

Ice-time Is Not The Cause of Score Effects

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Outline

- ▶ What are score effects?
- ▶ What might cause them?
- ▶ Are they caused by differences in ice-time for different players?
- ▶ They are not.

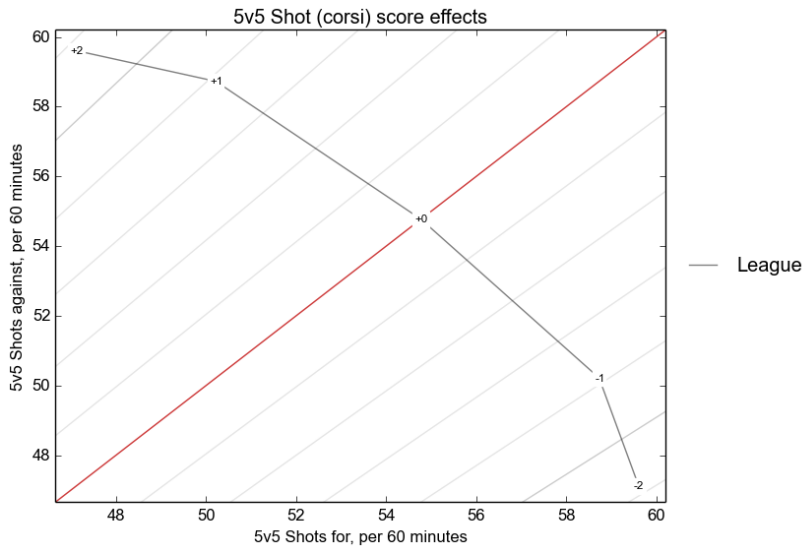
Score Effects

“Score Effects” is the name we give to a well-known phenomenon:

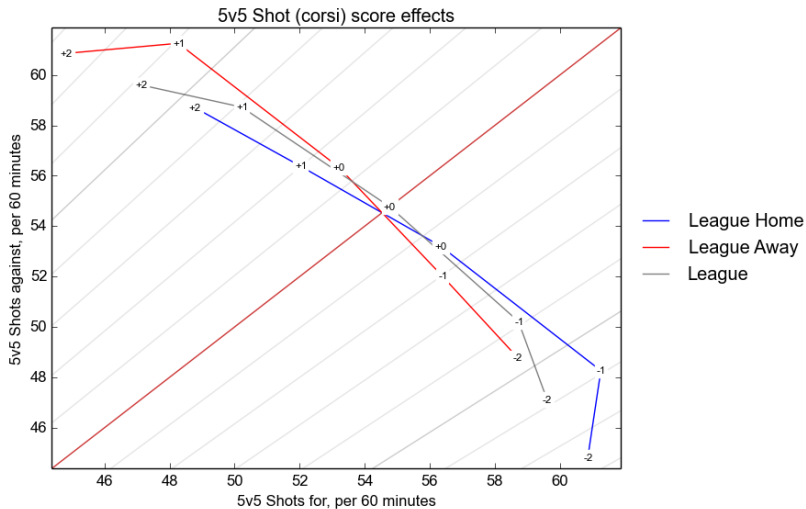
Trailing teams dominate

Today, we are interested in all 5v5 shots, that is: goals, saves, misses, and blocks.

Score Effects on Shot Rates

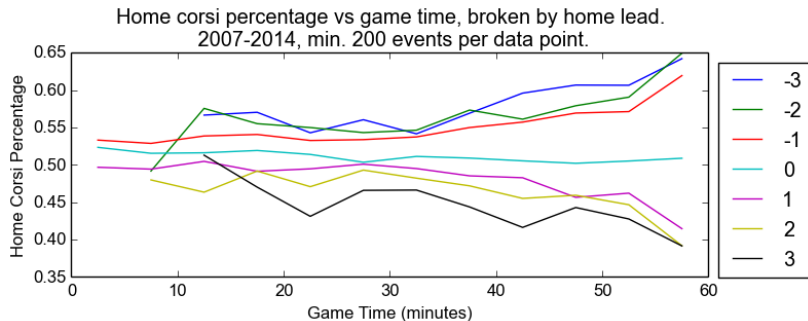


Score Effects on Shot Rates, Home/Away



Score Effects on Shot Rates over Time

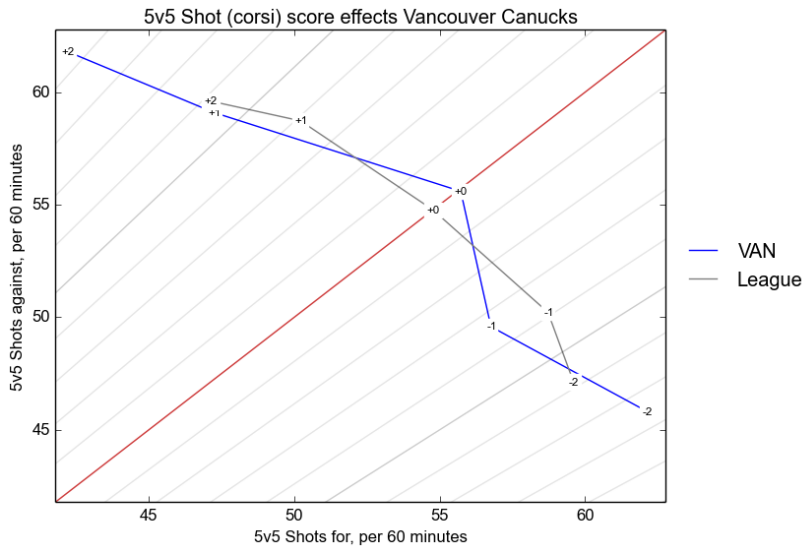
Score effects intensify over time but are marked throughout.



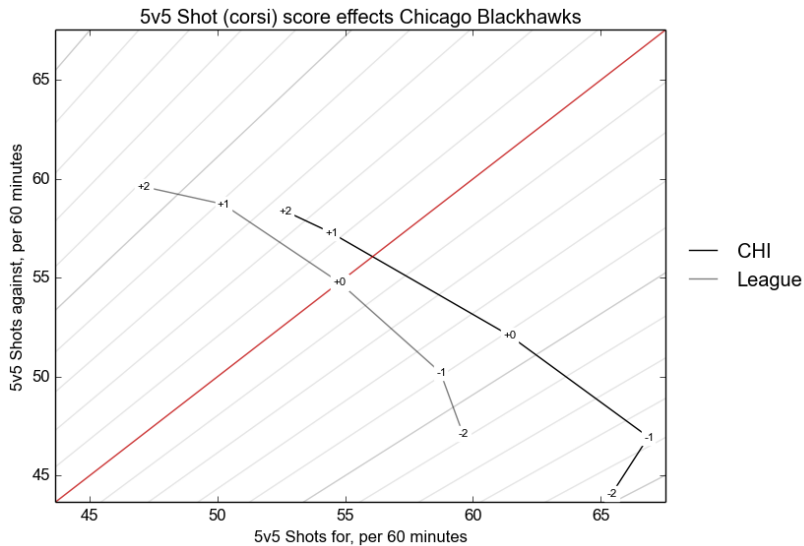
Possible Causes of Score Effects

- ▶ Ice-time assignments.
- ▶ Changes in coaching systems.
- ▶ Individual risk aversion.
- ▶ Intrinsic effort.

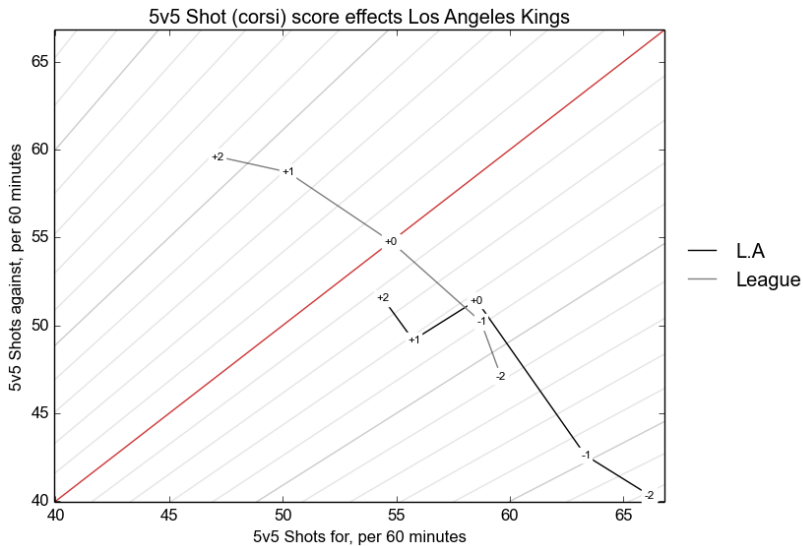
Vancouver Score Effects



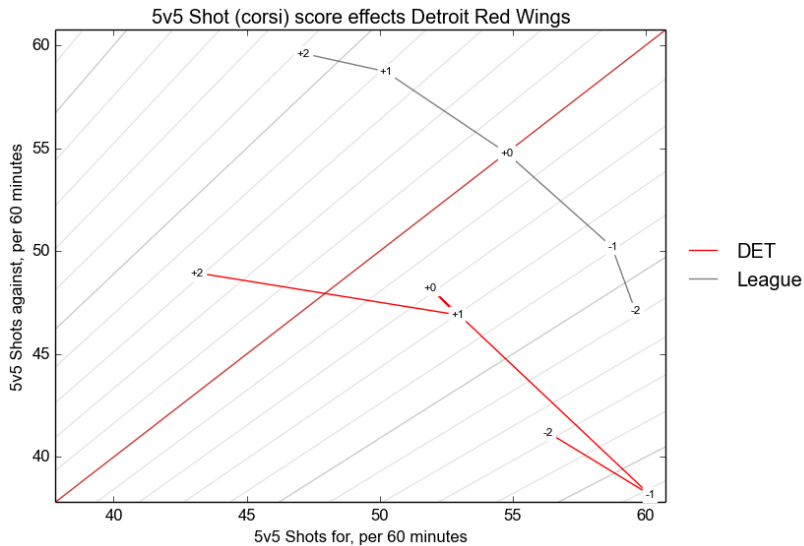
Chicago Score Effects



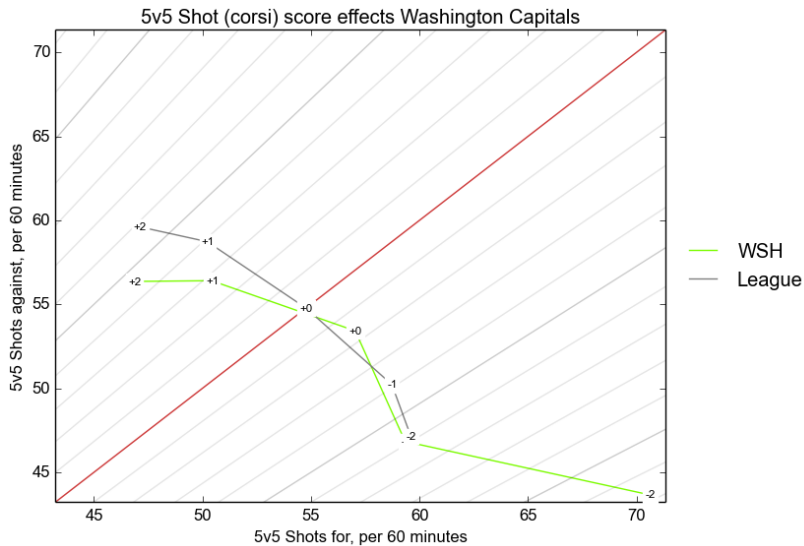
Los Angeles Score Effects



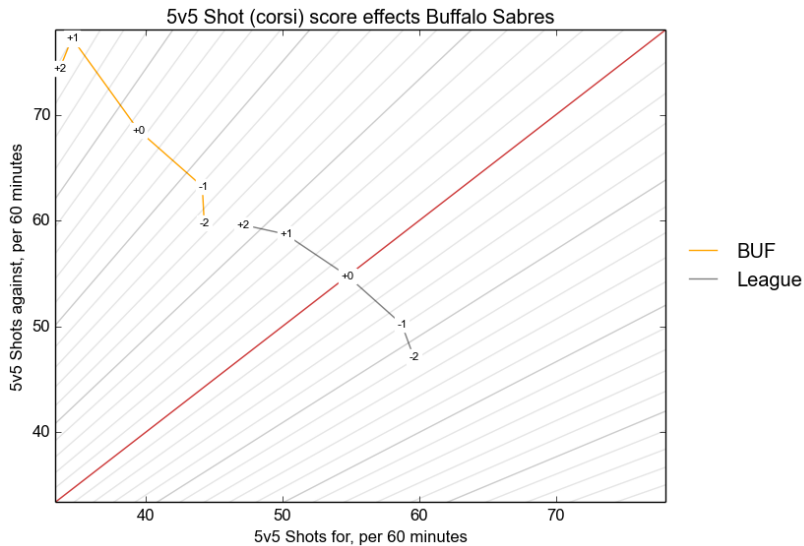
Detroit Score Effects



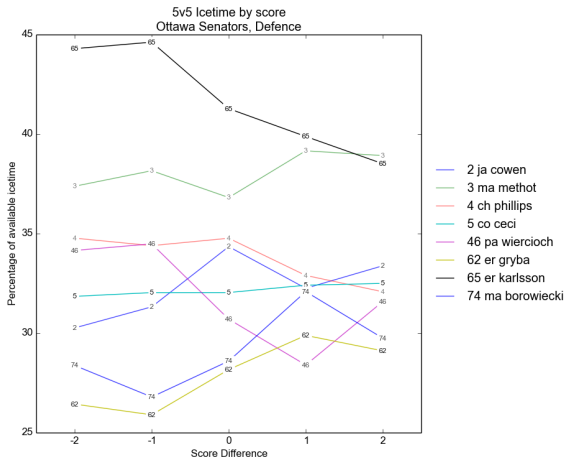
Washington Score Effects



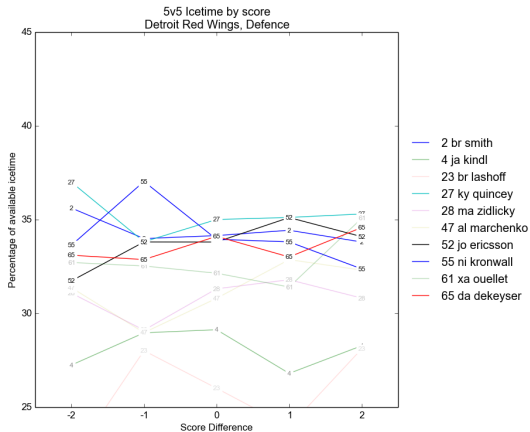
Buffalo Score Effects



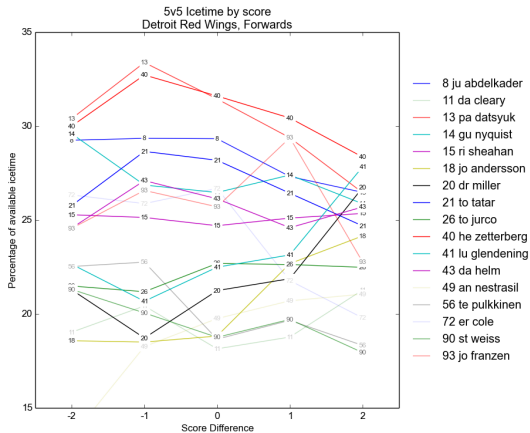
Ottawa Defence Ice-time



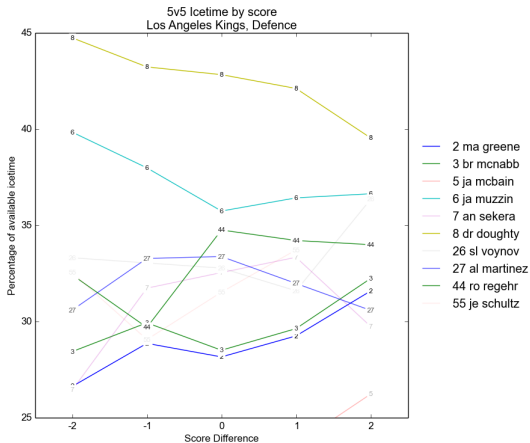
Detroit Defence Ice-time



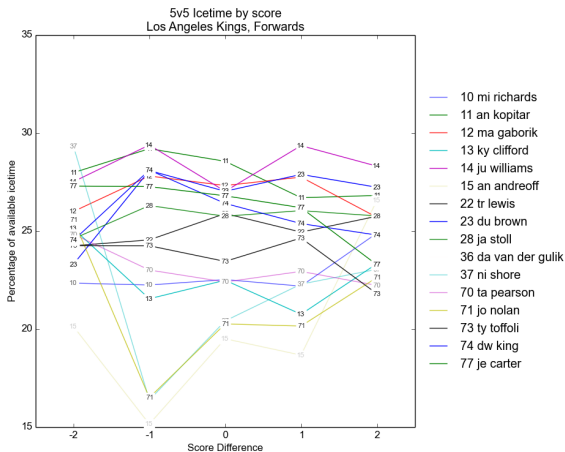
Detroit Forwards Ice-time



Los Angeles Defence Ice-time



Los Angeles Forward Ice-time

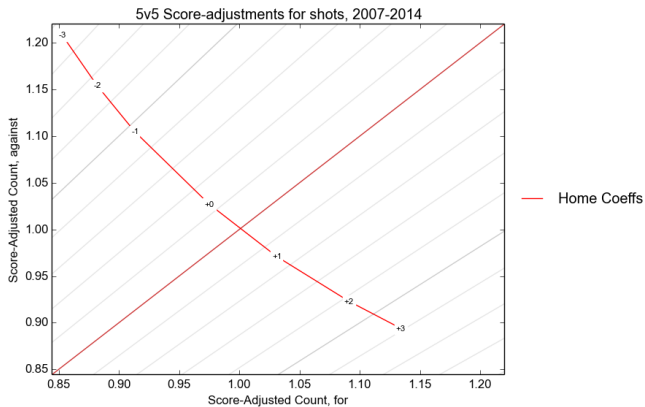


Score-adjusted Shots

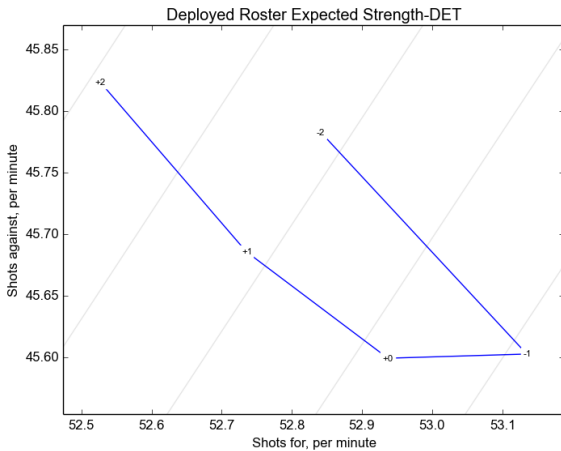
We can estimate a player's underlying skill at shot generation and shot suppression using *score adjusted shots*.

Shots taken by the home team or by the trailing team are worth slightly *less*, shots taken by the road team or by the leading team are worth slightly *more*.

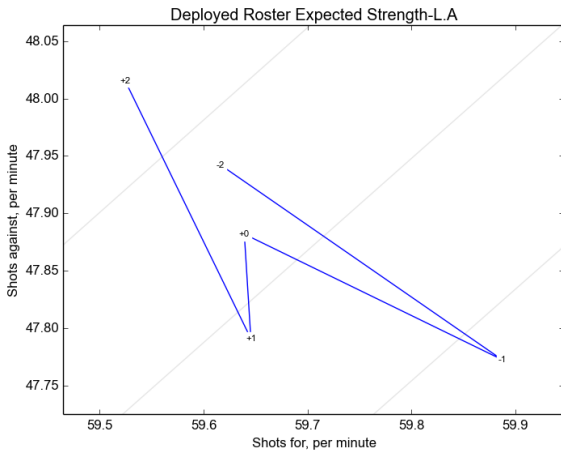
Score-adjustment Coefficients



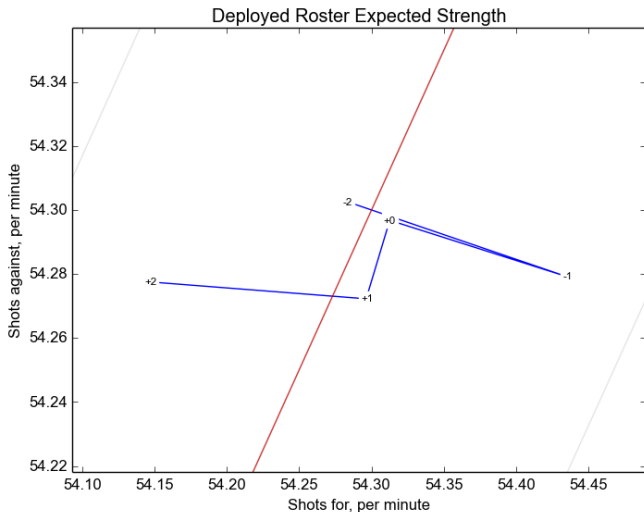
Detroit Roster Strength by Score State



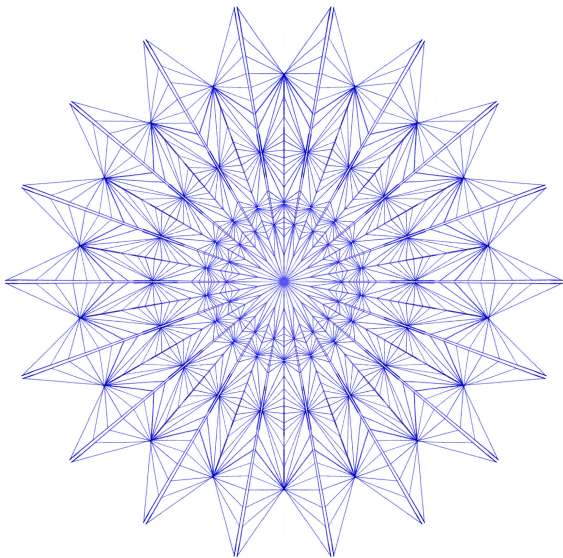
Los Angeles Roster Strength by Score State



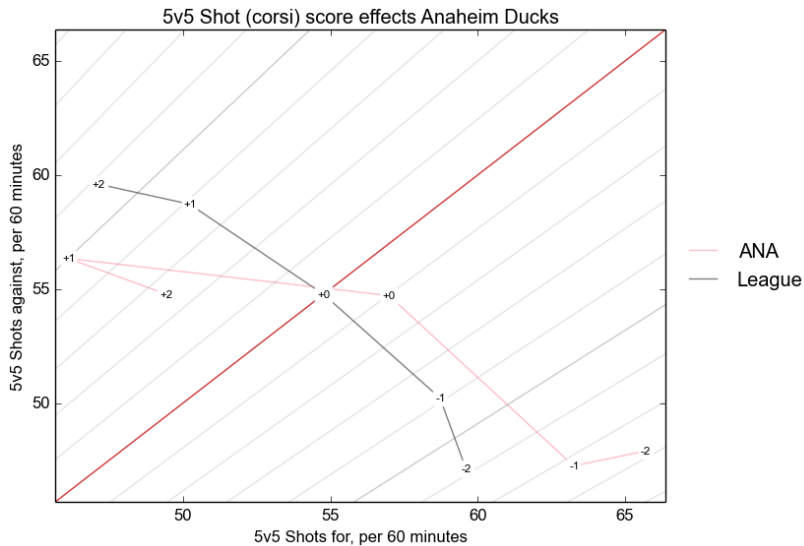
Roster Strength by Score State



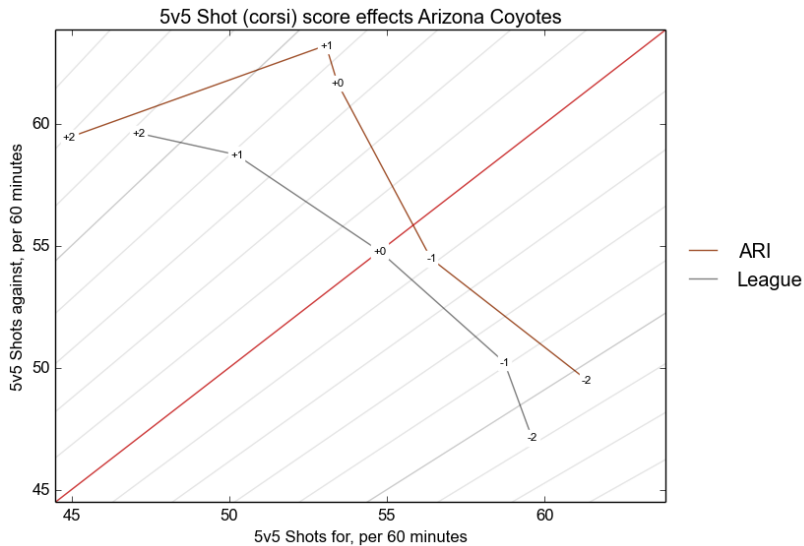
Thanks!



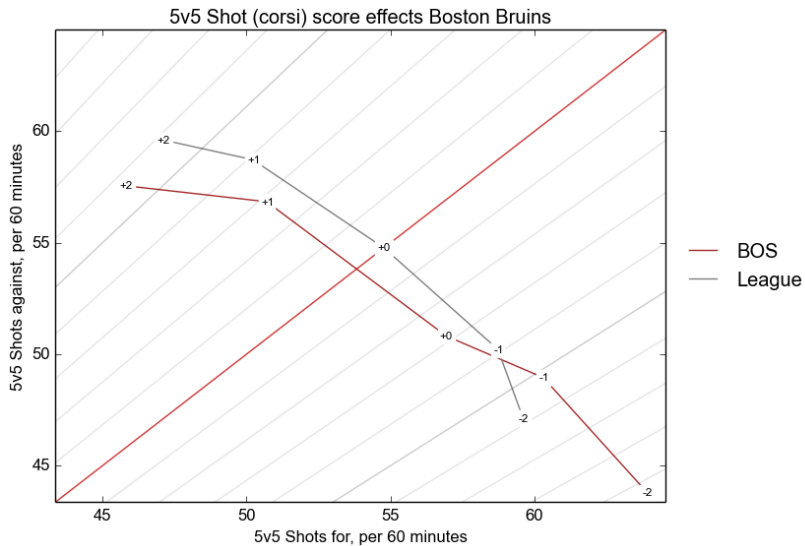
Anaheim Ducks Score Effects



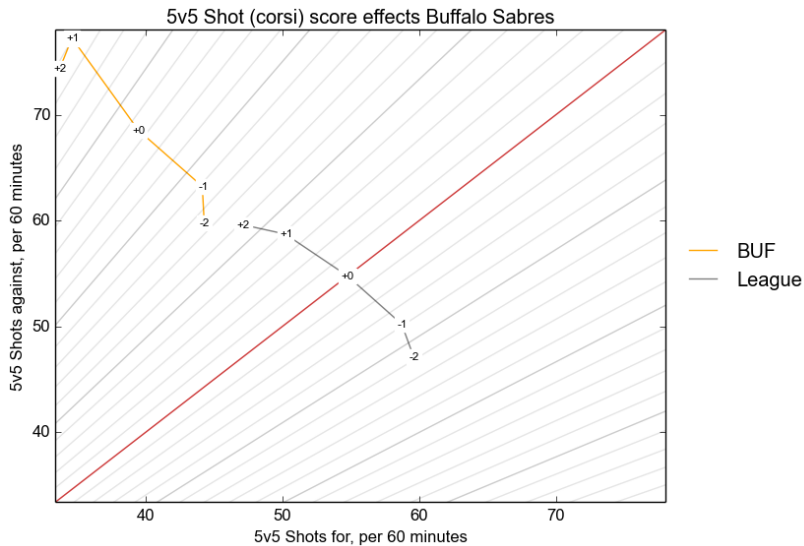
Arizona Coyotes Score Effects



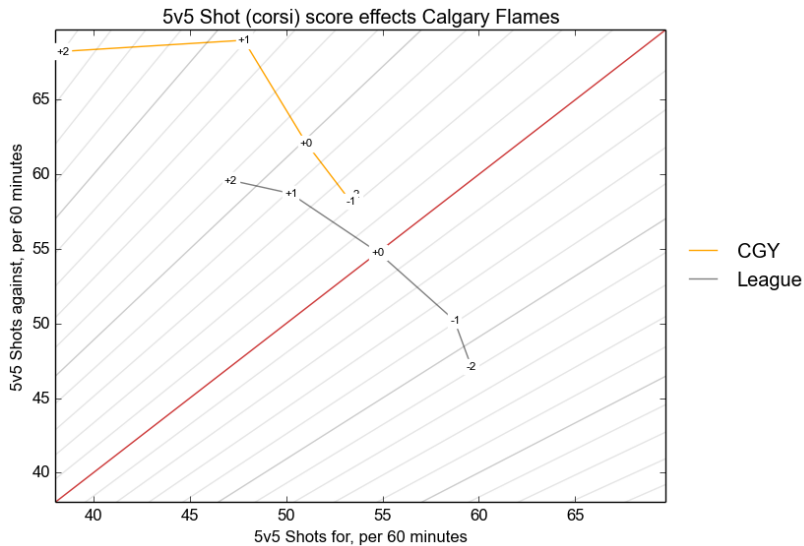
Boston Bruins Score Effects



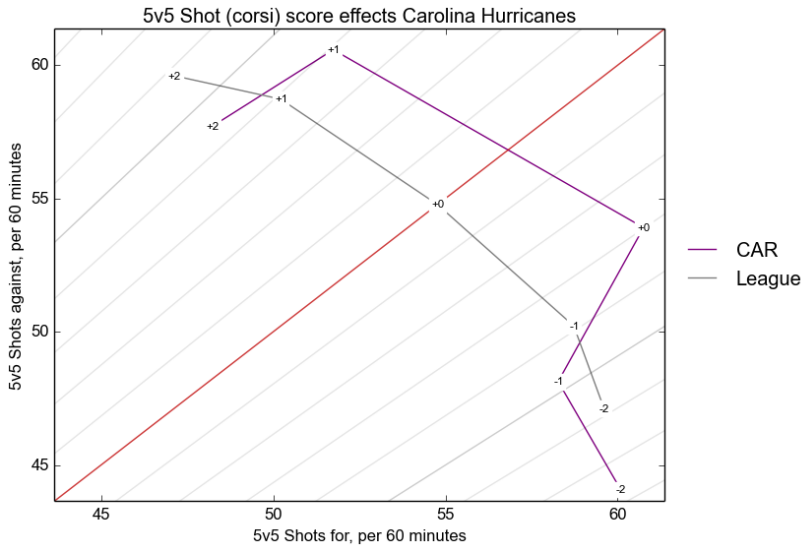
Buffalo Sabres Score Effects



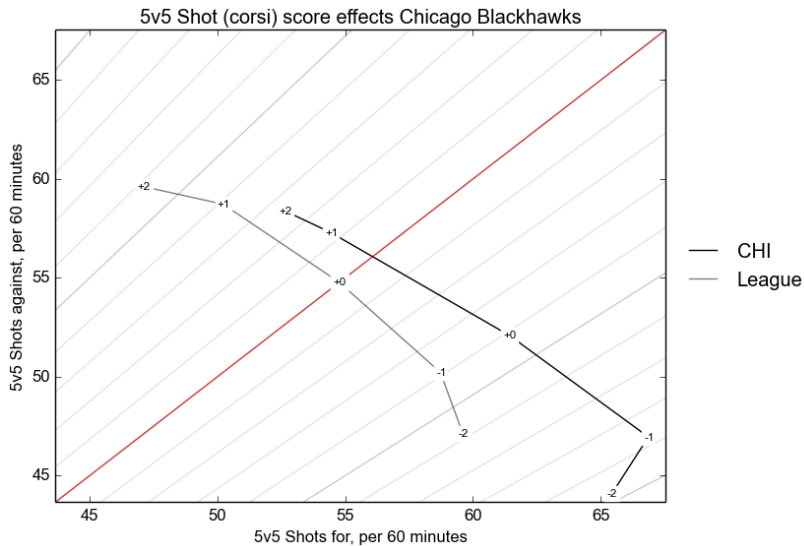
Calgary Flames Score Effects



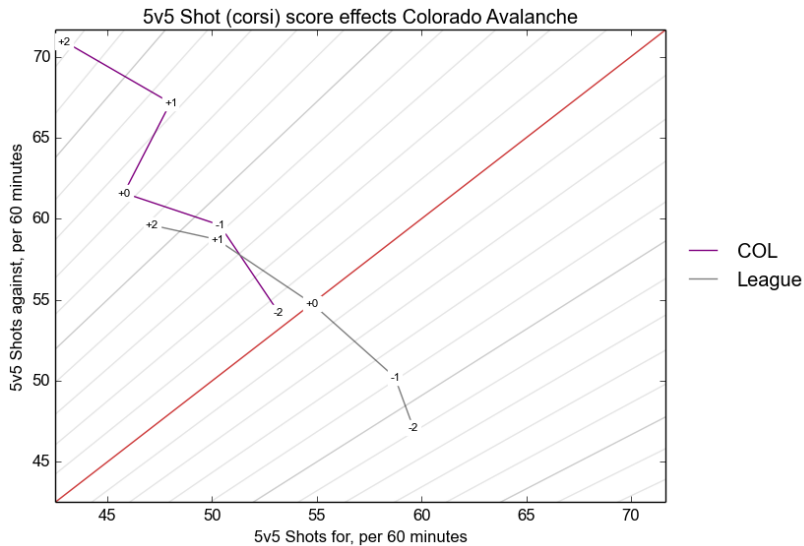
Carolina Hurricanes Score Effects



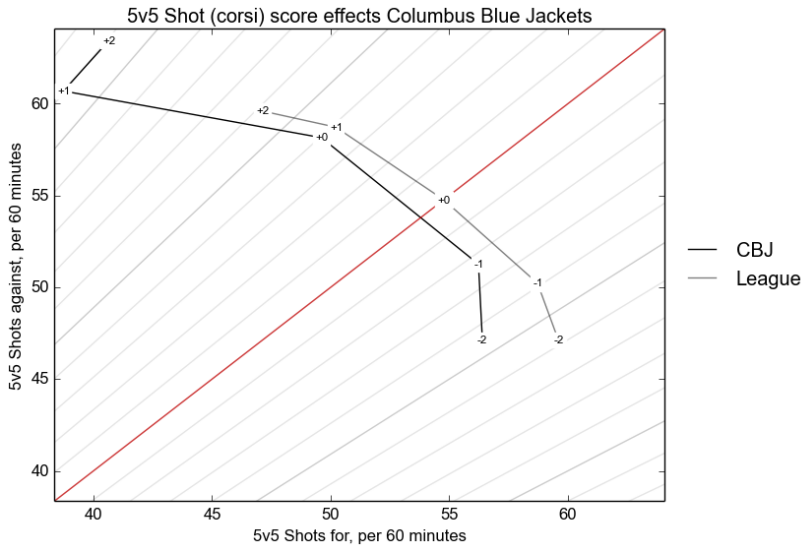
Chicago Blackhawks Score Effects



Colorado Avalanche Score Effects



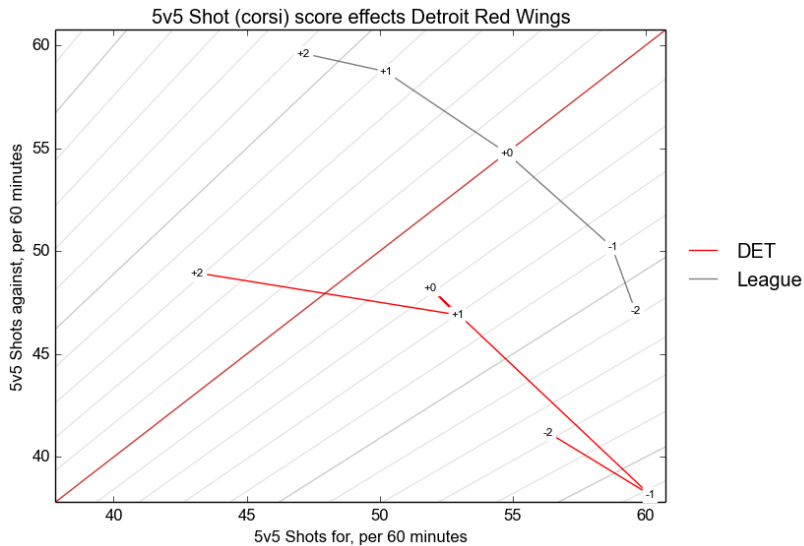
Columbus Blue Jackets Score Effects



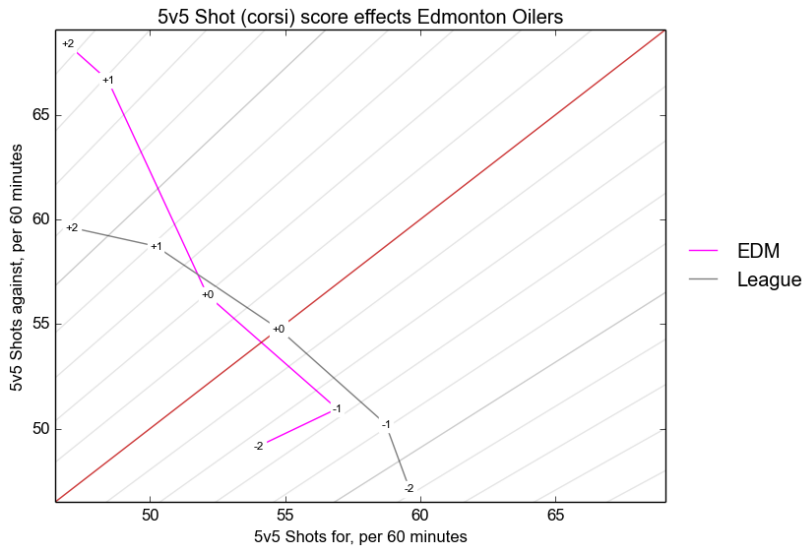
Dallas Stars Score Effects



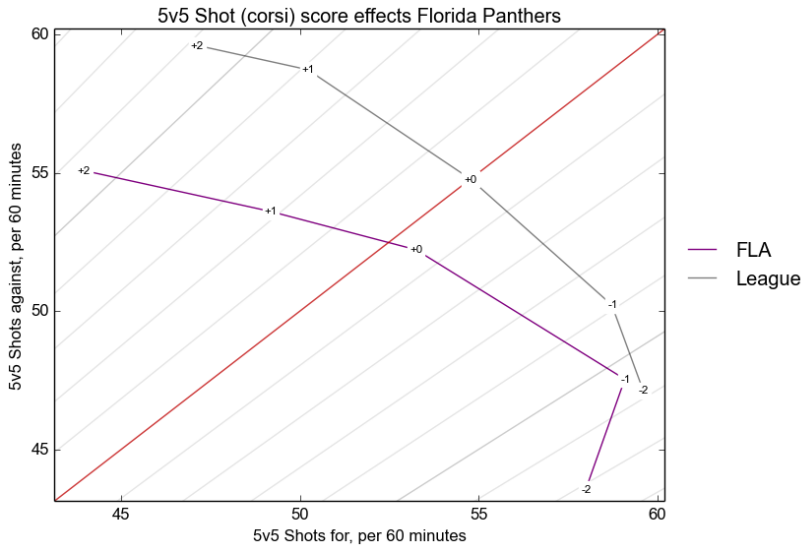
Detroit Red Wings Score Effects



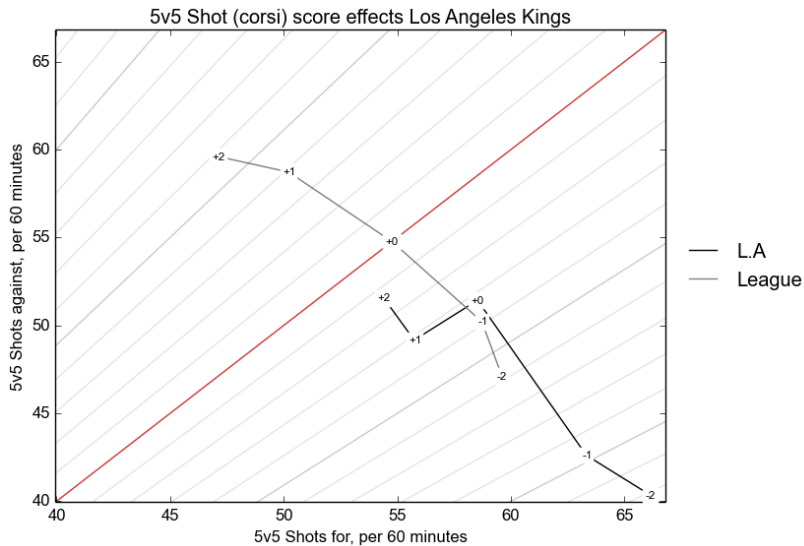
Edmonton Oilers Score Effects



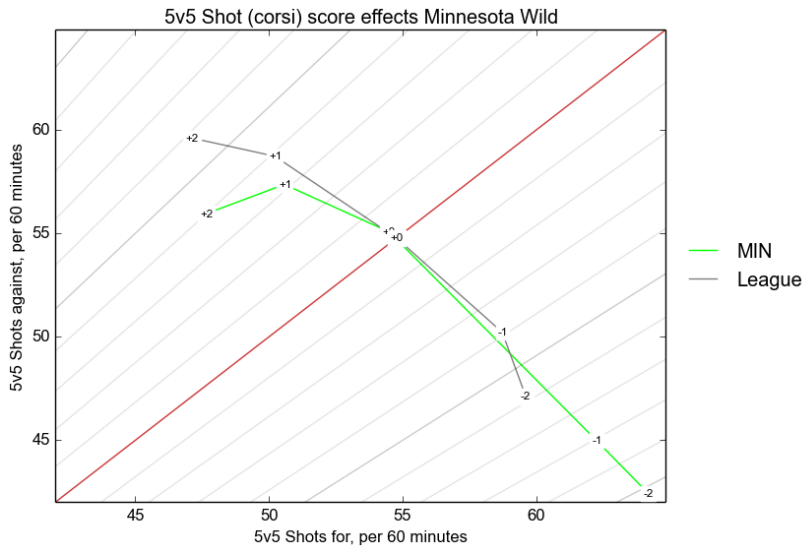
Florida Panthers Score Effects



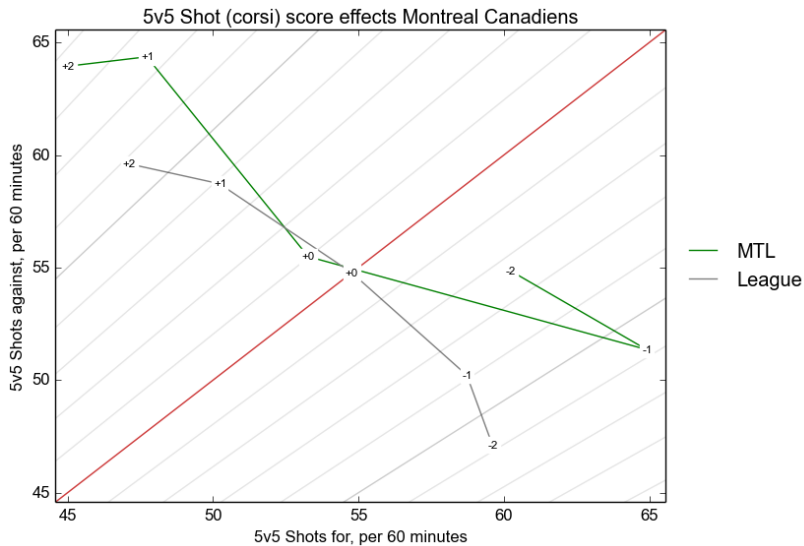
Los Angeles Kings Score Effects



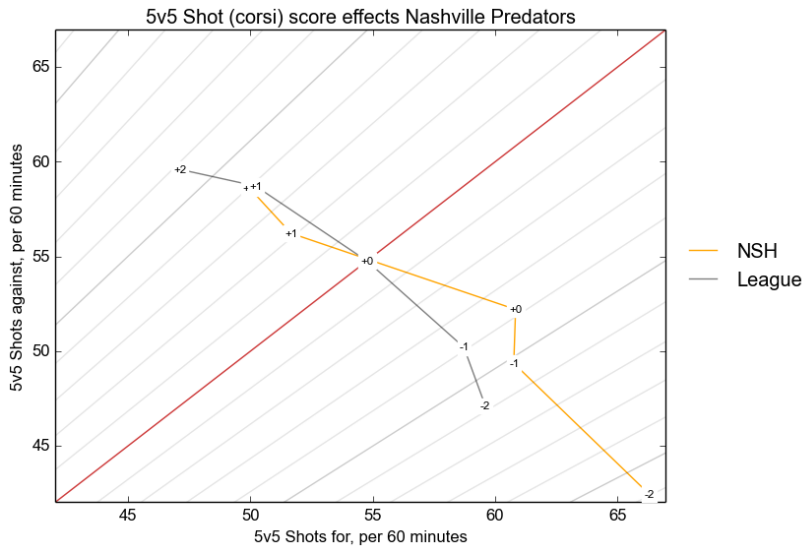
Minnesota Wild Score Effects



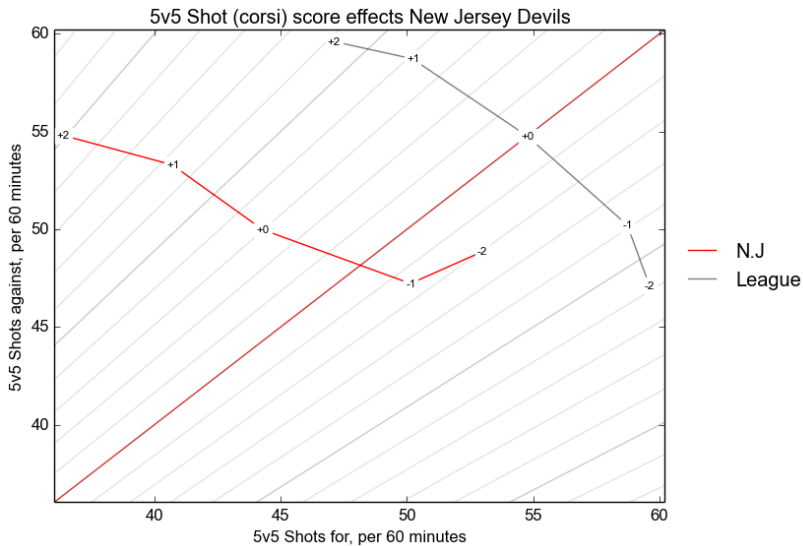
Montreal Canadiens Score Effects



Nashville Predators Score Effects



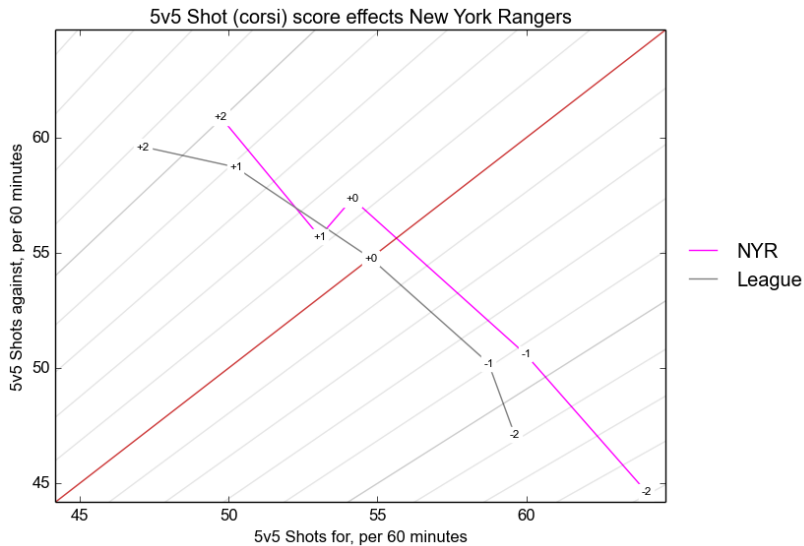
New Jersey Devils Score Effects



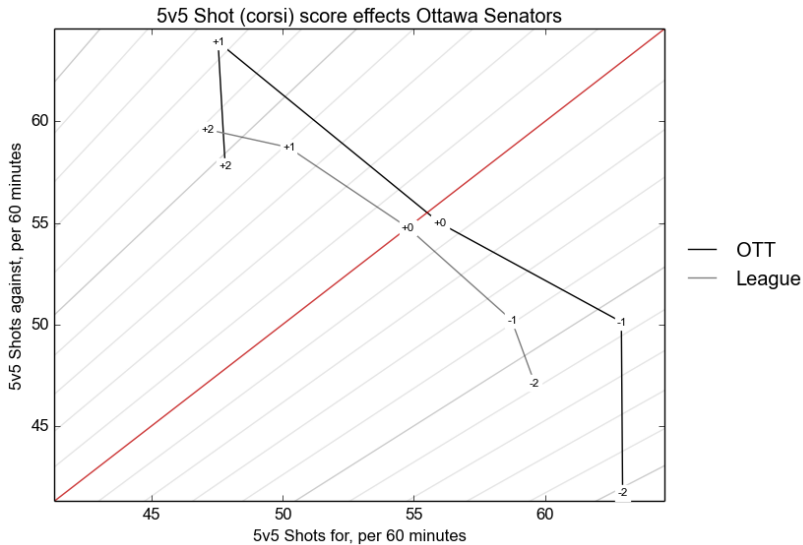
New York Islanders Score Effects



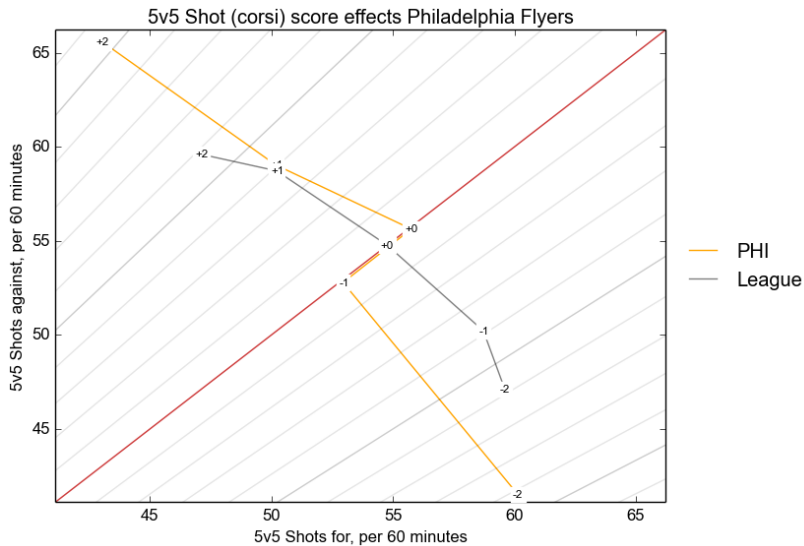
New York Rangers Score Effects



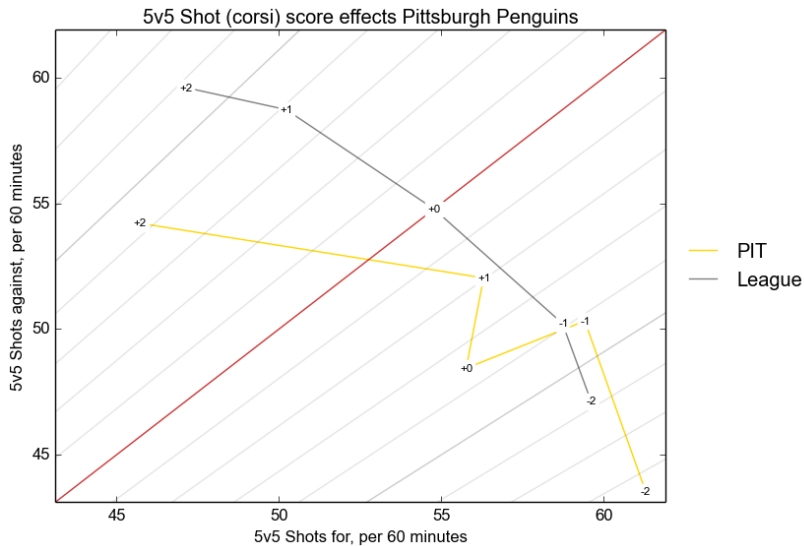
Ottawa Senators Score Effects



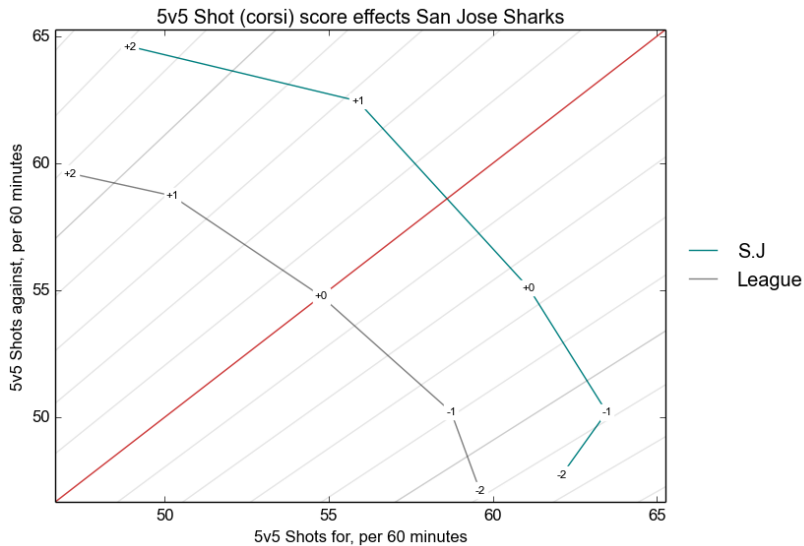
Philadelphia Flyers Score Effects



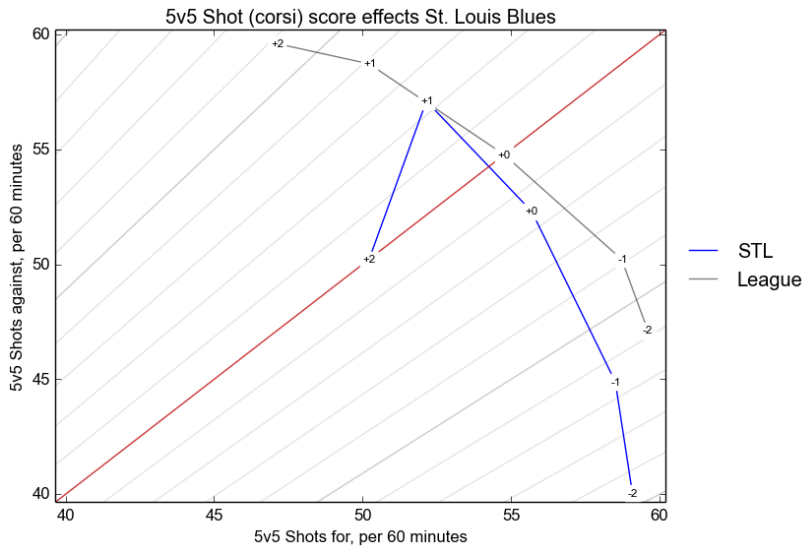
Pittsburgh Penguins Score Effects



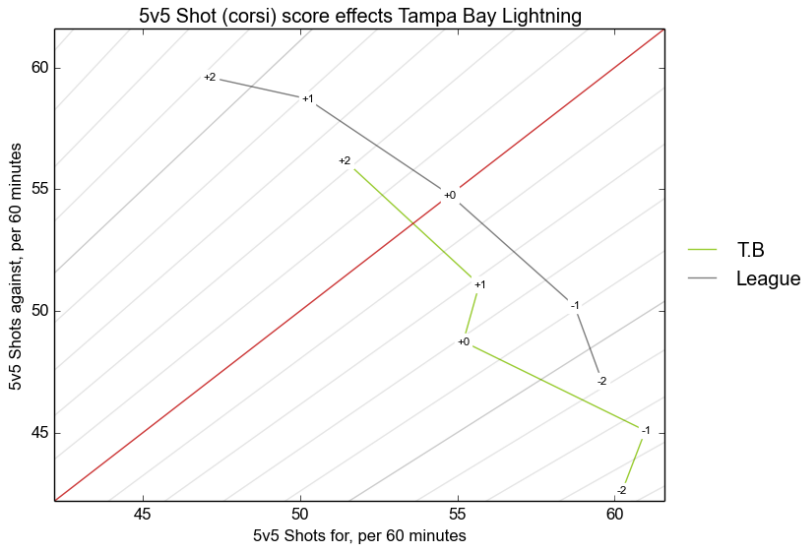
San Jose Sharks Score Effects



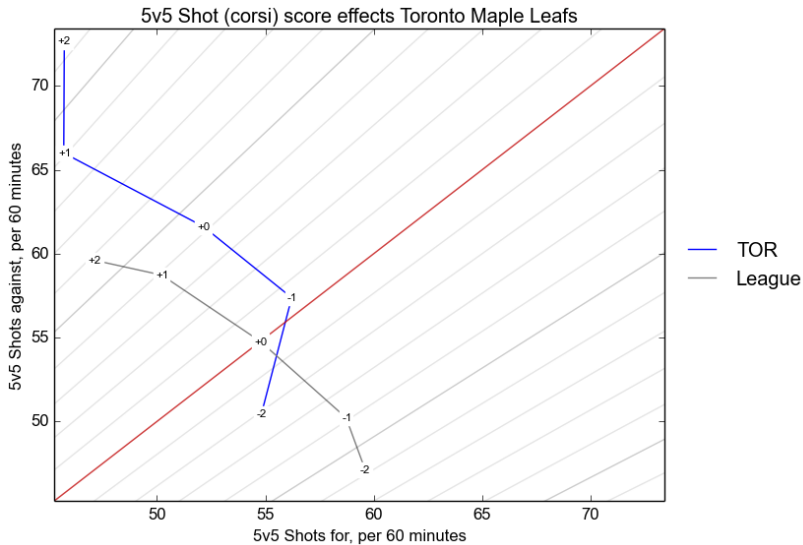
St. Louis Blues Score Effects



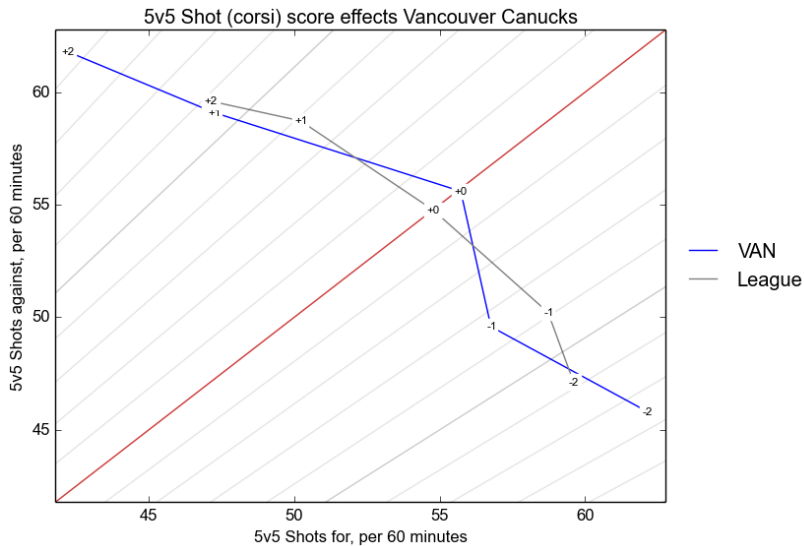
Tampa Bay Lightning Score Effects



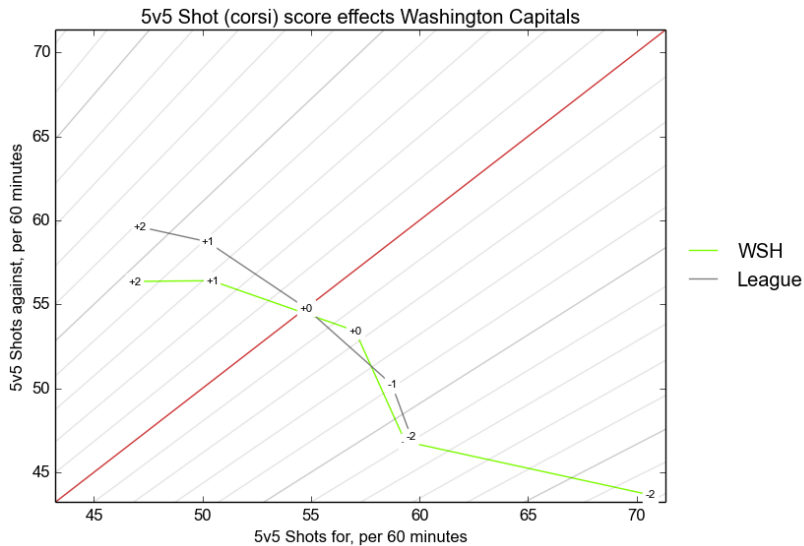
Toronto Maple Leafs Score Effects



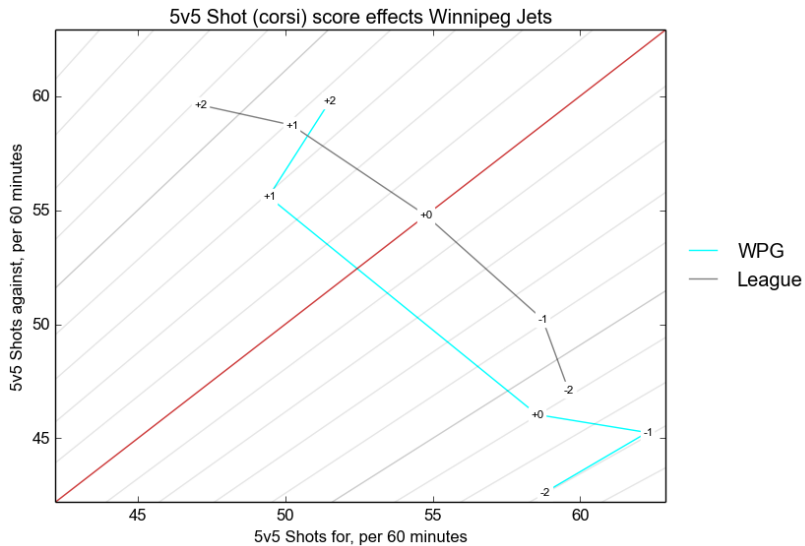
Vancouver Canucks Score Effects



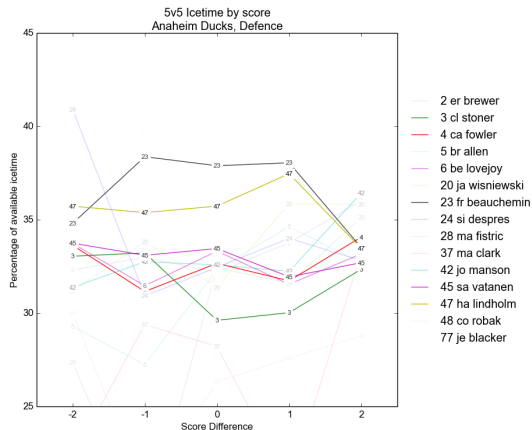
Washington Capitals Score Effects



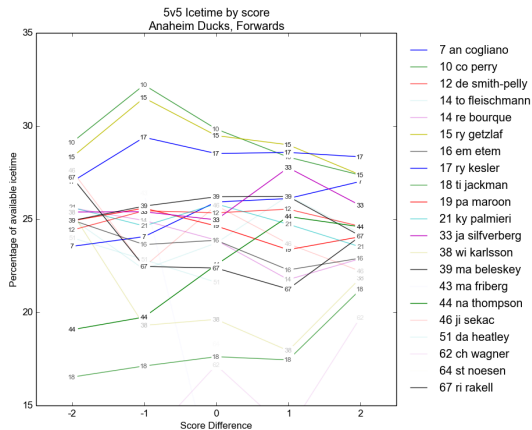
Winnipeg Jets Score Effects



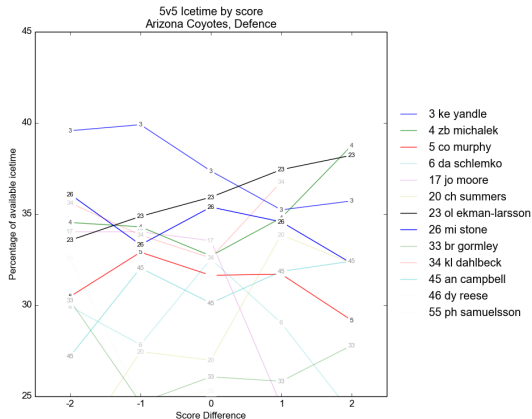
Anaheim Ducks Defence Ice-time



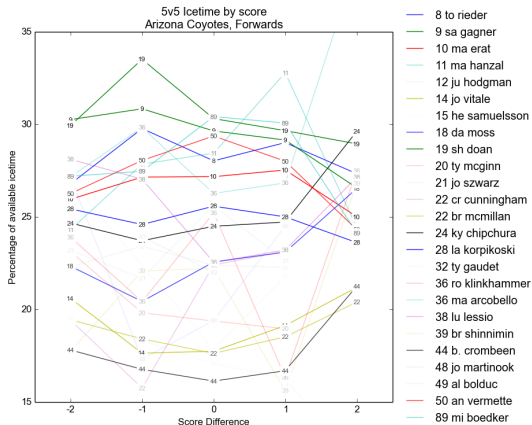
Anaheim Ducks Forwards Ice-time



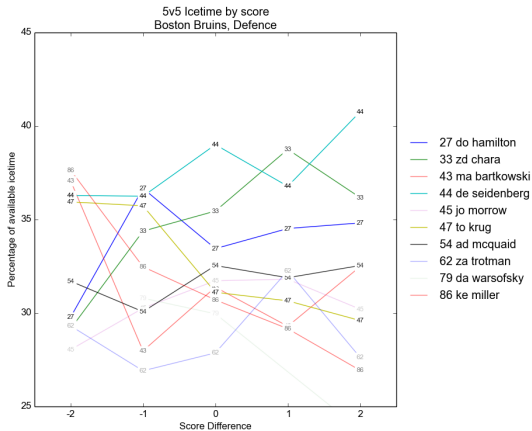
Arizona Coyotes Defence Ice-time



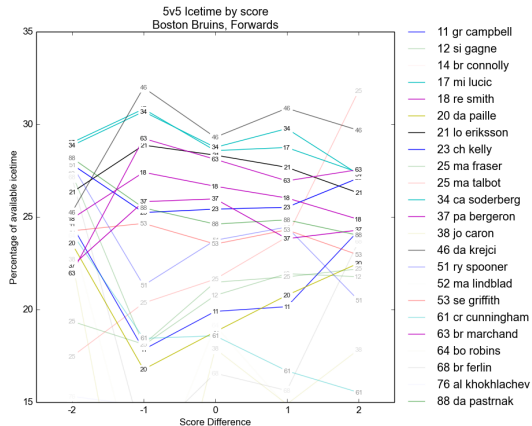
Arizona Coyotes Forwards Ice-time



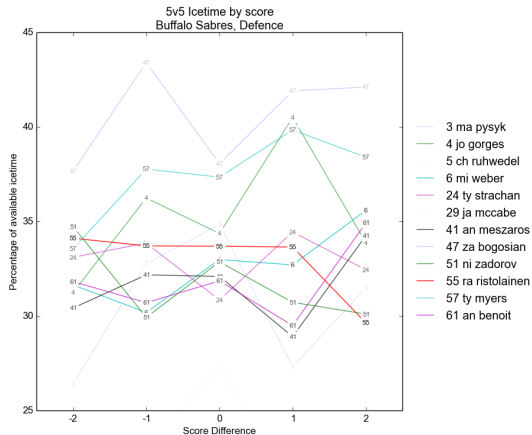
Boston Bruins Defence Ice-time



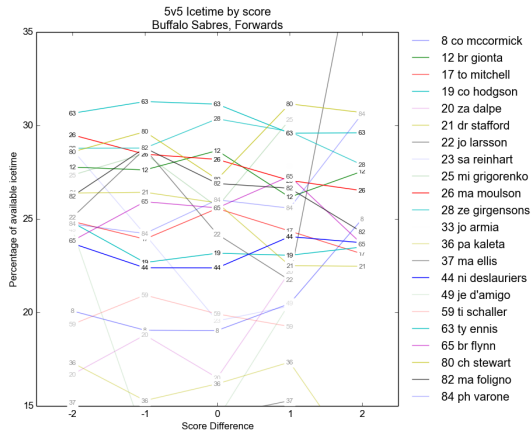
Boston Bruins Forwards Ice-time



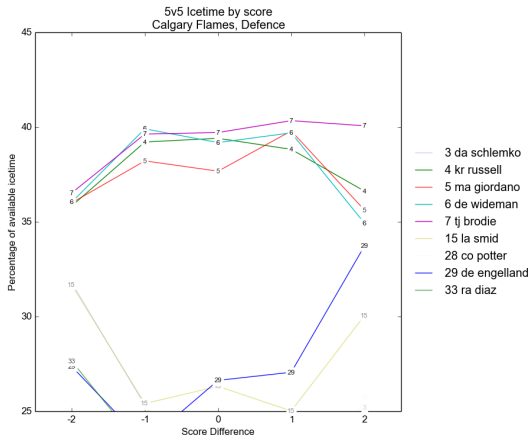
Buffalo Sabres Defence Ice-time



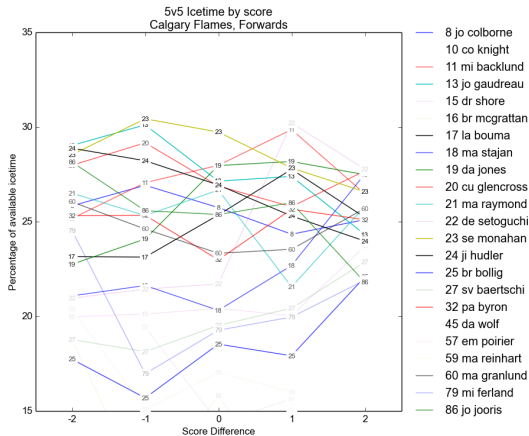
Buffalo Sabres Forwards Ice-time



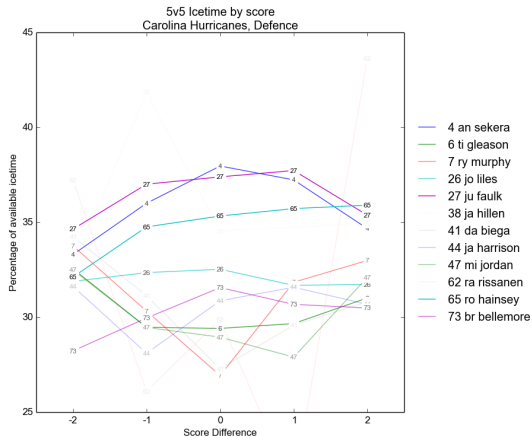
Calgary Flames Defence Ice-time



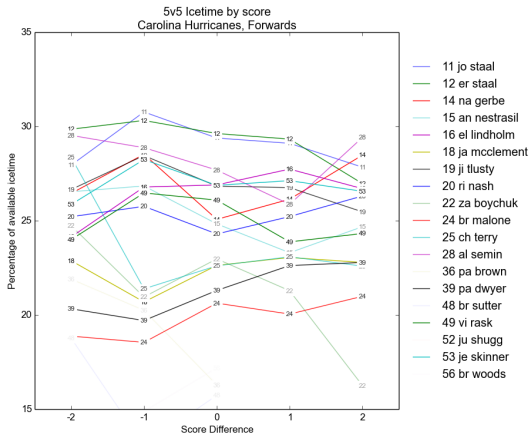
Calgary Flames Forwards Ice-time



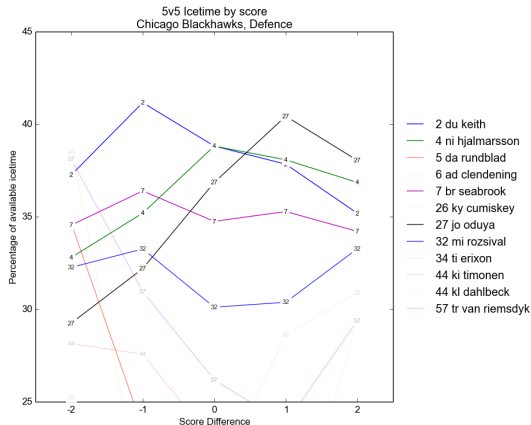
Carolina Hurricanes Defence Ice-time



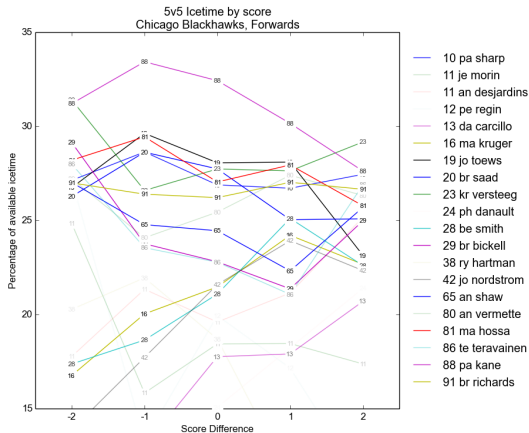
Carolina Hurricanes Forwards Ice-time



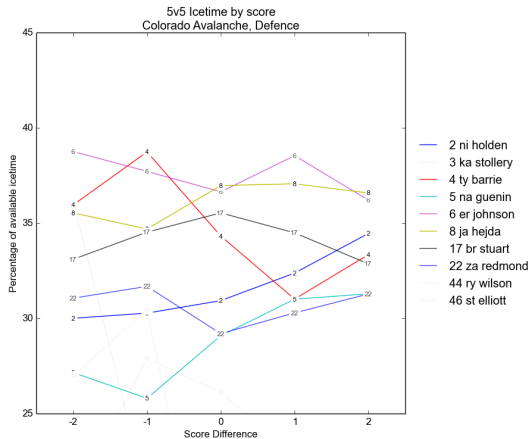
Chicago Blackhawks Defence Ice-time



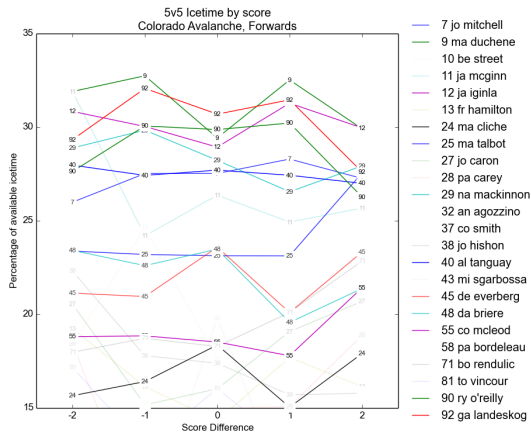
Chicago Blackhawks Forwards Ice-time



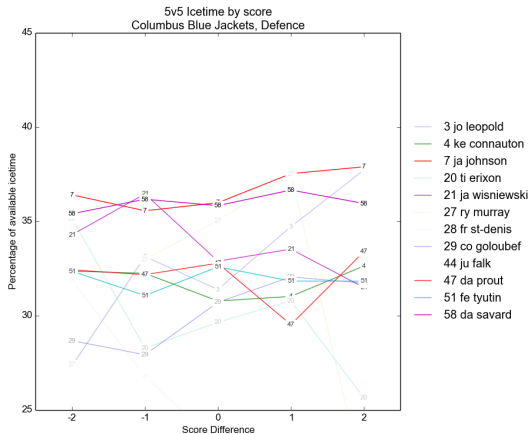
Colorado Avalanche Defence Ice-time



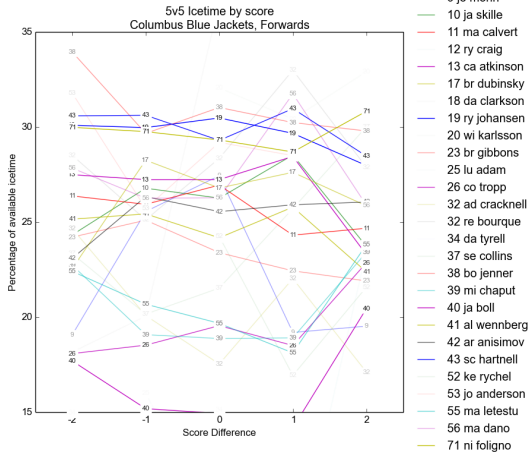
Colorado Avalanche Forwards Ice-time



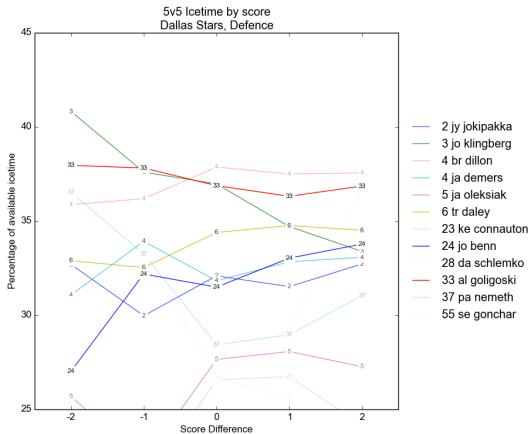
Columbus Blue Jackets Defence Ice-time



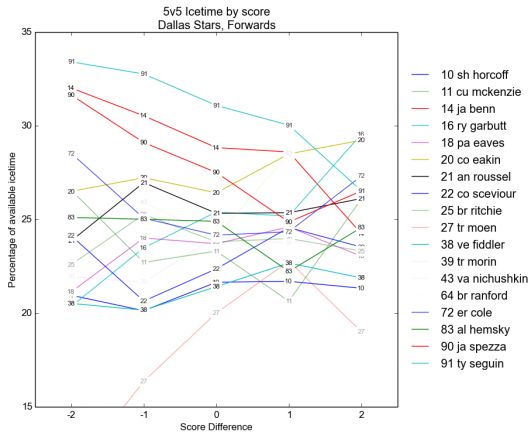
Columbus Blue Jackets Forwards Ice-time



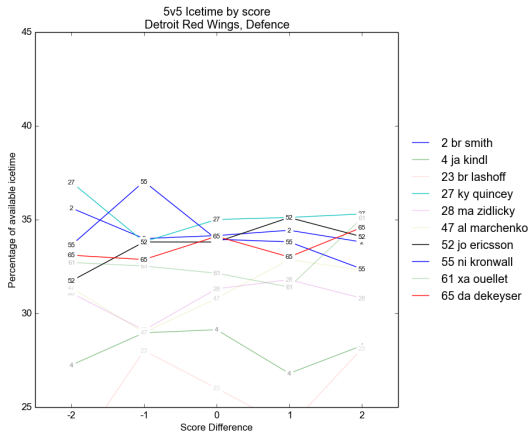
Dallas Stars Defence Ice-time



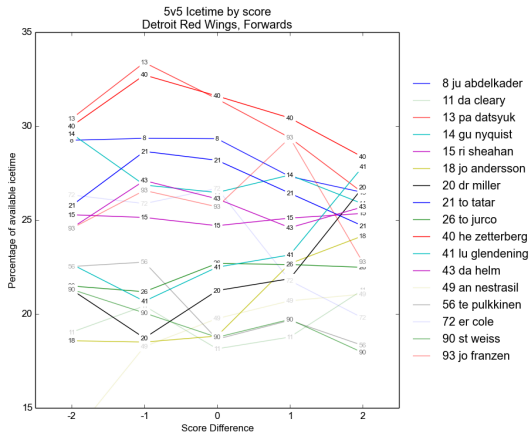
Dallas Stars Forwards Ice-time



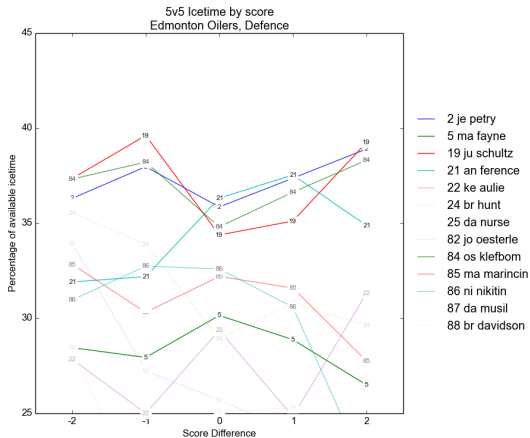
Detroit Red Wings Defence Ice-time



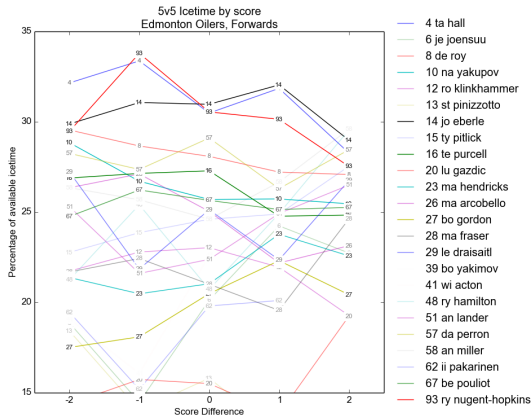
Detroit Red Wings Forwards Ice-time



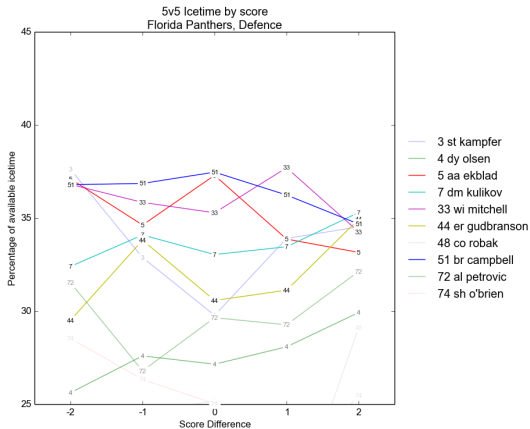
Edmonton Oilers Defence Ice-time



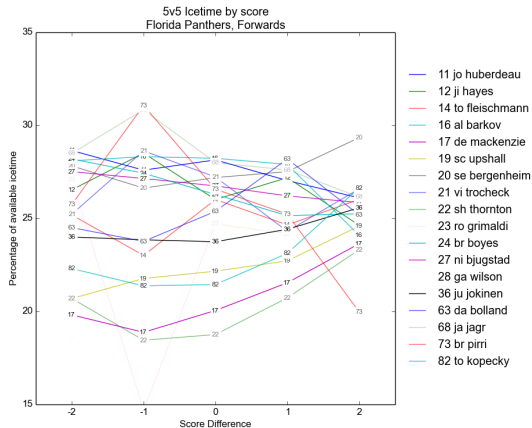
Edmonton Oilers Forwards Ice-time



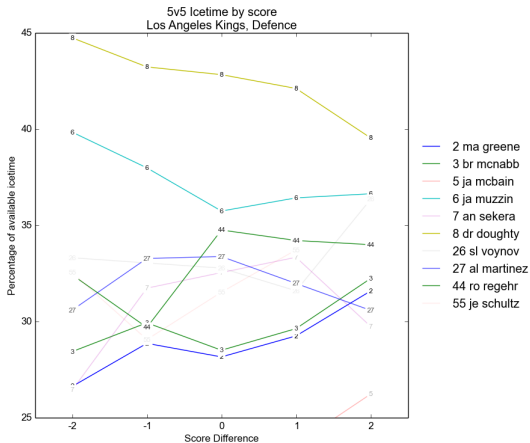
Florida Panthers Defence Ice-time



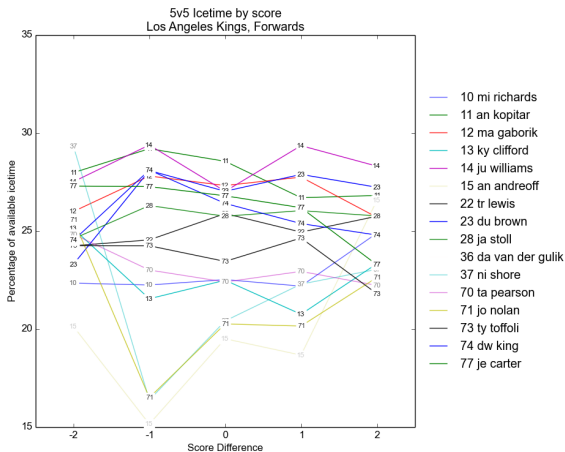
Florida Panthers Forwards Ice-time



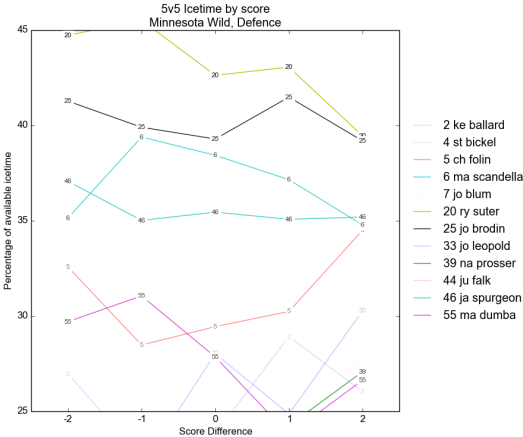
Los Angeles Kings Defence Ice-time



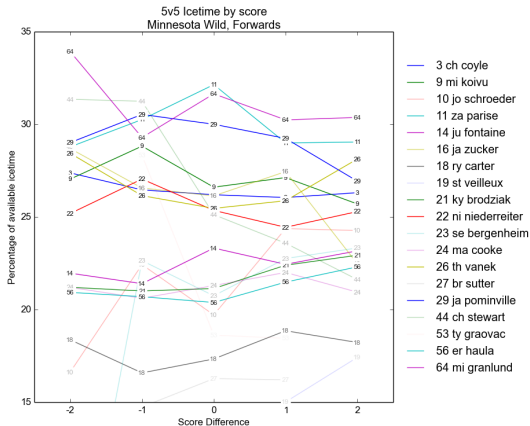
Los Angeles Kings Forwards Ice-time



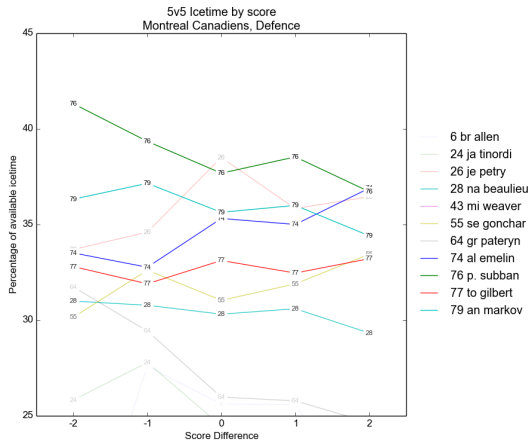
Minnesota Wild Defence Ice-time



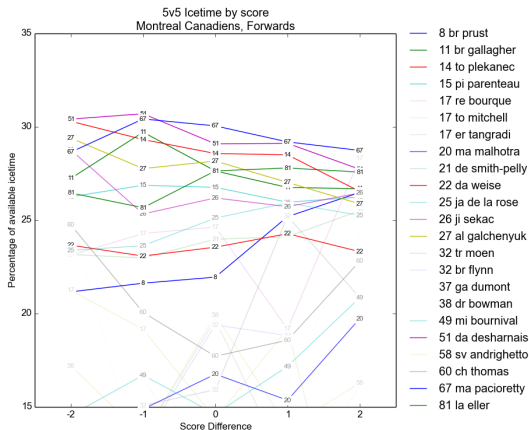
Minnesota Wild Forwards Ice-time



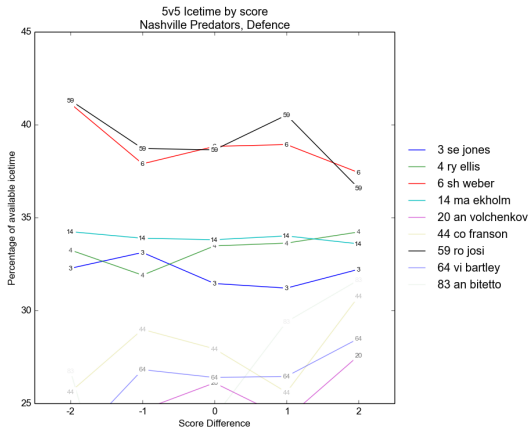
Montreal Canadiens Defence Ice-time



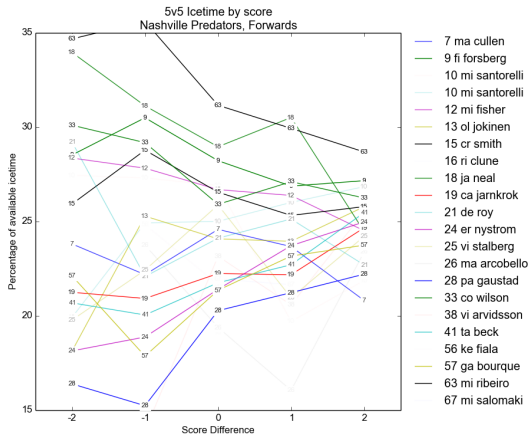
Montreal Canadiens Forwards Ice-time



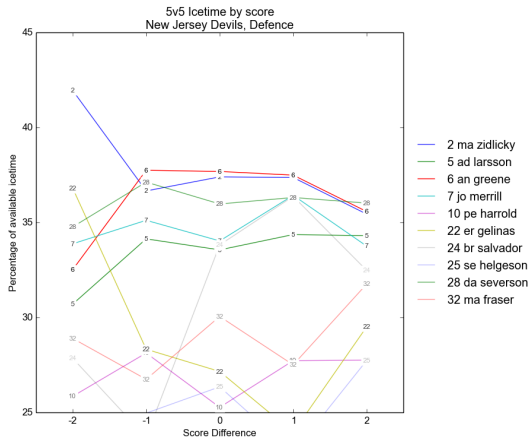
Nashville Predators Defence Ice-time



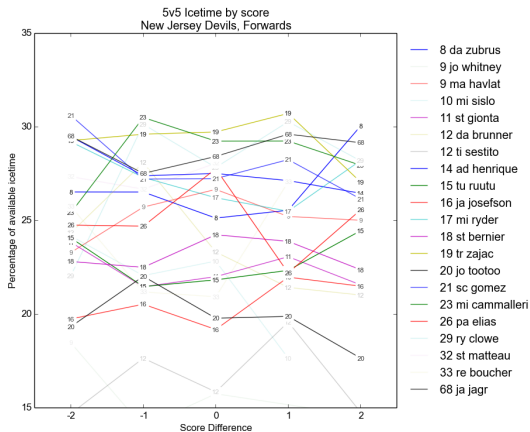
Nashville Predators Forwards Ice-time



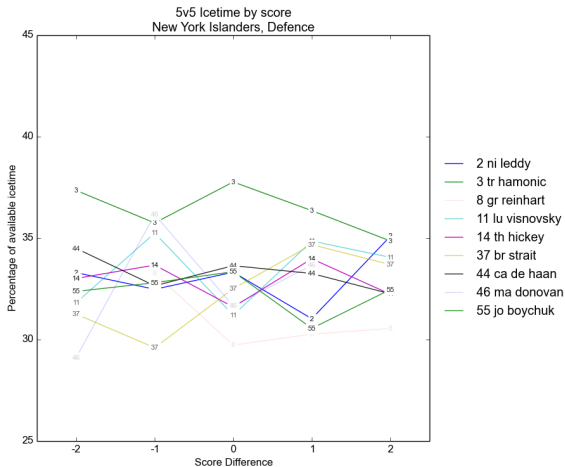
New Jersey Devils Defence Ice-time



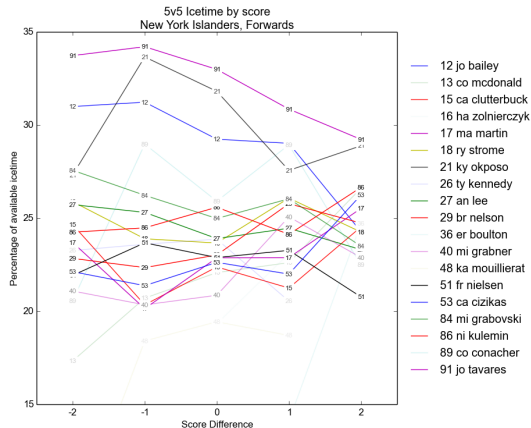
New Jersey Devils Forwards Ice-time



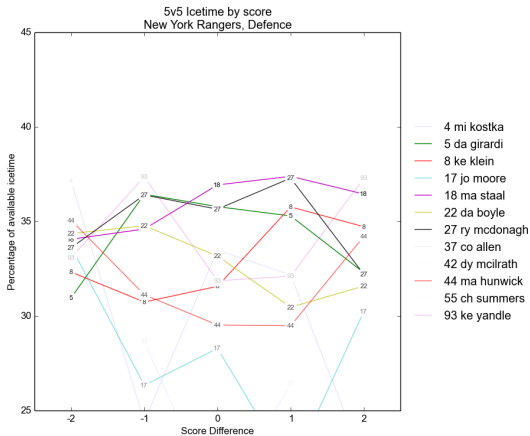
New York Islanders Defence Ice-time



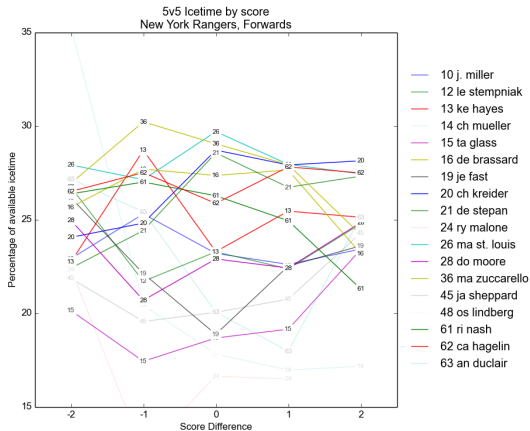
New York Islanders Forwards Ice-time



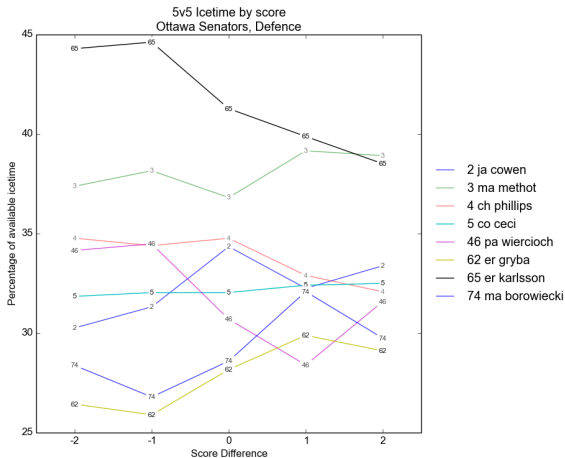
New York Rangers Defence Ice-time



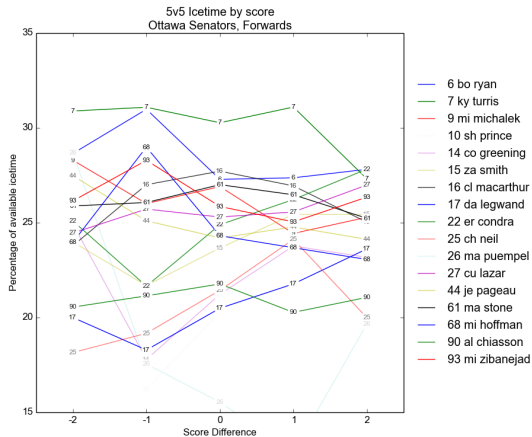
New York Rangers Forwards Ice-time



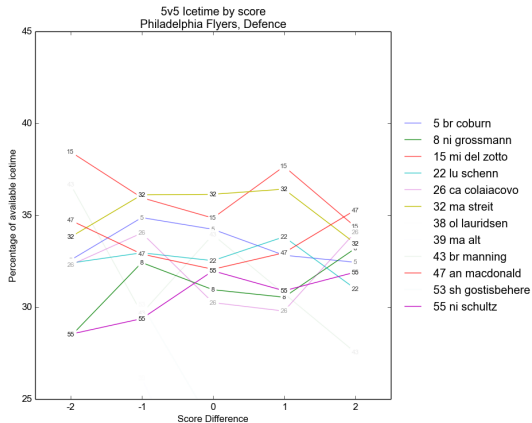
Ottawa Senators Defence Ice-time



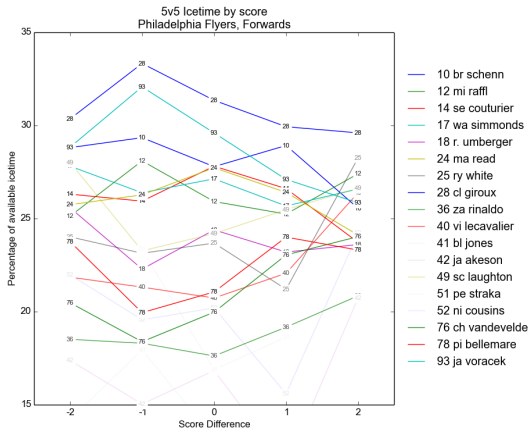
Ottawa Senators Forwards Ice-time



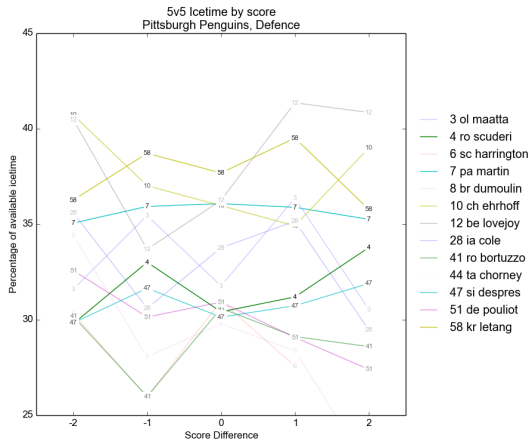
Philadelphia Flyers Defence Ice-time



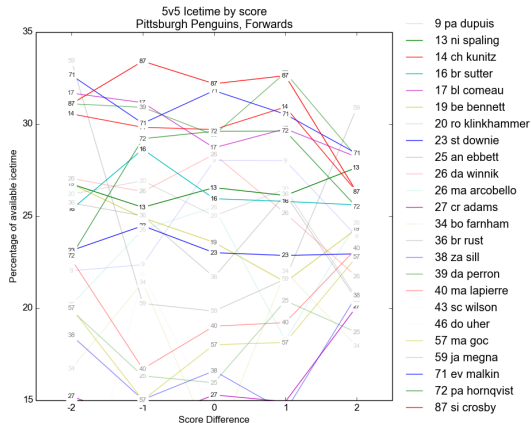
Philadelphia Flyers Forwards Ice-time



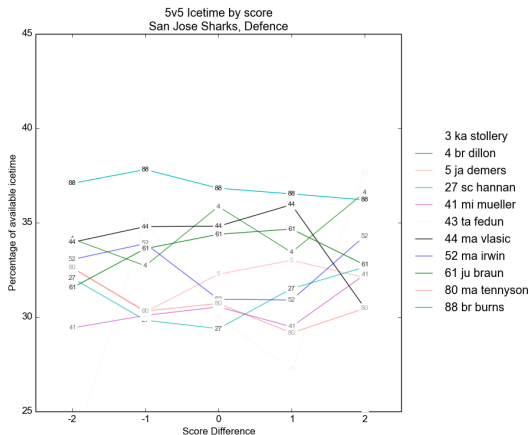
Pittsburgh Penguins Defence Ice-time



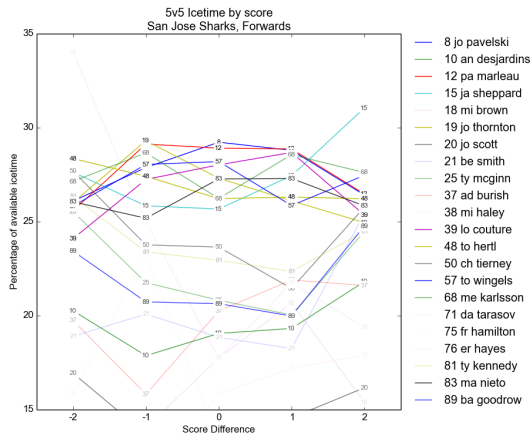
Pittsburgh Penguins Forwards Ice-time



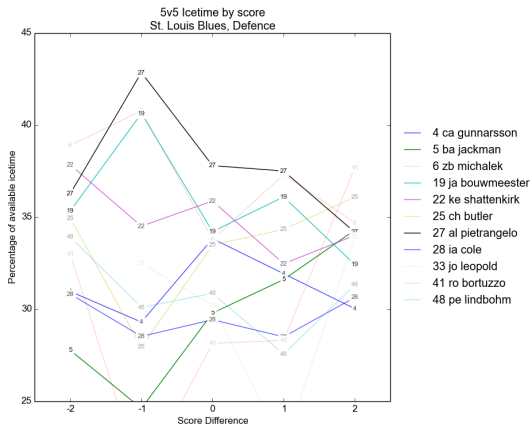
San Jose Sharks Defence Ice-time



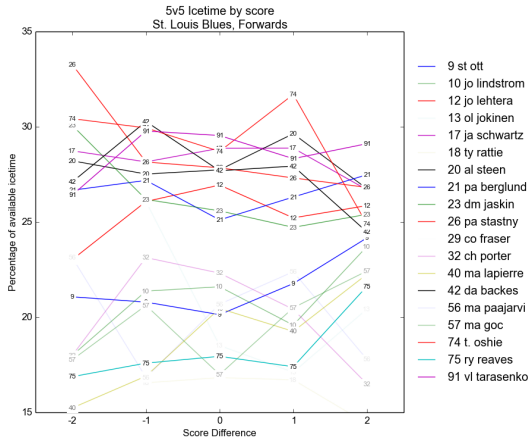
San Jose Sharks Forwards Ice-time



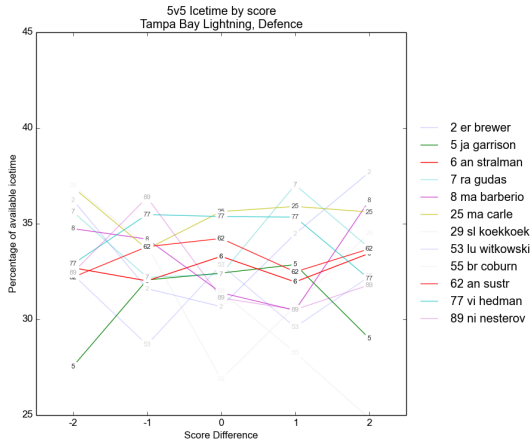
St. Louis Blues Defence Ice-time



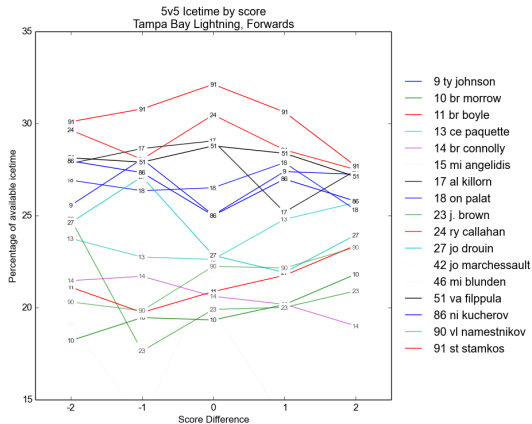
St. Louis Blues Forwards Ice-time



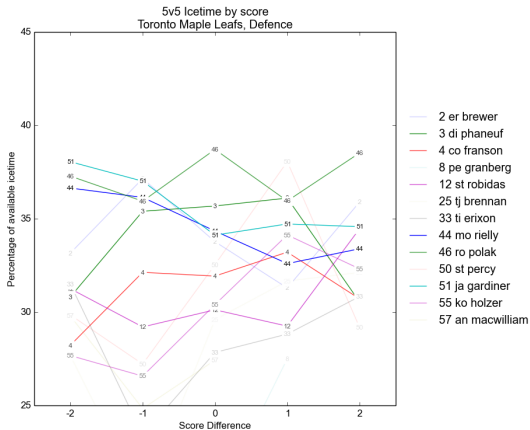
Tampa Bay Lightning Defence Ice-time



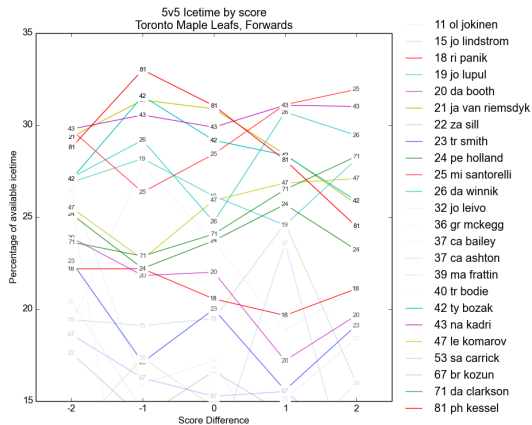
Tampa Bay Lightning Forwards Ice-time



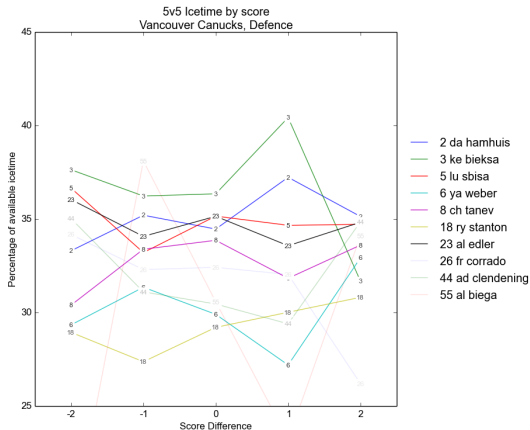
Toronto Maple Leafs Defence Ice-time



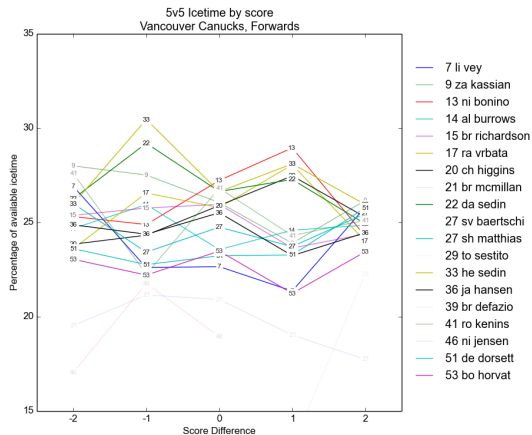
Toronto Maple Leafs Forwards Ice-time



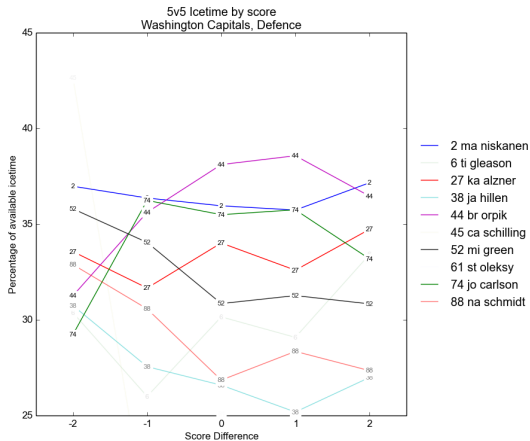
Vancouver Canucks Defence Ice-time



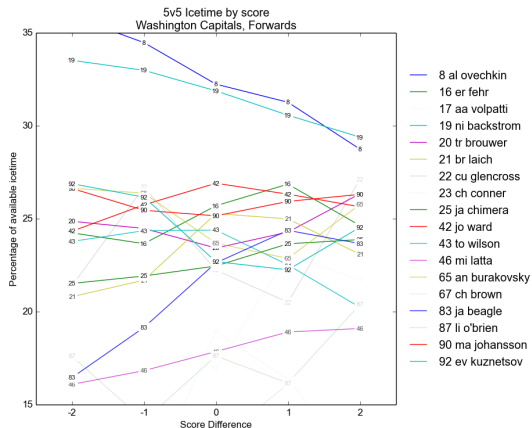
Vancouver Canucks Forwards Ice-time



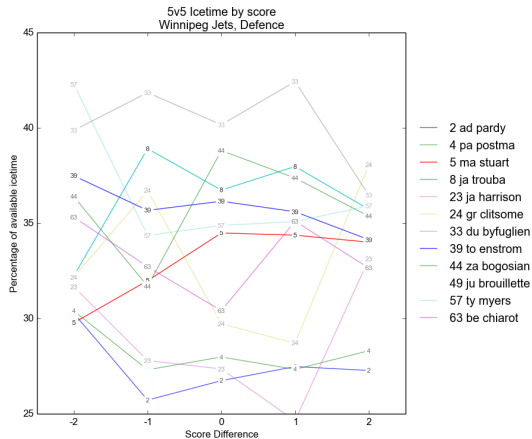
Washington Capitals Defence Ice-time



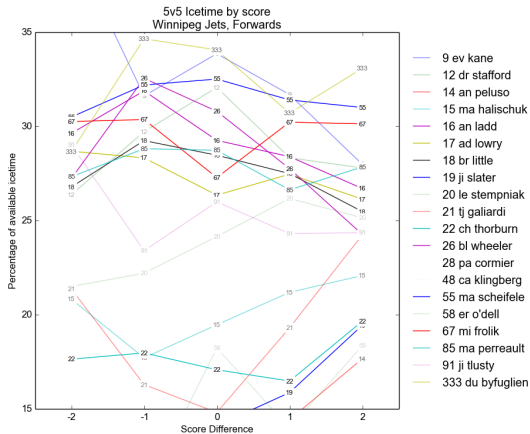
Washington Capitals Forwards Ice-time



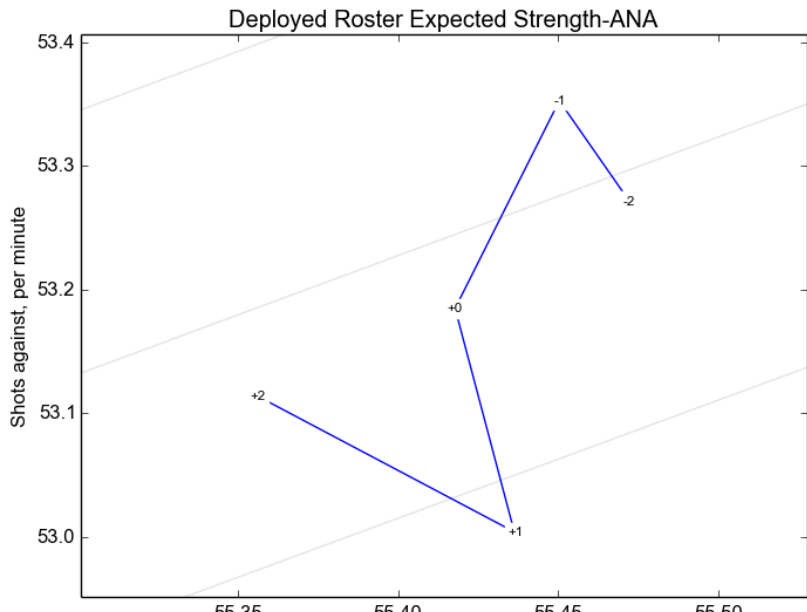
Winnipeg Jets Defence Ice-time



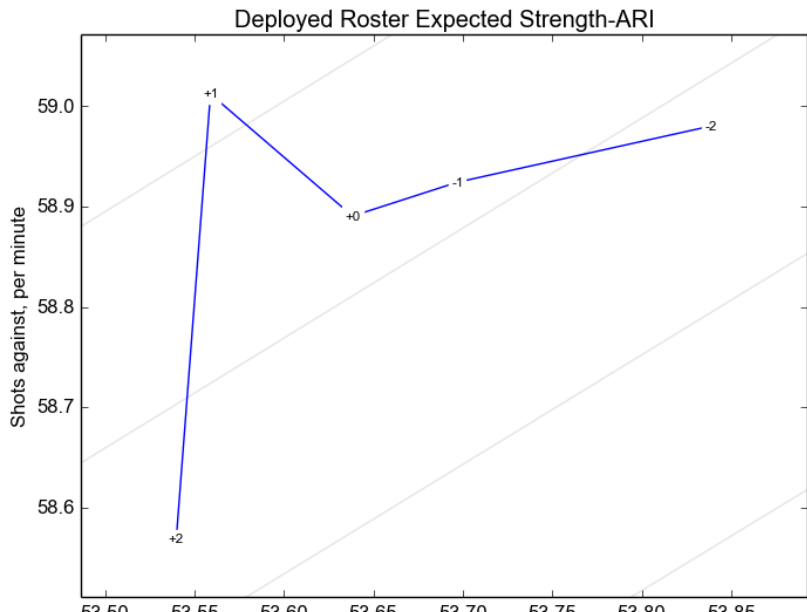
Winnipeg Jets Forwards Ice-time



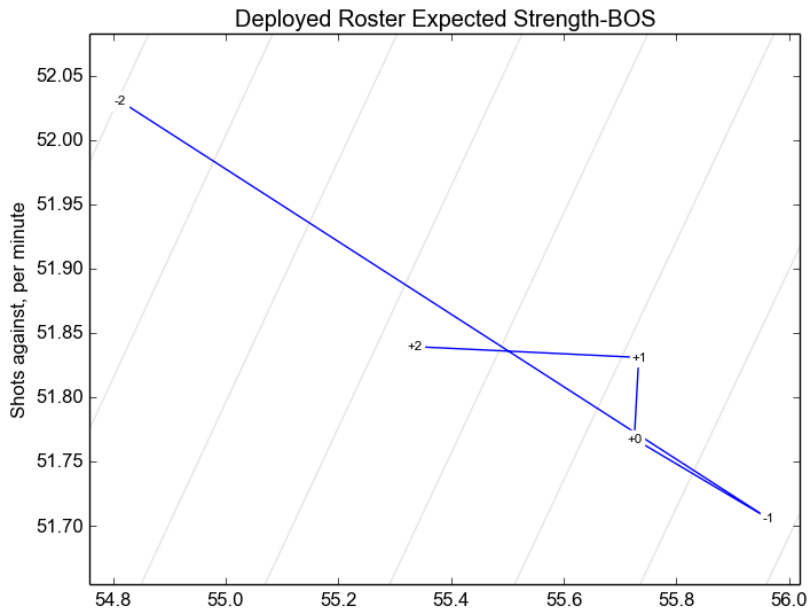
Anaheim Ducks Roster Strength by Score State



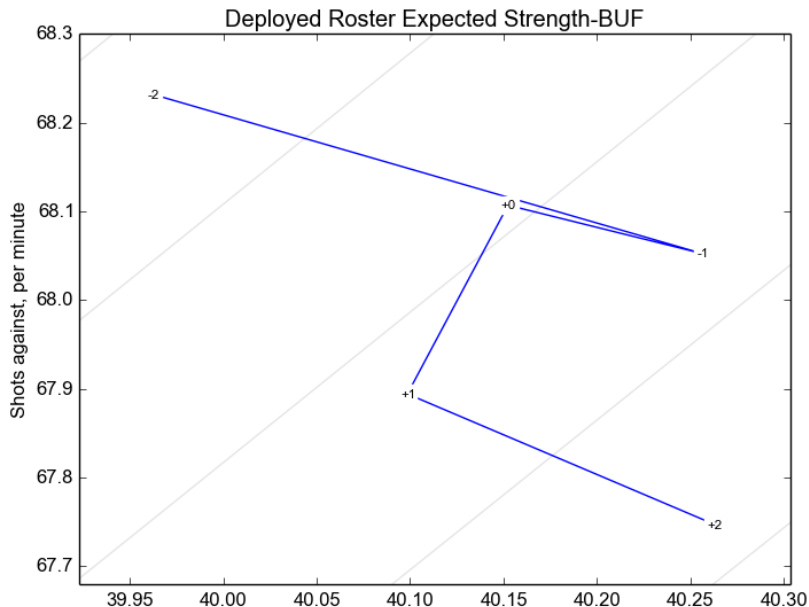
Arizona Coyotes Roster Strength by Score State



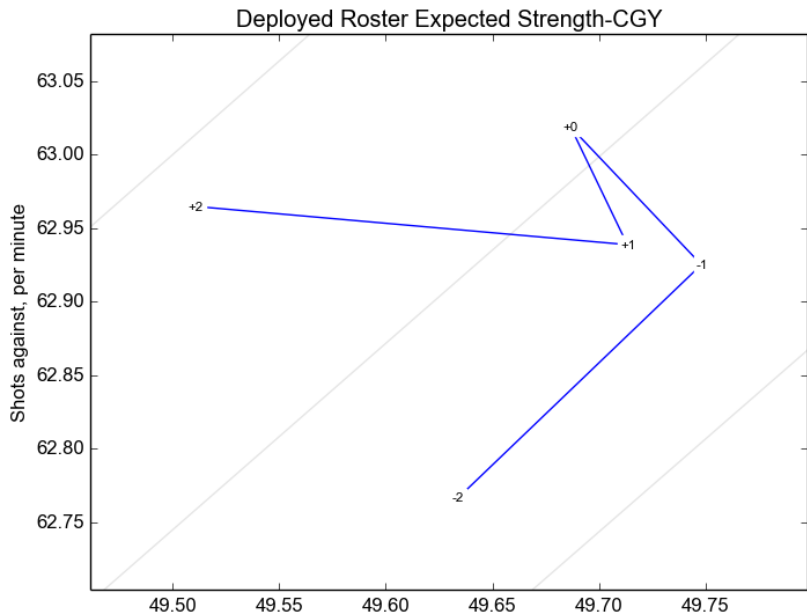
Boston Bruins Roster Strength by Score State



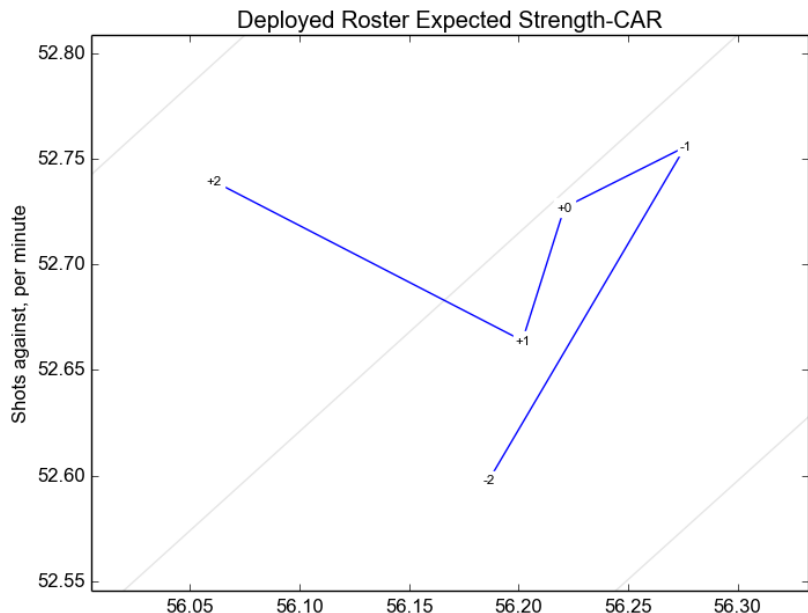
Buffalo Sabres Roster Strength by Score State



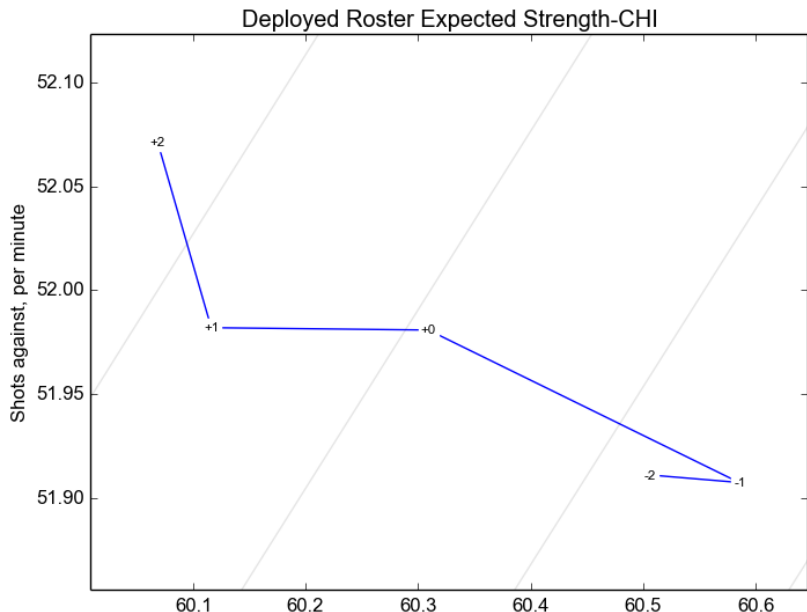
Calgary Flames Roster Strength by Score State



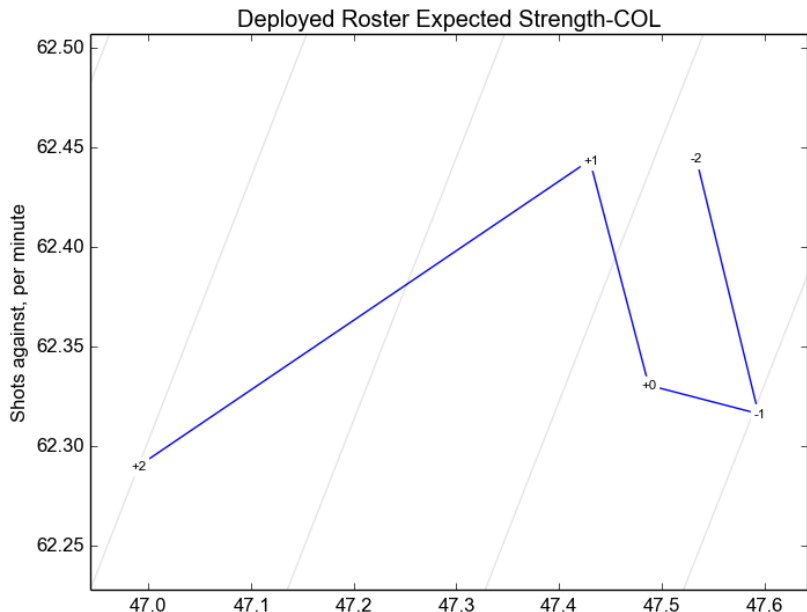
Carolina Hurricanes Roster Strength by Score State



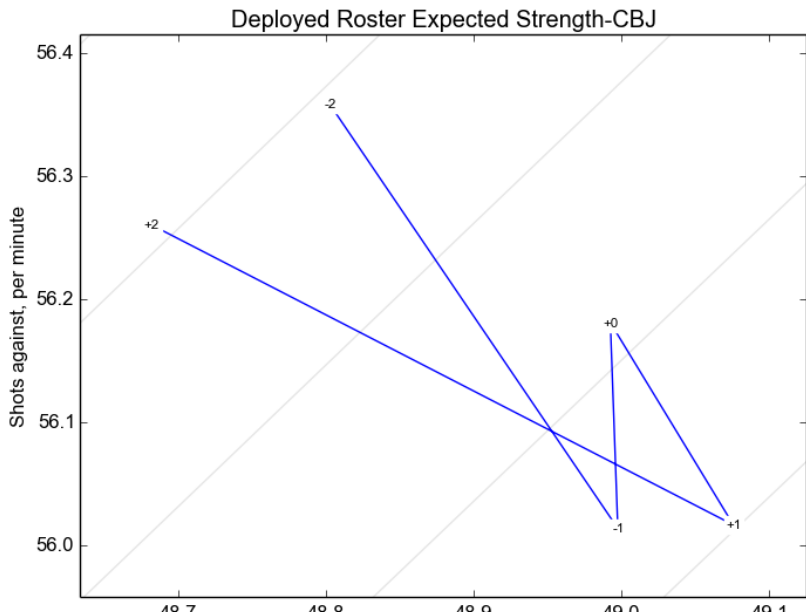
Chicago Blackhawks Roster Strength by Score State



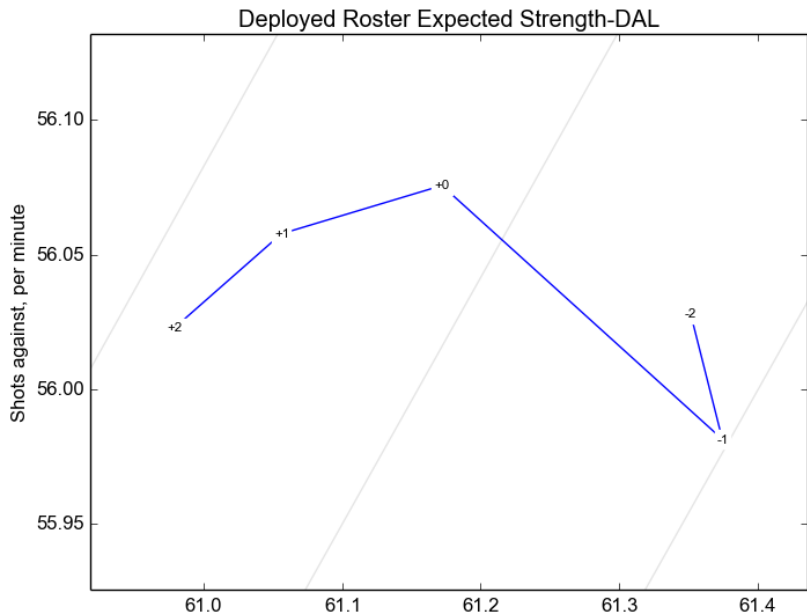
Colorado Avalanche Roster Strength by Score State



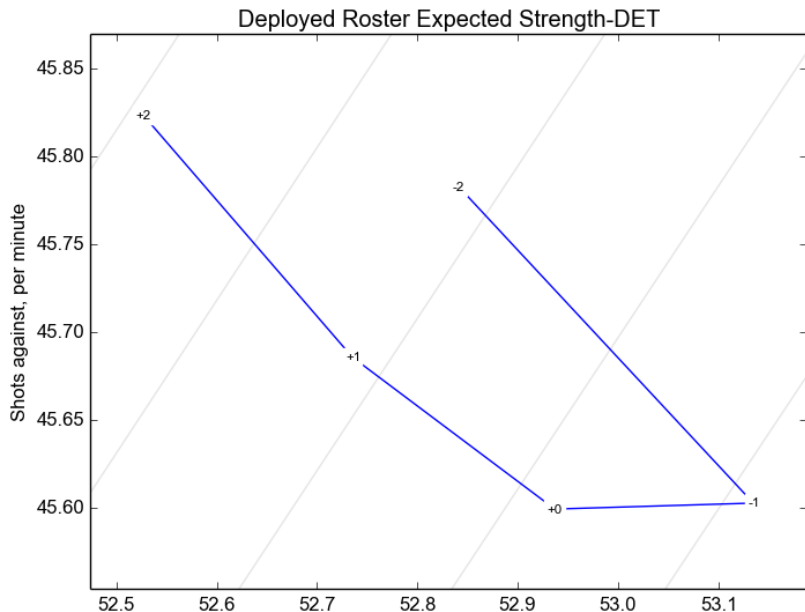
Columbus Blue Jackets Roster Strength by Score State



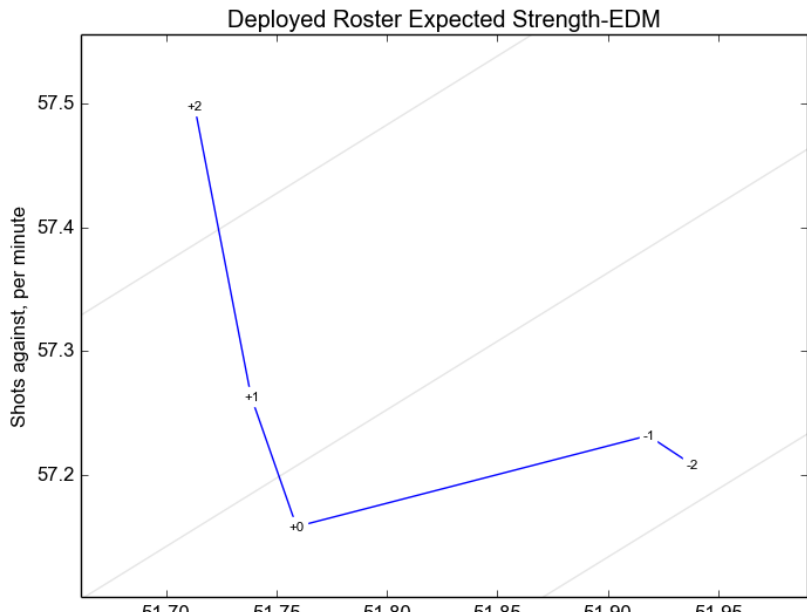
Dallas Stars Roster Strength by Score State



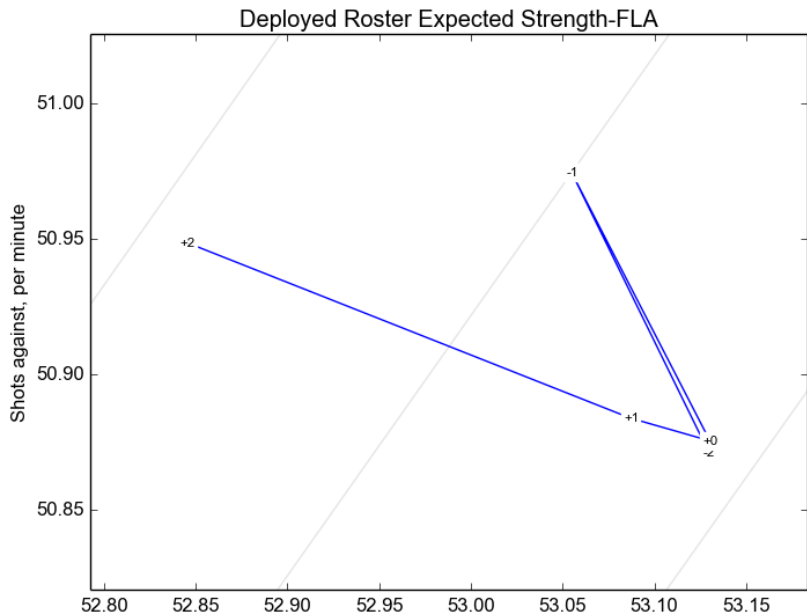
Detroit Red Wings Roster Strength by Score State



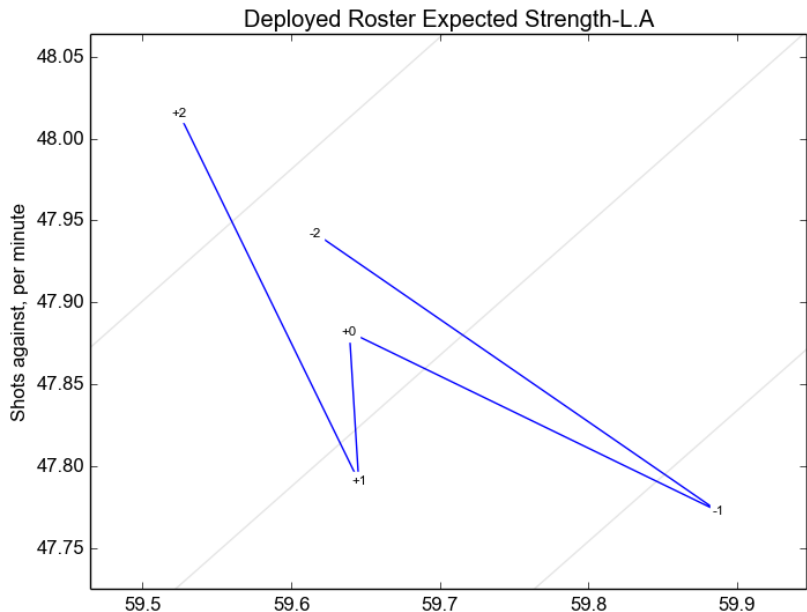
Edmonton Oilers Roster Strength by Score State



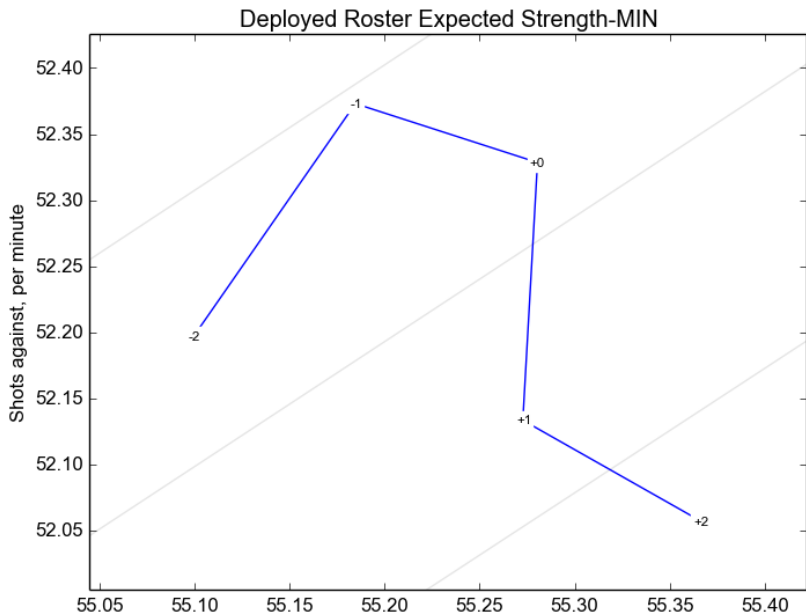
Florida Panthers Roster Strength by Score State



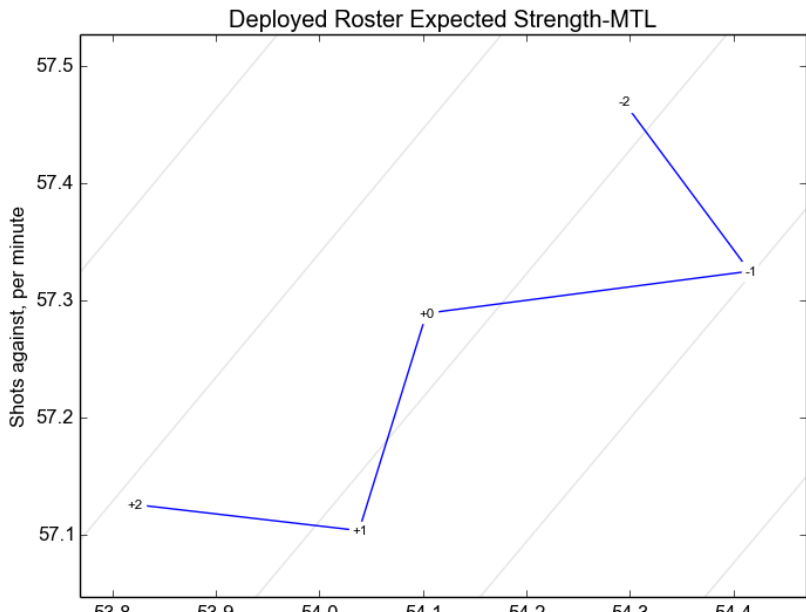
Los Angeles Kings Roster Strength by Score State



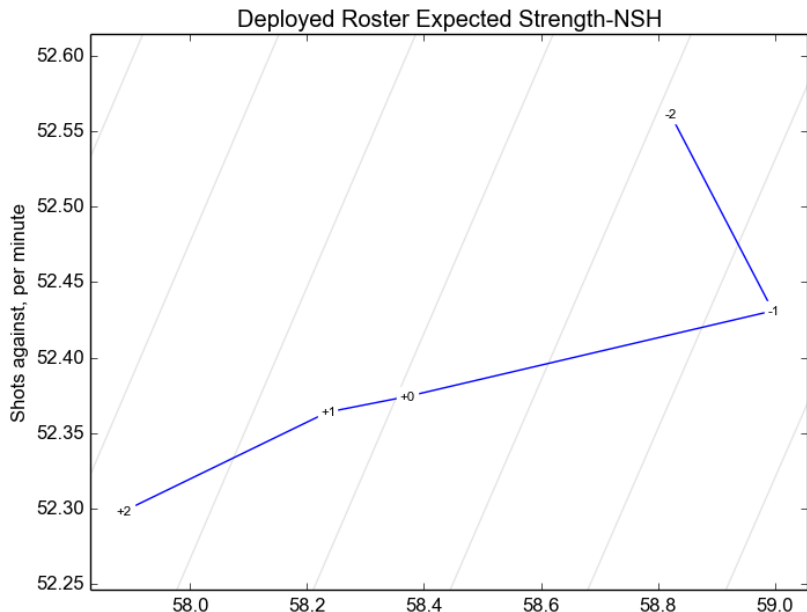
Minnesota Wild Roster Strength by Score State



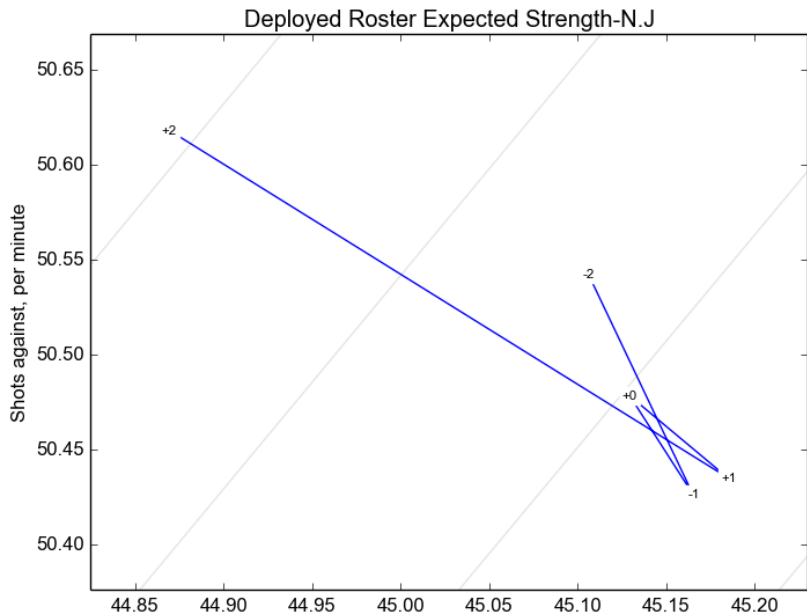
Montreal Canadiens Roster Strength by Score State



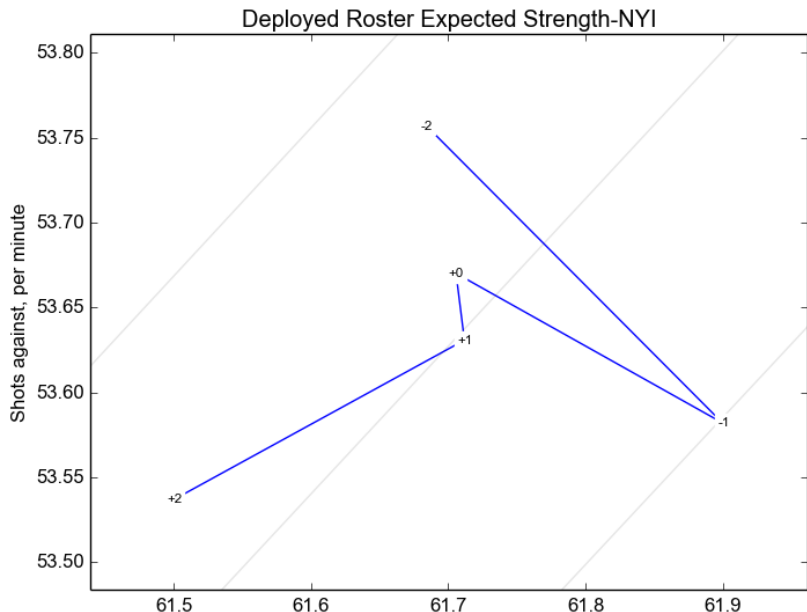
Nashville Predators Roster Strength by Score State



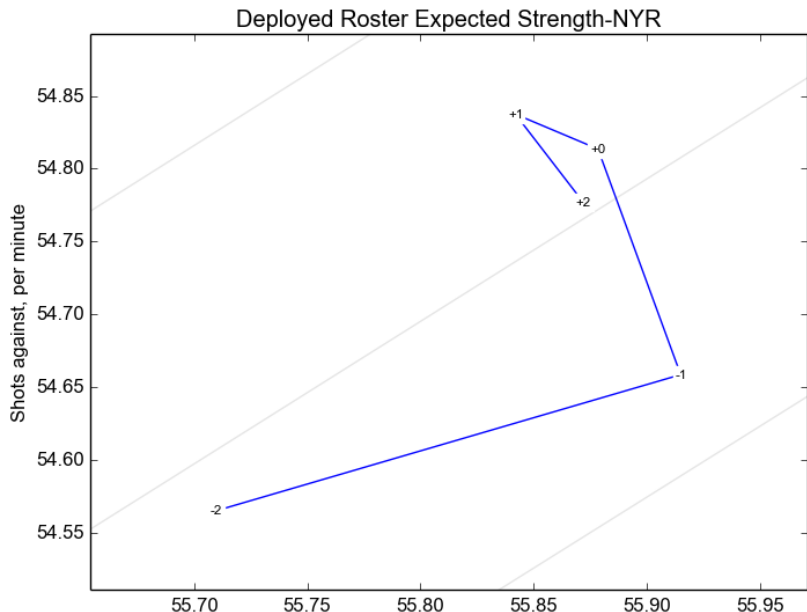
New Jersey Devils Roster Strength by Score State



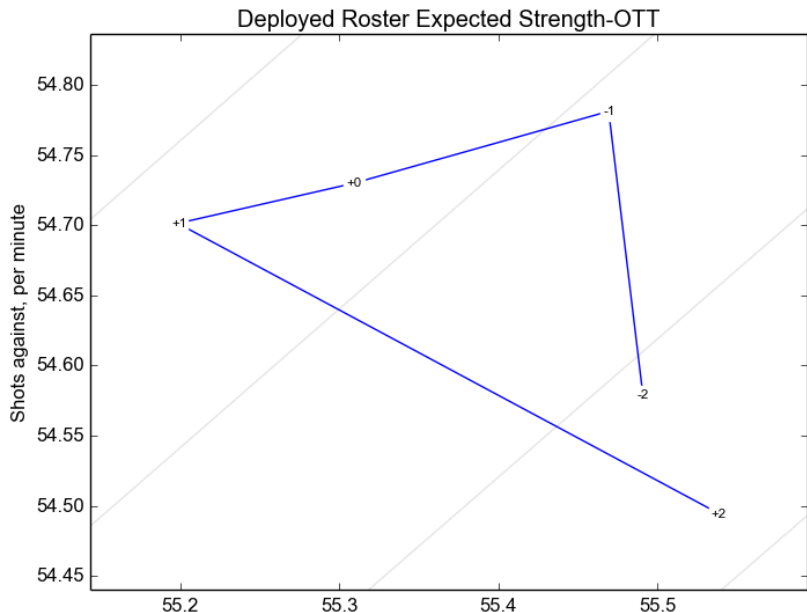
New York Islanders Roster Strength by Score State



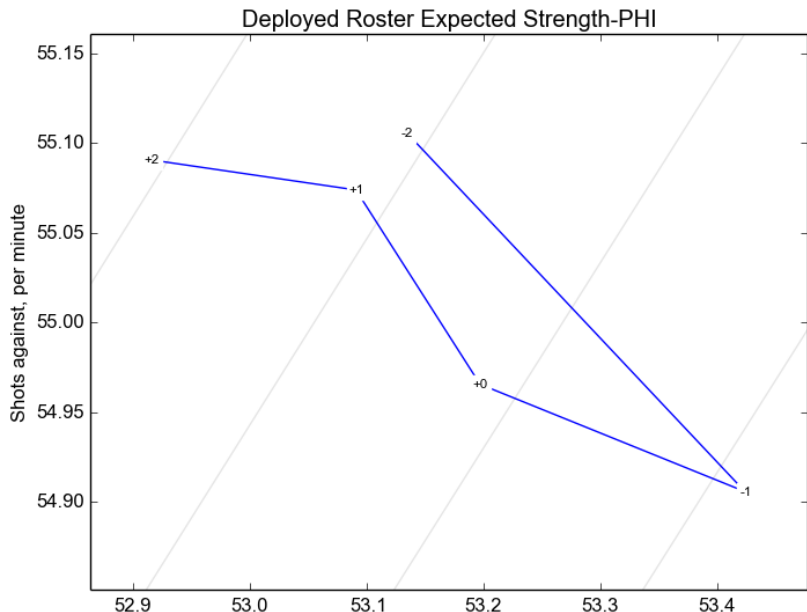
New York Rangers Roster Strength by Score State



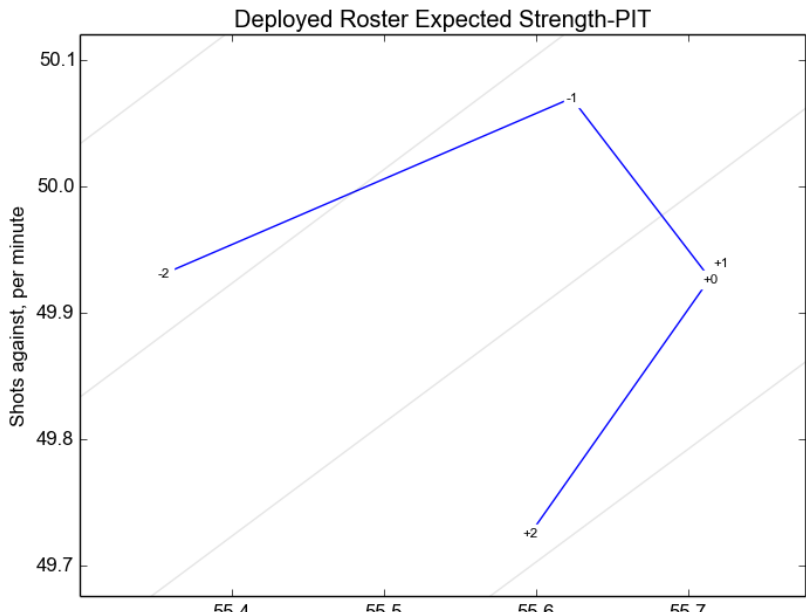
Ottawa Senators Roster Strength by Score State



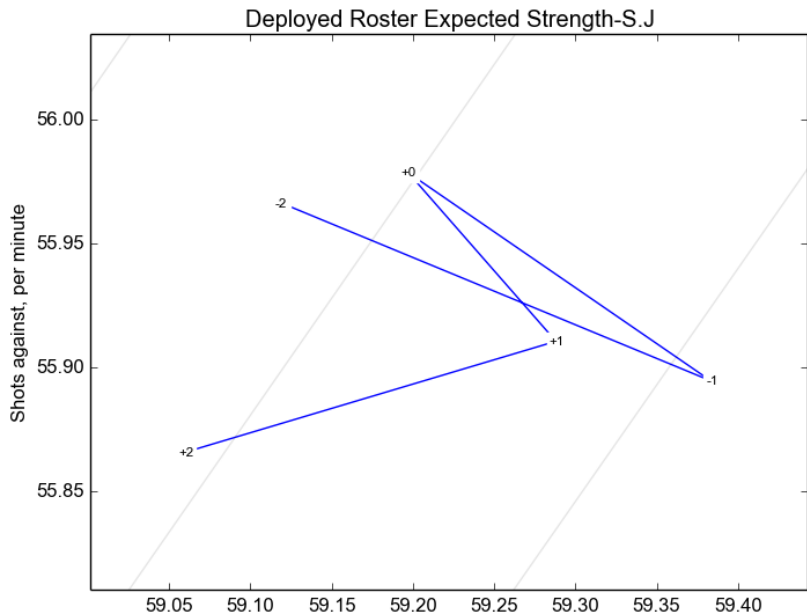
Philadelphia Flyers Roster Strength by Score State



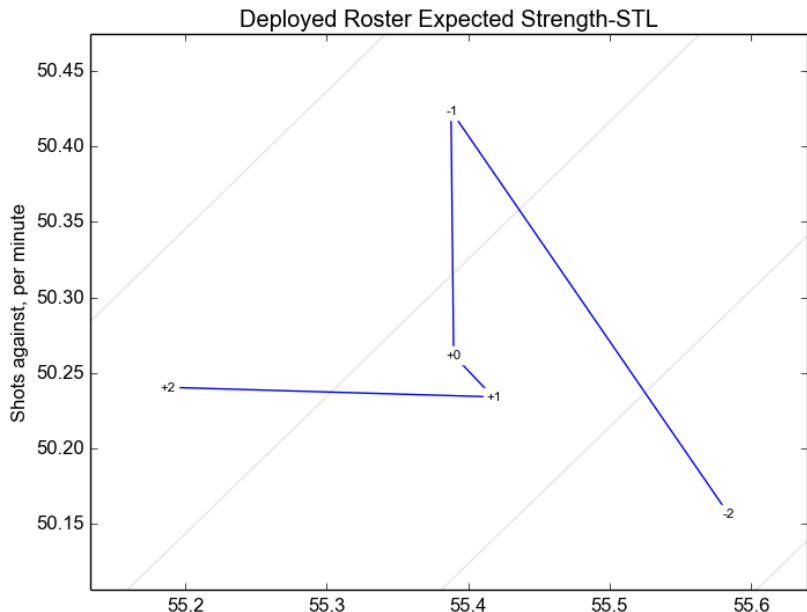
Pittsburgh Penguins Roster Strength by Score State



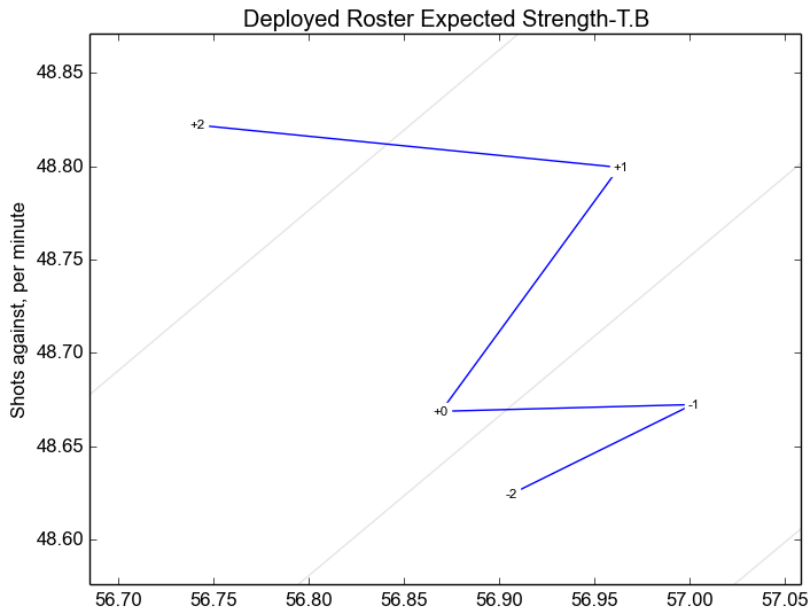
San Jose Sharks Roster Strength by Score State



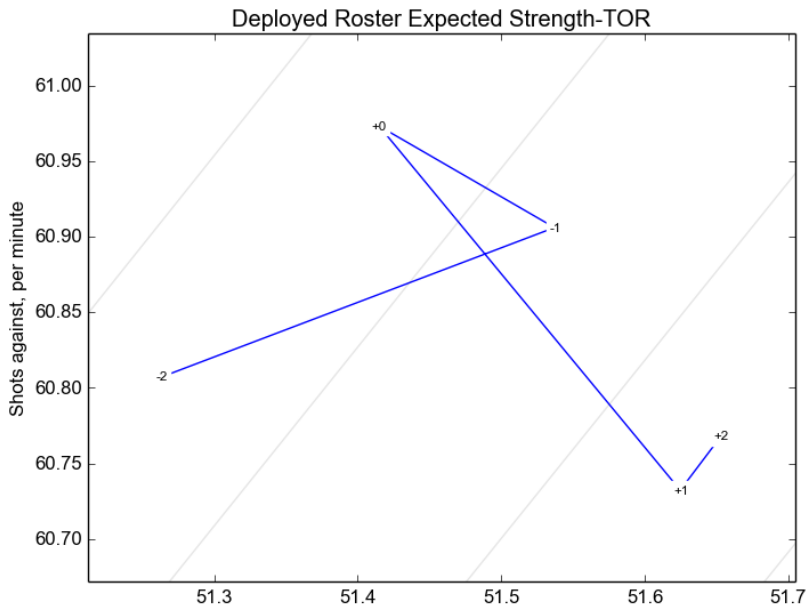
St. Louis Blues Roster Strength by Score State



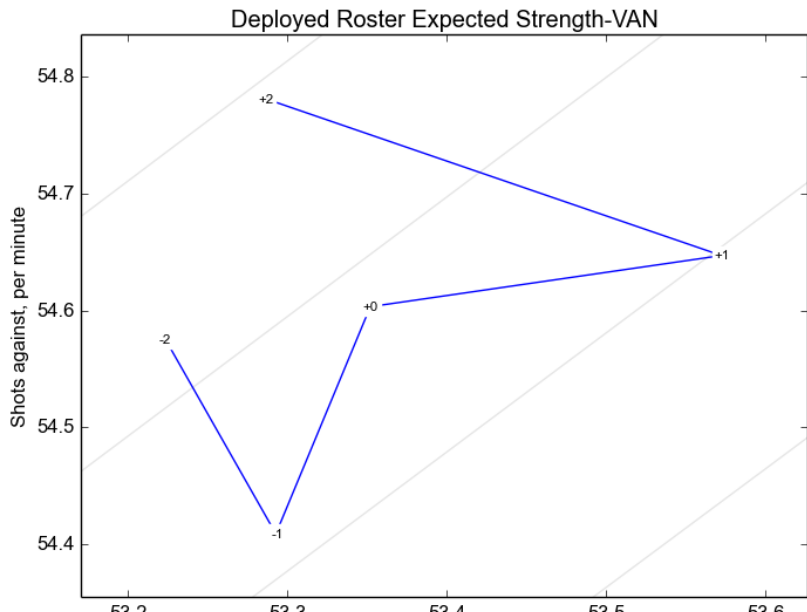
Tampa Bay Lightning Roster Strength by Score State



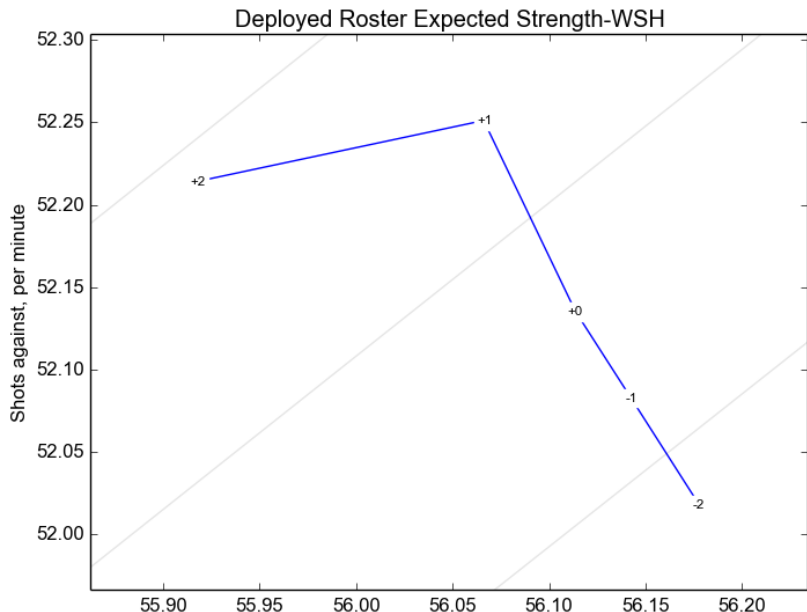
Toronto Maple Leafs Roster Strength by Score State



Vancouver Canucks Roster Strength by Score State



Washington Capitals Roster Strength by Score State



Winnipeg Jets Roster Strength by Score State

