Report of Meeting
L-37-1 Surveillance Panel Conference Call
Aug 12th , 2026

Attendees:

SwRI -	**Wright,** Lange
Lubrizol -	**Schaup,** Westmoreland, Janca, Grewe, Arnold
Afton -	**Sangpeal,** Bell, Campbell, Horvath
Intertek -	**Murray,** Portell
TMC -	Beck, Venhoff, **Transue**
BASF -	Goyal**, Caridi**, Mosher
Dana -	**Gibson**
Cummins-Meritor -	Catania
Army -	**Comfort**
Dauch -	**Muransky**
Fuchs -	Bender, Maxim, Finzenhagen
Oronite-	**Warden**
Shell-	Uy, **Schweitzer**
Exxon-	**Jetter**
Daimler Truck NA-	**Vander Wal**
Richful Lube Additives-	**McCollum**
International Motors-	Jeanelle
VBase-	Hunt
Infineum-	**Smith**

Voting Members in **BOLD**

1.0 Membership Review

Approved motion for Voting members: Added Andrew Smith as a voting member for Infineum
1st Schaup/2nd Lange Motion passed unanimously, 13-0-2 (Yes-No-Abstain).

2.0 Meeting minutes Approval

Motion #1 → Warden 1st /2nd Comfort approve the meeting minutes from the May 13th, 2026, ASTM Meeting. Motion passed unanimously, 14-0-2 (Yes-No-Abstain).

3.0 Action Item Review

- Previous Action Items
  - Strange axle build manual distributed at meeting 219 for review (Waiting on feedback from labs)
  - Data package for quotes (Open)

4.0 Call for replacement of 152-2

- If anyone has a 75-90 candidate reference oil that is a borderline pass in the L-37 please reach out to the TMC.

ACTION #1 → Schaup to send email requesting candidate reference oil with targets to committee

5.0 Data review and potential RCMS changes by TMC/Stats group

- Data was reviewed by the stats group and presented to the panel. Data is attached in the appendix of the meeting minutes. The presentation was centered around the idea of duplicating the deposit

workshop style calibration. Utilizing colored bands to indicate a raters performance compared to their peers. It was also discussed as a possibility that we move to a single yearly workshop, instead of the current bi-annual workshops.

6.0 Adjournment

Motion #3 → Sangpeal 1st /2nd Schaup to adjourn. Motion passed unanimously, 14-0-1 (Yes-No-Abstain).

7.0 Action Item Summary

- Nick Schaup to create a data package to get quotes for L-37 gear suppliers
- Nick Schaup to send an email out to the panel with targets canvasing for Reference oil candidates
- Nick Schaup to re-distribute strange axle rebuild manual for review

Respectfully submitted,

Nick Schaup
L-37-1 Surveillance Panel Chairman

D02.B0.03

L-37-1 Surveillance Panel Meeting

08/12/2026

Nick Schaup

- Call to Order/Agenda review
- Meeting Minute Approvals
  - May 13th, 2026, Panel Meeting Minutes
- Membership review
- Action Item Review
- Call for reference oil update
- Rating workshop and RCMS updates
- Old Business
- New business
- Adjournment

Lubrizol Confidential

Meeting Minutes Approval

- May 13th, 2026 Panel Meeting Minutes

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Membership Review

Steve Jetter	ExxonMobil
Allen Comfort	US Army
Troy Muransky	Dauch
Matt Sangpeal	Afton
Margaret Cardi	BASF
Trevor Gibson	Dana
Brad Transue	TMC
Jessica Carowick	Cummins
Reagan Murray	Intertek
Nick Schaup	Lubrizol
Payton Wright	Southwest Research
Rebecca Warden	Oronite
Clarance McCollum	Richful
Camden Vander Wal	Daimler
Addison Schweitzer	Shell
Andrew Smith	Infineum

Total Voting Members = 16

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Action Item Review

- Strange build manual review
  - Draft was distributed to labs, still waiting on feedback.
- “data package for quotes”
  - No updates

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Call for replacement oil of 152-2 Update

- The TMC is low on 152-2.

- A supplier has reached out, but if anyone else has options please reach out directly to the TMC

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Rating workshop and RCMS updates

TMC and Stats to present

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Old Business

New Business

Adjournment

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L-37-1
Review of Rater Calibration Monitoring System (RCMS) Data

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Key Assumption

Primarily only the July 2026 data is used for target setting. It is assumed that changes in ratings of parts since 2025 are a results of collaboration efforts to harmonize the definition of the rating scale, improve the resolution (now 0.5 merits), and through this process, reduce variability. Therefore, any shifts of ratings are assumed to be a result of this effort and not due to natural variability over time.

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Target Setting

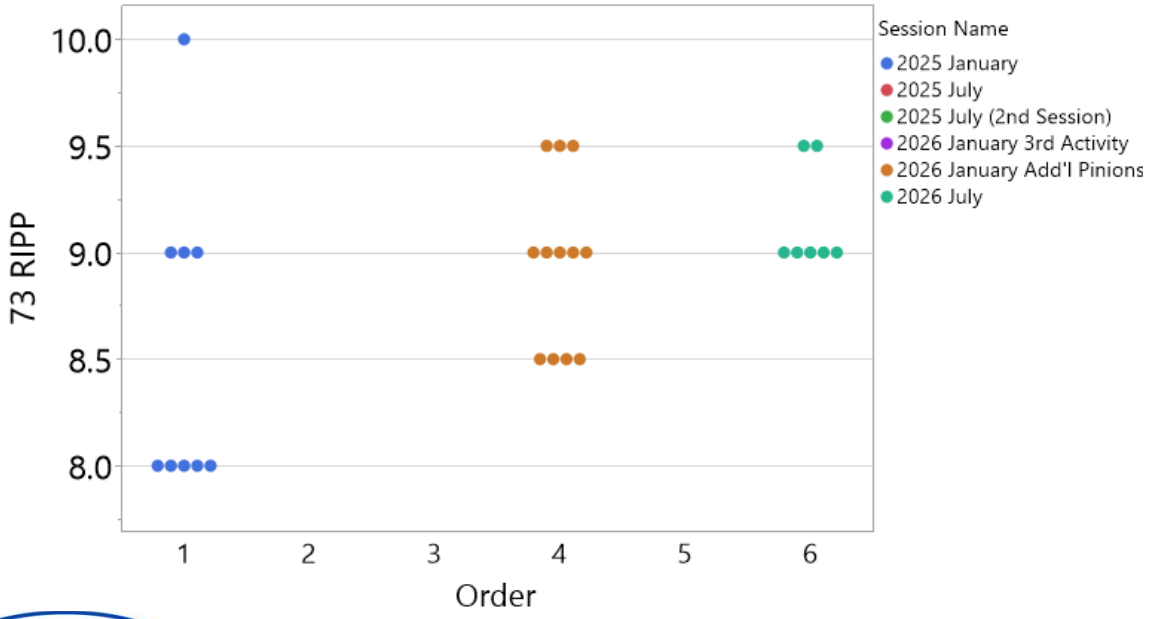
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Target Setting

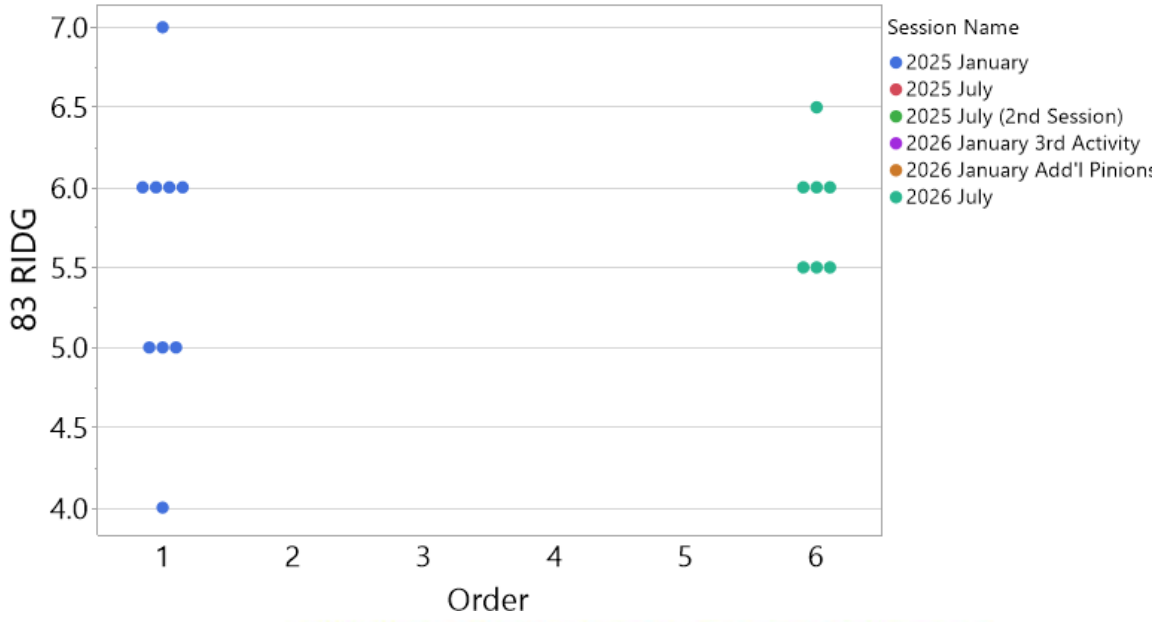
Seven (7) raters attended the July 2026 rating workshop. The following rules guided how the targets were set:

1. If a majority (at least four) of the raters agreed on the same number, this number was chosen to be the target.
2. If there was no majority agreement, the target was the value in half merit increments closest to the average.

Case #1 (majority): Target = 9.0



Case #2 (no majority): Target = 6.0

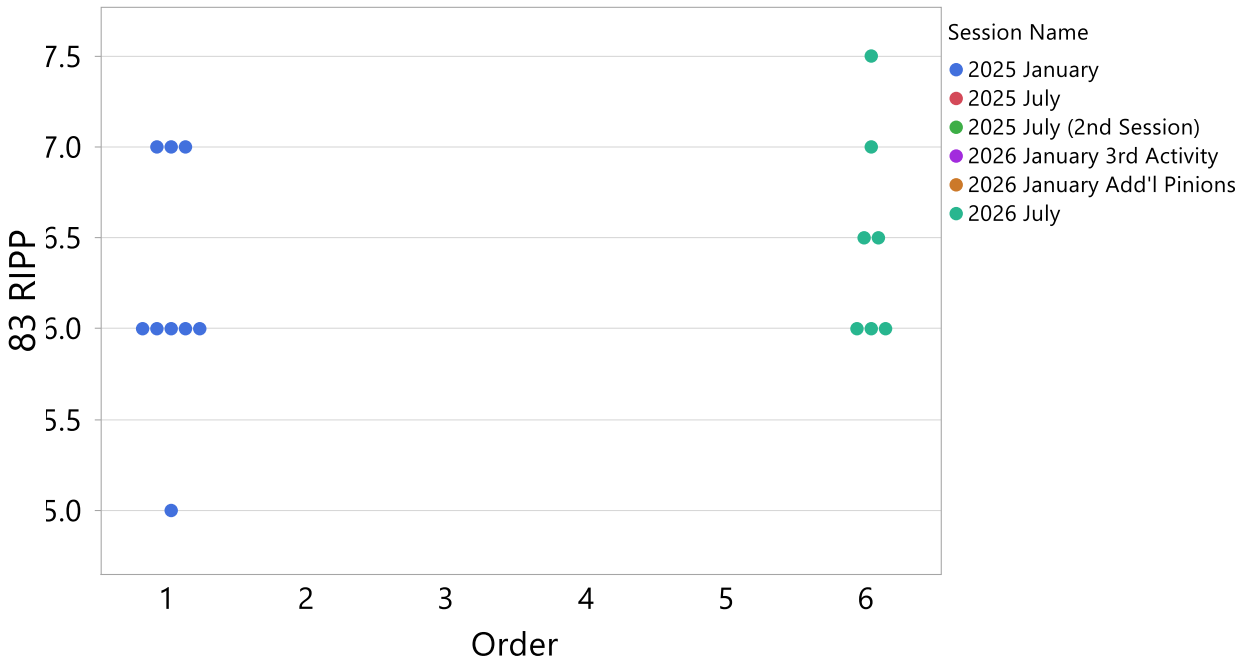


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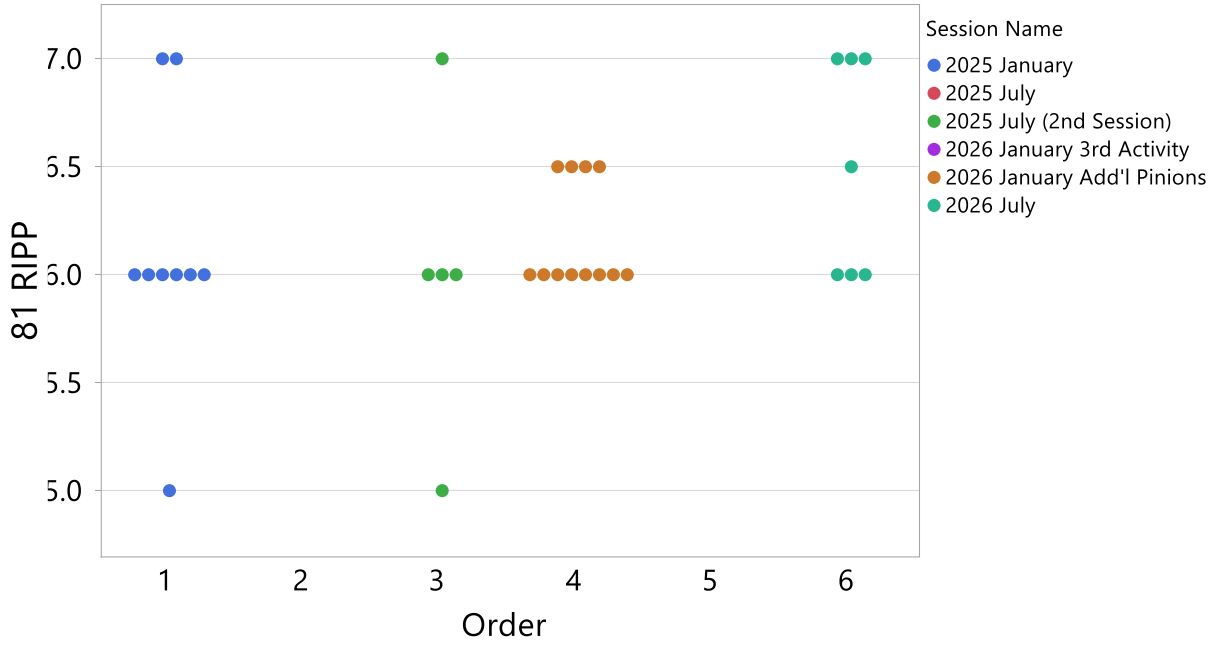
Target Not Always the Mode

Following the steps in Rule #2, there were some cases where the target was not the singular mode or tied as the mode.

Case #2 (no majority): Target = 6.5



Case #2 (no majority): Target = 6.5

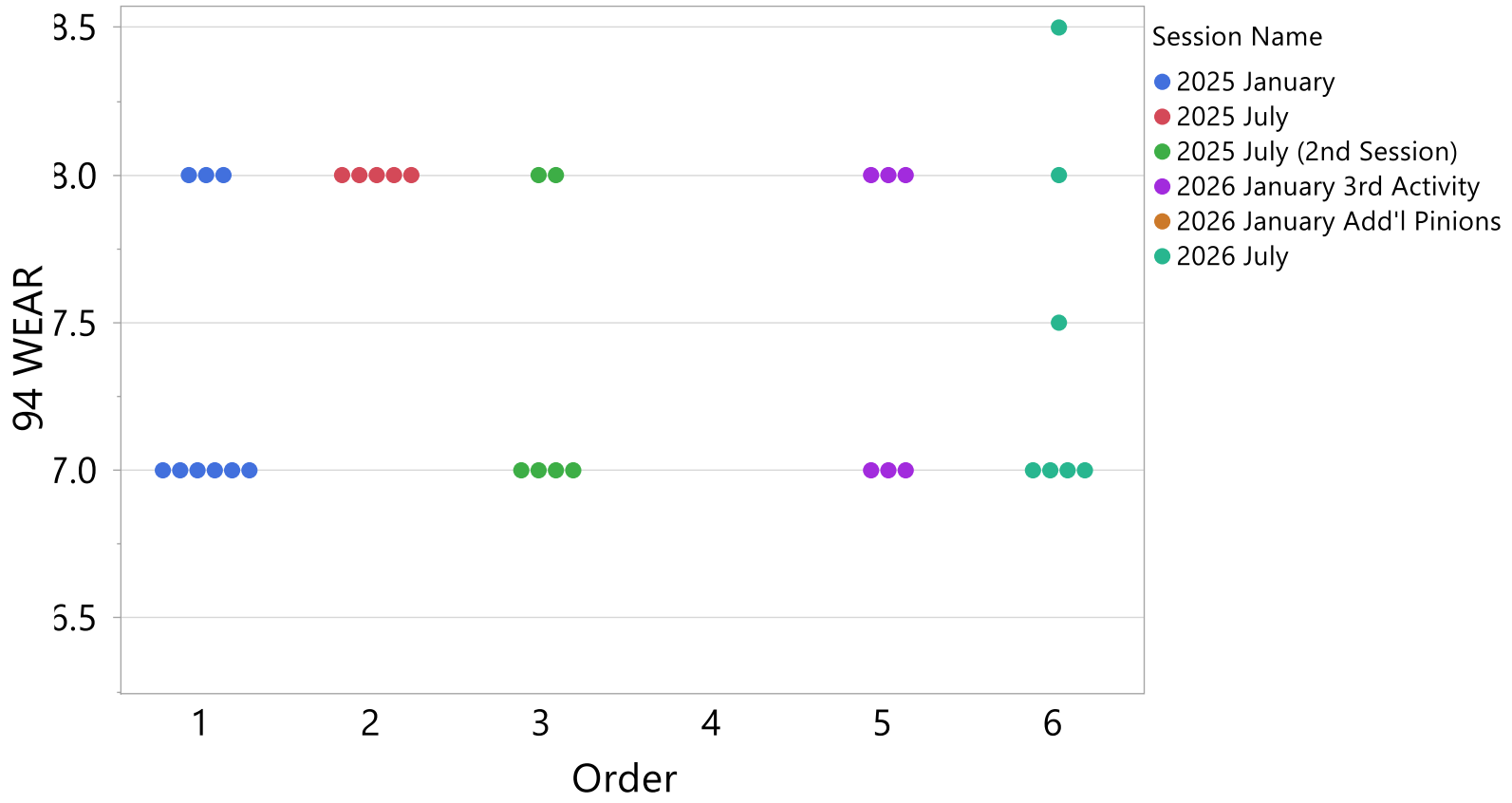


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Target Setting Rule Exception

Below is the only case where the recommended target does not follow the previously stated two rules. The target is recommended at 7.5 even though rule #1 would say it should be 7.0.

Target = 7.5



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Rating Colors

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Color Scheme Rules for Distance Off-Target

The standardized Yi values using standard deviations to reflect distance from target has generally not worked well for this test, since the standard deviation is highly unstable in a whole merit, or even half merit, often asymmetrical rating system. The below color rules may help to better describe distance from target for the L-37-1.

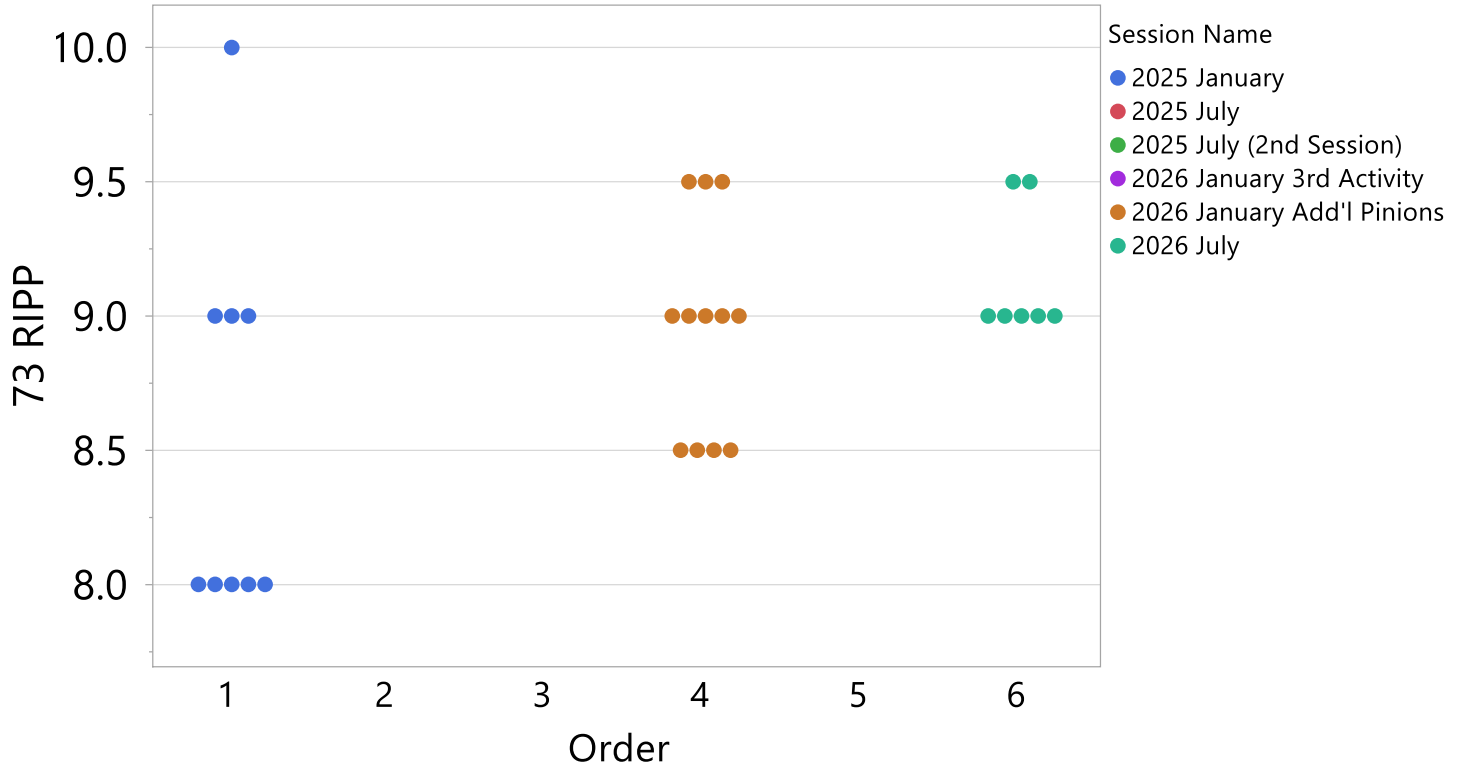
1. Green
   - The target values are always considered a green rating. In parts that are more variable, and the target seems less clear, a 2nd value may also be considered as a green rating.
2. Yellow
   - A yellow rating is a rating that is 0.5 merits from the target (0.1 for SPIT). In part/parameter combinations with only a single green rating, there will be two yellow ratings, one on either side of the target.
3. Orange
   - An orange rating is considered 0.5-1.0 merits off-target, and is only applicable when two green ratings are given. An orange represents the value that is 0.5 merits from one of the green ratings, and therefore there were at least two better choices for ratings.
4. Red
   - A red rating is 1 merit of more off-target, and does not fit the description of an orange.

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Rules for One vs. Two Green Ratings

If at least 5 of 7 raters in July 2026 agreed on the same value, then this single value is the only Green rating. The two values 0.5 merits away on either side are considered Yellow. All other values are considered to be Red.

Target = 9.0
Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {Ø}
Red = All other ratings

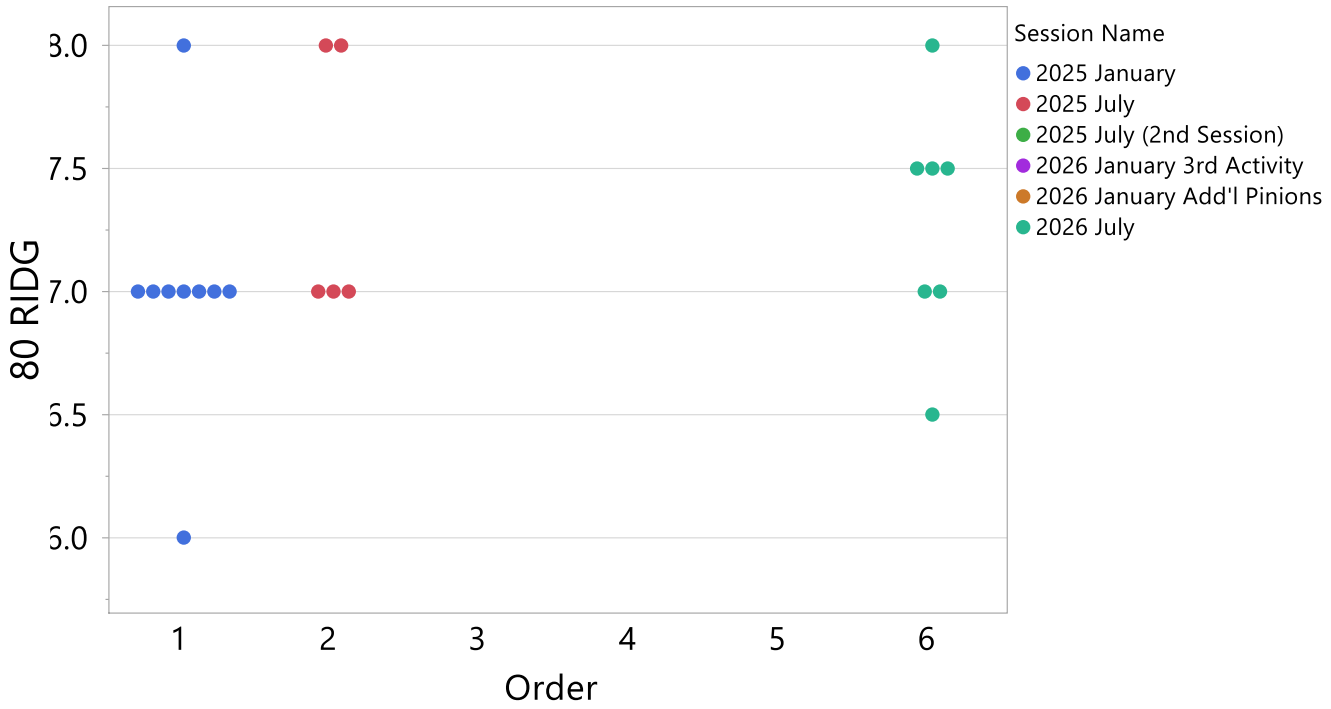


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Rules for One vs. Two Green Ratings

If four or fewer raters agreed on the target value, then this part/parameter is seen as harder to rate, and therefore the target is less certain, so the target plus the next closest 0.5 merit rating to the average are both considered as green ratings. A value of Orange is assigned to the two ratings 0.5 merits on either side of the greens, meaning they fall 0.5-1.0 merits from the arithmetic mean, and there were at least two better choices for ratings, making the slightly worse than a yellow on average.

Target = 7.5
Green = {7.5, 7.0}
Yellow = {∅}
Orange = {8.0, 6.5}
Red = All other ratings



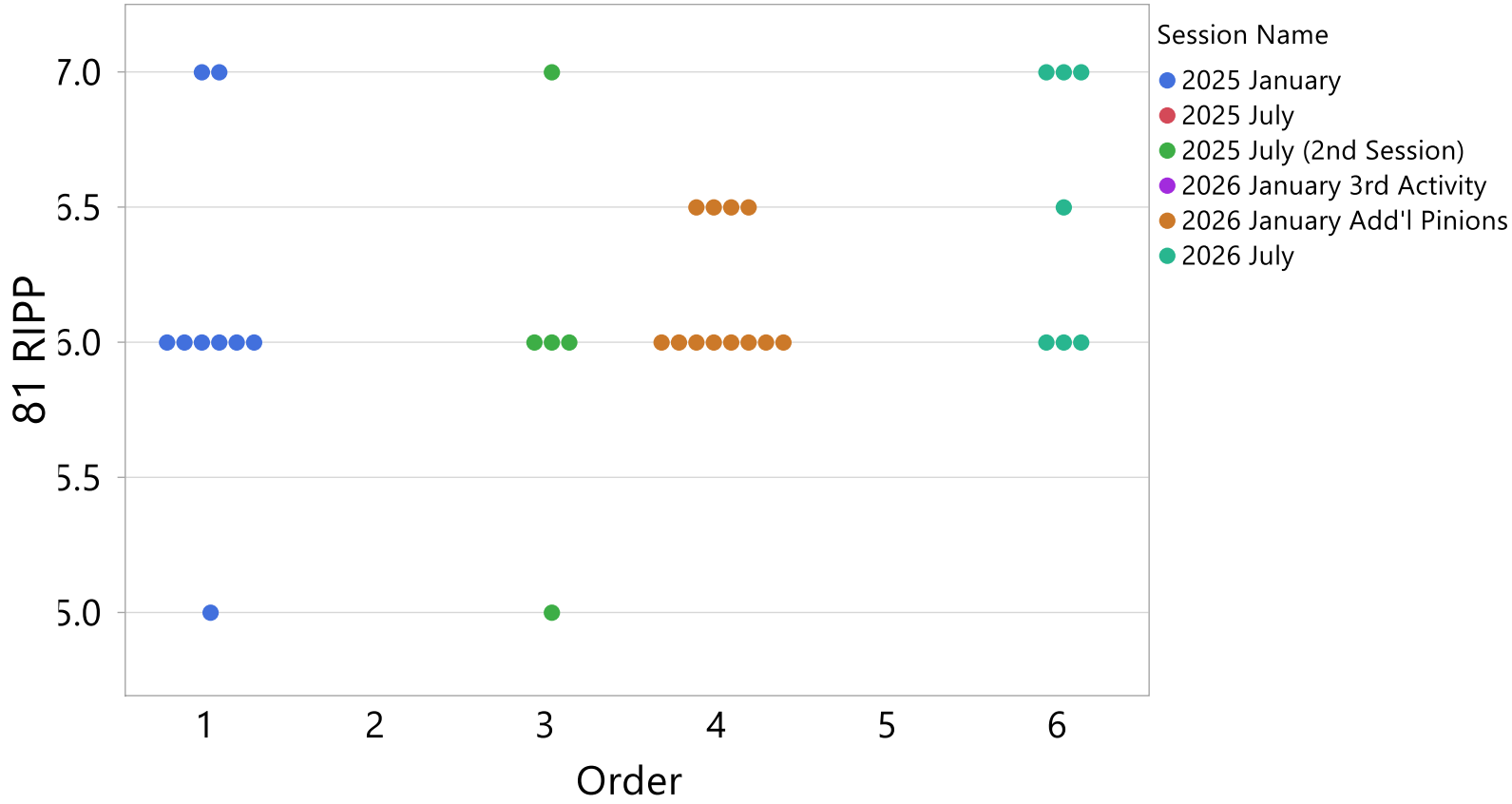
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Slides to Discuss

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Part 81 - RIPP

This part was milder this time vs. past workshops.

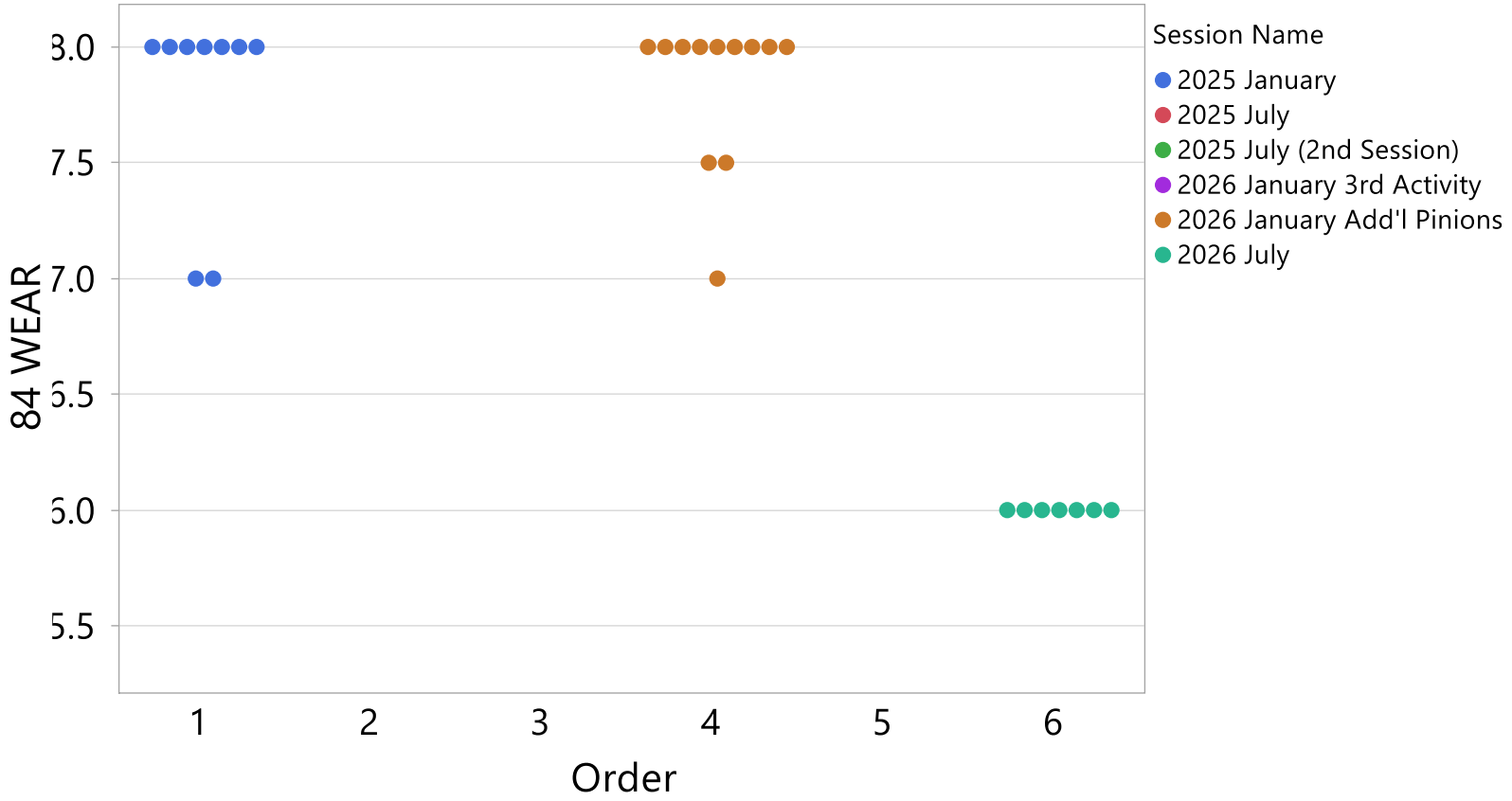


Target = 6.5

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Part 84 - Wear

This part was rated very differently this time vs. past workshops.

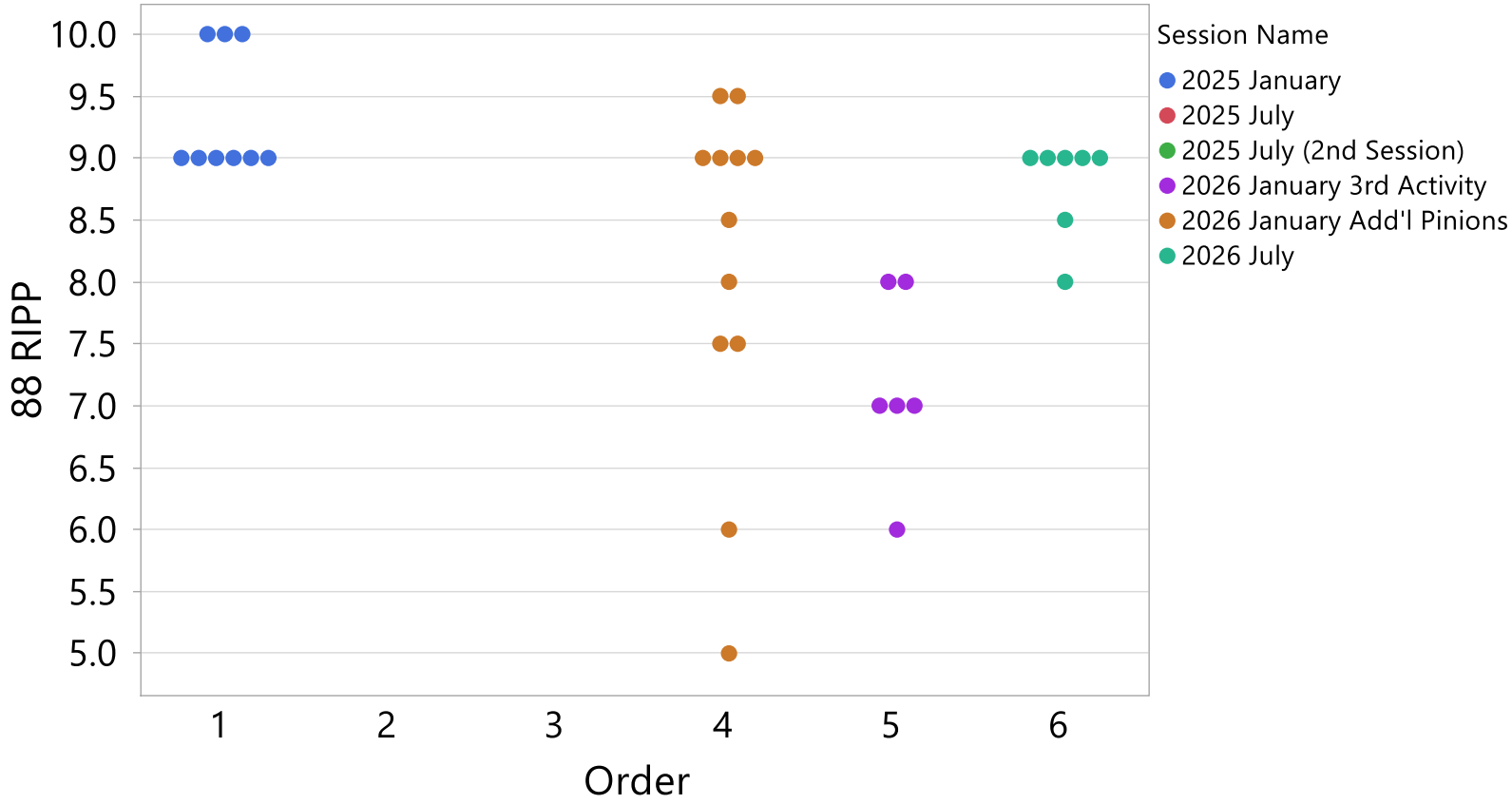


Target = 6.0

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Part 88 - RIPP

Do we know what happened to cause the orange dots from January 2026?



Target = 9.0

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Rater Statistics

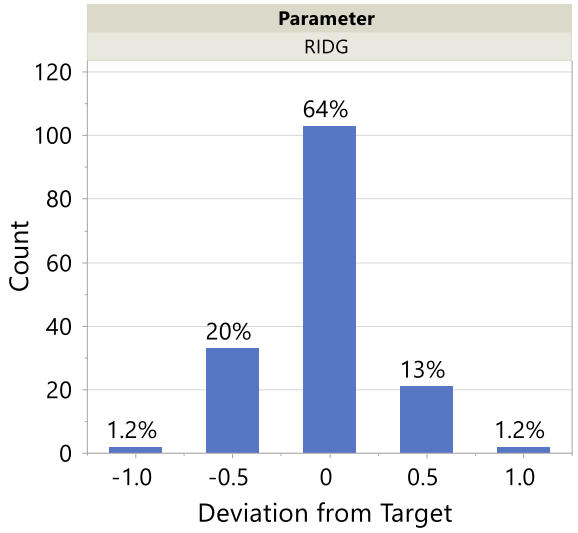
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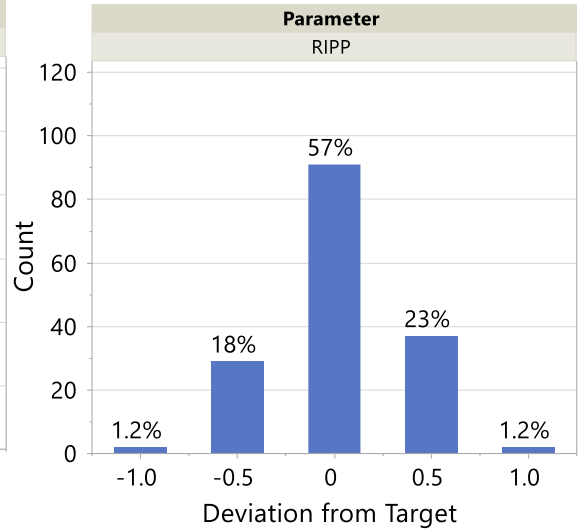
Combined Rater Statistics

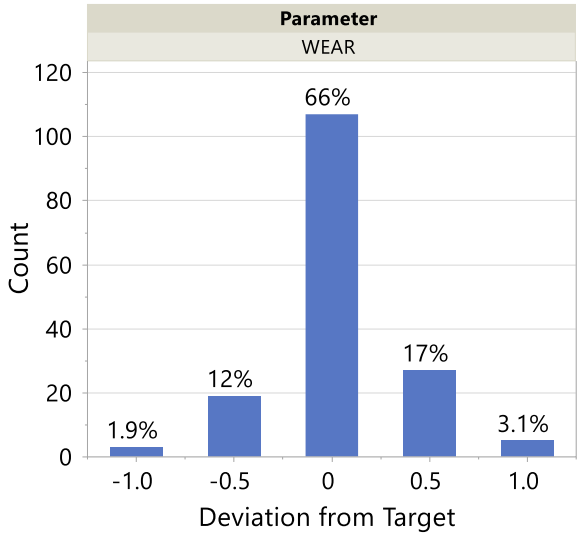
Rater #1 showed a tendency to be just below target on ridging, while never being above target.

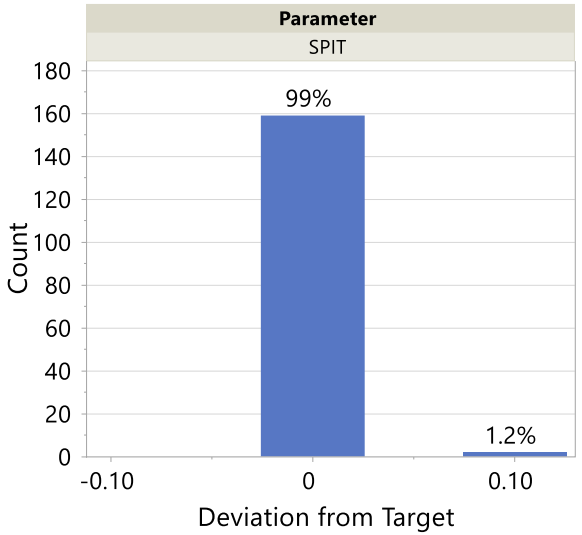
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	81.0%	83.9%	78.9%	80.1%	98.8%
Yellow %	11.6%	8.7%	14.3%	11.8%	1.2%
Orange %	5.2%	5.6%	5.6%	4.3%	0.0%
Red %	2.3%	1.9%	1.2%	3.7%	0.0%

Rating Deviation from Target









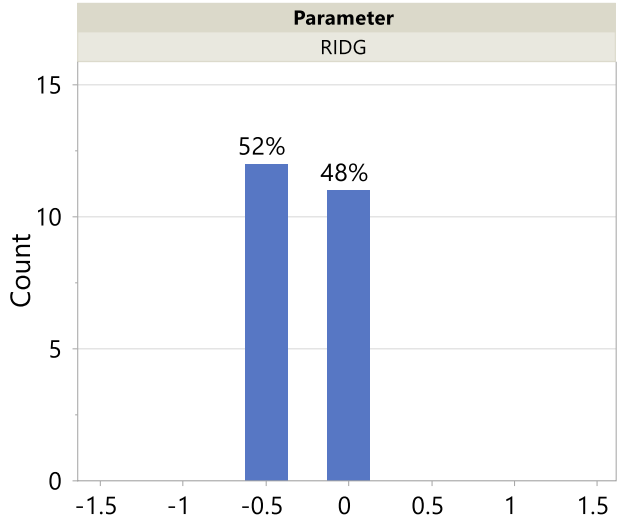
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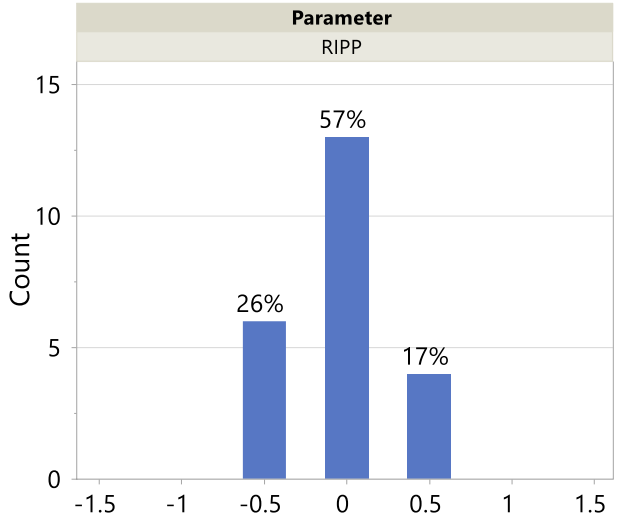
Rater #1 Statistics

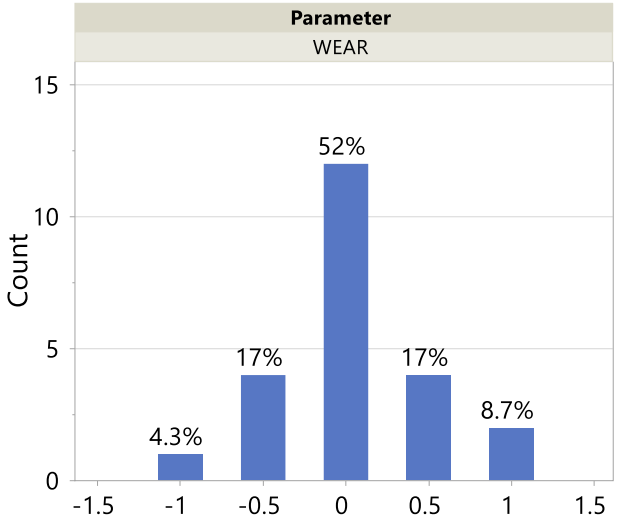
Rater #1 showed a tendency to be just below target on ridging, while never being above target.

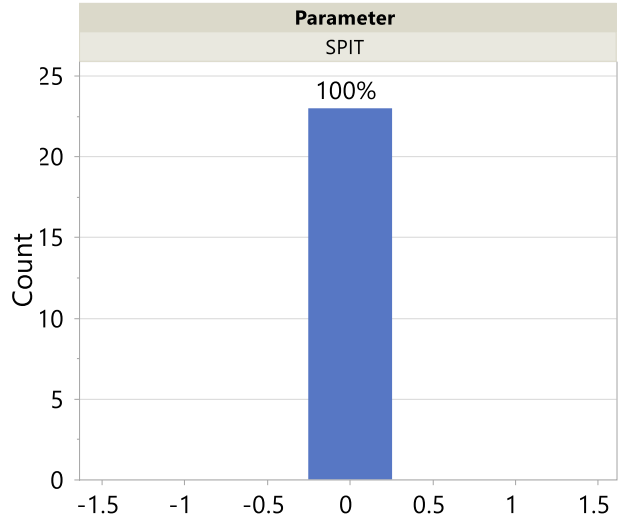
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	72.5%	69.6%	82.6%	65.2%	100.0%
Yellow %	17.4%	26.1%	13.0%	13.0%	0.0%
Orange %	7.2%	4.3%	4.3%	13.0%	0.0%
Red %	2.9%	0.0%	0.0%	8.7%	0.0%

Rating Deviation from Target







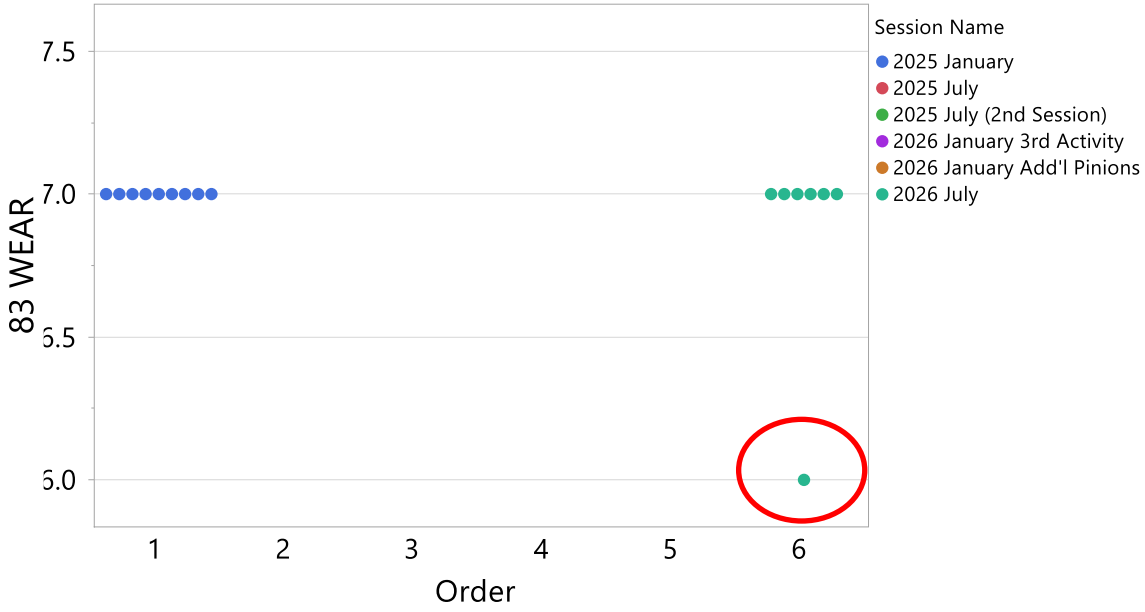


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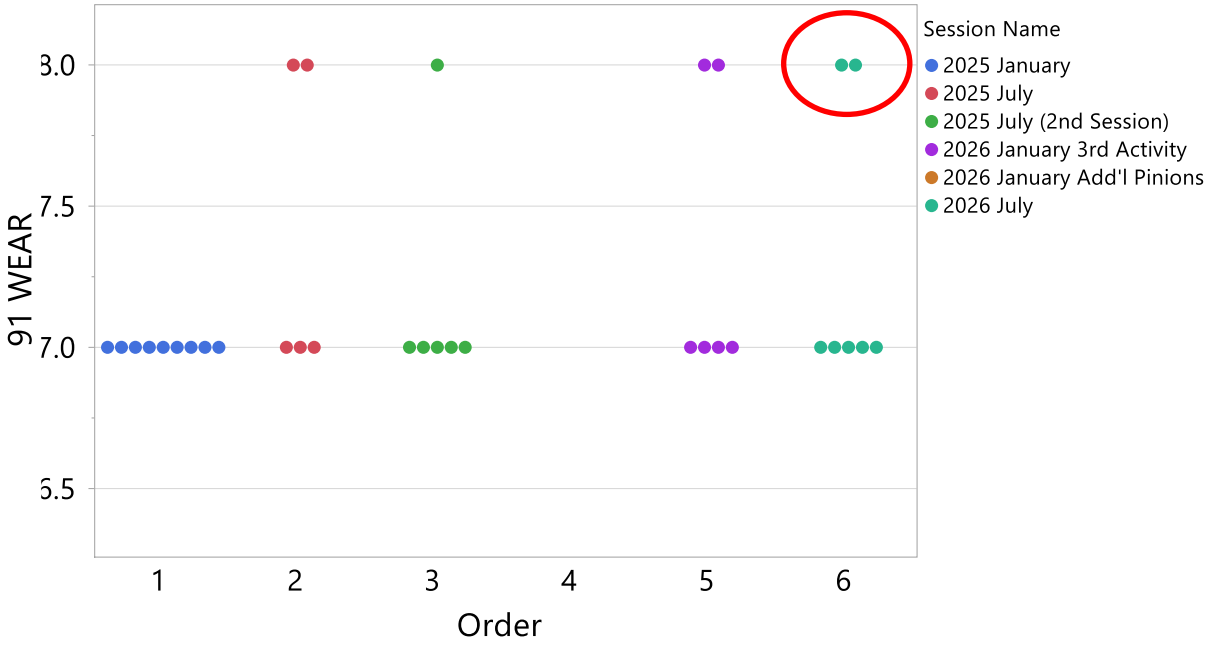
Rater #1 Red Ratings

The circled points below are the two red ratings for Rater #1.

Target = 7.0



Target = 7.0



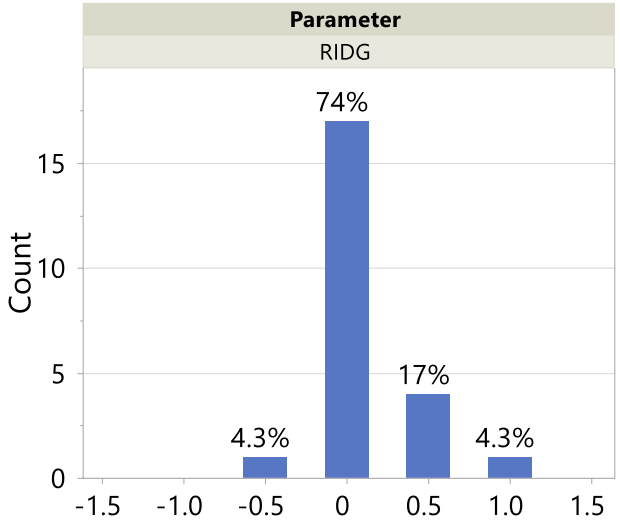
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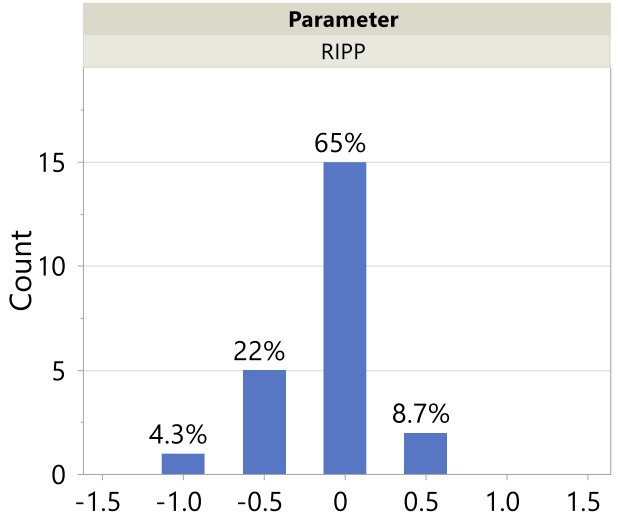
Rater #2 Statistics

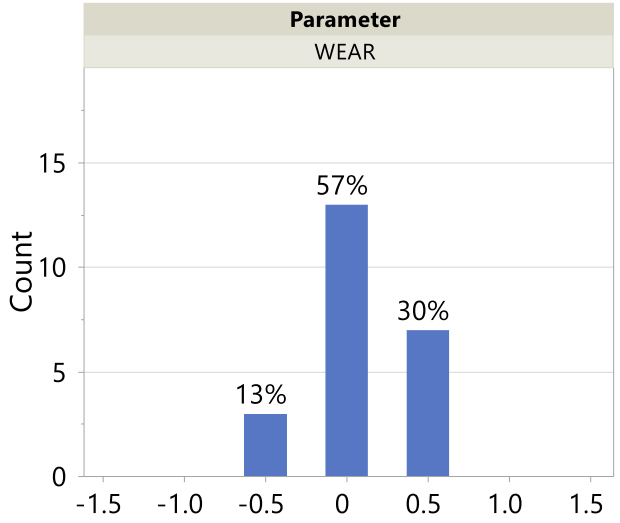
Rater #2 statistics shown below.

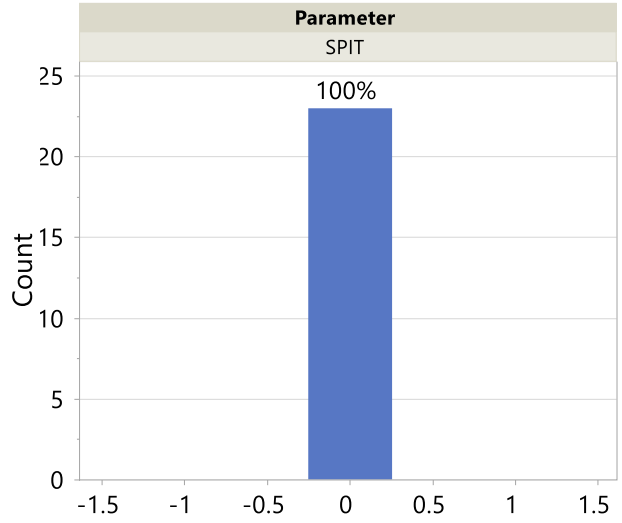
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	75.4%	82.6%	73.9%	69.6%	100.0%
Yellow %	14.5%	0.0%	17.4%	26.1%	0.0%
Orange %	7.2%	13.0%	4.3%	4.3%	0.0%
Red %	2.9%	4.3%	4.3%	0.0%	0.0%

Rating Deviation from Target









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Rater #2 Red Ratings

The circled points below are the two red ratings for Rater #2.





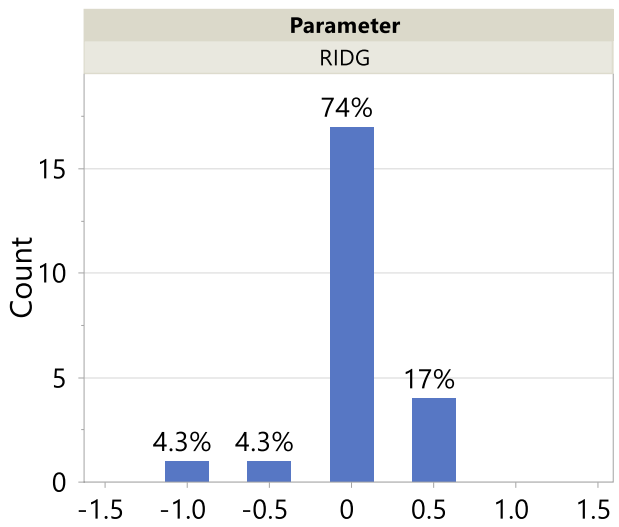
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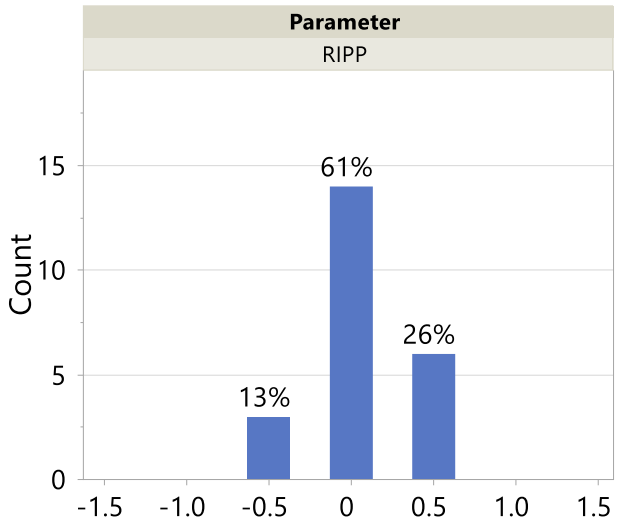
Rater #3 Statistics

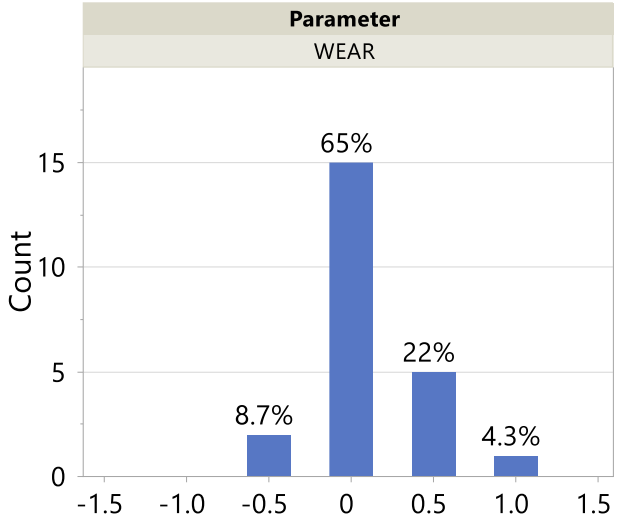
Rater #3 statistics shown below.

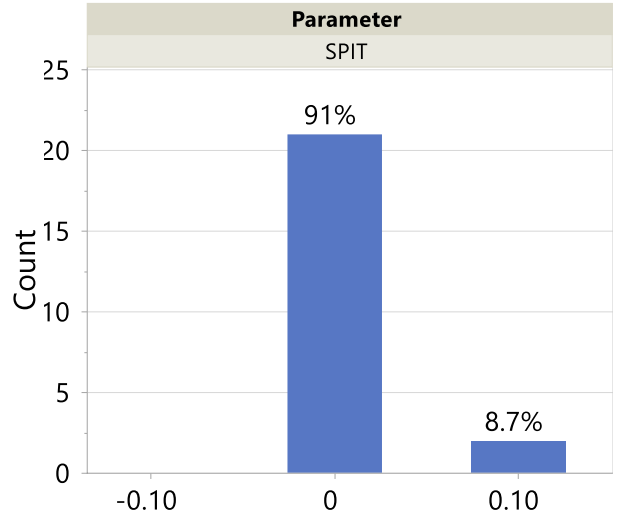
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	82.6%	87.0%	87.0%	73.9%	91.3%
Yellow %	11.6%	4.3%	8.7%	21.7%	8.7%
Orange %	4.3%	8.7%	4.3%	0.0%	0.0%
Red %	1.4%	0.0%	0.0%	4.3%	0.0%

Rating Deviation from Target









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Rater #3 Red Ratings

The circled point below is the one red rating for Rater #3.



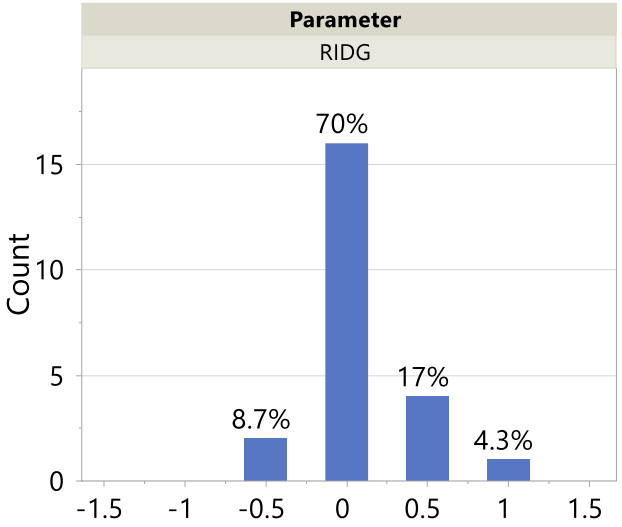
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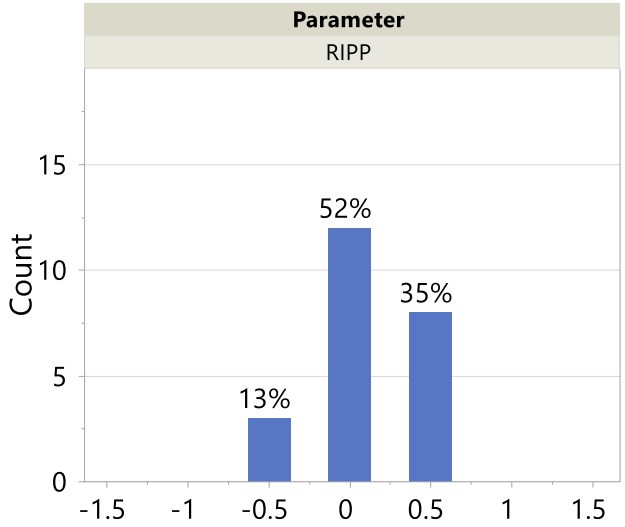
Rater #4 Statistics

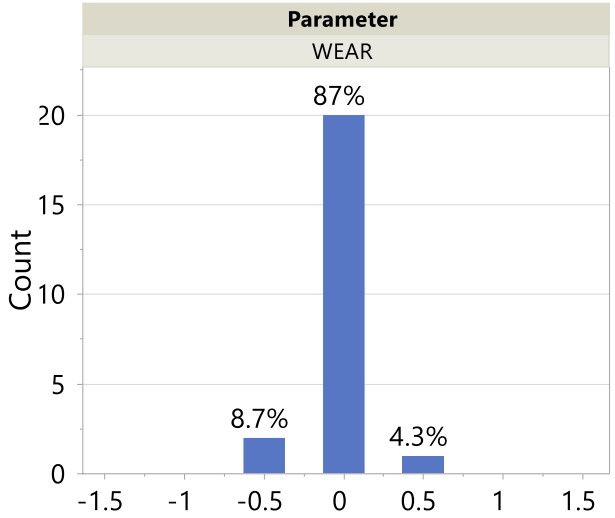
Rater #4 statistics shown below. This rater had a very high on-target percentage for wear.

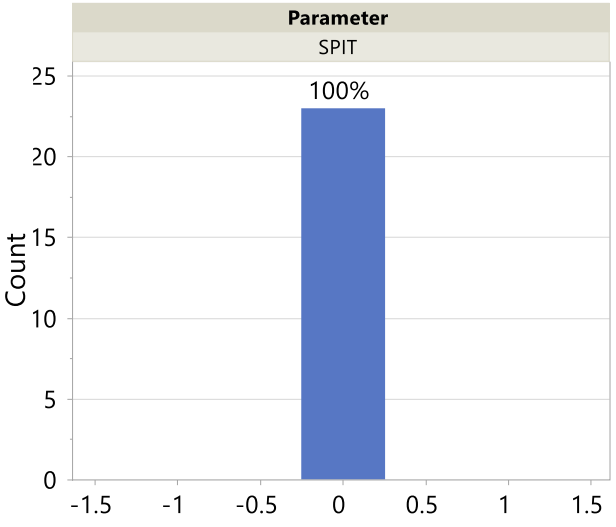
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	84.1%	82.6%	73.9%	95.7%	100.0%
Yellow %	8.7%	8.7%	17.4%	0.0%	0.0%
Orange %	5.8%	4.3%	8.7%	4.3%	0.0%
Red %	1.4%	4.3%	0.0%	0.0%	0.0%

Rating Deviation from Target









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Rater #4 Red Ratings

The circled point below is the one red rating for Rater #4.



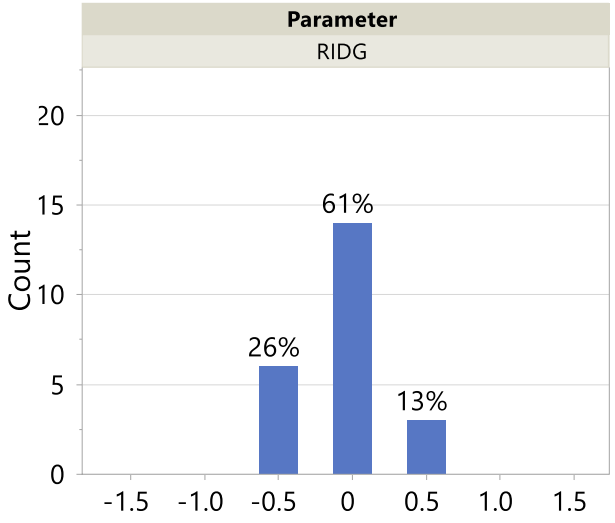
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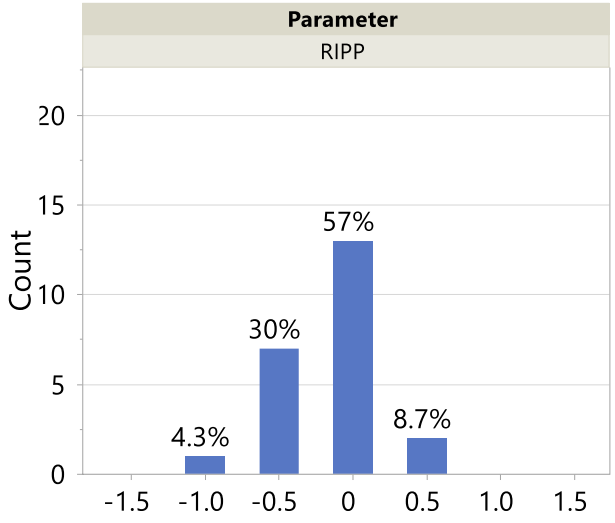
Rater #5 Statistics

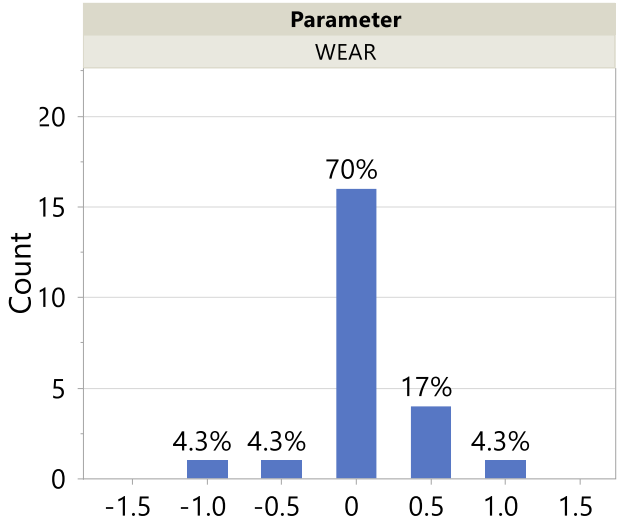
Rater #5 statistics below. There was a slight tendency to rate low on ridging and rippling.

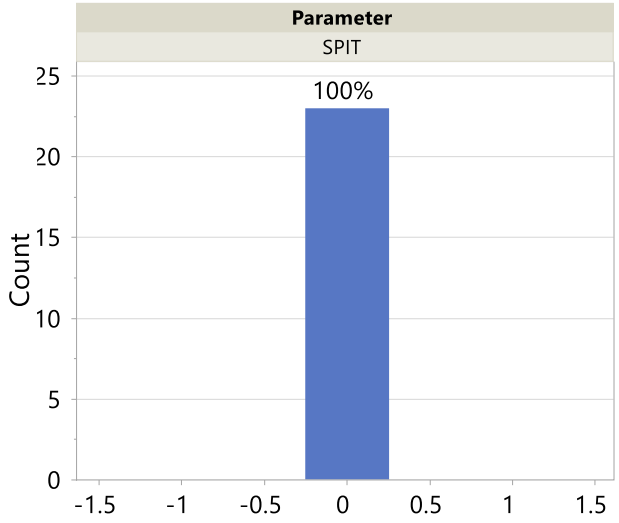
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	85.5%	91.3%	82.6%	82.6%	100.0%
Yellow %	8.7%	4.3%	13.0%	8.7%	0.0%
Orange %	4.3%	4.3%	4.3%	4.3%	0.0%
Red %	1.4%	0.0%	0.0%	4.3%	0.0%

Rating Deviation from Target









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Rater #5 Red Ratings

The circled point below is the one red ratings for Rater #5.



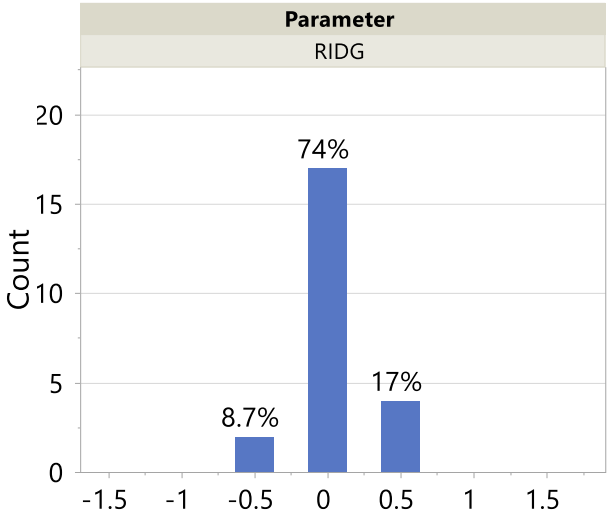
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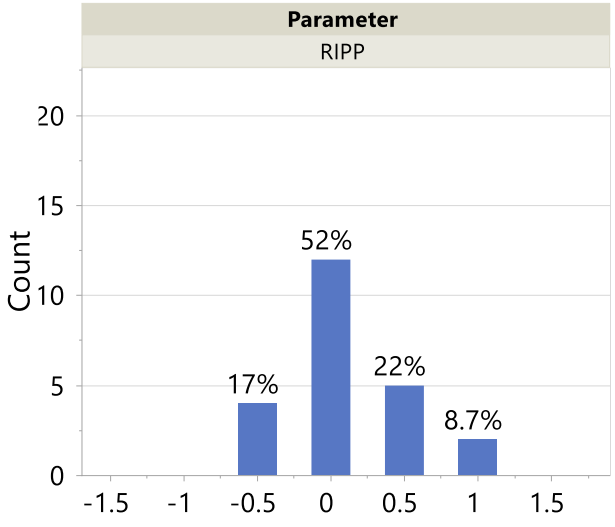
Rater #6 Statistics

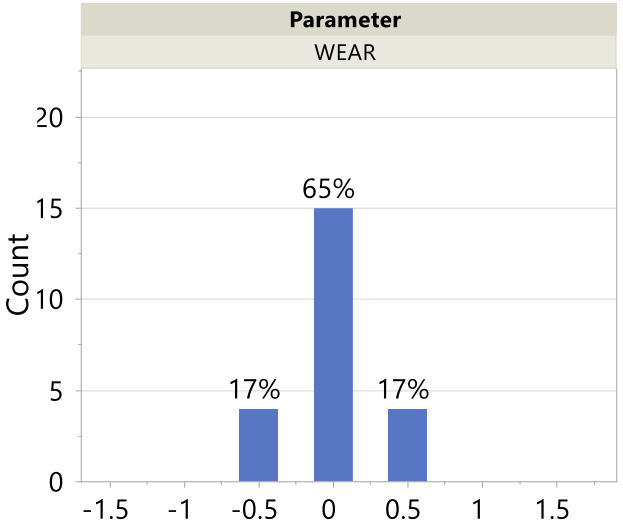
Rater #6 statistics below.

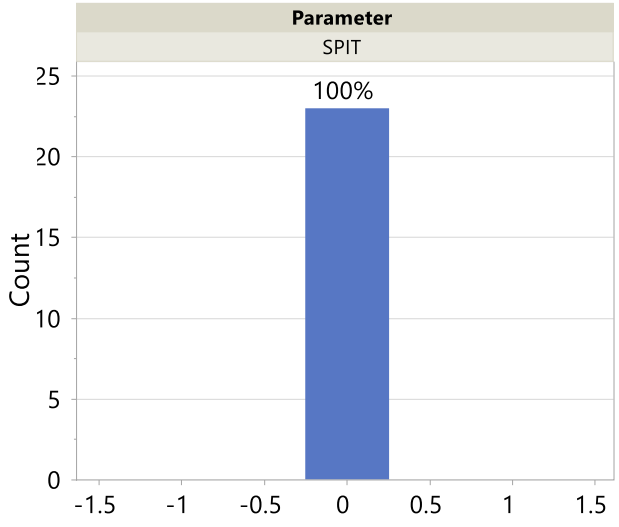
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	85.5%	95.7%	73.9%	87.0%	100.0%
Yellow %	10.1%	4.3%	17.4%	8.7%	0.0%
Orange %	2.9%	0.0%	4.3%	4.3%	0.0%
Red %	1.4%	0.0%	4.3%	0.0%	0.0%

Rating Deviation from Target





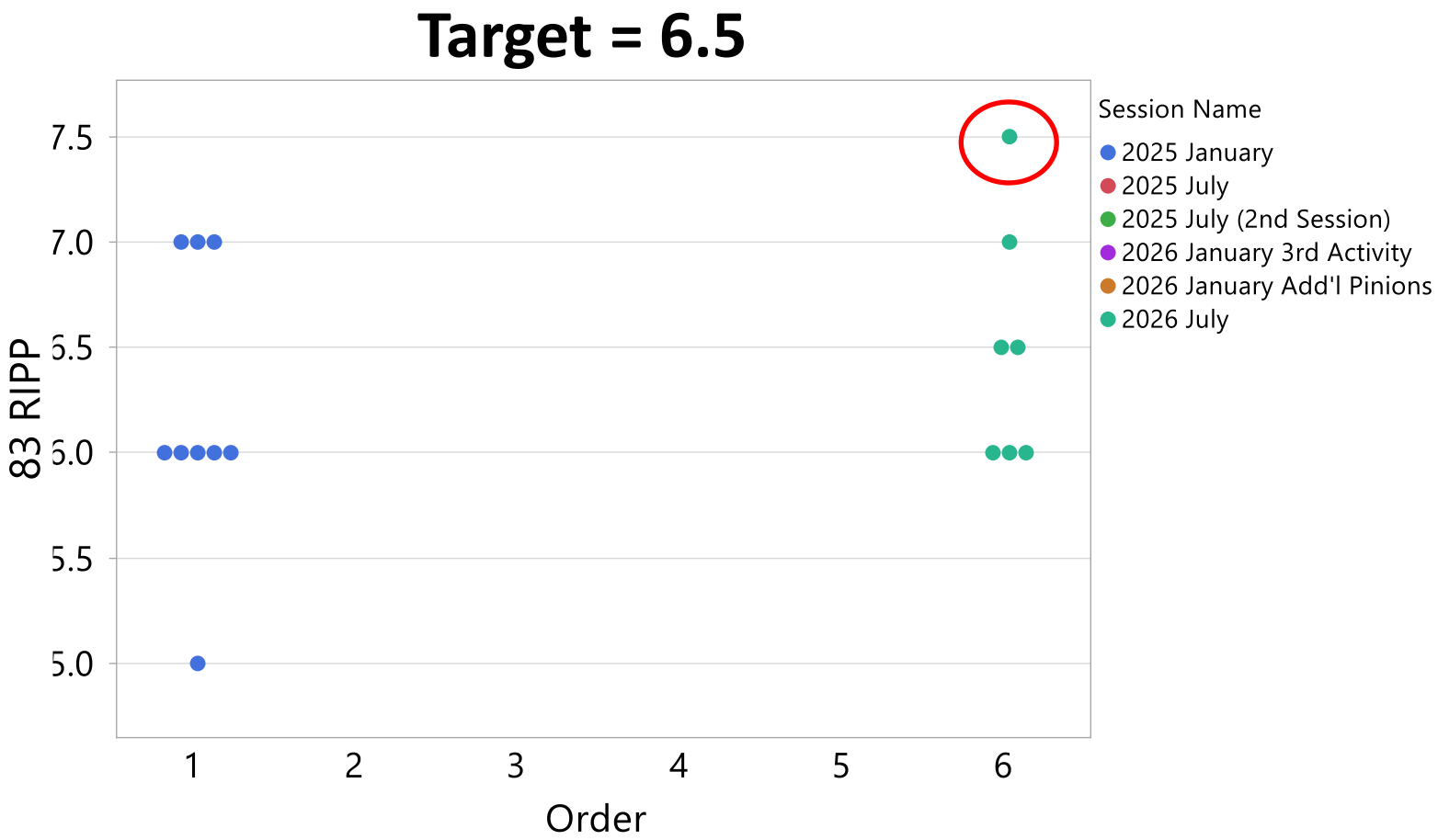




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Rater #6 Red Ratings

The circled point below is the one red rating for Rater #6.



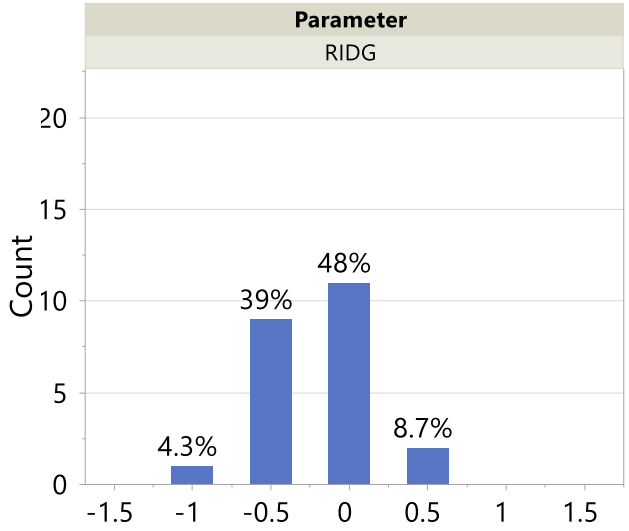
©SOUTHWEST RESEARCH INSTITUTE

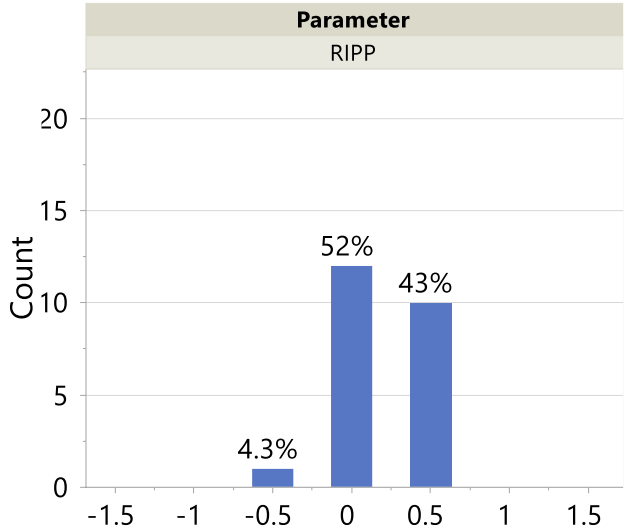
Rater #7 Statistics

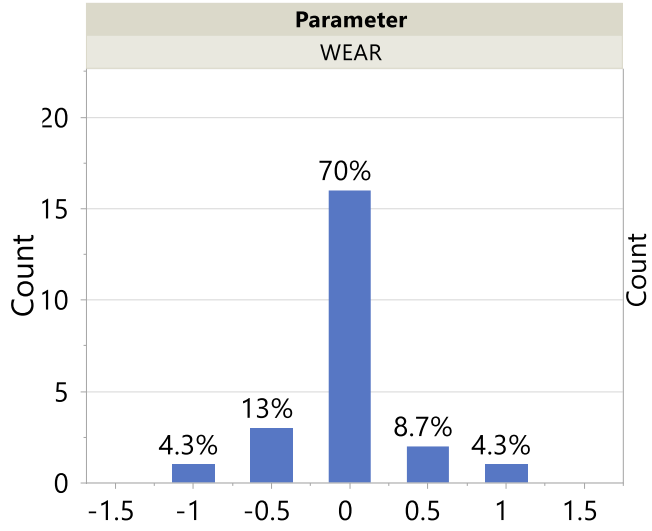
Rater #7 statistics below. This rater had a tendency to rate just below target on ridging and just above target on rippling.

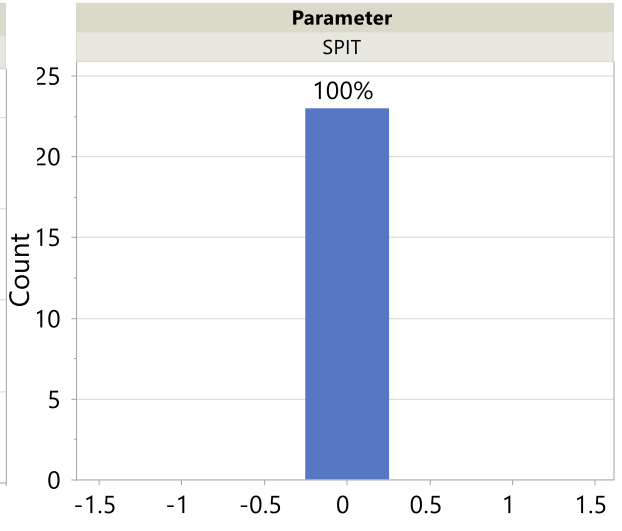
Rating Color	RIDG,RIPP,Wear	RIDG	RIPP	WEAR	SPIT
Green %	81.2%	78.3%	78.3%	87.0%	100.0%
Yellow %	10.1%	13.0%	13.0%	4.3%	0.0%
Orange %	4.3%	4.3%	8.7%	0.0%	0.0%
Red %	4.3%	4.3%	0.0%	8.7%	0.0%

Rating Deviation from Target







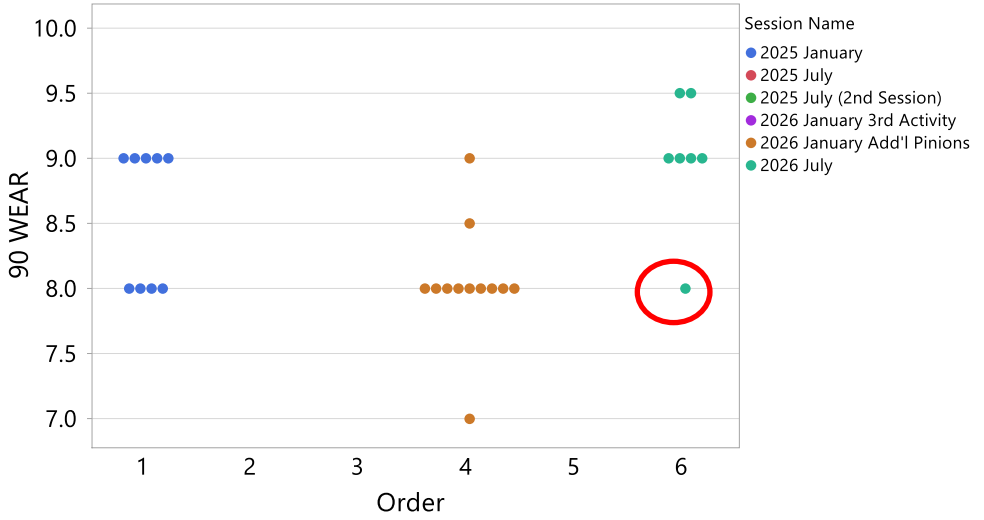


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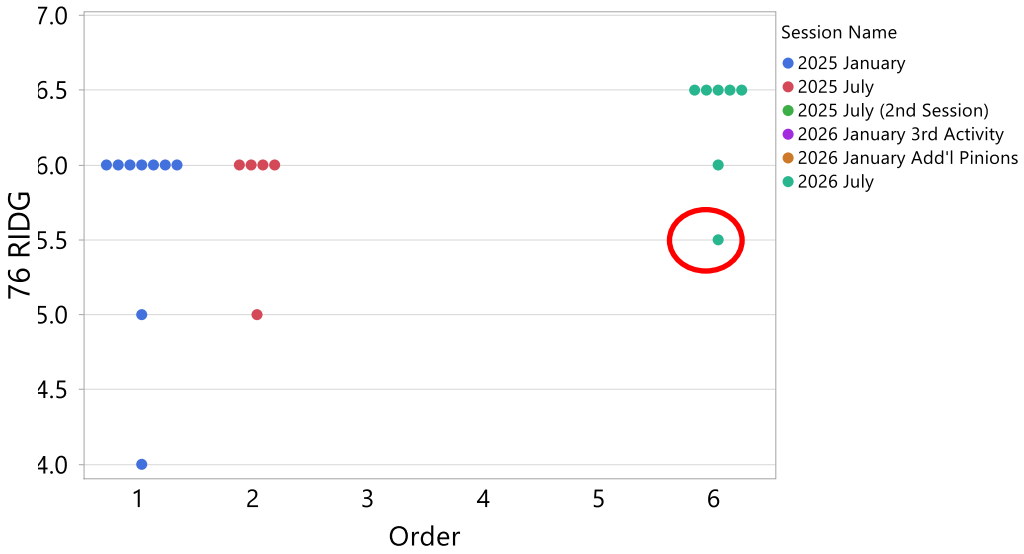
Rater #7 Red Ratings

The circled point below is the one red rating for Rater #7.

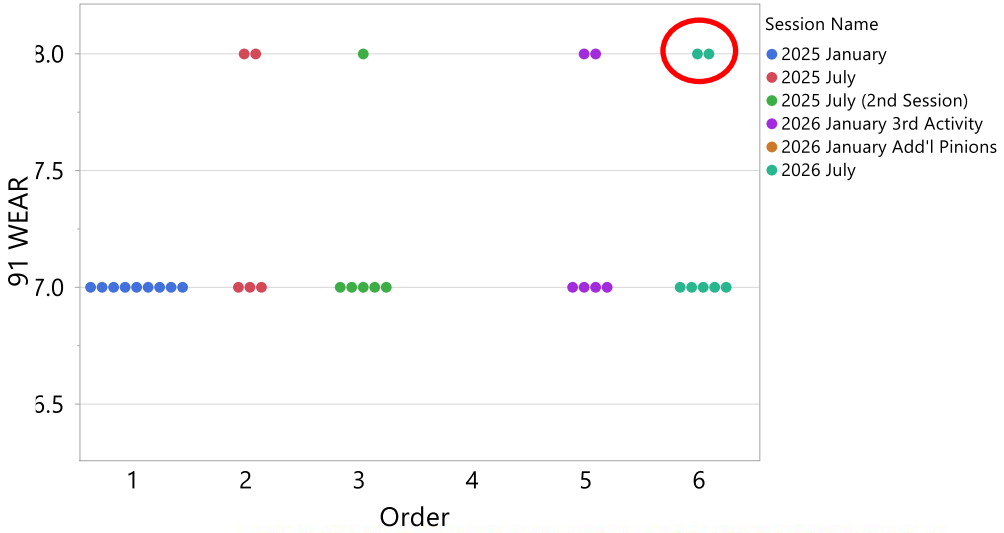
Target = 9.0



Target = 6.5



Target = 7.0



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Appendix

Plots of all Parts and Parameters

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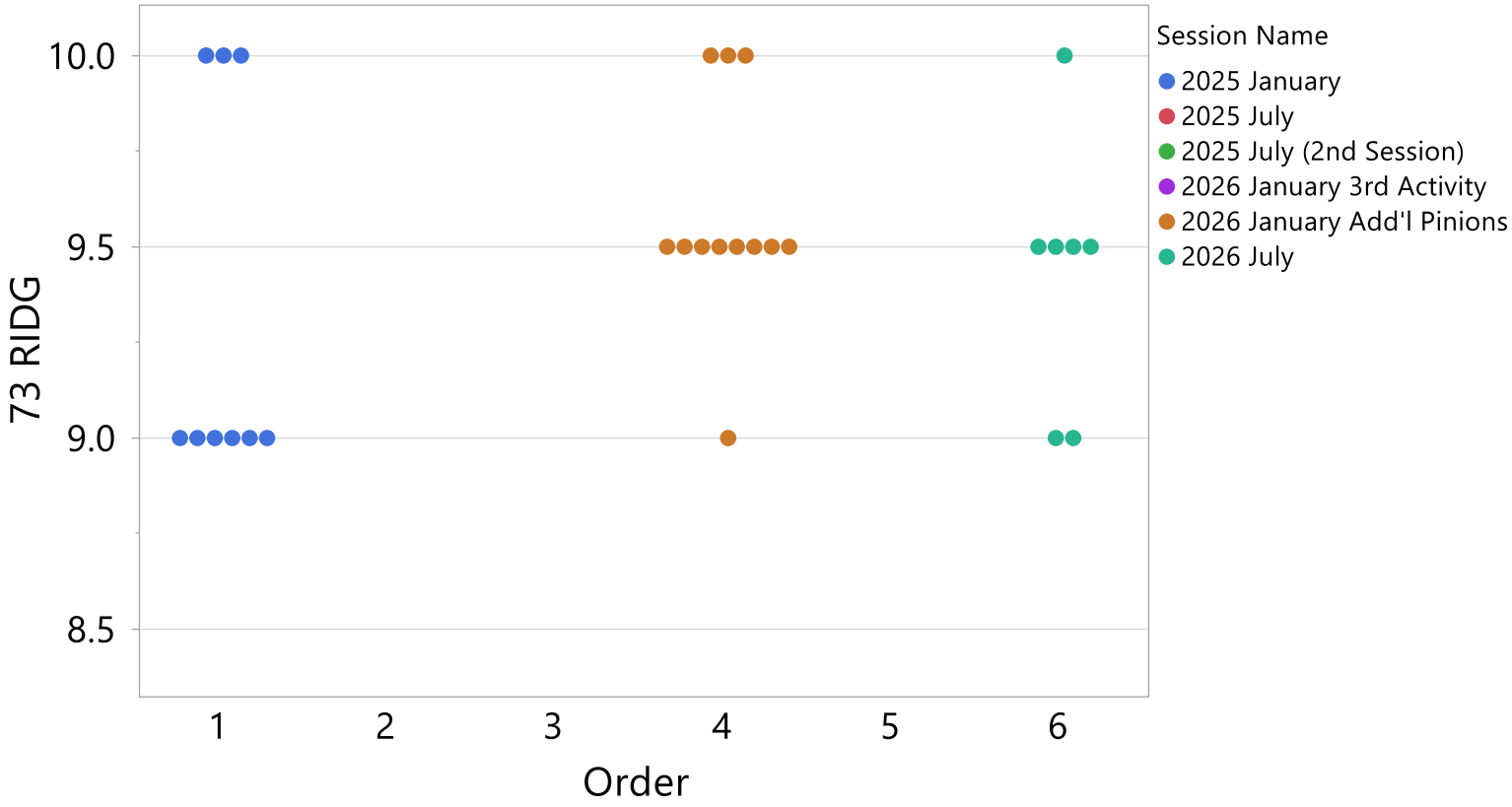
Part 73 Targets

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Part 73 - RIDG

Target = 9.5

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

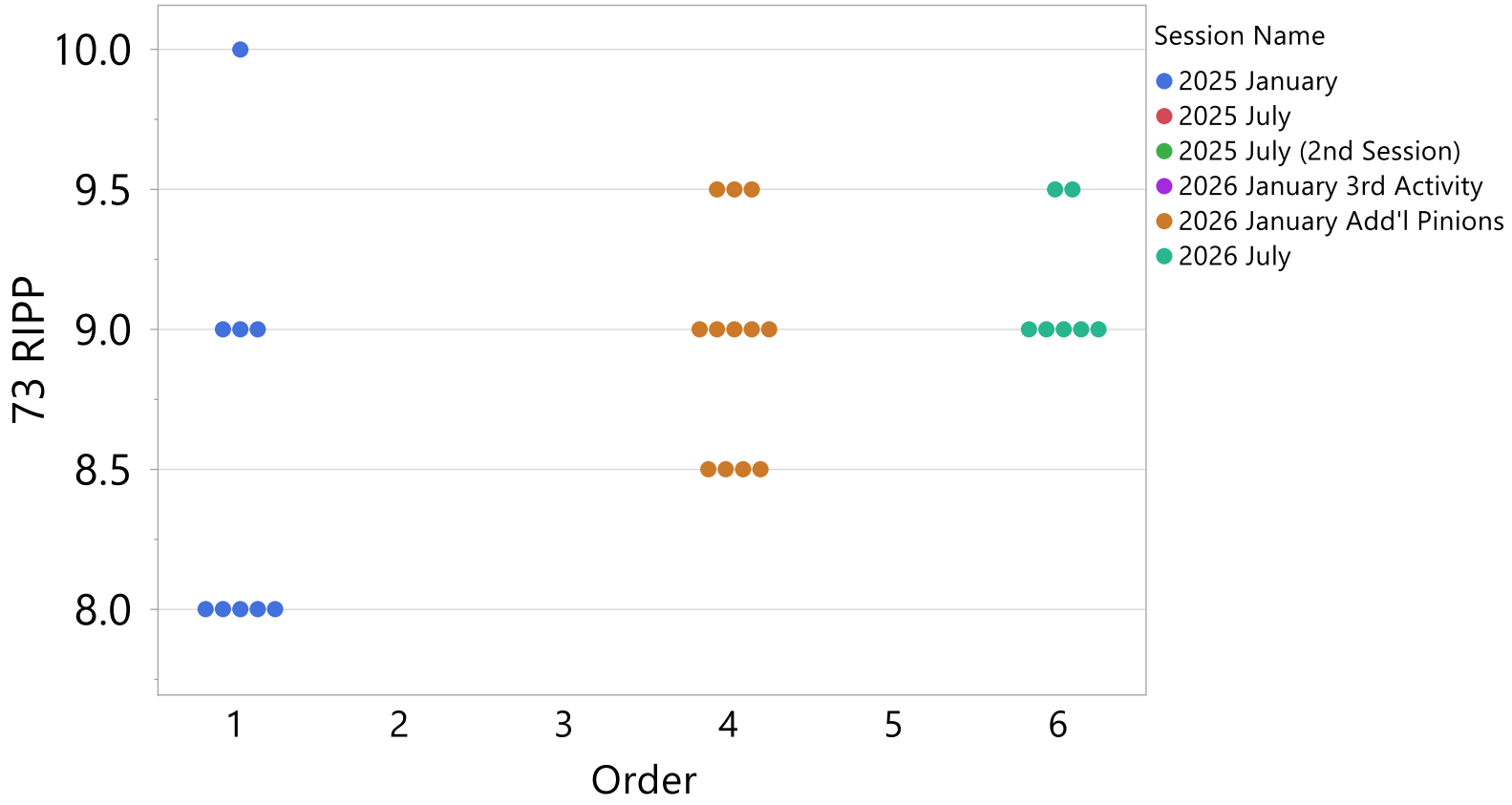


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Part 73 - RIPP

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {∅}
Red = All other ratings

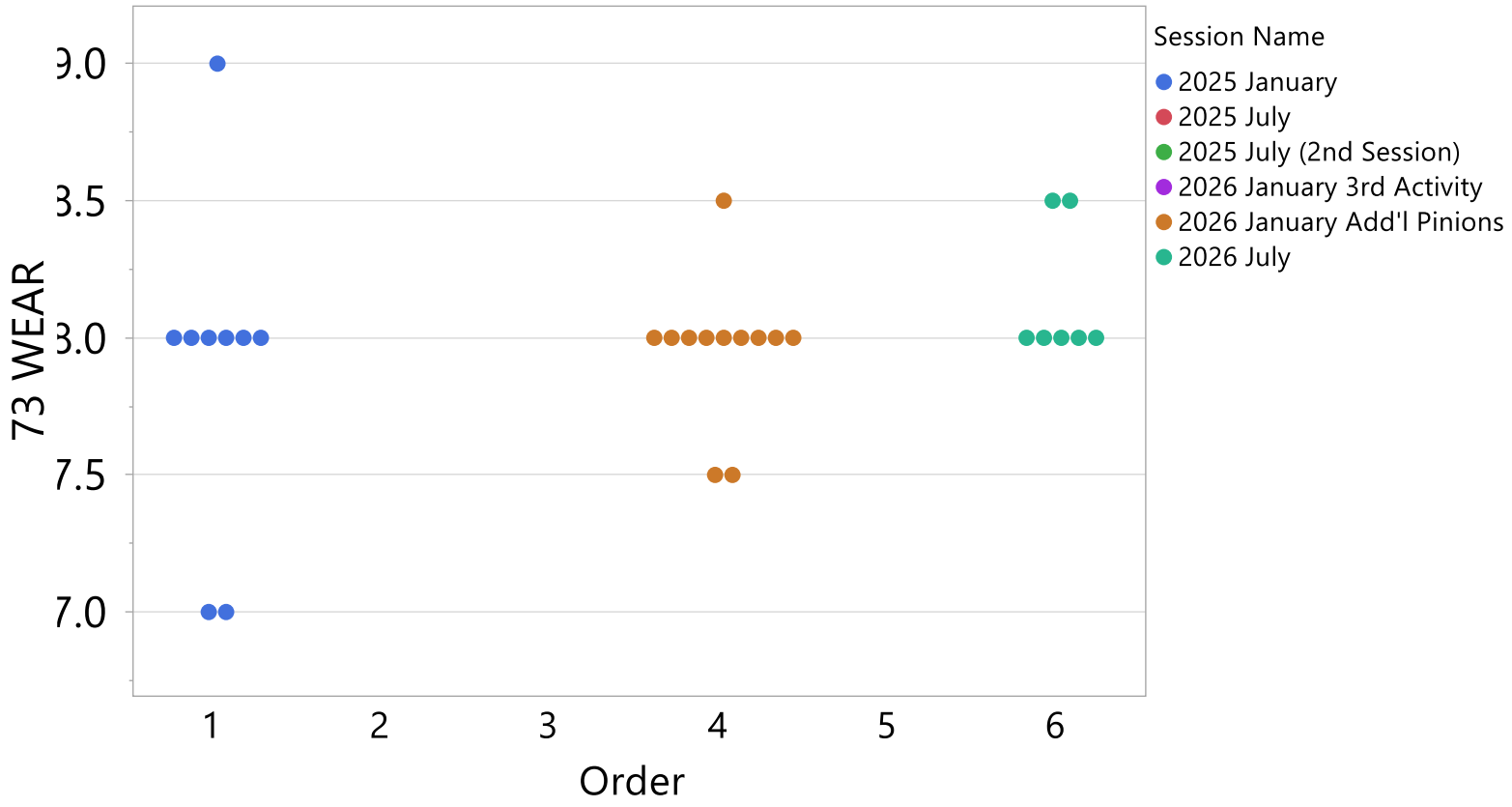


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Part 73 - Wear

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

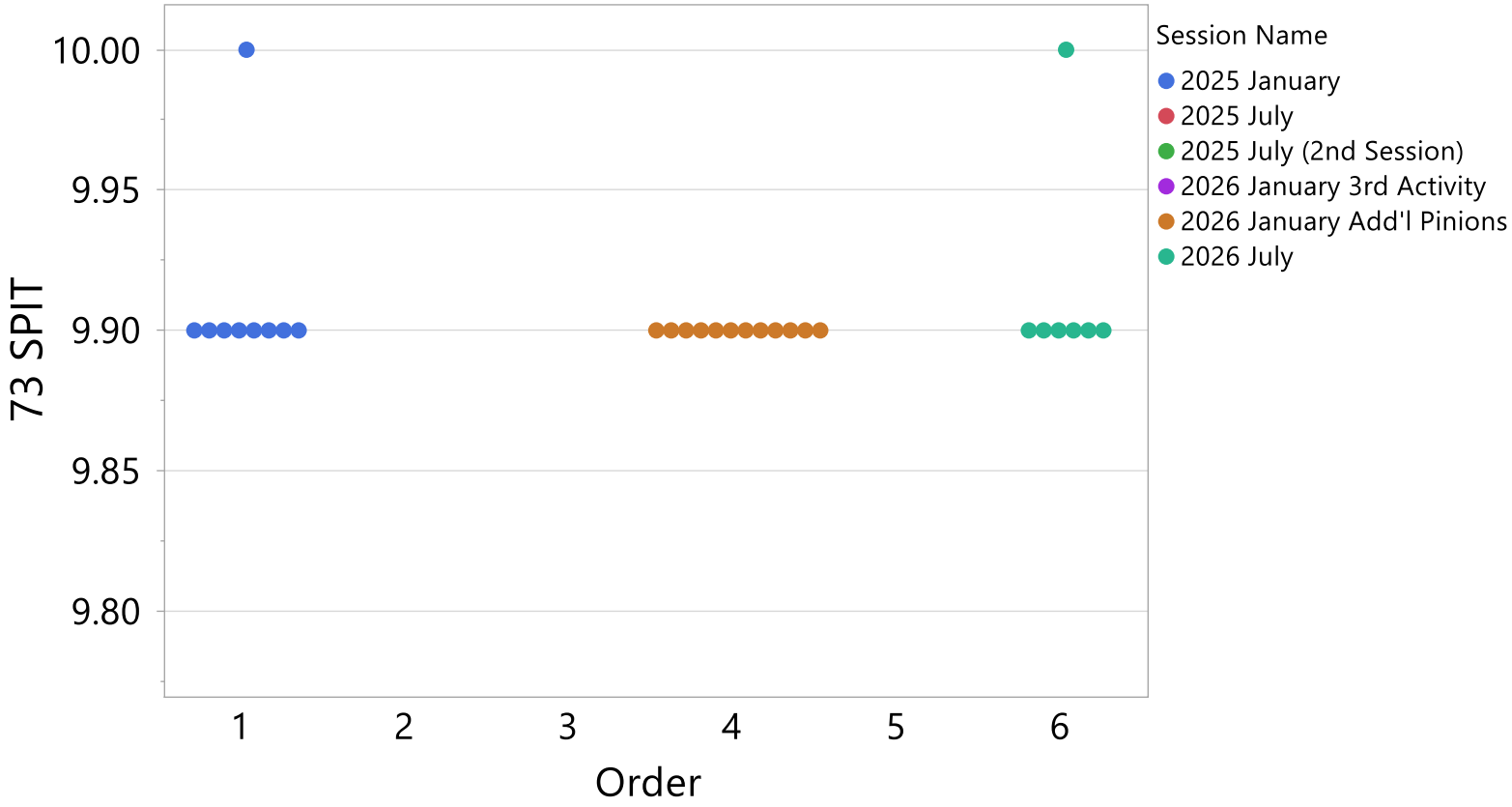


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Part 73 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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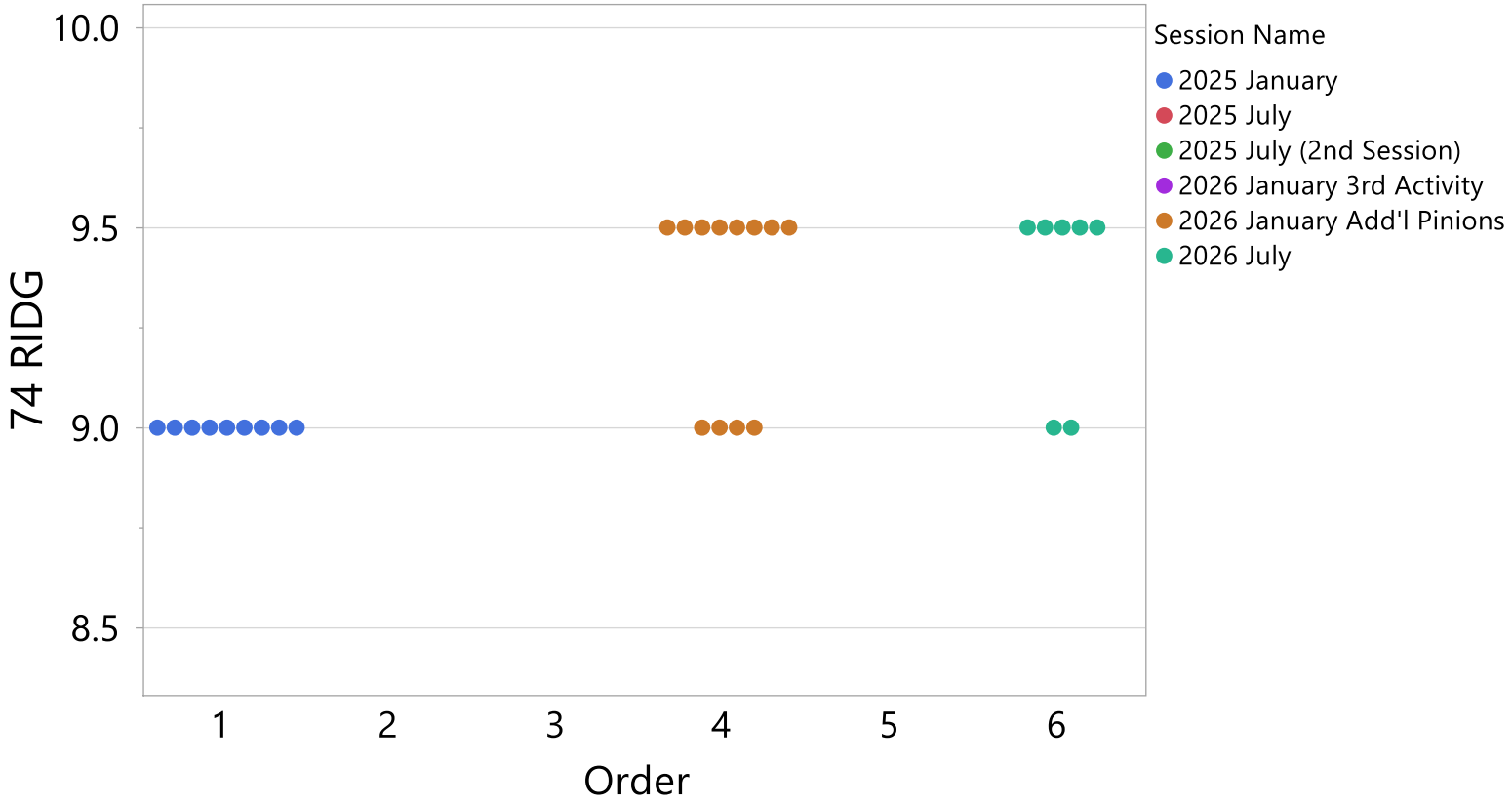
Part 74 Targets

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Part 74 - RIDG

Target = 9.5

Green = {9.5}
Yellow = {10.0, 9.0}
Orange = {∅}
Red = All other ratings

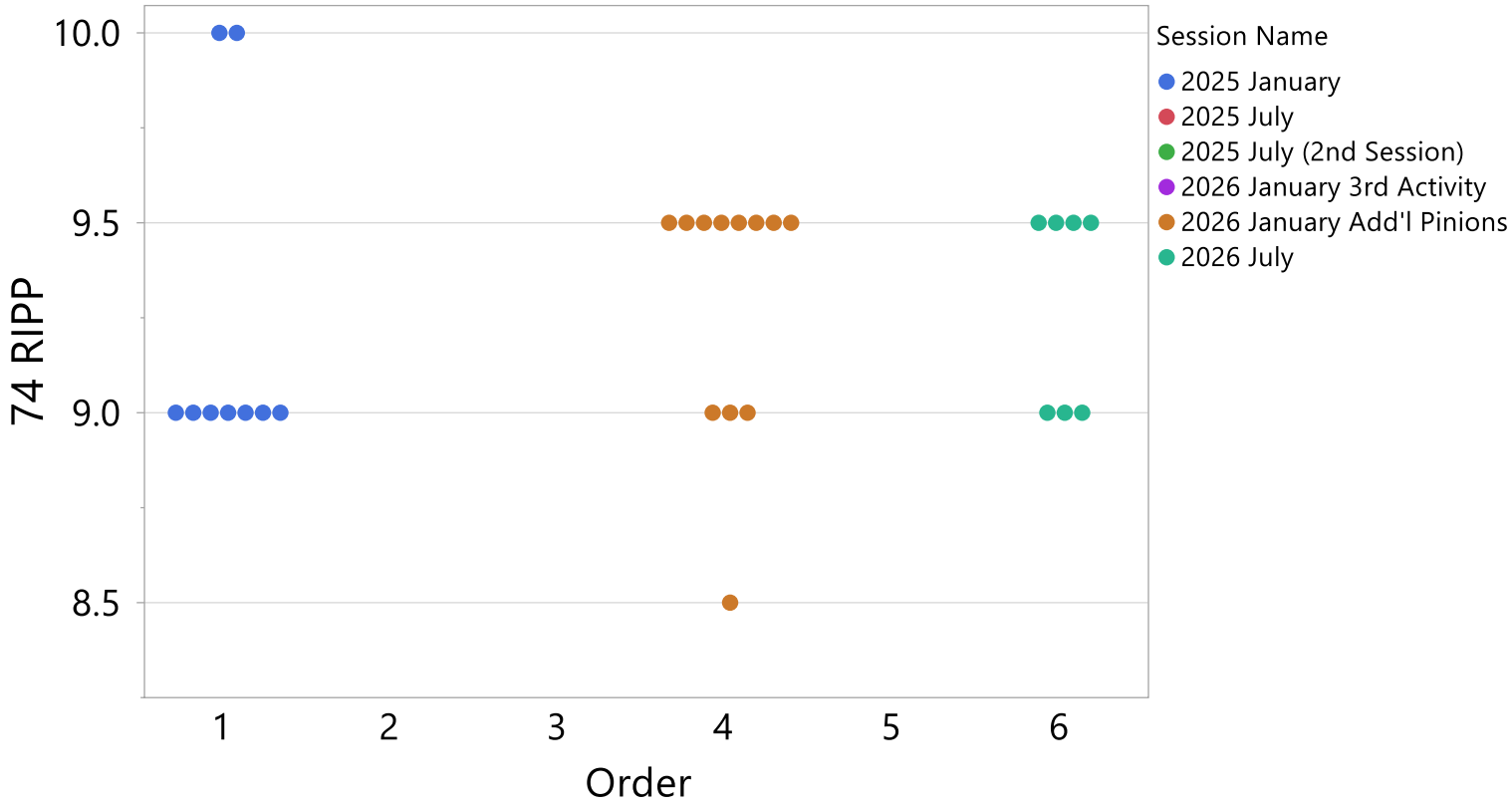


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Part 74 - RIPP

Target = 9.5

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

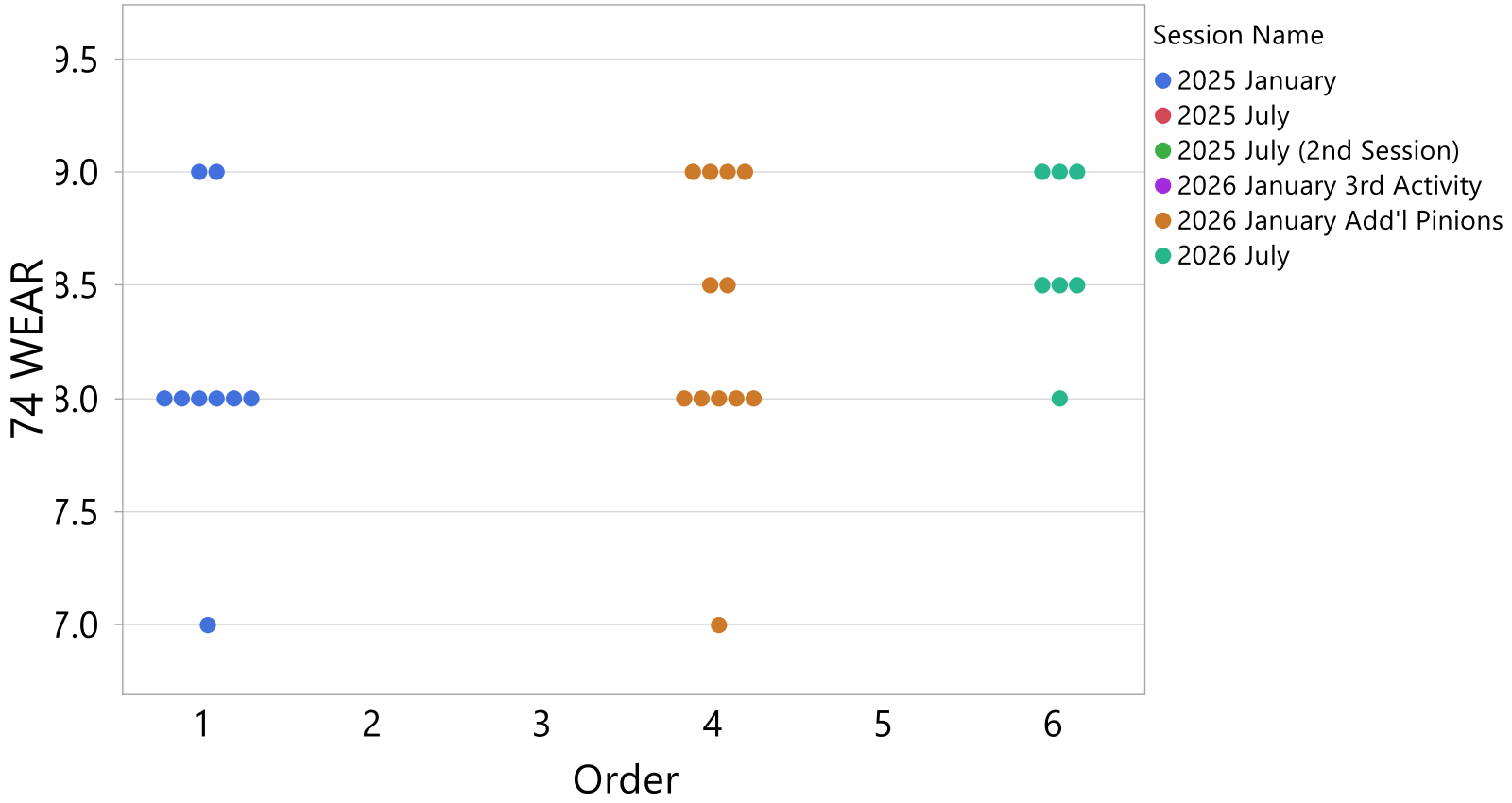


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Part 74 - Wear

Target = 8.5

Green = {9.0, 8.5}
Yellow = {Ø}
Orange = {9.5, 8.0}
Red = All other ratings

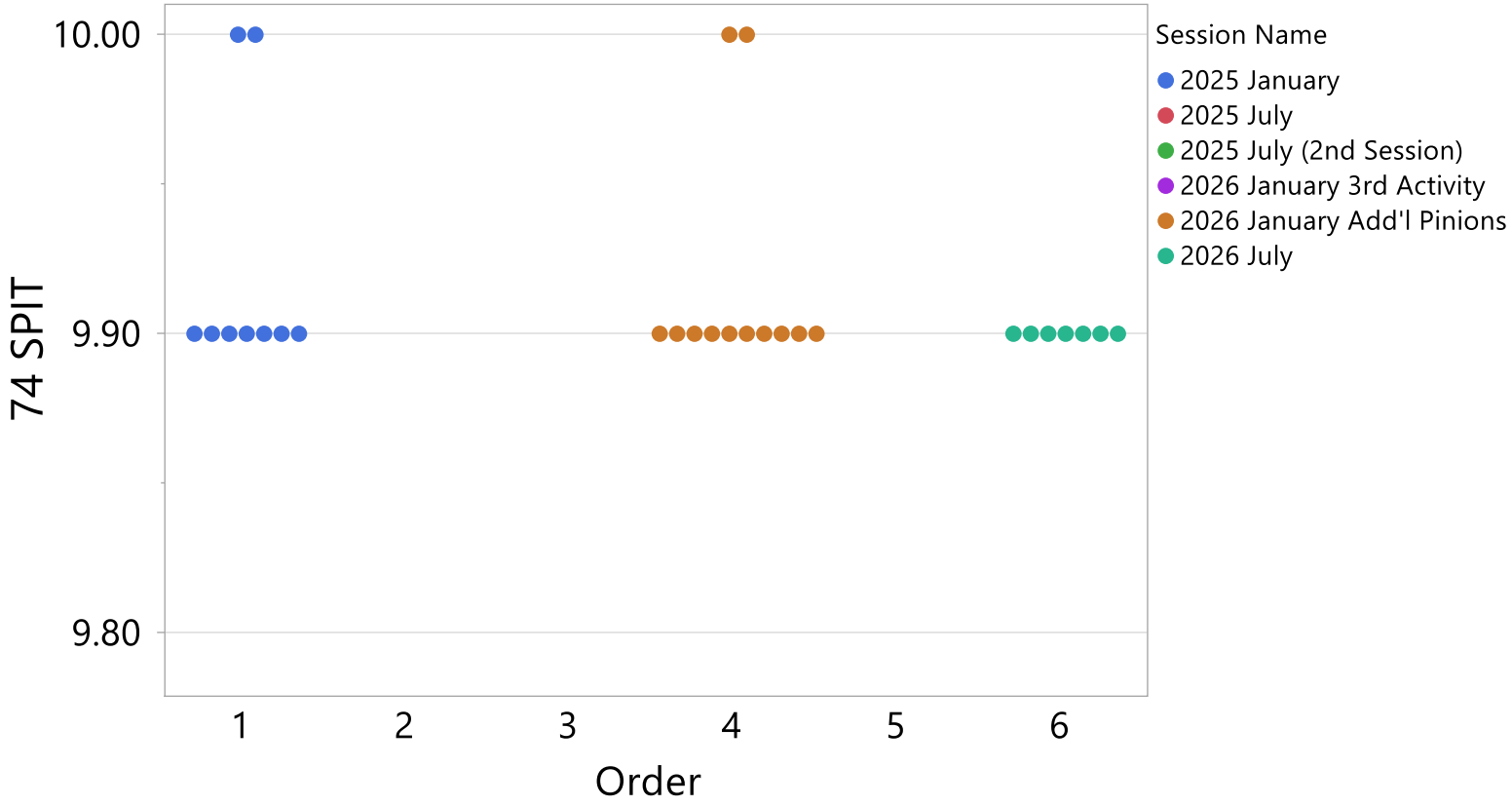


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Part 74 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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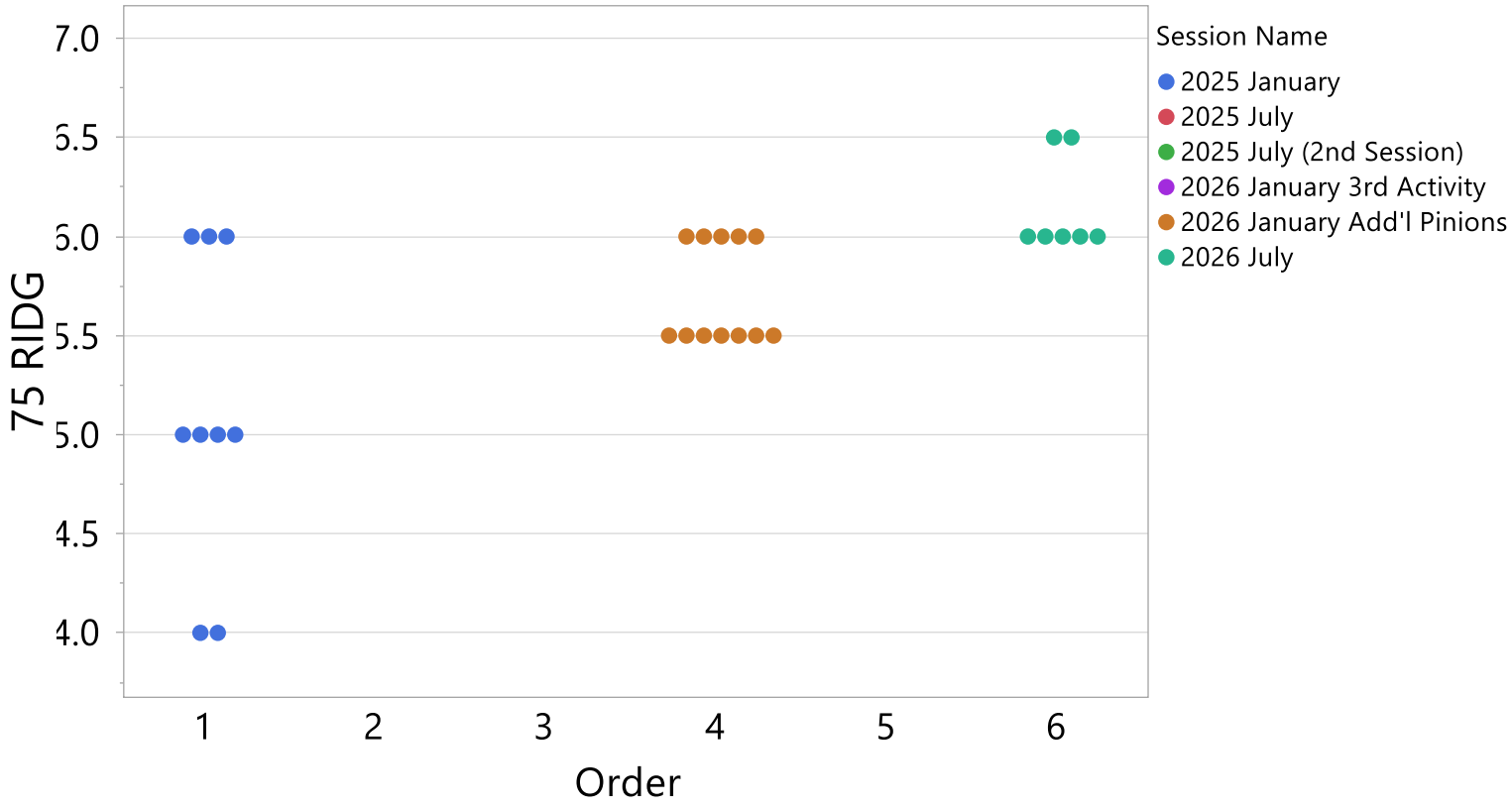
Part 75 Targets

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Part 75 - RIDG

Target = 6.0

Green = {6.0}
Yellow = {6.5, 5.5}
Orange = {∅}
Red = All other ratings

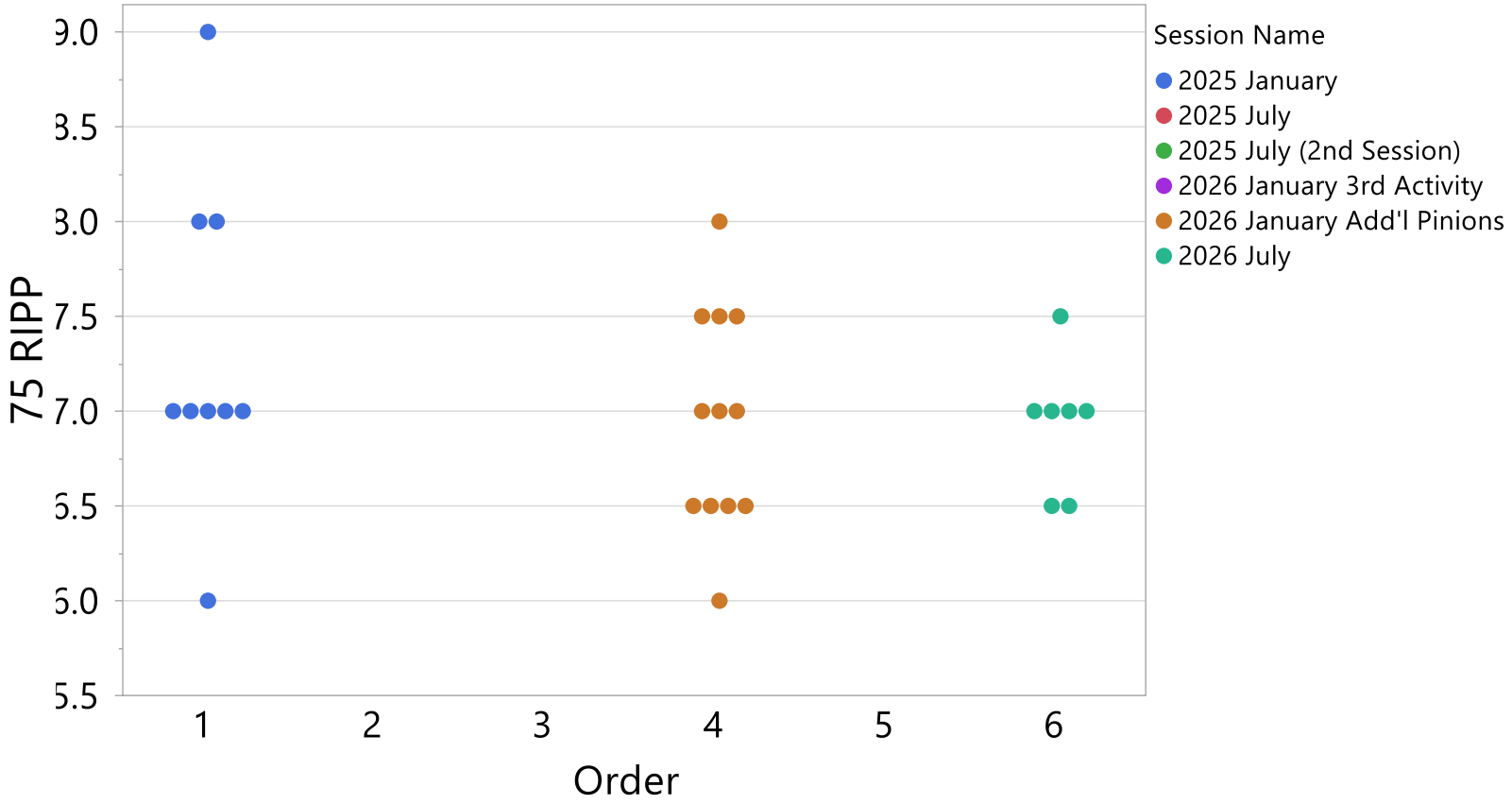


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Part 75 - RIPP

Target = 7.0

Green = {7.0, 6.5}
Yellow = {Ø}
Orange = {7.5, 6.0}
Red = All other ratings

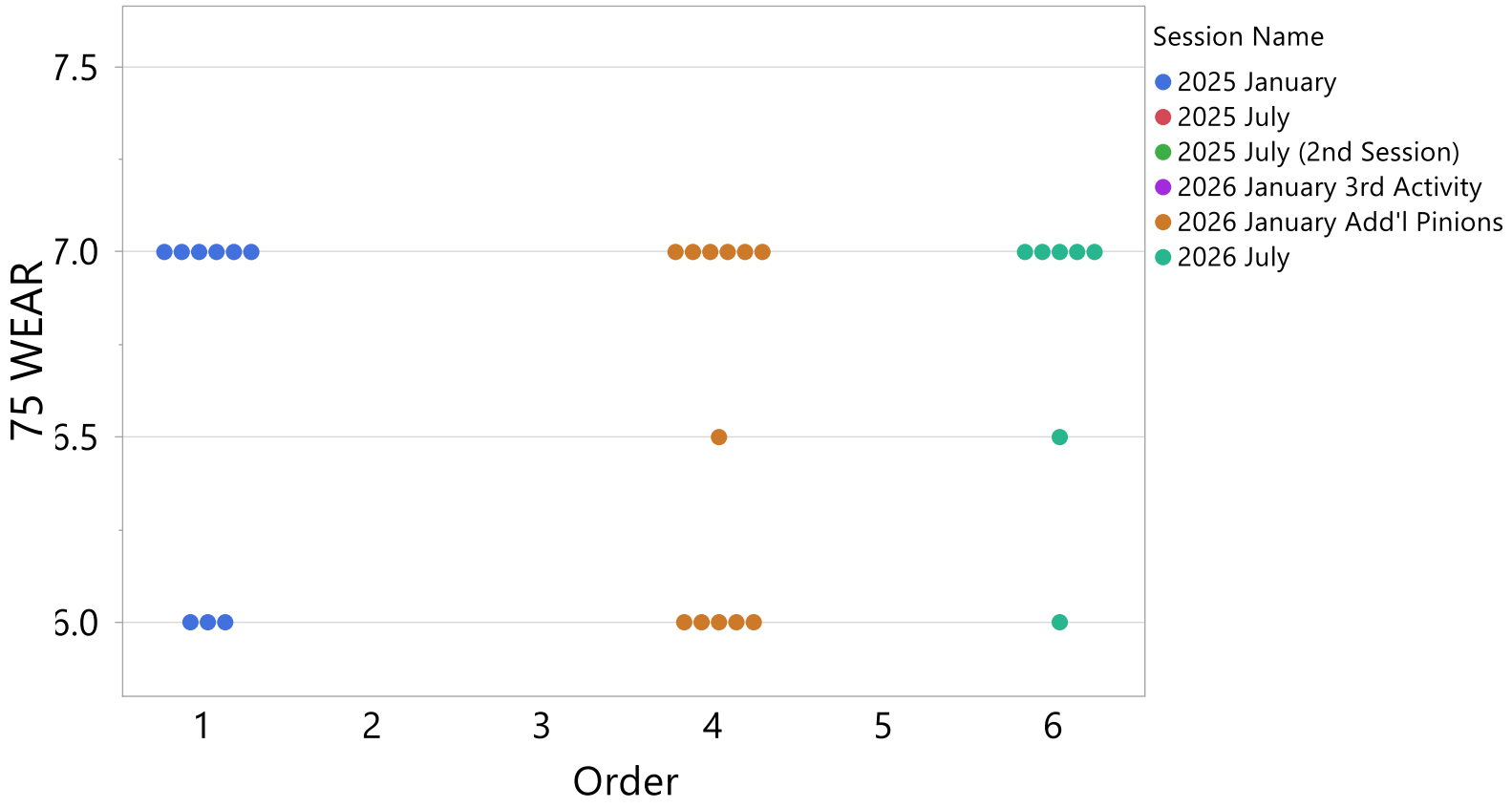


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Part 75 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {∅}
Red = All other ratings

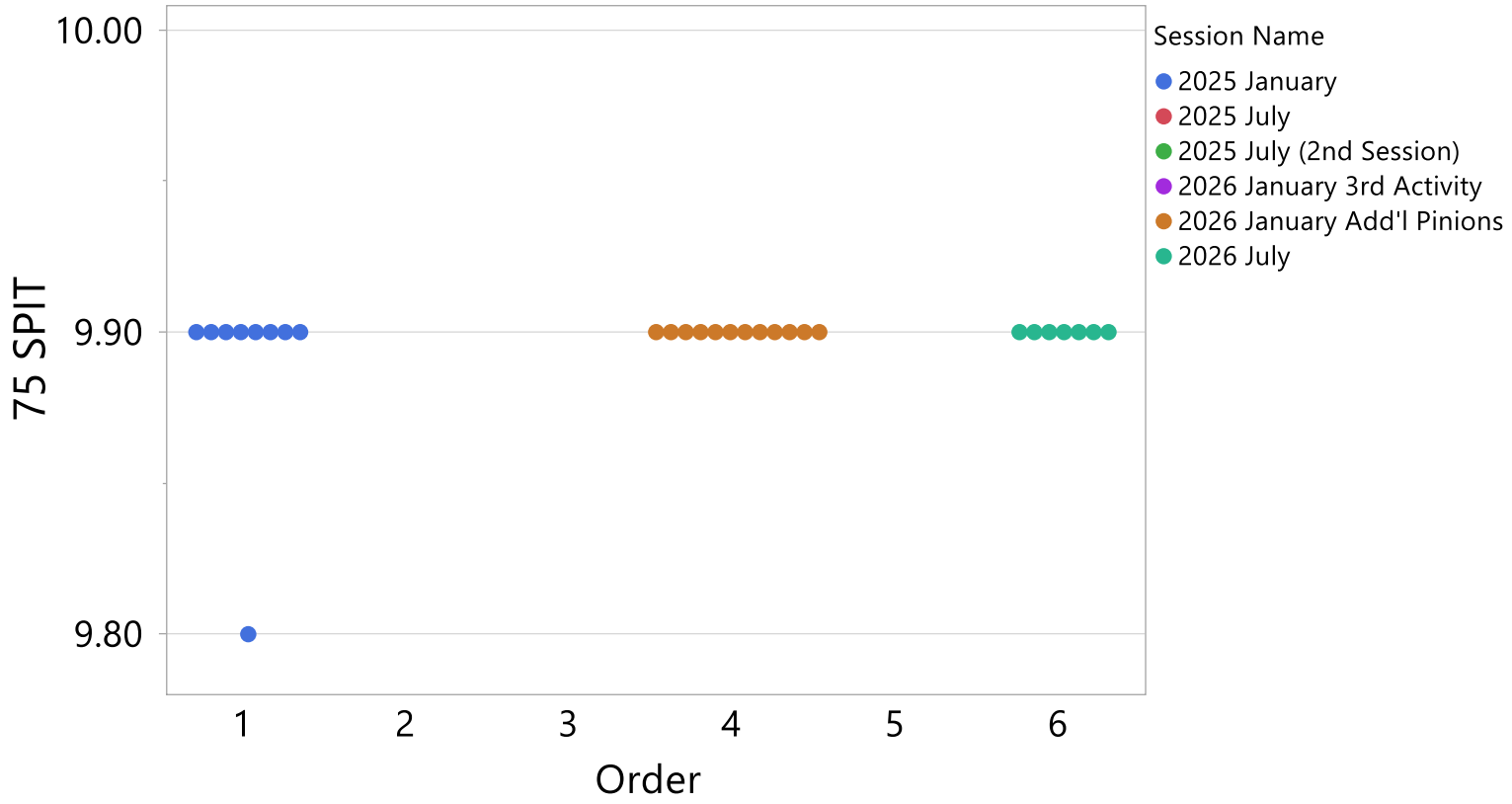


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Part 75 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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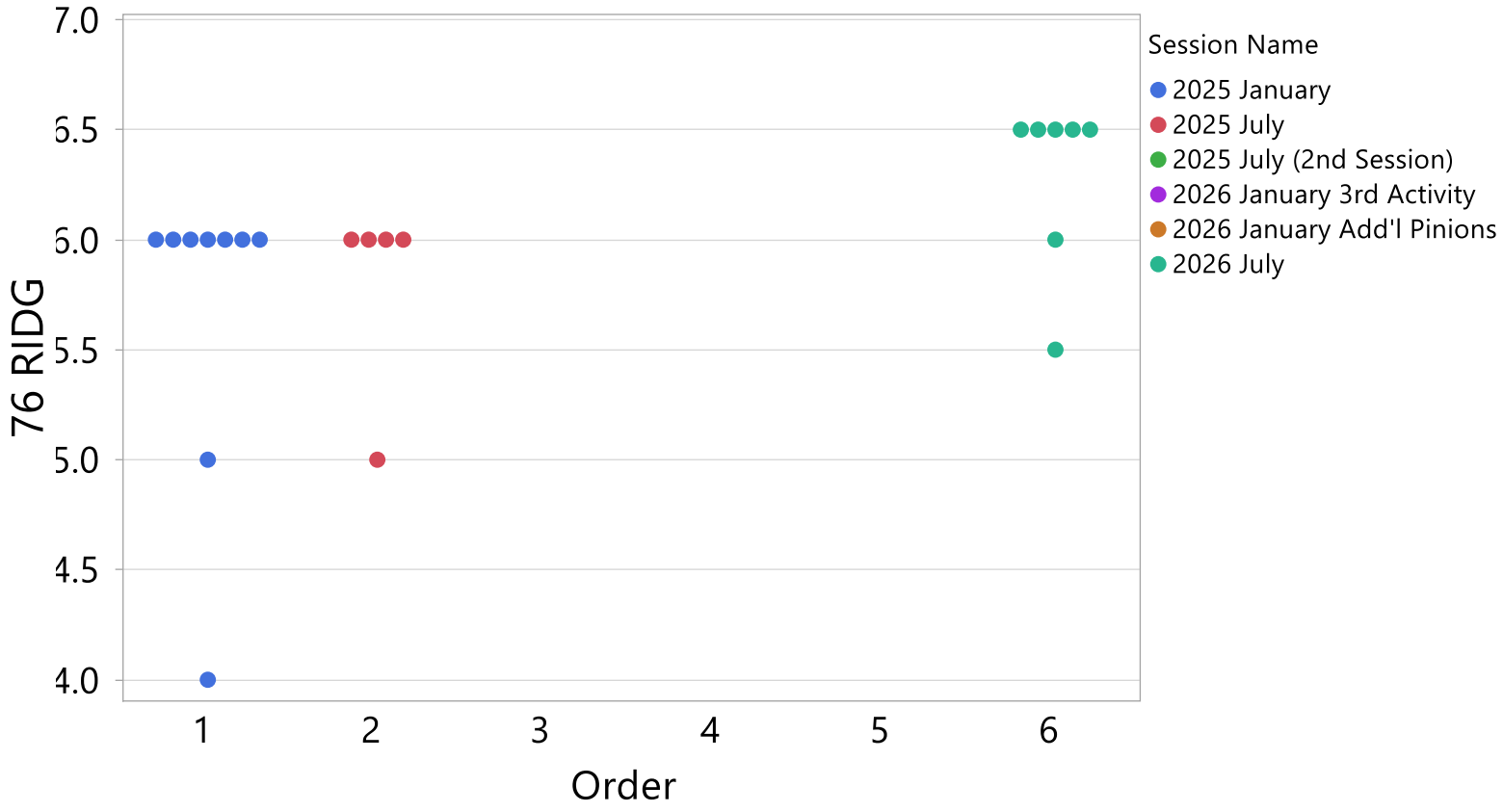
Part 76 Targets

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Part 76 - RIDG

Target = 6.5

Green = {6.5}
Yellow = {7.0, 6.0}
Orange = {Ø}
Red = All other ratings

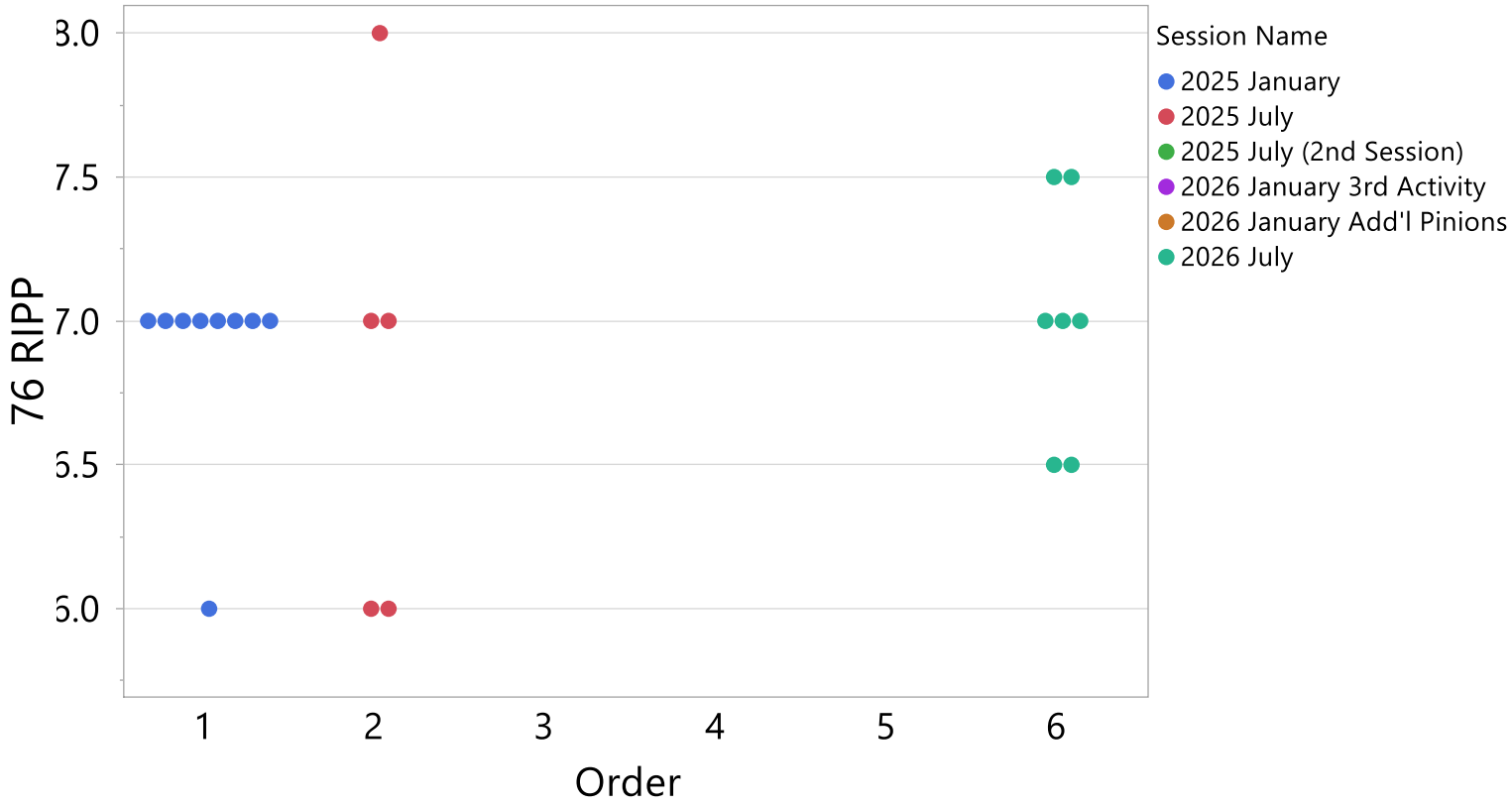


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Part 76 - RIPP

Target = 7.0

Green = {7.0, 6.5}
Yellow = {Ø}
Orange = {7.5, 6.0}
Red = All other ratings

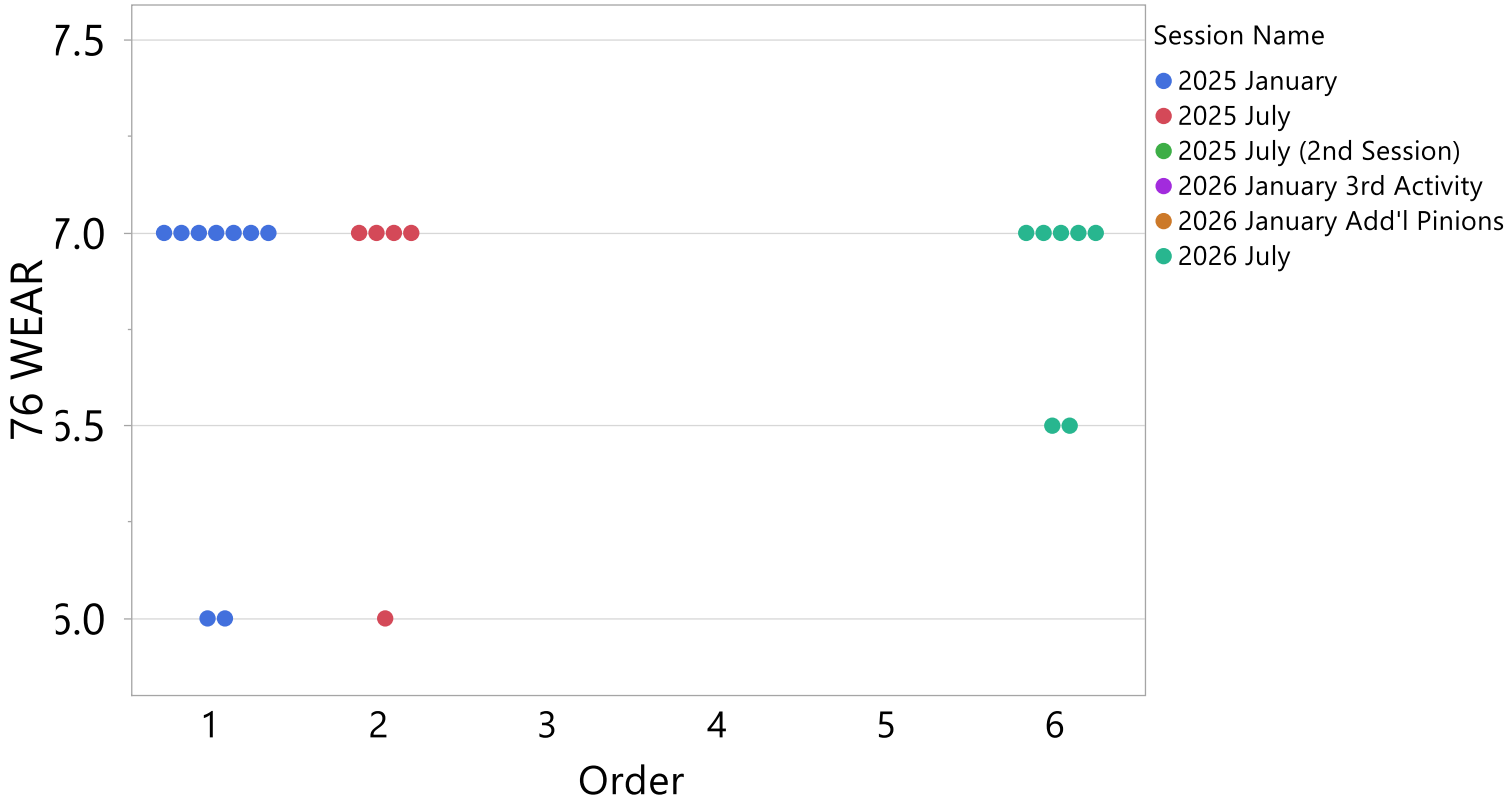


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Part 76 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {∅}
Red = All other ratings

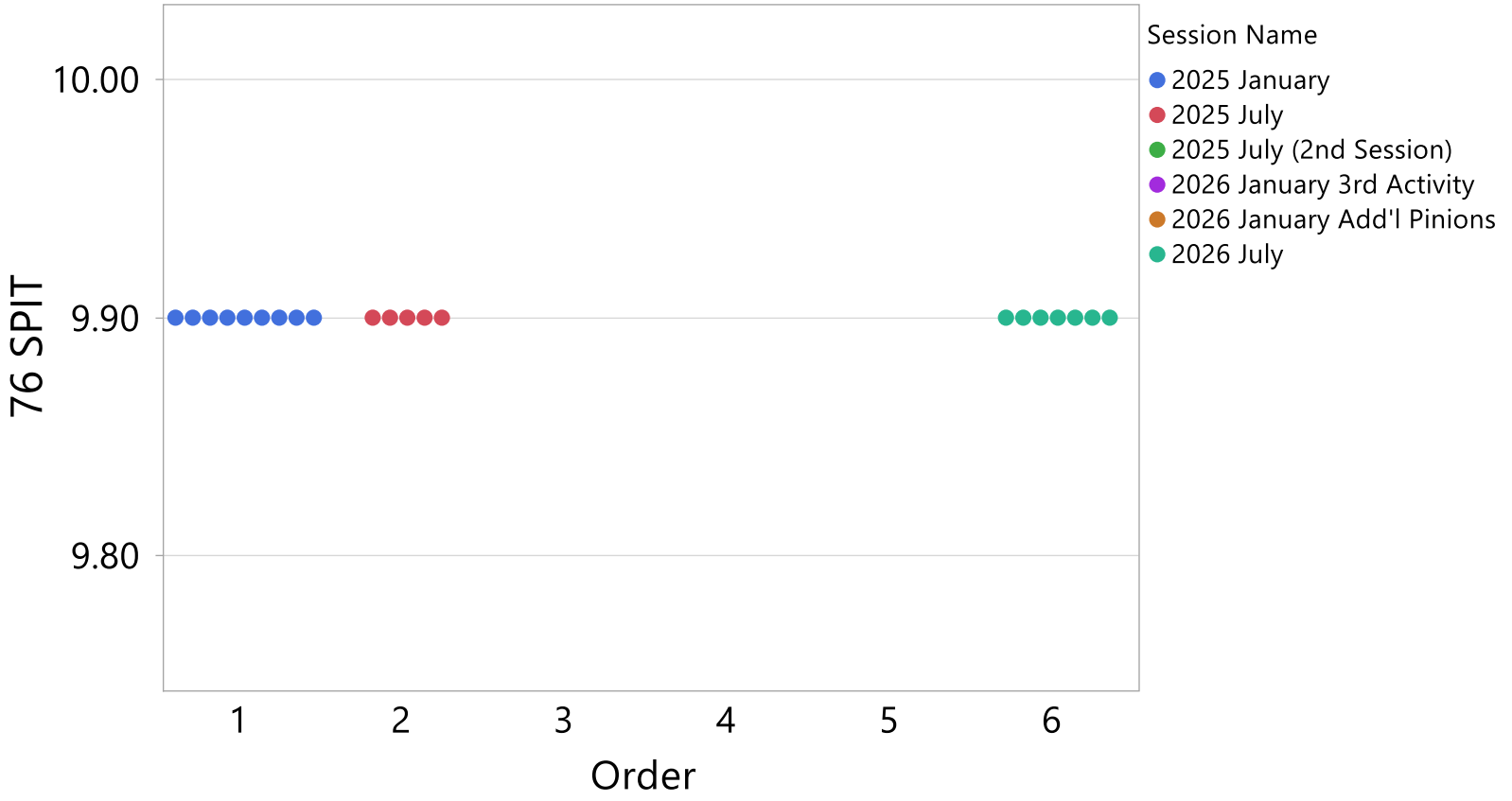


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Part 76 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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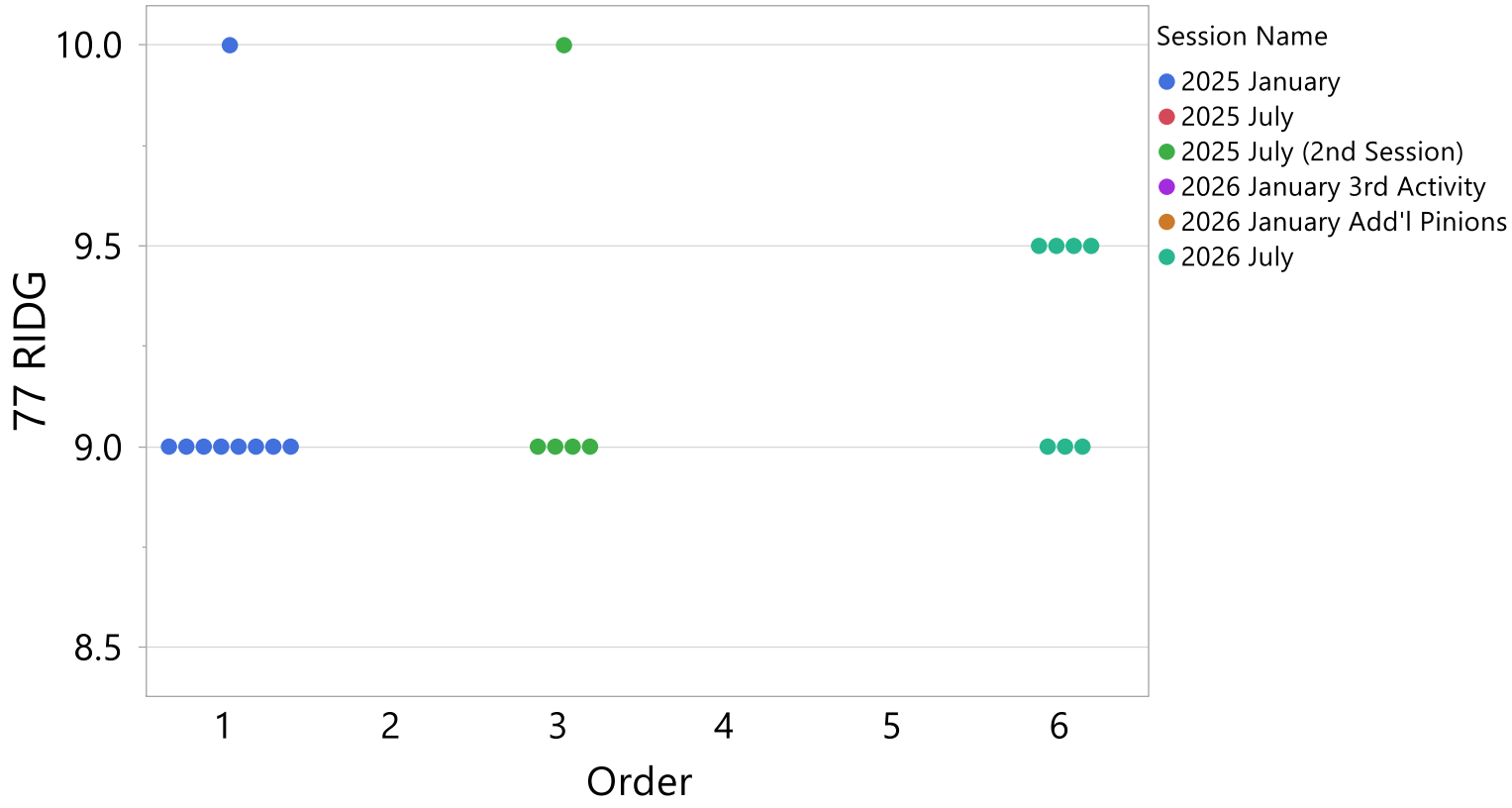
Part 77 Targets

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Part 77 - RIDG

Target = 9.5

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

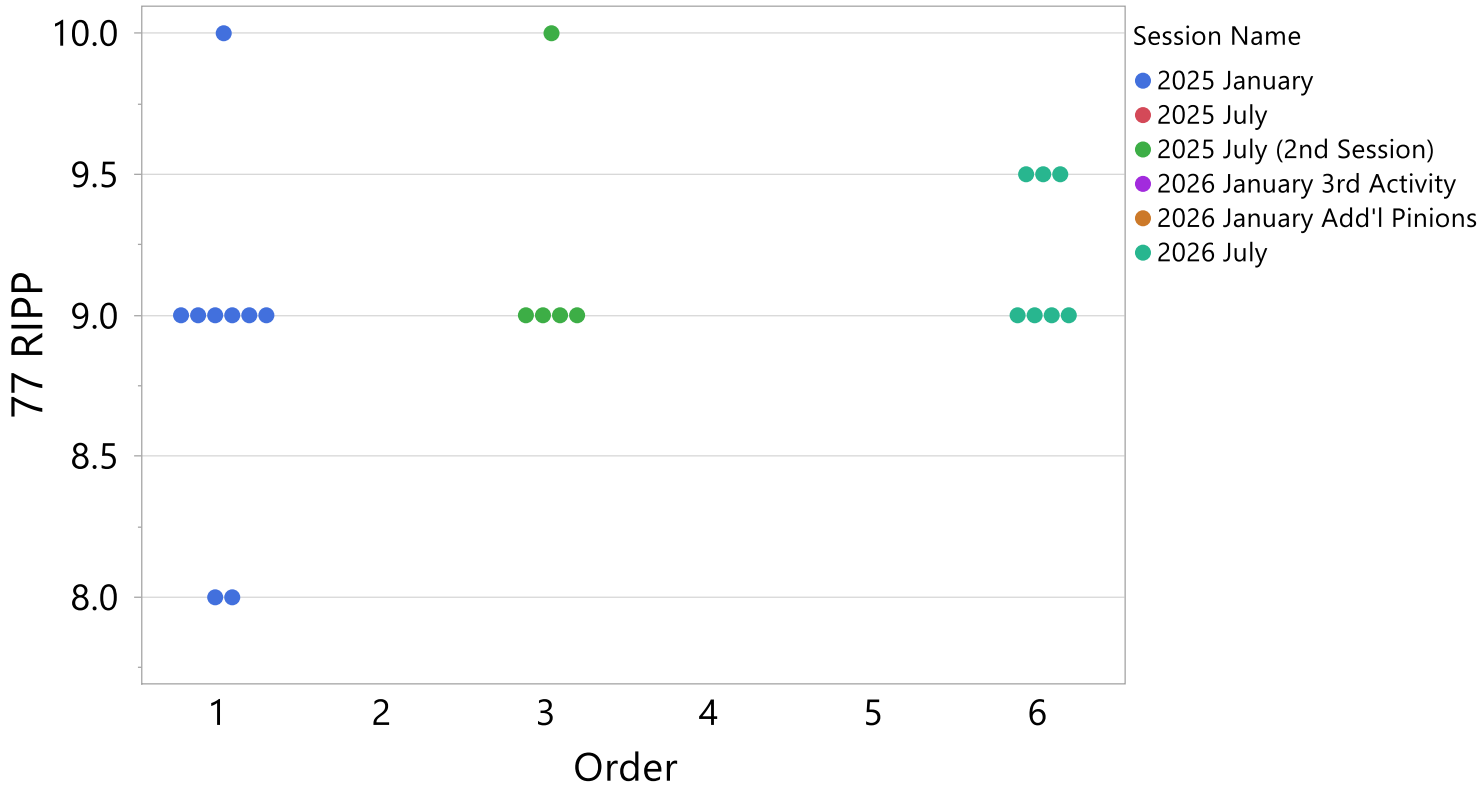


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Part 77 - RIPP

Target = 9.0

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

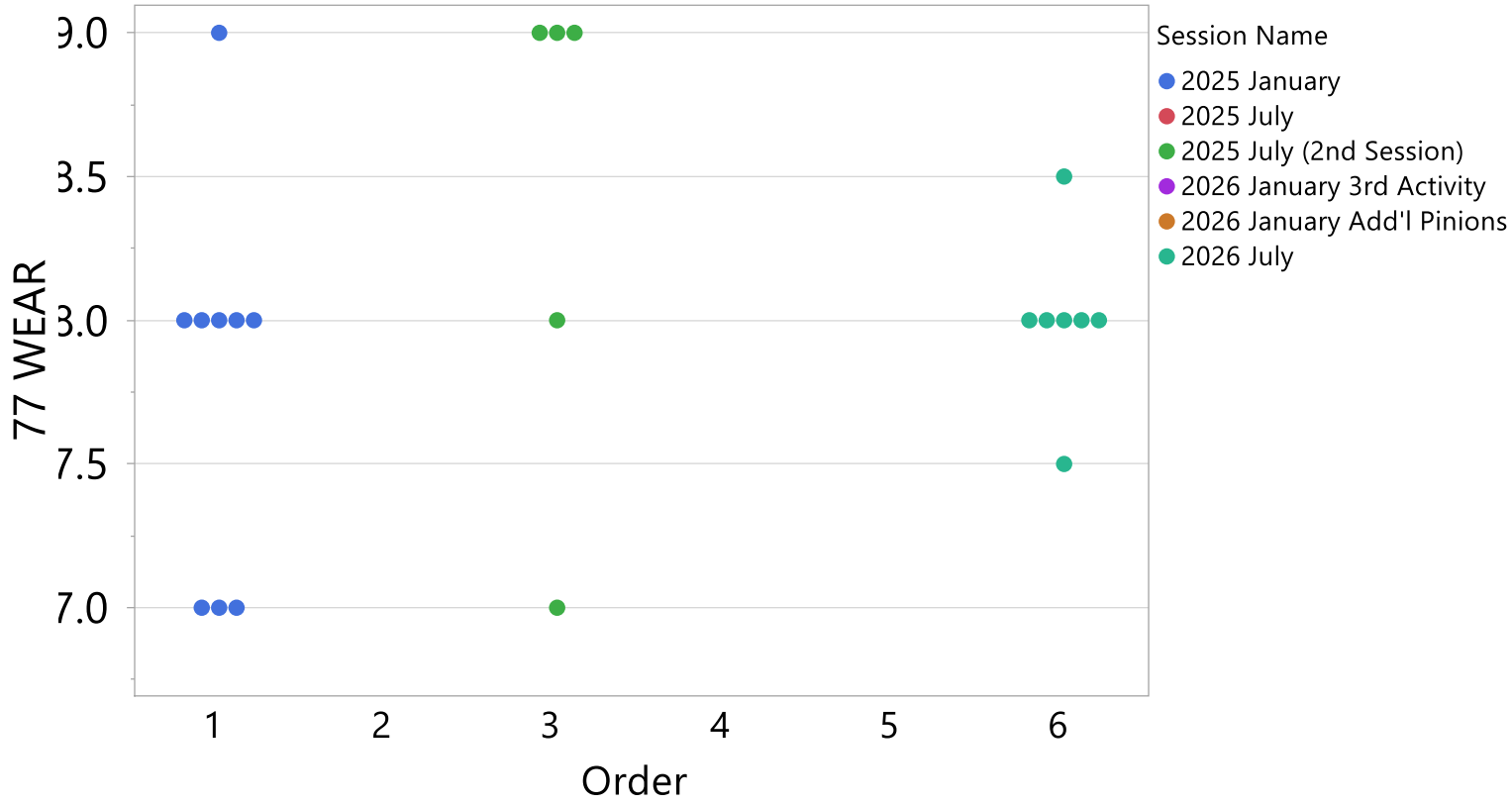


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Part 77 - Wear

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

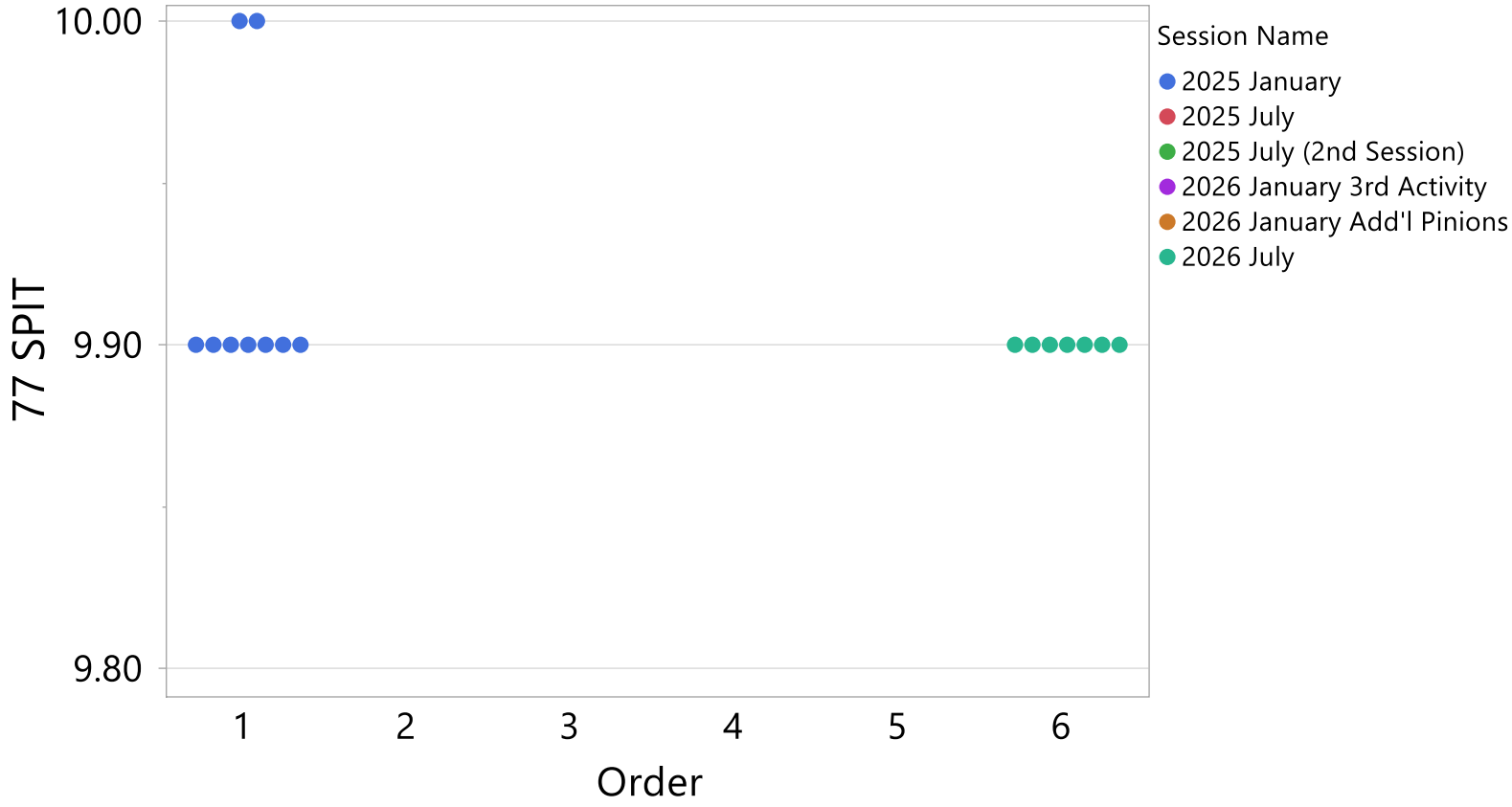


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Part 77 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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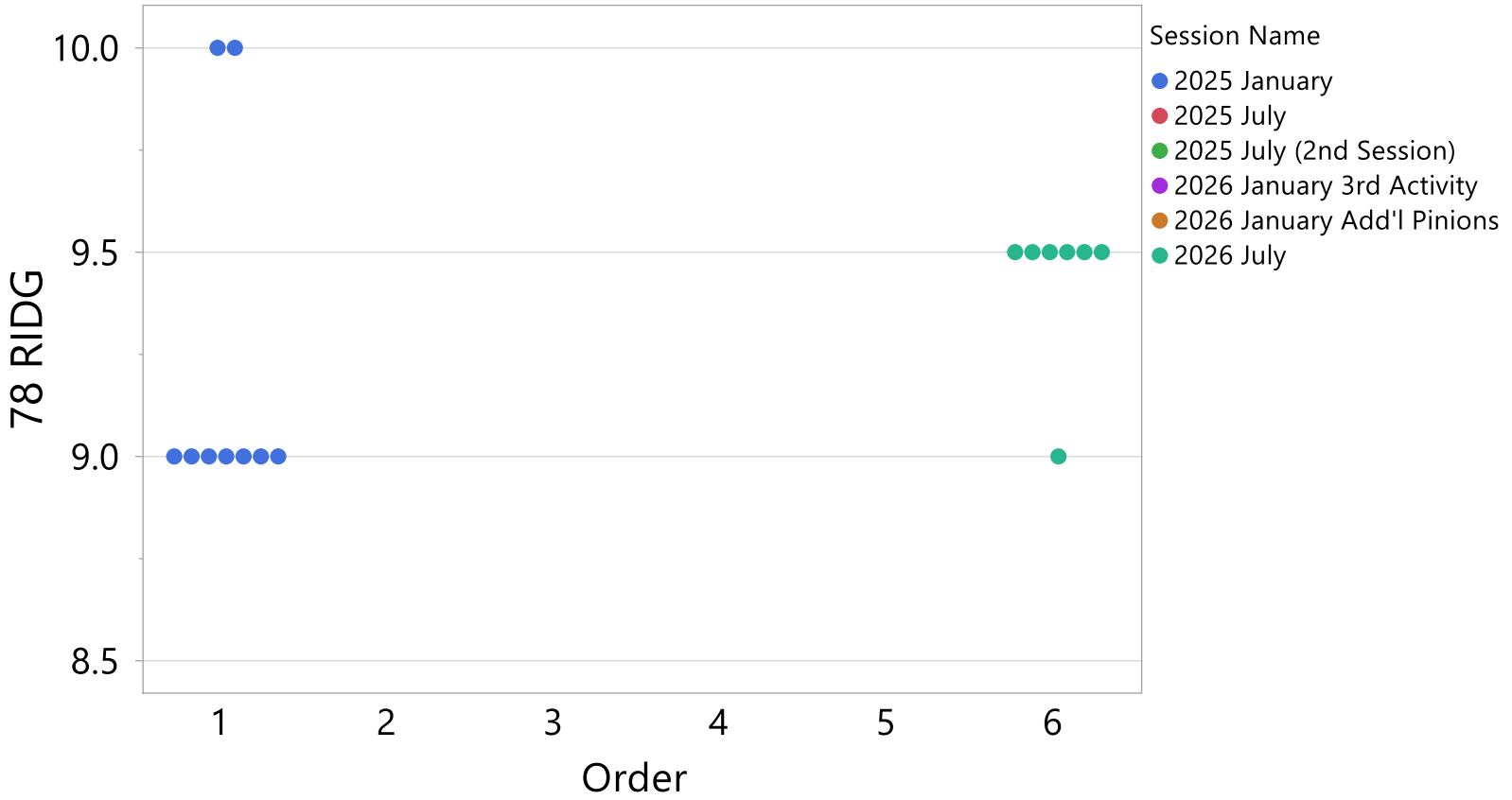
Part 78 Targets

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Part 78 - RIDG

Target = 9.5

Green = {9.5}
Yellow = {10.0, 9.0}
Orange = {Ø}
Red = All other ratings

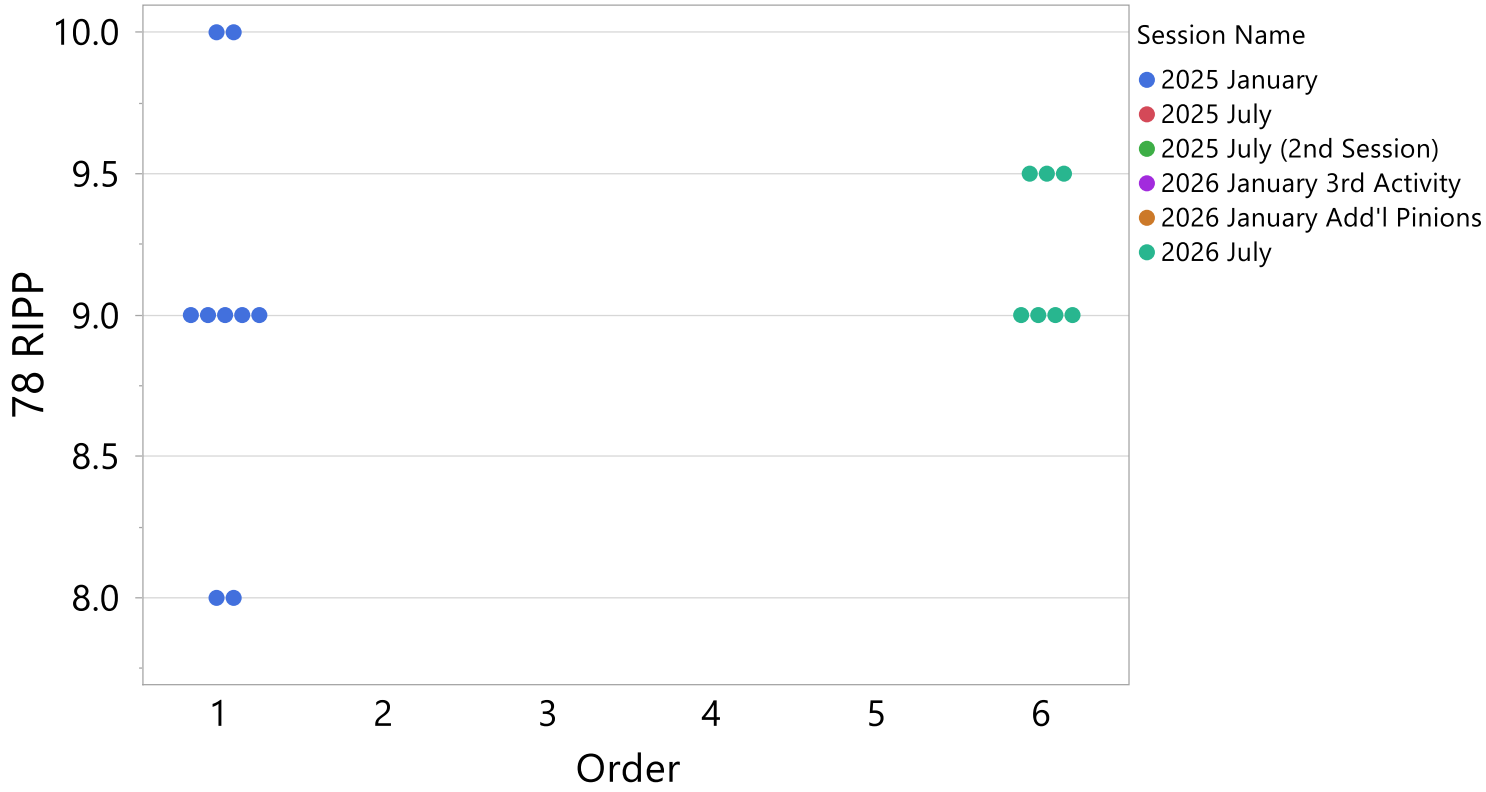


©SOUTHWEST RESEARCH INSTITUTE

Part 78 - RIPP

Target = 9.0

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

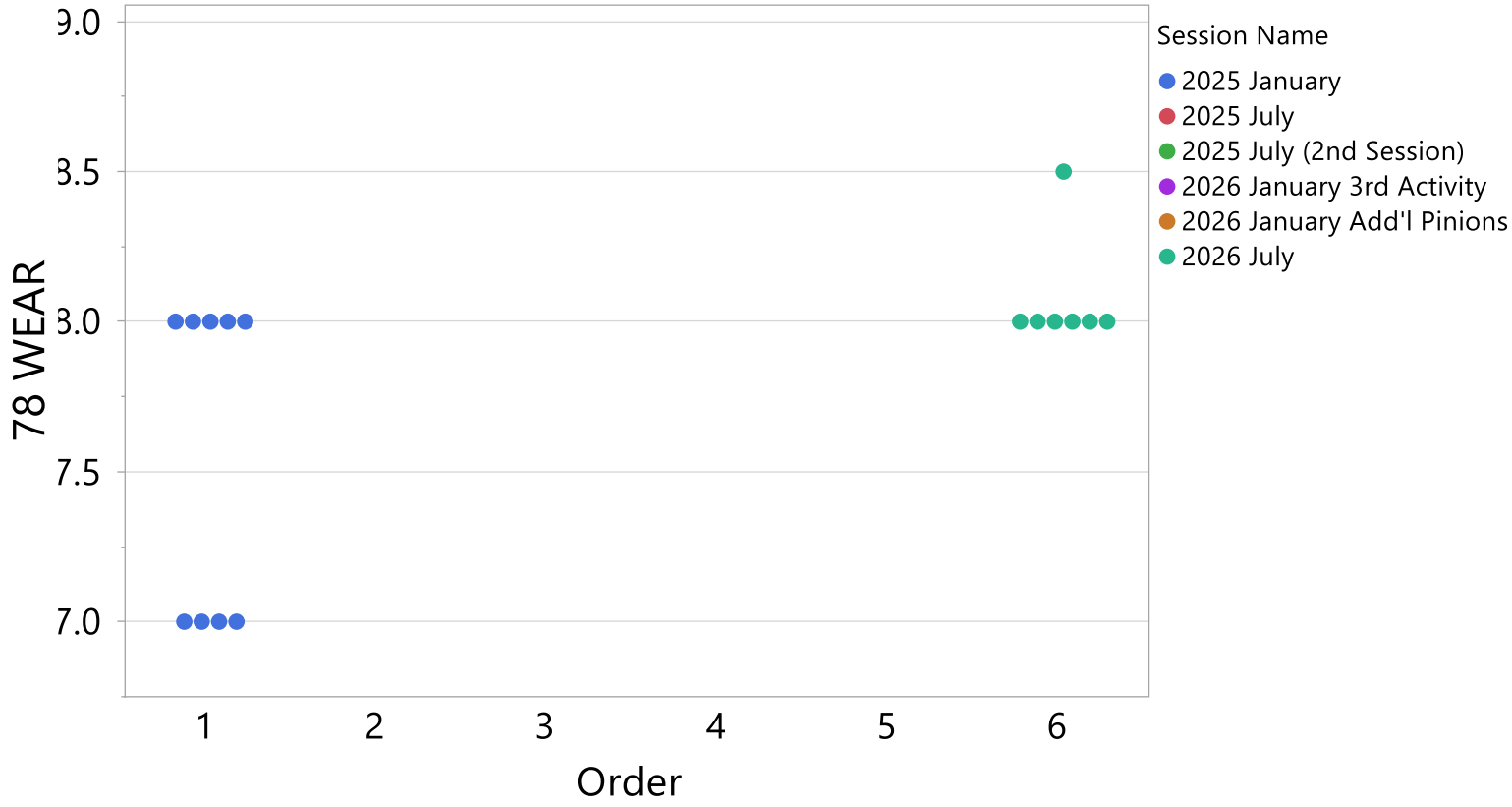


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Part 78 - Wear

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

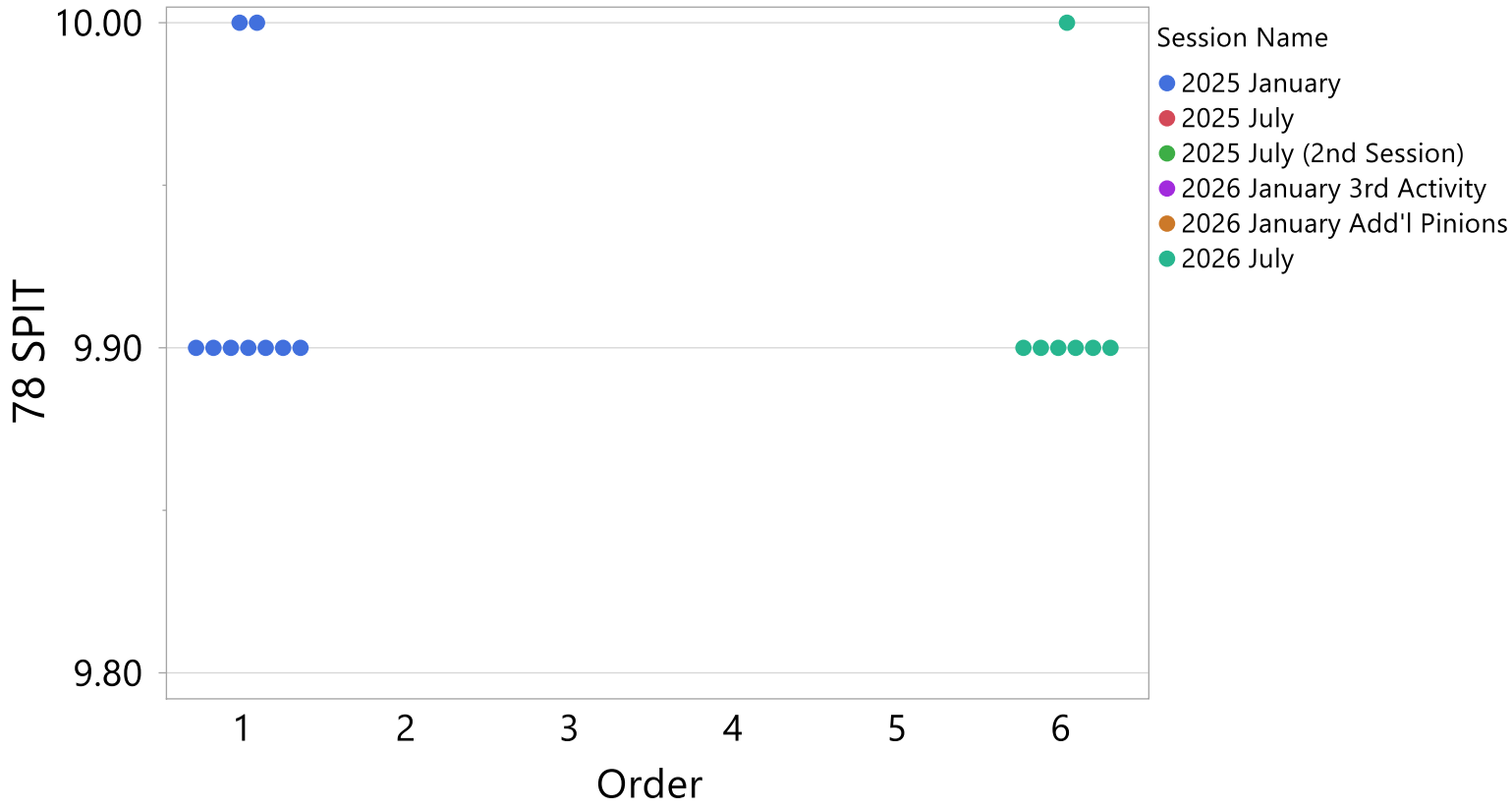


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Part 78 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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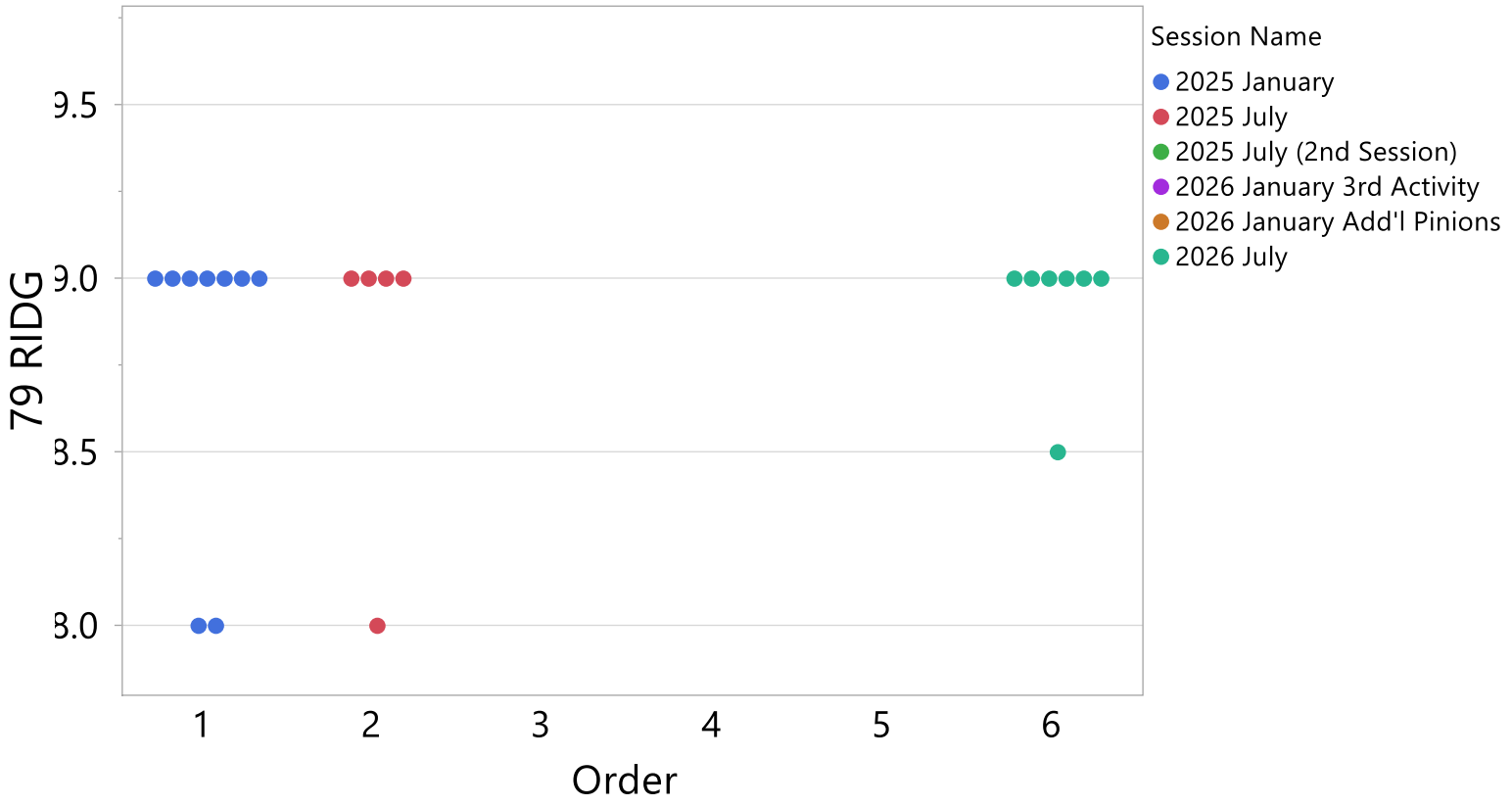
Part 79 Targets

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Part 79 - RIDG

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {∅}
Red = All other ratings

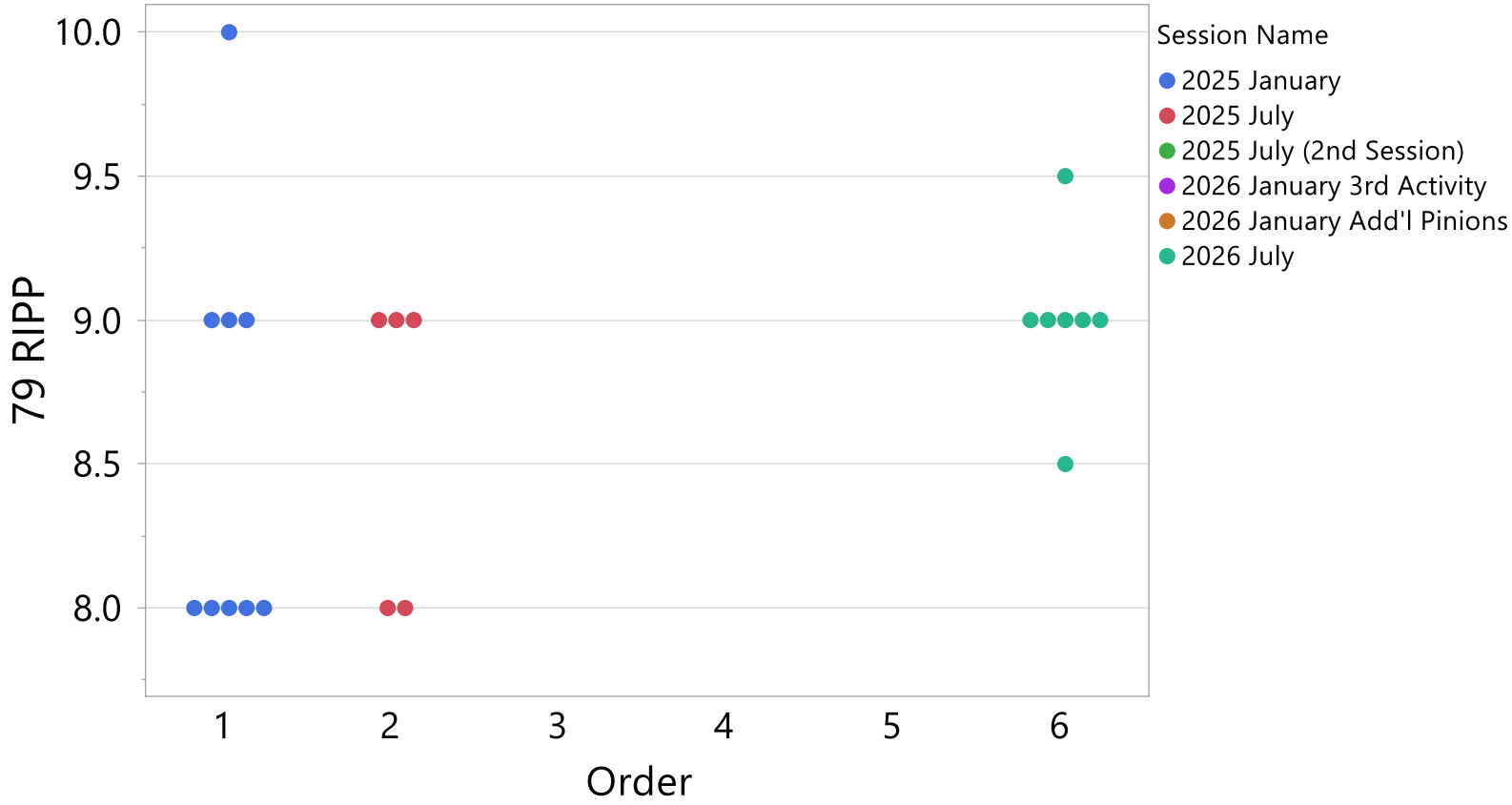


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Part 79 - RIPP

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {Ø}
Red = All other ratings

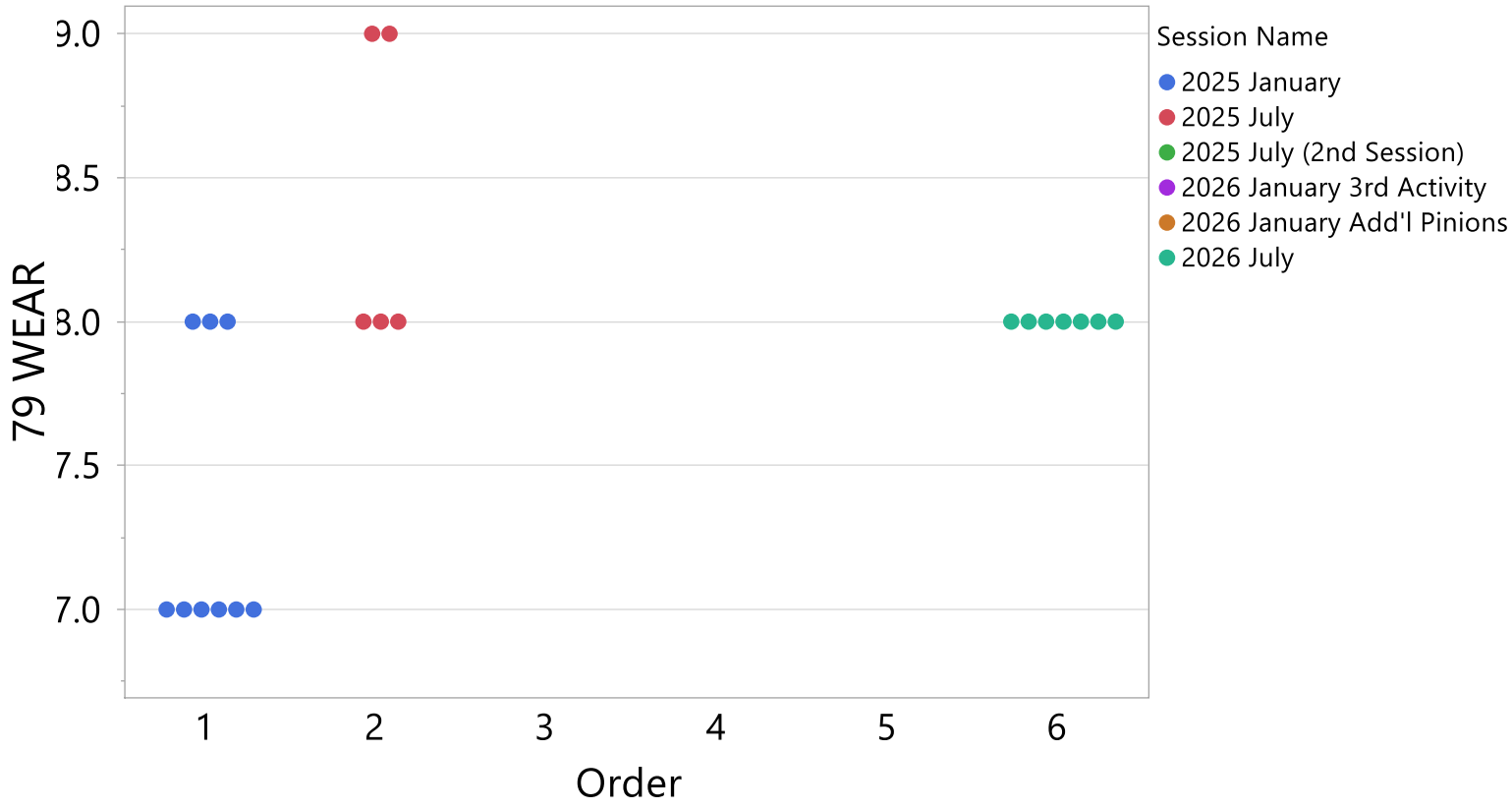


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Part 79 - Wear

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

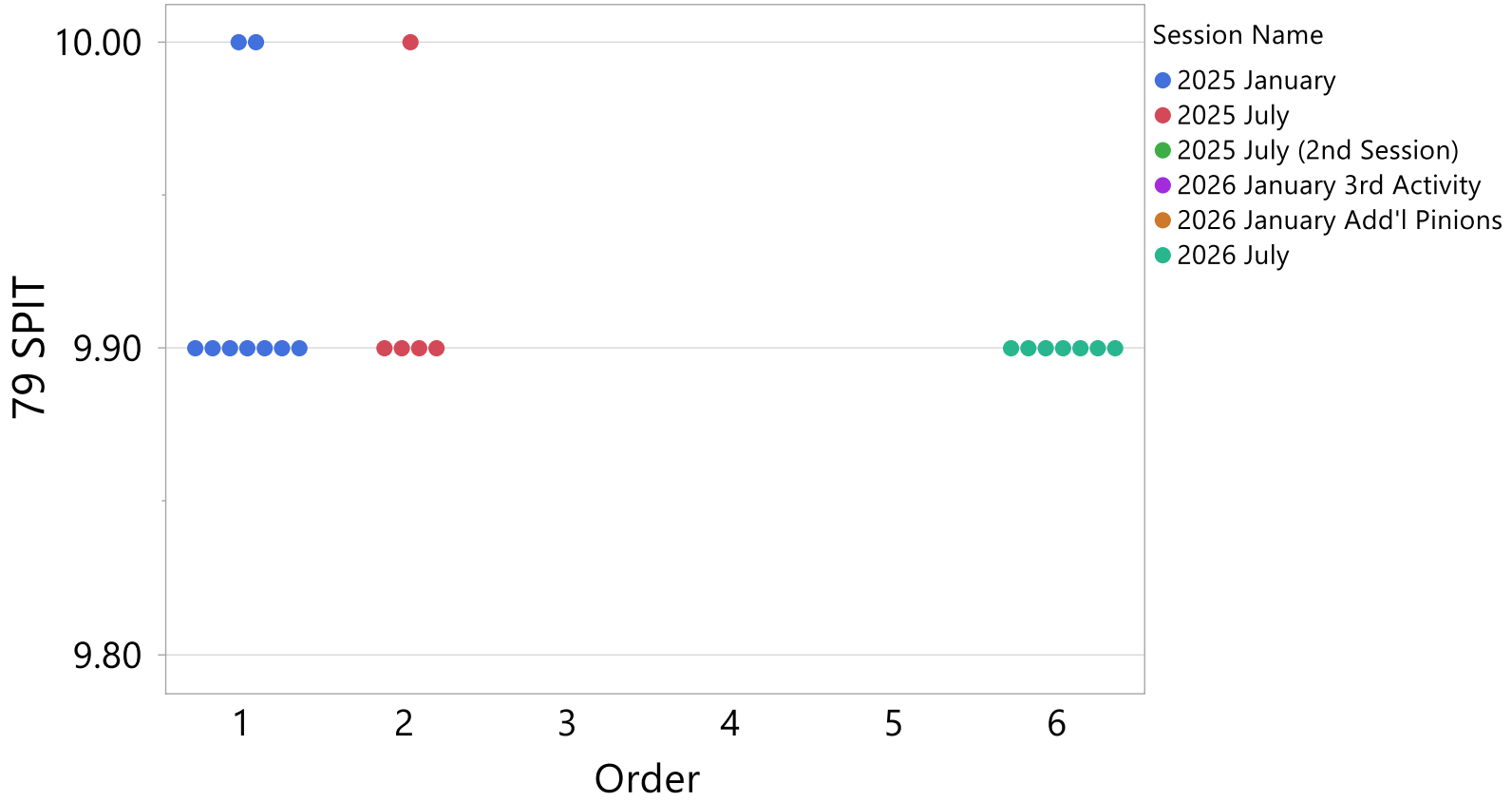


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Part 79 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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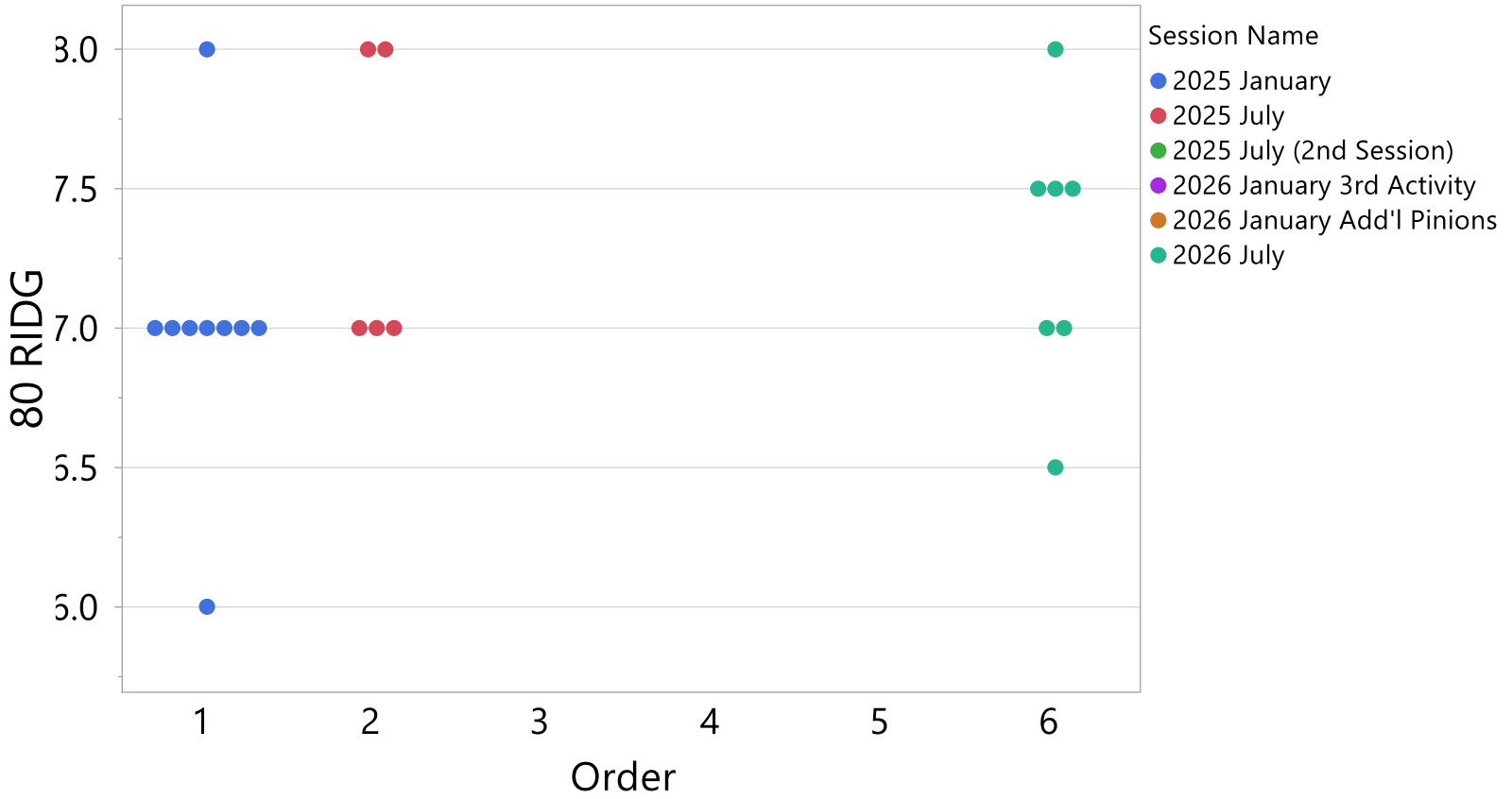
Part 80 Targets

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Part 80 - RIDG

Target = 7.5

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

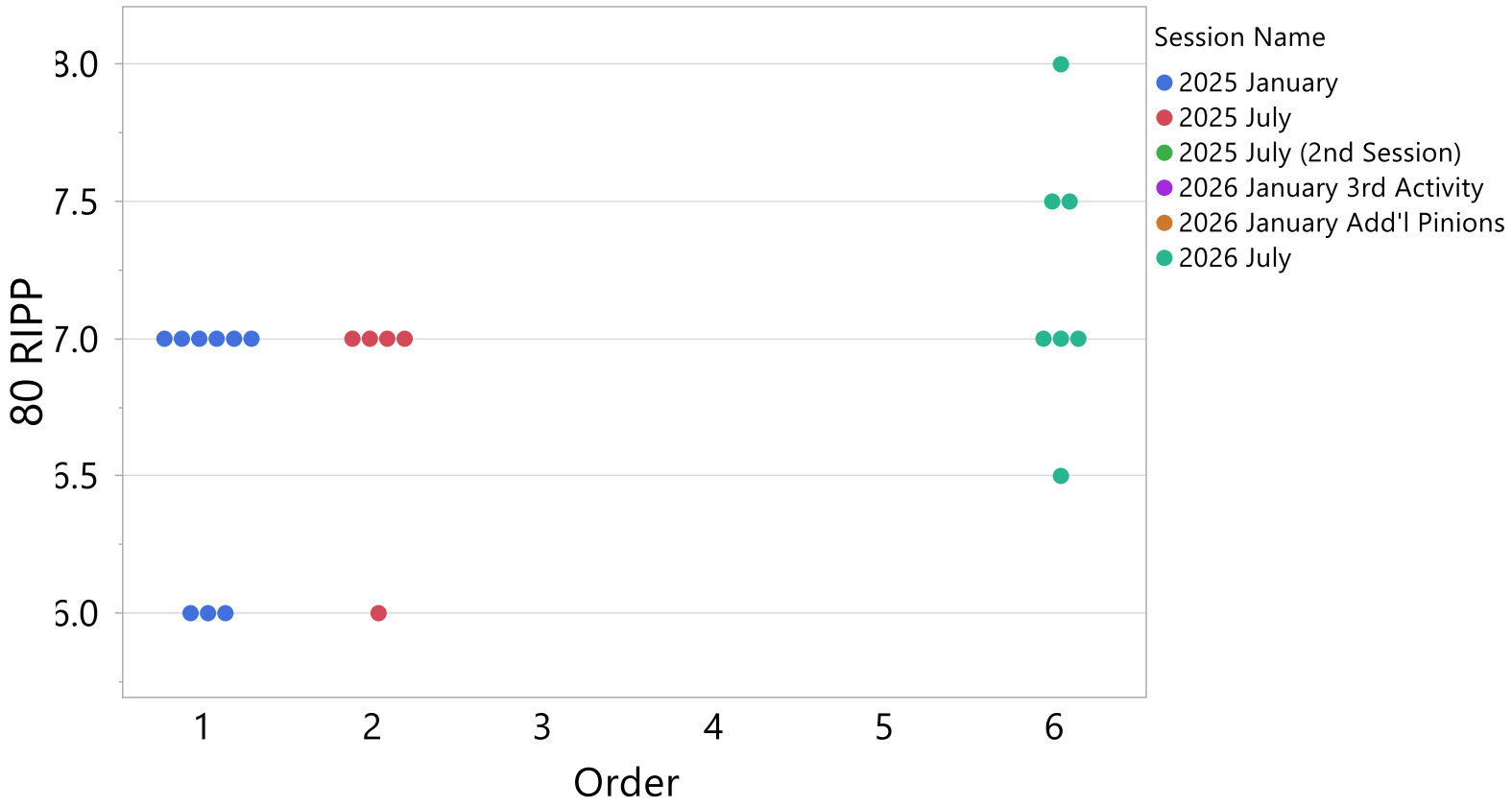


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Part 80 - RIPP

Target = 7.0

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

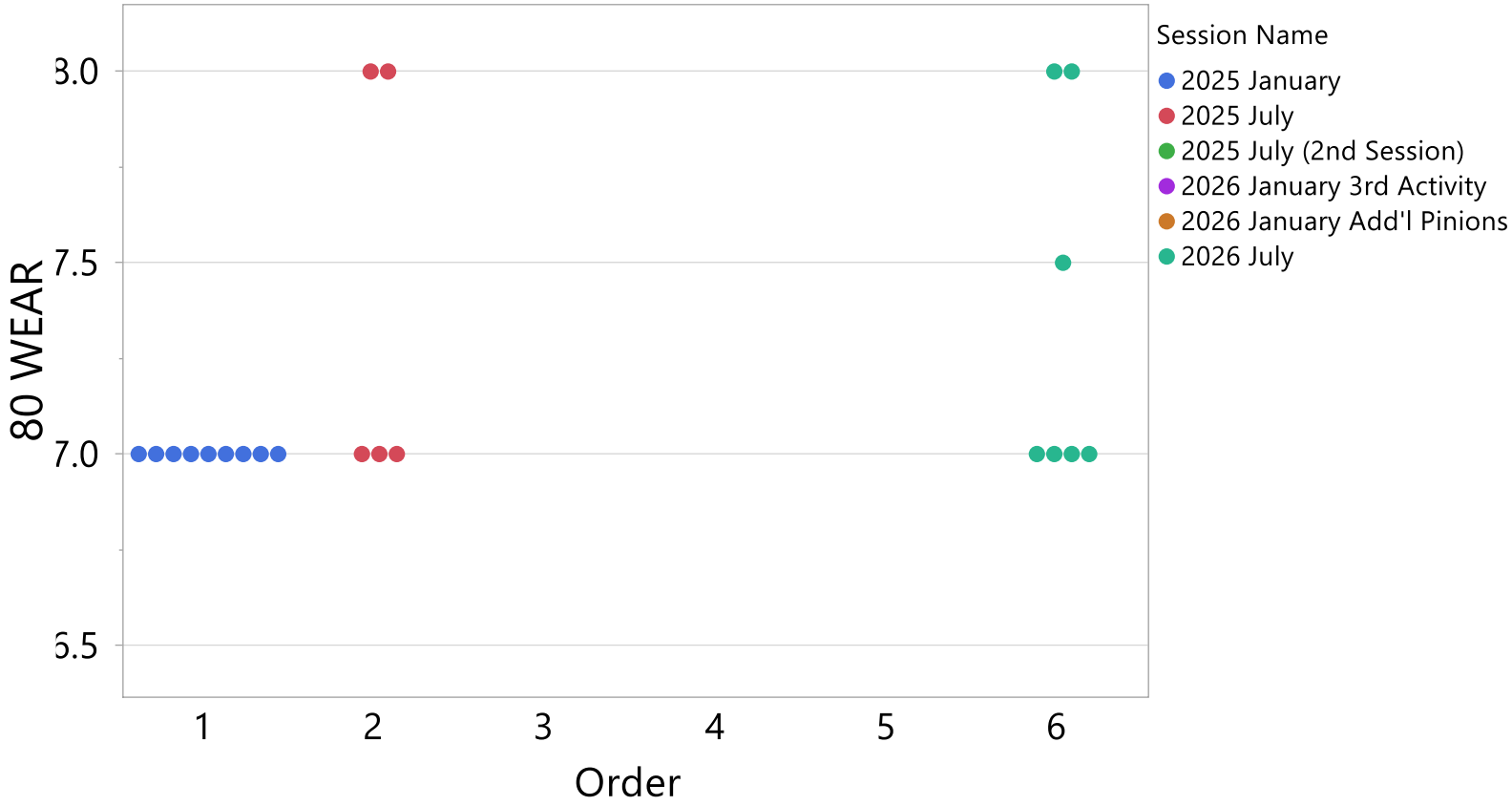


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Part 80 - Wear

Target = 7.0

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

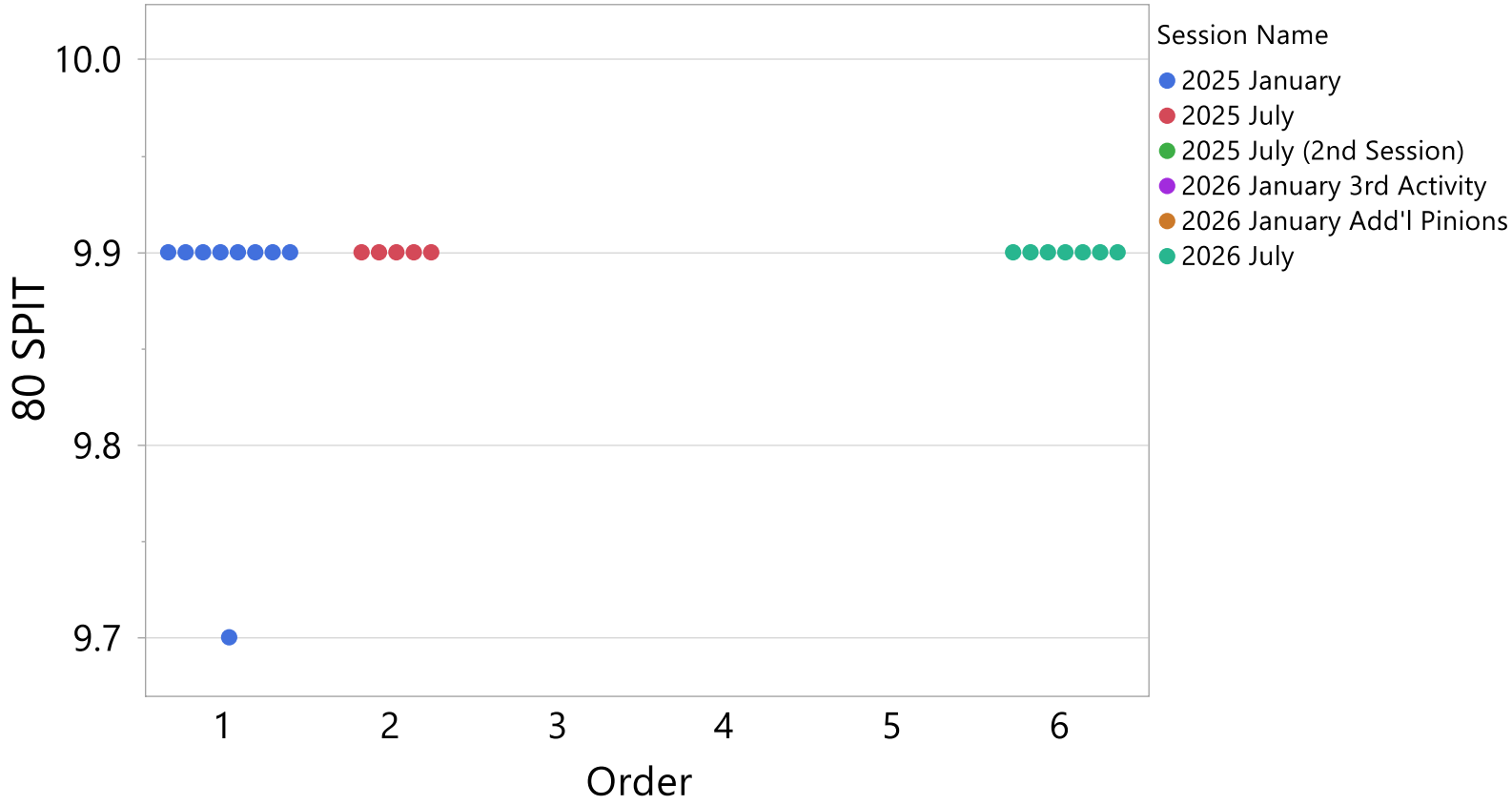


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Part 80 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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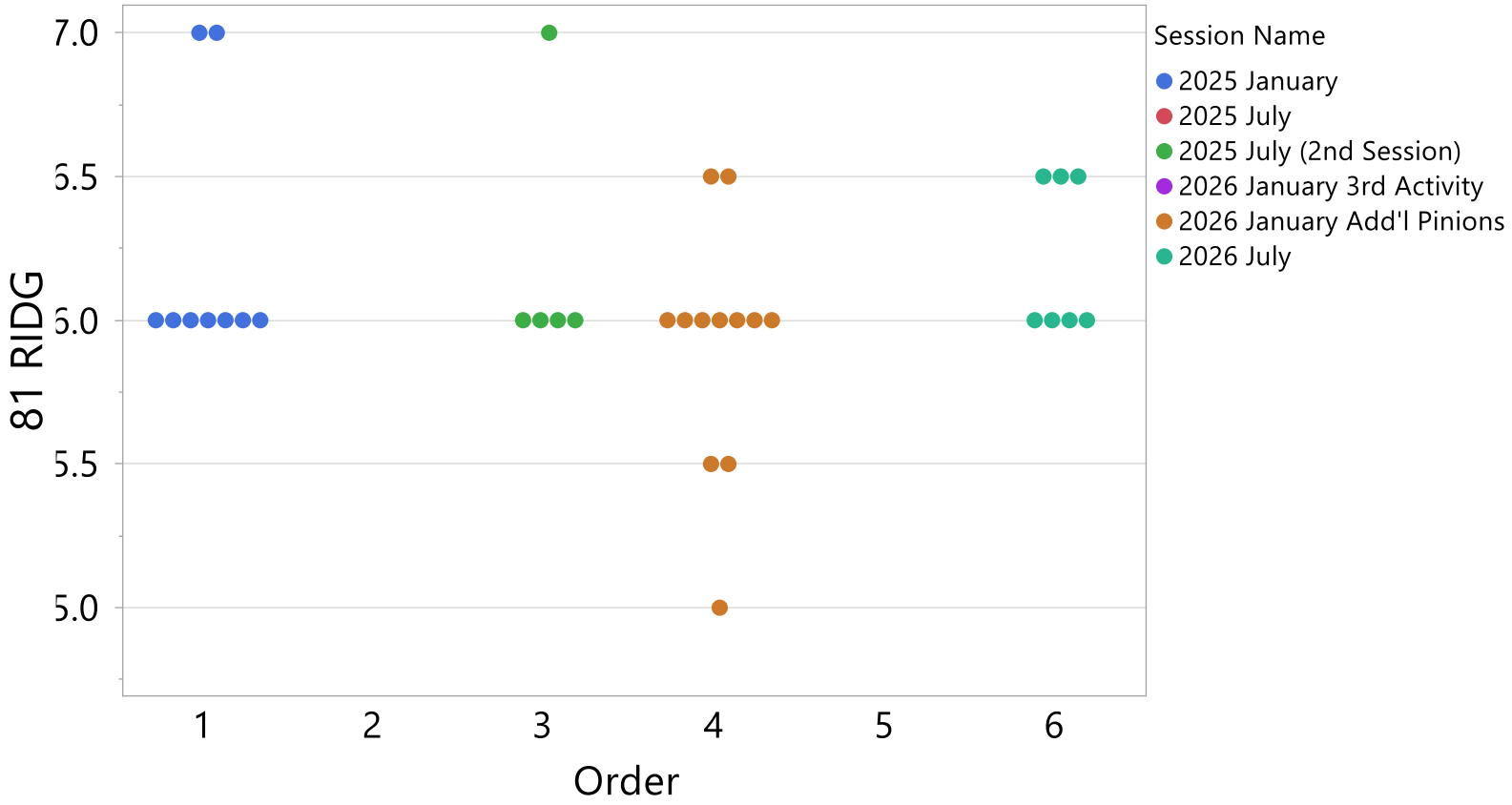
Part 81 Targets

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Part 81 - RIDG

Target = 6.0

Green = {6.5, 6.0}
Yellow = {Ø}
Orange = {7.0, 5.5}
Red = All other ratings

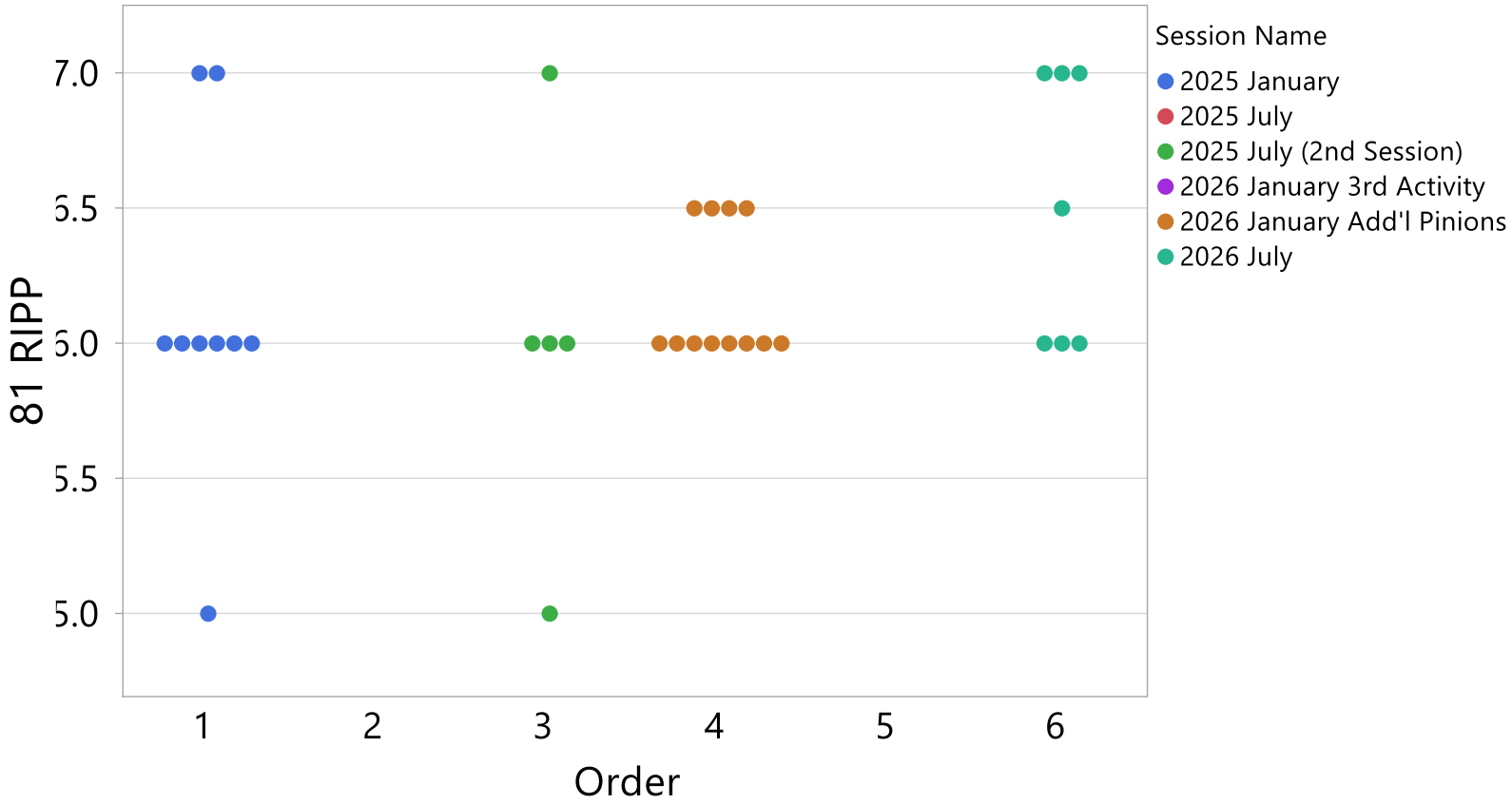


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Part 8 I - RIPP

Target = 6.5

Green = {6.5}
Yellow = {7.0, 6.0}
Orange = {Ø}
Red = All other ratings

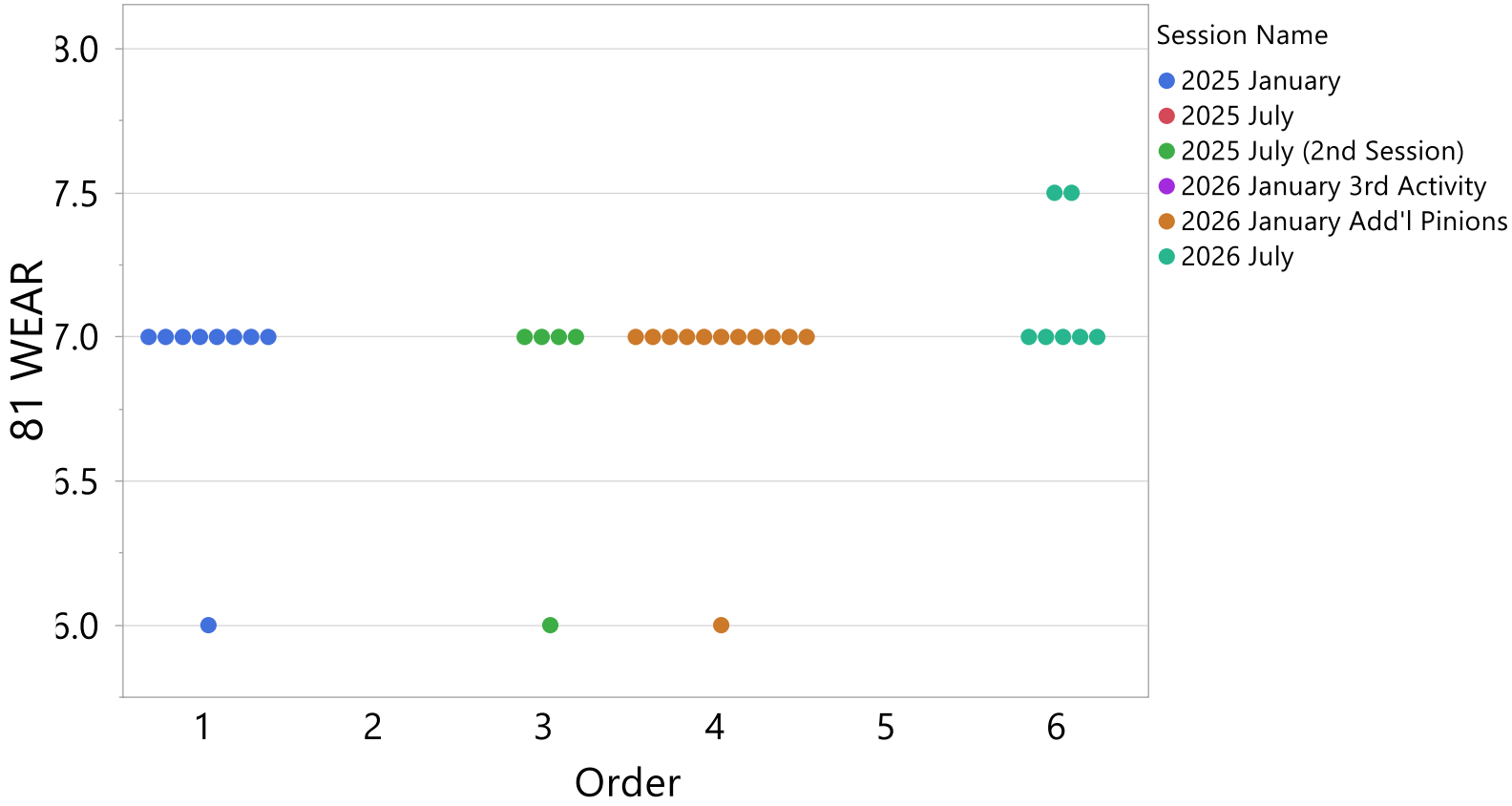


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Part 81 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {∅}
Red = All other ratings

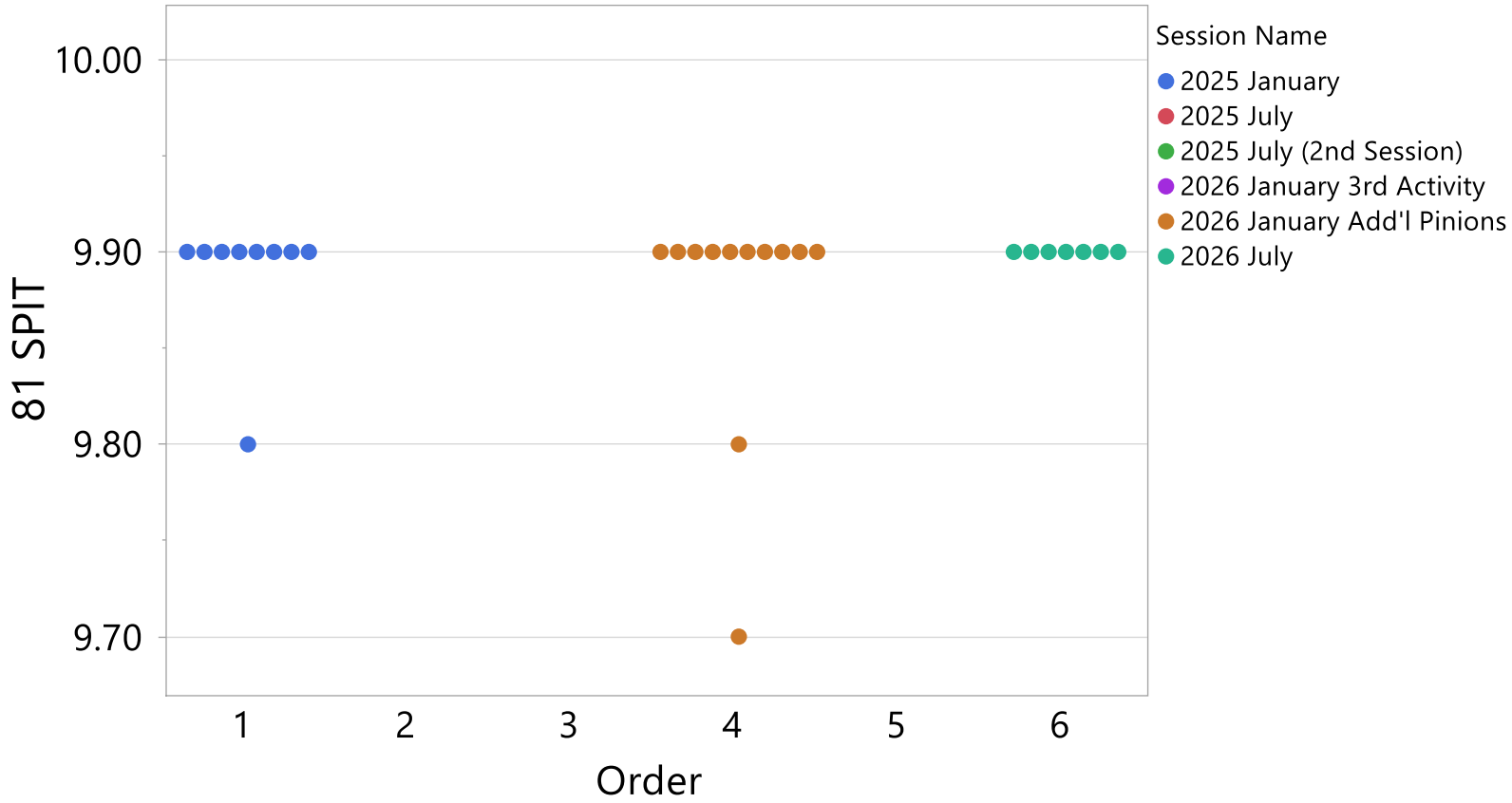


©SOUTHWEST RESEARCH INSTITUTE

Part 81 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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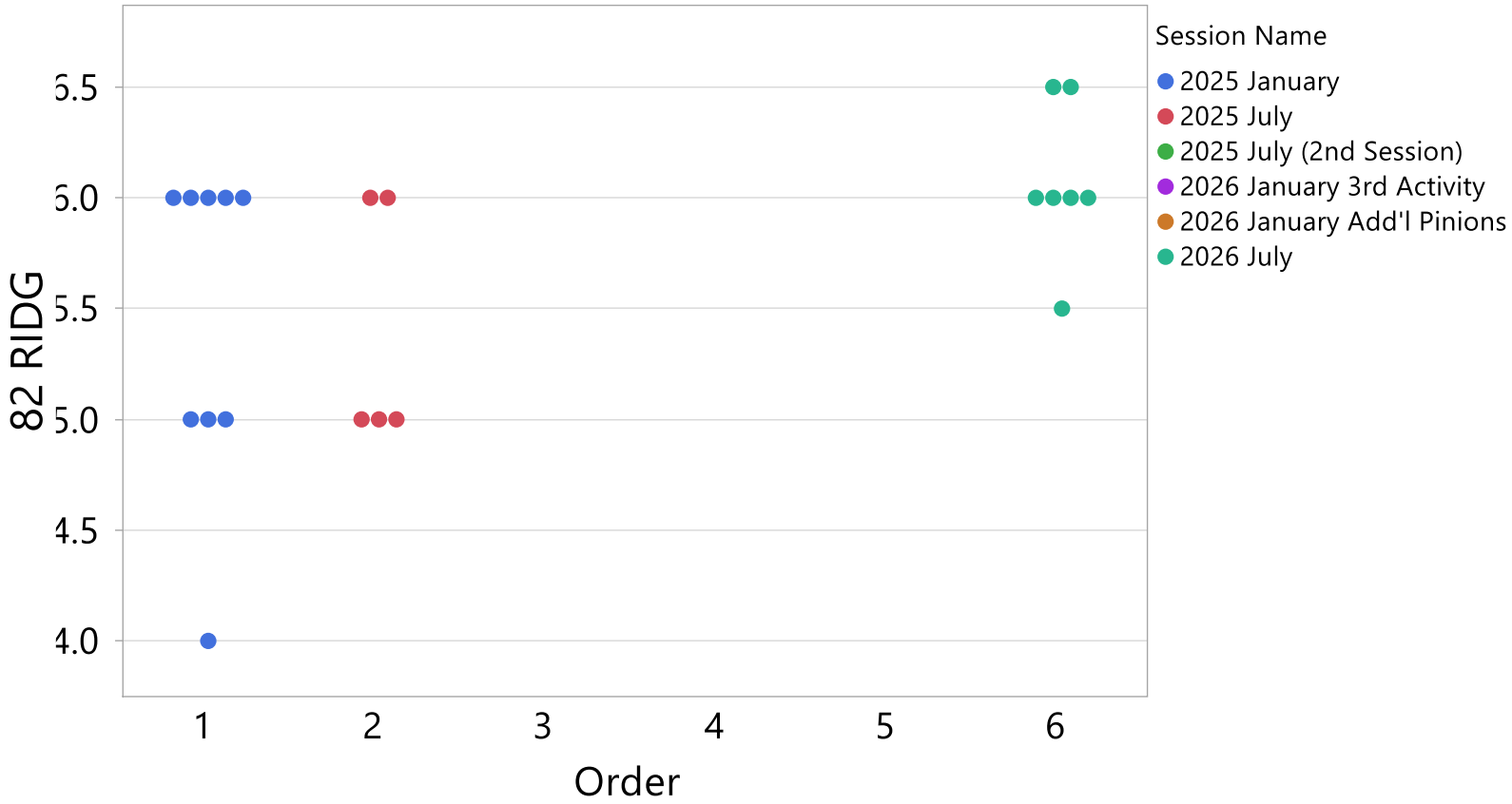
Part 82 Targets

©SOUTHWEST RESEARCH INSTITUTE

Part 82 - RIDG

Target = 6.0

Green = {6.5, 6.0}
Yellow = {Ø}
Orange = {7.0, 5.5}
Red = All other ratings

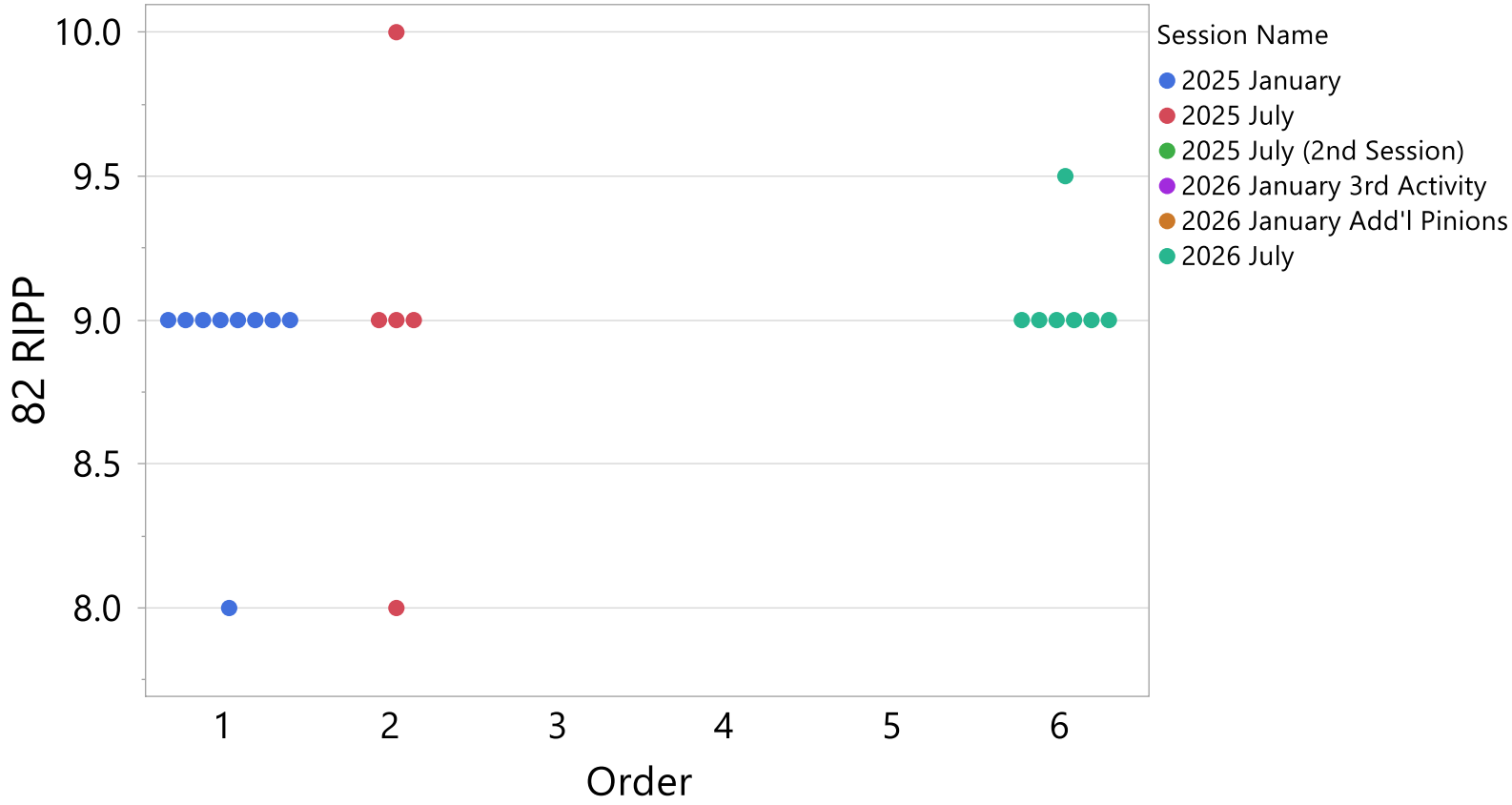


©SOUTHWEST RESEARCH INSTITUTE

Part 82 - RIPP

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {∅}
Red = All other ratings

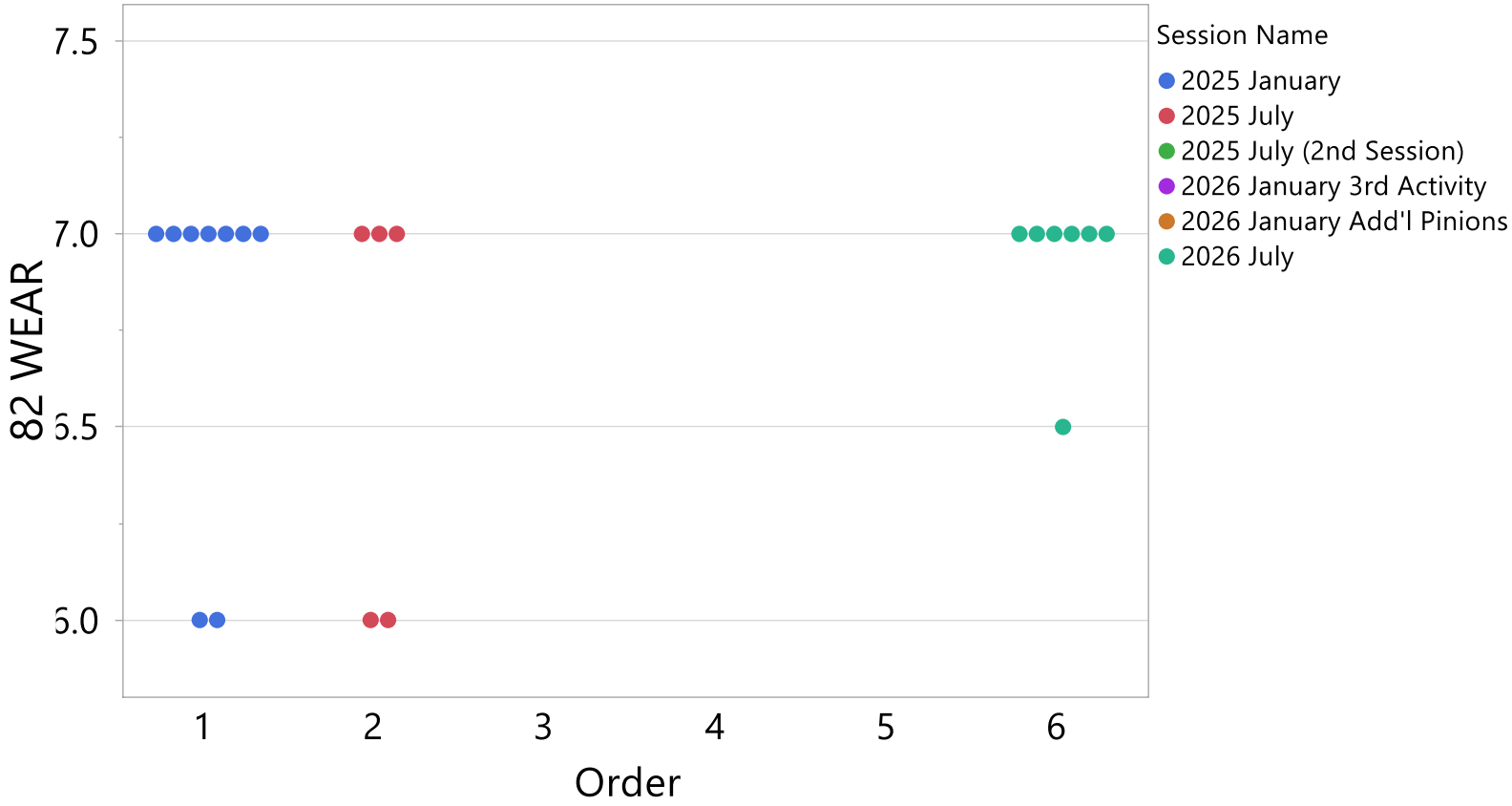


©SOUTHWEST RESEARCH INSTITUTE

Part 82 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {∅}
Red = All other ratings

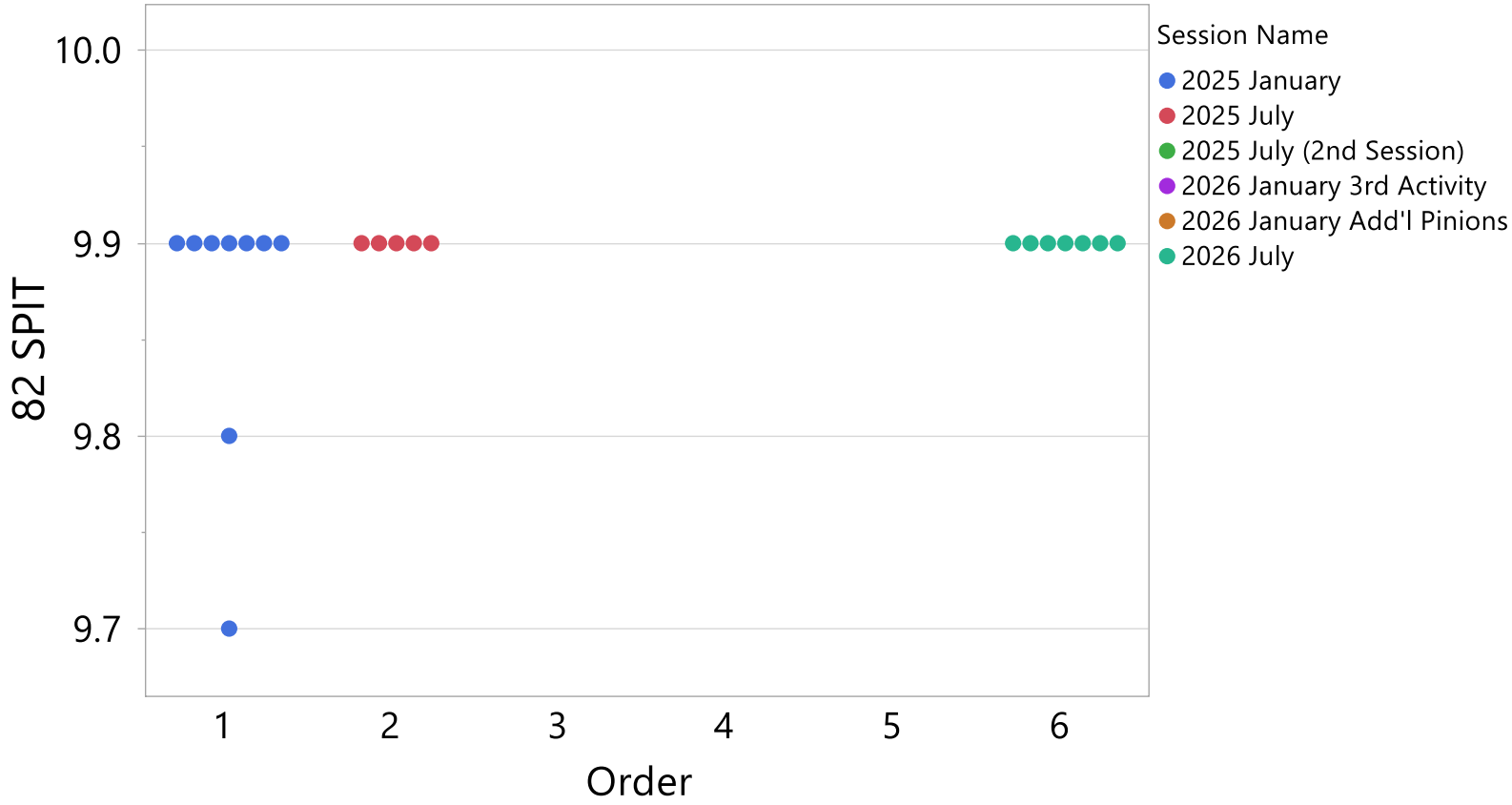


©SOUTHWEST RESEARCH INSTITUTE

Part 82 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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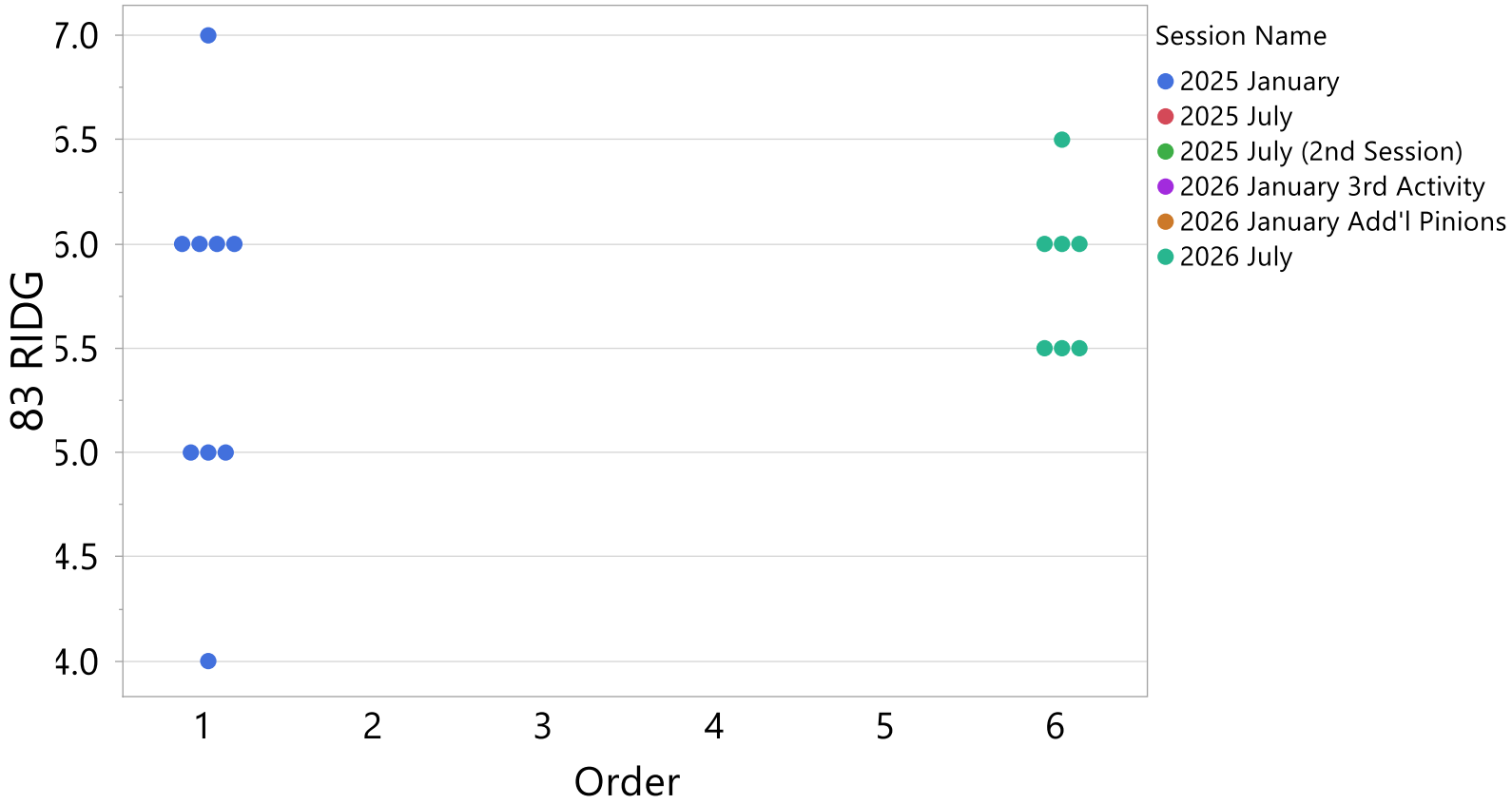
Part 83 Targets

©SOUTHWEST RESEARCH INSTITUTE

Part 83 - RIDG

Target = 6.0

Green = {6.0, 5.5}
Yellow = {Ø}
Orange = {6.5, 5.0}
Red = All other ratings

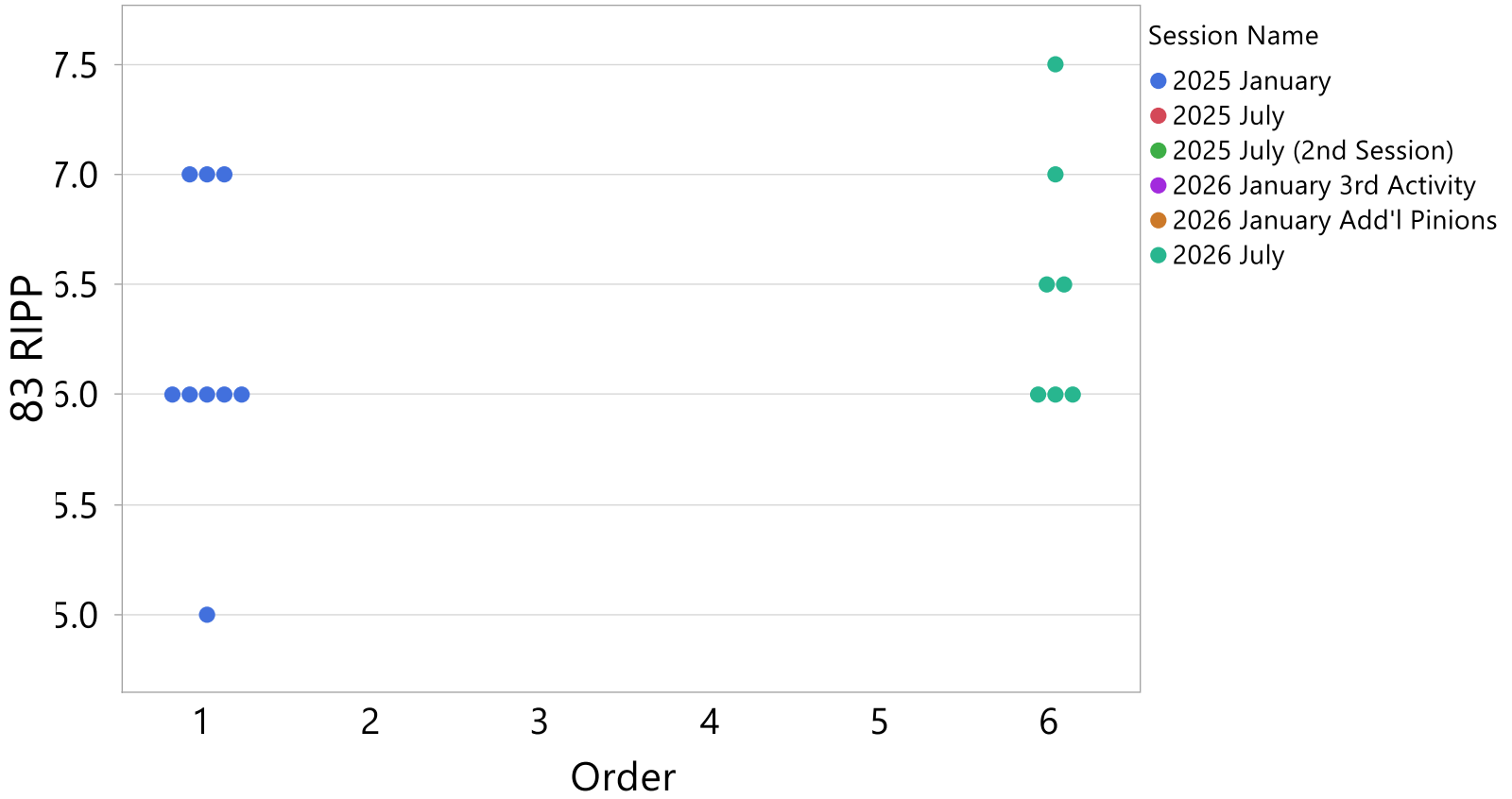


©SOUTHWEST RESEARCH INSTITUTE

Part 83 - RIPP

Target = 6.5

Green = {6.5, 6.0}
Yellow = {Ø}
Orange = {7.0, 5.5}
Red = All other ratings

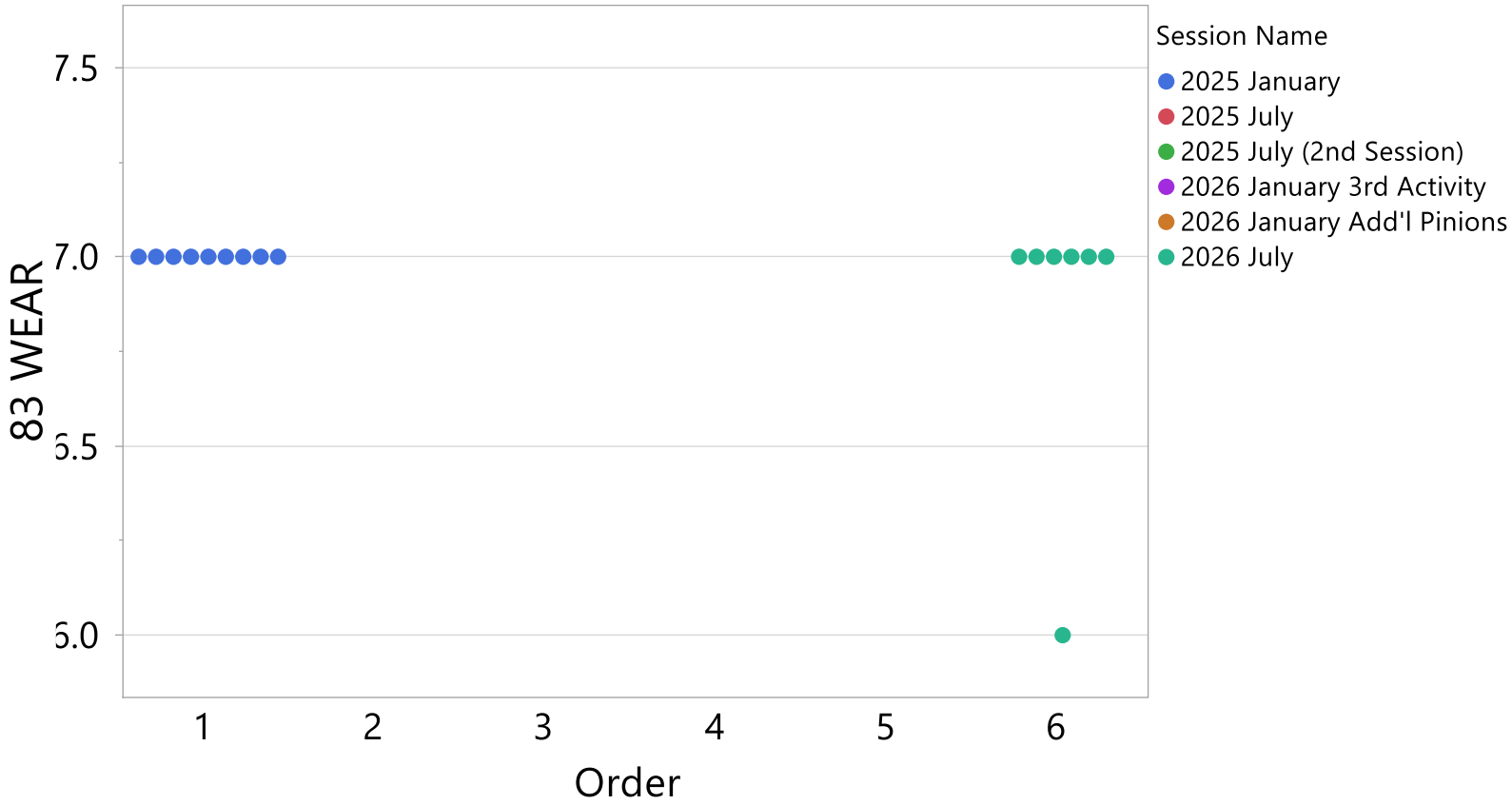


©SOUTHWEST RESEARCH INSTITUTE

Part 83 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {∅}
Red = All other ratings



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Part 83 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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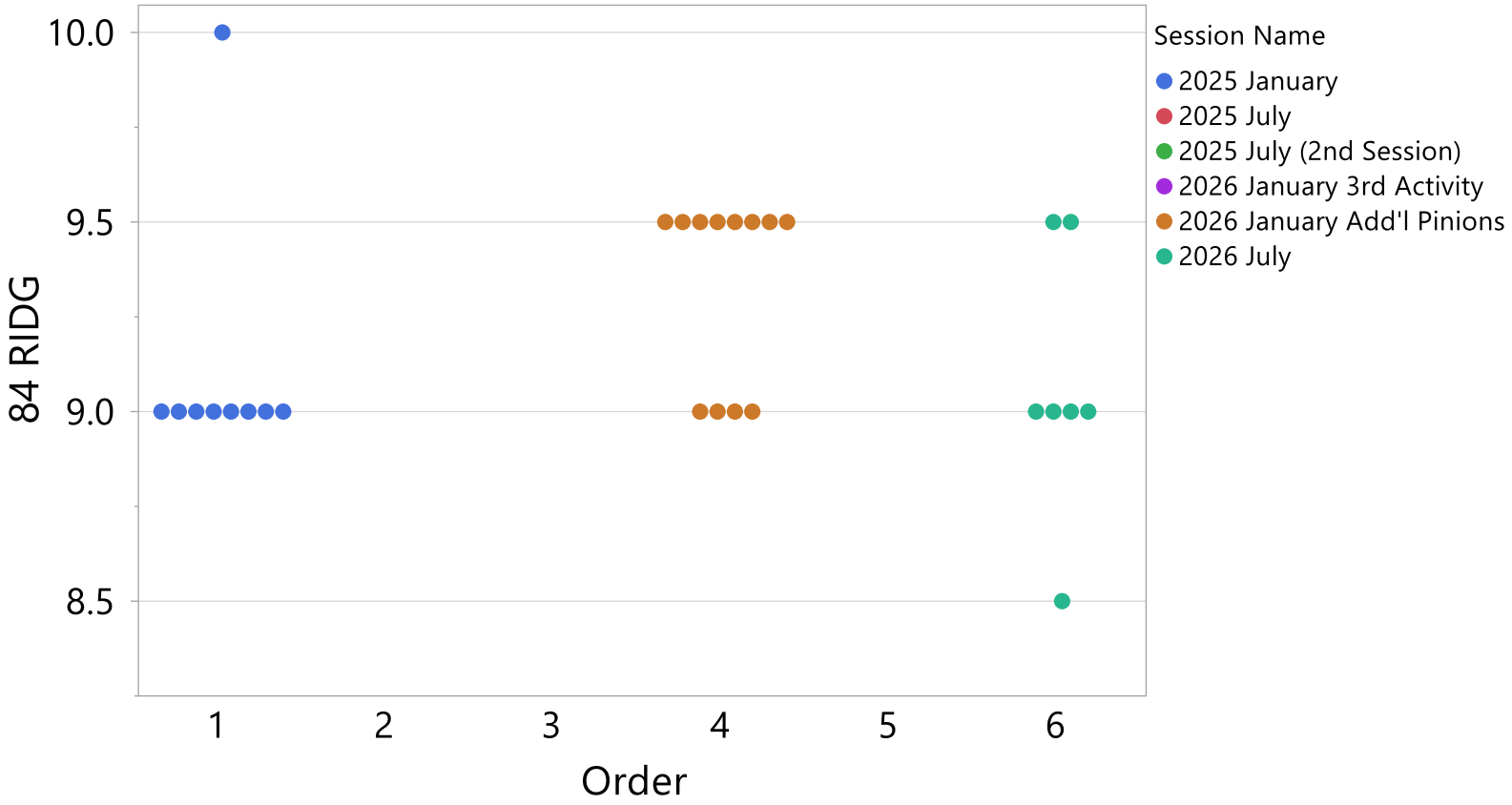
Part 84 Targets

©SOUTHWEST RESEARCH INSTITUTE

Part 84 - RIDG

Target = 9.0

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

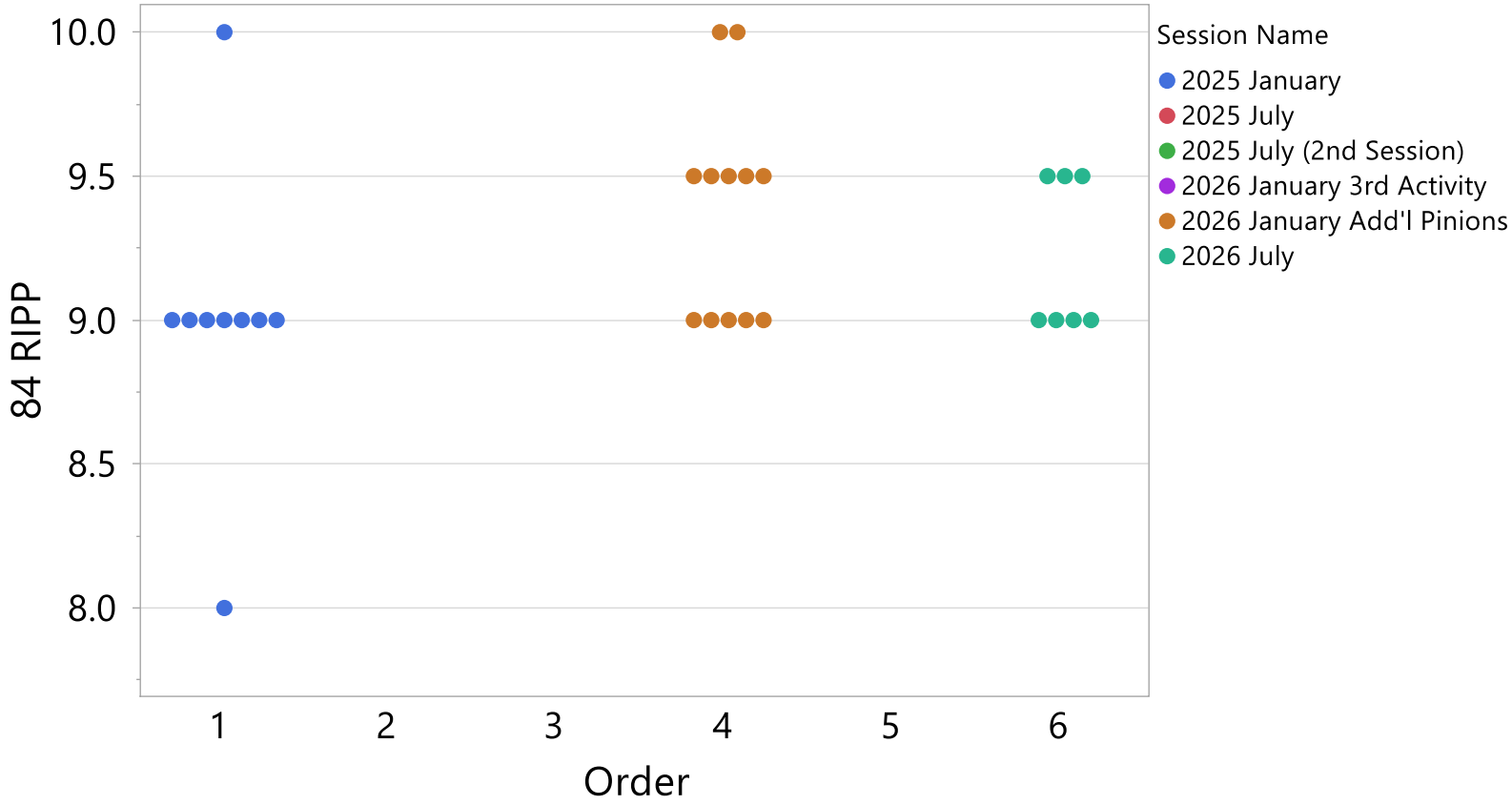


©SOUTHWEST RESEARCH INSTITUTE

Part 84 - RIPP

Target = 9.0

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

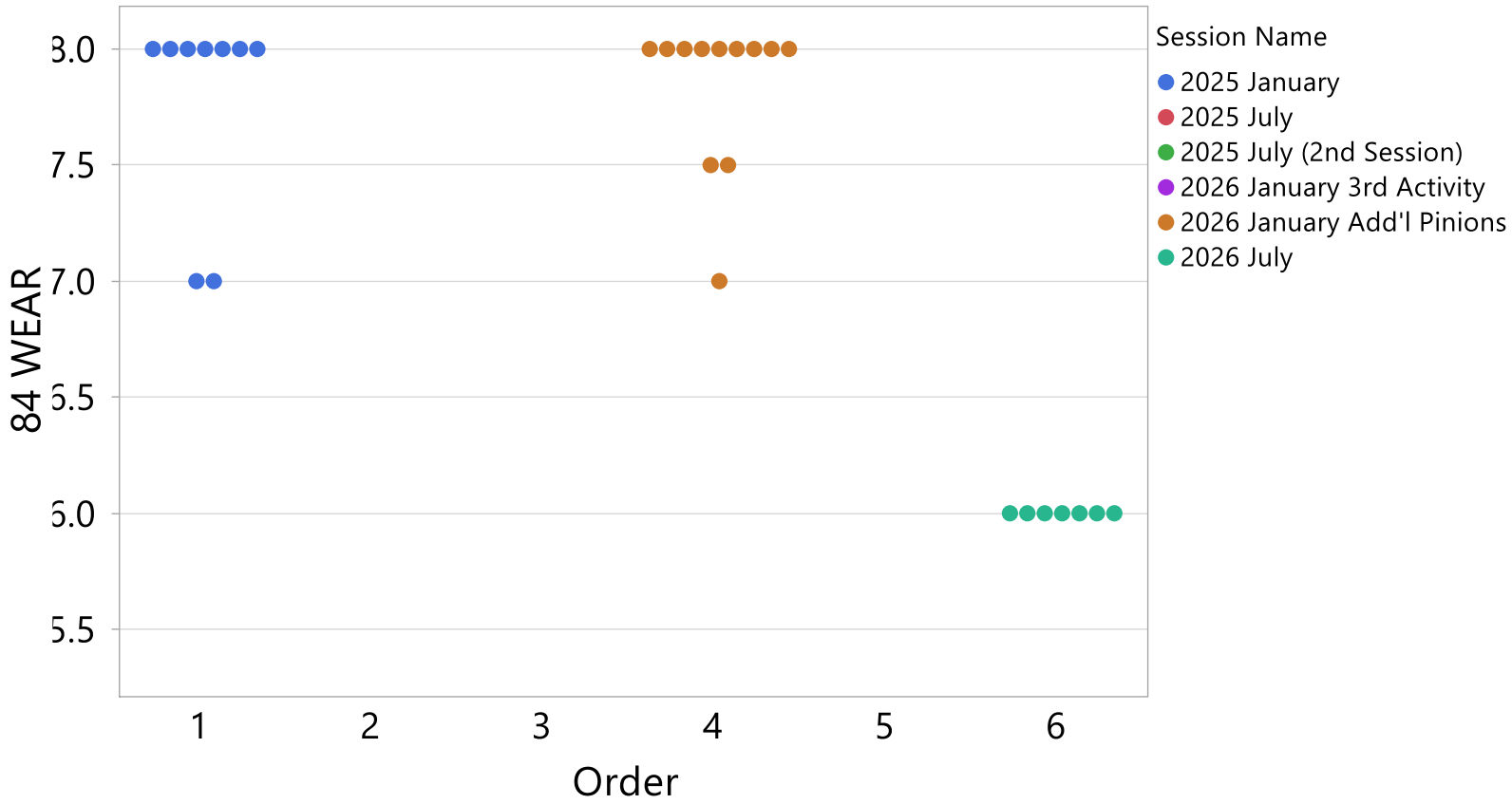


©SOUTHWEST RESEARCH INSTITUTE

Part 84 - Wear

Target = 6.0

Green = {6.0}
Yellow = {6.5, 5.5}
Orange = {Ø}
Red = All other ratings

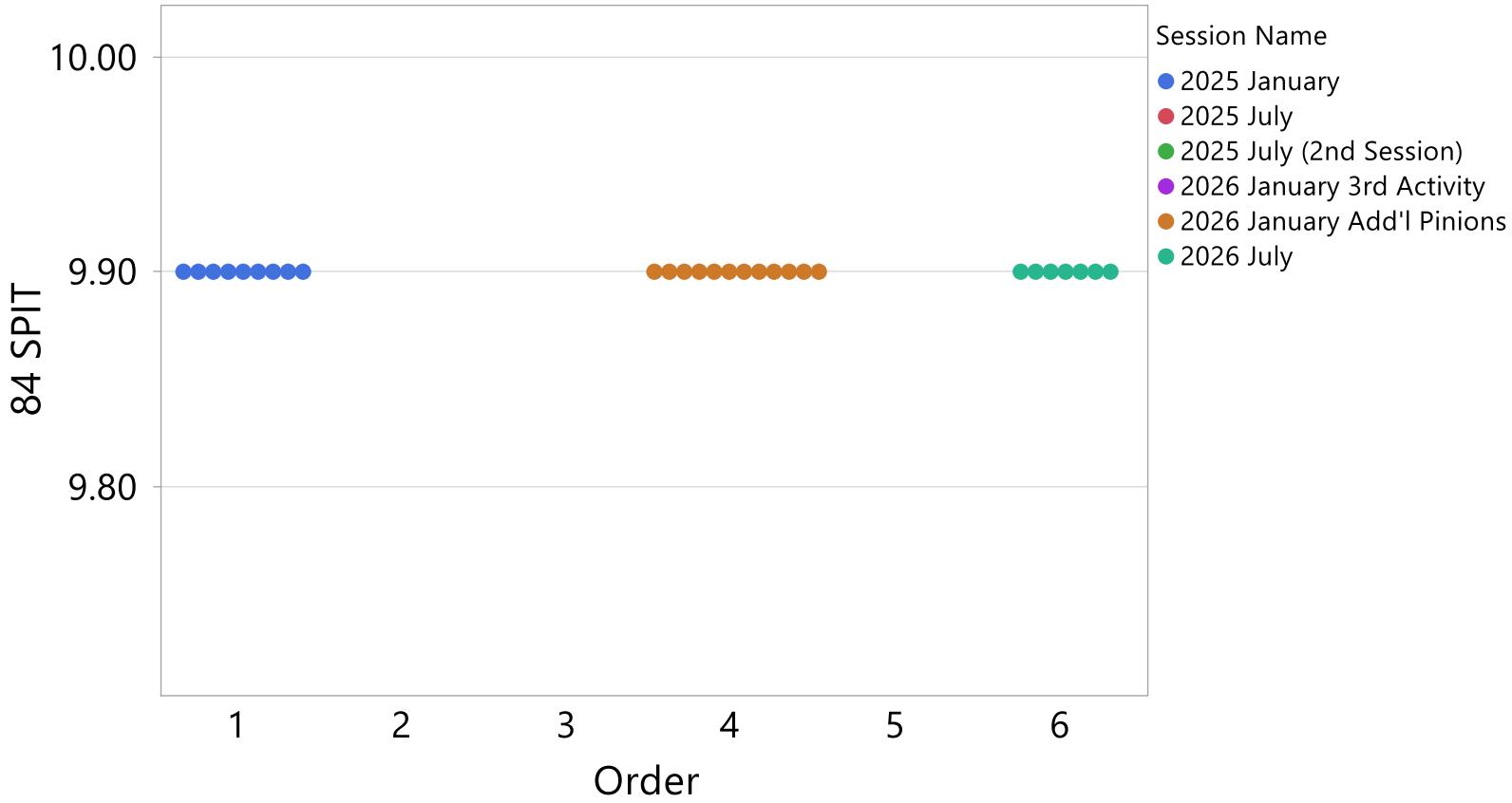


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Part 84 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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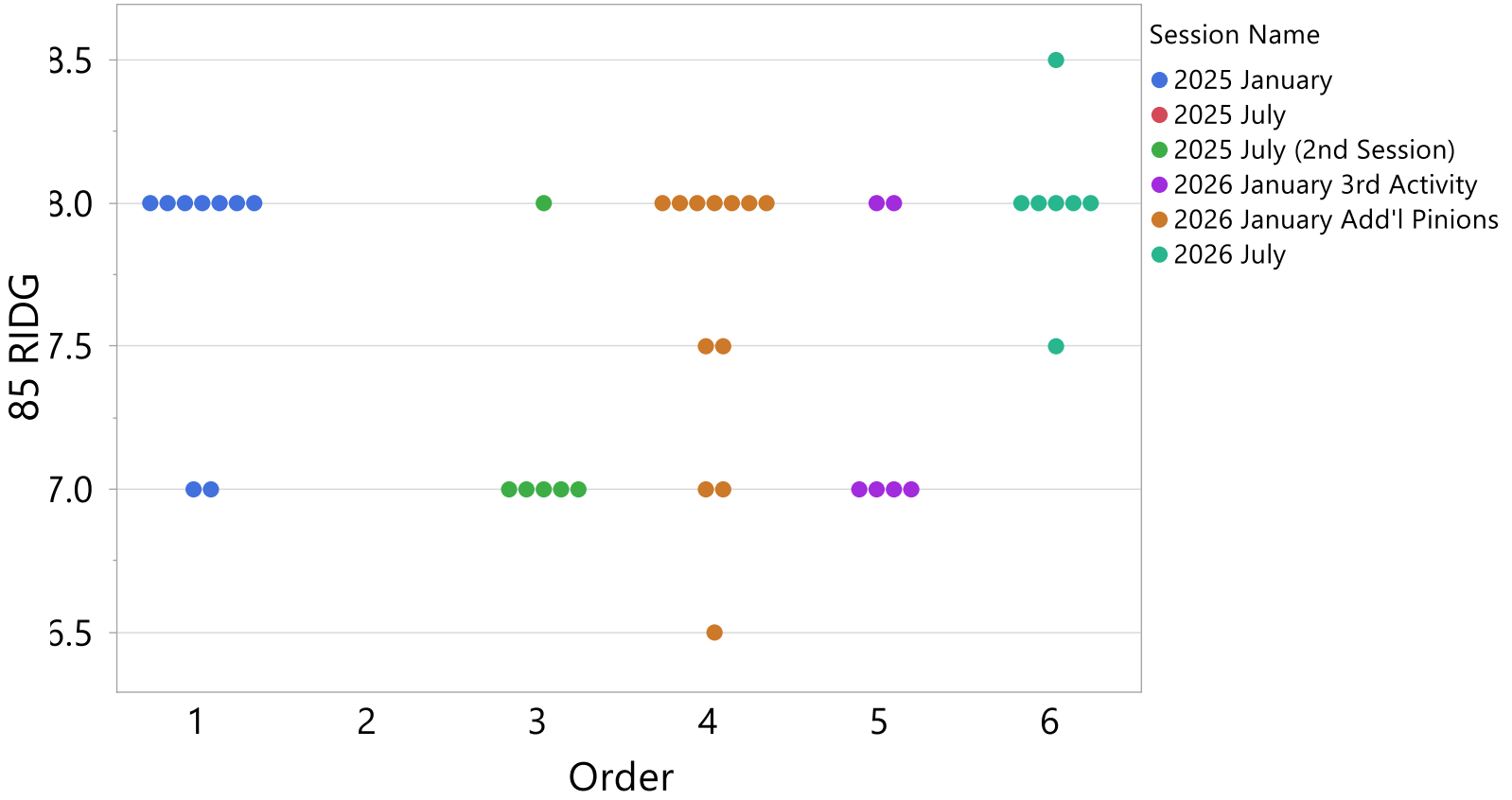
Part 85 Targets

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Part 85 - RIDG

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings



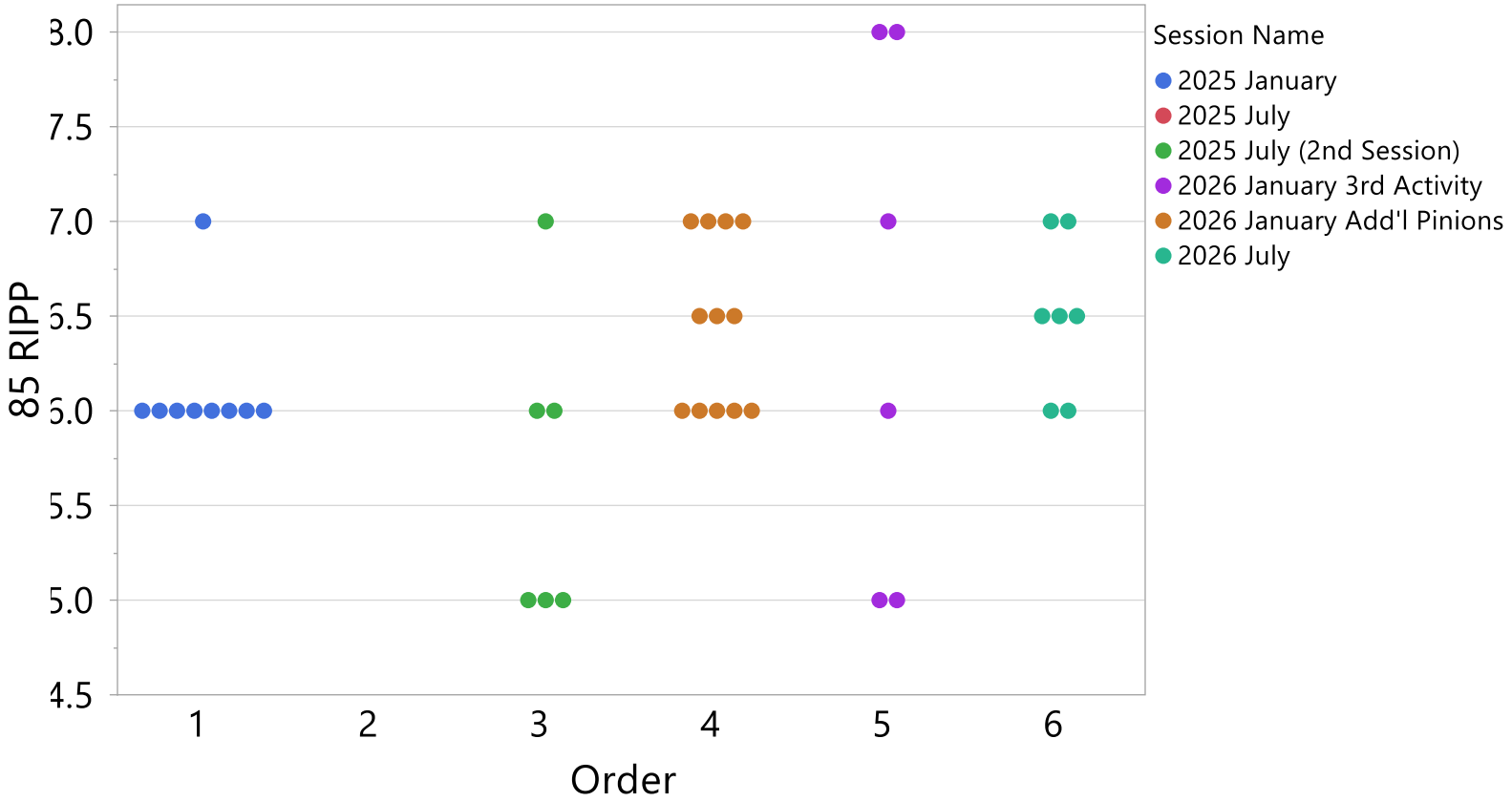
Target = 8.0

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Part 85 - RIPP

Target = 6.5

Green = {6.5}
Yellow = {7.0, 6.0}
Orange = {Ø}
Red = All other ratings

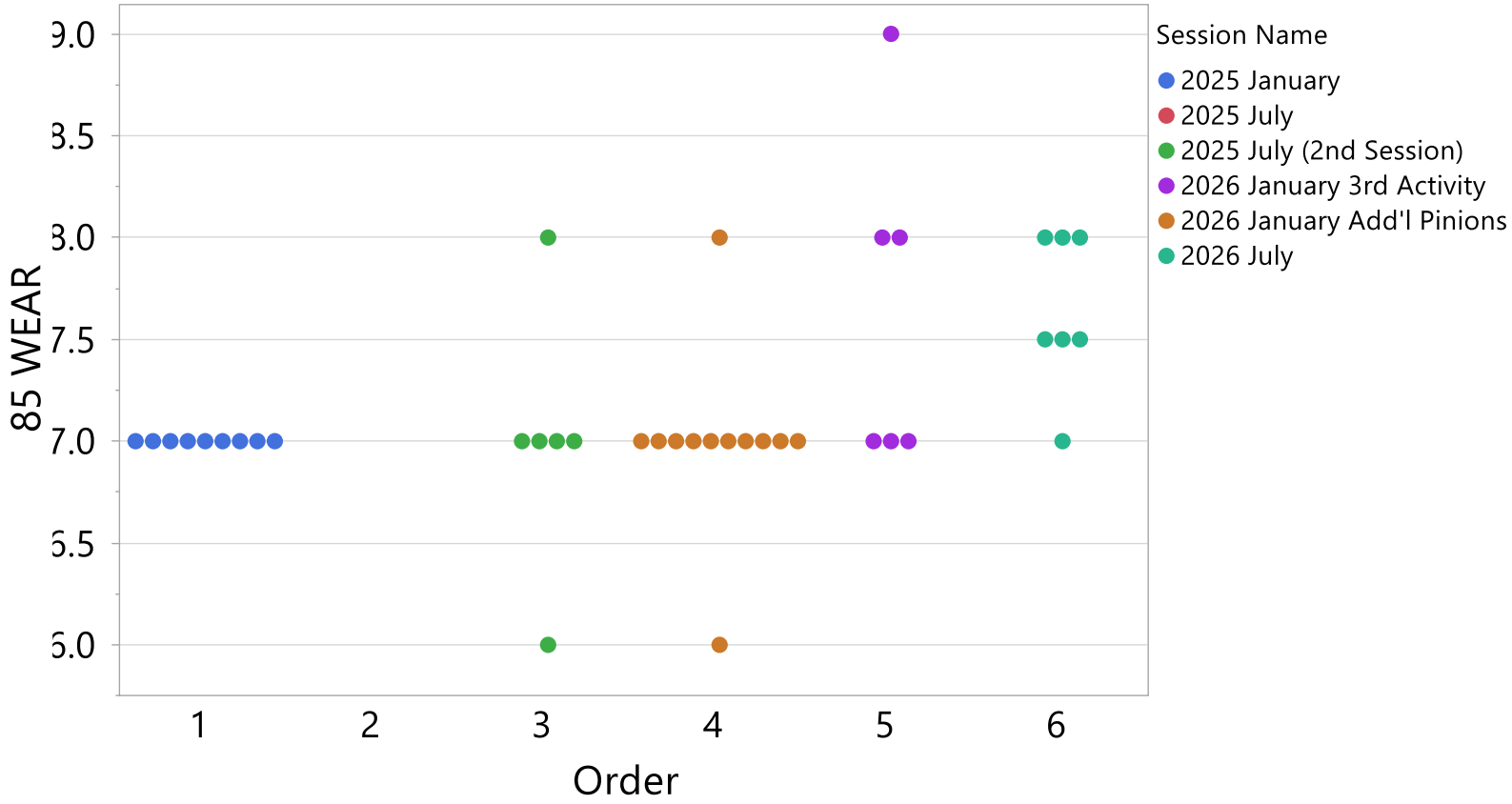


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Part 85 - Wear

Target = 7.5

Green = {8.0, 7.5}
Yellow = {Ø}
Orange = {8.5, 7.0}
Red = All other ratings



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Part 85 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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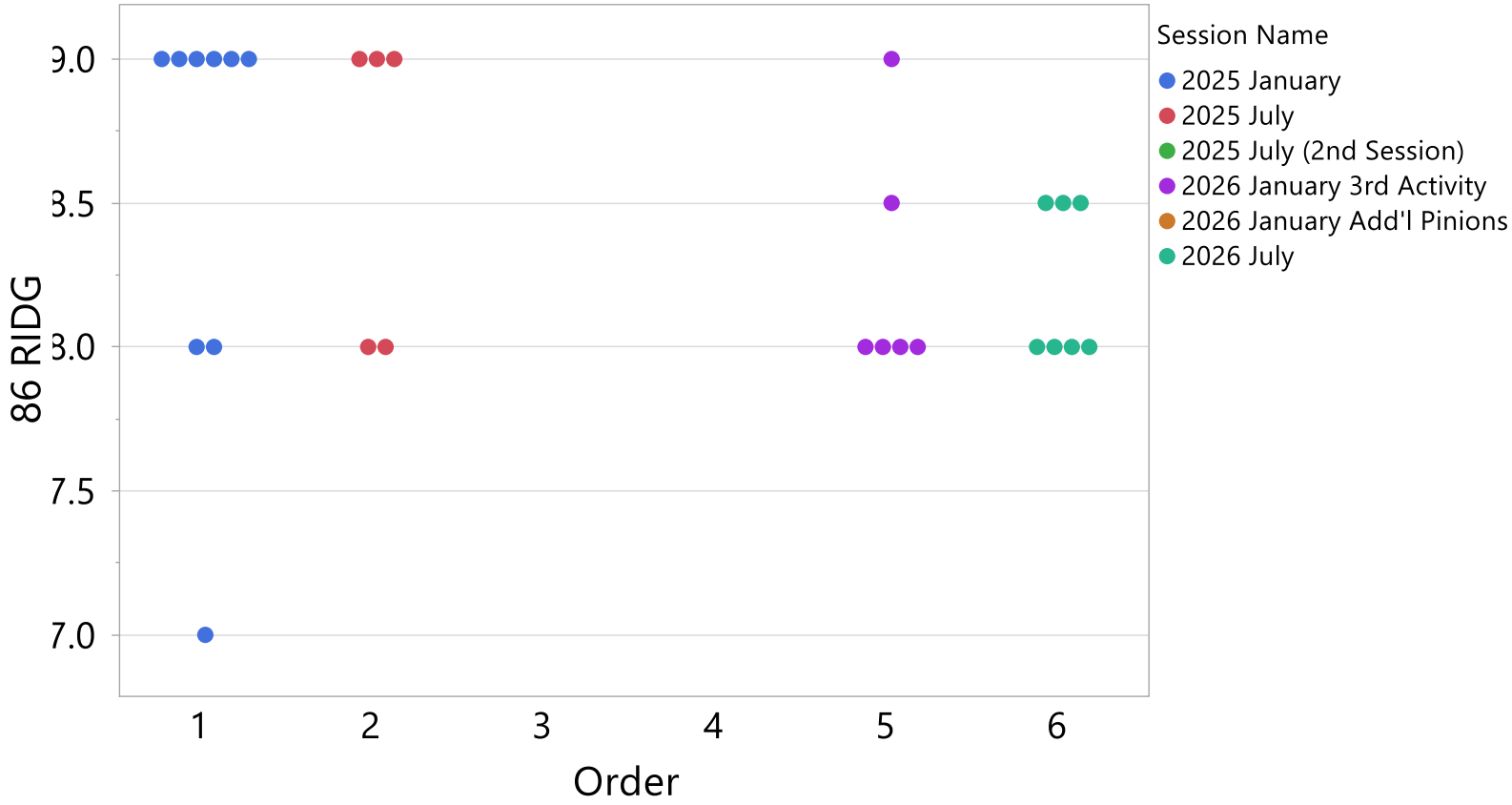
Part 86 Targets

©SOUTHWEST RESEARCH INSTITUTE

Part 86 - RIDG

Target = 8.0

Green = {8.5, 8.0}
Yellow = {Ø}
Orange = {9.0, 7.5}
Red = All other ratings

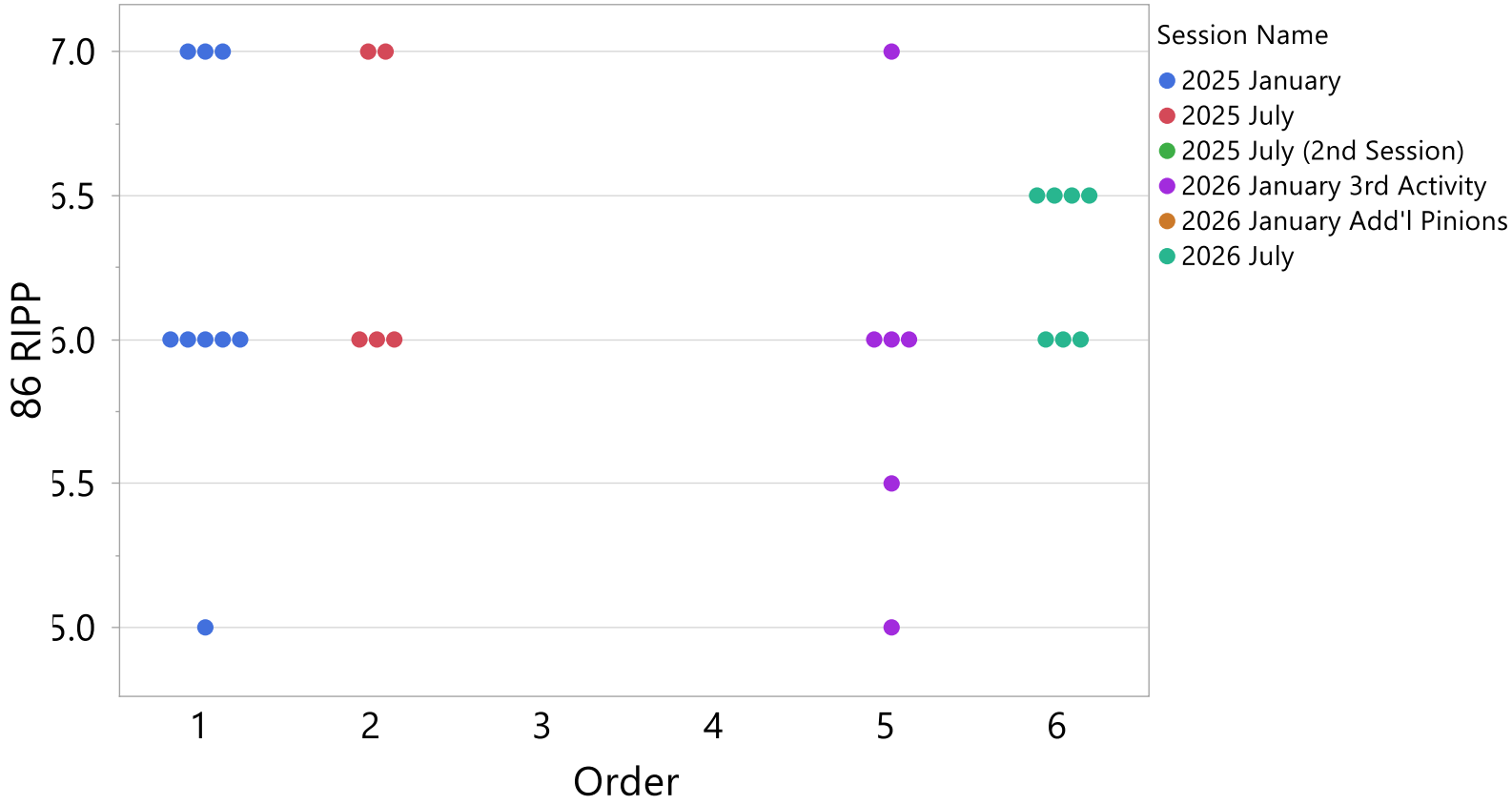


©SOUTHWEST RESEARCH INSTITUTE

Part 86 - RIPP

Target = 6.5

Green = {6.5, 6.0}
Yellow = {Ø}
Orange = {7.0, 5.5}
Red = All other ratings

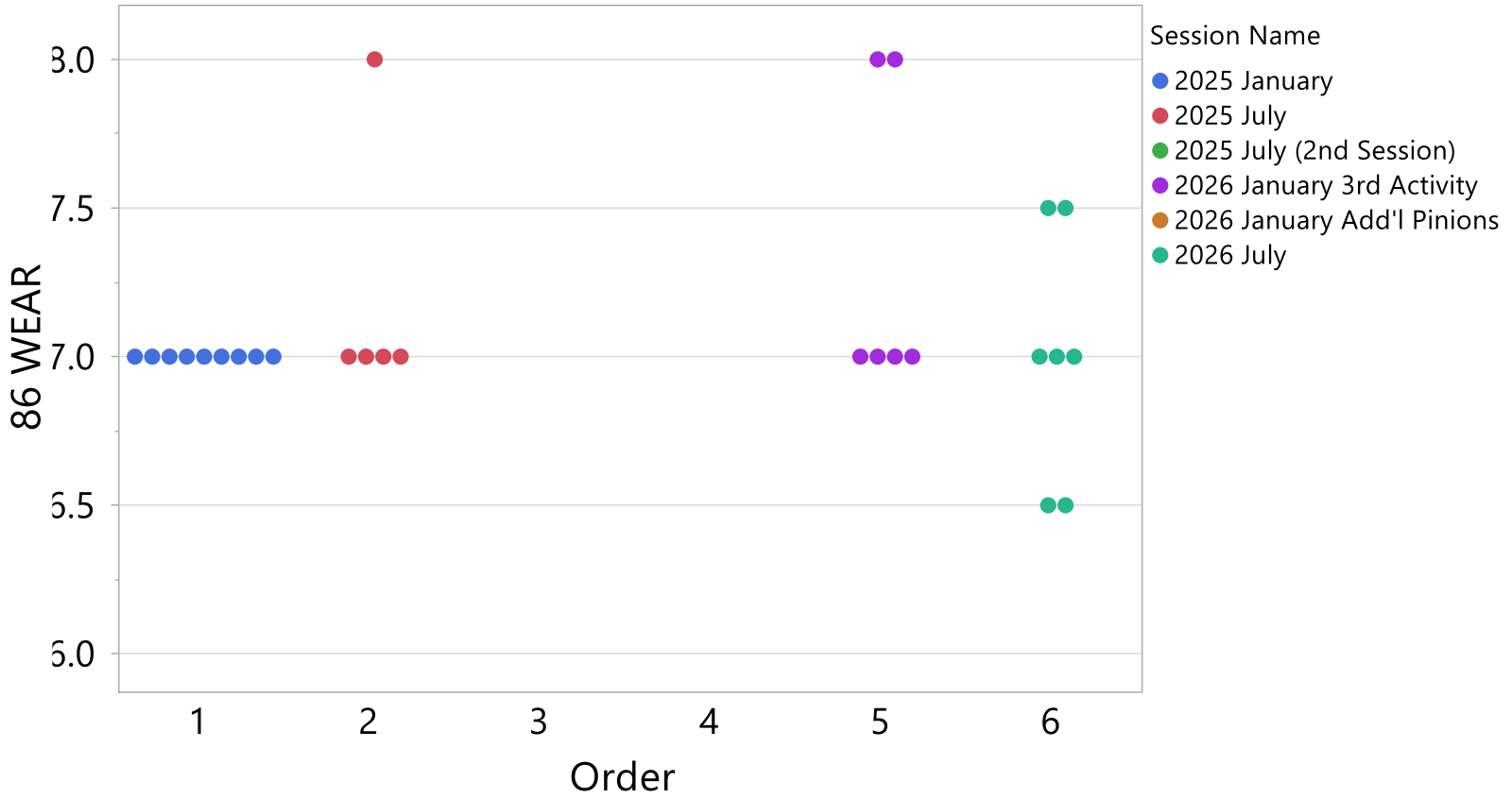


©SOUTHWEST RESEARCH INSTITUTE

Part 86 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {Ø}
Red = All other ratings

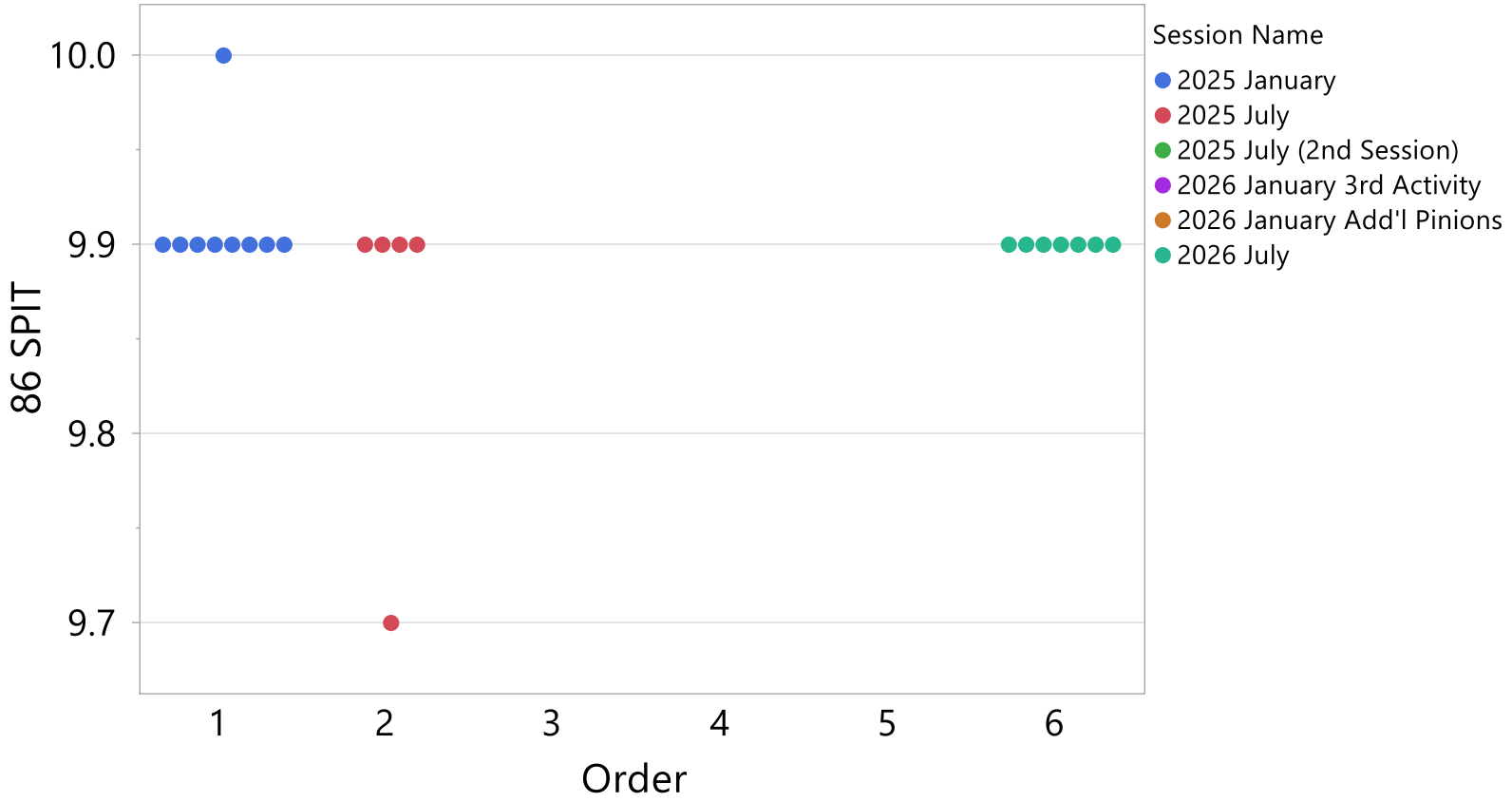


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Part 86 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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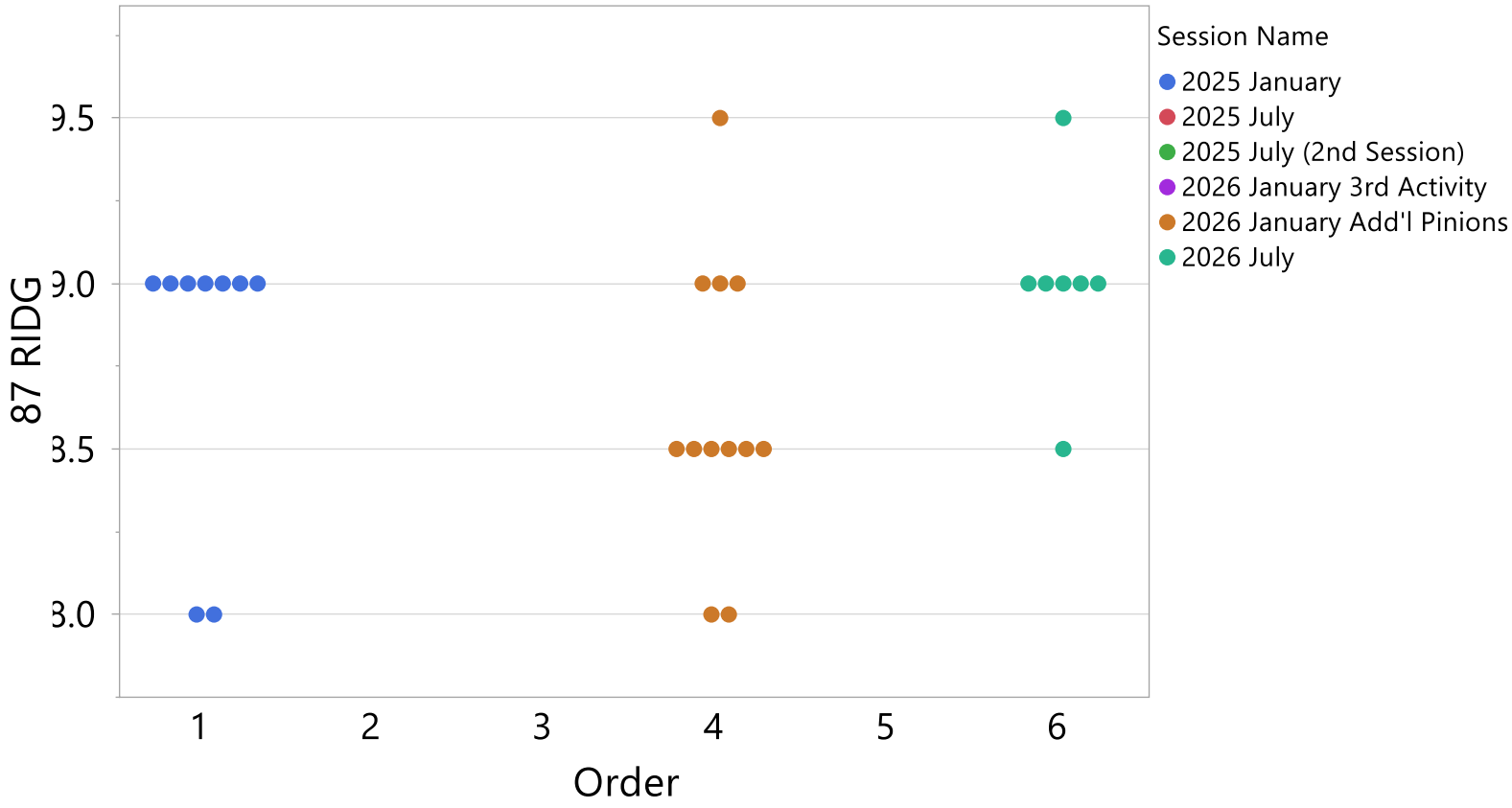
Part 87 Targets

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Part 87 - RIDG

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {∅}
Red = All other ratings

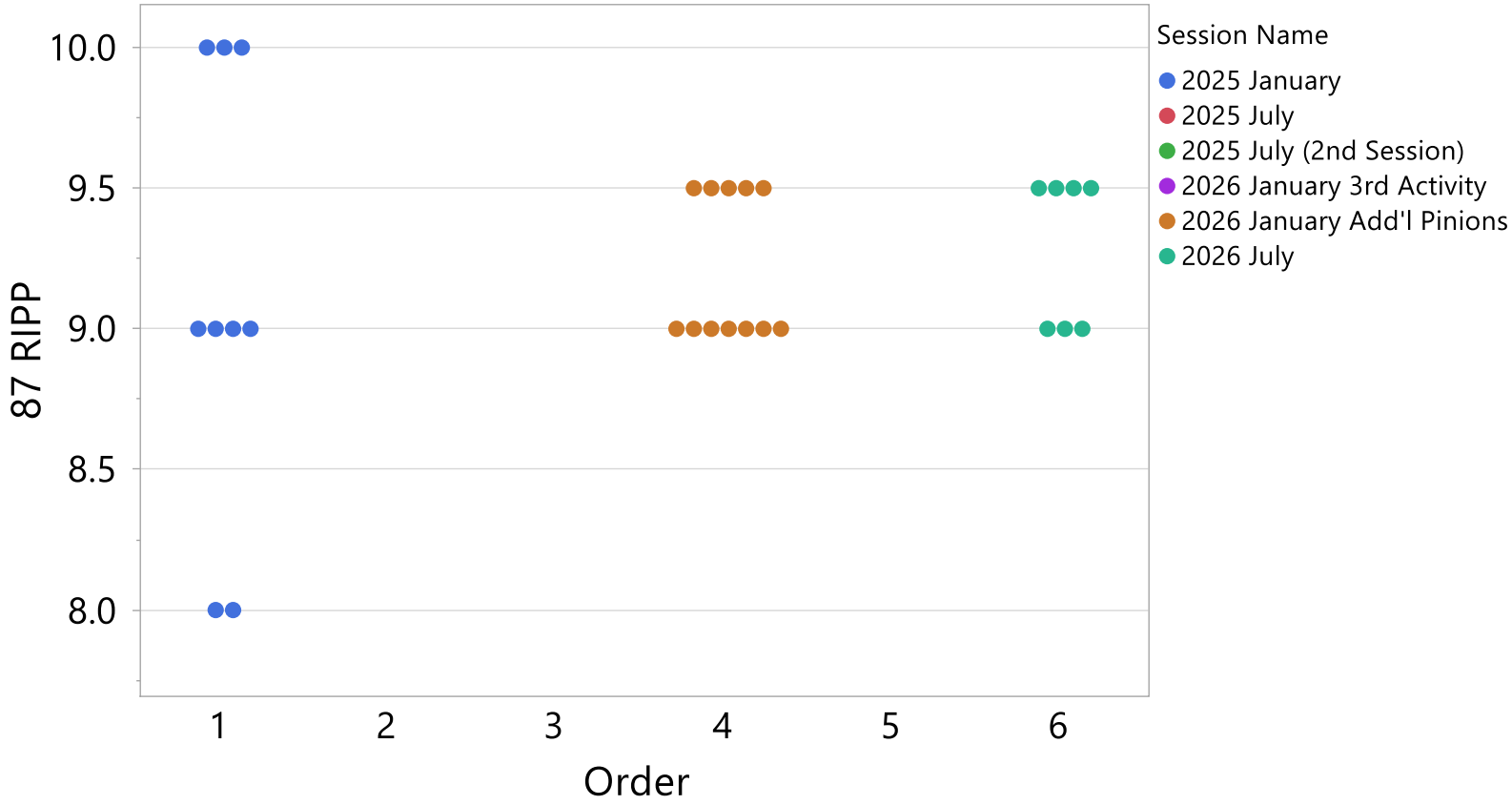


©SOUTHWEST RESEARCH INSTITUTE

Part 87 - RIPP

Target = 9.5

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

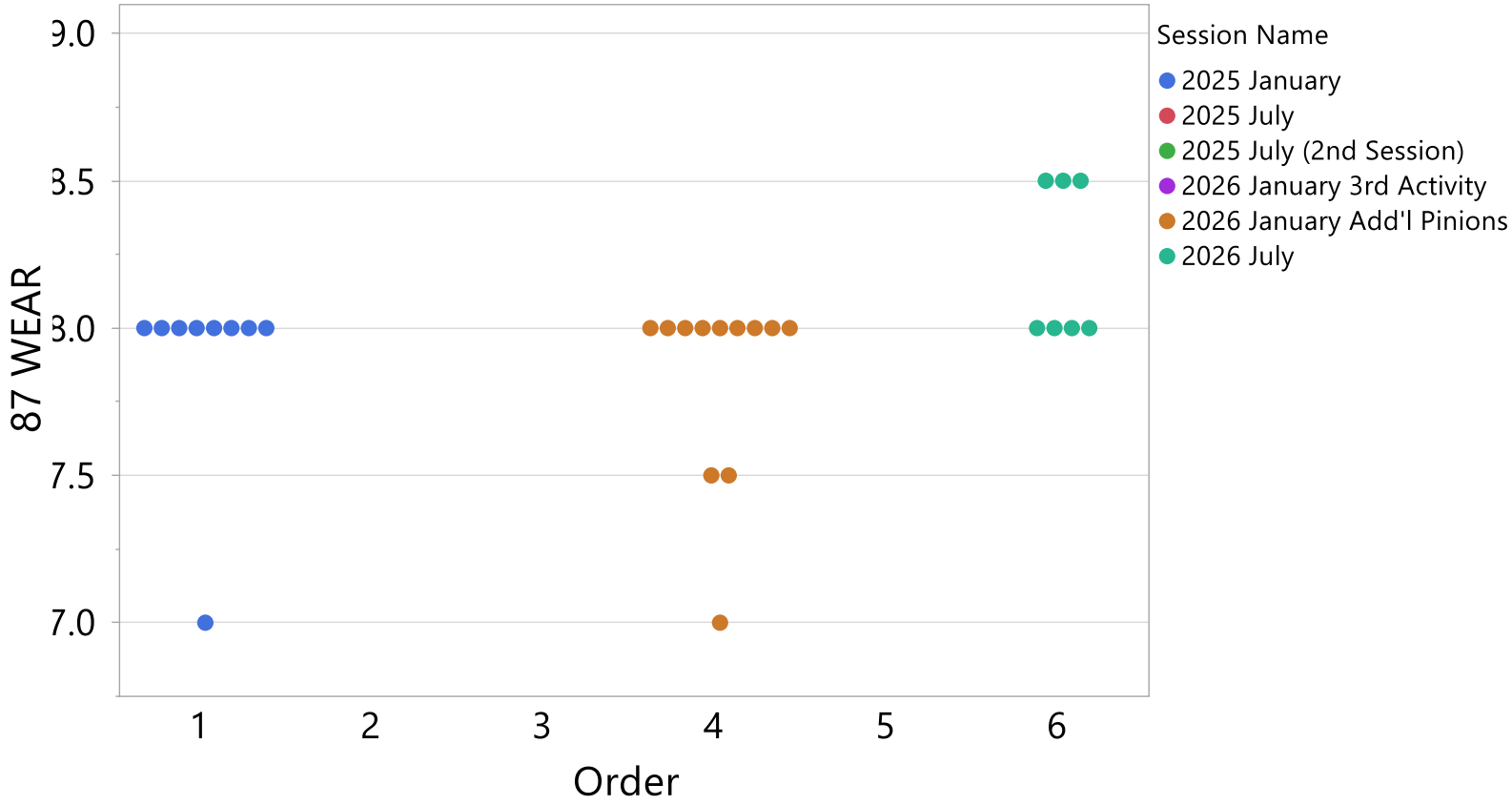


©SOUTHWEST RESEARCH INSTITUTE

Part 87 - Wear

Target = 8.0

Green = {8.5, 8.0}
Yellow = {Ø}
Orange = {9.0, 7.5}
Red = All other ratings

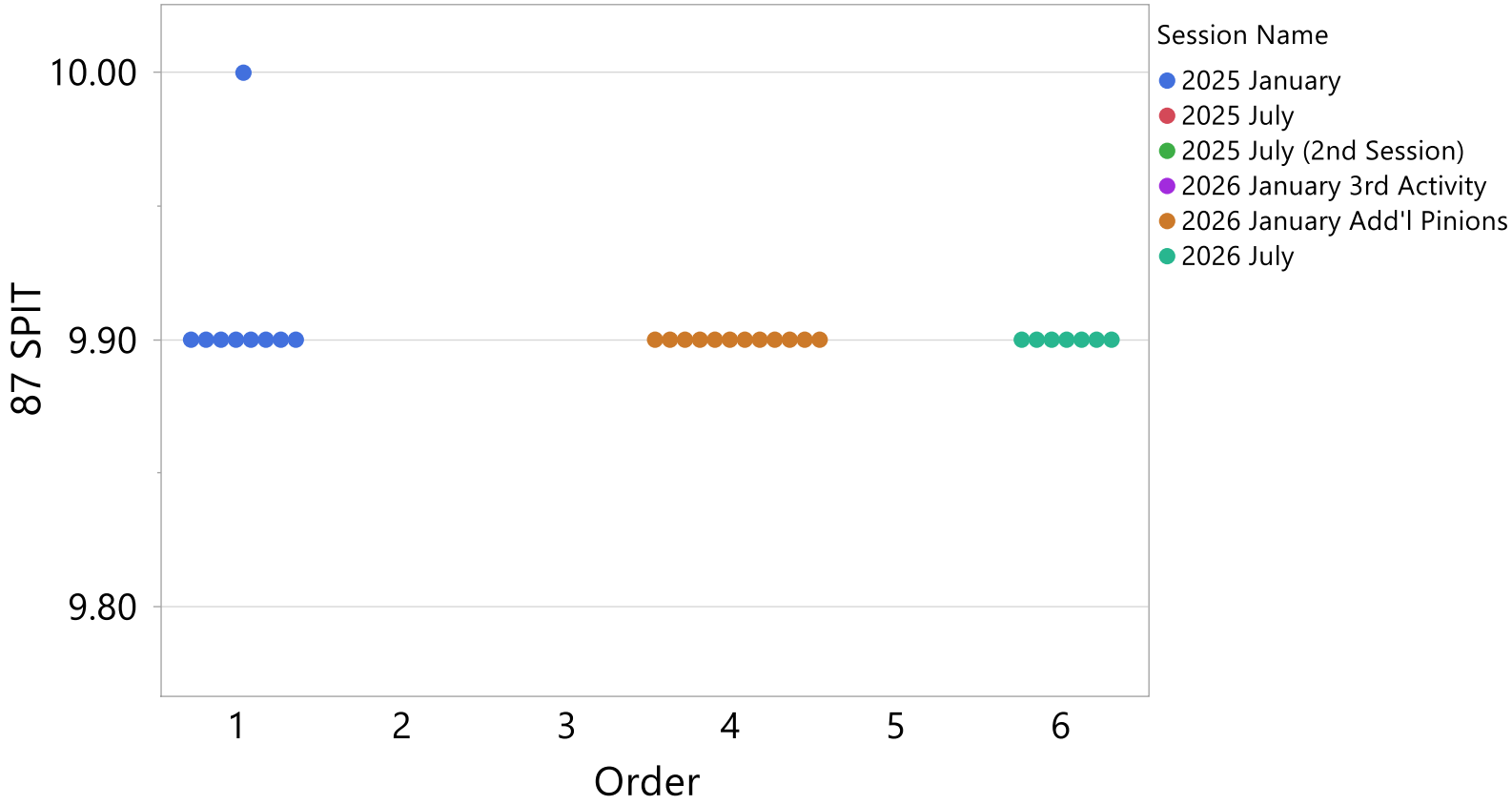


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Part 87 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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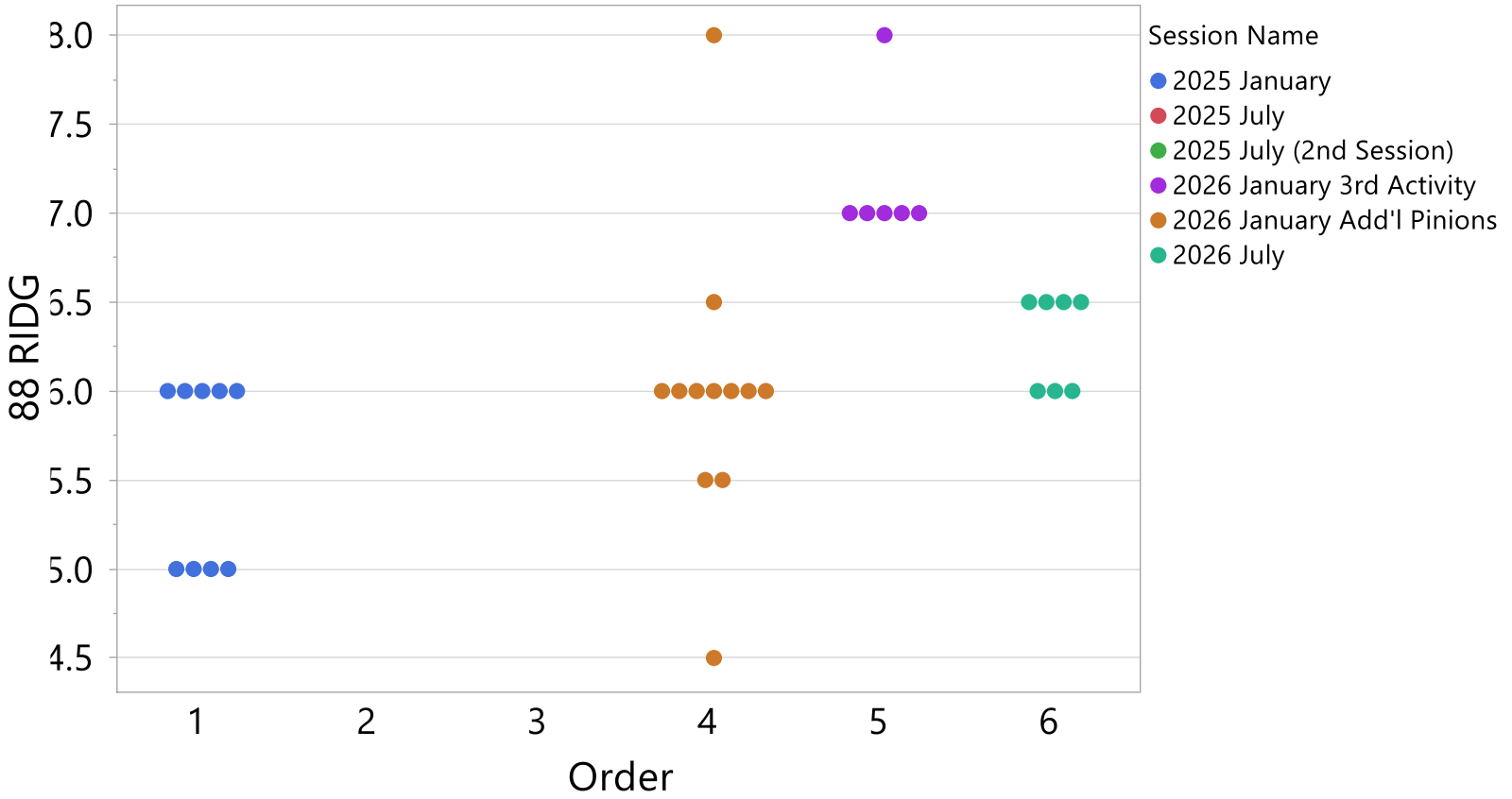
Part 88 Targets

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Part 88 - RIDG

Target = 6.5

Green = {6.5, 6.0}
Yellow = {Ø}
Orange = {7.0, 5.5}
Red = All other ratings

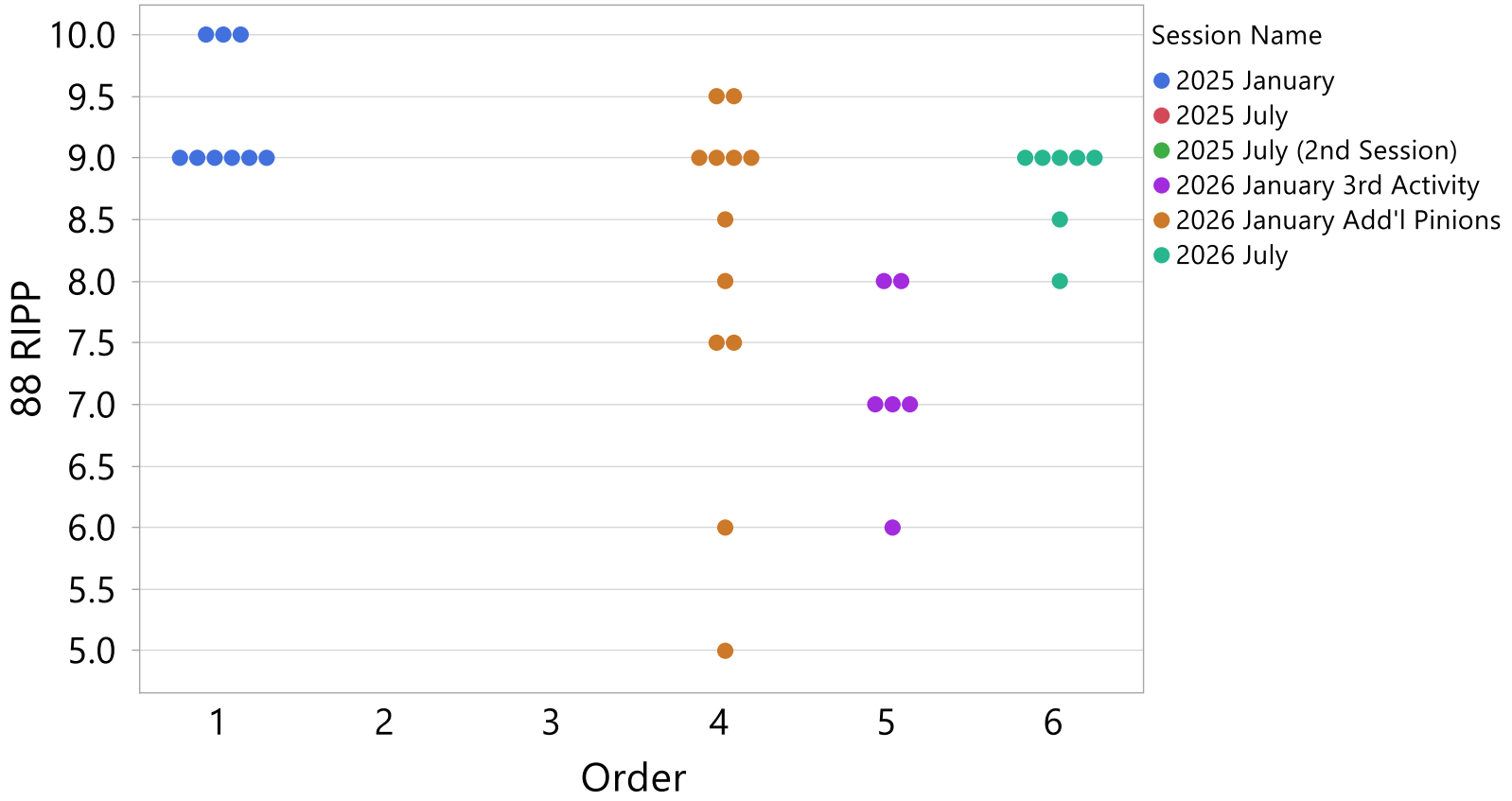


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Part 88 - RIPP

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {∅}
Red = All other ratings

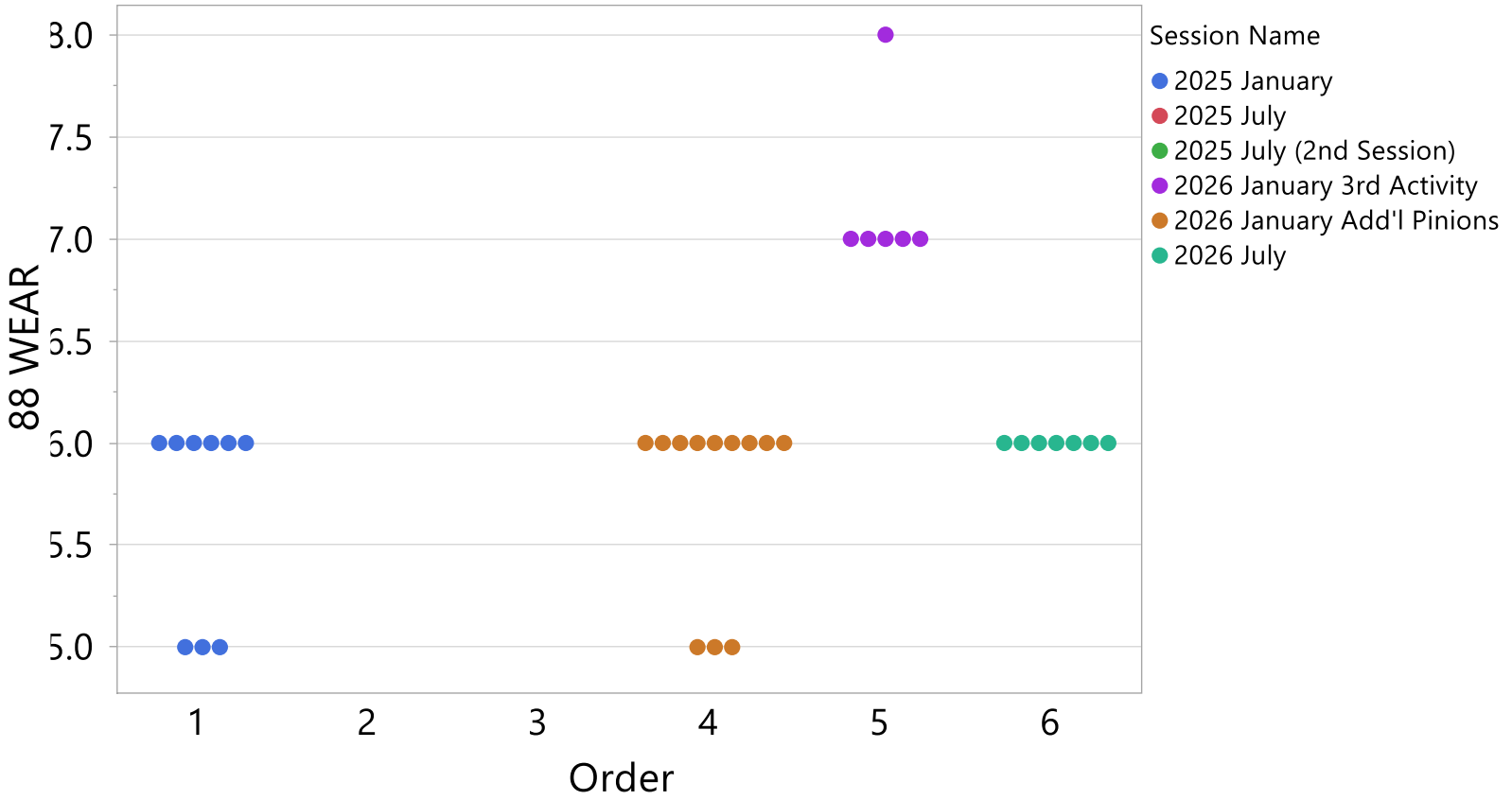


©SOUTHWEST RESEARCH INSTITUTE

Part 88 - Wear

Target = 6.0

Green = {6.0}
Yellow = {6.5, 5.5}
Orange = {Ø}
Red = All other ratings

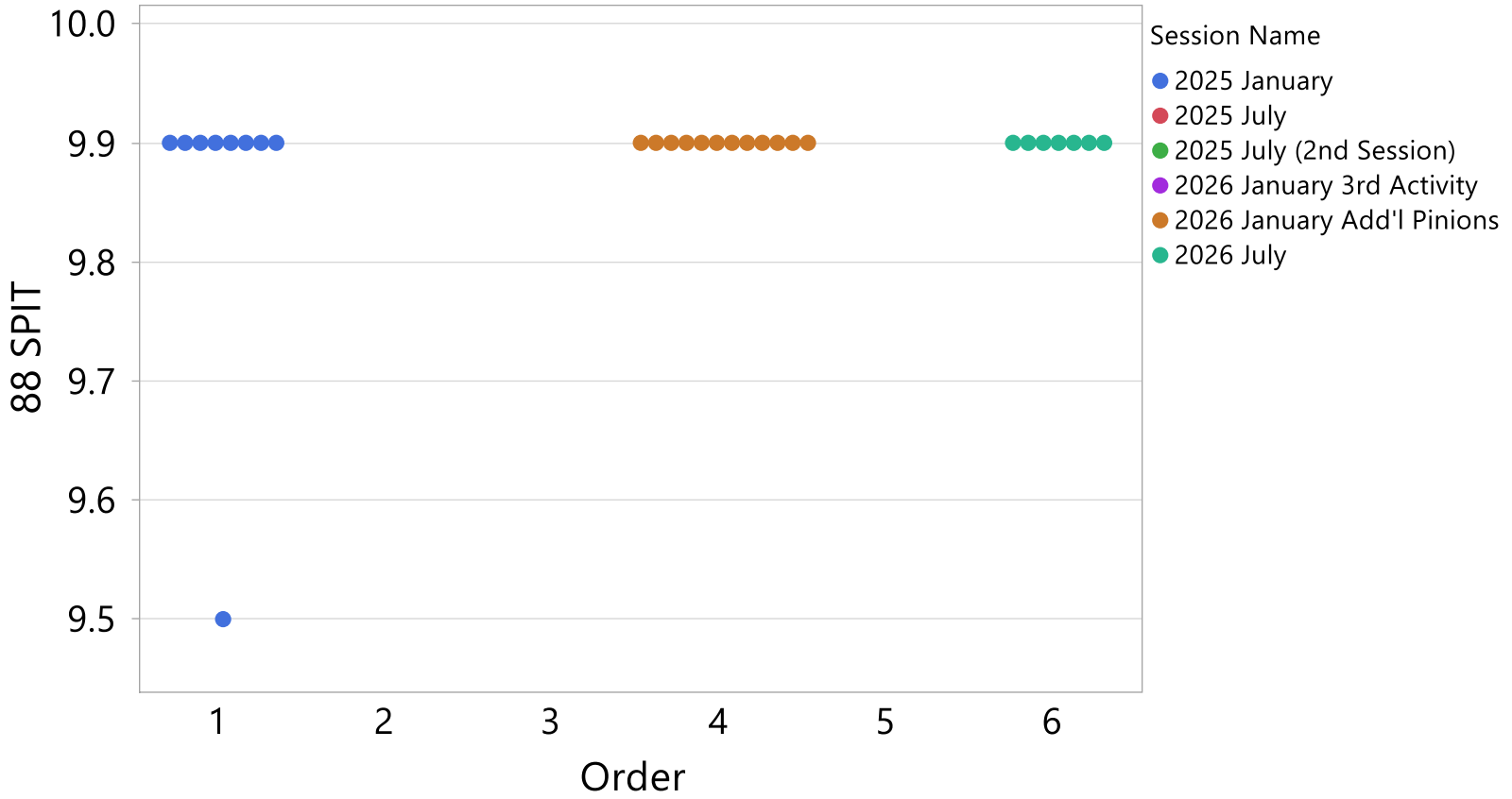


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Part 88 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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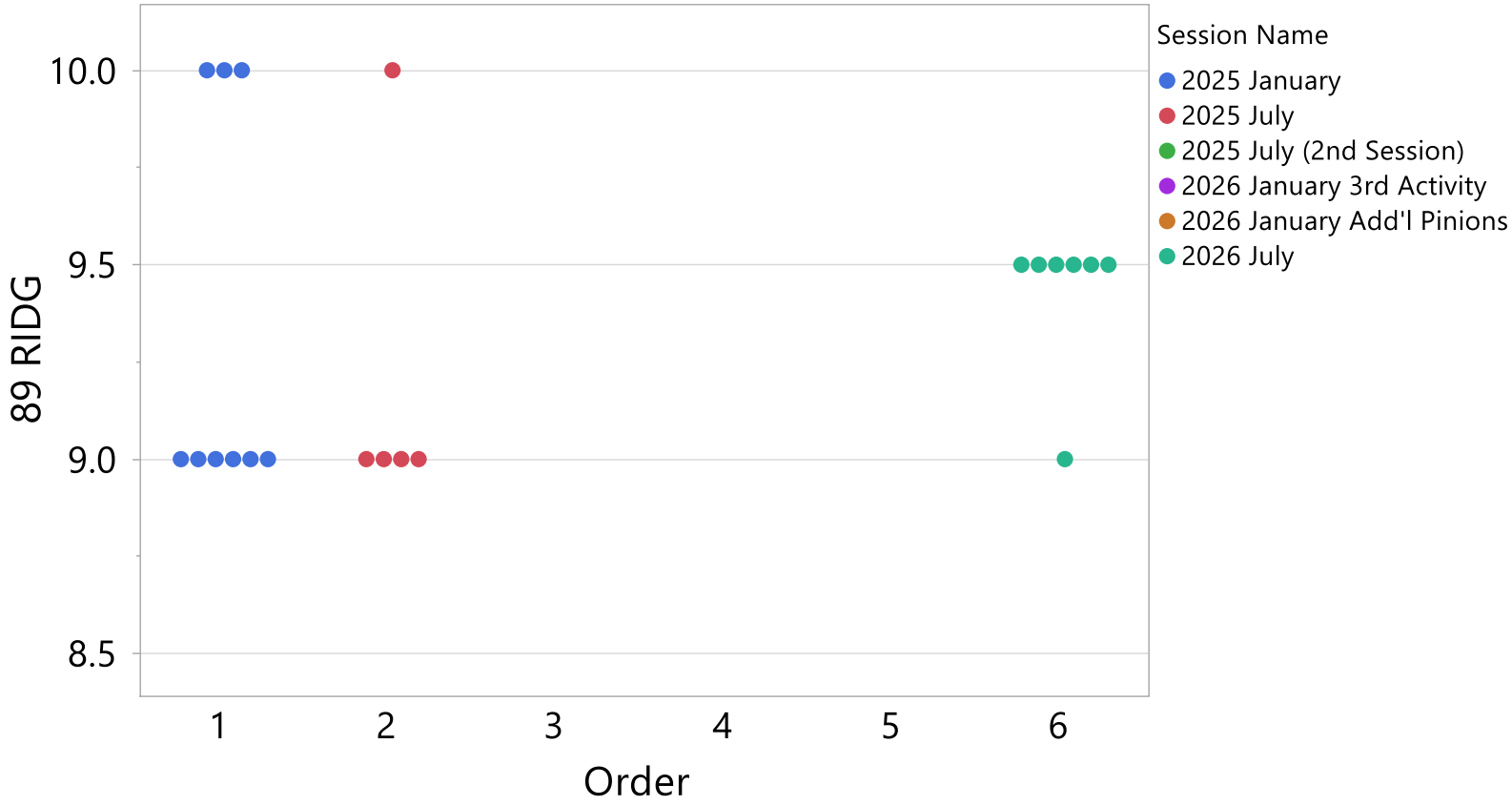
Part 89 Targets

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Part 89 - RIDG

Target = 9.5

Green = {9.5}
Yellow = {10.0, 9.0}
Orange = {Ø}
Red = All other ratings

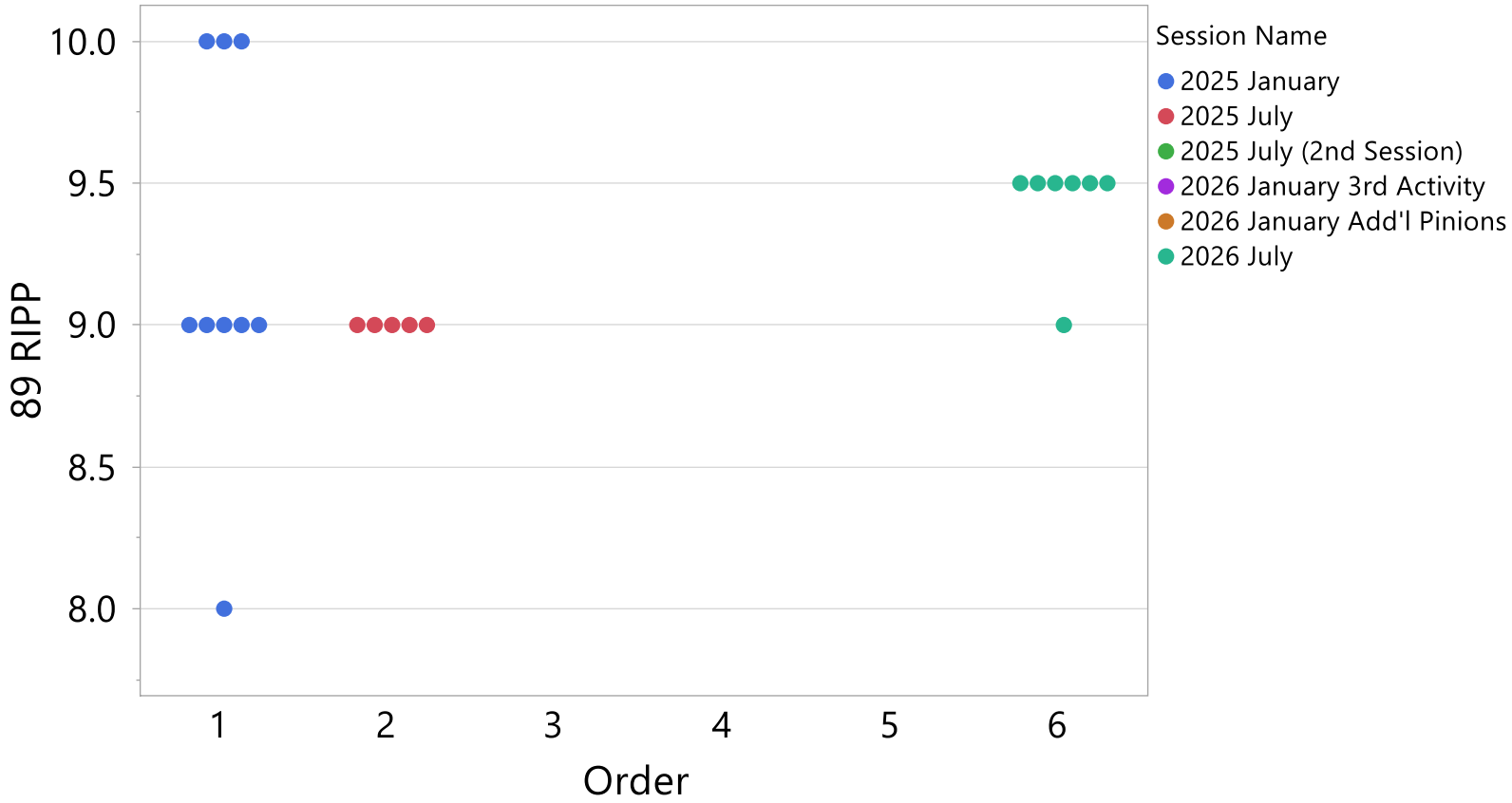


©SOUTHWEST RESEARCH INSTITUTE

Part 89 - RIPP

Target = 9.5

Green = {9.5}
Yellow = {10.0, 9.0}
Orange = {Ø}
Red = All other ratings

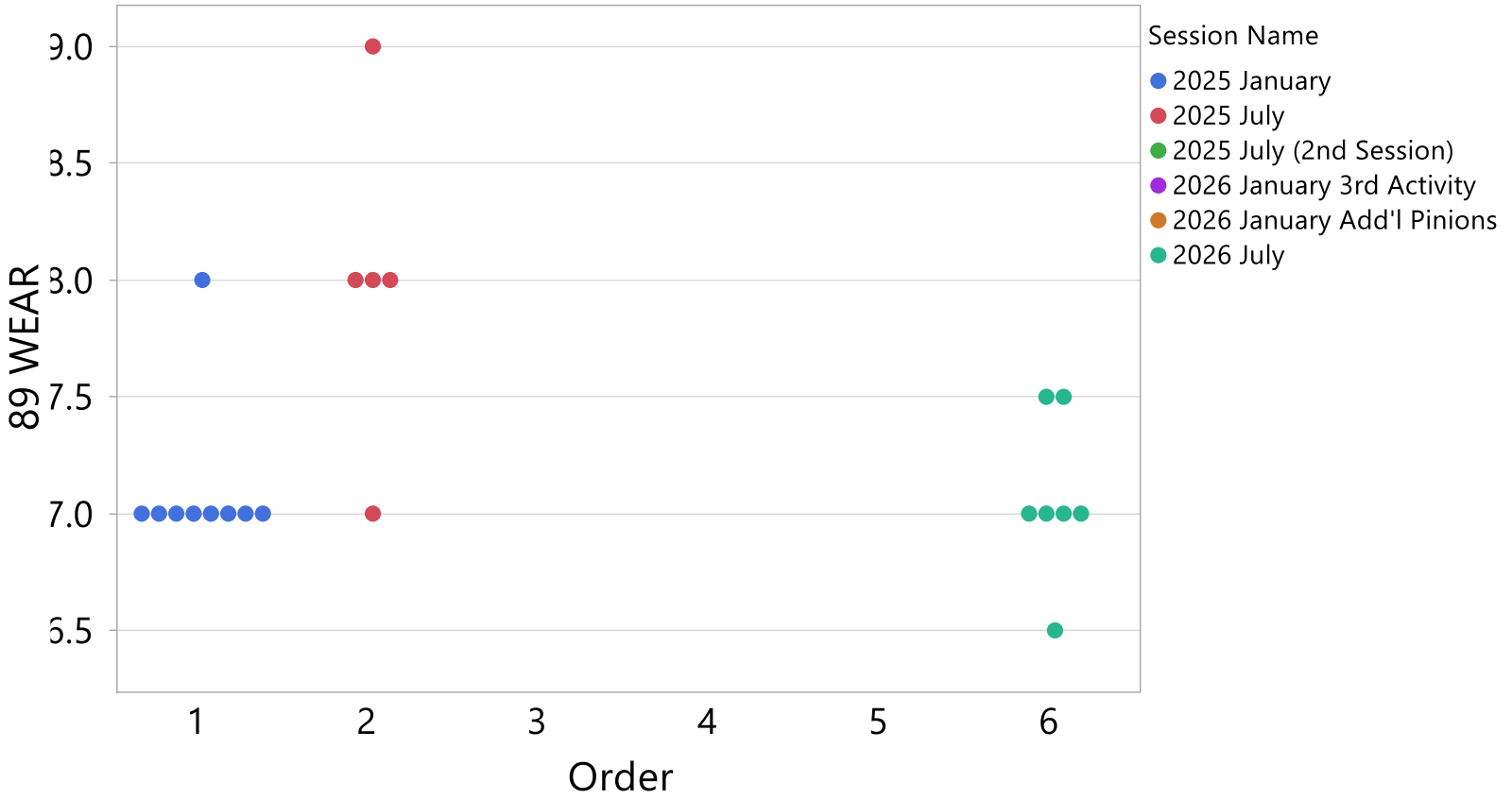


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Part 89 - Wear

Target = 7.0

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

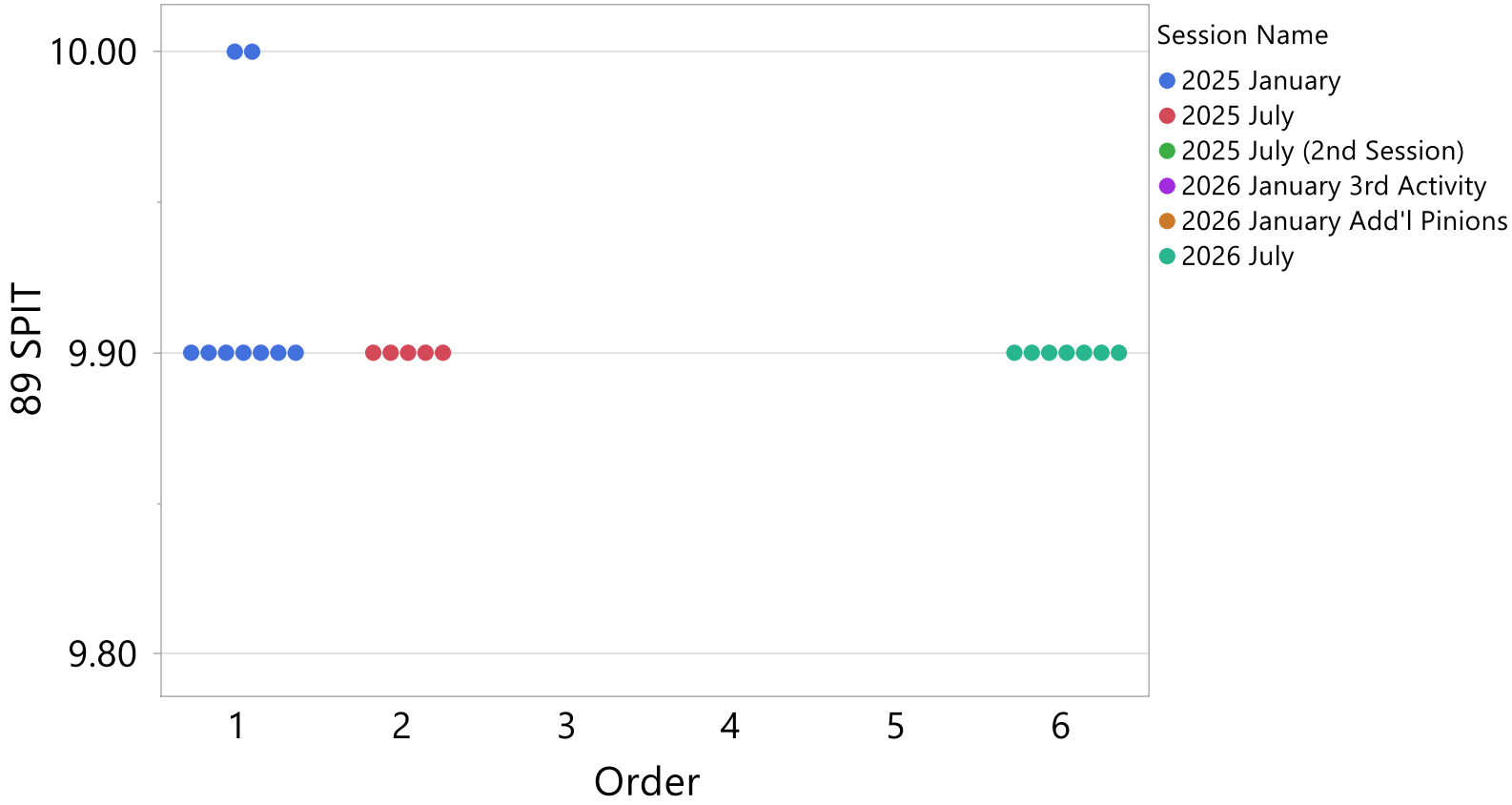


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Part 89 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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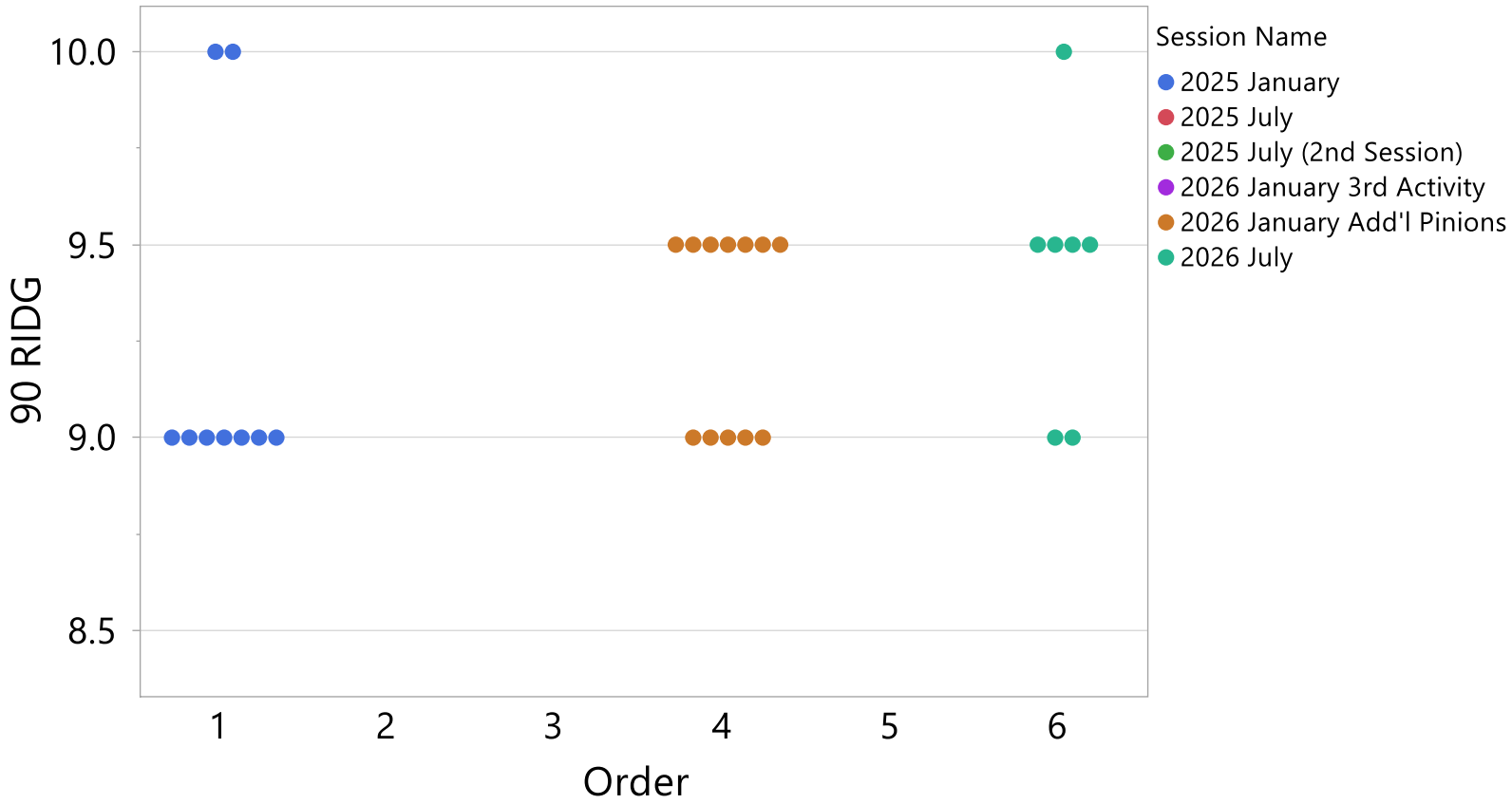
Part 90 Targets

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Part 90 - RIDG

Target = 9.5

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

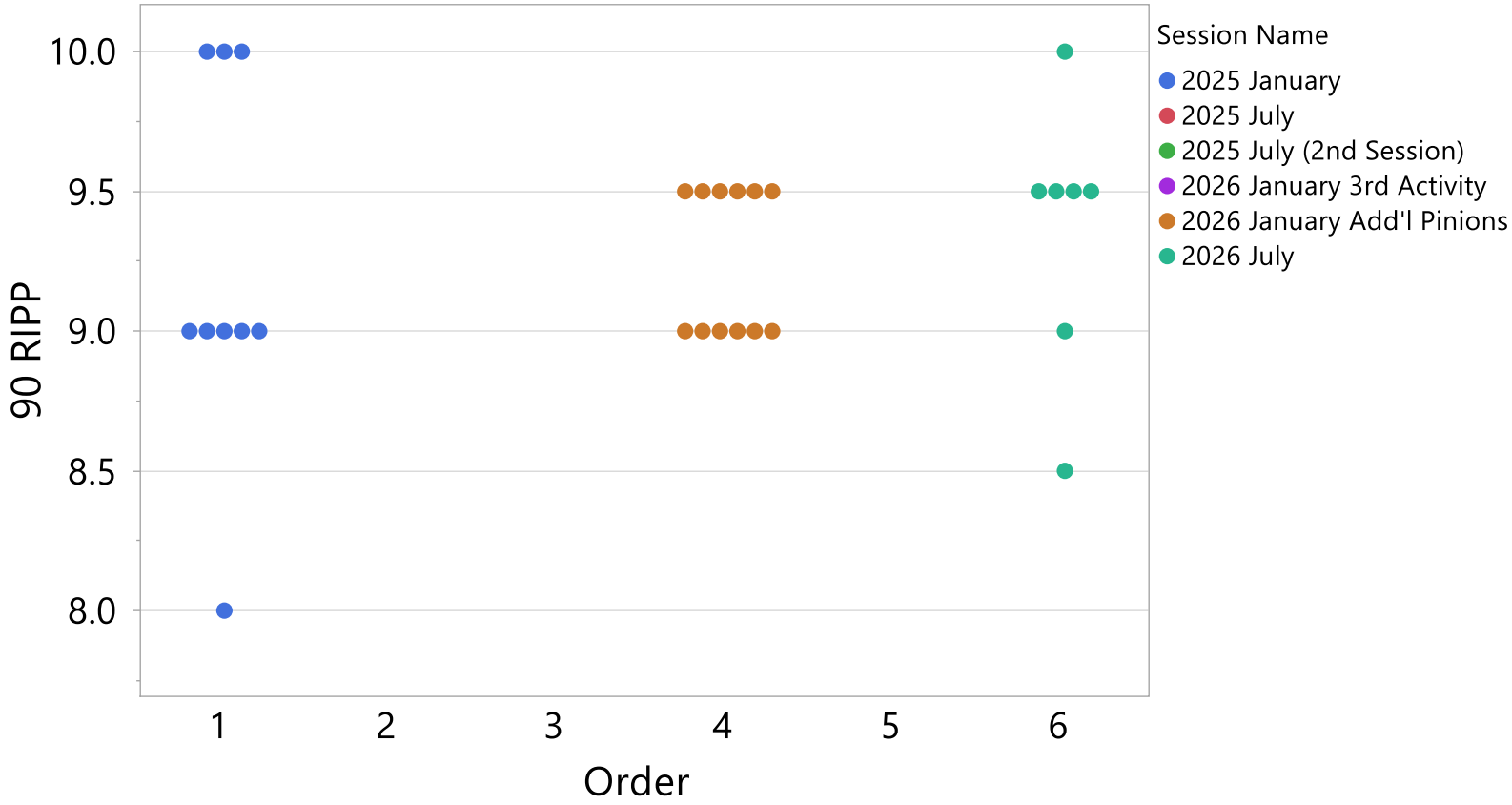


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Part 90 - RIPP

Target = 9.5

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

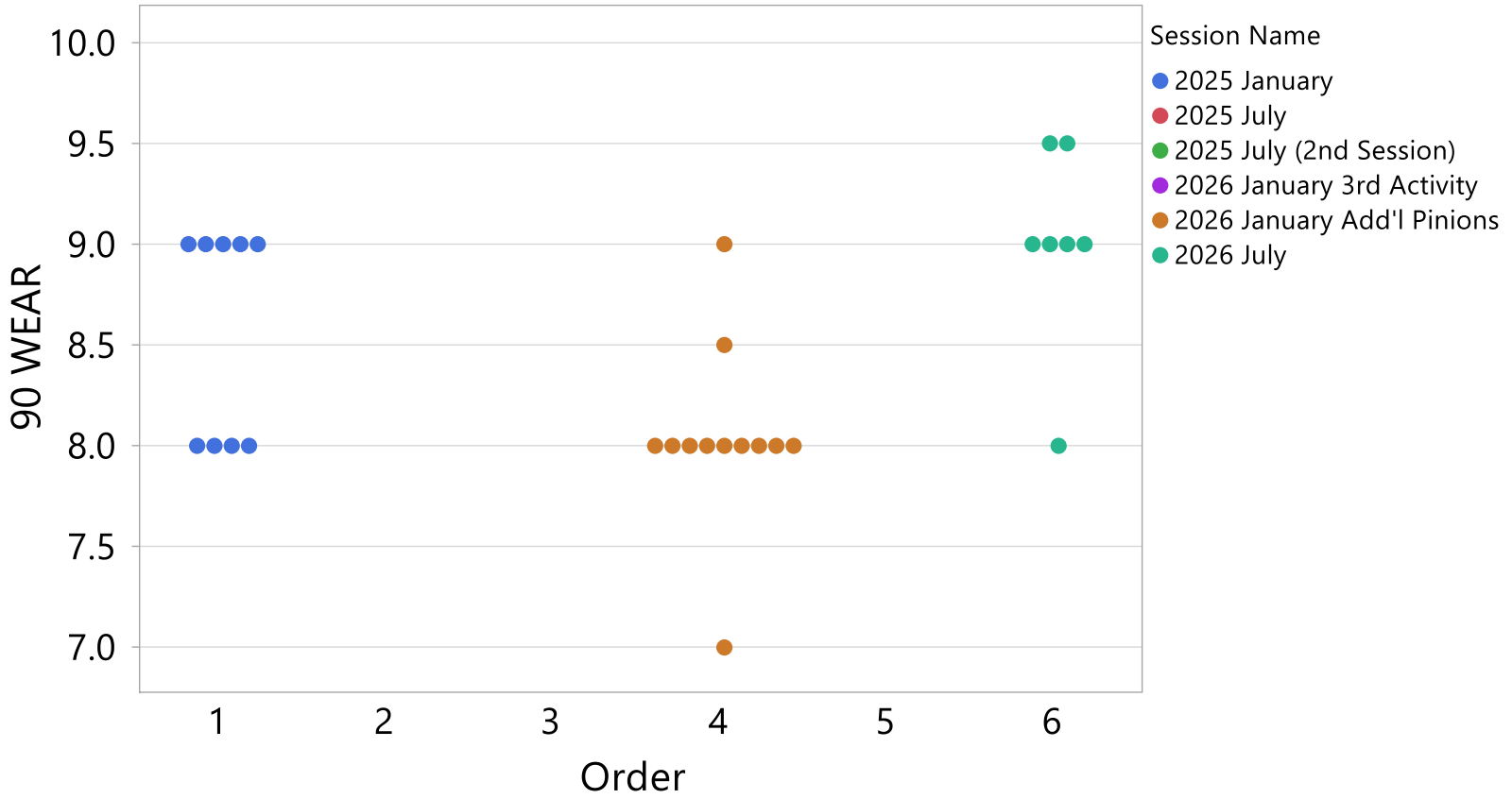


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Part 90 - Wear

Target = 9.0

Green = {9.0}
Yellow = {9.5, 8.5}
Orange = {∅}
Red = All other ratings

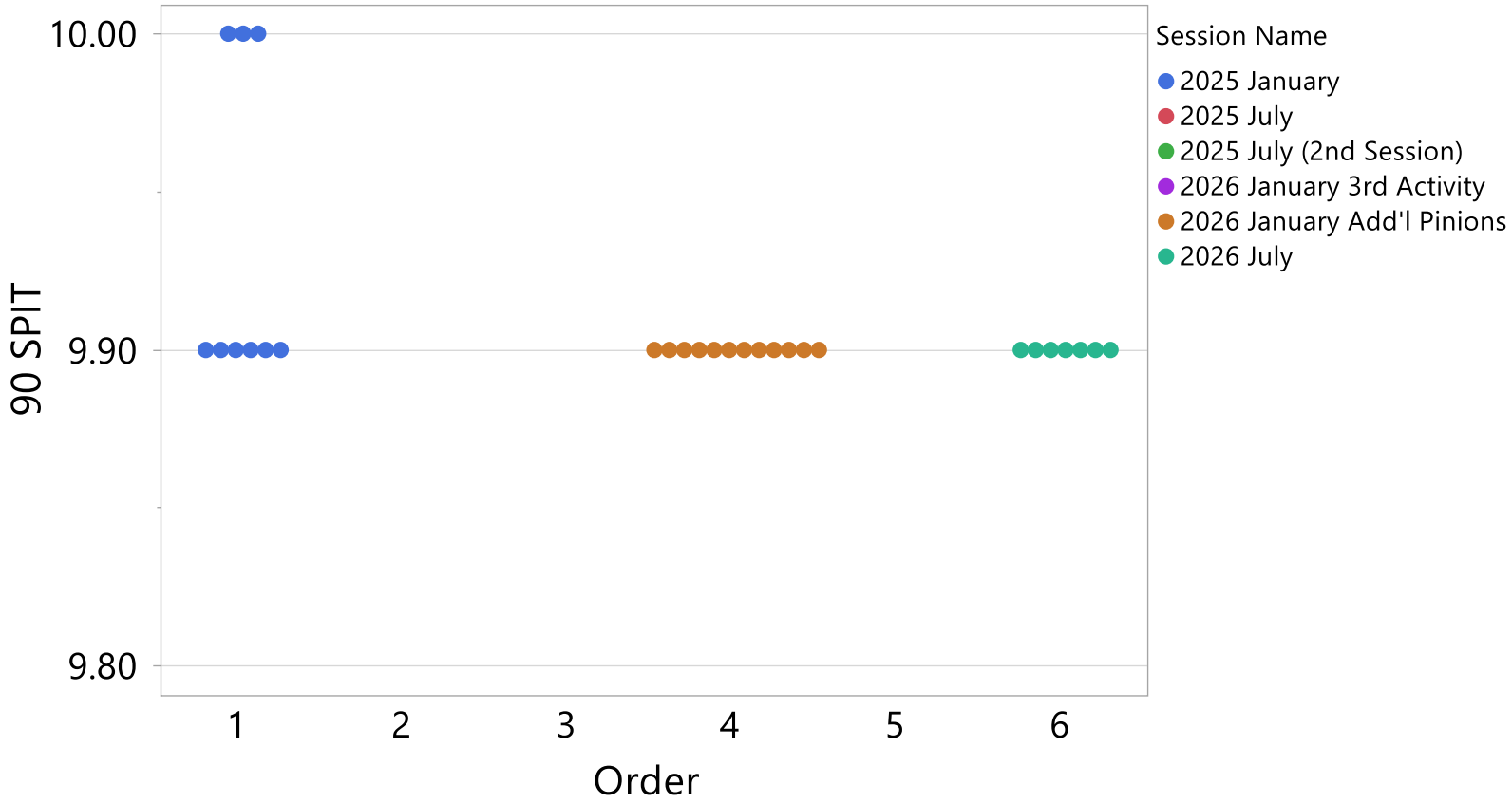


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Part 90 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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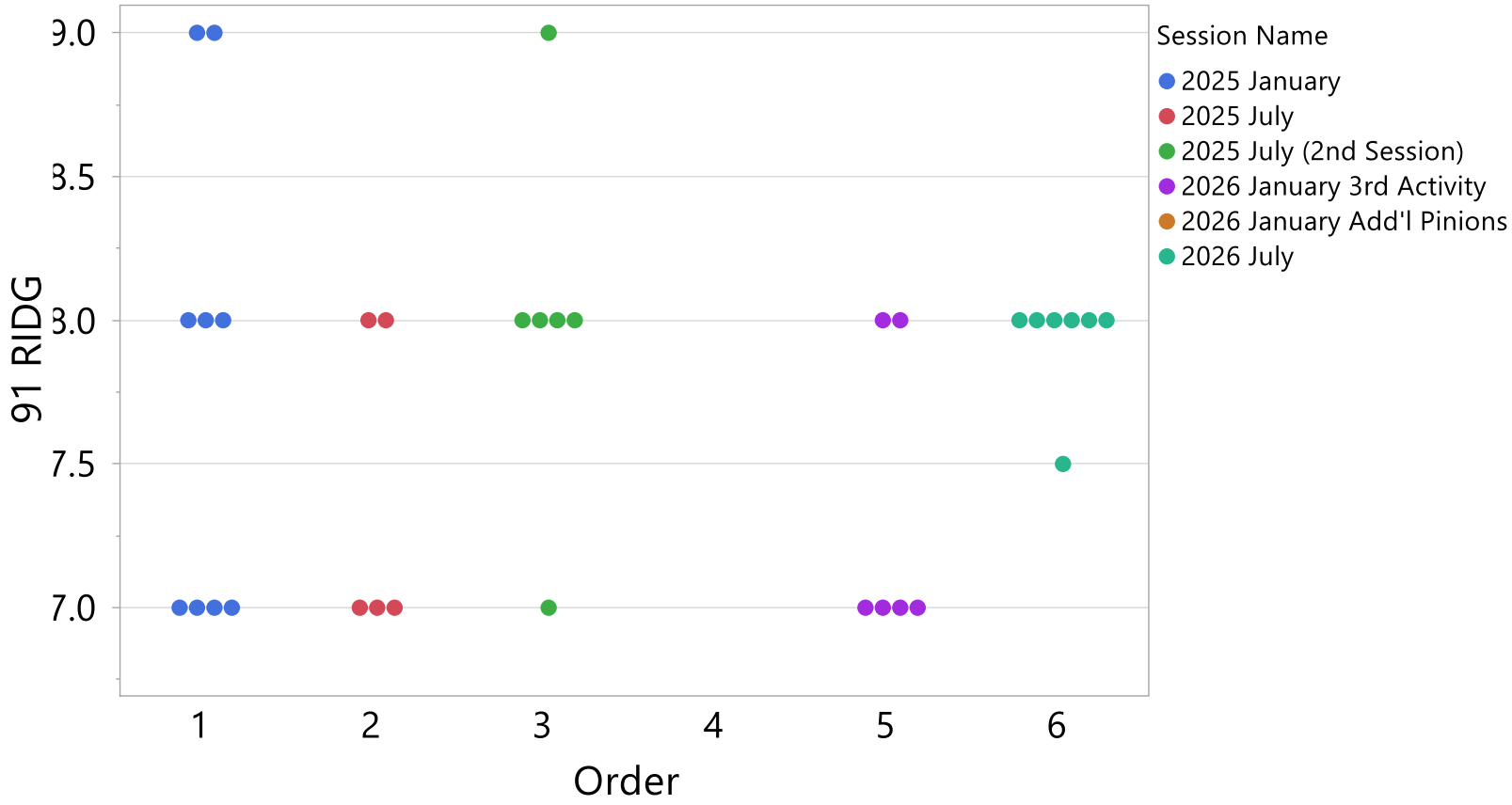
Part 91 Targets

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Part 91 - RIDG

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

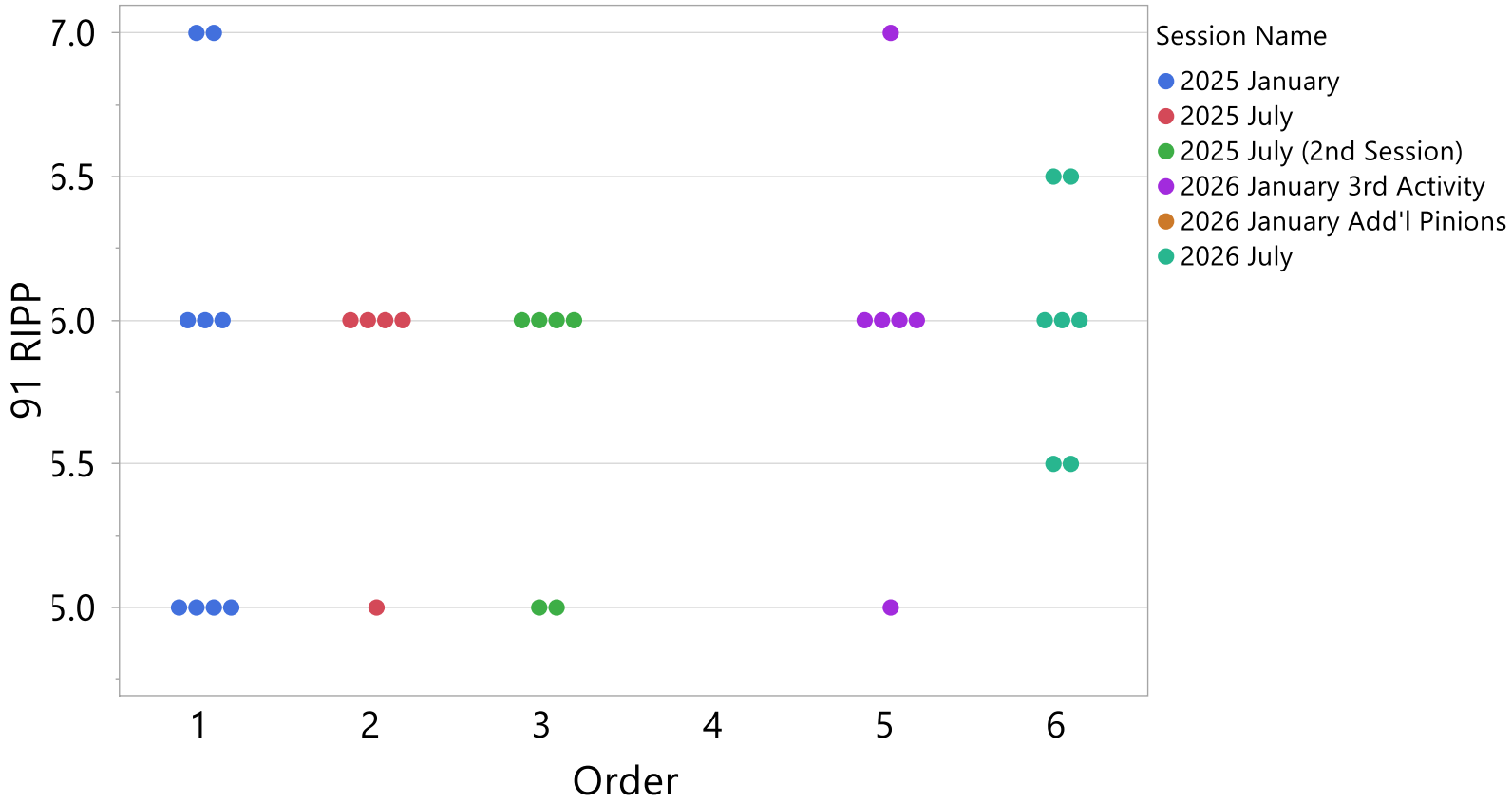


©SOUTHWEST RESEARCH INSTITUTE

Part 91 - RIPP

Target = 6.0

Green = {6.0}
Yellow = {6.5, 5.5}
Orange = {∅}
Red = All other ratings

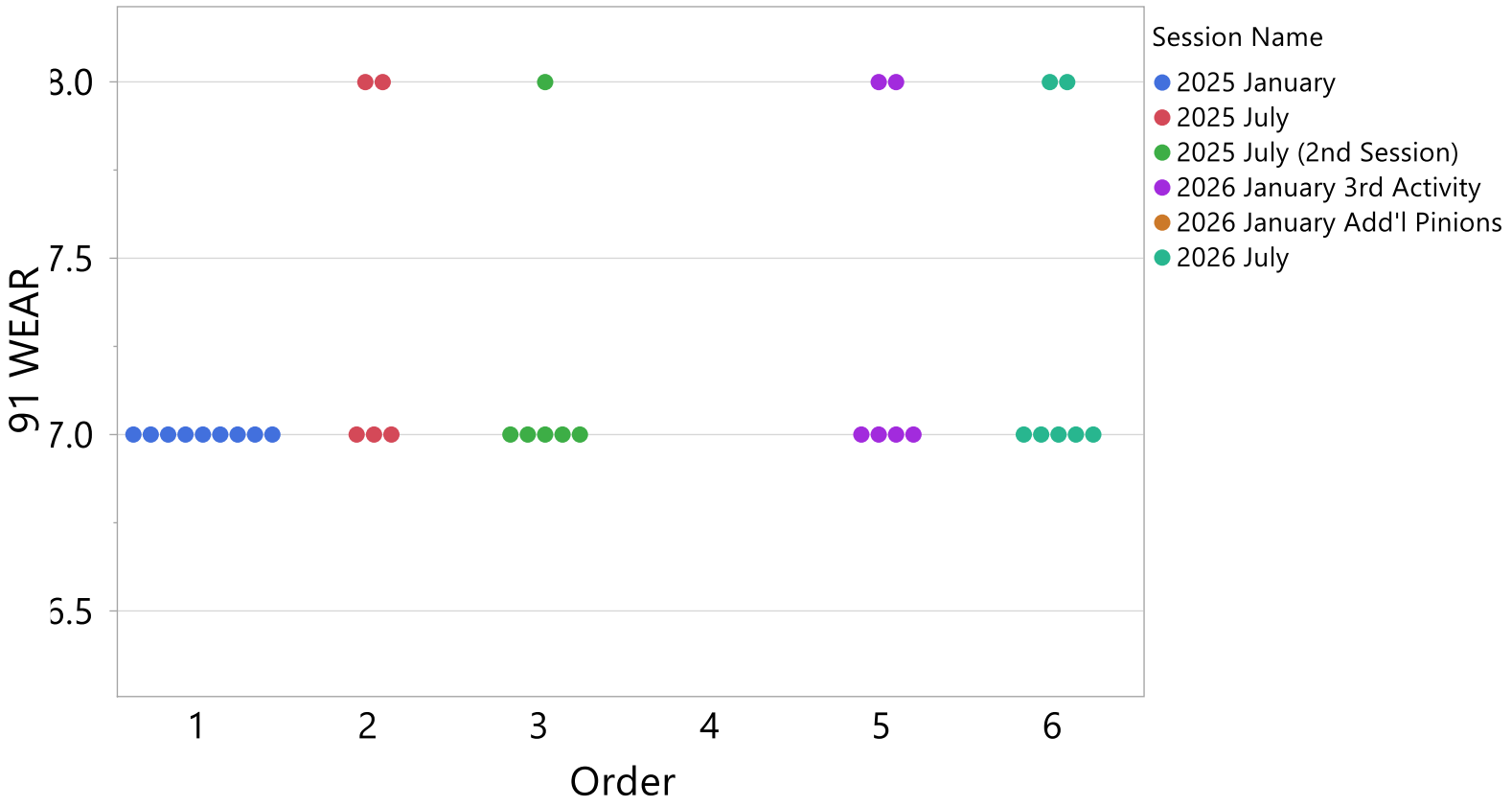


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Part 91 - Wear

Target = 7.0

Green = {7.0}
Yellow = {7.5, 6.5}
Orange = {Ø}
Red = All other ratings

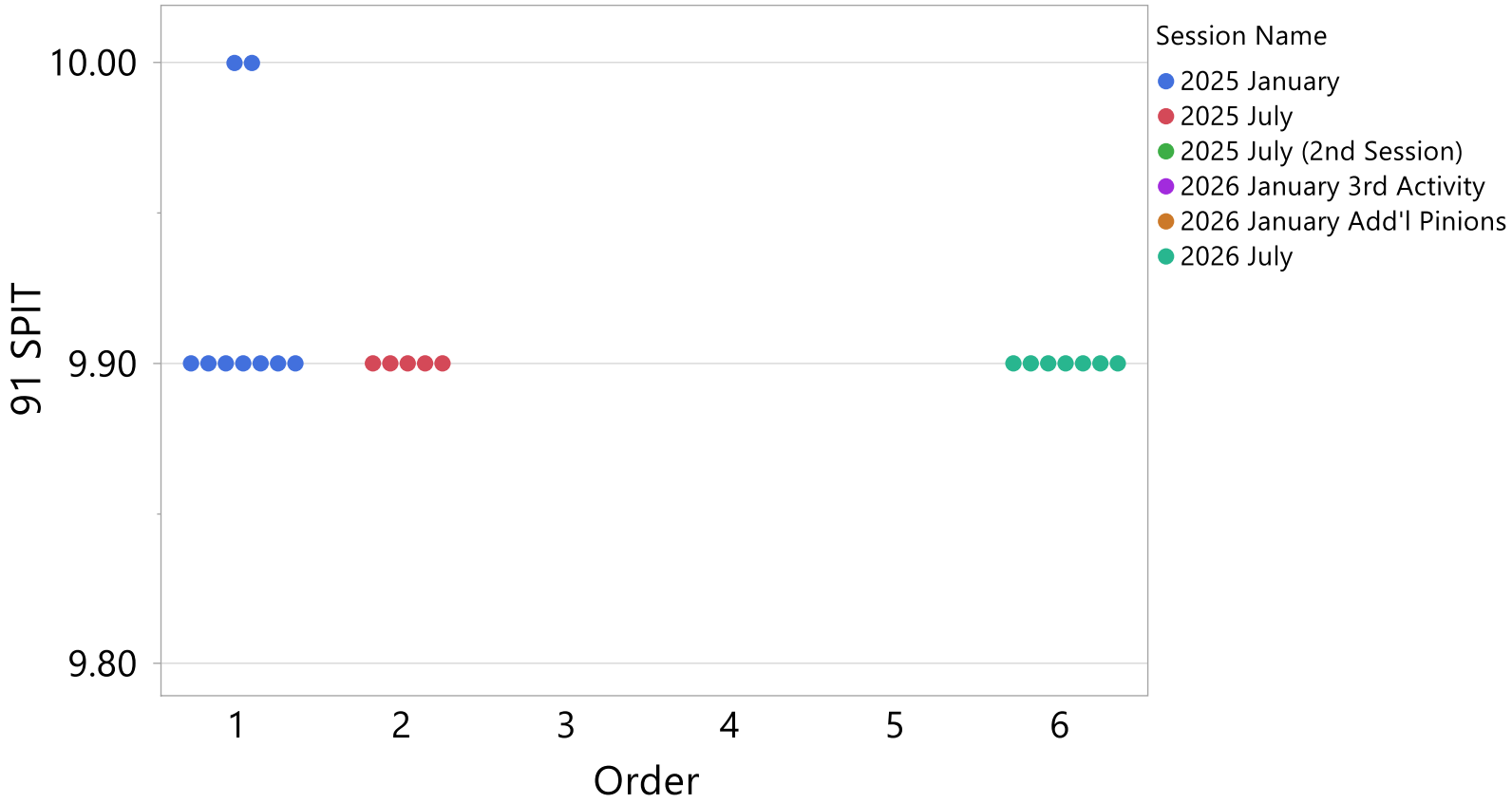


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Part 91 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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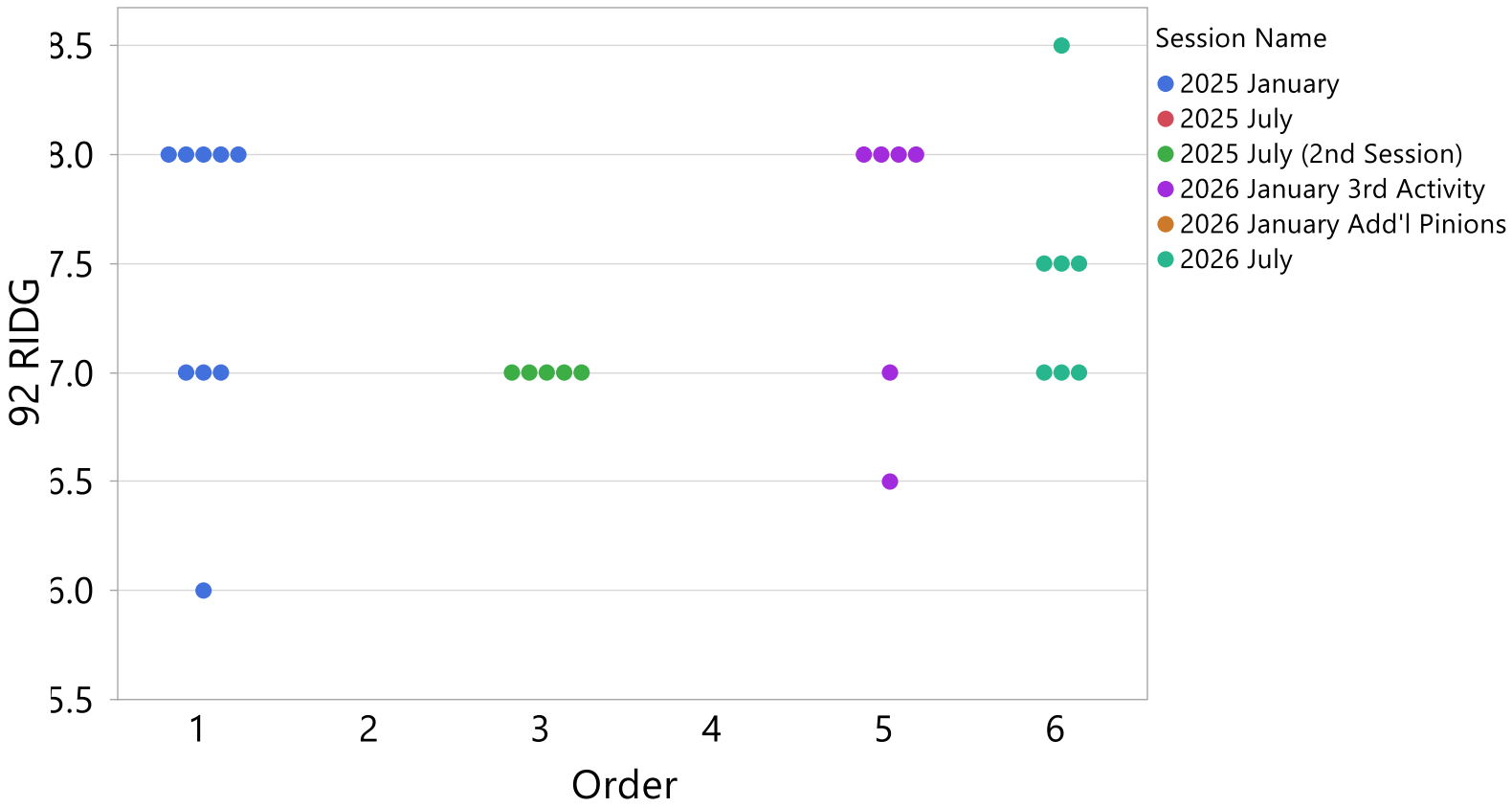
Part 92 Targets

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Part 92 - RIDG

Target = 7.5

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

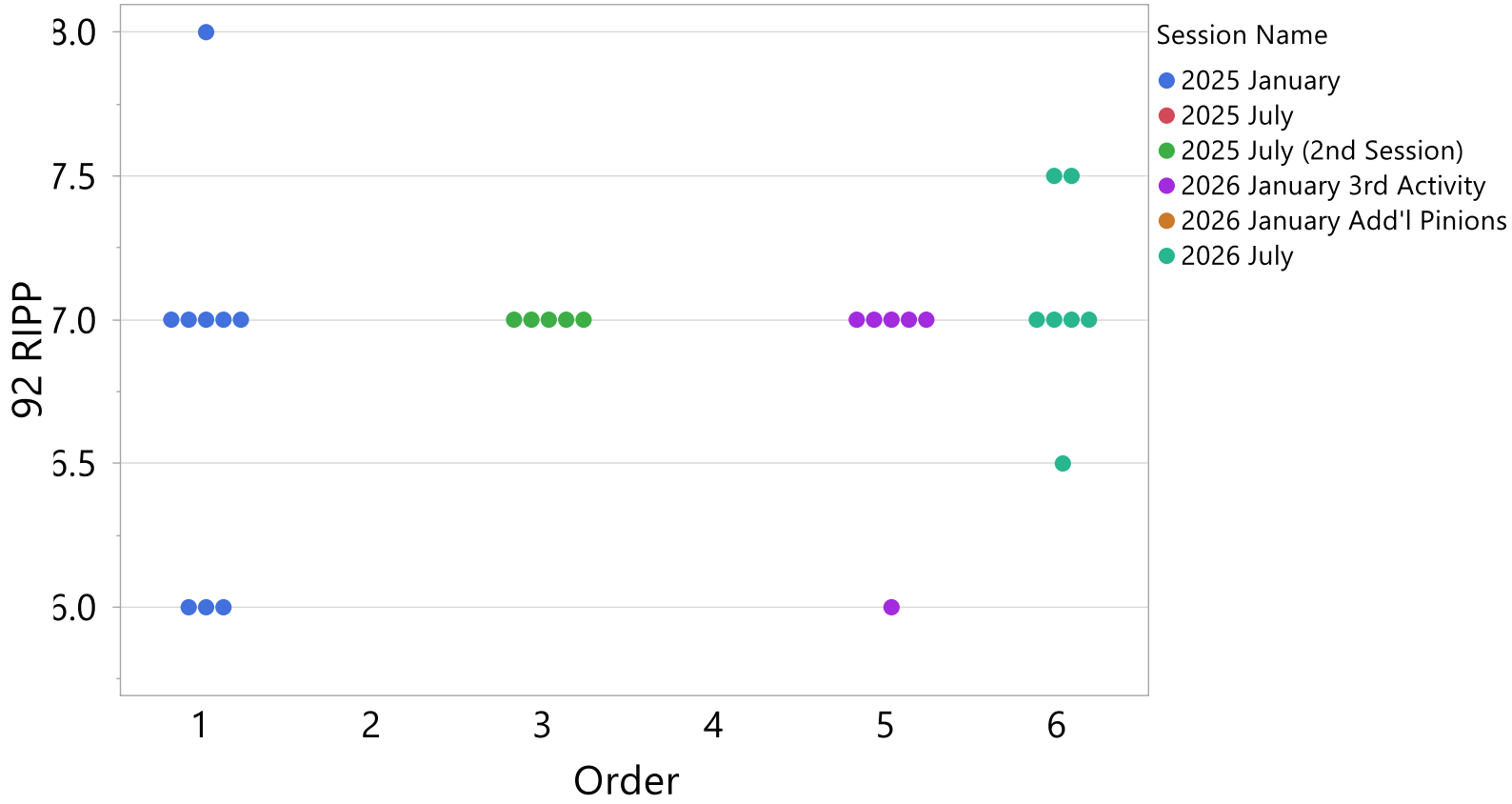


©SOUTHWEST RESEARCH INSTITUTE

Part 92 - RIPP

Target = 7.0

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

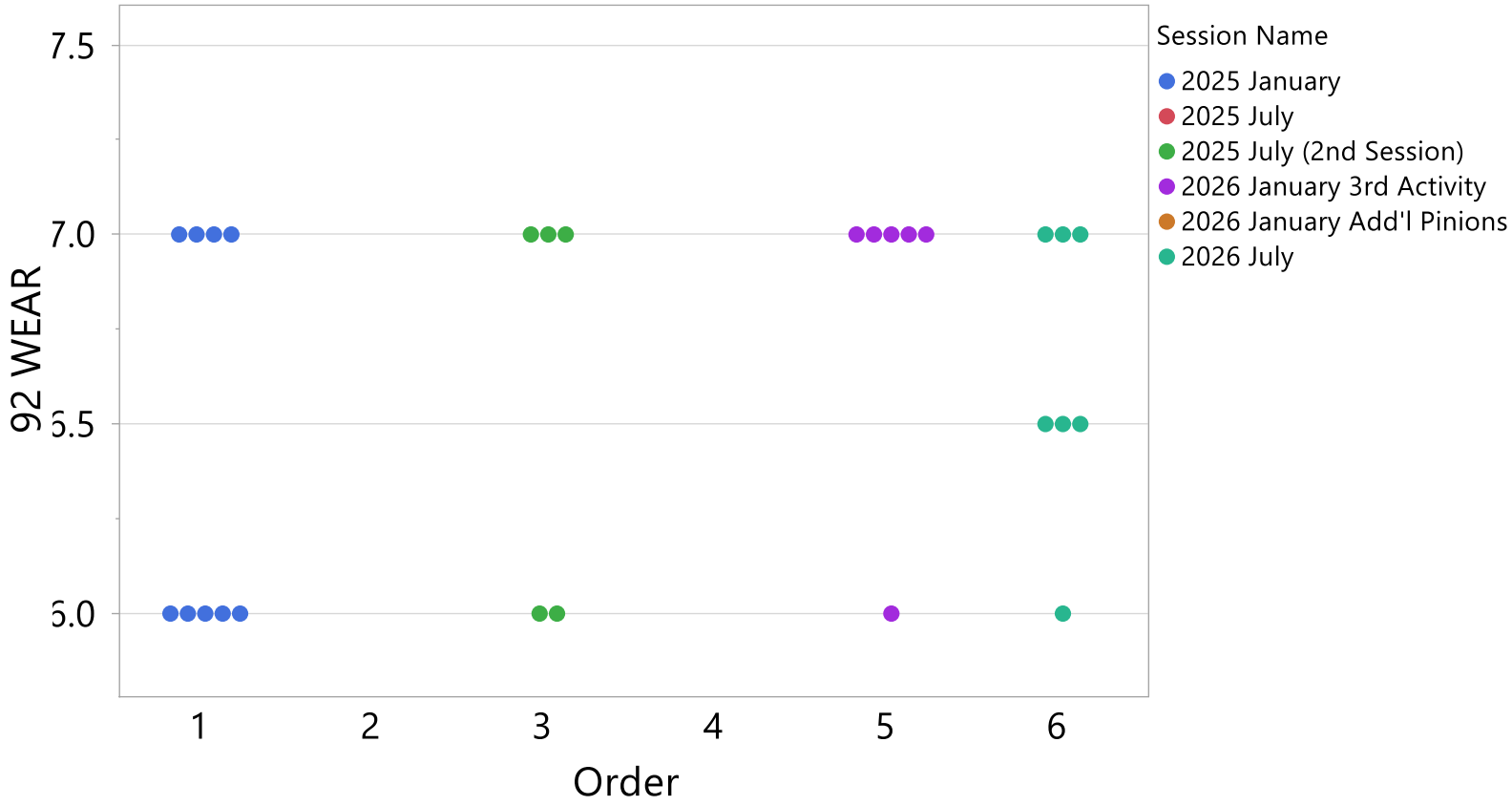


©SOUTHWEST RESEARCH INSTITUTE

Part 92 - Wear

Target = 6.5

Green = {7.0, 6.5}
Yellow = {Ø}
Orange = {7.5, 6.0}
Red = All other ratings



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Part 92 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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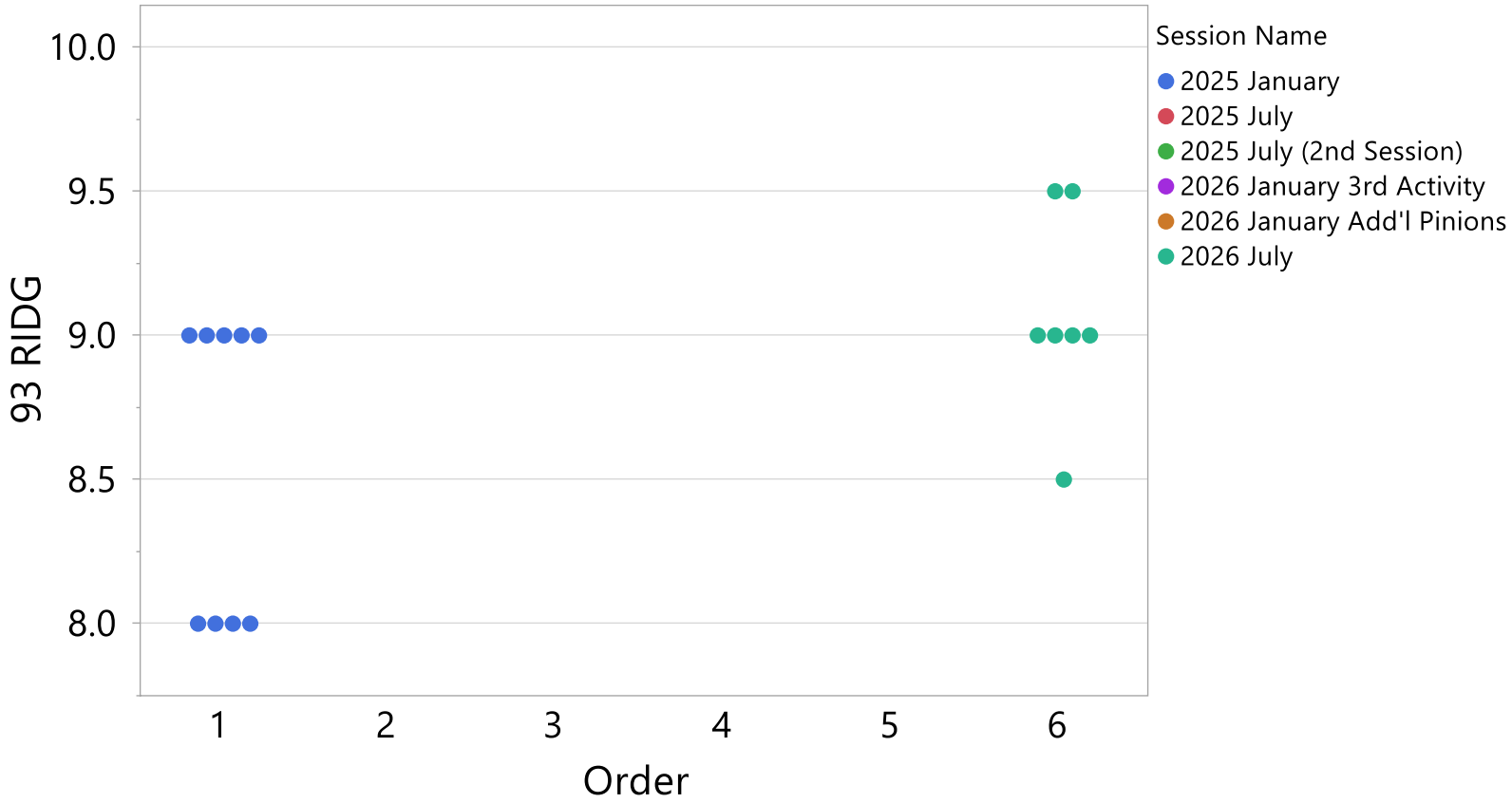
Part 93 Targets

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Part 93 - RIDG

Target = 9.0

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {10.0, 8.5}
Red = All other ratings

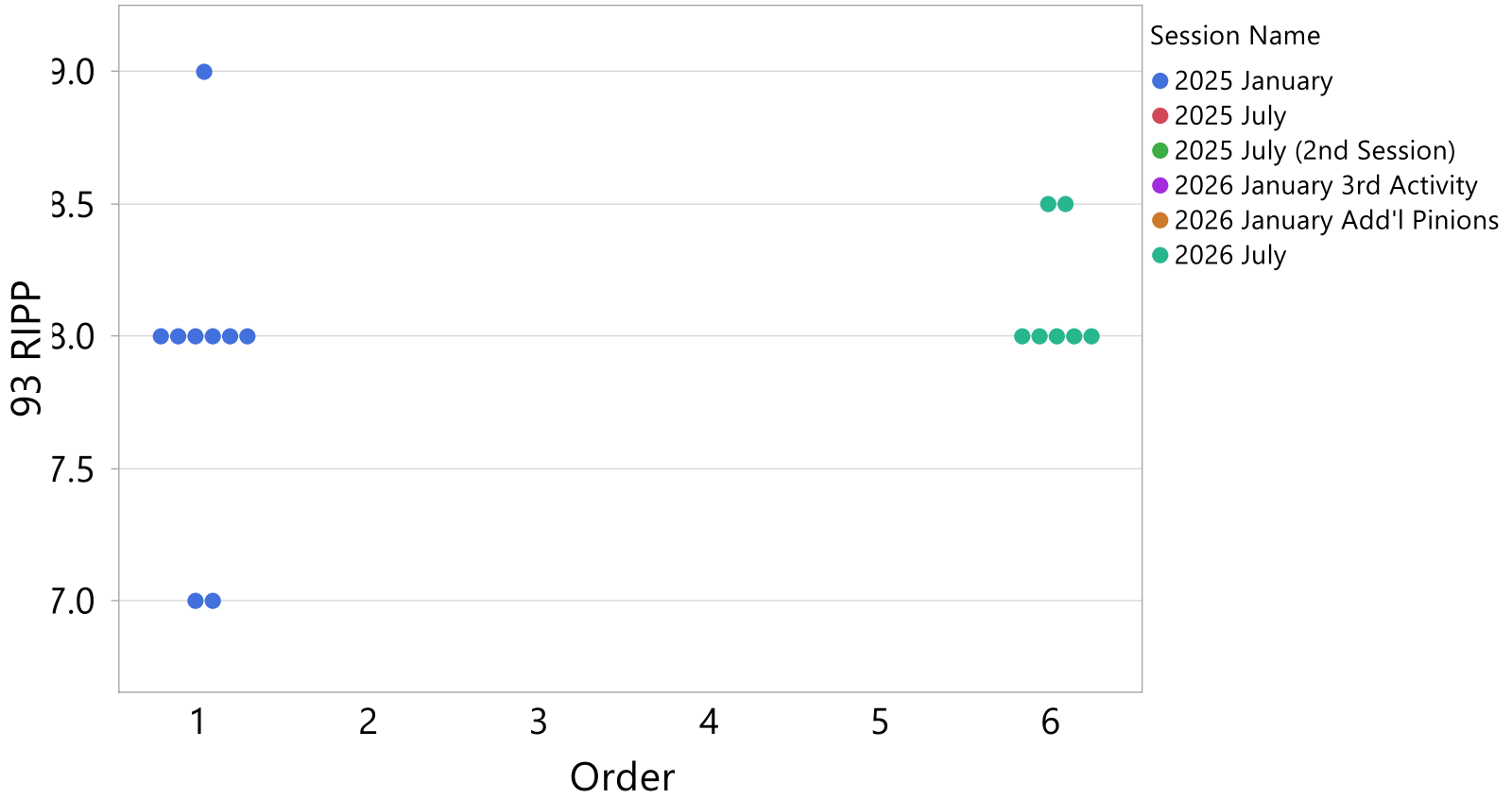


©SOUTHWEST RESEARCH INSTITUTE

Part 93 - RIPP

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

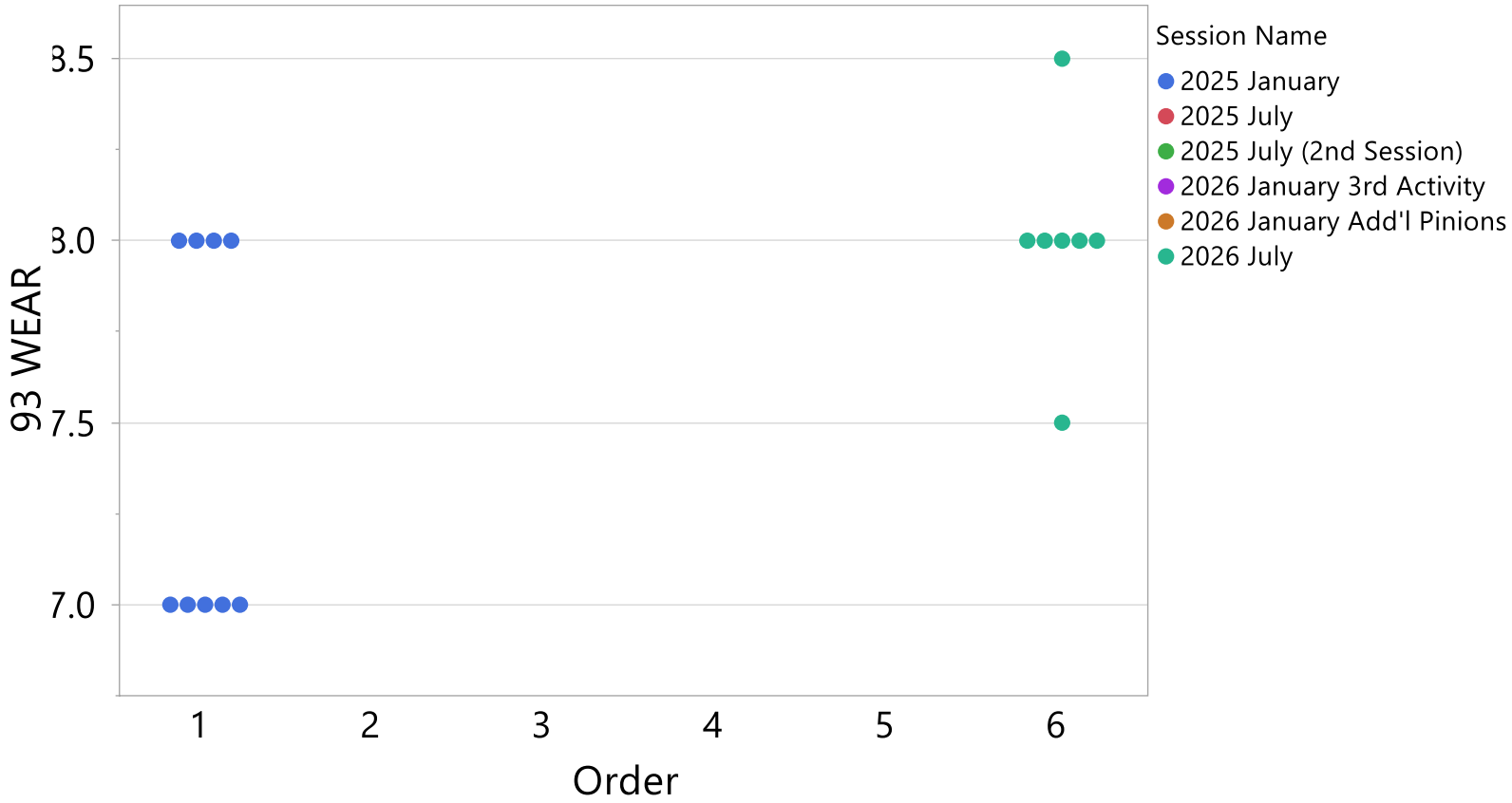


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Part 93 - Wear

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings



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Part 93 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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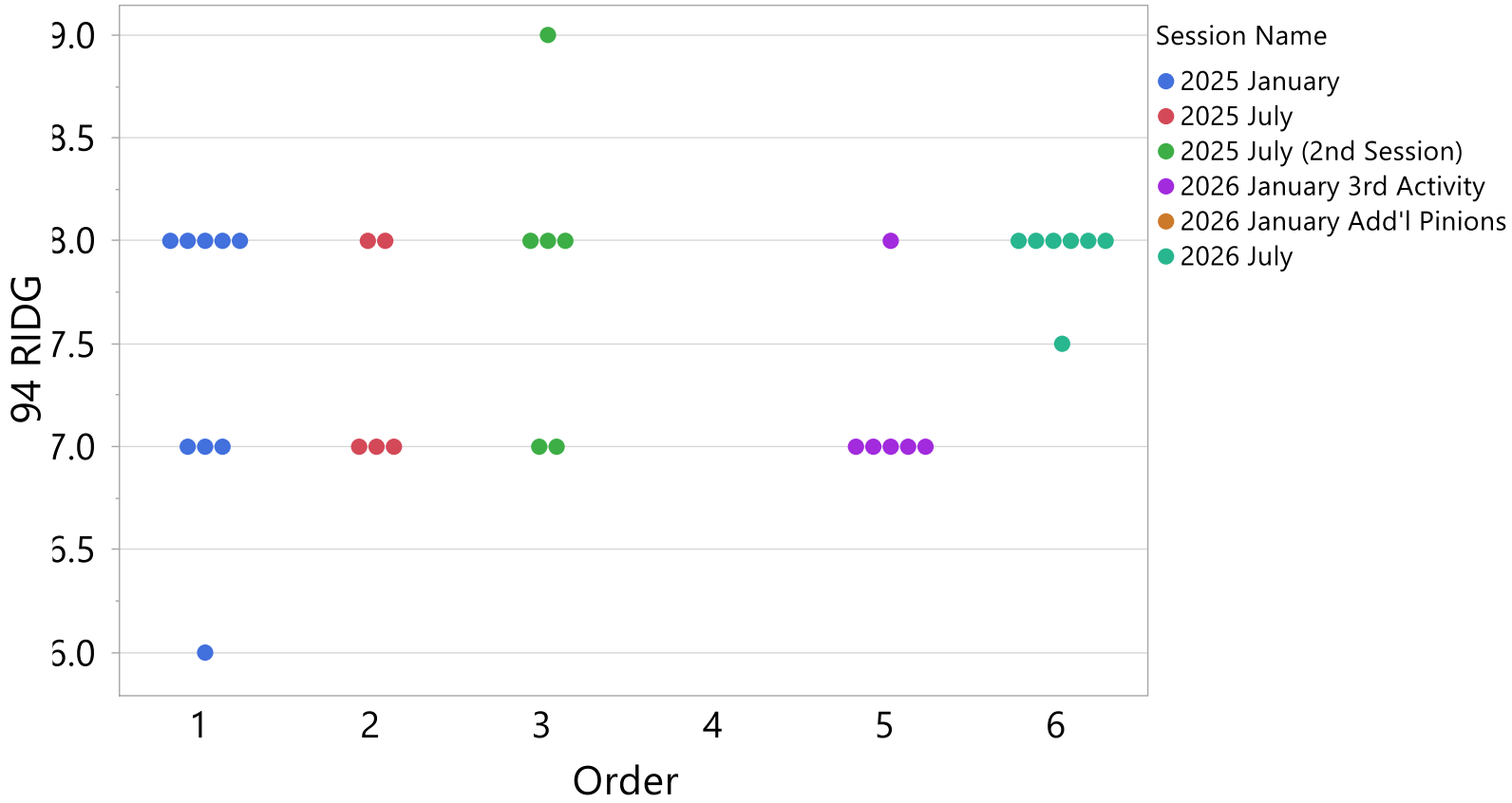
Part 94 Targets

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Part 94 - RIDG

Target = 8.0

Green = {8.0}
Yellow = {8.5, 7.5}
Orange = {Ø}
Red = All other ratings

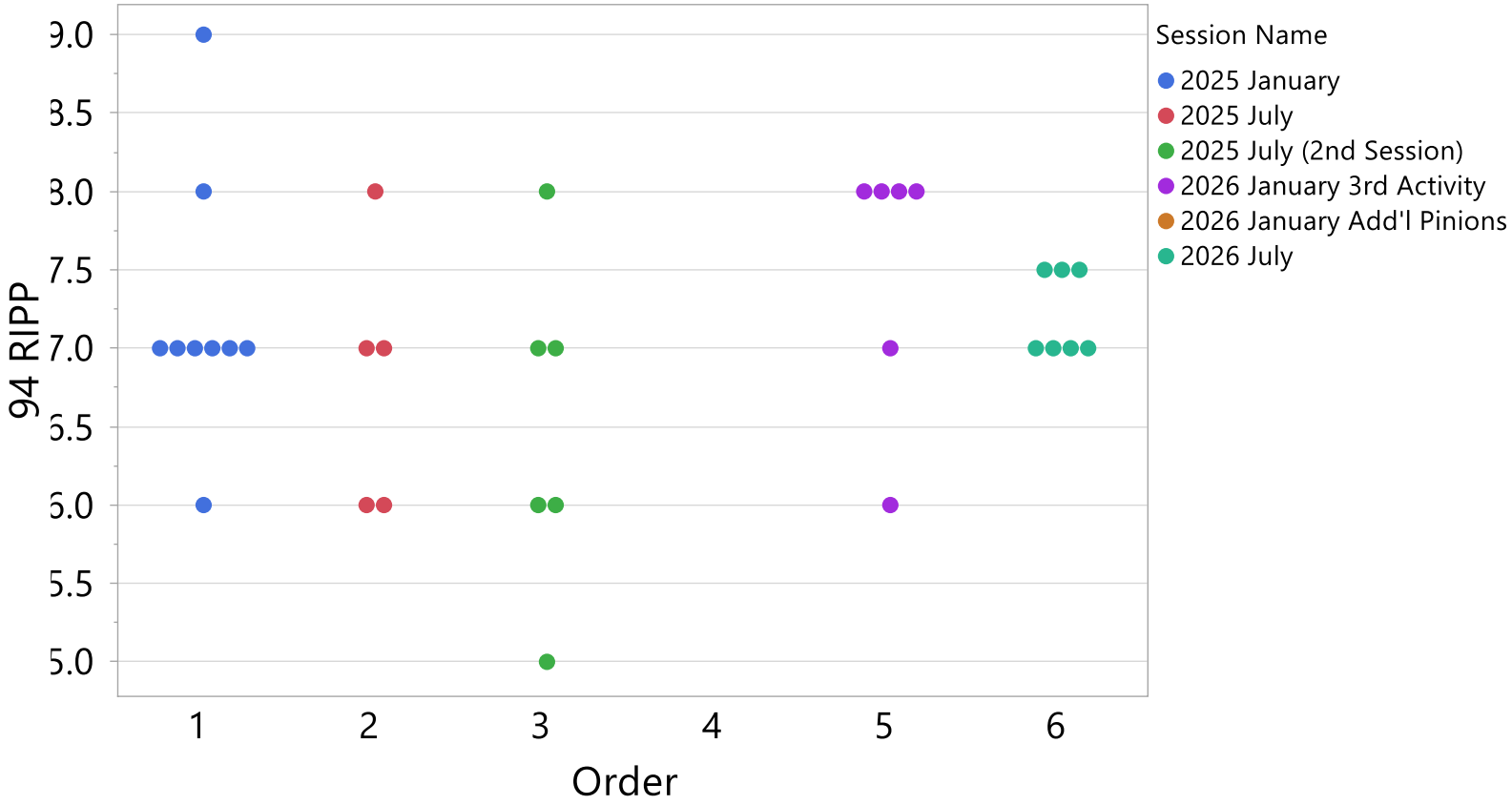


©SOUTHWEST RESEARCH INSTITUTE

Part 94 - RIPP

Target = 7.0

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

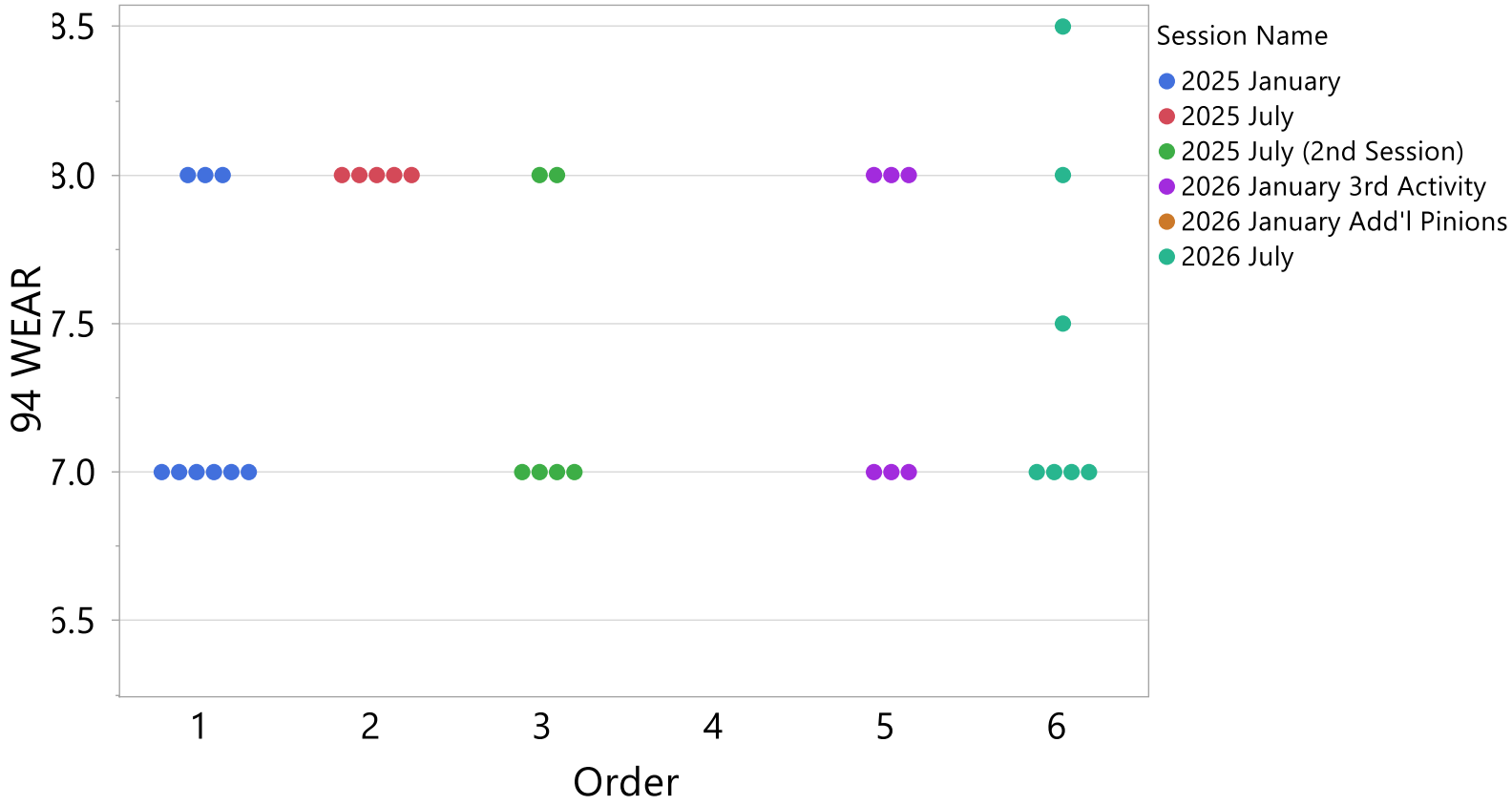


©SOUTHWEST RESEARCH INSTITUTE

Part 94 - Wear

Target = 7.5

Green = {7.5, 7.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

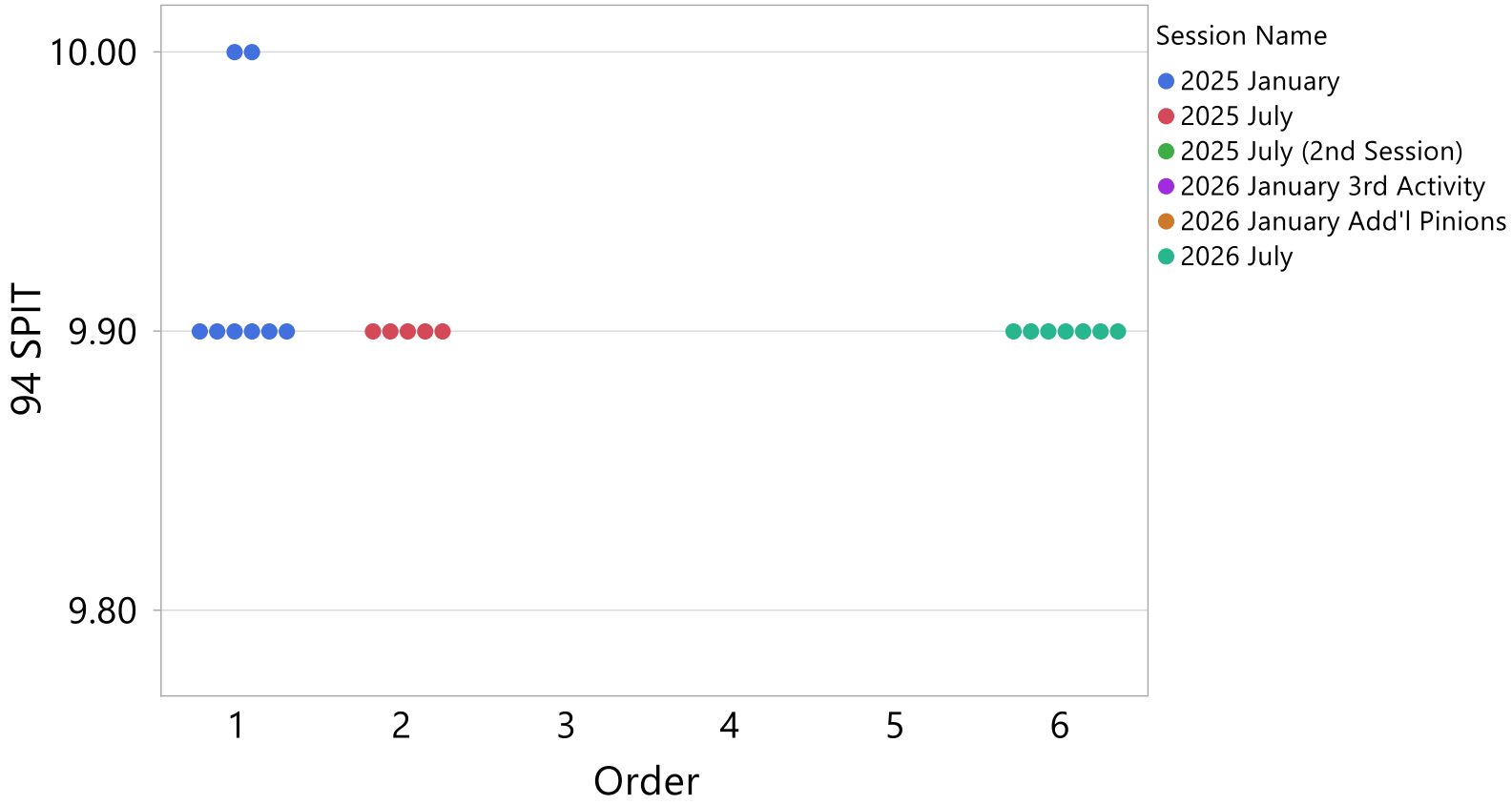


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Part 94 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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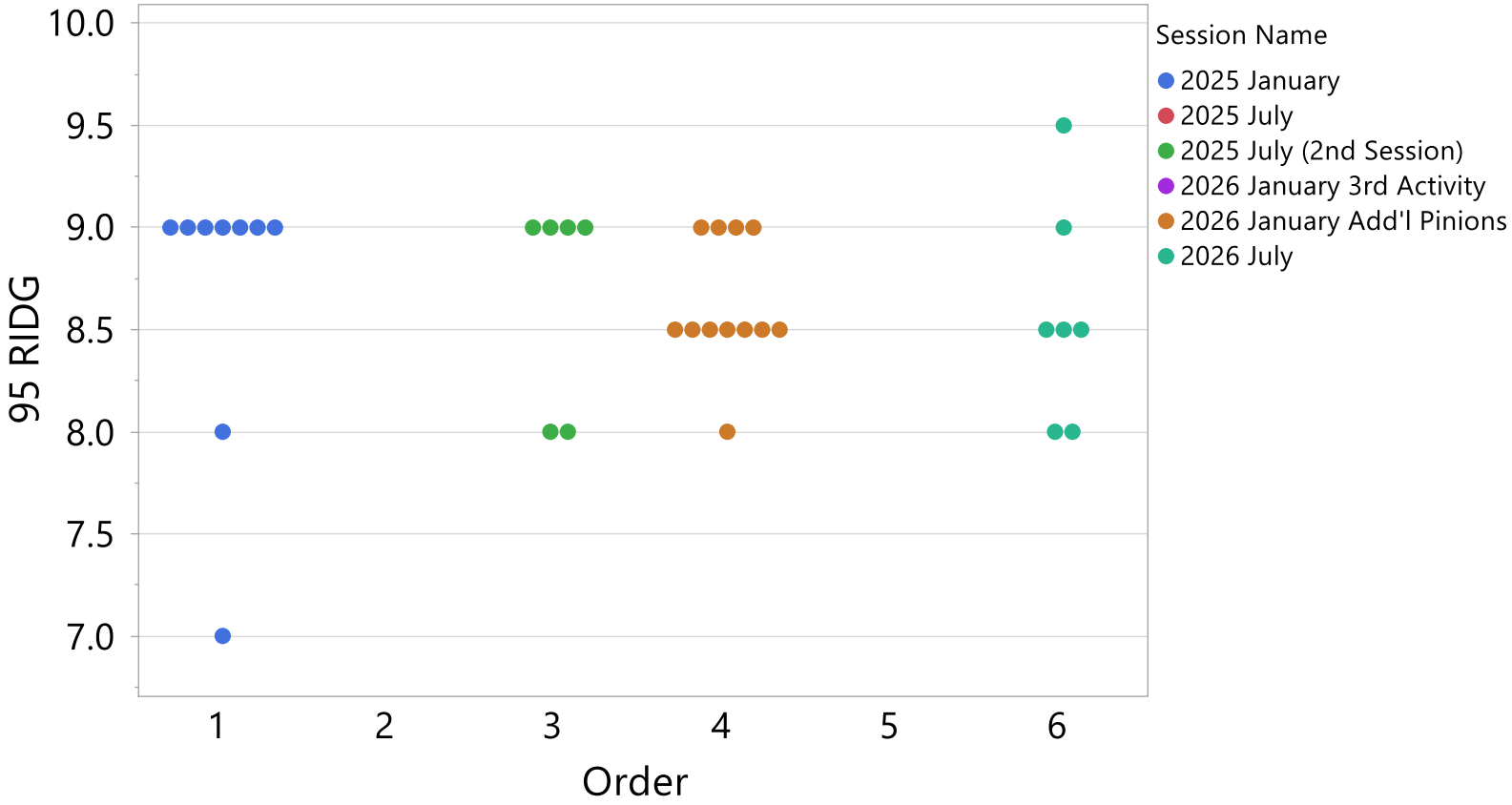
Part 95 Targets

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Part 95 - RIDG

Target = 8.5

Green = {8.5, 8.0}
Yellow = {Ø}
Orange = {9.0, 7.5}
Red = All other ratings

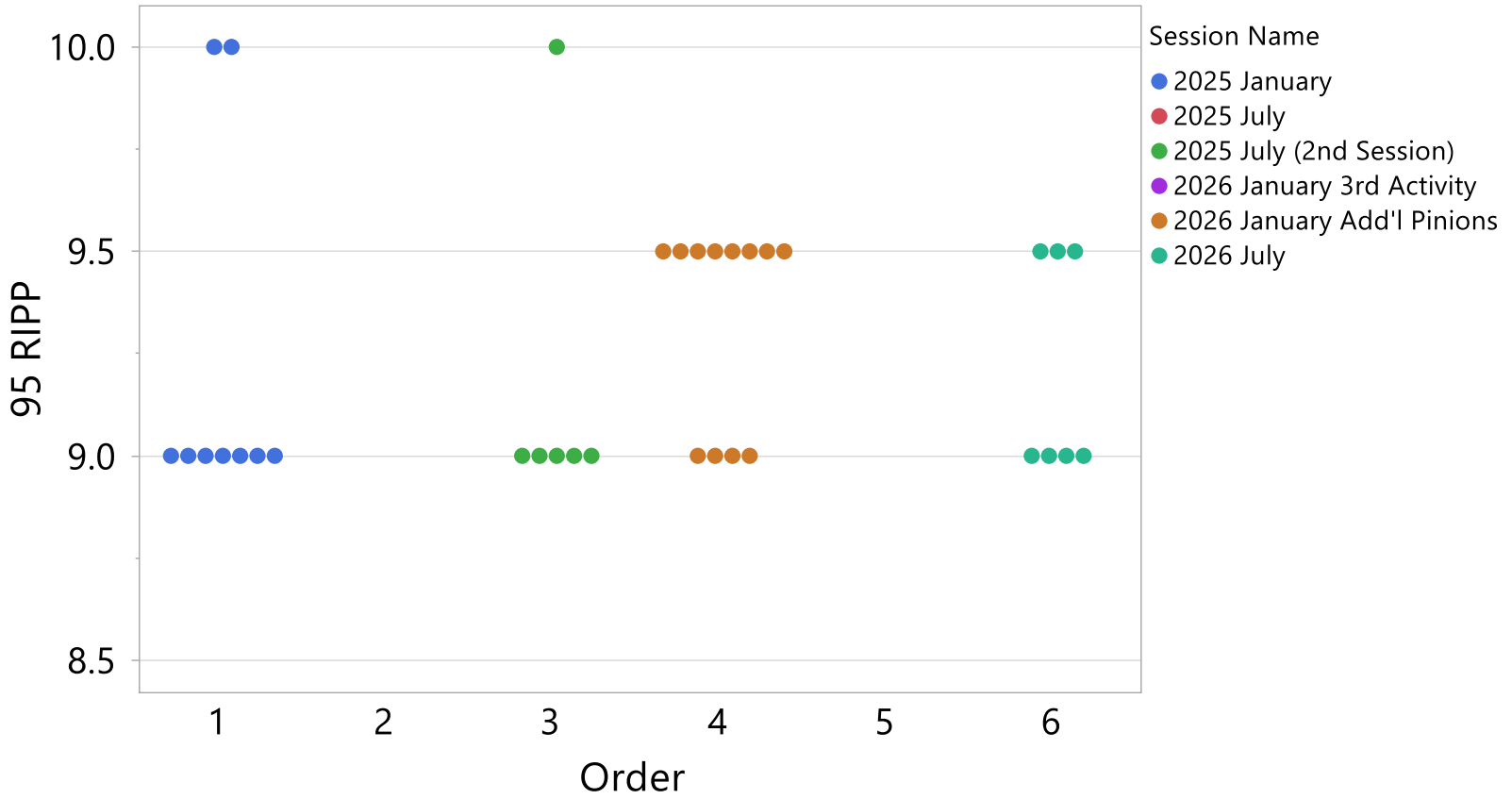


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Part 95 - RIPP

Target = 9.0

Green = {9.5, 9.0}
Yellow = {Ø}
Orange = {8.0, 6.5}
Red = All other ratings

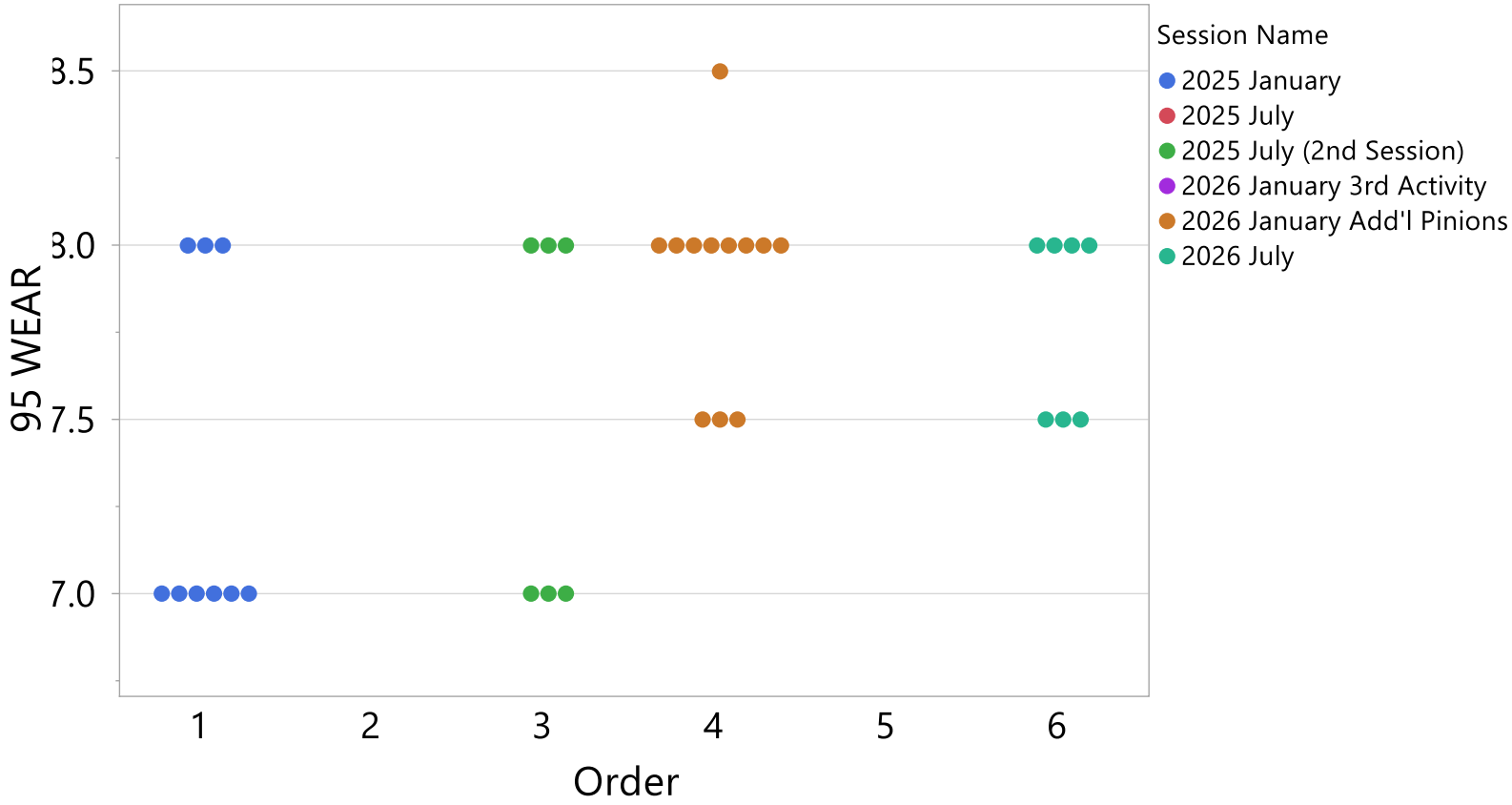


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Part 95 - Wear

Target = 8.0

Green = {8.0, 7.5}
Yellow = {Ø}
Orange = {8.5, 7.0}
Red = All other ratings

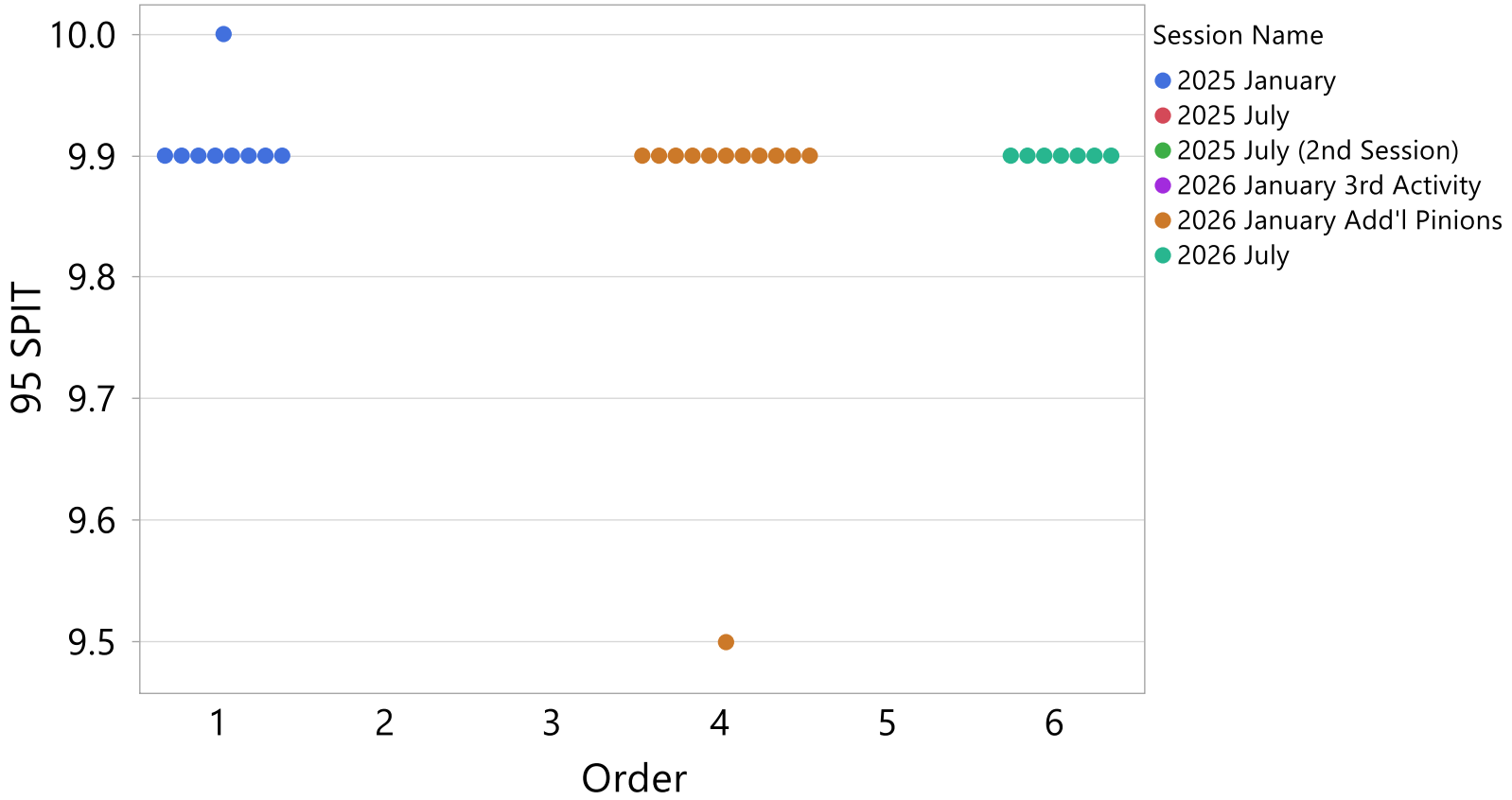


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Part 95 - SPIT

Target = 9.9

Green = {9.9}
Yellow = {10.0, 9.8}
Orange = {Ø}
Red = All other ratings



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L-37-1 Gleason Rating Update

August 2026

L-37-1 Rating Timeline

- Two things have been in the works simultaneously for the past year + to improve the rating of Gleason parts:
    - Development of new rating aid photos for distresses seen on Gleason parts
    - Introduction of Gleason parts to replace the Dana parts currently being used in the rater calibration (RCMS) system

L-37-1 Rating Timeline

- Two things have been in the works simultaneously for the past year + to improve the rating of Gleason parts:
  - **Development of new rating aid photos for distresses seen on Gleason parts**
  - Introduction of Gleason parts to replace the Dana parts currently being used in the rater calibration (RCMS) system

Rating Aid Development

- A 1st draft of the rating aid photos was introduced at the January 2026 gear rating workshop
  - Feedback from this was to re-take these photos from a closer angle

- The photos were re-taken and the revised rating aid was trialed at the July 2026 gear rating workshop
  - Feedback was positive and each lab has a copy of the new rating aid to review internally

Rating Aid Development

- Next Step:
  - Raters currently reviewing the current version of the rating aid internally
  - If any feedback, then it can be discussed through a rater conference call
  - If no feedback, then the rating aid can go to the panel for a vote

L-37-1 Rating Timeline

- Two things have been in the works simultaneously for the past year + to improve the rating of Gleason parts:
    - Development of new rating aid photos for distresses seen on Gleason parts
    - **Introduction of Gleason parts to replace the Dana parts currently being used in the rater calibration (RCMS) system**

L-37-1 Rating Timeline

- During the May 2026 panel meeting targets were presented for 20 potential Gleason RCMS parts
    - Feedback from the panel was to send this to the stat group for review
        - Stats group has a proposal for the panel on target system for L-37-1 rater calibration



A Program of ASTM International