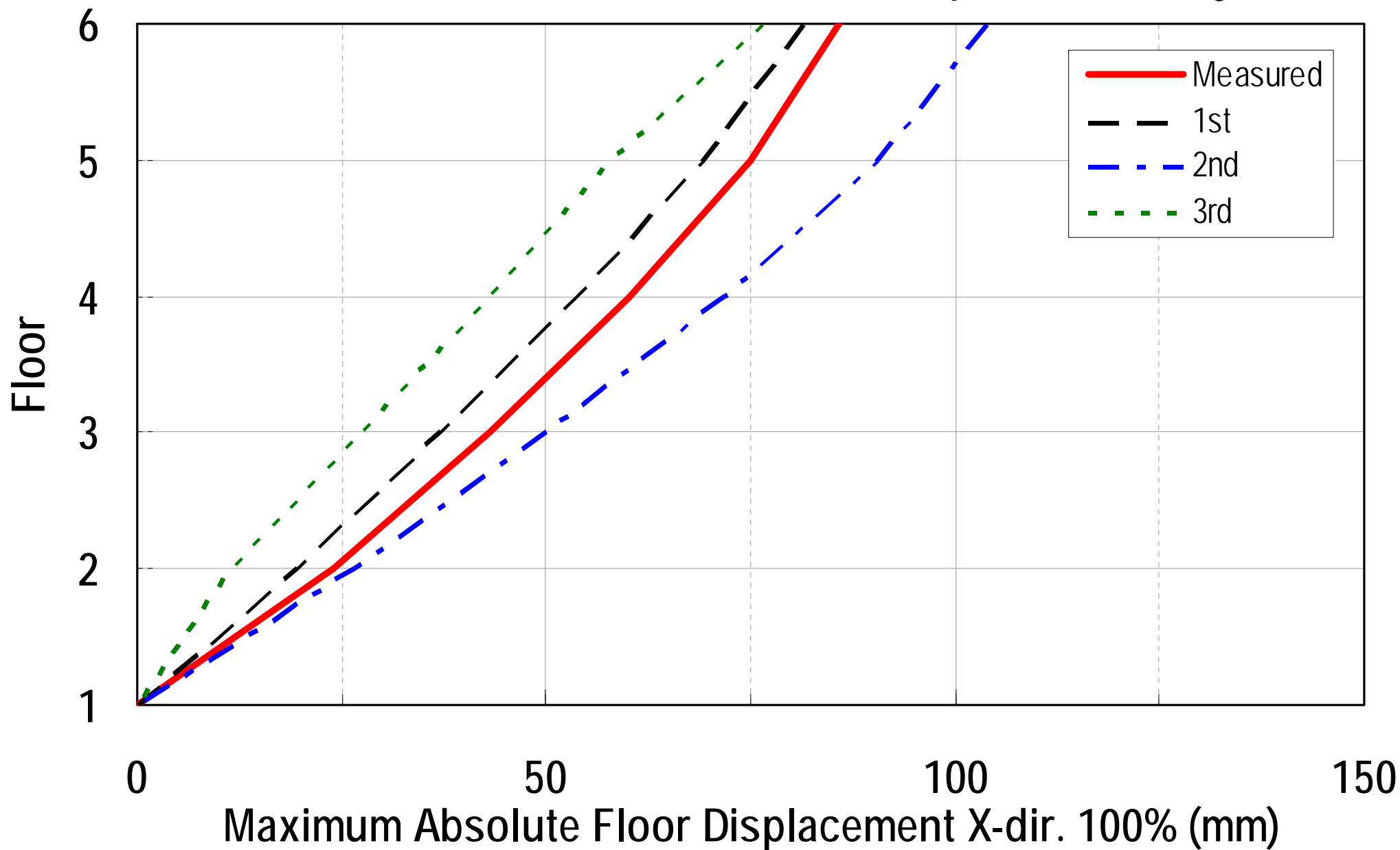
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



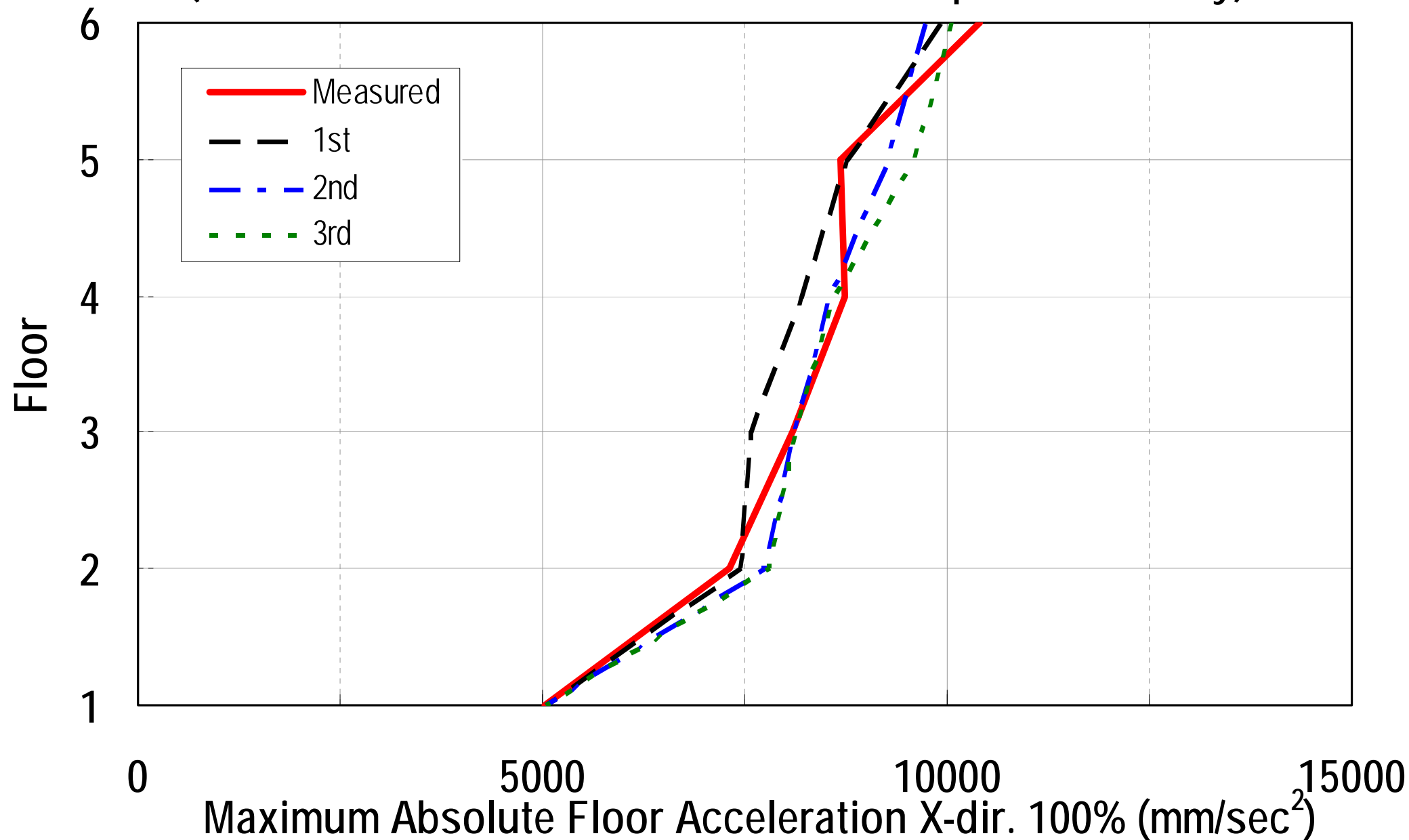
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



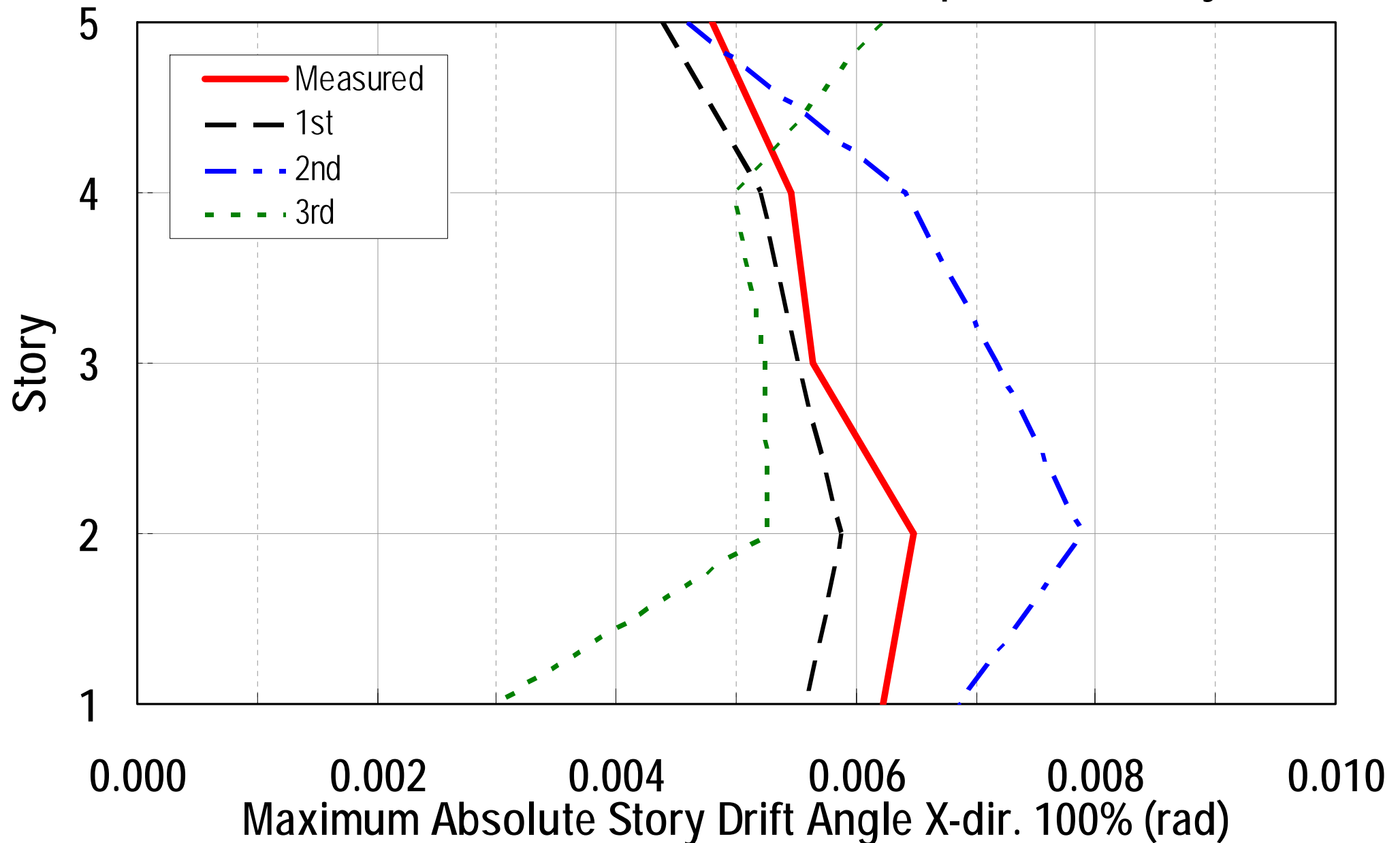
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



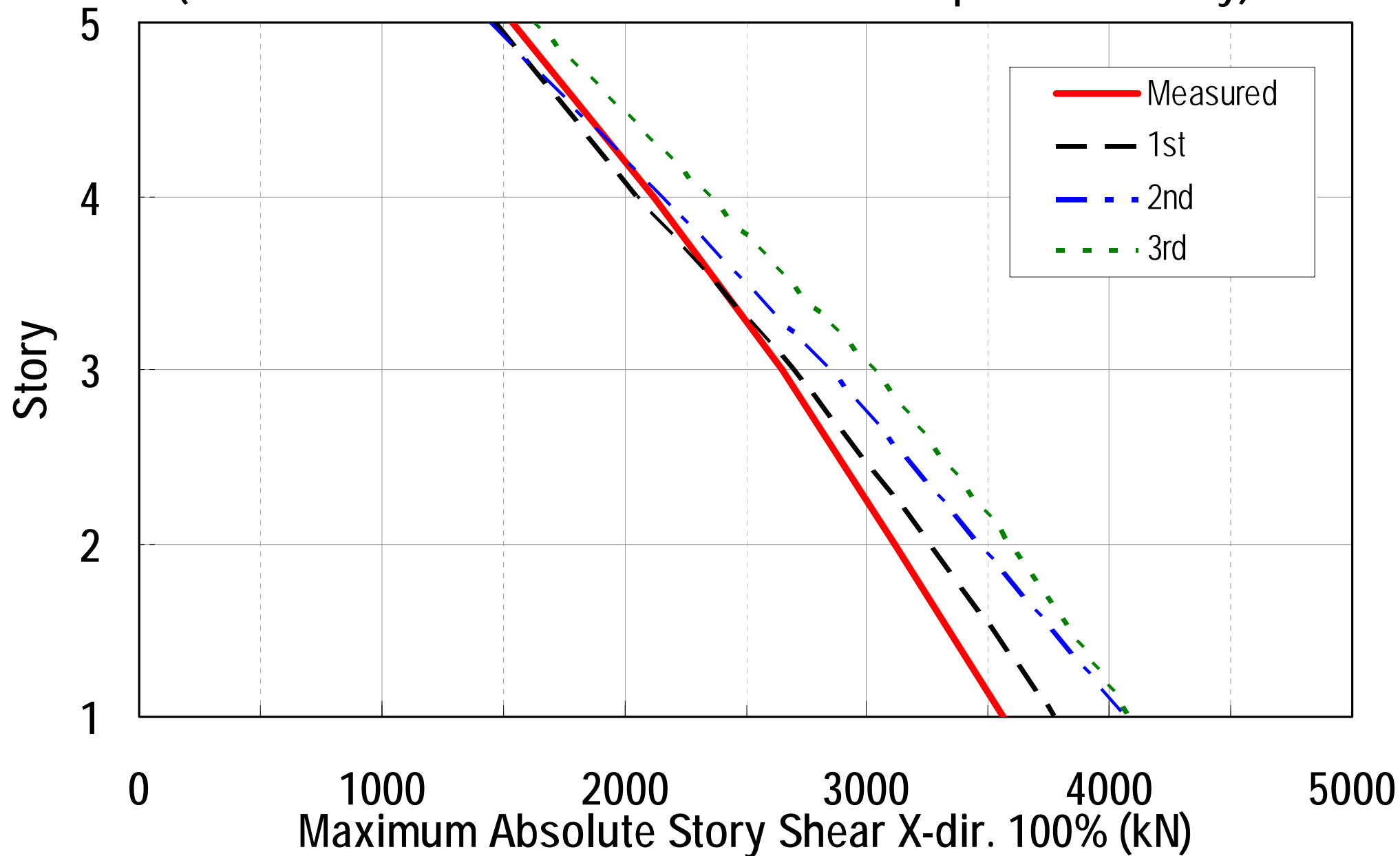
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



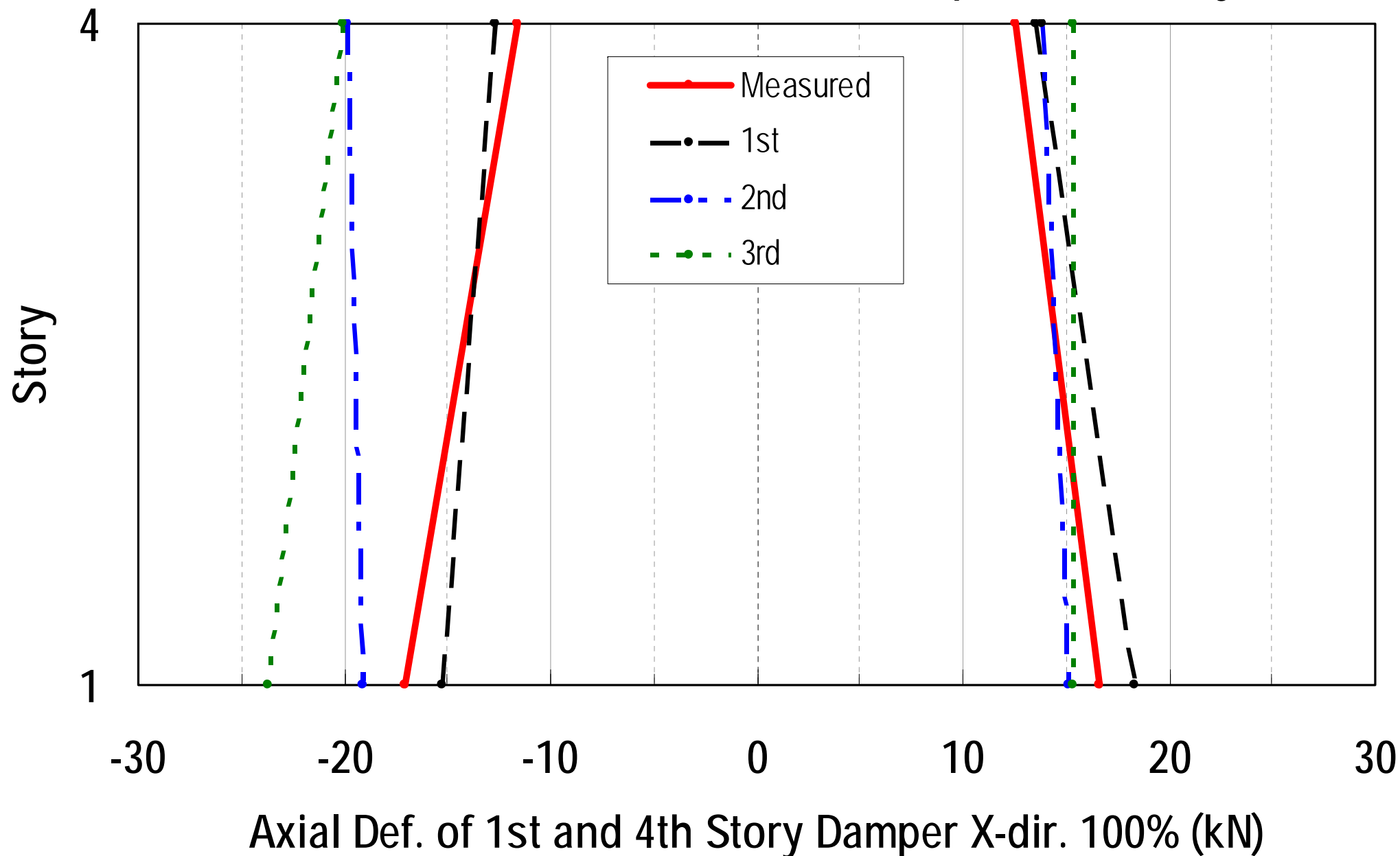
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



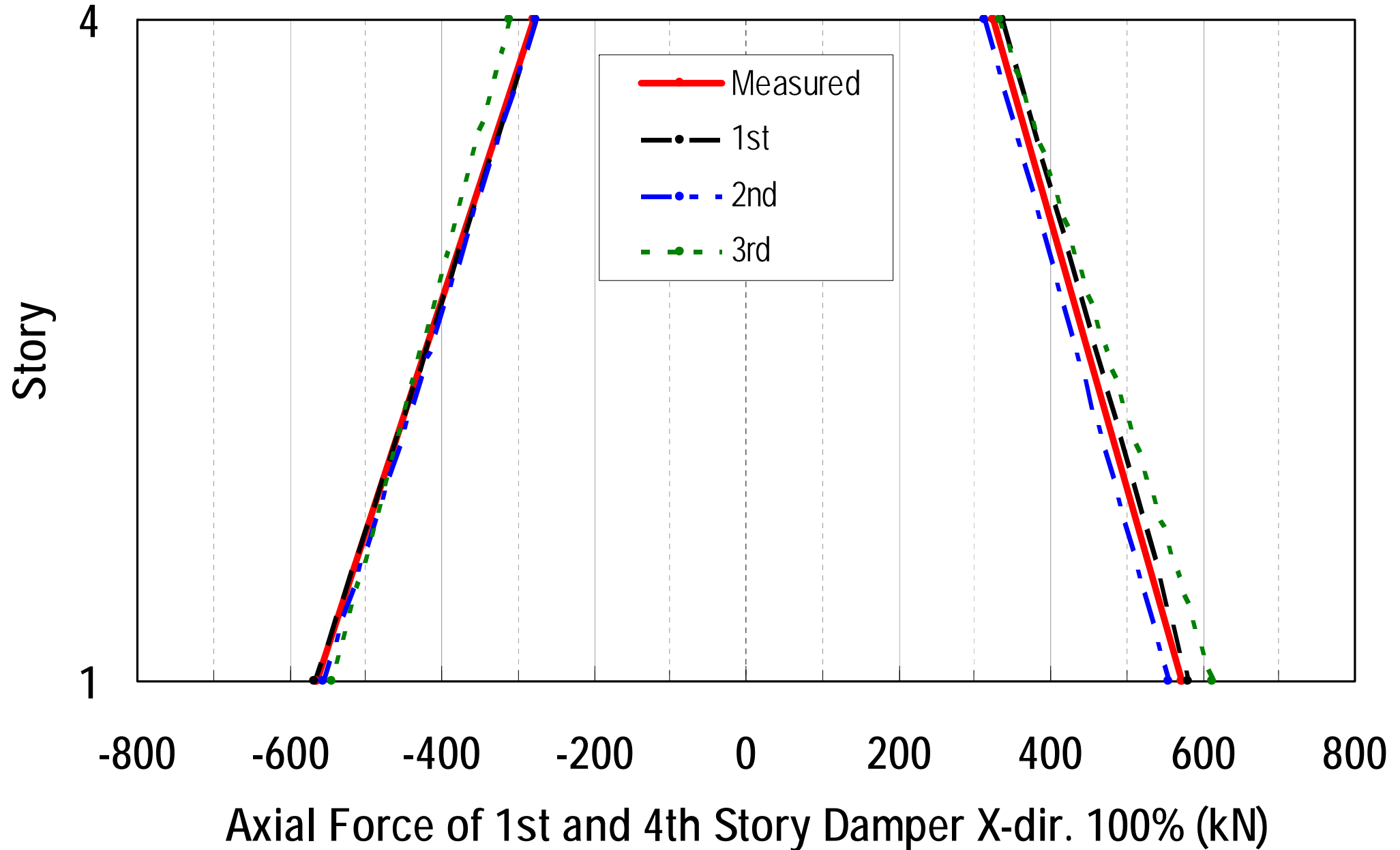
3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

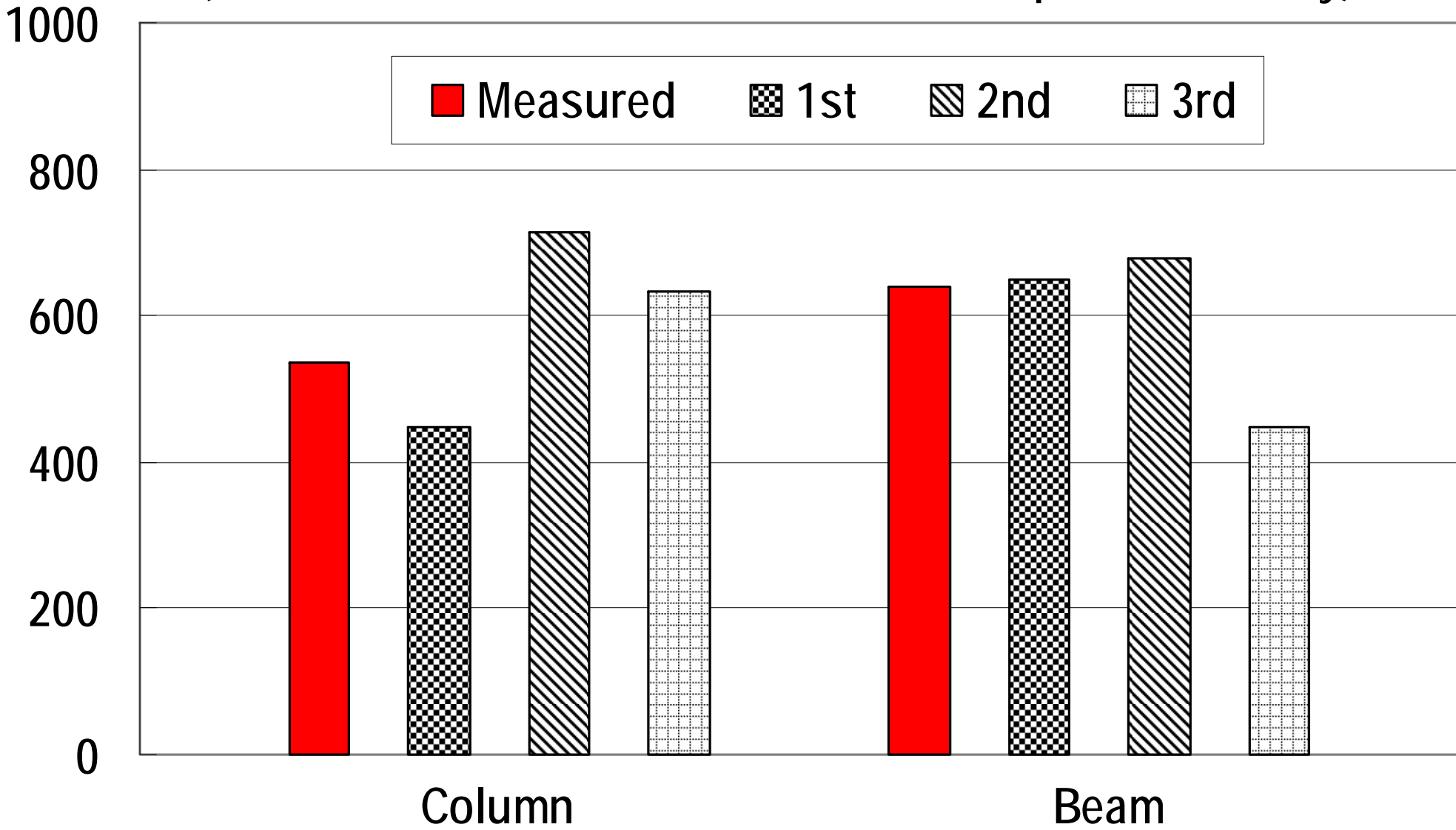


3D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



3D Viscous Damper Blind Analysis Prediction Results

(μ) (Measured and Best 3 Teams of Each Response Quantity)

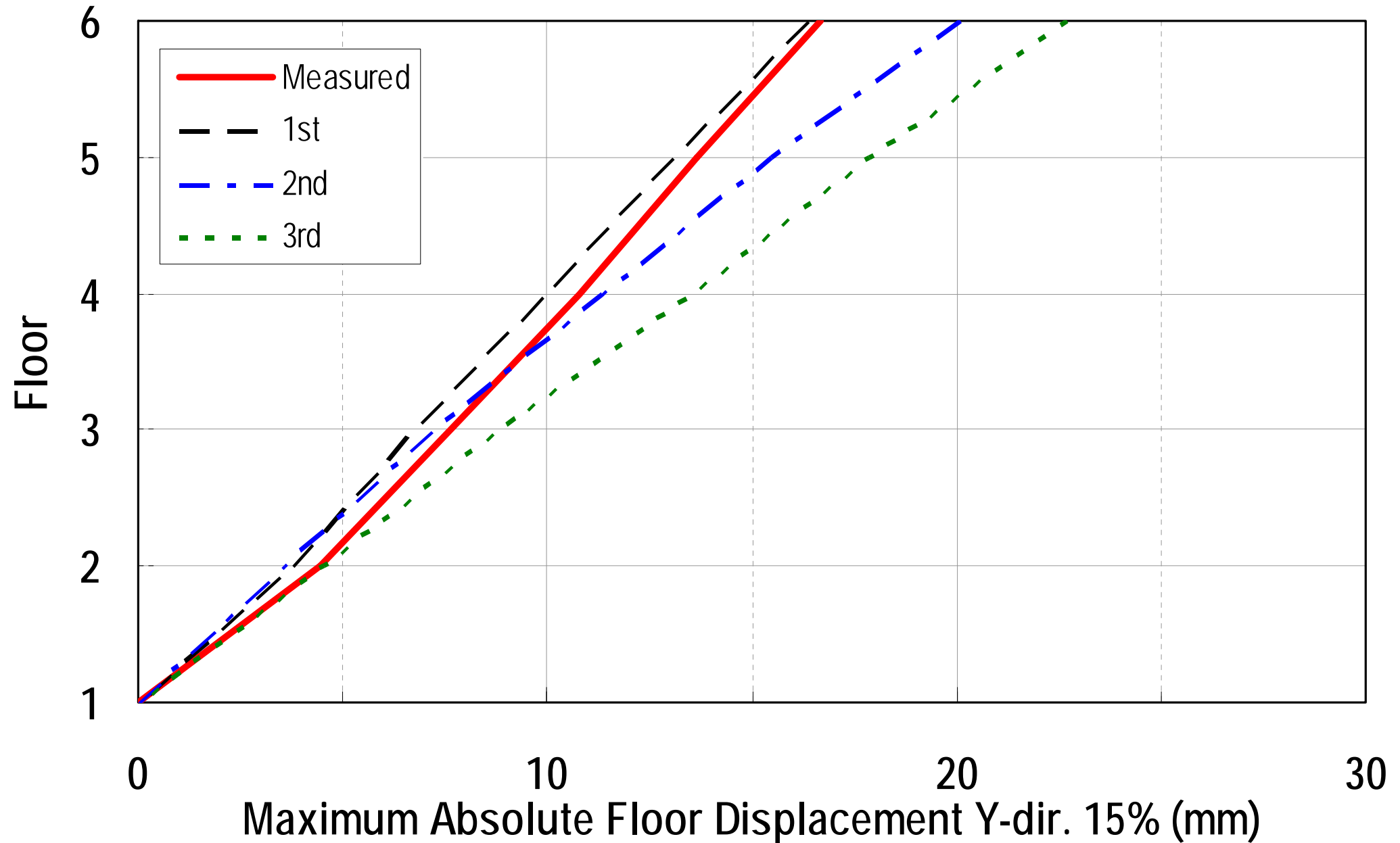


Axial Strain at the Designated Points of Colum and Beam 100%

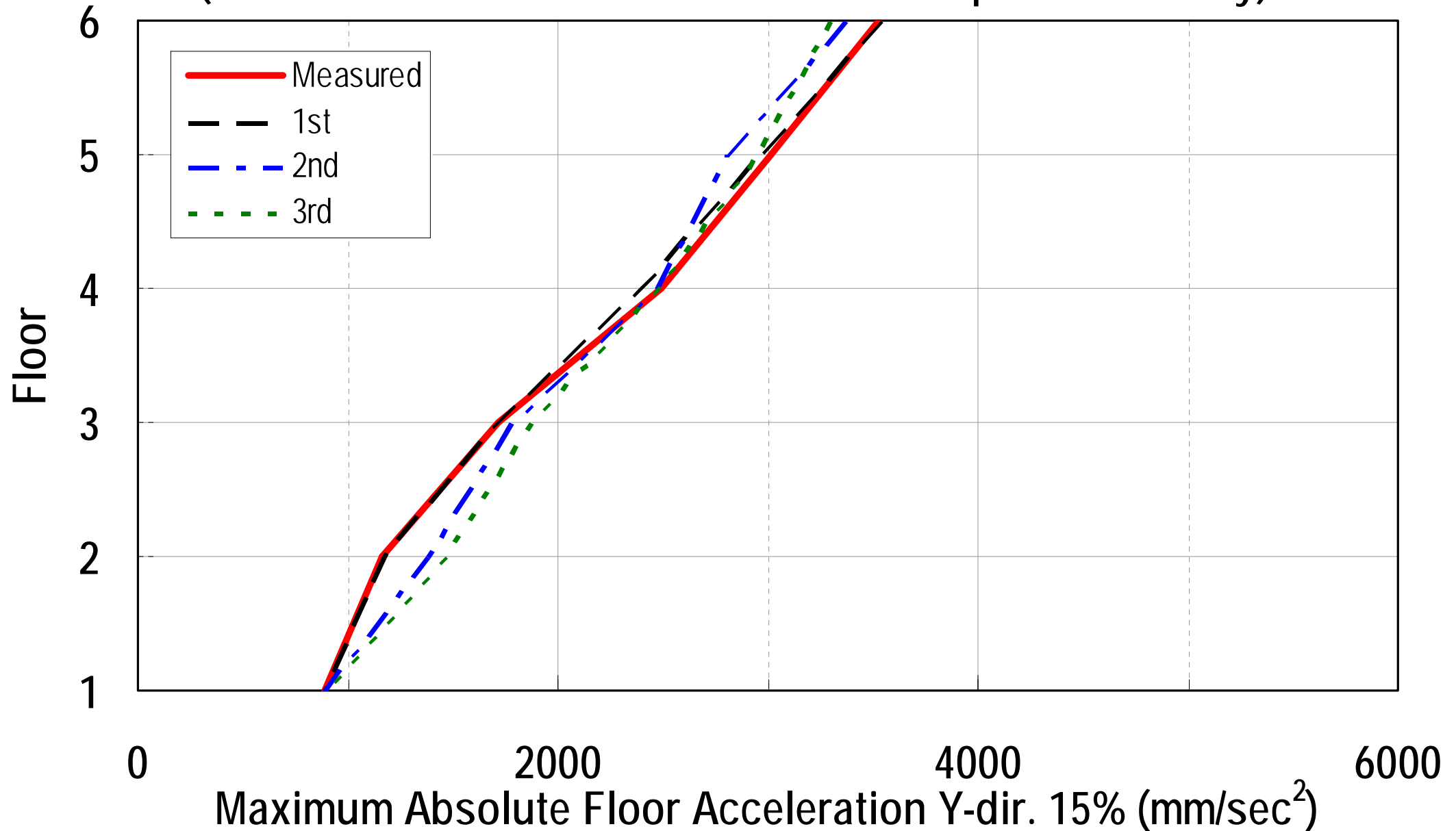


カテゴリー3: 平面骨組解析・鋼材ダンパー (実験結果及び各応答値上位3チーム)

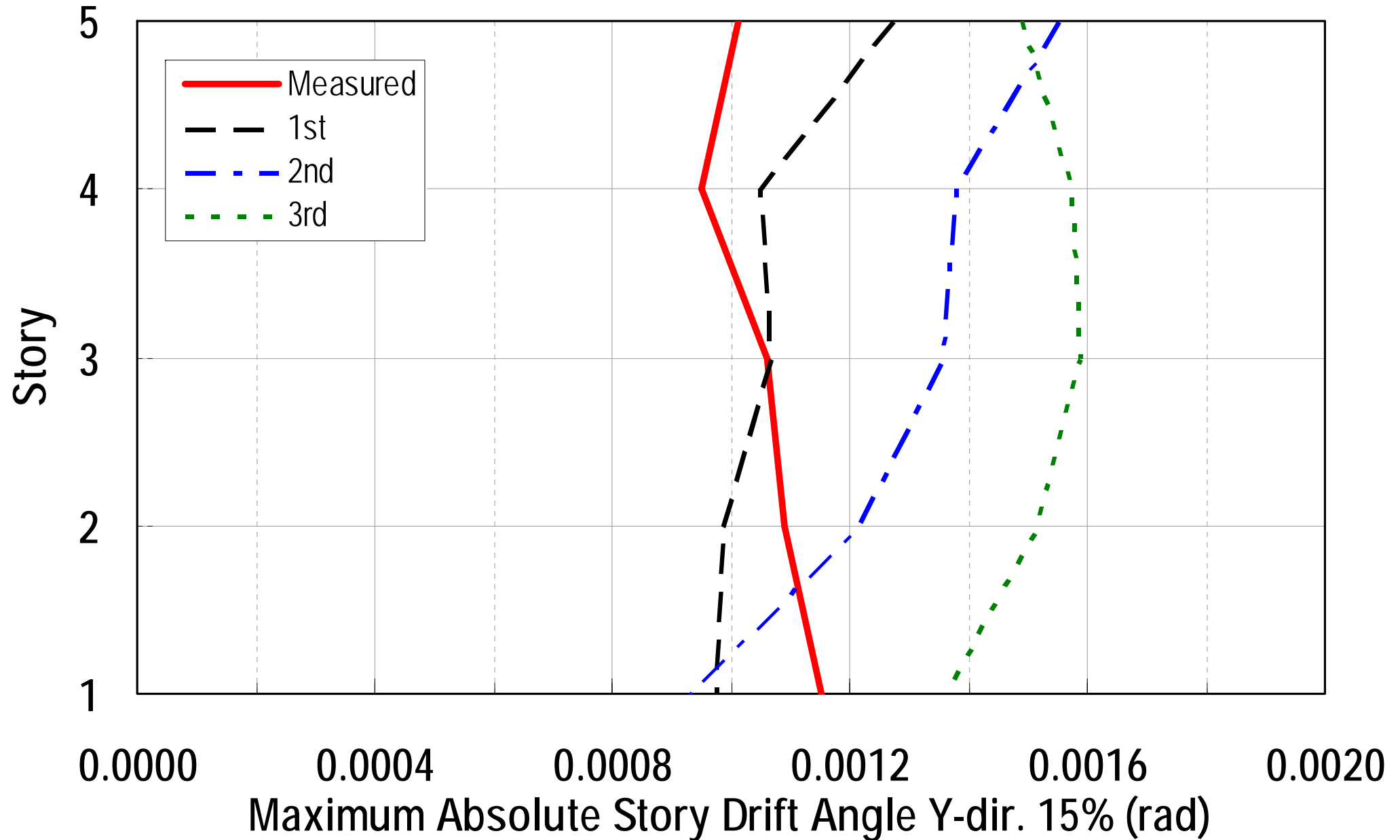
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



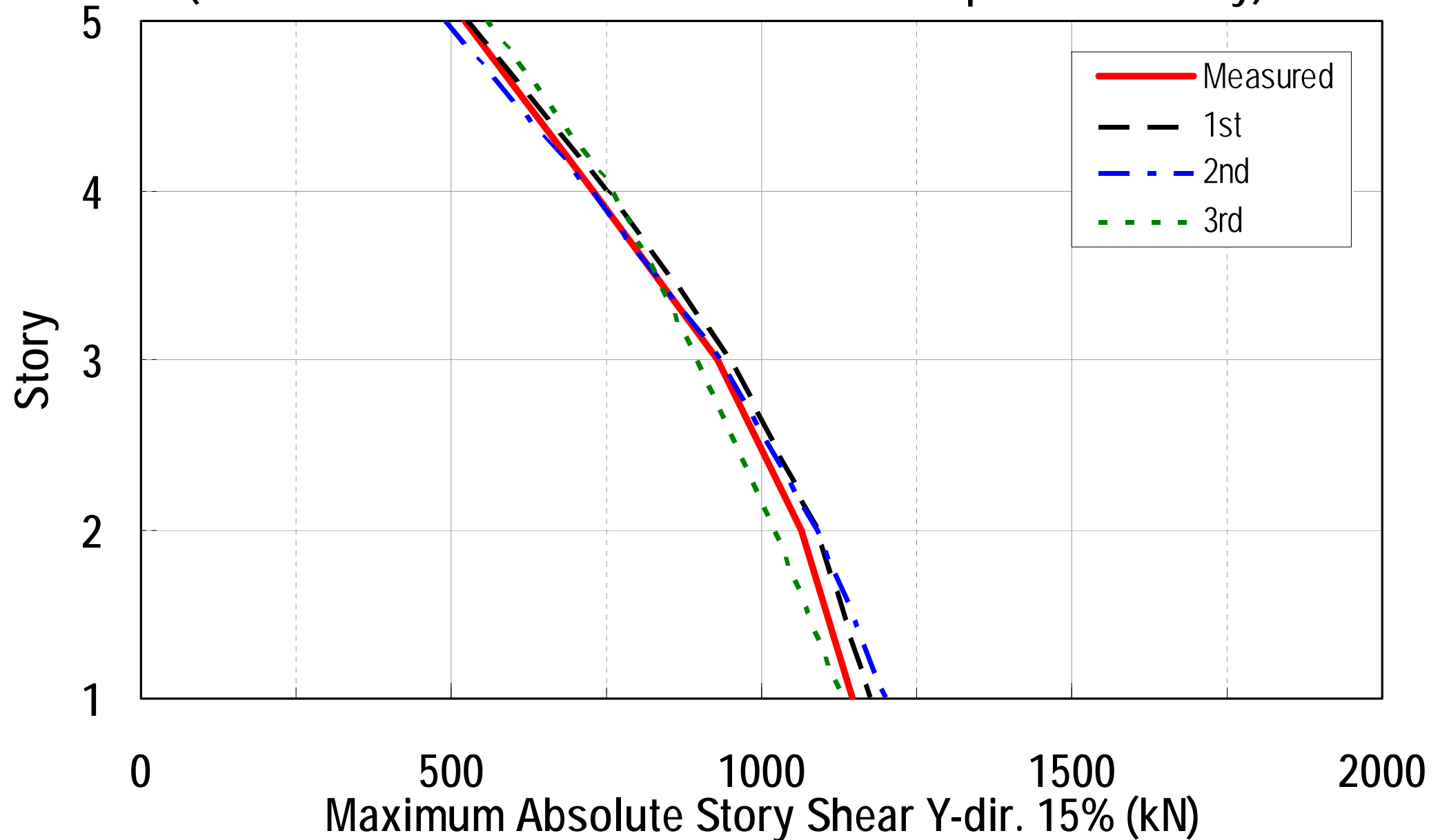
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



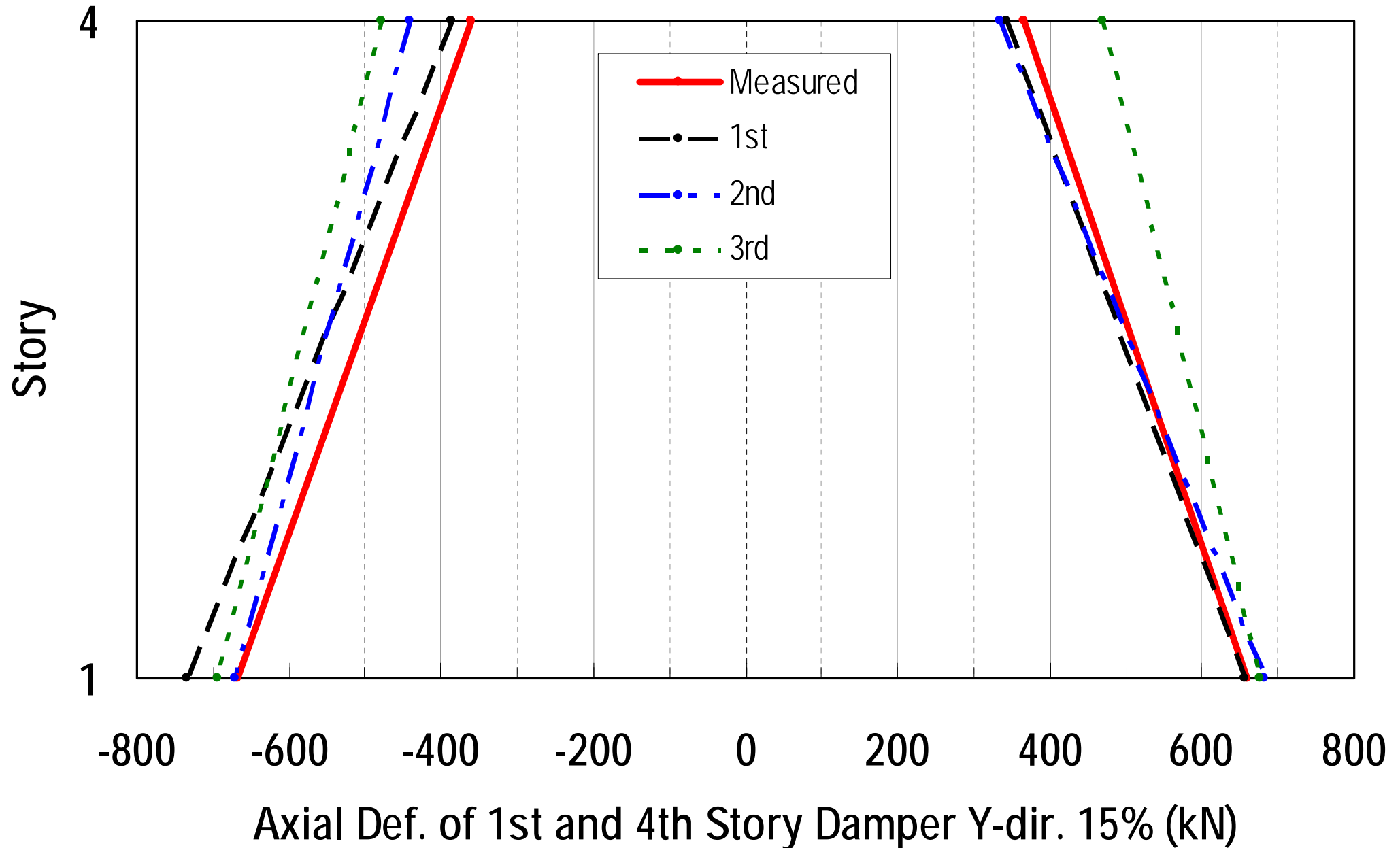
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



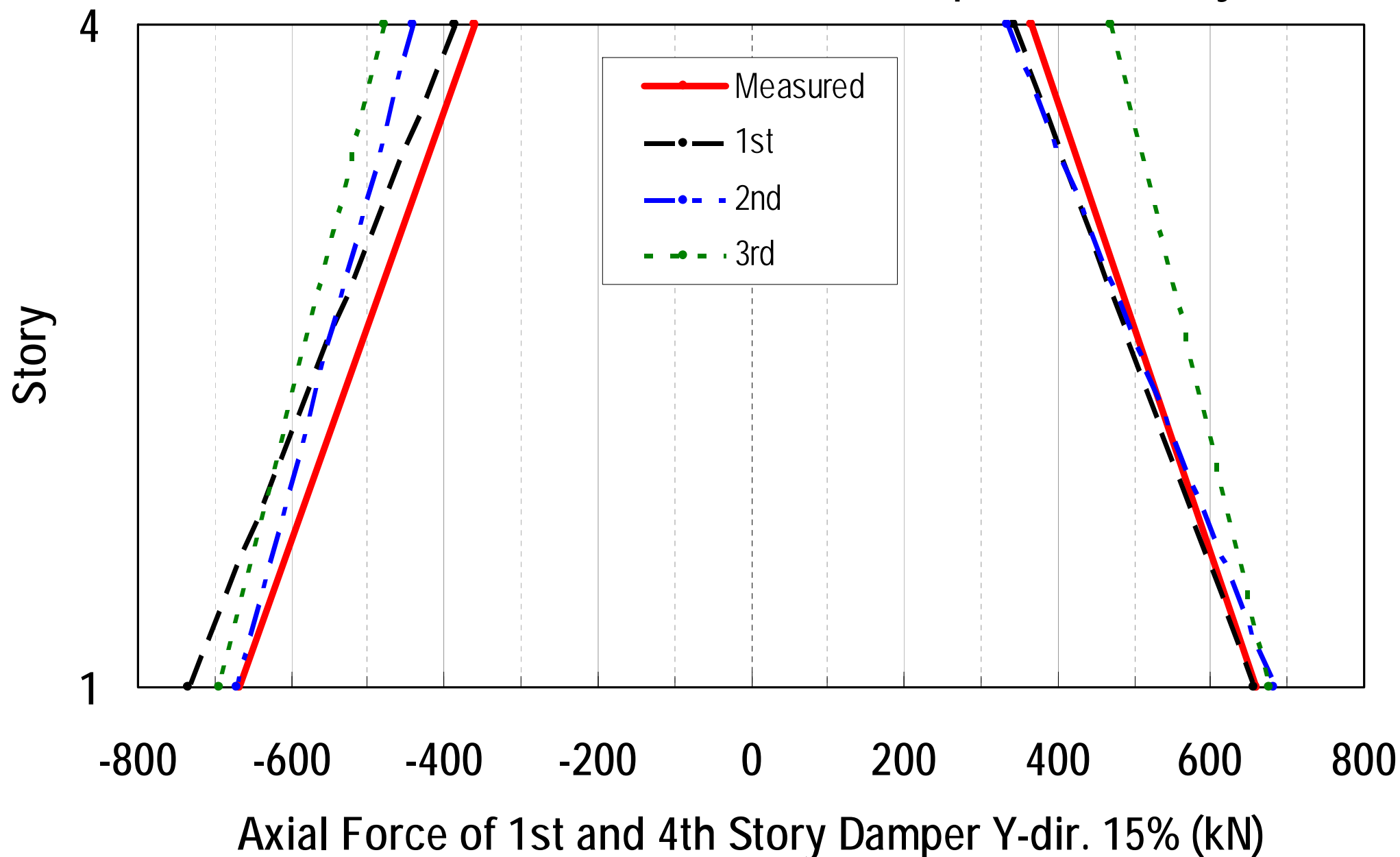
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

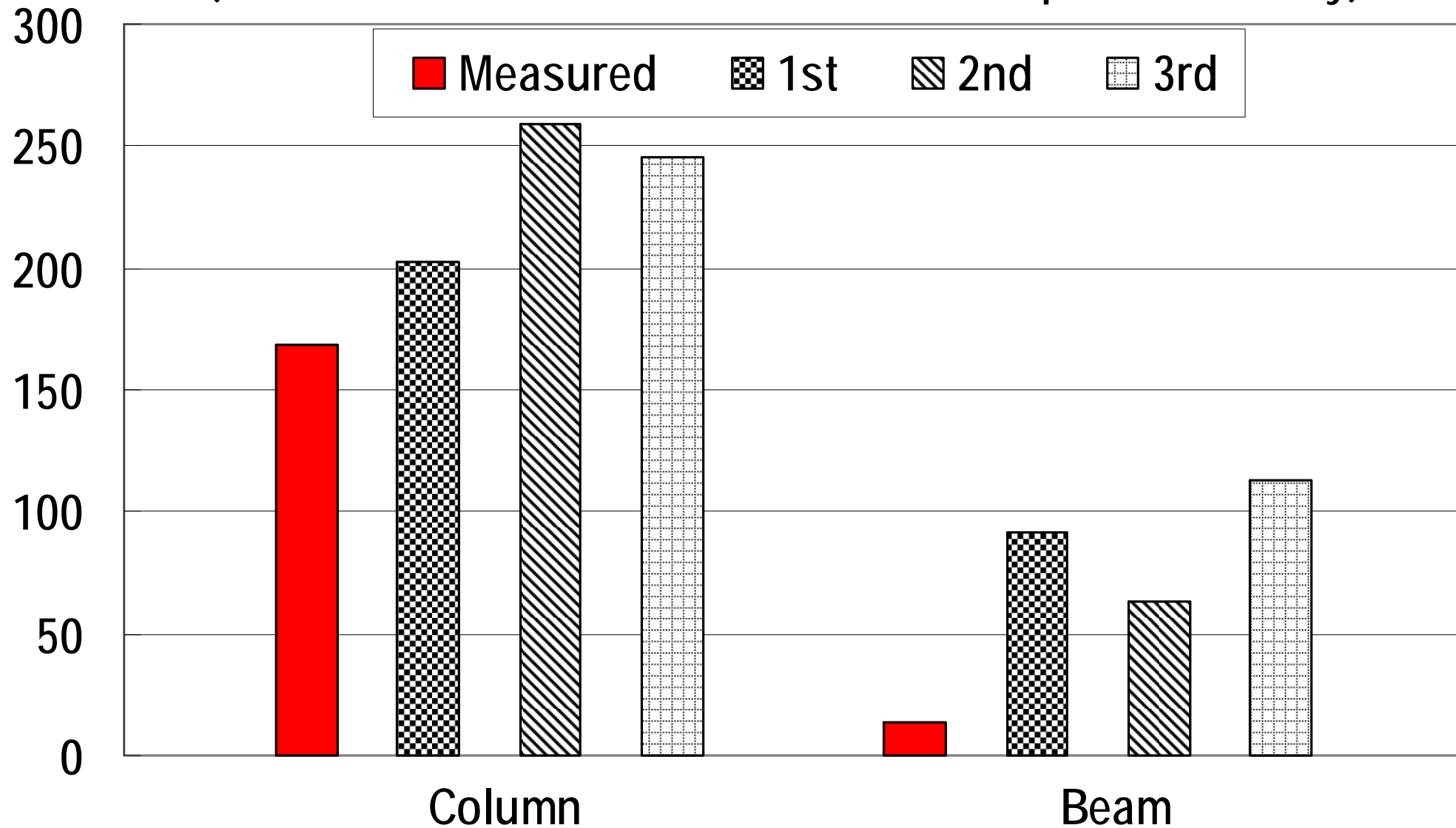


2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



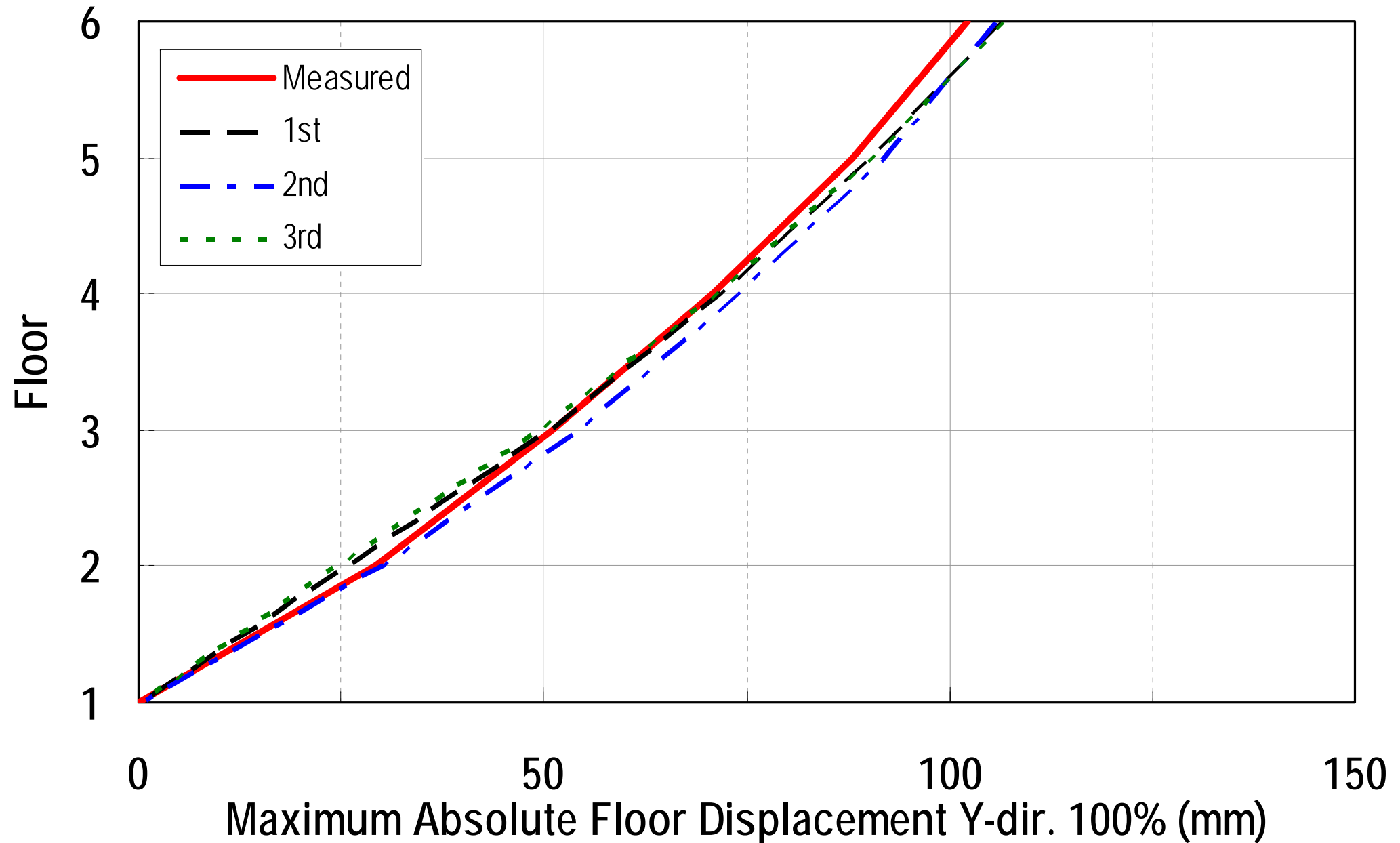
2D Steel Damper Blind Analysis Prediction Results

(μ) (Measured and Best 3 Teams of Each Response Quantity)

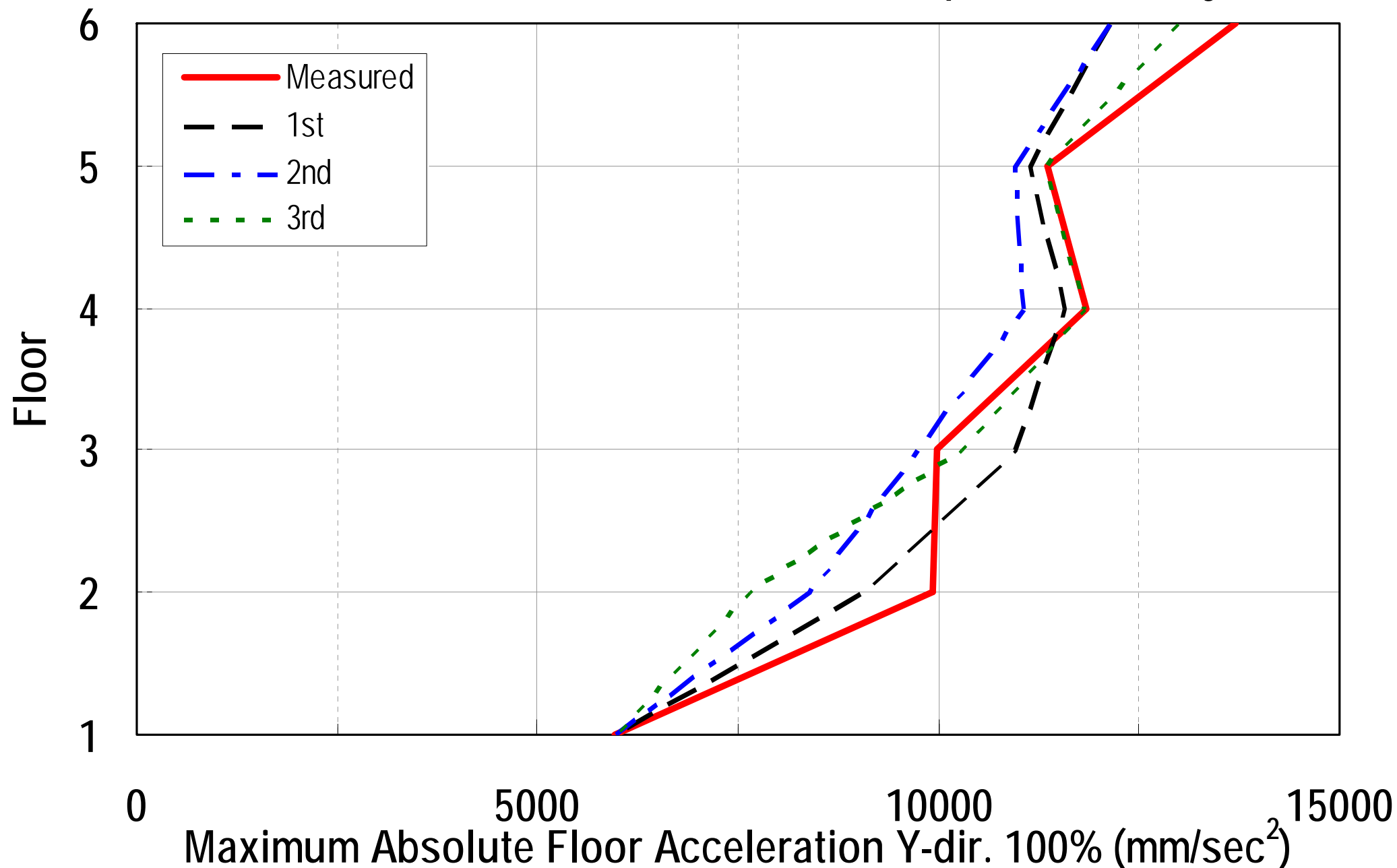


Axial Strain at the Designated Points of Colum and Beam 15%

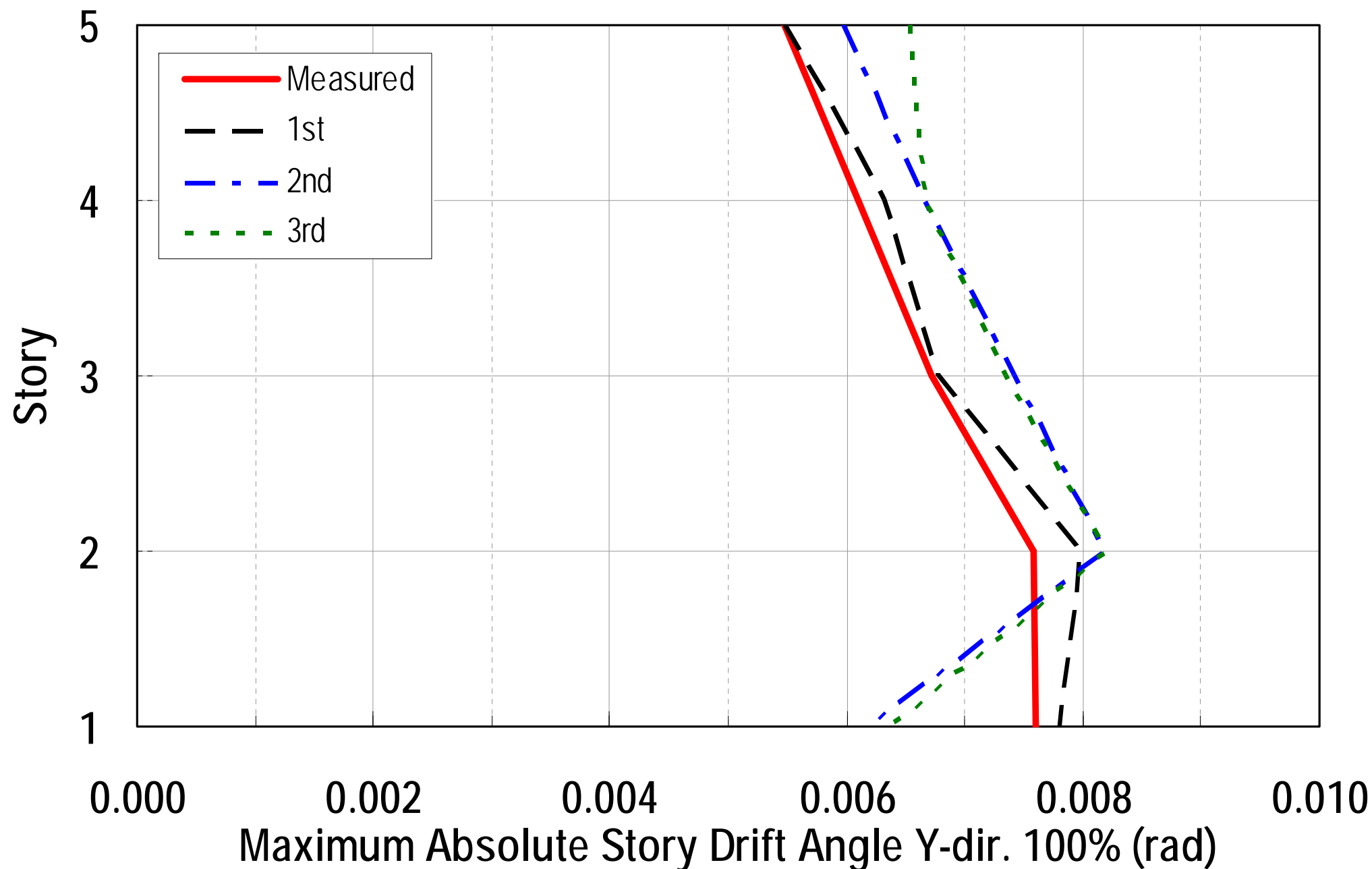
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



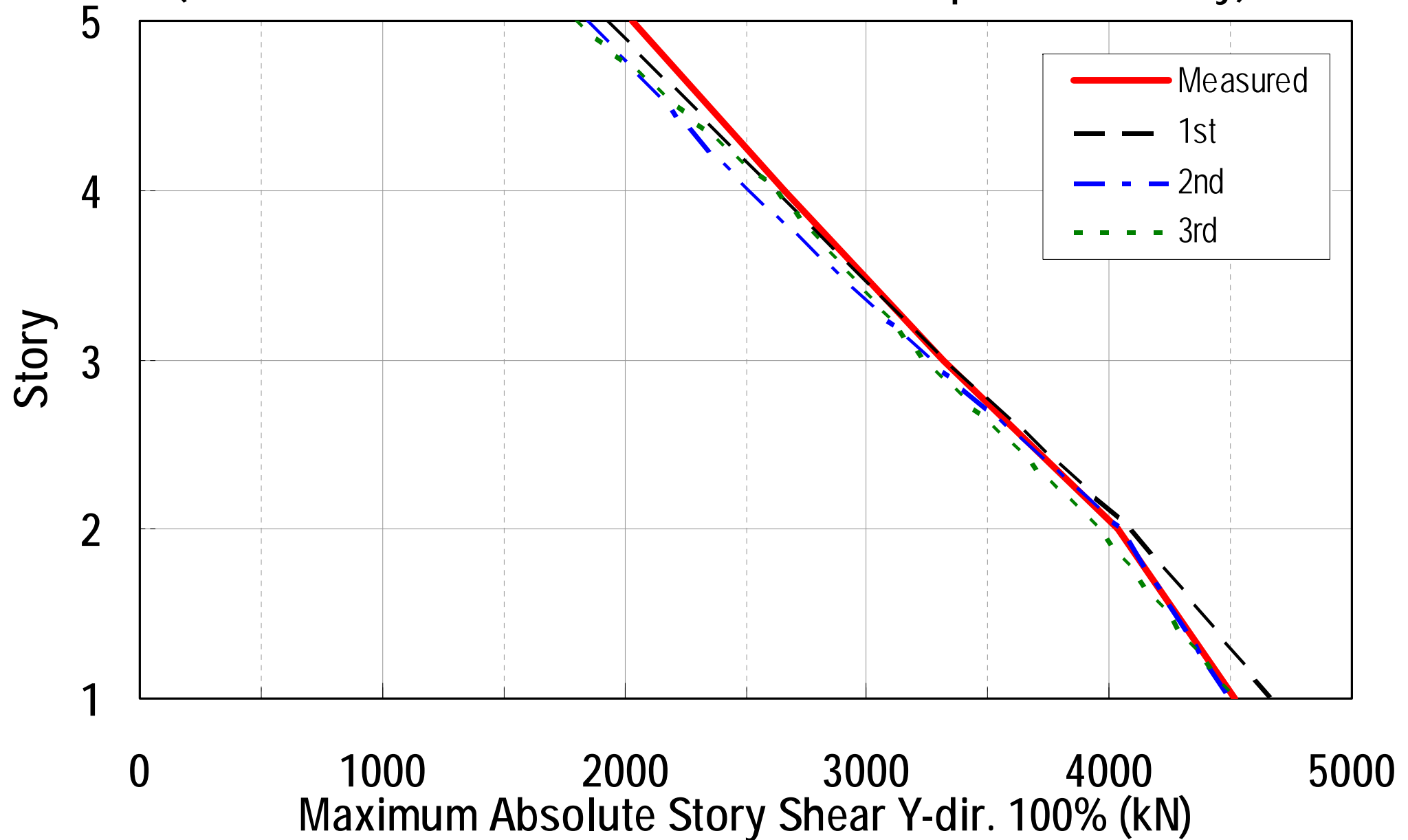
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



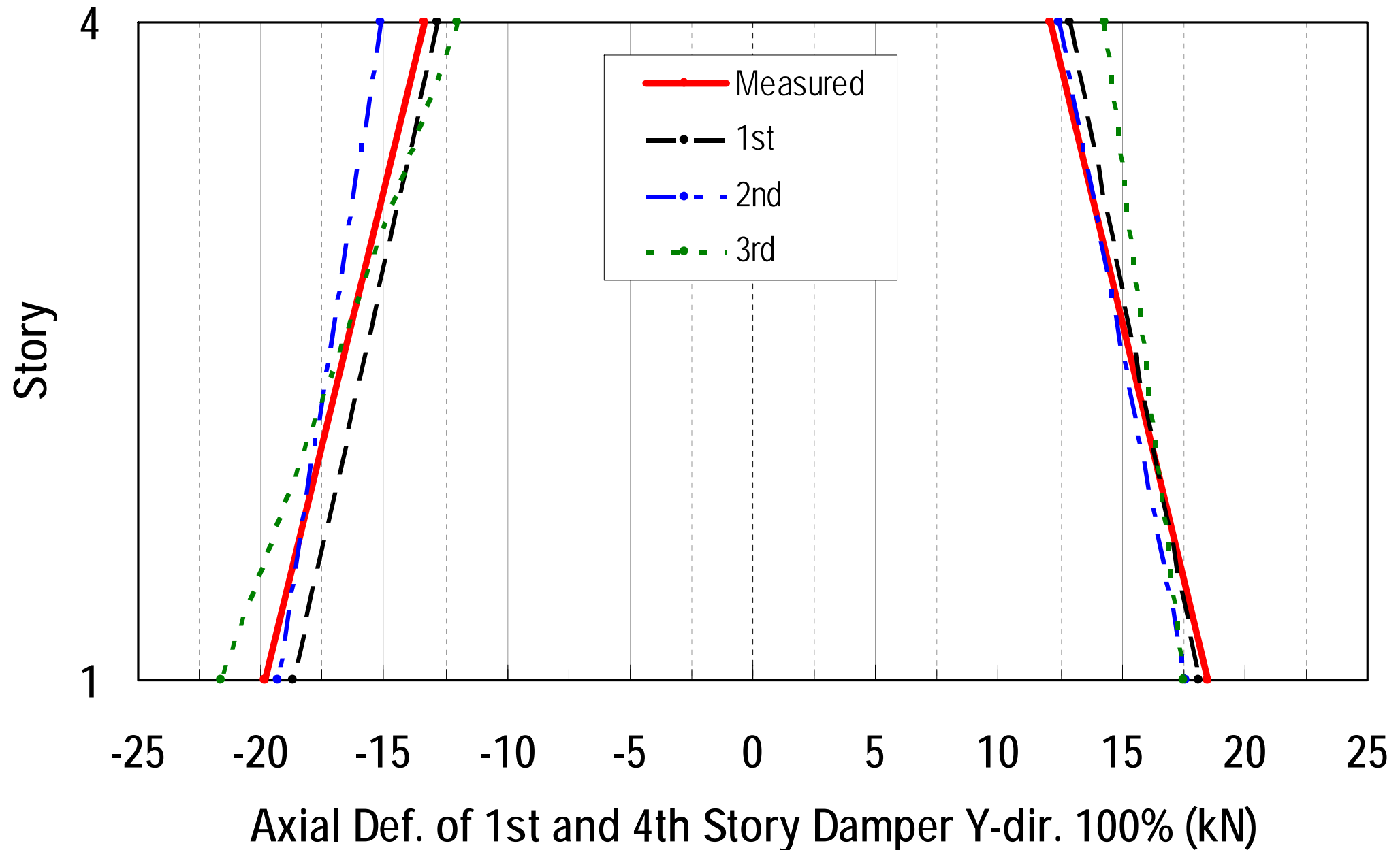
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



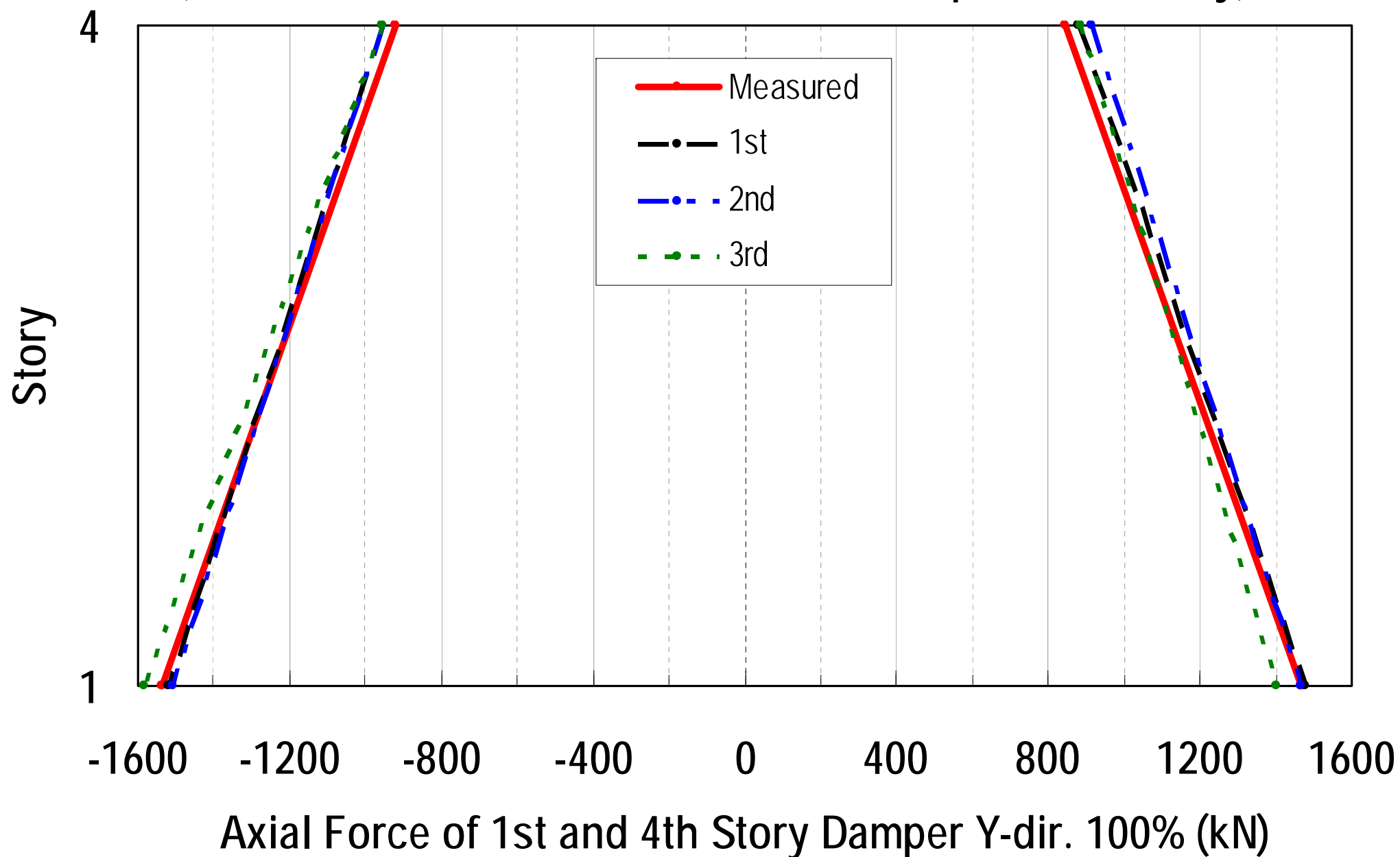
2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

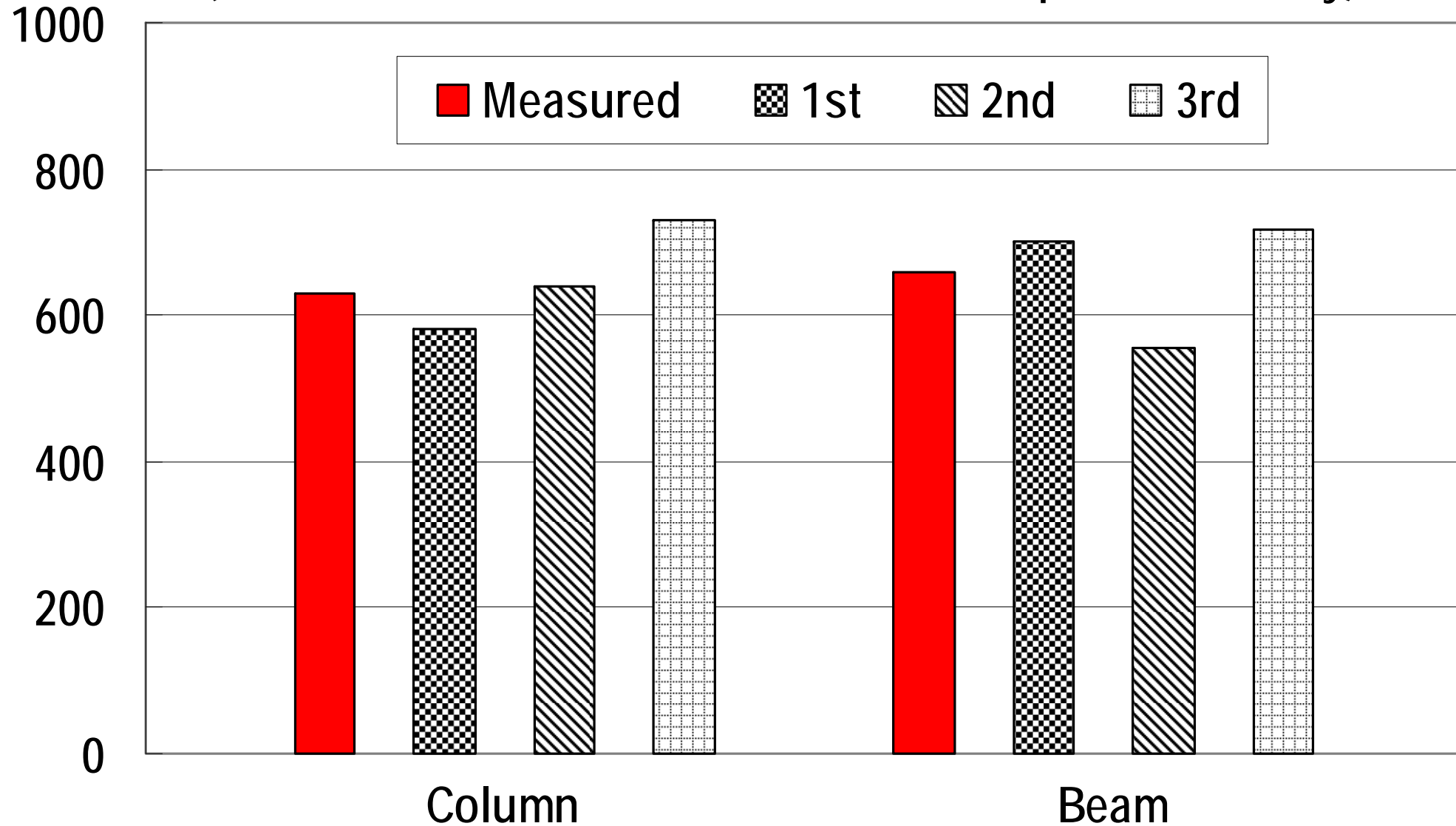


2D Steel Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



2D Steel Damper Blind Analysis Prediction Results

(μ) (Measured and Best 3 Teams of Each Response Quantity)

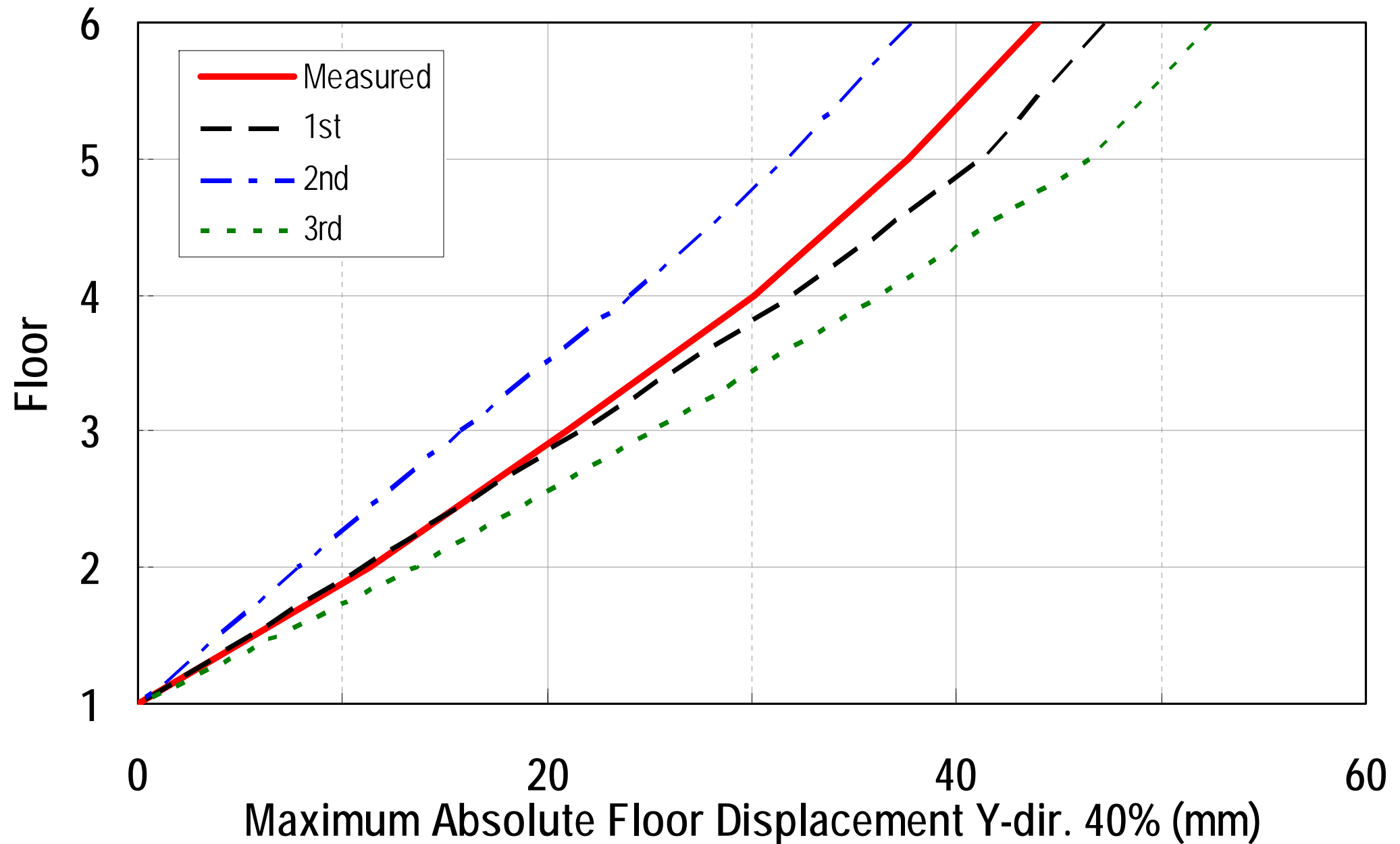


Axial Strain at the Designated Points of Colum and Beam 100%

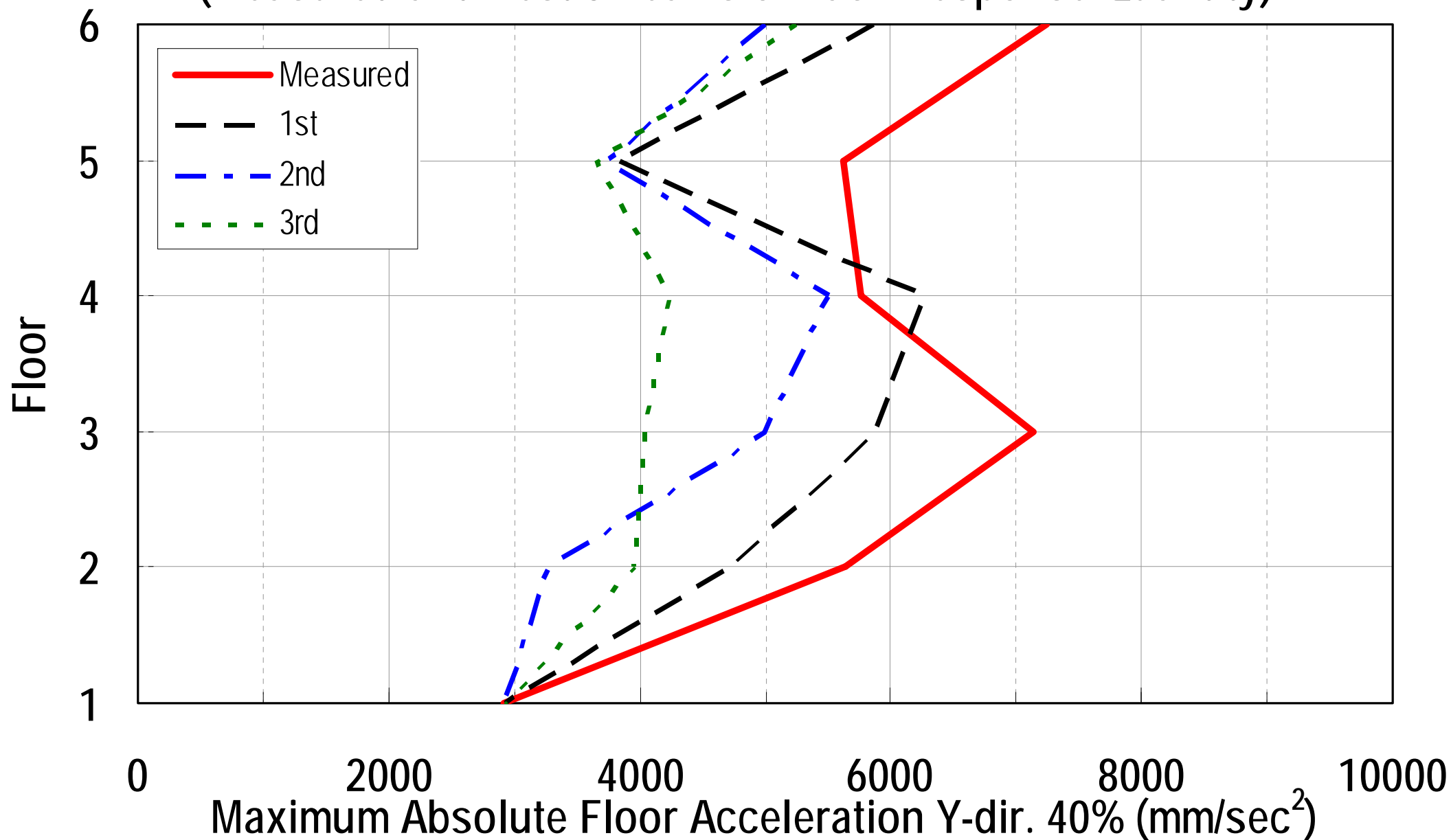


カテゴリー4: 平面骨組解析・鋼材ダンパー (実験結果及び各応答値上位3チーム)

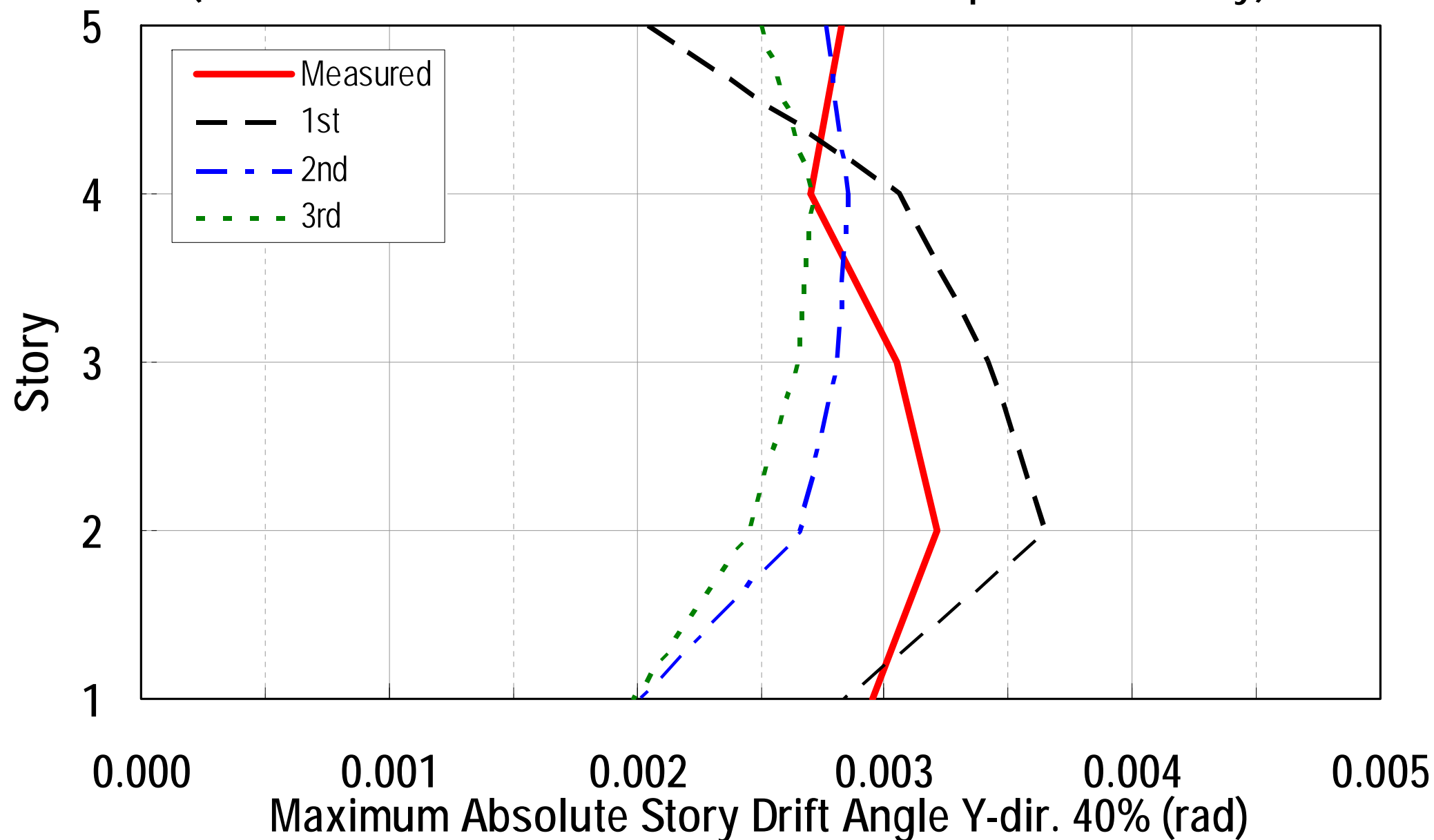
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



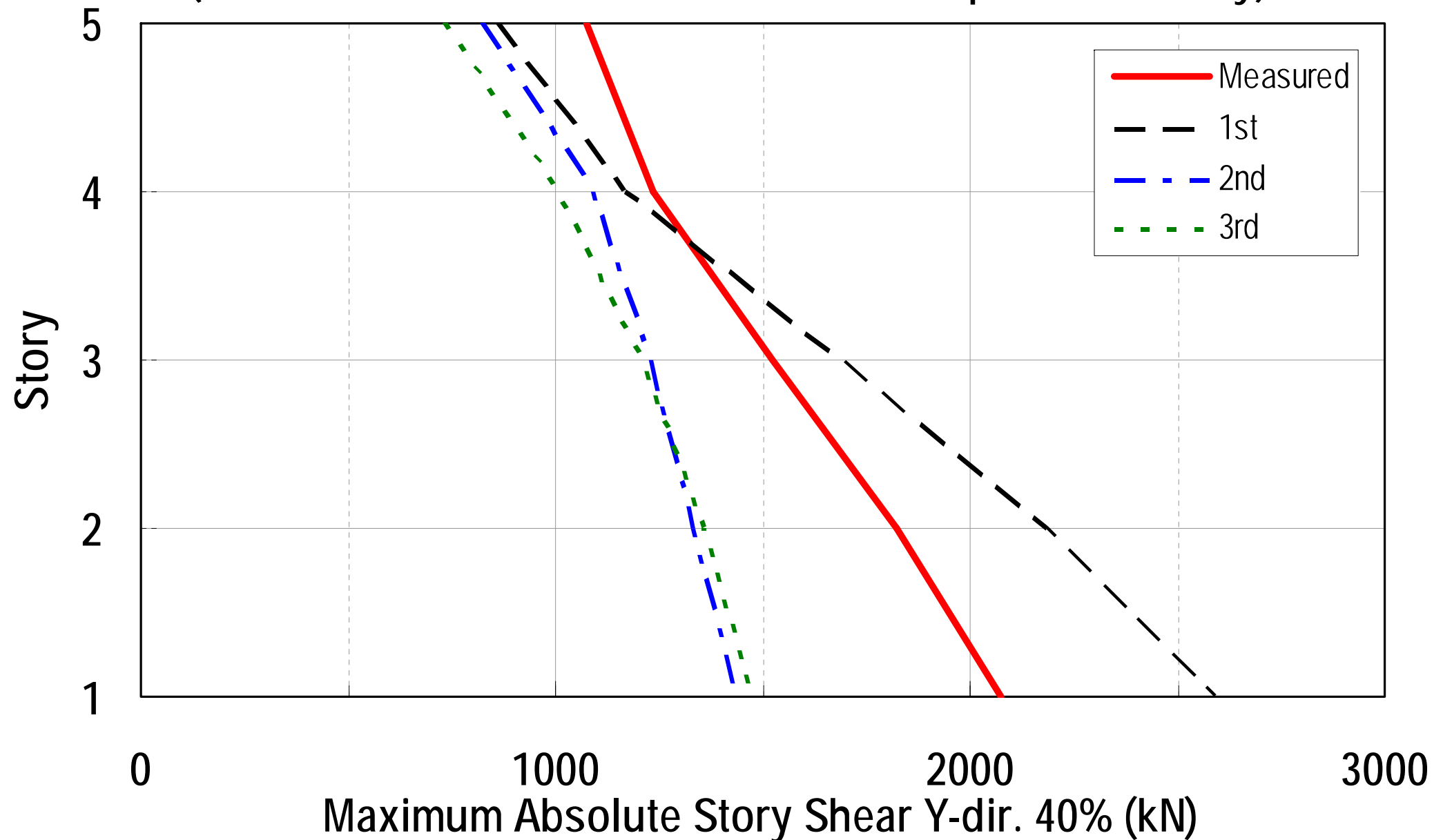
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



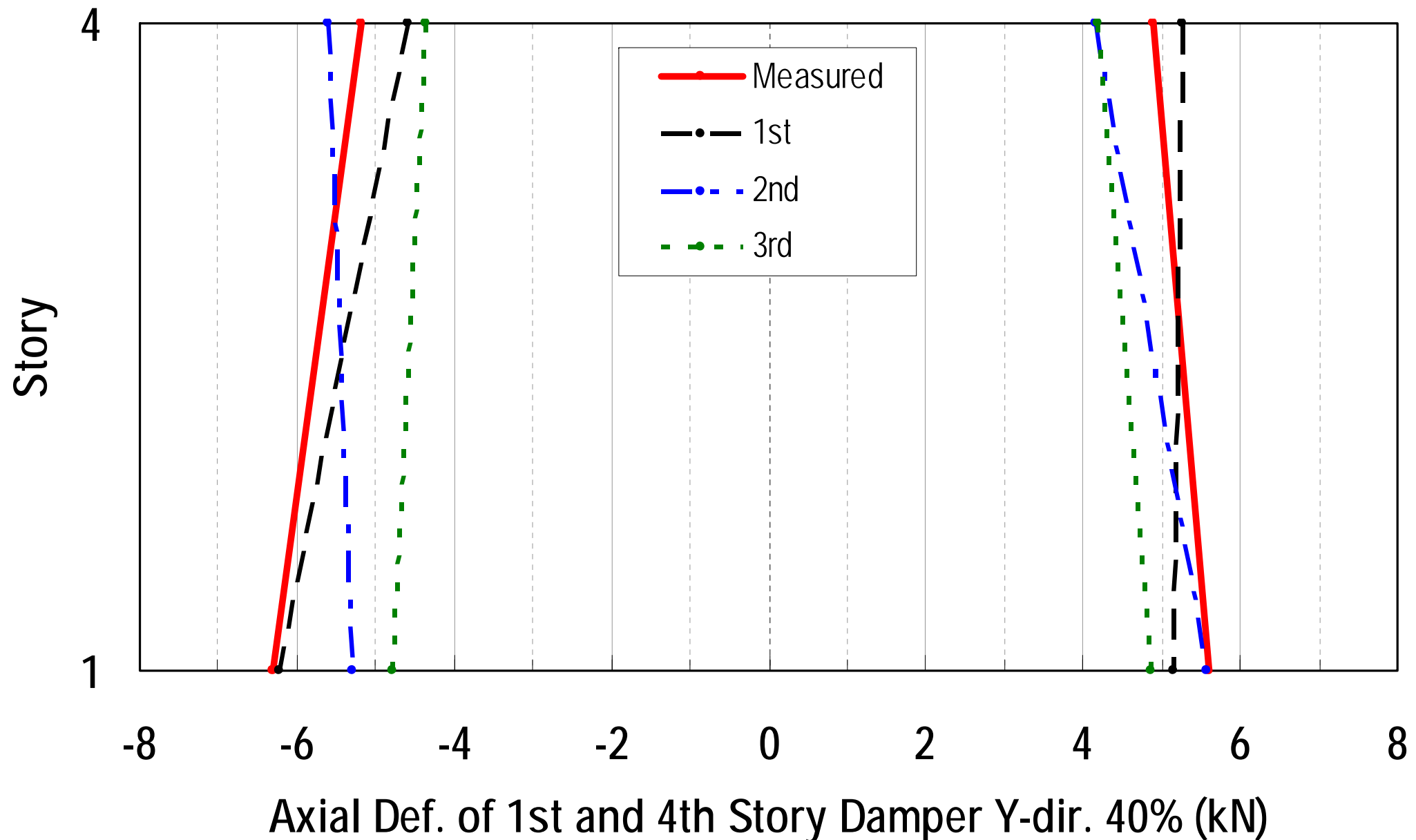
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



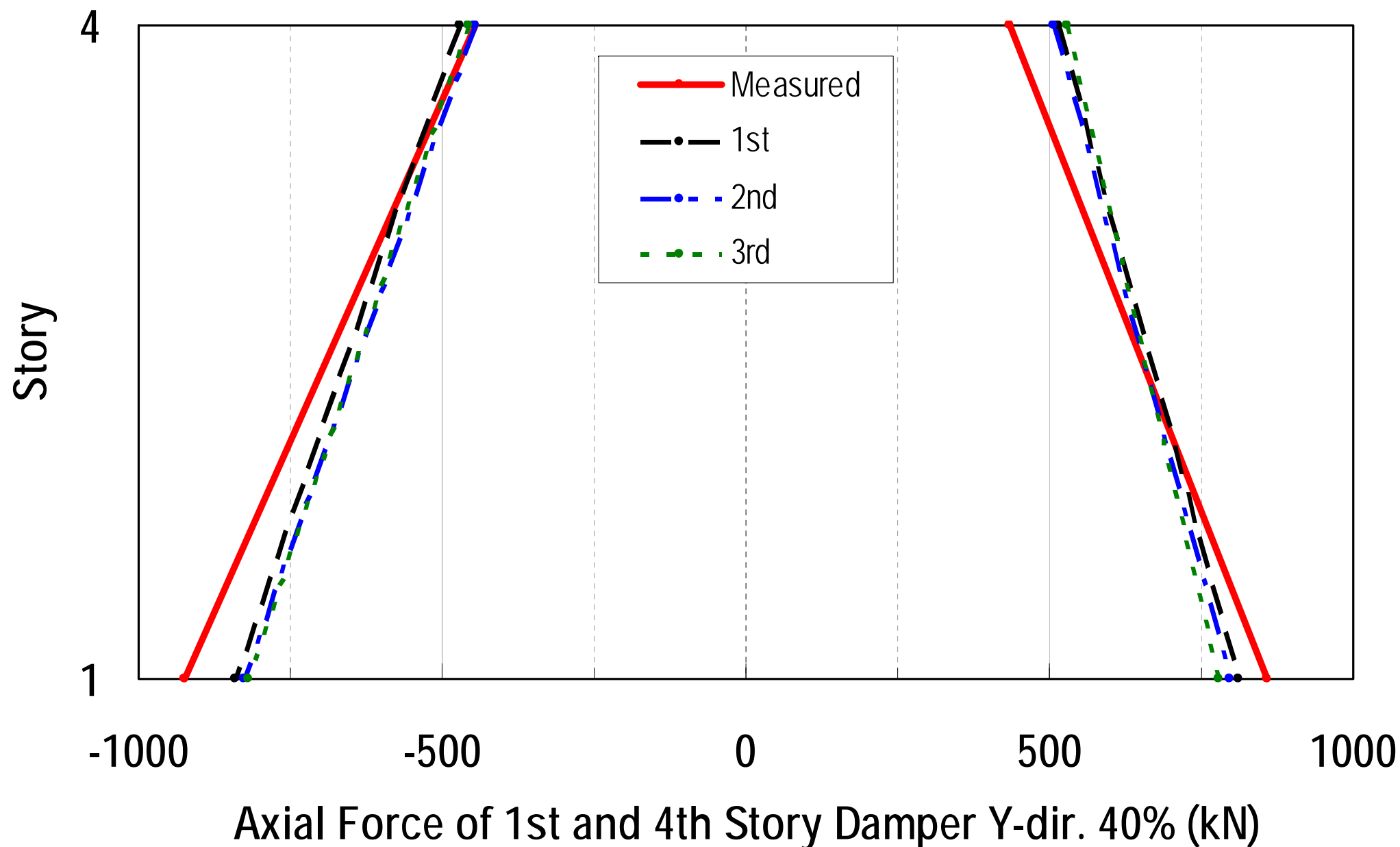
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

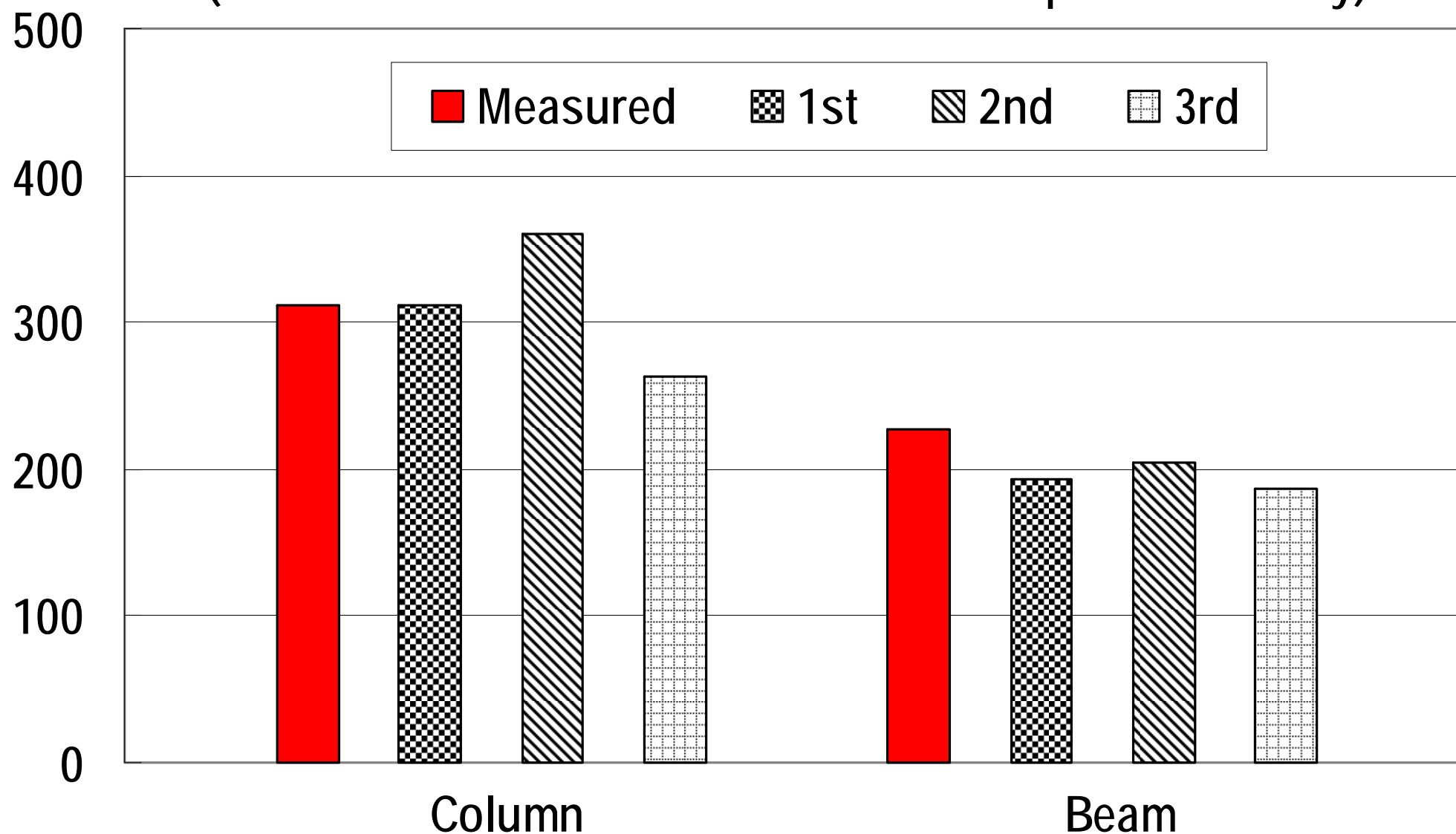


2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



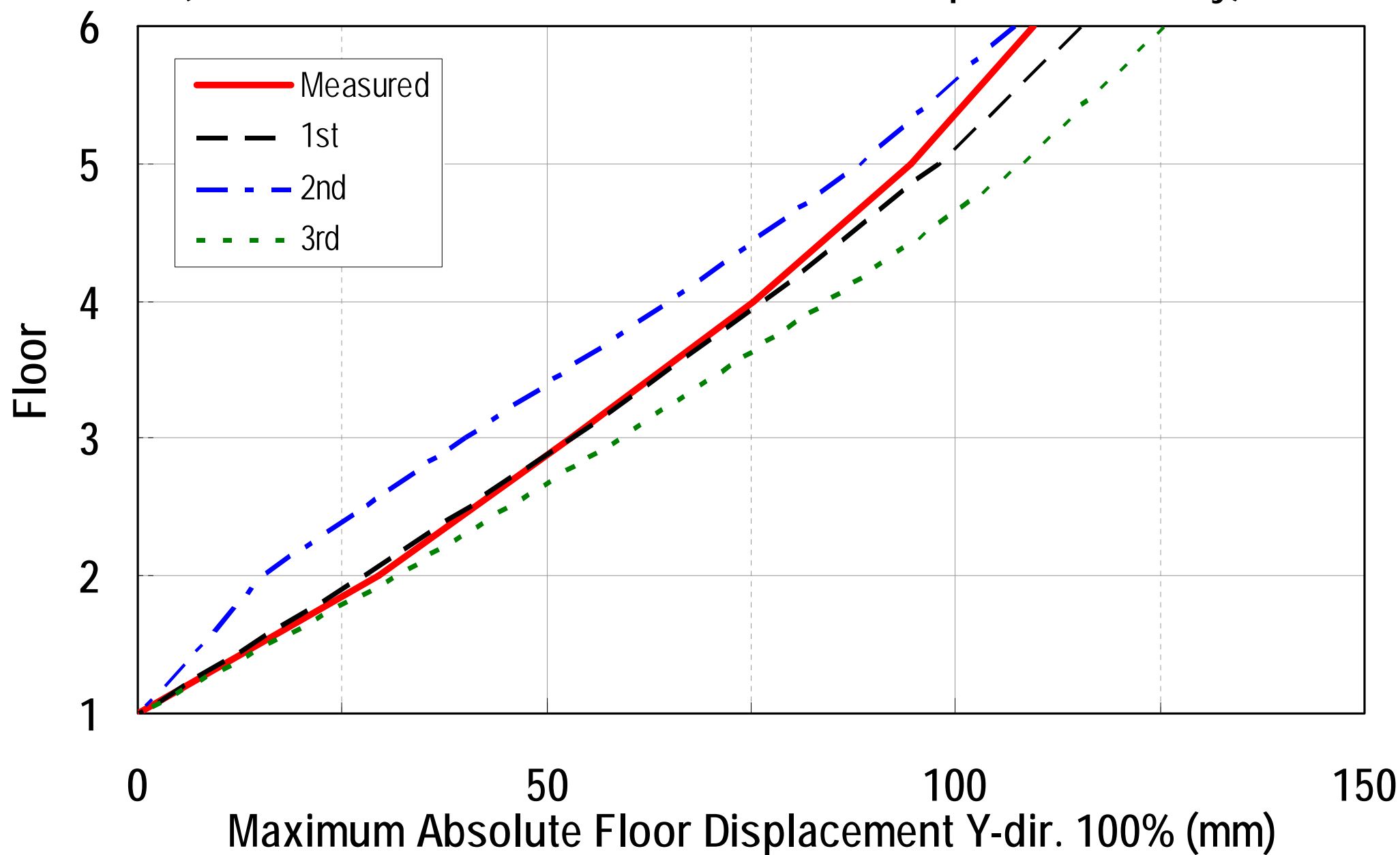
2D Viscous Damper Blind Analysis Prediction Results

(μ) (Measured and Best 3 Teams of Each Response Quantity)

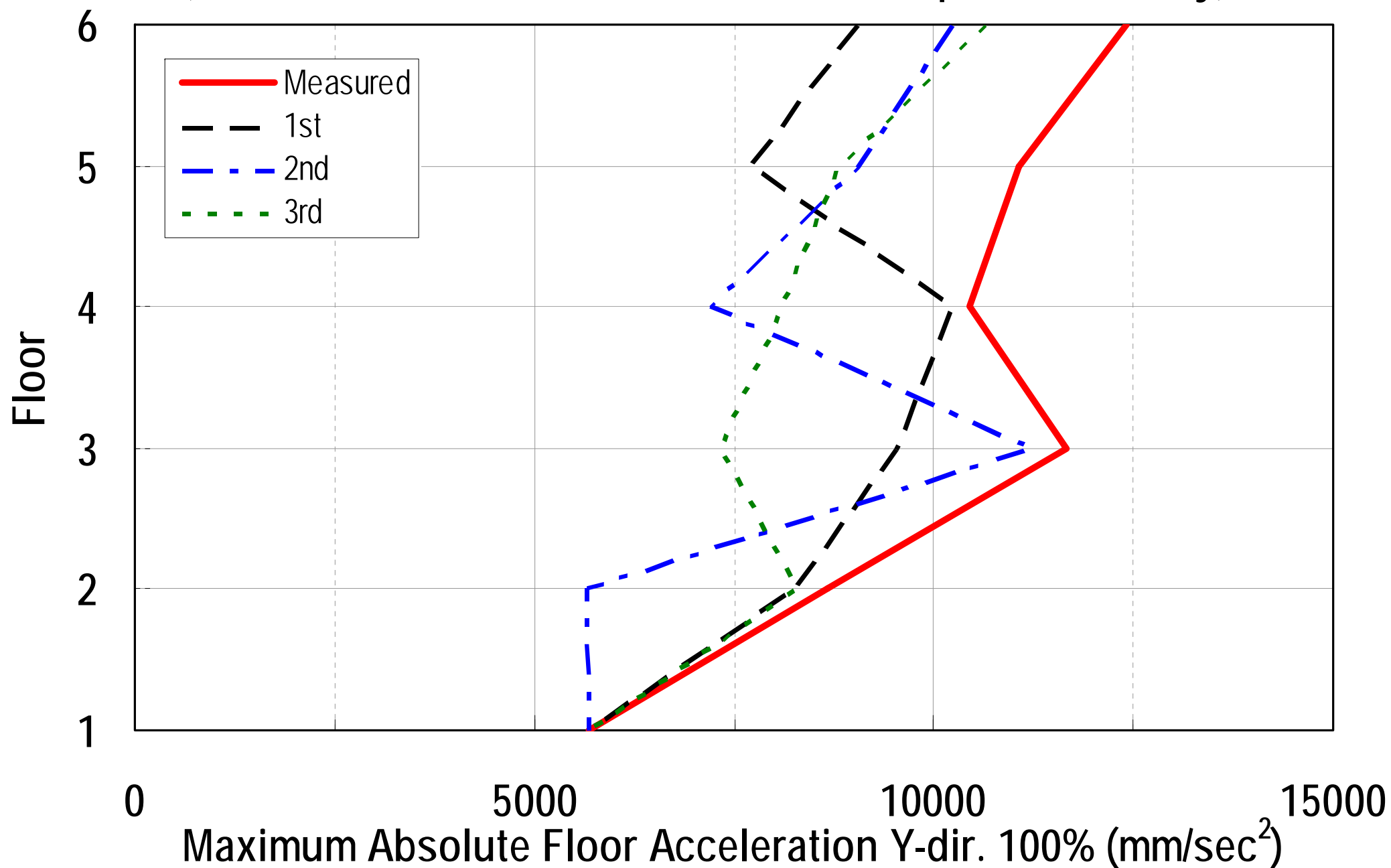


Axial Strain at the Designated Points of Colum and Beam 40%

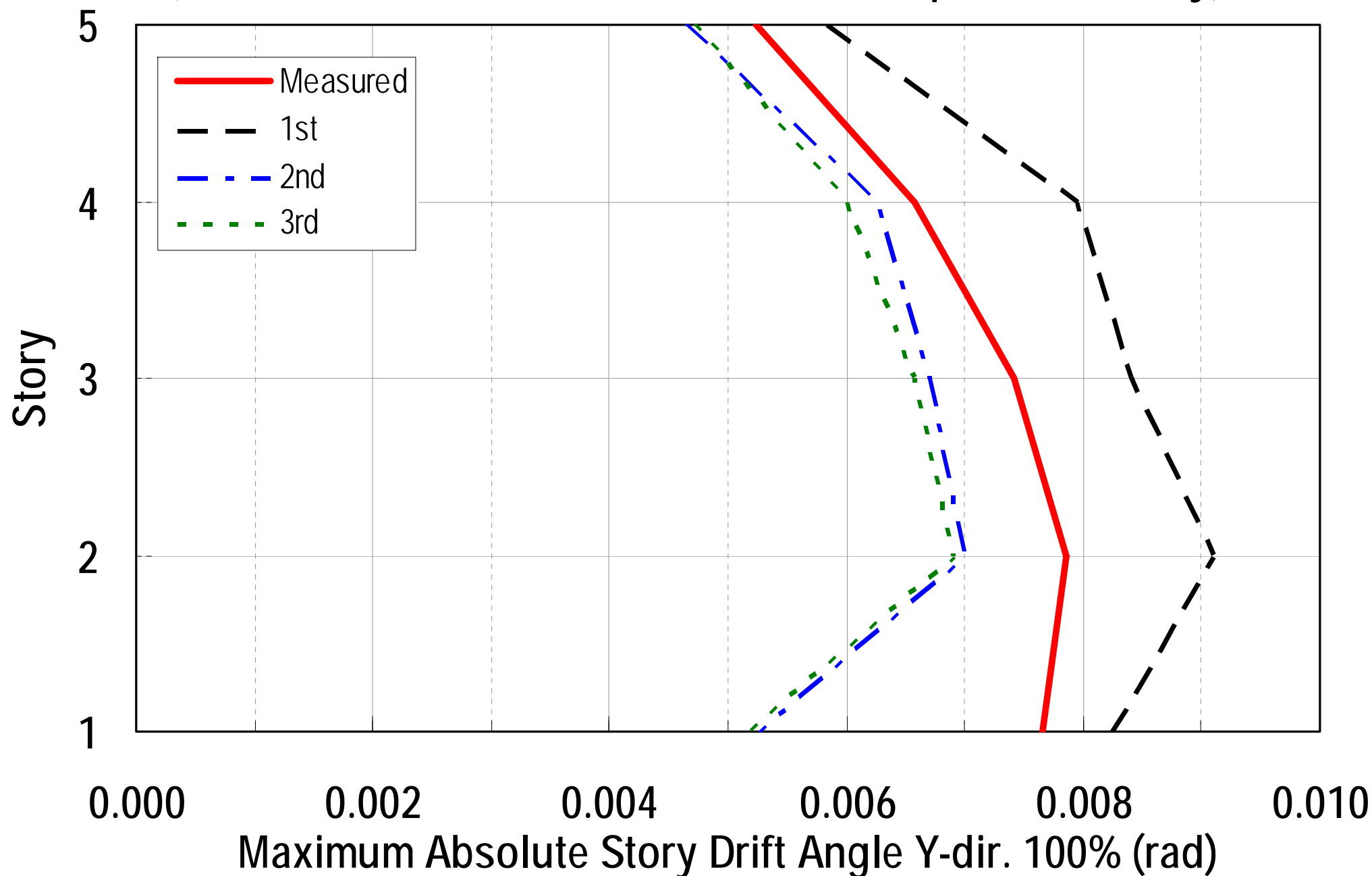
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



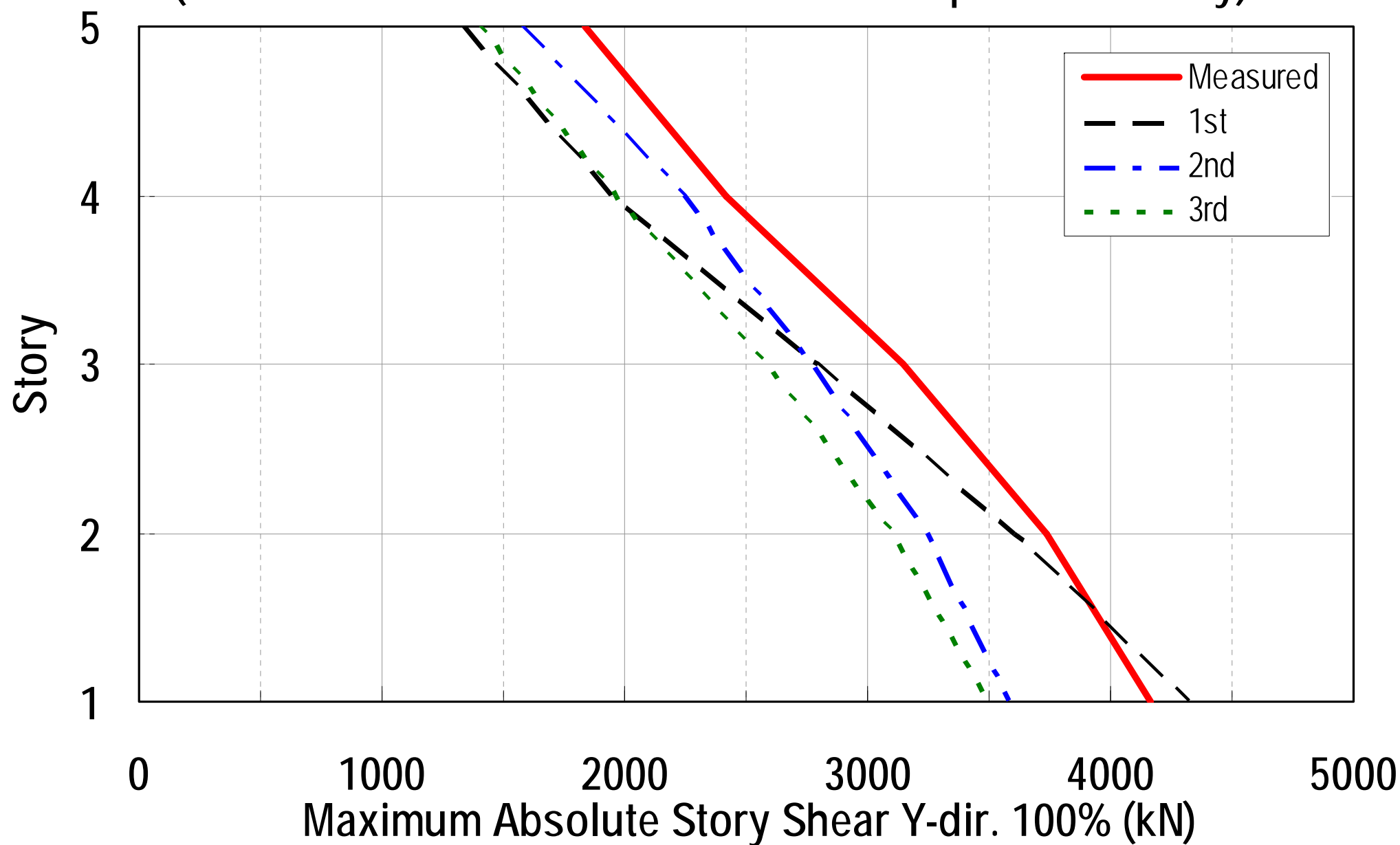
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



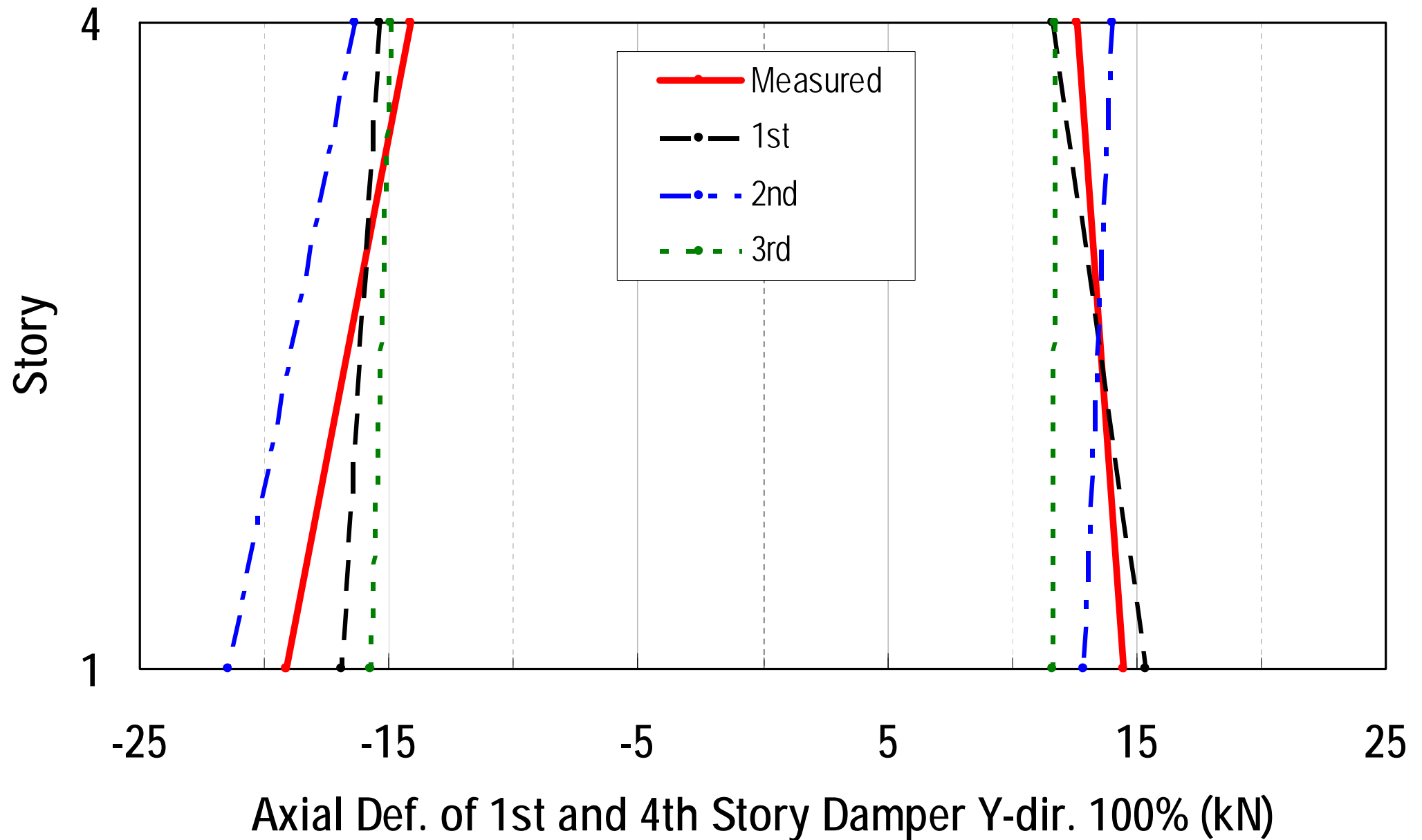
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



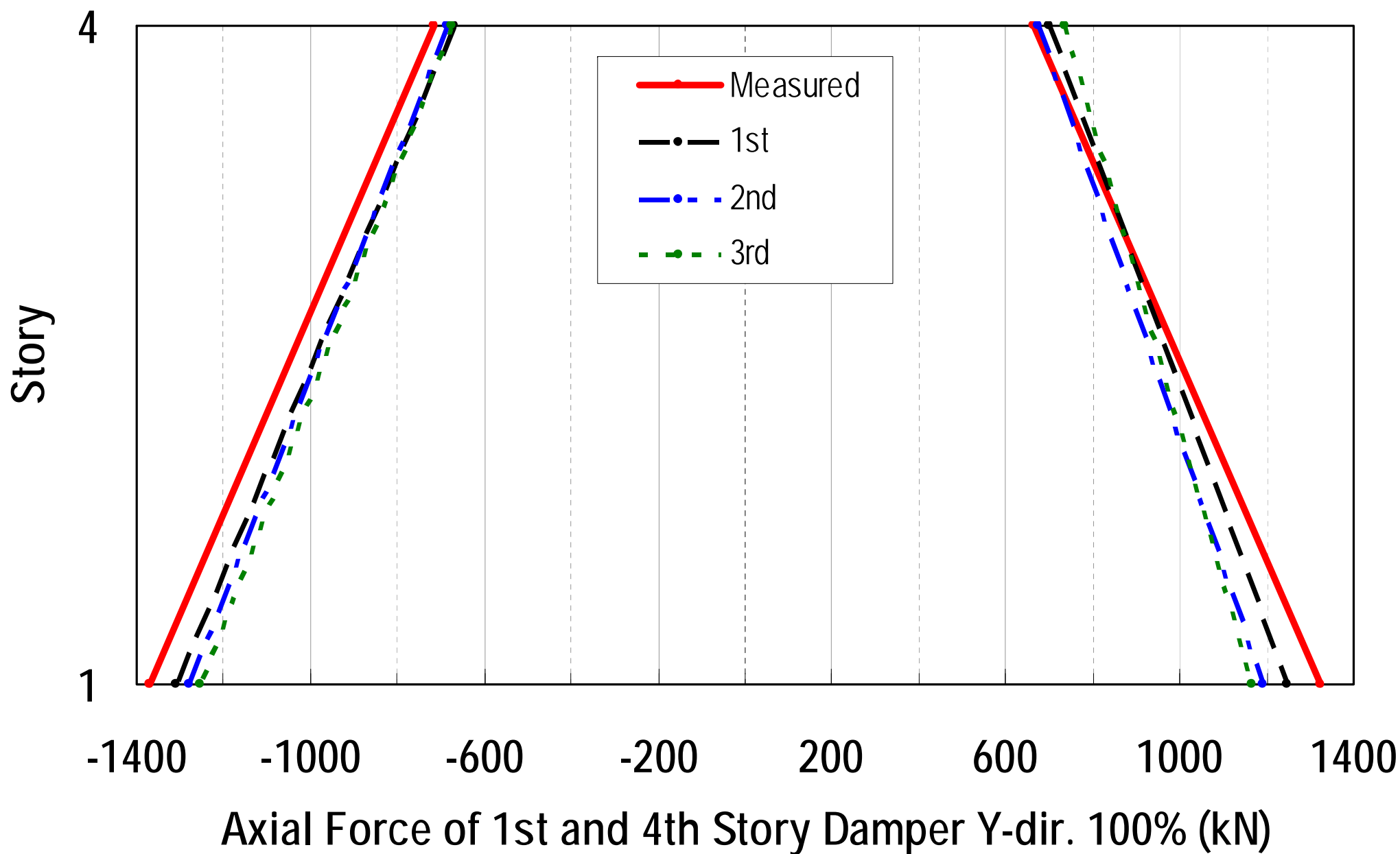
2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)

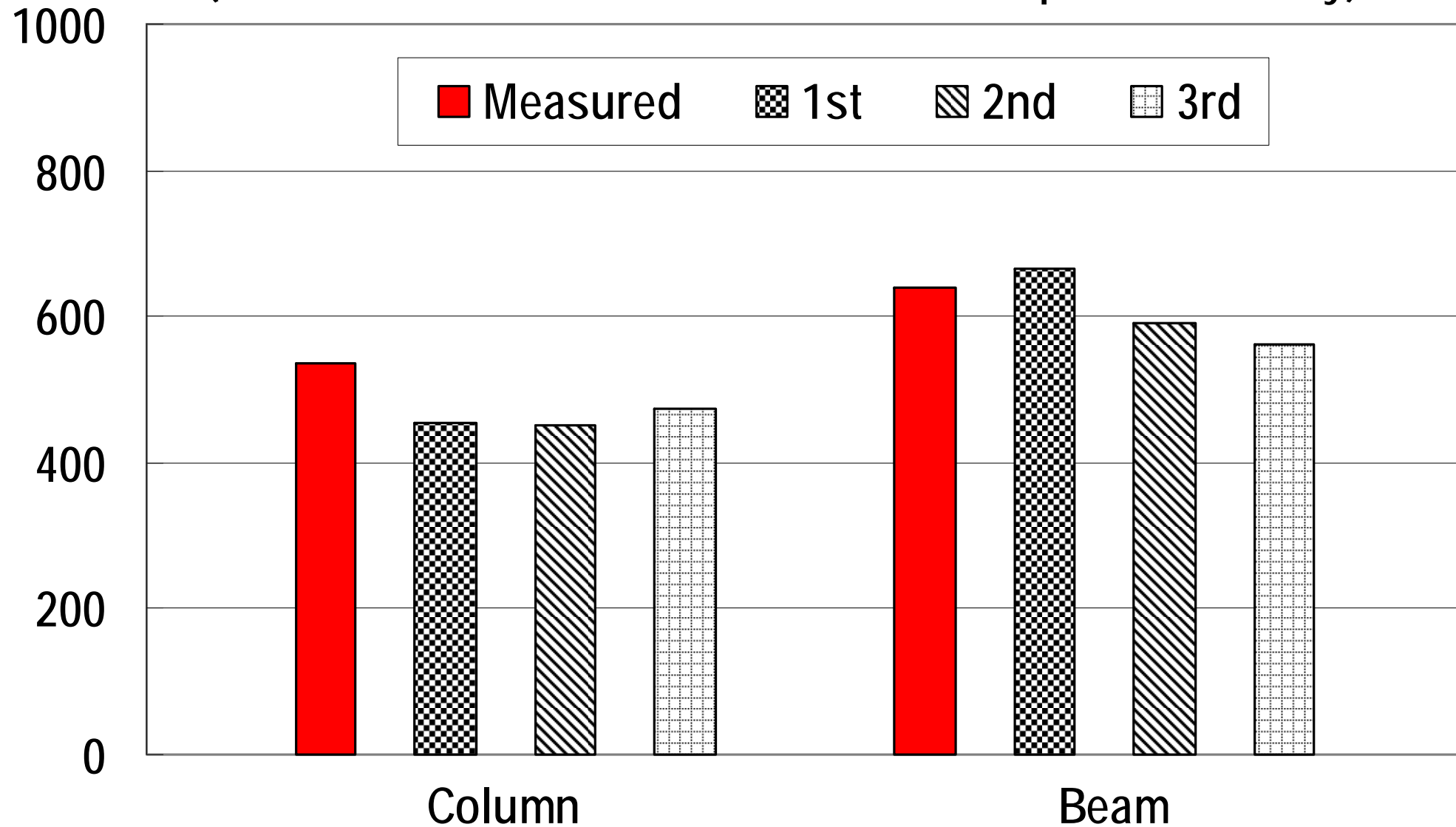


2D Viscous Damper Blind Analysis Prediction Results (Measured and Best 3 Teams of Each Response Quantity)



2D Viscous Damper Blind Analysis Prediction Results

(μ) (Measured and Best 3 Teams of Each Response Quantity)



Axial Strain at the Designated Points of Colum and Beam 100%

～ 最優秀チーム ～

7th CUEE and 5th ICEE Joint Conference, 東京, 2010 にご招待し, 表彰いたします

カテゴリー1 立体骨組解析・鋼材ダンパー

中村 尚弘, 鈴木 琢也, 中村 壮志, 山本 雅史, ほか2名
(株)竹中工務店, 日本

カテゴリー2 立体骨組解析・粘性ダンパー

山下 忠道, 川端 淳, 二宮 正行, 柴田 正樹, ほか2名
(株)構造計画研究所, 日本

カテゴリー3 平面骨組解析・鋼材ダンパー

米田 春美, 山本 雅史, 曾根 孝行, 中村 尚弘, ほか2名
(株)竹中工務店, 日本

カテゴリー4 平面骨組解析・粘性ダンパー

山下 忠道, 川端 淳, 二宮 正行, 坂場 律和, 梁川 幸盛
(株)構造計画研究所, 日本



カテゴリー1 (立体骨組解析・鋼材ダンパー) 上位3チーム

最優秀 (134 pt.)

中村 尚弘, 鈴木 琢也, 中村 壮志, 山本 雅史, 曾根 孝行,
米田 春美
(株)竹中工務店, 日本

第2位 (107 pt.)

Yi-Jer Yu, Jui-Liang Lin, Pei-Ching Chen, Min-Lang Lin
National Center for Research on Earthquake Engineering, 台湾

第3位 (90 pt.)

修行 稔
長崎大学, 日本



カテゴリー2 (立体骨組解析・粘性ダンパー) 上位3チーム

最優秀 (131 pt.)

山下 忠道, 川端 淳, 二宮 正行, 柴田 正樹, 坂場 律和,
梁川 幸盛
(株)構造計画研究所, 日本

第2位 (96 pt.)

中村 尚弘, 鈴木 琢也, 中村 壮志, 山本 雅史, 曾根 孝行,
米田 春美
(株)竹中工務店, 日本

第3位 (70 pt.)

Yi-Jer Yu, Jui-Liang Lin, Pei-Ching Chen, Min-Lang Lin
National Center for Research on Earthquake Engineering, 台湾



カテゴリー3 (平面骨組解析・鋼材ダンパー) 上位3チーム

最優秀 (50 pt.)

米田 春美, 山本 雅史, 曾根 孝行, 中村 尚弘, 鈴木 琢也,
中村 壮志 (株)竹中工務店, 日本

第2位 (43 pt.)

Bruce Maison
Structural Engineer, 米国

第3位 (42 pt.)

Yushu Liu, Gregory Deierlein, Xiang Ma, Dimitrios Lignos
Stanford University, 米国

第3位 (42 pt.)

Yi-Jer Yu, Jui-Liang Lin, Pei-Ching Chen, Min-Lang Lin
National Center for Research on Earthquake Engineering, 台湾



カテゴリー4 (平面骨組解析・粘性ダンパー) 上位3チーム

最優秀 (90 pt.)

山下 忠道, 川端 淳, 二宮 正行, 坂場 律和, 梁川 幸盛
(株)構造計画研究所, 日本

第2位 (55 pt.)

Liling Cao, Ali Ashrafi, Elisabeth Malsch, Graeme Ballantyne
Thornton Tomasetti Inc., 米国

第3位 (38 pt.)

米田 春美, 山本 雅史, 曾根 孝行, 中村 尚弘, 鈴木 琢也,
中村 壮志
(株)竹中工務店, 日本