

NATIONAL COACHING SYMPOSIUM 2018



Sail Shape and Trim From the Coach Boat

Mike Ingham



Goal: Speed By Real Time Comparison



Compare:

Trim:

- Leach Profile
- Flow (Leach tales)

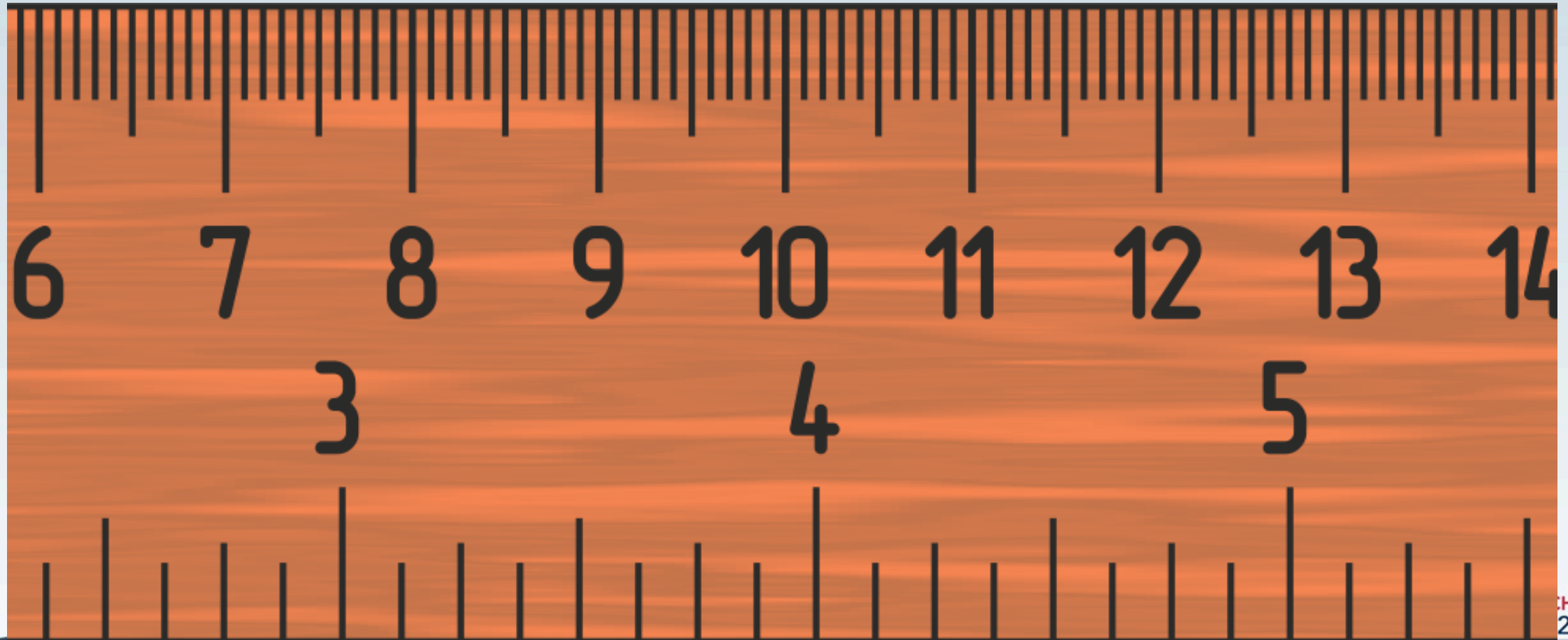
Shape:

- Camber
- Draft

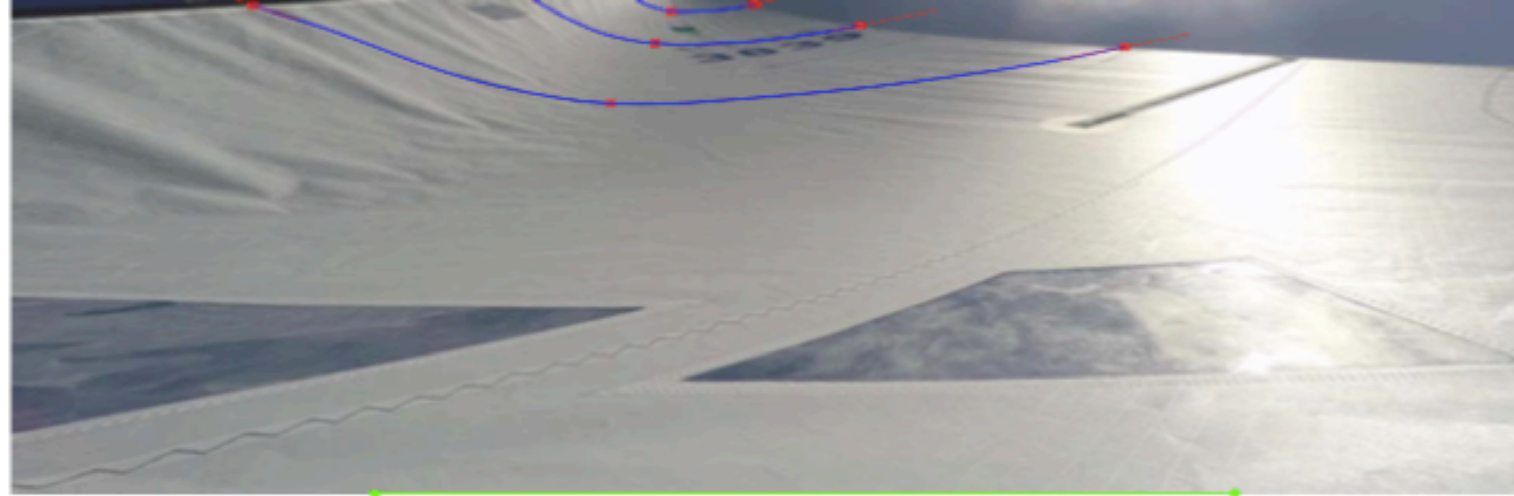
Setup:

- Mast bend
- Shroud tension
- Rotation
- (Not talking about today)

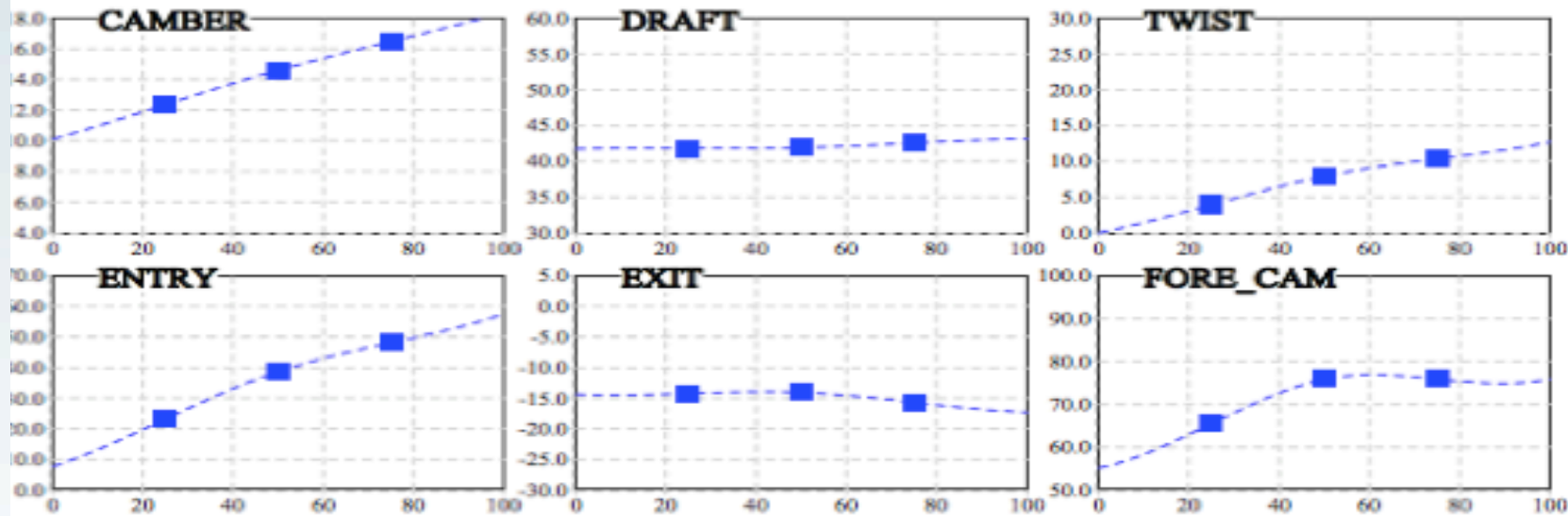
Problem: Our eye not good at absolutes



Have Computer Tools- But Not Real Time

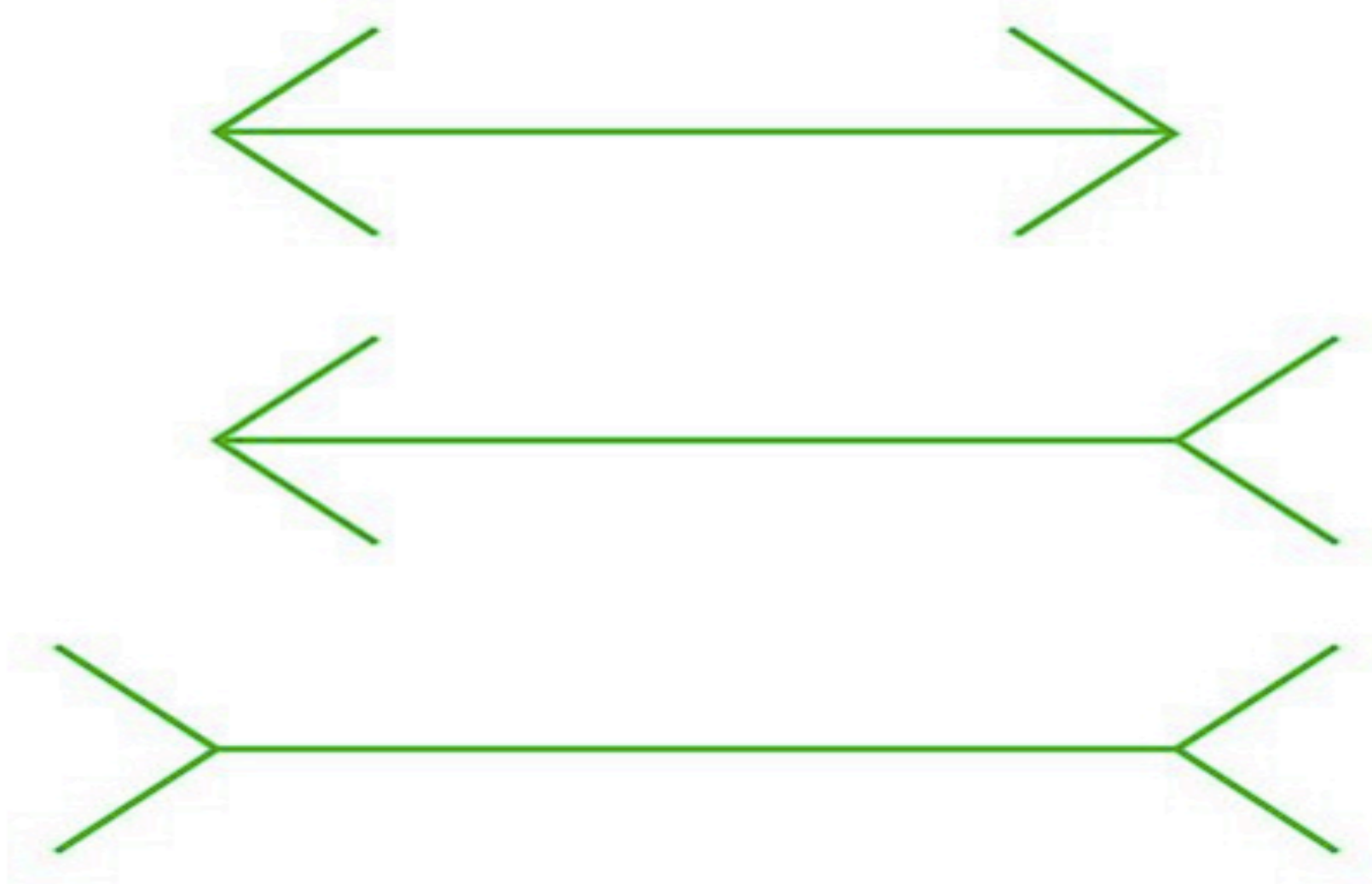


Ver.5.620, Copyright (North Sails Japan)



SailType; MAIN	Height	CAMBER	DRAFT	TWIST	ENTRY	EXIT	FORE_CAM	BACK_CAM
	25.0	12.3	41.8	4.0	23.2	-14.2	65.5	64.9
	50.0	14.6	41.9	7.9	38.7	-14.0	75.9	67.2
	75.0	16.5	42.5	10.3	48.0	-15.7	75.9	66.6

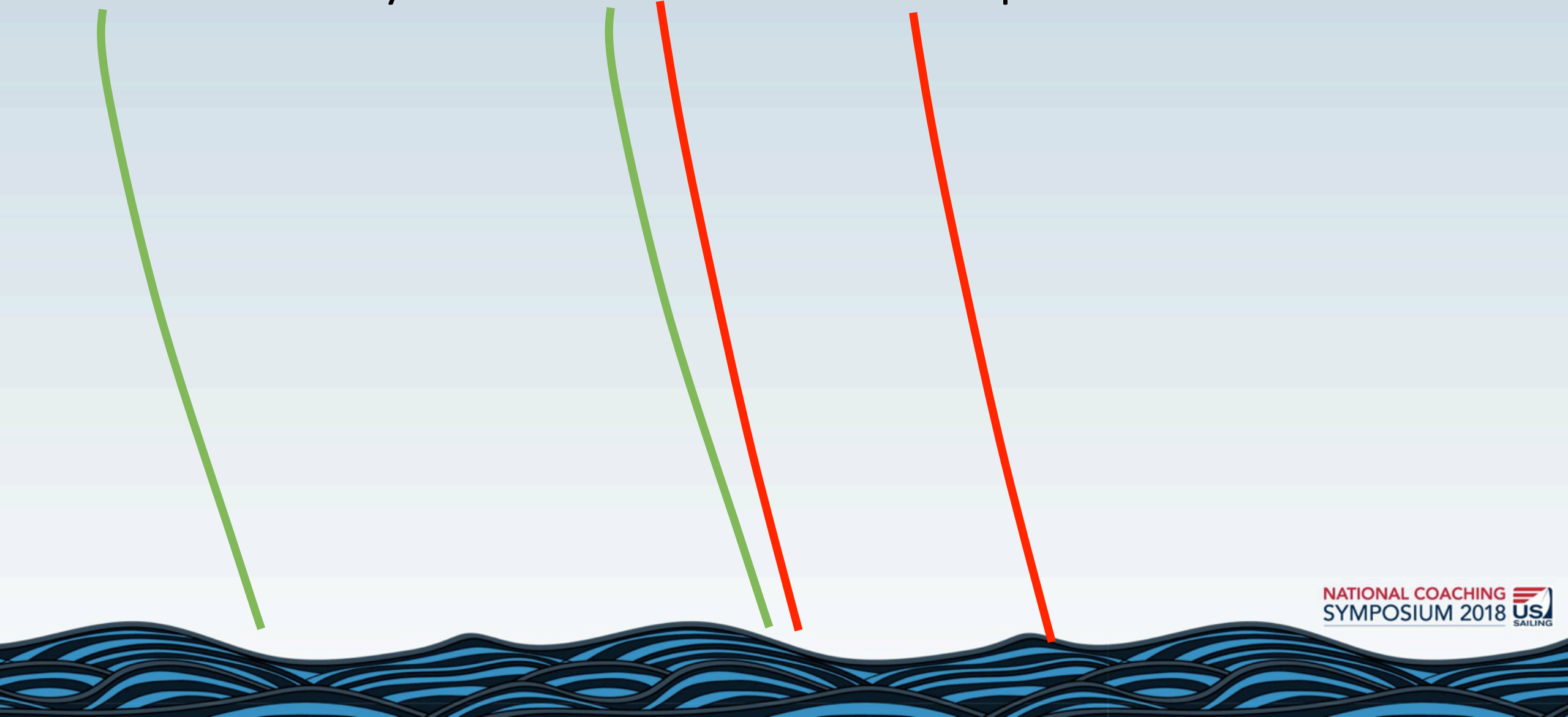
Our Eye is Easily Fooled



Human Eye Best at Direct Comparison



Human Eye Best at Direct Comparison



Trim First!

- Then setup



Main

Main Leach Tale:

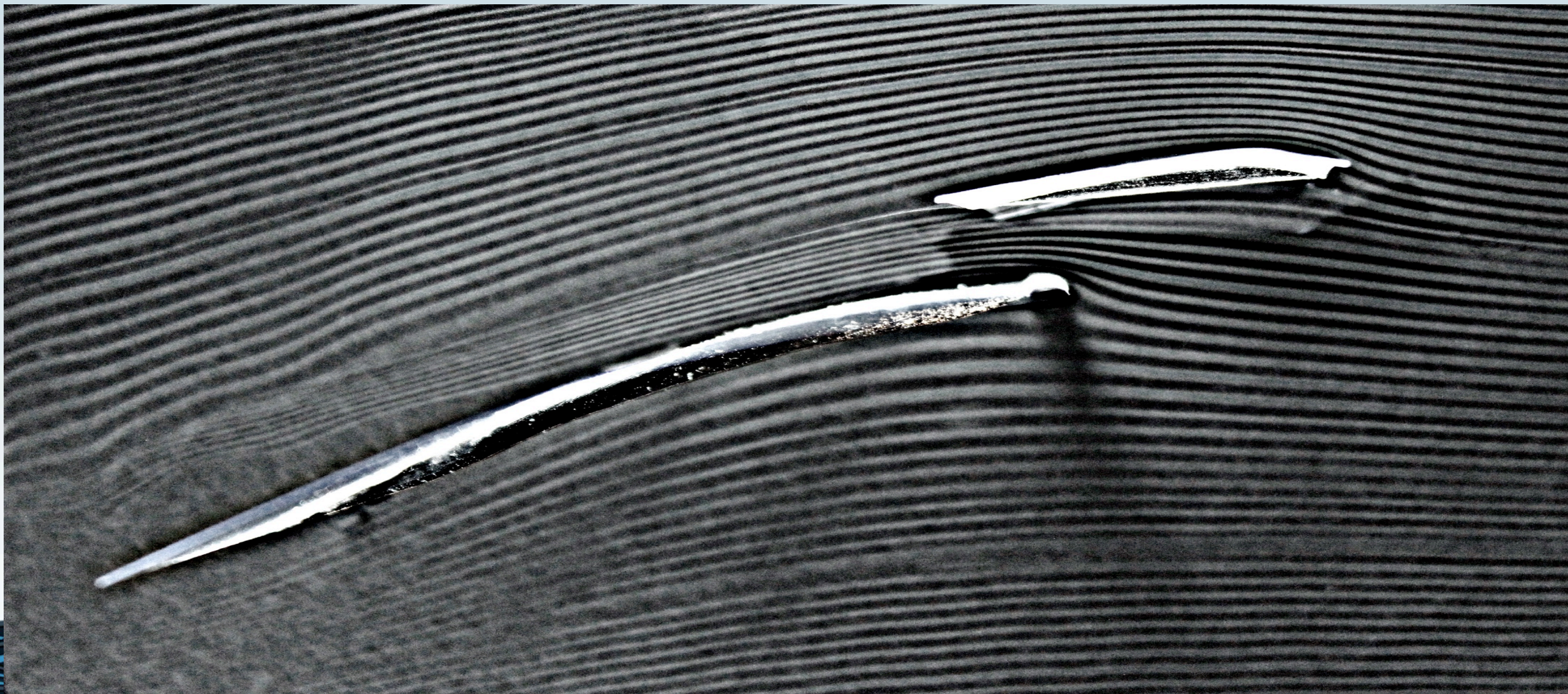
- Flow analog
- “25% stall”

-Cycles ~3 seconds

~10 click ratchet range
From 10% to 90% Stall



Flow Near Main Leach Partially Detached



Leach Profile

Twist transition point

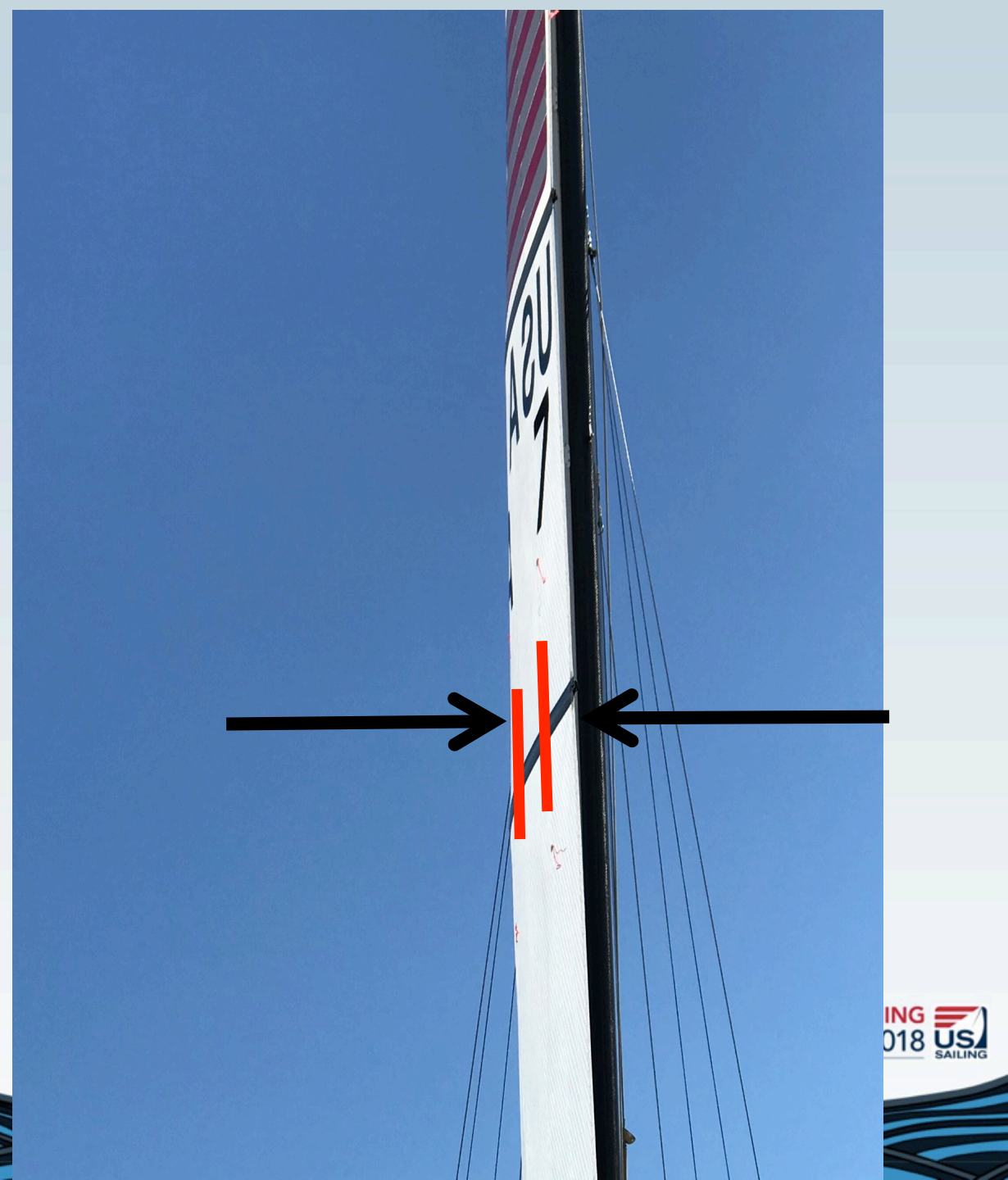
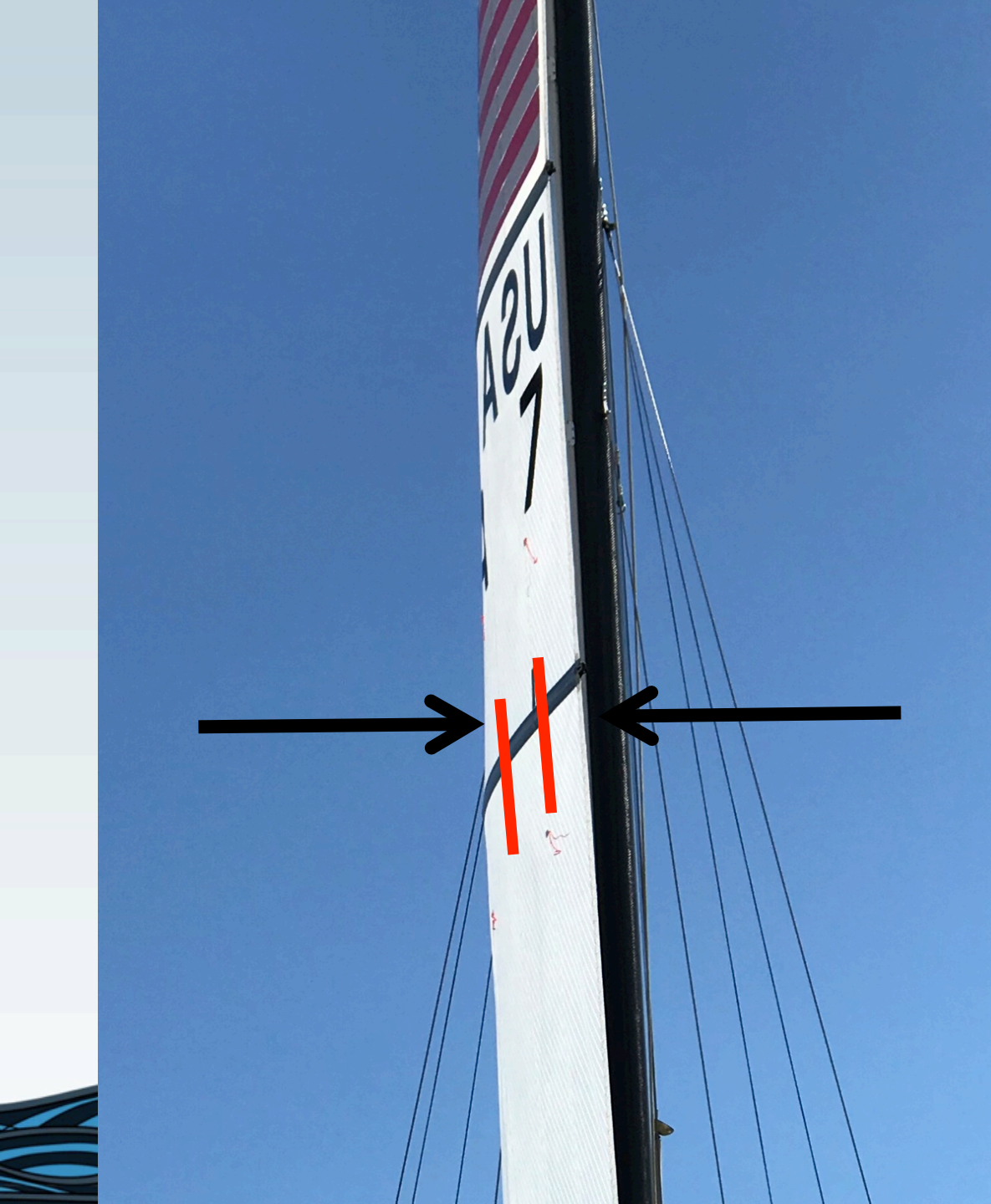


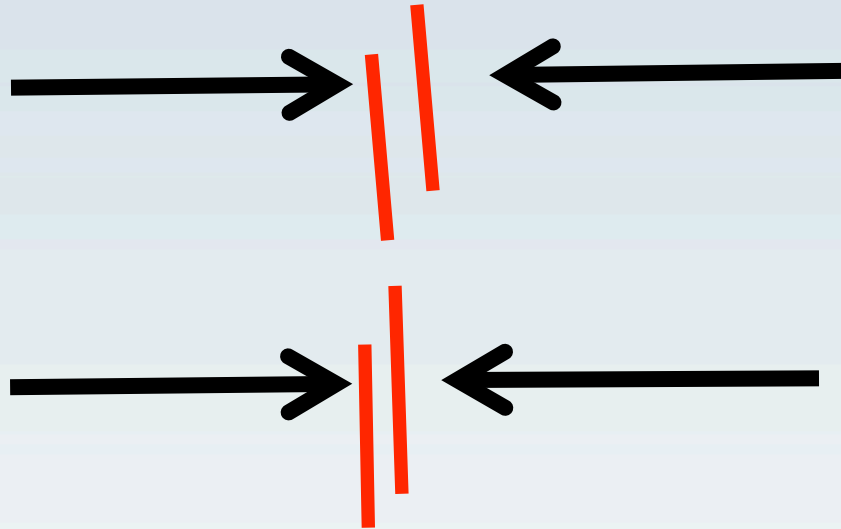
Over-bend Wrinkles











zero cunningham

camber

16.4%

15.8%

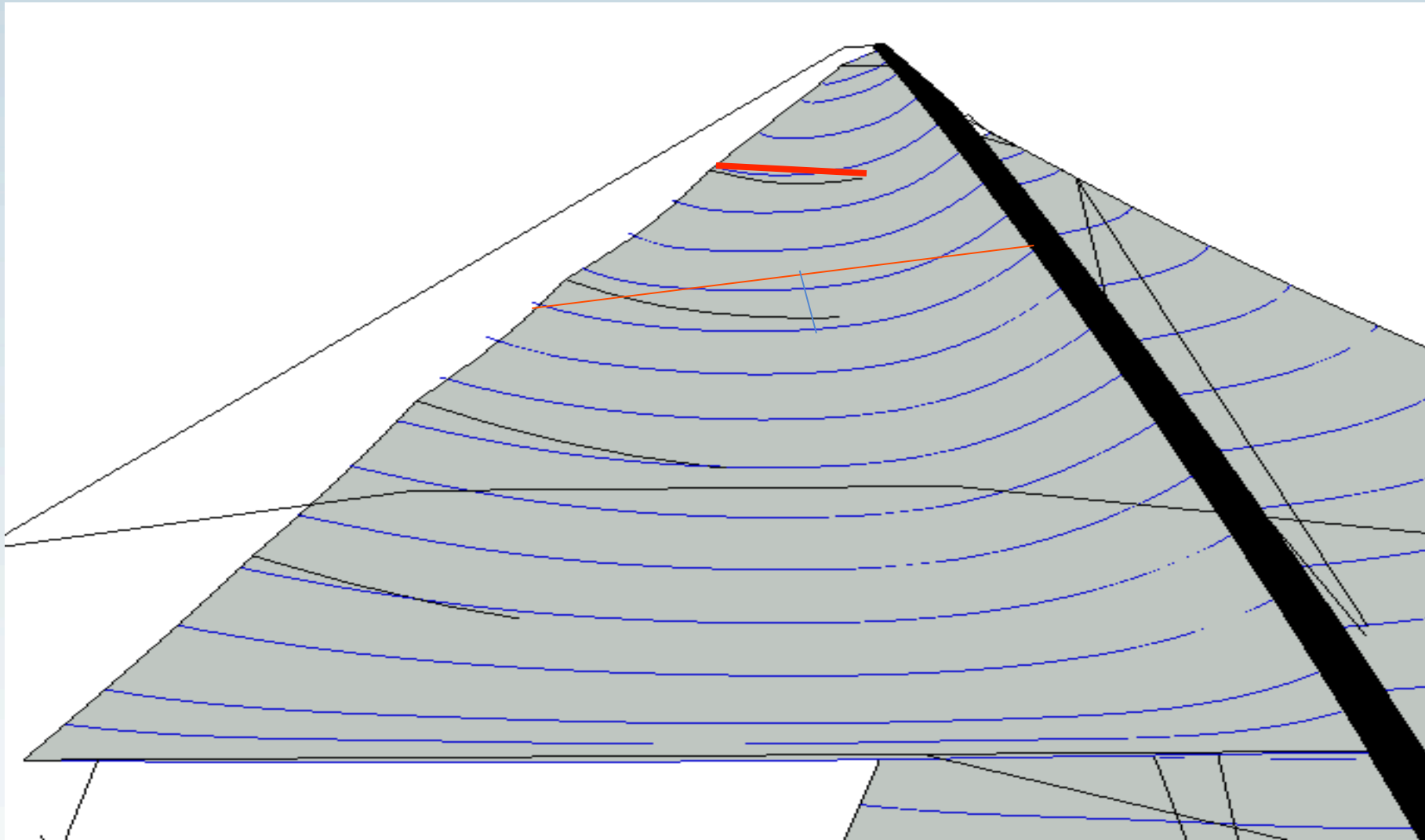
12.5%

draft

46.1%

41.2%

37.7%



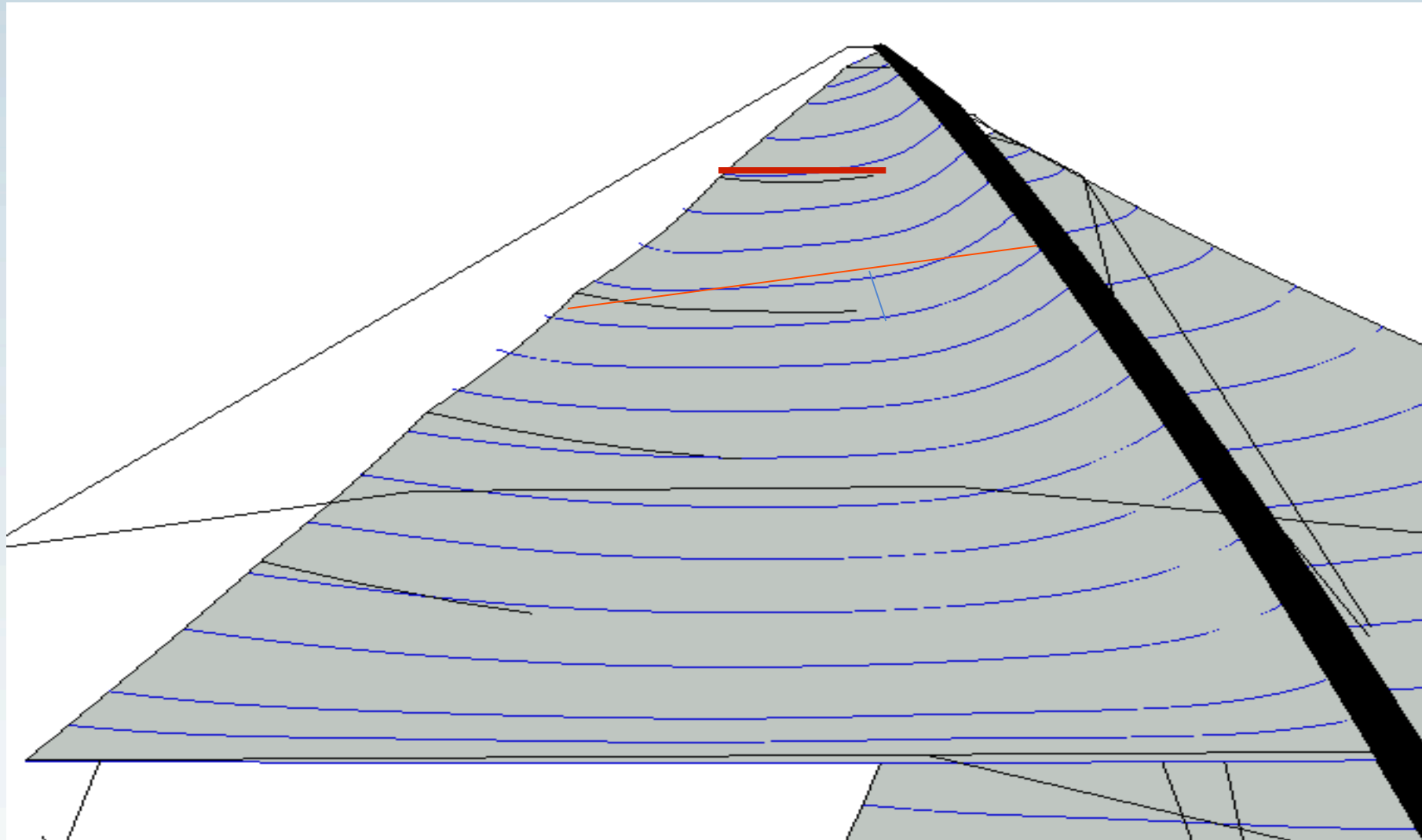
Tight cunningham

camber

13.9%

13.0%

10.1%



draft

36.2%

34.6%

35.9%





Jib



Exit angel

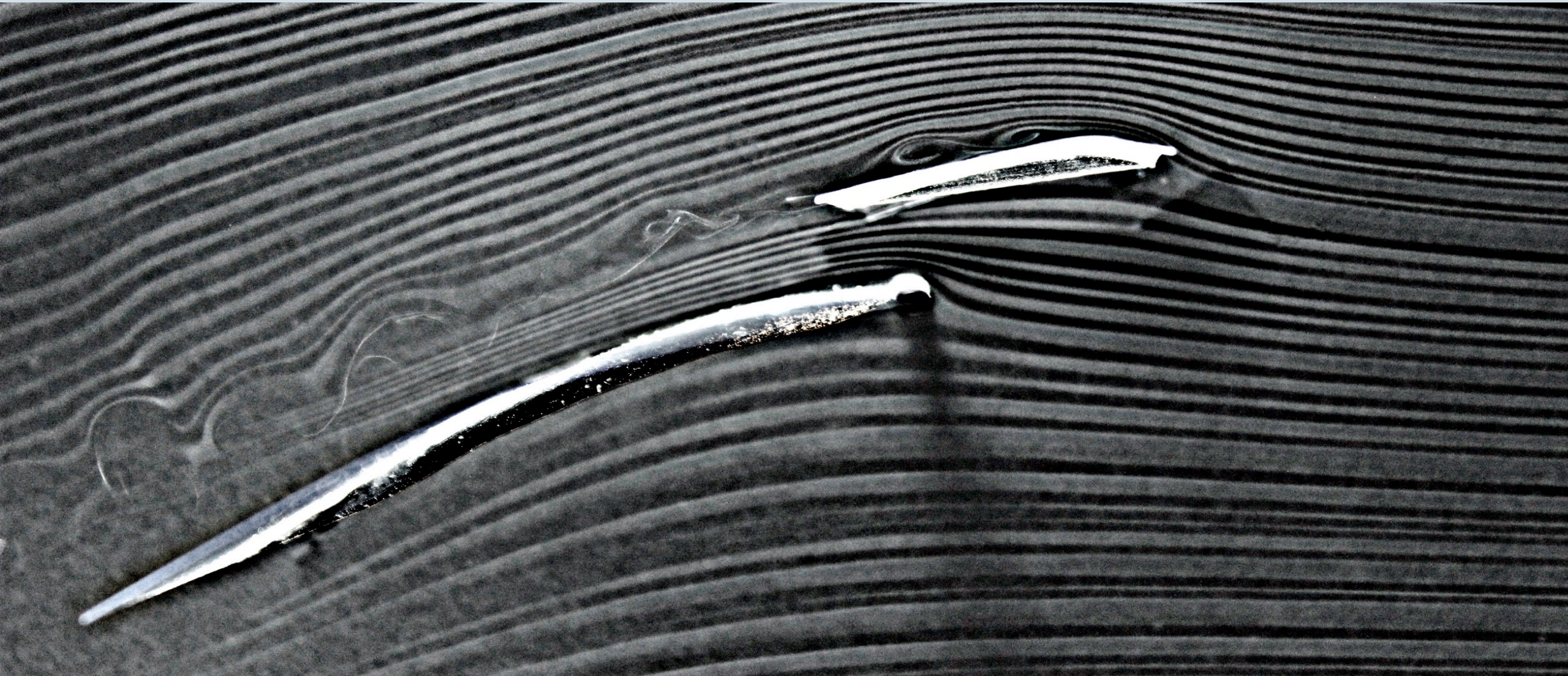
Slot



Jib Leach Tale:

-Flow “digital”

Over Trim Jib = Complete Flow Separation







Spin



Curl:

- Amount
- Height



Use Curl Instead of Tales Because Separation





