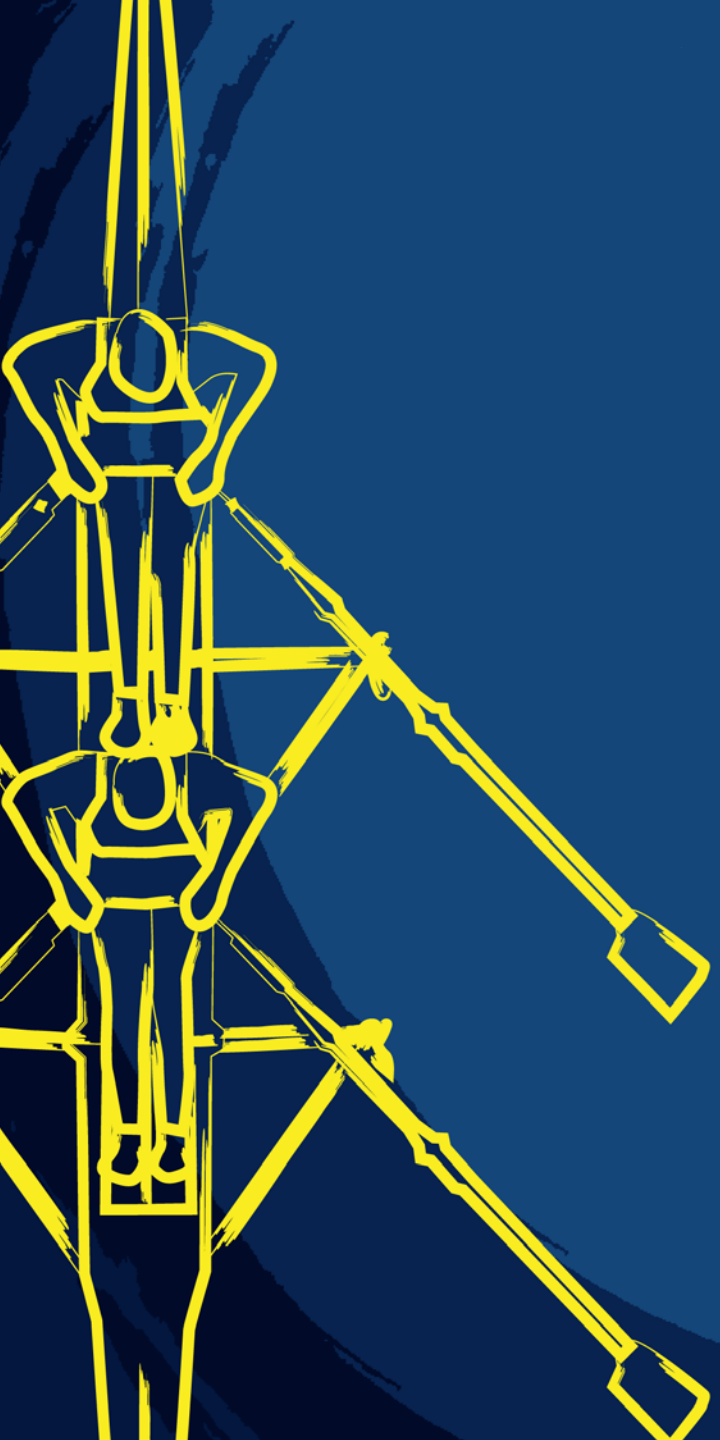
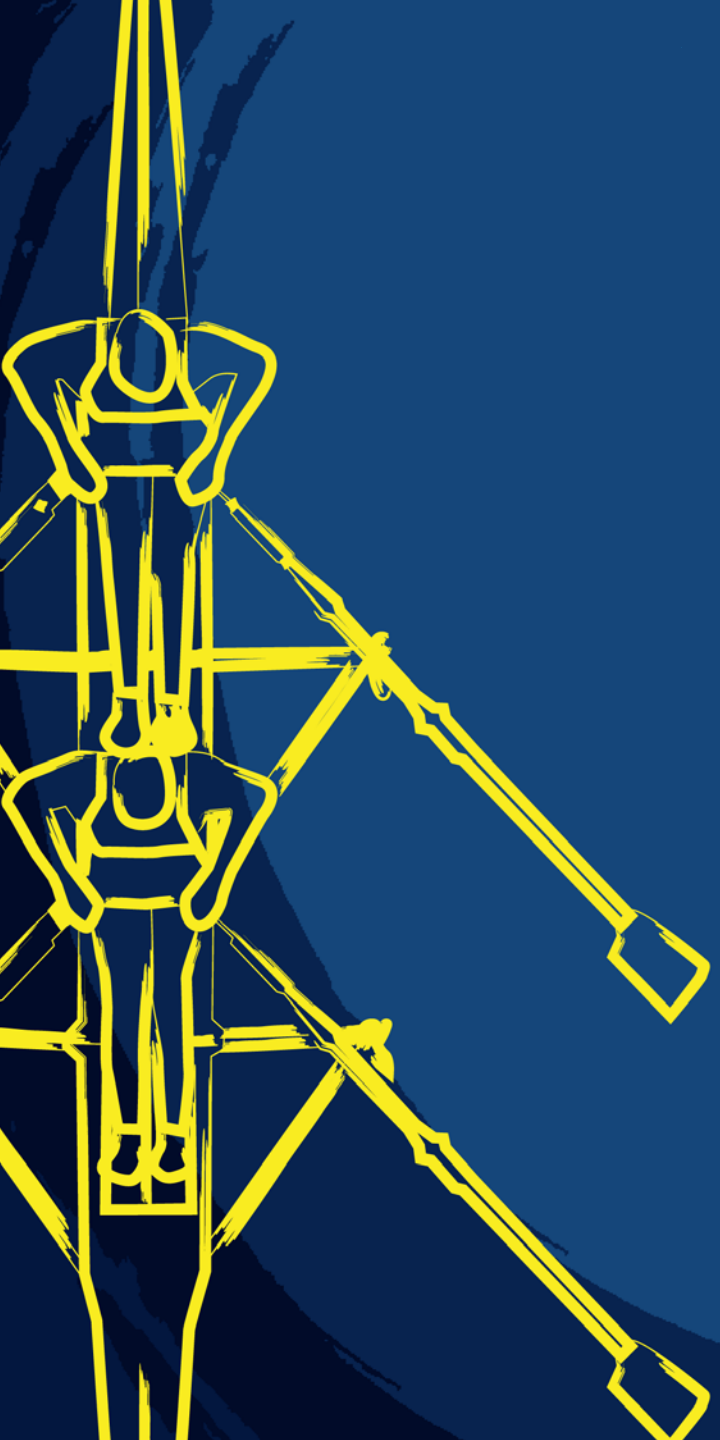


WELCOME!

JOHN BOULTBEE / FISA
EDSON ALTINO / RIO2016
07/11/2014



COACH IN THE SPOTLIGHT

Gary Hay (NZL)
07/11/2014

WORLD ROWING COACHES CONFERENCE
RIO 2014

WHO IS GARY HAY

- Rowed for NZ as a Lightweight in the 80's
- Coached at school level
- Coached at one of NZ'S High Performance Centres based out of Christchurch
- Coached Internationally at Junior / U23 and Elite level

ROWING NEW ZEALAND

Bankstream

Coaching at World Championships

- 2008: Junior W4- (Gold)
- 2009: U23 M2X (Gold)
- 2010: U23 LW2X(Silver)
- 2011: W2X (Bronze)
- 2012: W2X (5^{th})
- 2013: W1X (Silver) and W2- (Bronze)
- 2014: W1X (Gold), LW2X(Gold), W2- (Bronze)


MIGHTY RIVER POWER
FYRAN CAT400
MIGHTY RIVER POWER

- Spent 22 years in the NZ Police: Variety of roles but mainly spent working as a Detective and working in middle management type roles.
- 10 years spent on an Armed Response Unit.
- My experience in the Police provided me with a number of skills which I believe has helped in my Coaching: organisation, communication, people skills.

ROWING NEW ZEALAND

Bankstream

- No secrets / no magic bullets to the success of Rowing NZ as a whole or with the crews I coached.

ROWING NEW ZEALAND

Bankstream

- I Consider myself very fortunate to coach at this level
- I see myself as being someone at the end of a very long line of people who have helped, assisted and guided the athletes to this point.
- A large number of people involved in the success that Rowing NZ has achieved.

ROWING NEW ZEALAND

Bankstream

CREWS

- In 2014 I Coached Emma Twigg, LW2X and W2-.
- All 3 crews trained together.
- All on the same training programme
- At some stage during the campaign all 3 x crews faced some sort of adversity

ROWING NEW ZEALAND

Bankstream


2014 World Rowing
Chan
CLEAN WATER
world rowing
BMW


2014
rld Rowin
Champi
CLEAN WATER
Heineken


ionships
rowing
CLEAN WATER
AEGON

- Coaching -The art of facilitating the performance, learning and development of another (Downey 2003)

ROWING NEW ZEALAND

Bankstream

MY PHILOSOPHY TO COACHING

- Structured programme
- Hard work
- Individualising sessions

ROWING NEW ZEALAND

Bankstream

- Good intensity
- Keep it simple
- Expert coaching

ROWING NEW ZEALAND

Bankstream

- Creating self belief
- Optimism not Pessimism
- Emotions are contagious

ROWING NEW ZEALAND

Bankstream

- Quickly identify the best way your athlete learns.
- Communication
- Trust
- You need to care about your athlete

ROWING NEW ZEALAND

Bankstream


SK innovation
NZL
Bankstream

- Preparation: short and long term
- Seek feedback and act on it
- Constant reviewing performance and training

ROWING NEW ZEALAND

Bankstream

- Only focused on coaching
- Ignore outside distractions
- Opposition analysis / race strategy and tactics

ROWING NEW ZEALAND

Bankstream

- Let athletes know what's occurring
- Explain to them why or why not
- Treat each athlete as an individual
- Good recovery during and between sessions

ROWING NEW ZEALAND

Bankstream

Wooden on Leadership™

Pyramid of Success

Competitive Greatness
"Perform at your best when your best is required. Your best is required each day."

FAITH PATIENCE

Poise
"Be yourself. Don't be thrown off by events whether good or bad."

Confidence
"The strongest steel is well-founded self-belief. It is earned, not given."

Condition
"Ability may get you to the top, but character keeps you there – mental, moral, and physical."

Skill
"What a leader learns after you've learned it all counts most of all."

Team Spirit
"The star of the team is the team. 'We' supercedes 'me'."

Self-Control
"Control of your organization begins with control of yourself. Be disciplined."

Alertness
"Constantly be aware and observing. Always seek to improve yourself and the team."

Initiative
"Make a decision! Failure to act is often the biggest failure of all."

Intentness
"Stay the course. When thwarted try again; harder; smarter. Persevere relentlessly."

Industriousness
"Success travels in the company of very hard work. There is no trick, no easy way."

Friendship
"Strive to build a team filled with camaraderie and respect: comrades-in–arms."

Loyalty
"Be true to yourself. Be true to those you lead."

Cooperation
"Have utmost concern for what's right rather than who's right."

Enthusiasm
"Your energy and enjoyment, drive and dedication will stimulate and greatly inspire others."

"Success is peace of mind which is a direct result of self-satisfaction in knowing you made the effort to become the best of which you are capable."

John Wooden, Head Coach

12 Lessons in Leadership

1. Good Values Attract Good People
2. Love Is The Most Powerful Four-Letter Word
3. Call Yourself A Teacher
4. Emotion Is Your Enemy
5. It Takes 10 Hands To Make A Basket
6. Little Things Make Big Things Happen
7. Make Each Day Your Masterpiece
8. The Carrot Is Mightier Than A Stick
9. Make Greatness Attainable By All
10. Seek Significant Change
11. Don't Look At The Scoreboard
12. Adversity Is Your Asset

www.CoachJohnWooden.com

TECHNIQUE

- I try not to over complicate technique
- Work on connection / blade work
- You need to be one with the boat
- Feel and have empathy with the water
- Be smooth and gentle on the boat

ROWING NEW ZEALAND

Bankstream

NZ Programme

- Centralised programme: includes athletes, coaches and support staff
- Full NZ Squad pieces
- Good support from the HPD , CEO and sponsors which includes the Government
- Each NZ Coach leads his/her programme

ROWING NEW ZEALAND

Bankstream

LAKE KARAPIRO

Coaching 5 x Women

ROWING NEW ZEALAND

Bankstream

KEY POINTS TO SUCCESS

- Small team environment
- Everyone got on very well
- Trained together – side by side
- Had fun on and off the water / Life balance

ROWING NEW ZEALAND

Bankstream

- Good balance of training – aerobic v Anaerobic

- Training programme:
  - keep reviewing
  - consult
  - be open to new ideas

- Give praise – say “well done” when it’s deserved.

- 3 months in Europe
- Living in close contact with everyone
- Good relationships with Support Staff
- Individualised training programme for the athletes and boats

ROWING NEW ZEALAND

Bankstream

SUPPORT STAFF

- I worked very closely with all the Sport Science Support Staff.
- On each of the tours was a Physiotherapist, Massage therapist and a Manager. Other staff came and went over the course of the campaign
- Team Doctor came in for the World Championships.

ROWING NEW ZEALAND

Bankstream

WHY IS NZ ROWING STRONG ?

- It starts with School Rowing

- 2108 students attended the 2015 Aon Maadi Cup (the largest ever, about 80 more students than the year before).

- 155 Schools were members of NZSSRA (so had a rower at their school) and 125 of those attended the 2015 Aon Maadi Cup (5 more schools than the year before).

- There were a total of 3000 school rowers last year across NZ

ROWING NEW ZEALAND

Bankstream

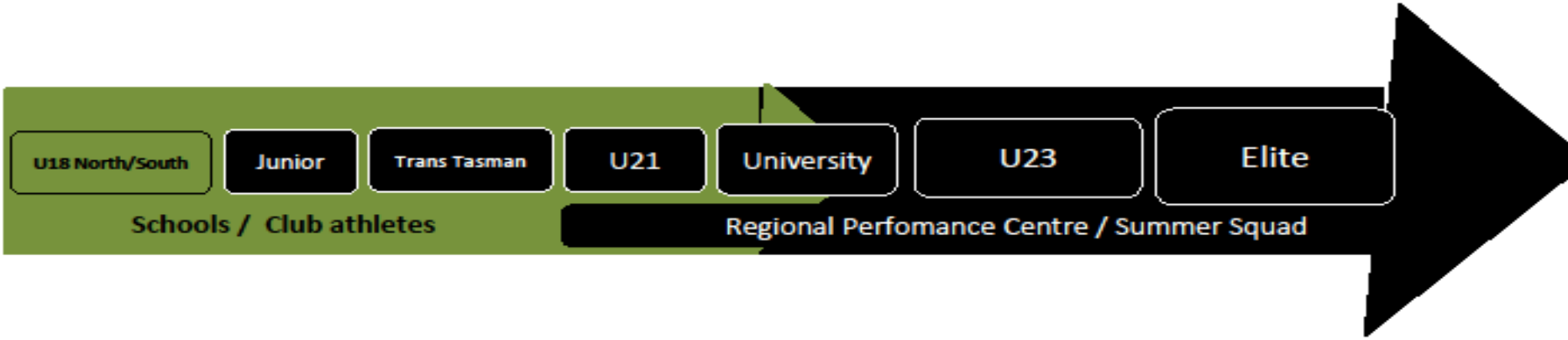

U3
U5
U6
U7
U9

B U17 1X	50	G U18 4+	12
G U17 4+	30	G U16 4X+	44
B U15 2X	56	B U16 2X	59
G U15 4X+	33	G U18 1X	46
B U18 2-	23	B U18 1X	44
G U18 2X	42	G U15 2X	53
B U16 4X+	33	B U15 4X+	32
G U16 1X	53	G U17 8+	10
B U18Nov 2X	35	B U17 4+	24
G U18 Nov 8+	7	G U18 Lwt 2X	34
B U17 8+	9	B U18 Lwt 2X	42
G U17 4X+	38	G U16 4+	31
B U18 Lwt 4+	23	B U16 8+	19
G U15 4+	31	G U18 4X+	23
B U18 4X+	21	B U18 2X	37
G U18 2-	19	G U15 8+	14
B U16 4+	32	B U15 4+	29
G U16 8+	18	G U17 2X	66
B U18 Nov 8+	9	B U17 4X+	35
G U18 Lwt 4+	10	G U18 Nov 4+	26
B U17 2X	60	B U18 Nov 4+	29
G U17 1X	65	G U16 2X	63
B U15 8+	12	B U16 1X	51
G U18 Nov 2X	49	G U18 8+	12
B U18 4+	26	B U18 8+	22


AON

ROWING NEW ZEALAND

HIGH PERFORMANCE PATHWAY



- Good selections at all levels
- Clear and defined pathways
- Good coaching at all levels
- By the time the athletes have progressed through school – NZ representation they are well used to the intensity / mileage.

ROWING NEW ZEALAND

Bankstream

NZ National Sports

- Men: Rugby
- Women: Netball
- Rowing would lose most of our talent to either of these two sports


ALL BLACKS®

video


GD


HOLDEN
GS

WHERE TO NOW

- NZ Summer Squad and Regional Performance Centres have been selected and are training.
- NZ Rowing Championships in Mid February 2015

ROWING NEW ZEALAND

Bankstream

- New Zealand Trials in February/March 2015
- New Zealand team commences training early March
- The European Campaign commences again – 90 day's away !!

ROWING NEW ZEALAND

Bankstream

- Continue to improve not only as a coach but also to ensure and be part of a NZ Rowing programme that continues to strive for success

- Clearly it's not that easy to back up year after year and retain World Titles. A number of 2013 World Champions failed in their attempts to do so.

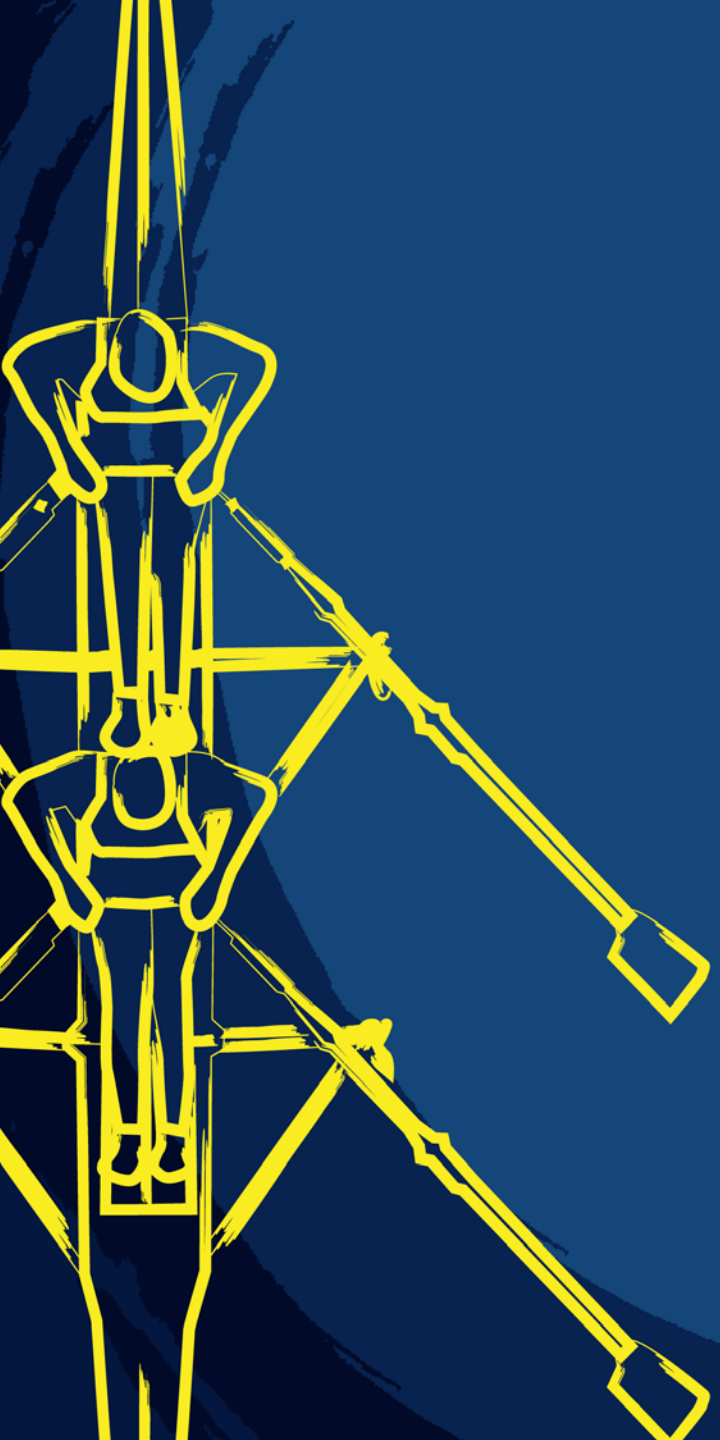
ROWING NEW ZEALAND

Bankstream

THANK-YOU

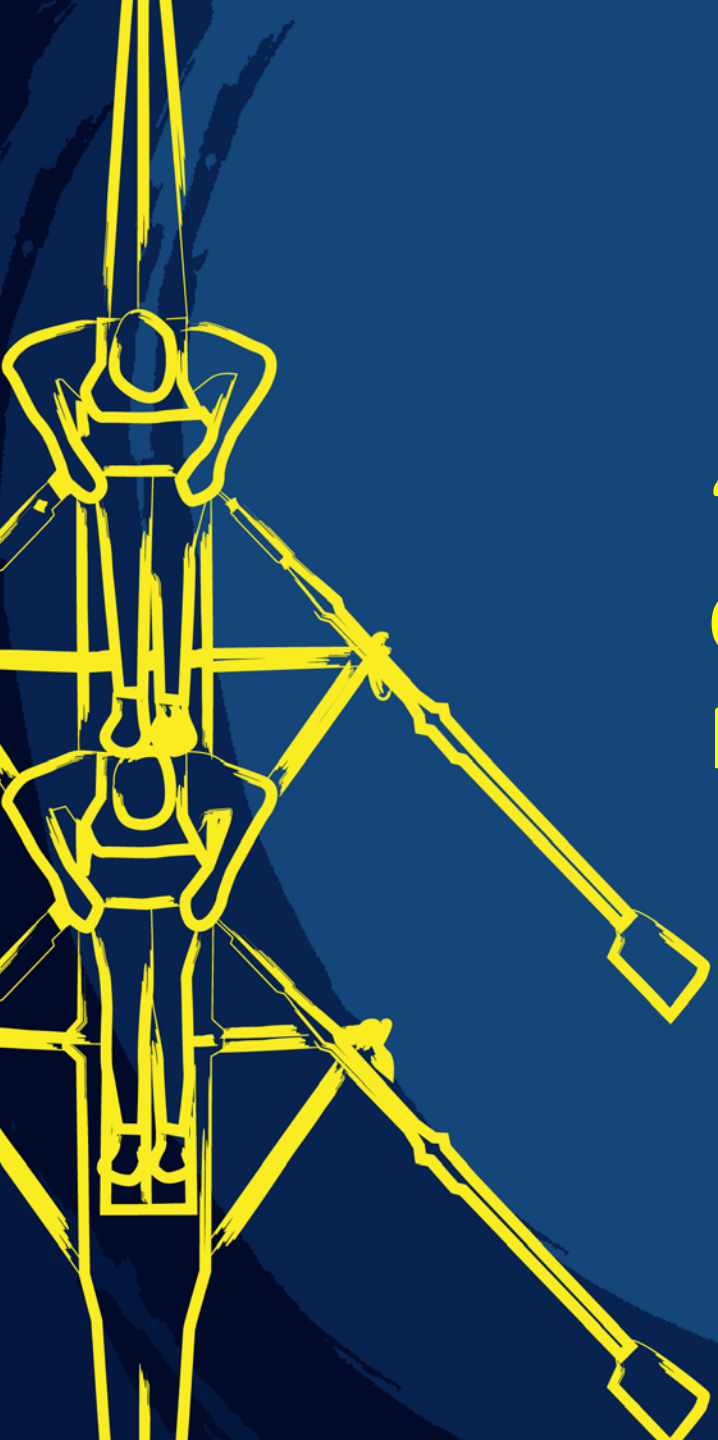
ROWING NEW ZEALAND

Bankstream



COFFEE BREAK

07/11/2014



“WHAT MAKES A SUCCESSFUL COACH OF WOMEN - THE MYTH AND THE REALITY”

Josy Verdonkschot (NED)
Christine Gossé (FRA)
Premsyl Panuska (CZE)
Gianni Postiglione (GRE/LTU)
Morten Espersen (IRL)
Gary Hay (NZL)
07/11/2014

Main differences

Mirka

Ondrej

Crises of the Czech Rowing

Atlanta 1996

- 3 crews
- M1x, final A (Vaclav Chalupa)

Sydney 2000

- 1 crew
- M1x, then Vaclav Chalupa was ill

February, 2000 → **new HEAD COACH**

Decisions:

•Create crews only in the Olympic events

•Emphasis of the physical parameters

•Improvement of women´s rowing

Main differences

Mirka started with rowing in 1999

Ondrej wan his first medal in Zagreb 2000

The beginning

Mirka

- Mirka started with sport at the age of 6 - cross country skiing, athletics (middle tracks), competing at the national level.
- Sometimes she takes part in the 1500m race in the women's extra league. The personal best is 4:34.
- She started with rowing when she was 19, in 1999.
- The first WRC in 2001, the first WRCh in 2001 in Lucerne – the 10th place.
- Both of her parents were rowers, members of the National team. Her father participated in the Olympic Games in Montreal (placed 6th) and in Moscow (placed 5th).

Ondrej

- His cousin brings Ondrej into the rowing club to make him to lose the weight - at the age of 13.
- As Ondrej says he did not use to be a sporty character and he was negligent of his training.
- After five years of „the adequate" training he has his junior medal – JM2x - 3rd place, Zagreb 2000
- In 2003 the CZE crew M2X O.Synek, M.Dolecek wins the WRC series and the bronze medal during the WRCh.
- From 2005 Ondrej has always the medal at the single scull – 10x in the line
- In 2007 he is the stroke man of CZE M8+ for ERCh - the 1st place
-

Results

Mirka

Race	*Event*	*Result*
2001 WRC Munchen	1x	5
2001 WRCh Lucerne	1x	10
2002 FISA U23	1x	1
2002 WURCh Sevilla	1x	1
2002 WRC overall	1x	1
2003 WRCh Milano	1x	4
2004 OG Athens	**1x**	**4**
2005 WRCh Gifu	1x	2
2006 WRCh Eton	1x	2
2007 WRCh Munich	1x	4
2007 ERCh Poznan	1x	2
2008 OG Beijing	**1x**	**5**
2008 OG Beijing	**2x**	**6**
2008 ERCh Athens	1x	1
2009 WRCh Poznan	1x	3
2010 WRCh Karapiro	1x	4
2011 WRCh Bled	1x	1
2011 ERCh Plovdiv	1x	1
2012 OG London	**1x**	**1**
2013 ERCh Sevilla	1x	1
2013 WRCh Chungju	1x	3
2014 ERCh Beograd	1x	1
2014 WRCh Amsterdam	1x	7

Ondrej

Race	*Event*	*Result*
2000 JWRC Munchen	2x	3
2001 WRCh Lucerne	4x	11
2002 WURCh Sevilla	2x	5
2003 WRC overall	2x	1
2003 WRCh Milano	2x	3
2004 OG Athens	**2x**	**5**
2005 WRC overall	1x	1
2005 WRCh Gifu	1x	3
2006 WRCh Eton	1x	3
2007 WRCh Munich	1x	2
2007 ERCh Poznan	8+	1
2008 OG Beijing	**1x**	**2**
2008 WRC overall	1x	1
2009 WRCh Poznan	1x	3
2010 WRCh Karapiro	1x	1
2011 WRCh Bled	1x	2
2012 OG London	**1x**	**2**
2013 ERCh Sevilla	1x	1
2013 WRCh Chungju	1x	1
2014 ERCh Beograd	1x	1
2014 WRCh Amsterdam	1x	1

Questions at the beginning

- Main difference - the way of the beginning
- Big difference – the age of the beginning

- Mirka – at 6 years, general activities
- Ondrej – at 13 years, rowing…

- Easier to bring the boy?
- How to bring the girl in to rowing, especial advise…
- The importance of the family setting – the role of parents?
- The age for the first steps in rowing?
- Is it necessary the wider dialogue, demand of the girl to be persuaded?

- Yes
- …….
- The key point - for both of genders!
- 13 years
- I think, yes!

Testing

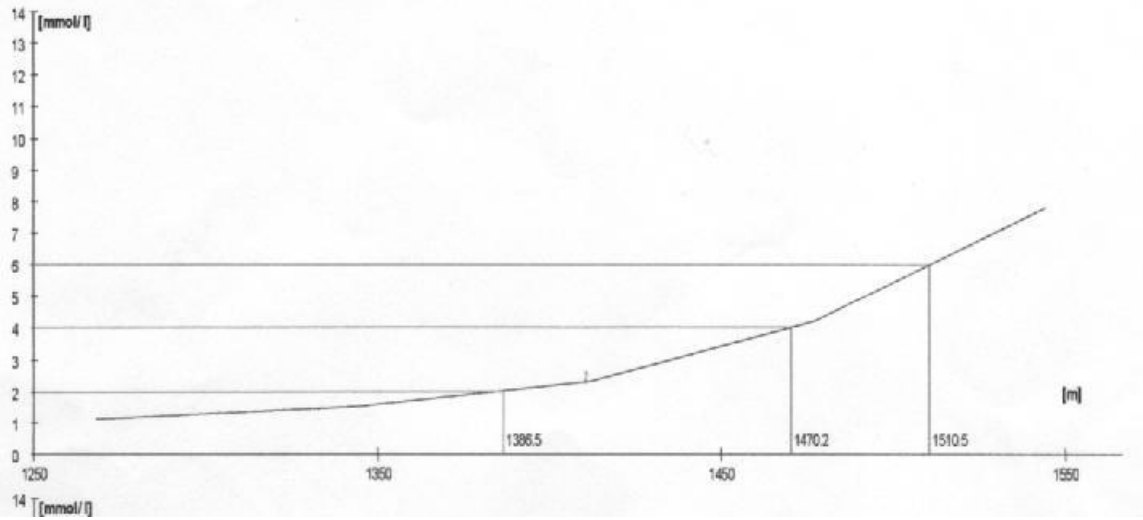
- 5 x 5 minutes
- Rest 1 minute
- Last distance with full power

- During each rest – blood sample
- The Curve of lactic acid

900829/4647 VIKTORA Milan Veslo 9.11.2013

	Rozm.[W]	Výkon [m]	W	TF/min	Lakt.
1.	210	1268	211	153	1,1
2.	250	1344	252	162	1,5
3.	290	1412	292	171	2,3
4.	330	1477	334	178	4,2
5.	370	1544	382	182	7,8

Lakt.	TF/min	W
2.0	167.6	277.0
3.0		
4.0	177.3	329.6
5.0		
6.0	180.0	358.0
7.0		
8.0		



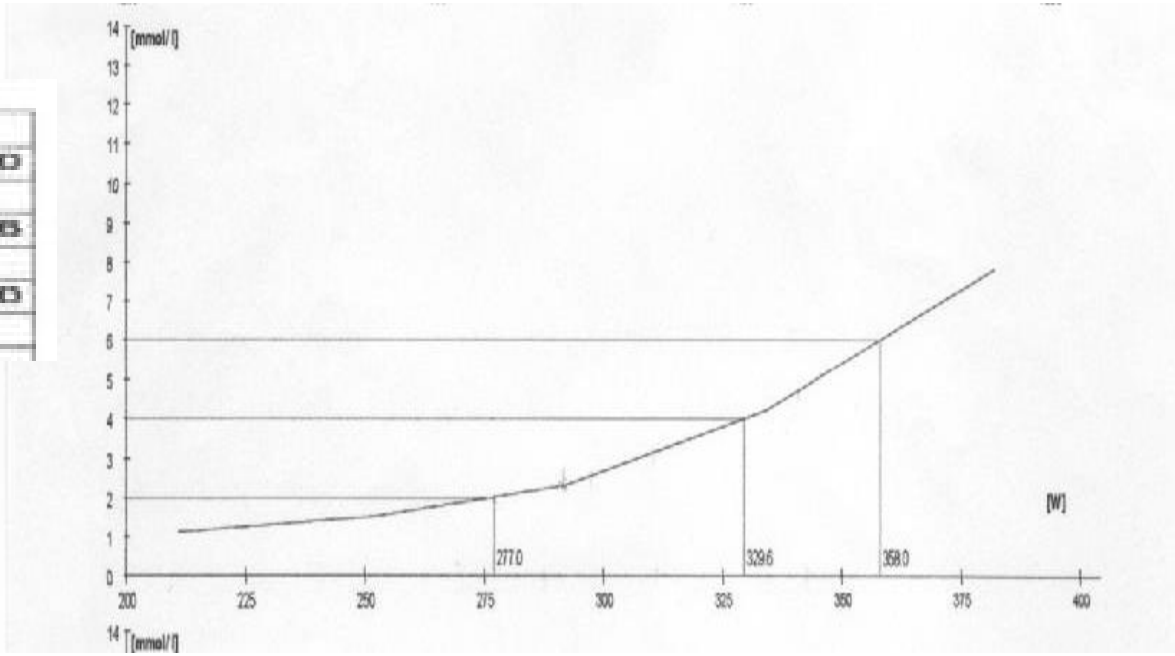
Testing

3x – 4x in a year
efficiency → of the training process

4 zones of the training intensity

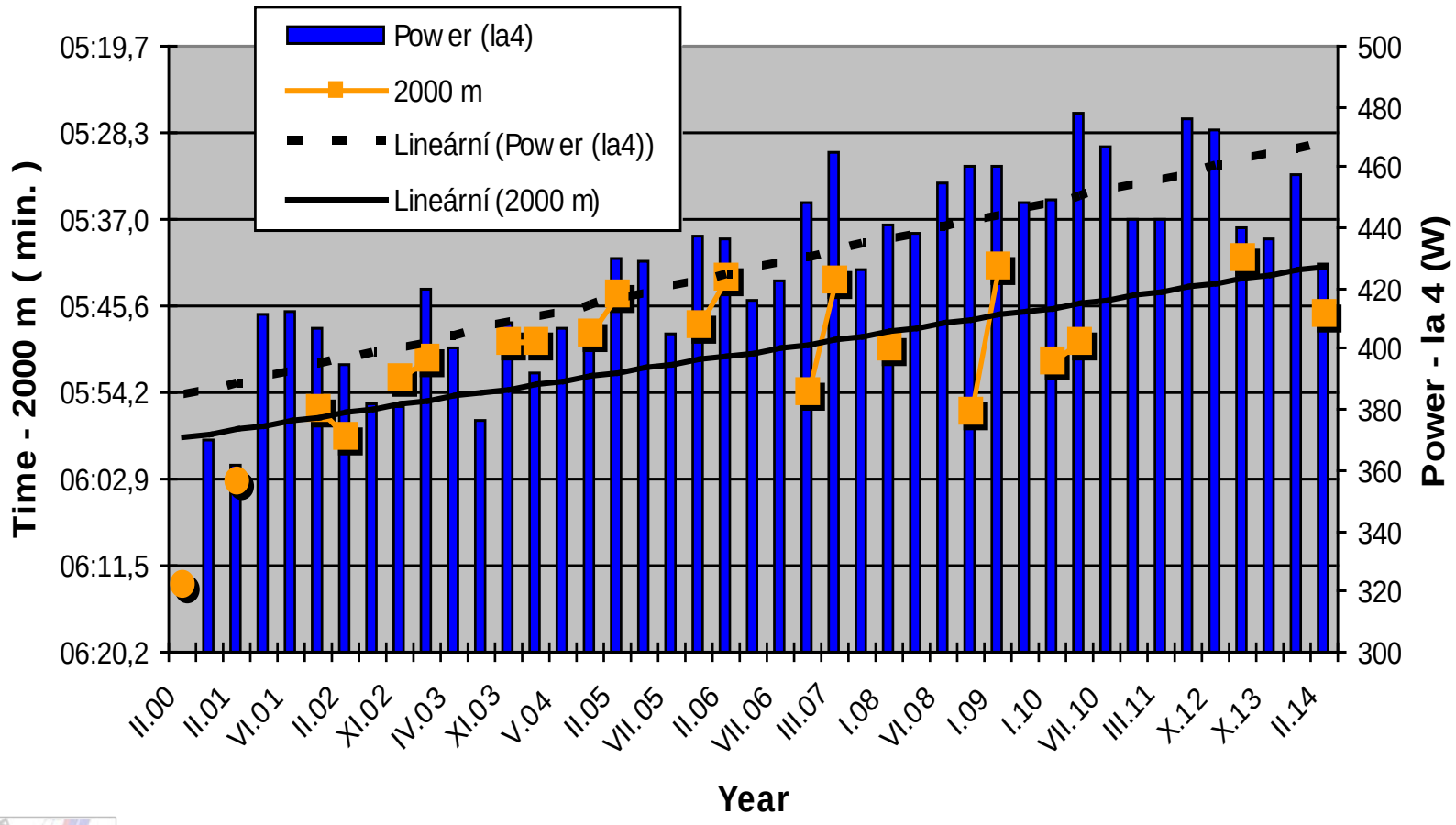
la less than 2 mmol/l of blood
la 2 – 4 mmol
la 4 – 6 mmol
la more than 6 mmol/l of blood

Lakt.	TF/min	VV
2.0	167.6	277.0
3.0		
4.0	177.3	329.6
5.0		
6.0	180.0	358.0
7.0		

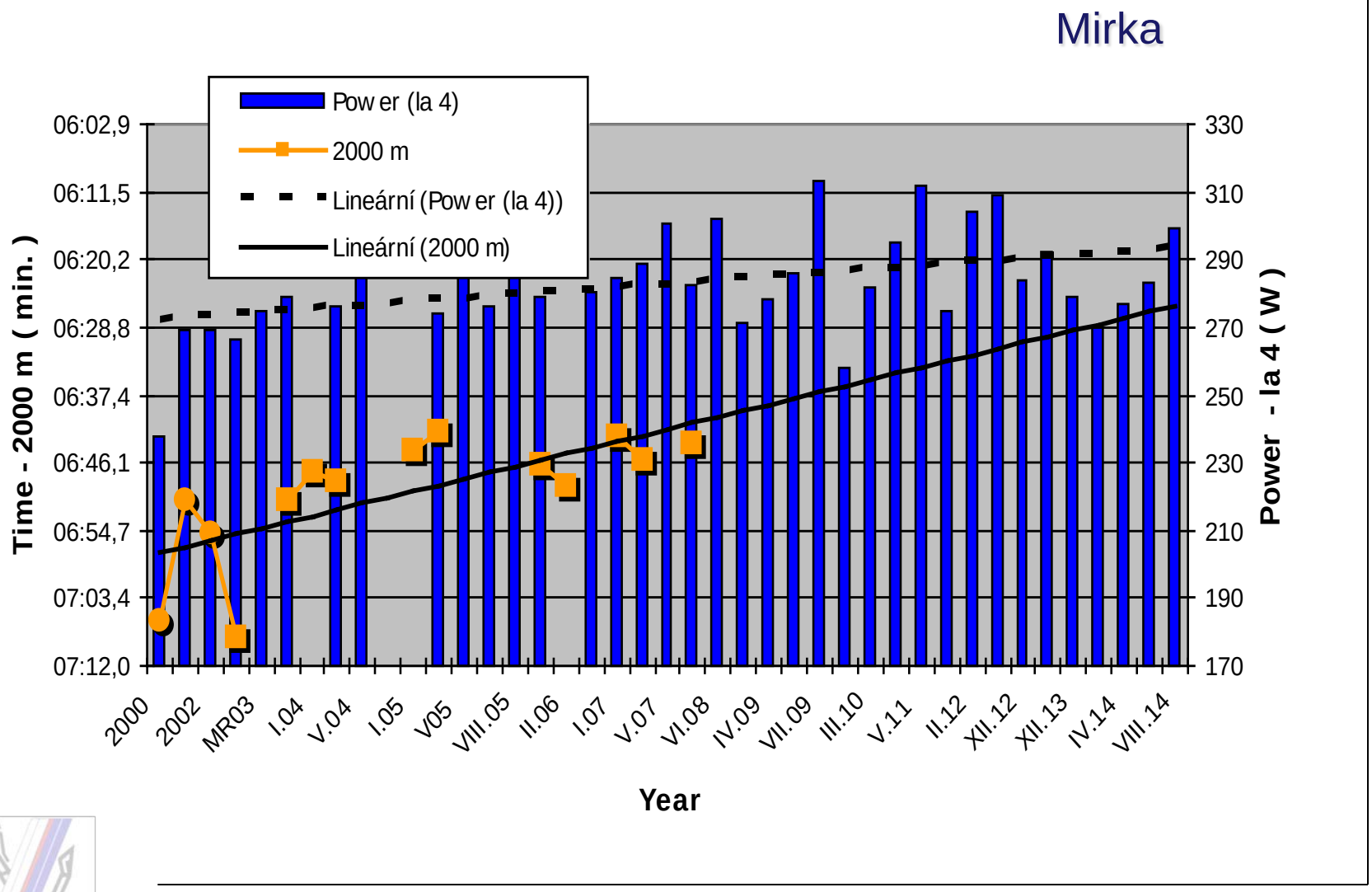


The tests

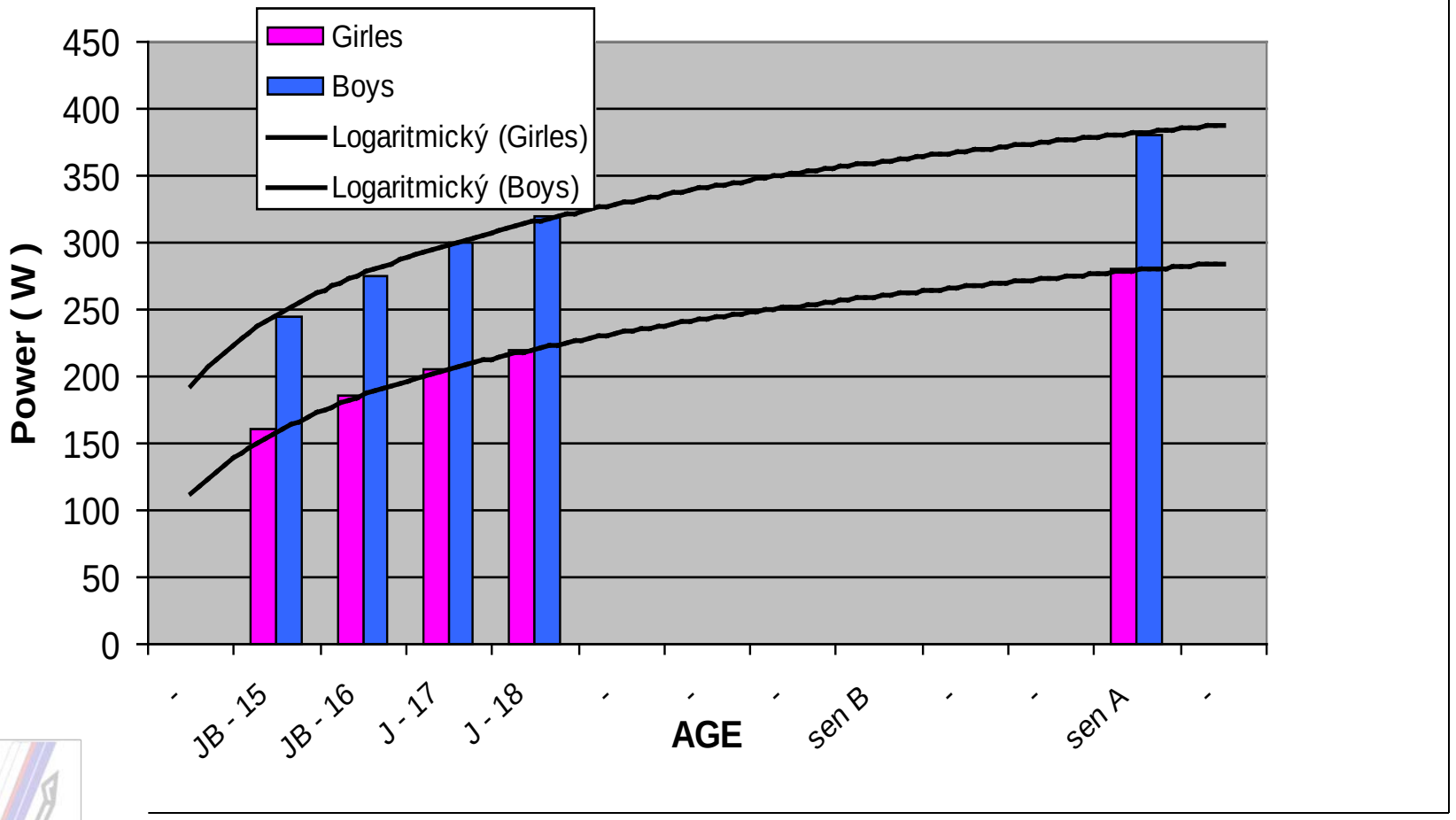
Ondrej



The tests


Mirka
Power (la 4)
2000 m
Lineární (Power (la 4))
Lineární (2000 m)
Time - 2000 m (min.)
Power - la 4 (W)
06:02,9
06:11,5
06:20,2
06:28,8
06:37,4
06:46,1
06:54,7
07:03,4
07:12,0
330
310
290
270
250
230
210
190
170
2000
2002
MR03
I.04
V.04
I.05
V05
VIII.05
II.06
I.07
V.07
VI.08
IV.09
VII.09
III.10
V.11
II.12
XII.12
XII.13
IV.14
VIII.14
Year

The tests – steps in power (la4)



Question: differences in testing

Mirka

The personal best

- 2000 m
  6:42,6
- 6000 m
  21:20,2
- Power (la4)
  311,5 W
- Power (la4) / kg
  4,4 W / kg

Ondrej

The personal best

- 2000 m
  5:40,9
- 6000 m
  18:05,3
- Power (la4)
  478,3 W
- Power (la4) / kg
  4,8 W / kg

Woman / Man

The international level

- 2000 m
  6:42 / 5:55
- 6000 m
  21:50 / 19:20
- Power (la4)
  280 / 380 W

The CZE opinion

Event	M	W
2-	6:21	6:58
1x	6:38	7:12

Questions: differences in times

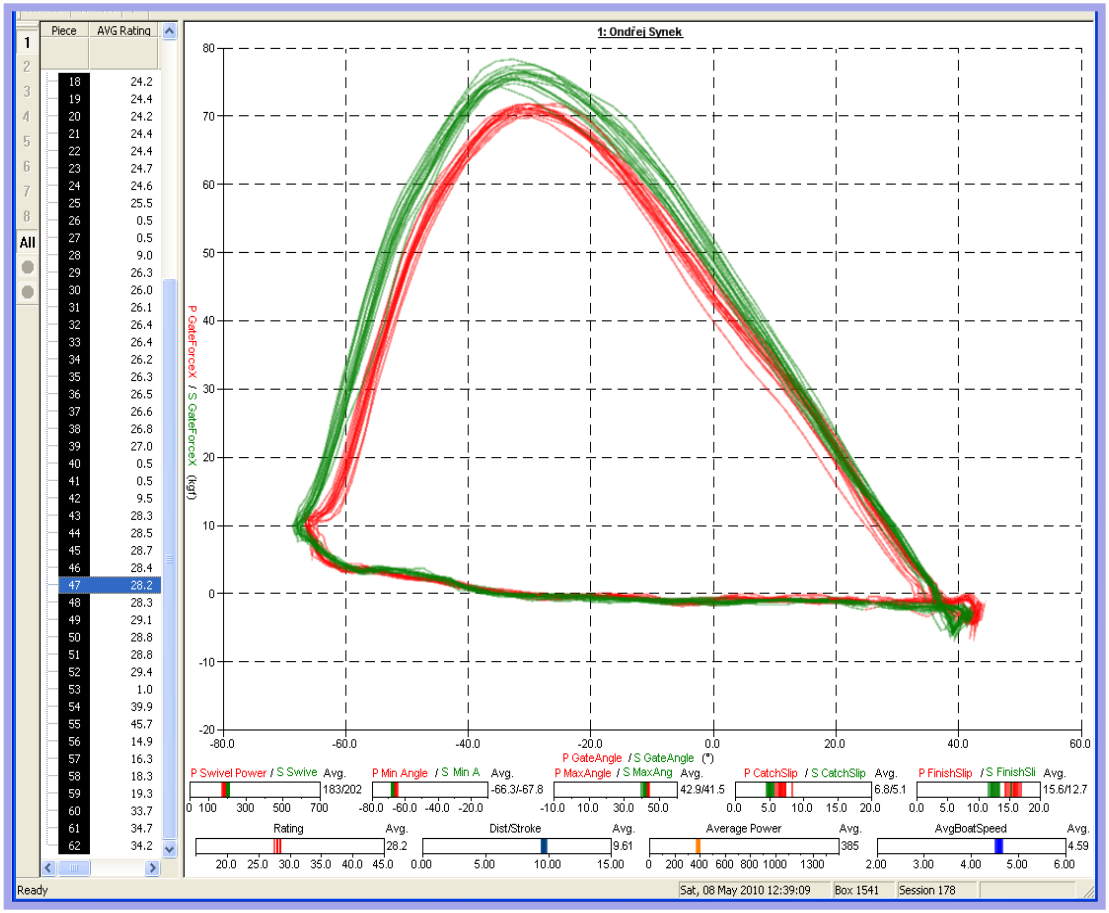
Event	M	ML	BM	BML	JM	W	LW	BW	BWL	JW
2x	**6:14**	**6:18**	6:18	6:24	6:28	**6:47**	**6:53**	6:52	6:57	7:02
2-	**6:21**	6:28	6:25	6:31	6:35	**6:58**		7:03		7:13
1x	**6:38**	6:45	6:42	6:48	6:52	**7:12**	7:29	7:17	7:23	7:28
4-	**5:51**	**5:57**	5:55	6:00	6:04	6:26		6:30		6:40
4x	**5:43**	5:49	5:47	5:52	5:55	**6:16**	6:23	6:20	6:26	6:30
8+	**5:30**	5:36	5:34	5:38	5:42	**6:02**		6:06		6:15

The CZE opinion

The biomechanical testing

Stroke Rate 28

- Swivel Power
  - 183 / 202 W = 385 W
- Min Angle
  - -66,3 / -67,8
- Max Angle
  - +42,9 / +41,5
- Catch Slip
  - 6,8 / 5,1 degrees
- Finish Slip
  - 15,6 / 12,7 degrees
- Dist / Stroke
  - 9,51 m
- Avg. Boat Speed
  - 4,59 m/s

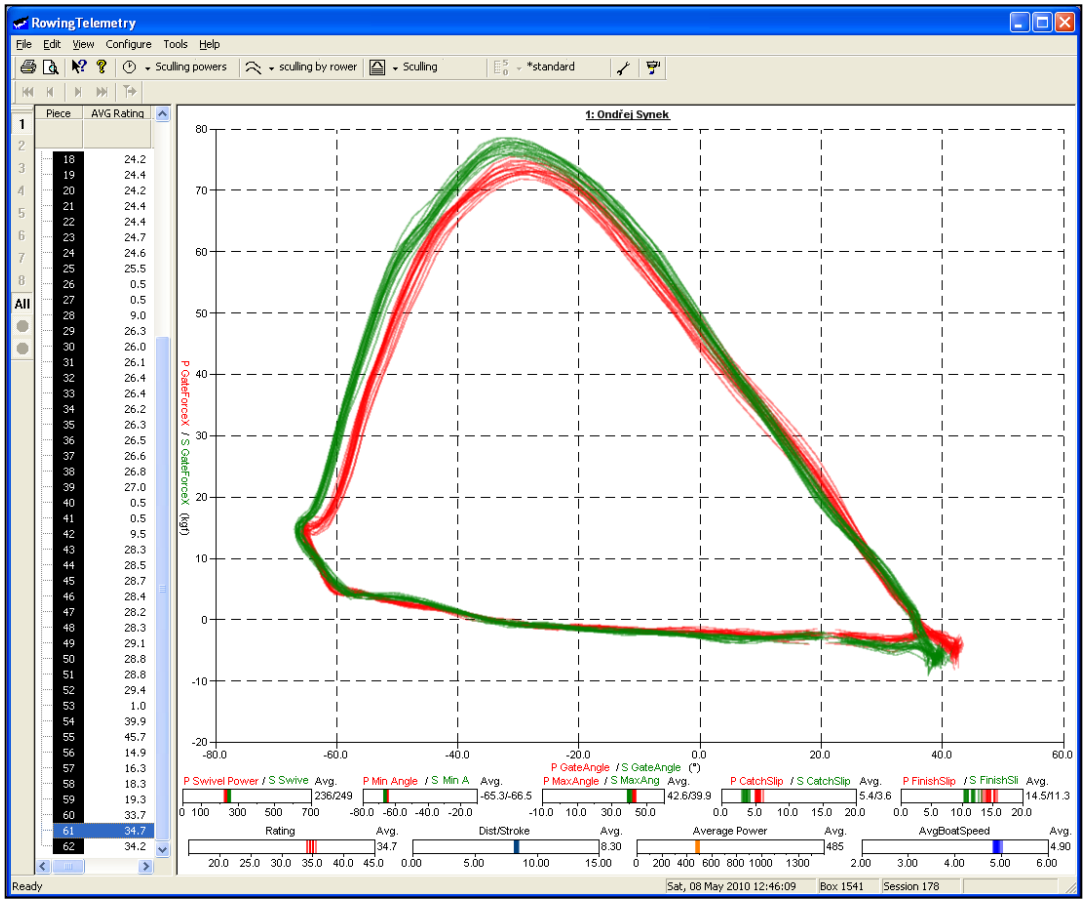


Ondrej

The biomechanical testing

Stroke Rate 35

- Swivel Power
  - 236 / 249 W = 485 W
- Min Angle
  - -65,3 / -66,5
- Max Angle
  - +42,6 / +39,9
- Catch Slip
  - 5,4 / 3,6 degrees
- Finish Slip
  - 14,5 / 11,3 degrees
- Dist / Stroke
  - 8,30 m
- Avg. Boat Speed
  - 4,90 m/s



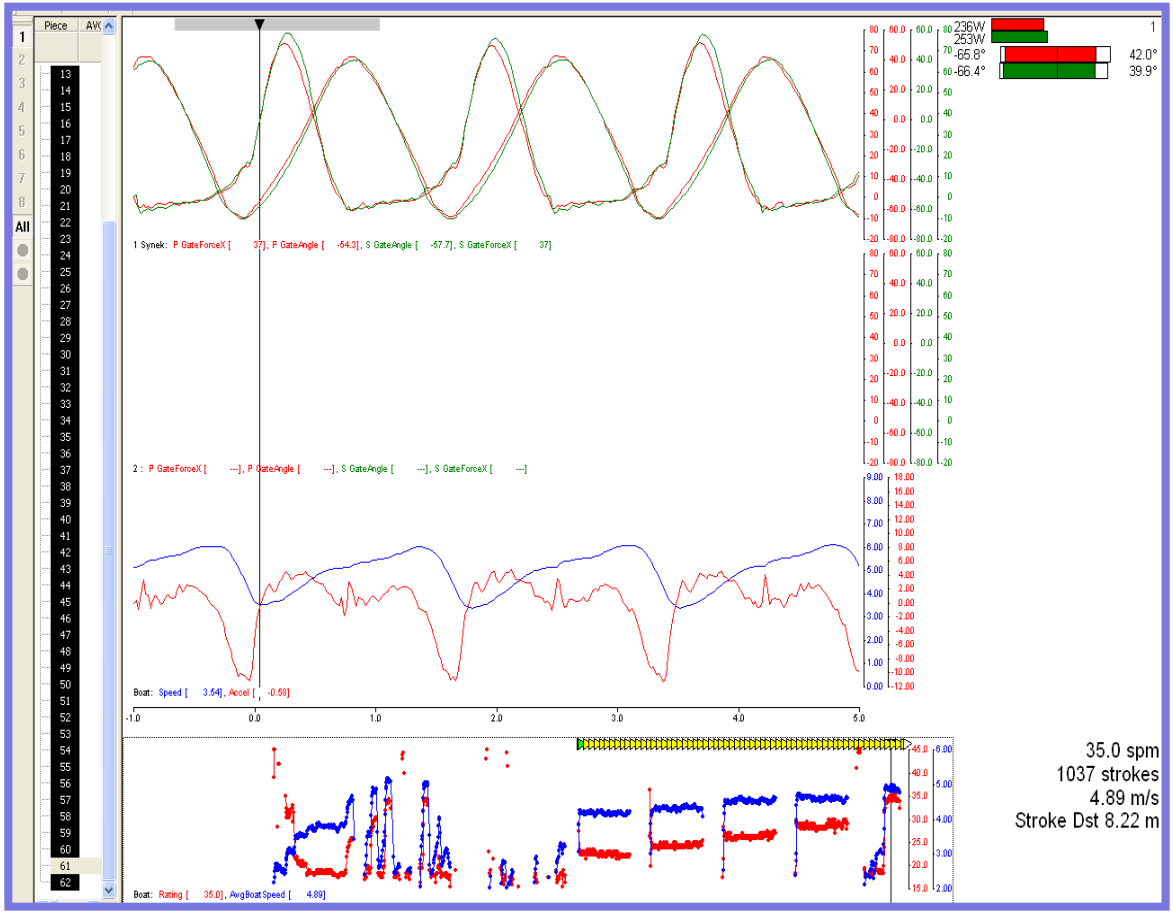
Ondrej

The biomechanical testing

Stroke Rate 35

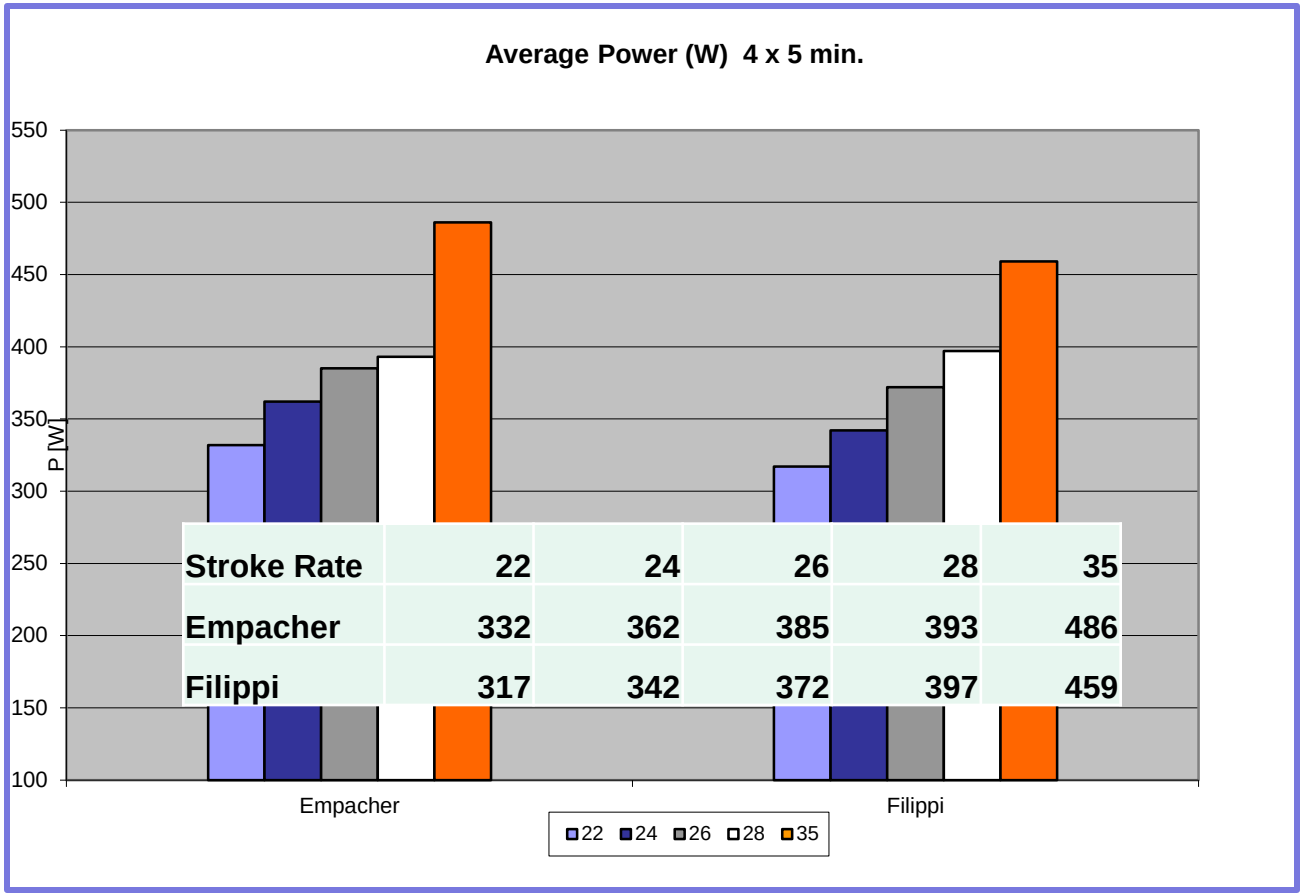
- Swivel Power
  236 / 253 W = 489 W
- Min Angle
  -65,8 / -66,4
- Max Angle
  +42,0 / +39,9
- Dist / Stroke
  8,22 m
- Avg. Boat Speed
  4,89 m/s

- Speed
- Acceleration



Ondrej

The biomechanical testing



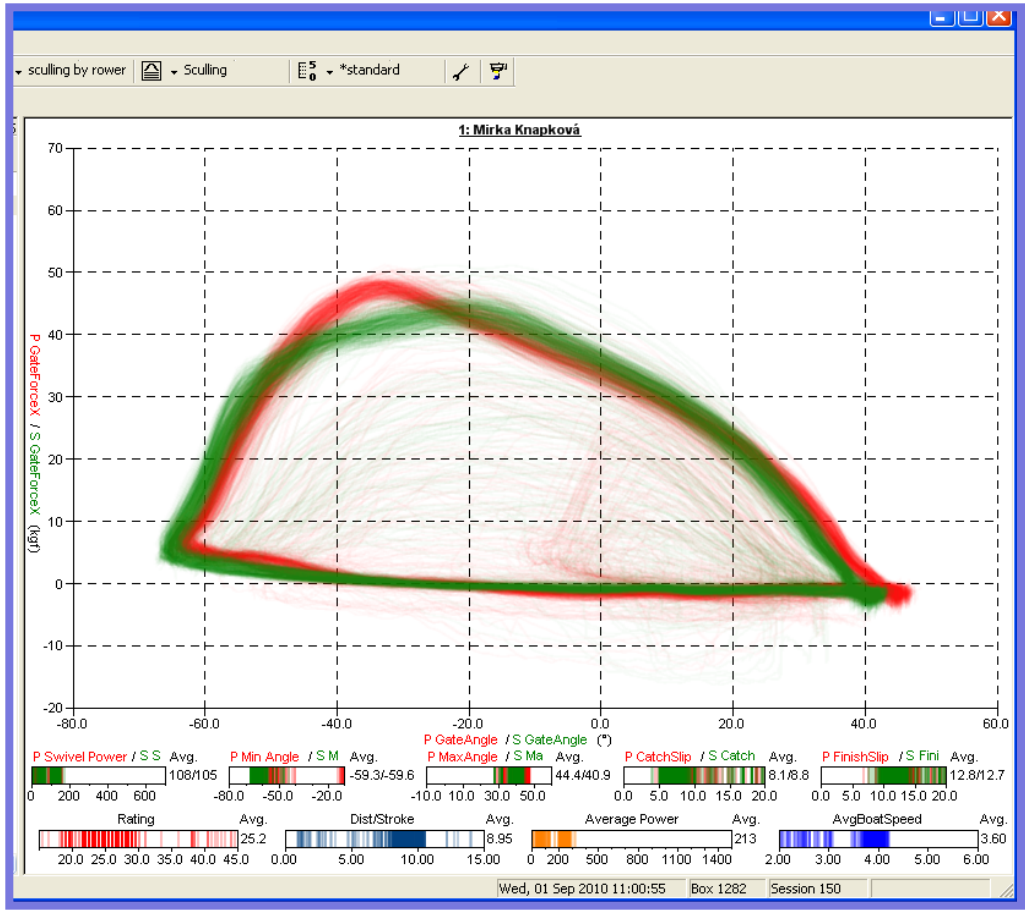
Stroke Rate	22	24	26	28	35
Empacher	332	362	385	393	486
Filippi	317	342	372	397	459

Ondrej

The biomechanical testing

Stroke Rate 25

- Swivel Power
  - 108 / 105 W = 213 W
- Min Angle
  - -59,3 / -59,6
- Max Angle
  - +44,4 / +40,9
- Catch Slip
  - 8,1 / 8,8 degrees
- Finish Slip
  - 12,8 / 12,7 degrees
- Dist / Stroke
  - 8,95 m
- Avg. Boat Speed
  - 3,60 m/s



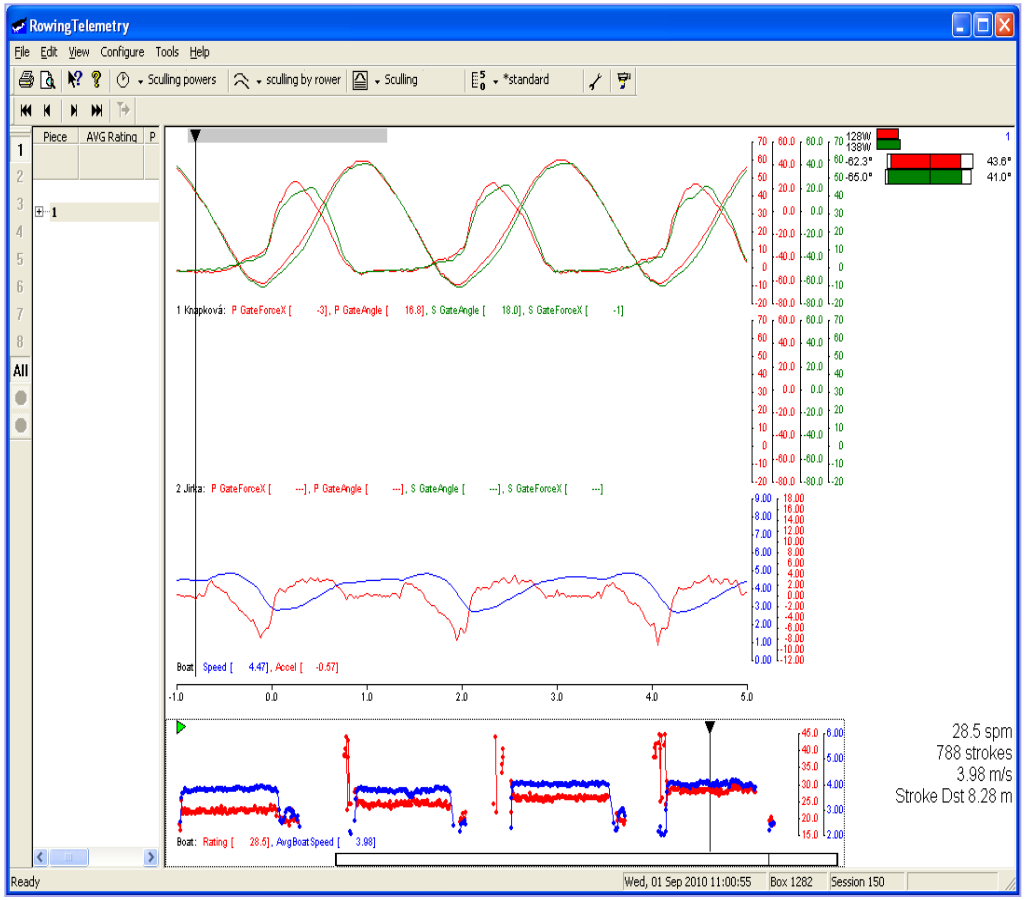
Mirka

The biomechanical testing

Stroke Rate 28

- Swivel Power
  - 128 / 138 W = 266 W
- Min Angle
  - -62,3 / -65,0
- Max Angle
  - +43,6 / +41,0
- Dist / Stroke
  - 8,28 m
- Avg. Boat Speed
  - 3,98 m/s

- Speed
- Acceleration

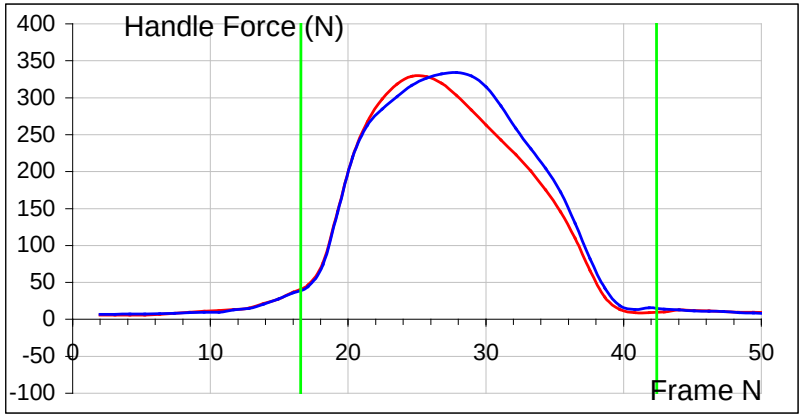


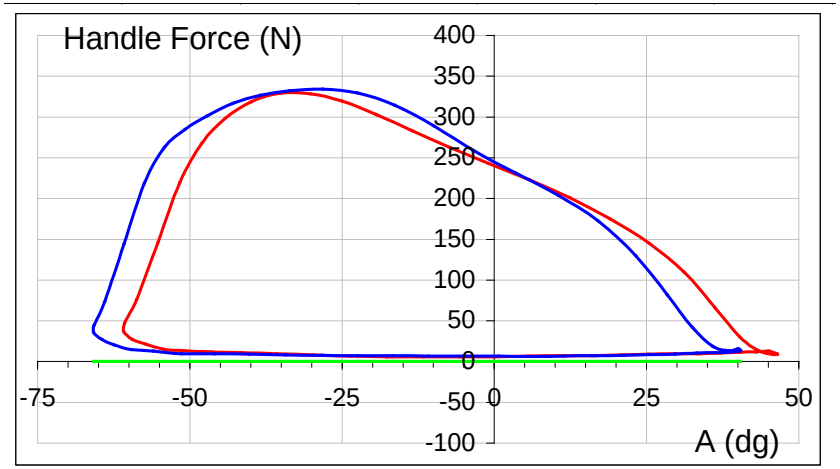
Mirka

The biomechanical testing

Stroke Rate 28

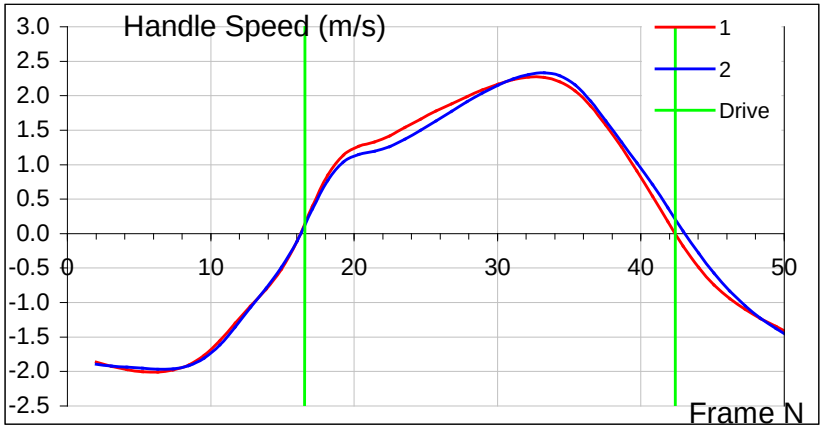
- Swivel Power
  154 / 162 W = 316 W
- Force Max (N)
  329 / 334
- Force Aver (N)
  184 / 190
- Total Angle (deg)
  107,3/ 106,2
- Length (m)
  1,57 / 1,55
- Drive Time (s)
  1,046 / 1,072
- Rhythm (%)
  49% / 50%

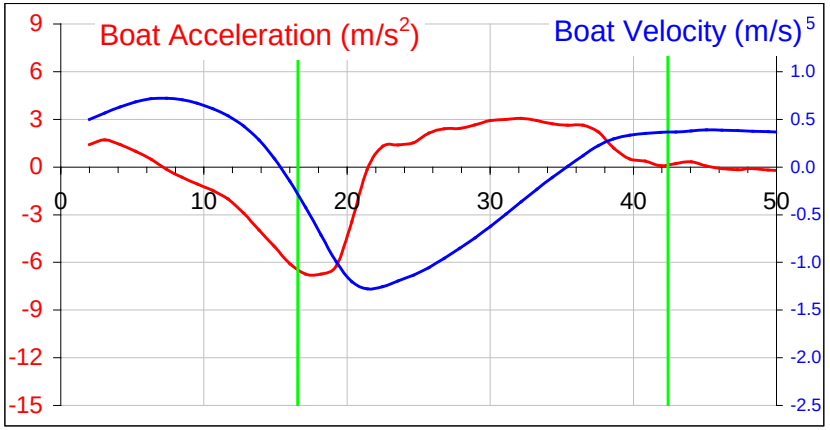


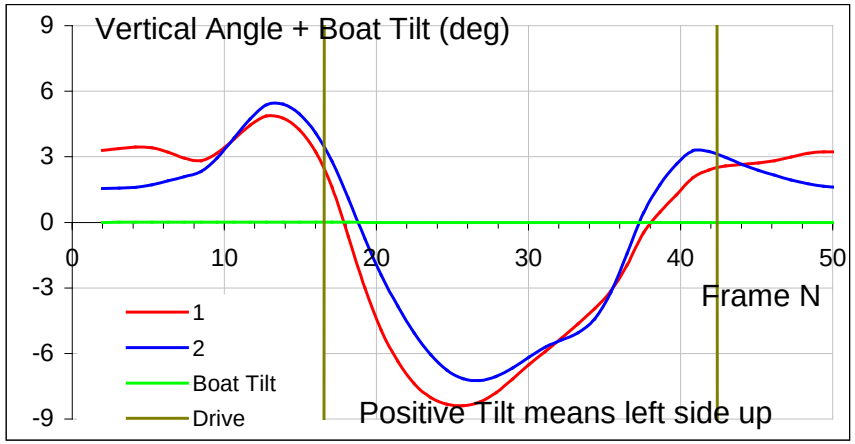


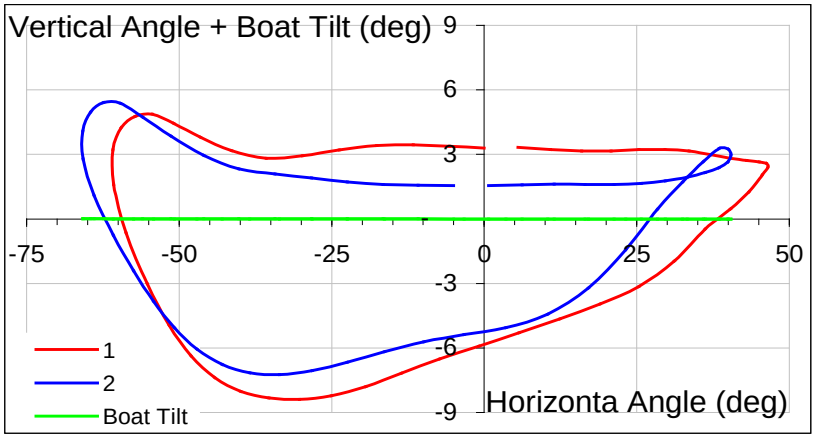
Mirka

The biomechanical testing









Mirka

The differences?

Stroke Rate 28

- Swivel Power
  183 / 202 W = 385 W
- Min Angle
  -66,3 / -67,8
- Max Angle
  +42,9 / +41,5
- Dist / Stroke
  9,51 m
- Avg. Boat Speed
  4,59 m/s

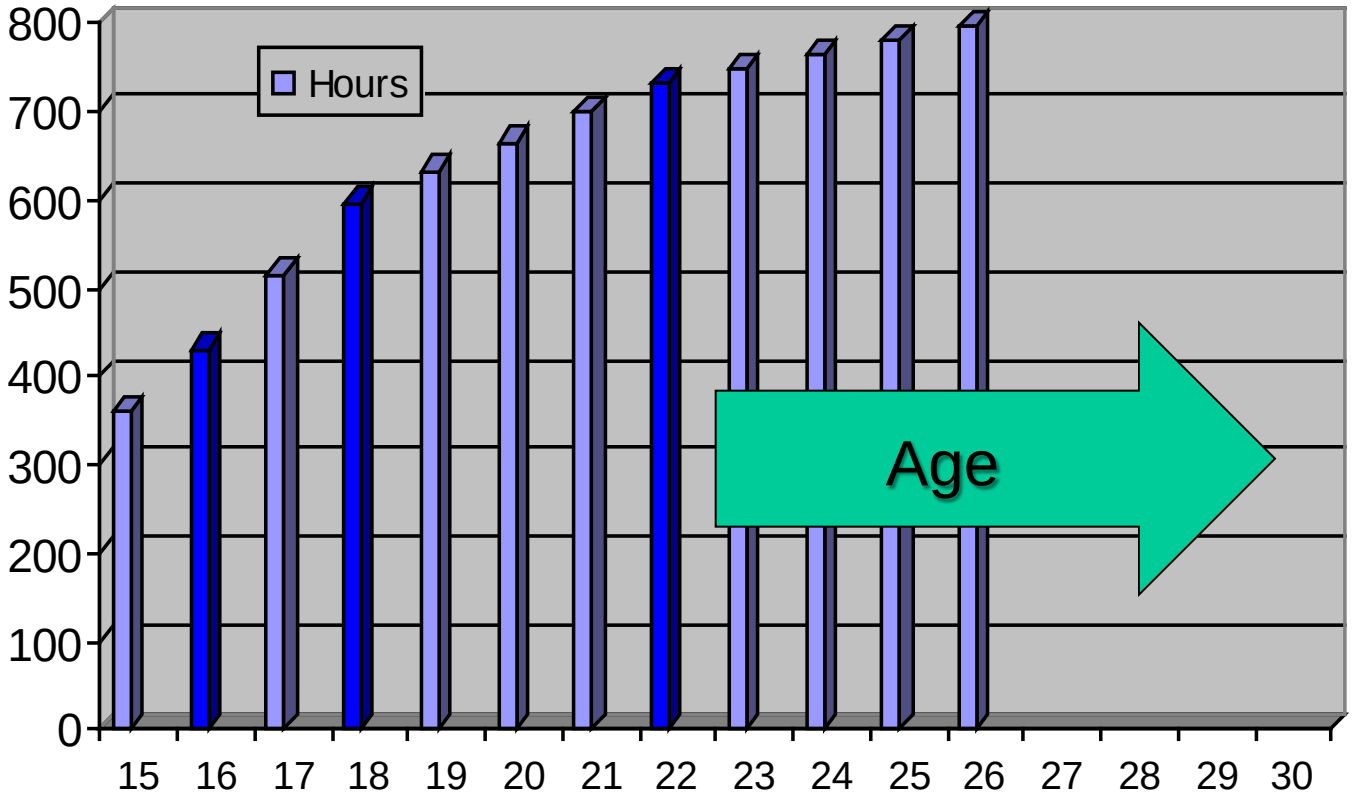
Ondrej

Stroke Rate 28

- Swivel Power
  128 / 138 W = 266 W
- Min Angle
  -62,3 / -65,0
- Max Angle
  +43,6 / +41,0
- Dist / Stroke
  8,28 m
- Avg. Boat Speed
  3,98 m/s

Mirka

Training volume



The differences in training volume?

- 272 days
- 679 hours
- 3 days of illness

- Rowing - 4512 km
- Water - 2353 km, ergo - 2159 km

In hours
- La 2 mmol - 225
- La 4 mmol - 82
- More then 4 mmol - 28
- Weight lifting - 102
- Running, cycling - 150
- Skiing, swimming, games - 92

- Limited training - 24 days

Ondrej

- 269 days
- 653 hours
- 26 days of illness

- Rowing - 4819 km

In hours
- La 2 mmol - 205
- La 4 mmol - 110
- More then 4 mmol - 75
- Weight lifting - 119
- Others - 144

- Limited training - 25 days

Mirka

The differences in programme?

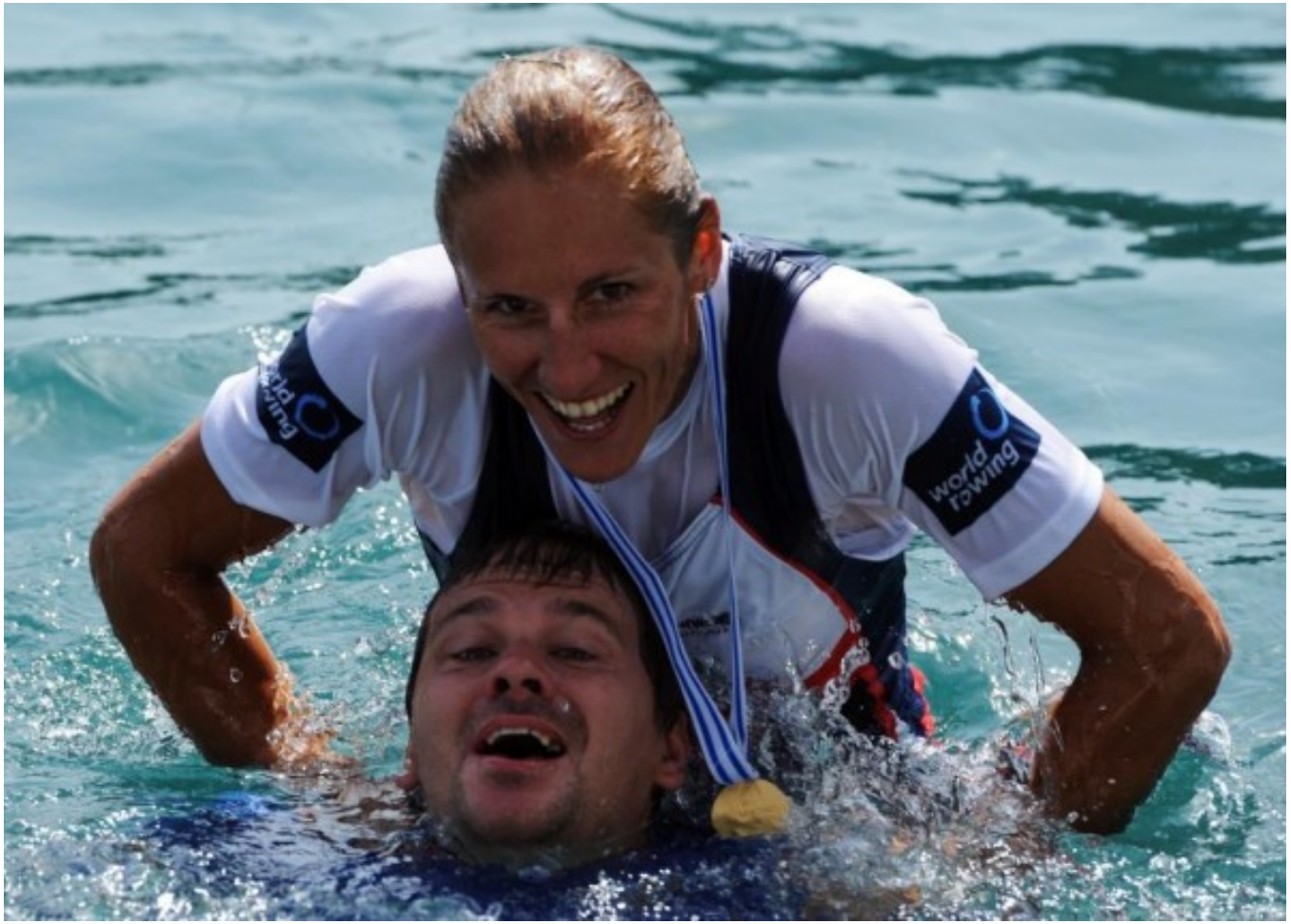
IX.	X.	XI.	XII.	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	WRCh
races Boston	rowing ergo	skiing Livigno	skiing Livigno	rowing at home						rowing Livigno		
	weight lifting		cross country skiing, rowing ergo				cycling rowing water			rowing water		

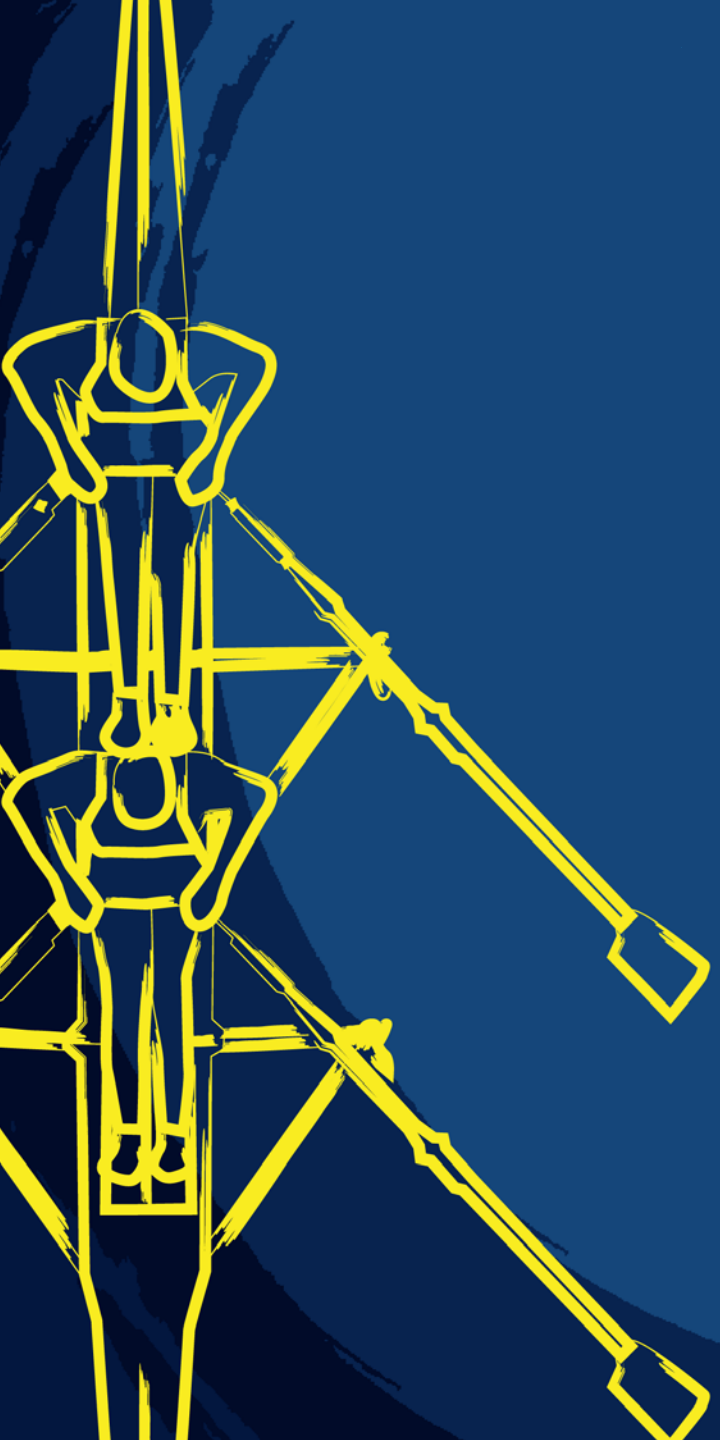
cardio vascular system — cardiac output — speed

force

Ondrej

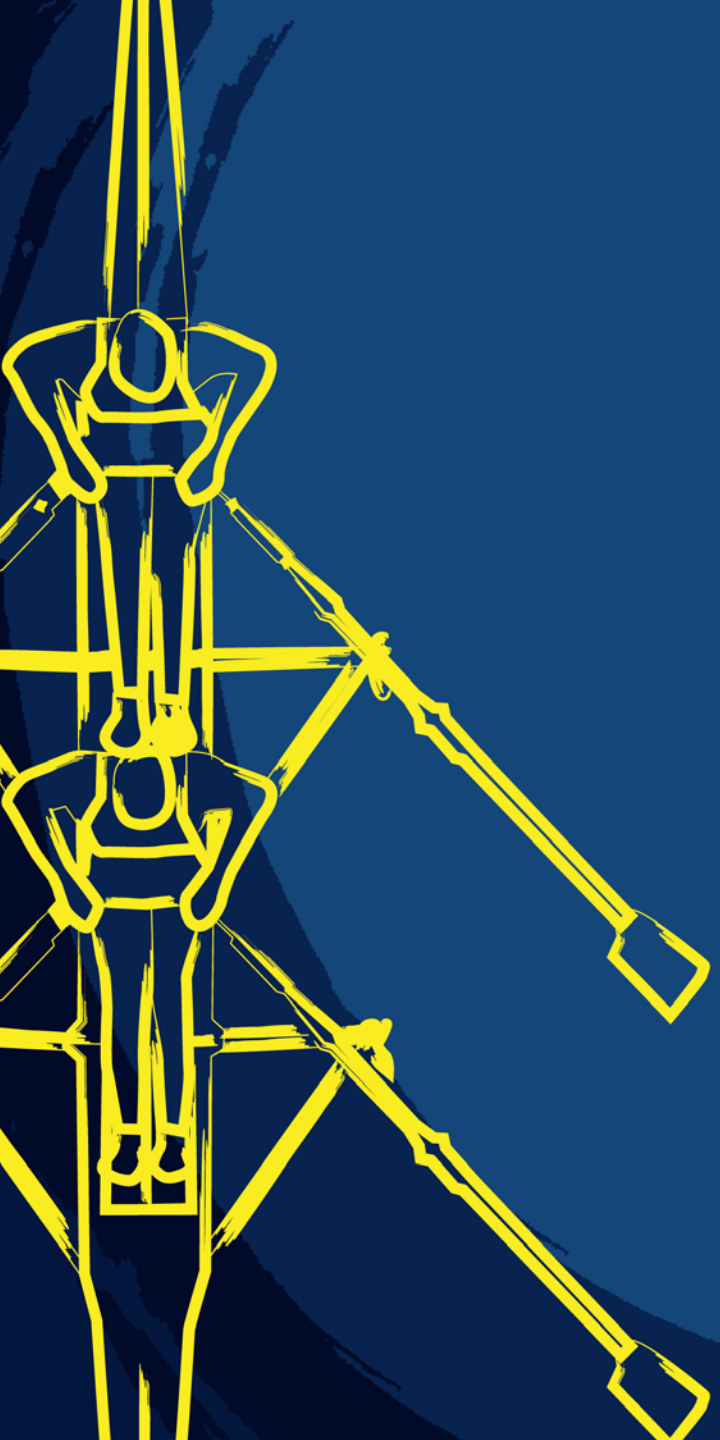
The happy end





LUNCH

07/11/2014



COACHING PARA ROWERS

Guilherme Soares (BRA)

07/11/2014

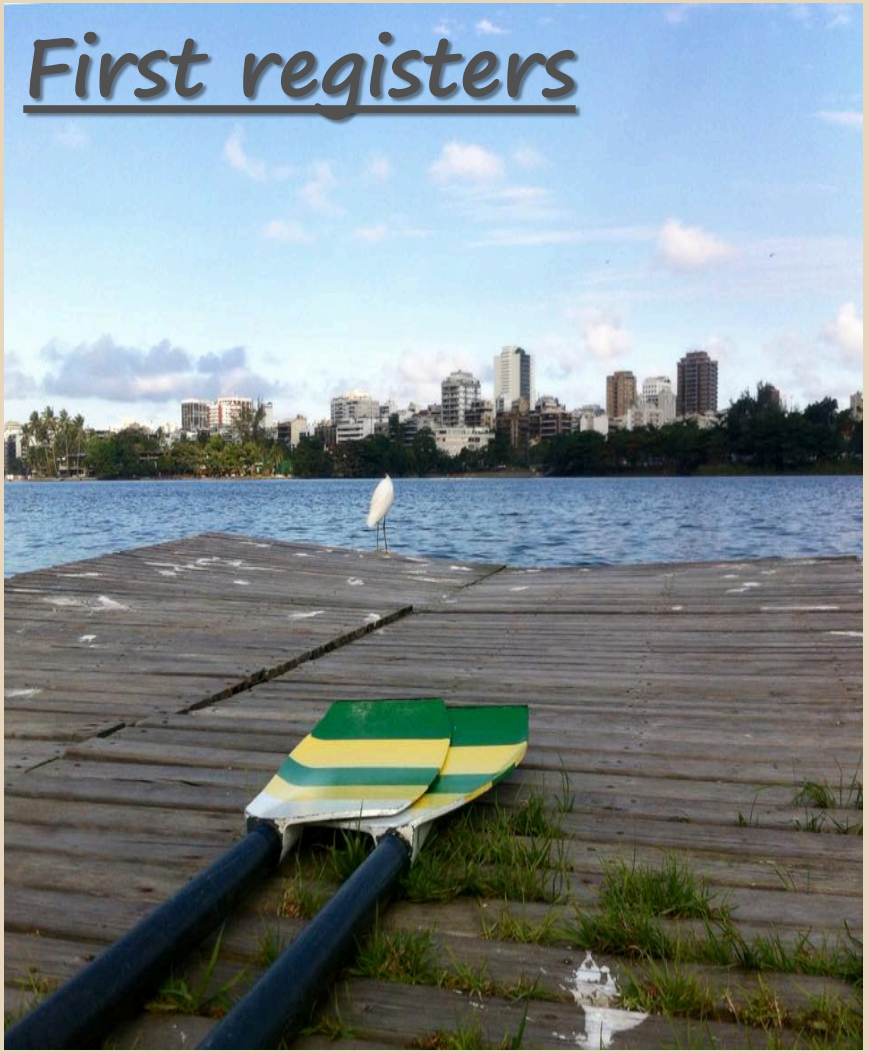
ParaRowing

Guilherme Soares
Technical Coordinator of ParaRowing.

Paralympic Rowing in Brazil

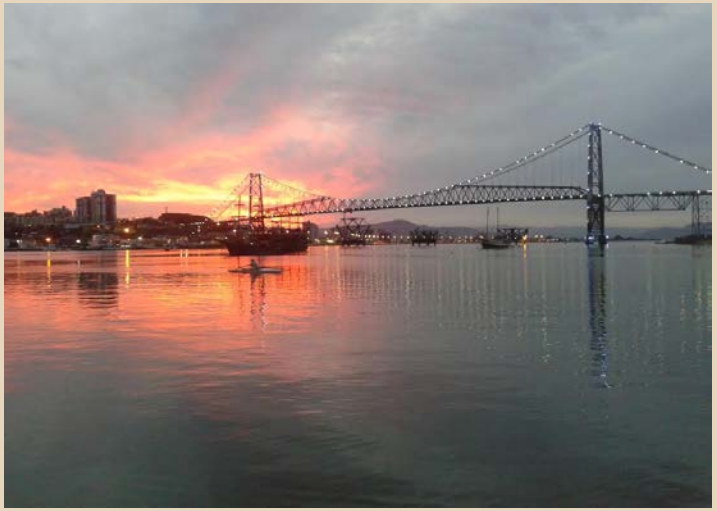
1980 – Project Suderj – Adapted rowing – A new perspective to handicapped people

First registers



Begin

- 2003 – Santa Catarina
- 2004 – Banyoles World Rowing Championship
- 2005 – Adapted Rowing Department



International Championships

Years	2006	2007	2008	2009	2010	2011	2012	2013	2014
International Competitions	8°- 2x TA 9°- 4+ LTA 10°-1x AsM Eton	1°- 1x AsW 1°- 2x TA 8°- 4+LTA 9°- 1x AsM Munich		2°- 2x TA Poznan	2°- 1x AsW 4°- 2x TA 6°- 1x AsM Lake Karapiro	5°- 1x AsW 9°- 1x AsM 9°- 4+ LTA Bled		3°- 1x AsW 9°- 1xAsM Chungju	3°- 2x TA 5°- 2x LTA 5°- 4+ LTA 6°- 1x AsM 7°- 1x AsW Amsterdam
Paralympics			3°- 2x TA 4°- 1x AsW 7°- 4+ LTA				4°- 1x AsW 6°- 1x AsM 8°- 2x TA		

Other ParaRowing Championships

COMPETITION	GOLD	SILVER	BRONZE
GAVIRATE	---	6	6
CRASH-B	5	4	1

Relevant Data

Brazil	**5th largest country in the world**
Population	203.500.000 inhabitants
23,9 % of population have some kind of disability	Motor, Hearing, Visual and Mental or Intelectual

- 26 States + 1 Federal District
- 14 States develop Rowing
- 8 States develop ParaRowing

Difficulties found at the Clubs

- Accessibility
- Specific equipment
- Professional development

Challenge – Renovation

- Applied policy Initiation Parasports
- Support from the Brazilian Paralympic Committee
- Carrying out of Courses and Seminars
- Partnership with Universities

Selection Process- Athletes

SNAR National System of Evaluation of Rowers

- 100 meters
- 250 meters
- 1000 meters
- 3000 meters
- Strength Test

Selection process – Athletes

1x ASM e ASW – The best of 3 falls by 1 km distance

2x TA e LTA – Rowing machine, the best of 3 falls by 1 km distance and better boat formation

4+ LTA – Rowing machine, 2 - pair all the formations and better formation of 4+ Coxed Pair

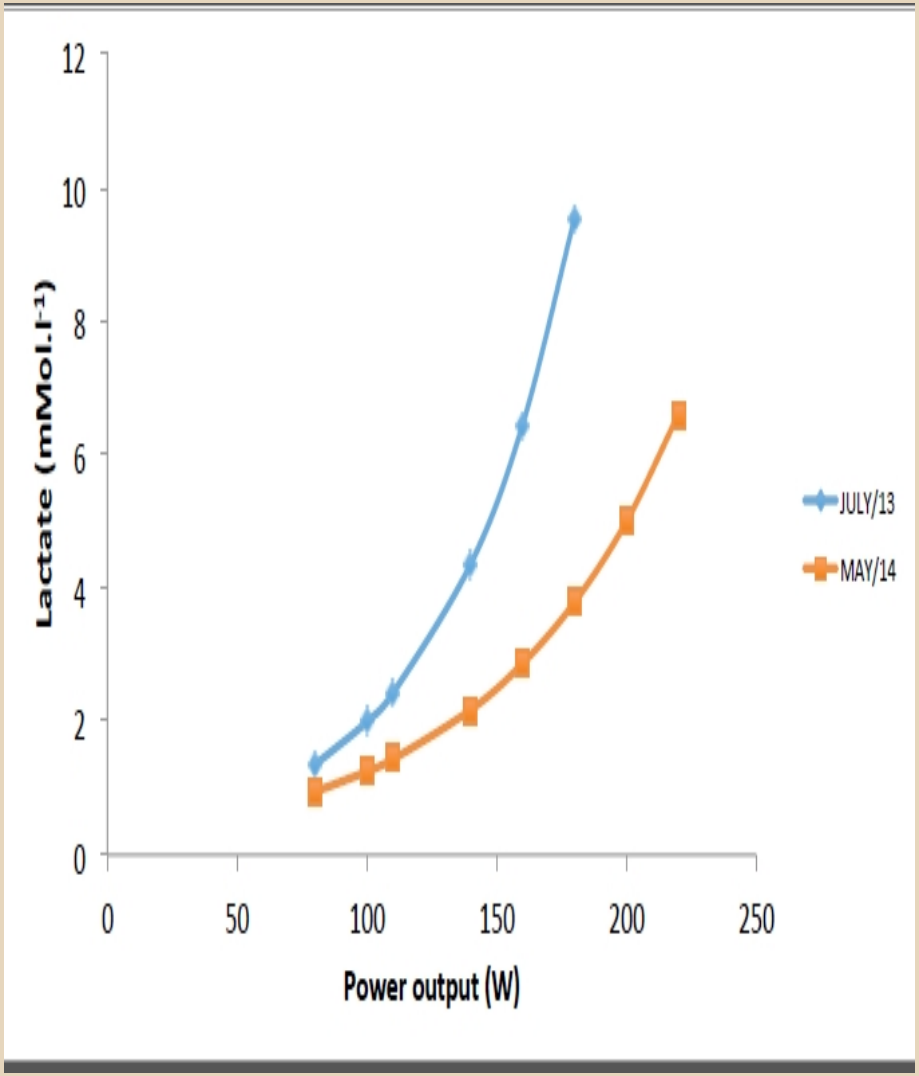
Athletes' training

Phisiology

Incremental test - assesses aerobic capacity by response rates of lactate (anaerobic threshold) and maximal aerobic power at VO2

3 minutes steps, with breaks of 30 seconds to collect blood increasing 20-30 watts until exhaustion for athletes of all categories.

Phisiology



Incremental test variation of athlete TA Josiane Lima

Training method

Kaatsu Training

Training with restricted blood flow

Researches have shown significant improvement in the ability of strength and endurance

Psychology Applied to Sport

Mental training

By Samulski (2000), mental training is the imagination of planned, conscious and repeated motor skills, sports techniques and tactical strategies.

Mental training allows the athlete to reach, with regularity, optimal conditions for learning and performance through the development of mental skills.

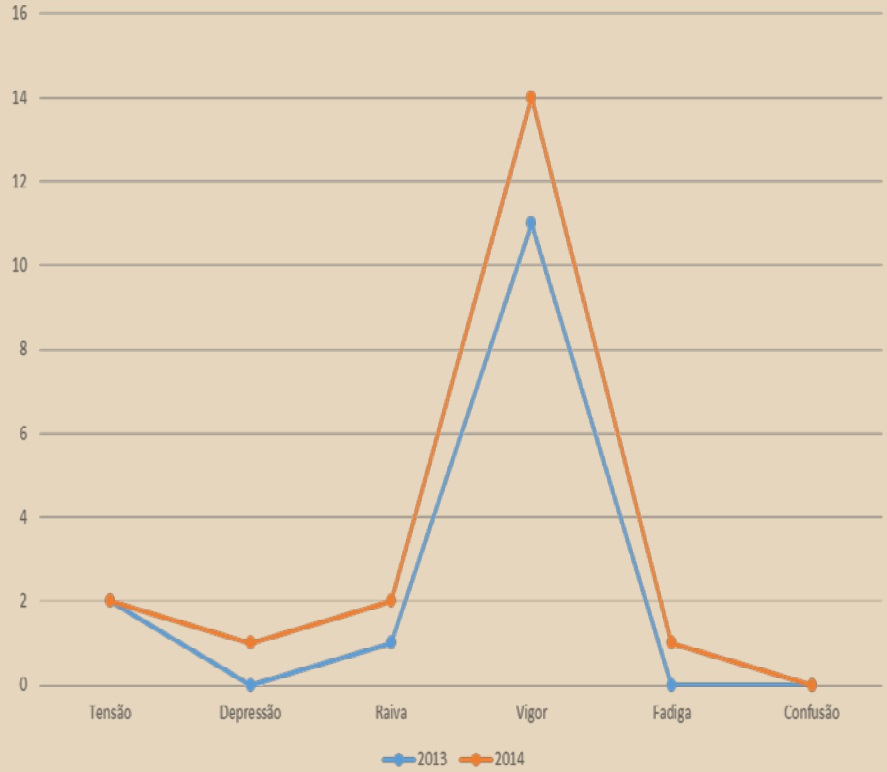
Psychology Applied to Sport

Used techniques

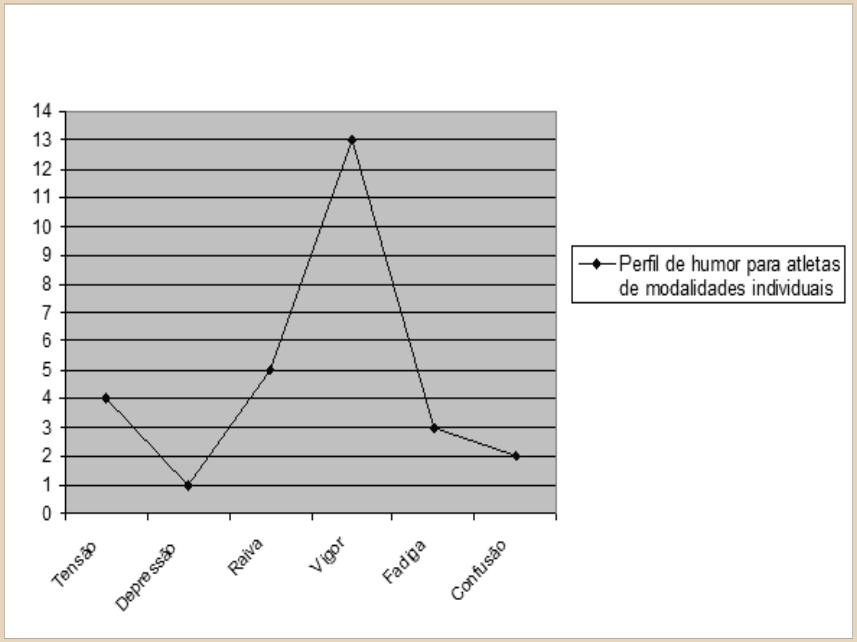
- Relaxing
- Visualization
- Stress control
- Anxiety
- Optimal activation

Psychology Applied to Sport

Mood levels of athlete TA Josiane Lima in the competitive period in 2013 and 2014, with high levels of force associated with low levels of tension, depression, anger, fatigue and confusion.



Ideal model of humor to individual sports athletes to competitive period (Brandt, 2013). And in training period under tension, and anger levels is recommended. Based on this,it can be seen that the athlete had optimal levels of the mood factors, being in the best physical and emotional conditions to train and compete.



Physiotherapy

Used Techniques

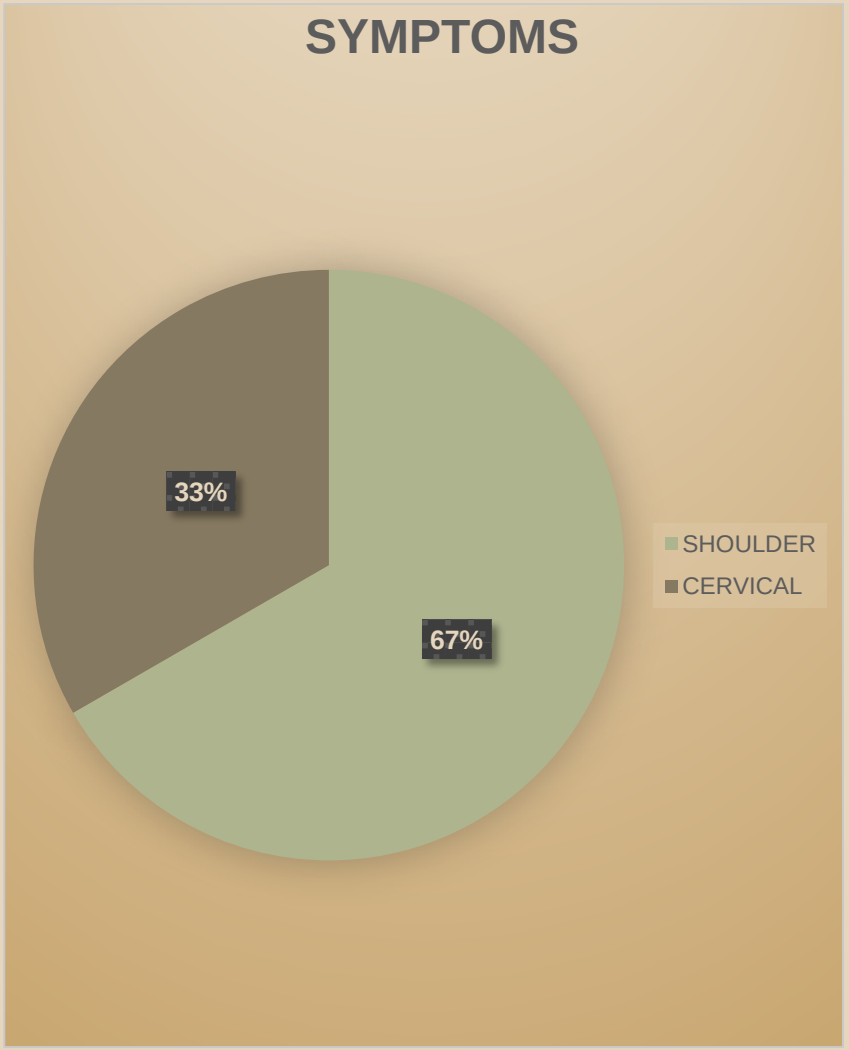
- Cinesiotherapy
- Techinique of Crochetagem
- Myofascial Techniques
- Electrotherapy
- Kinesiotaping
- Functional Bandage
- Neural Mobilization

Physiotherapy

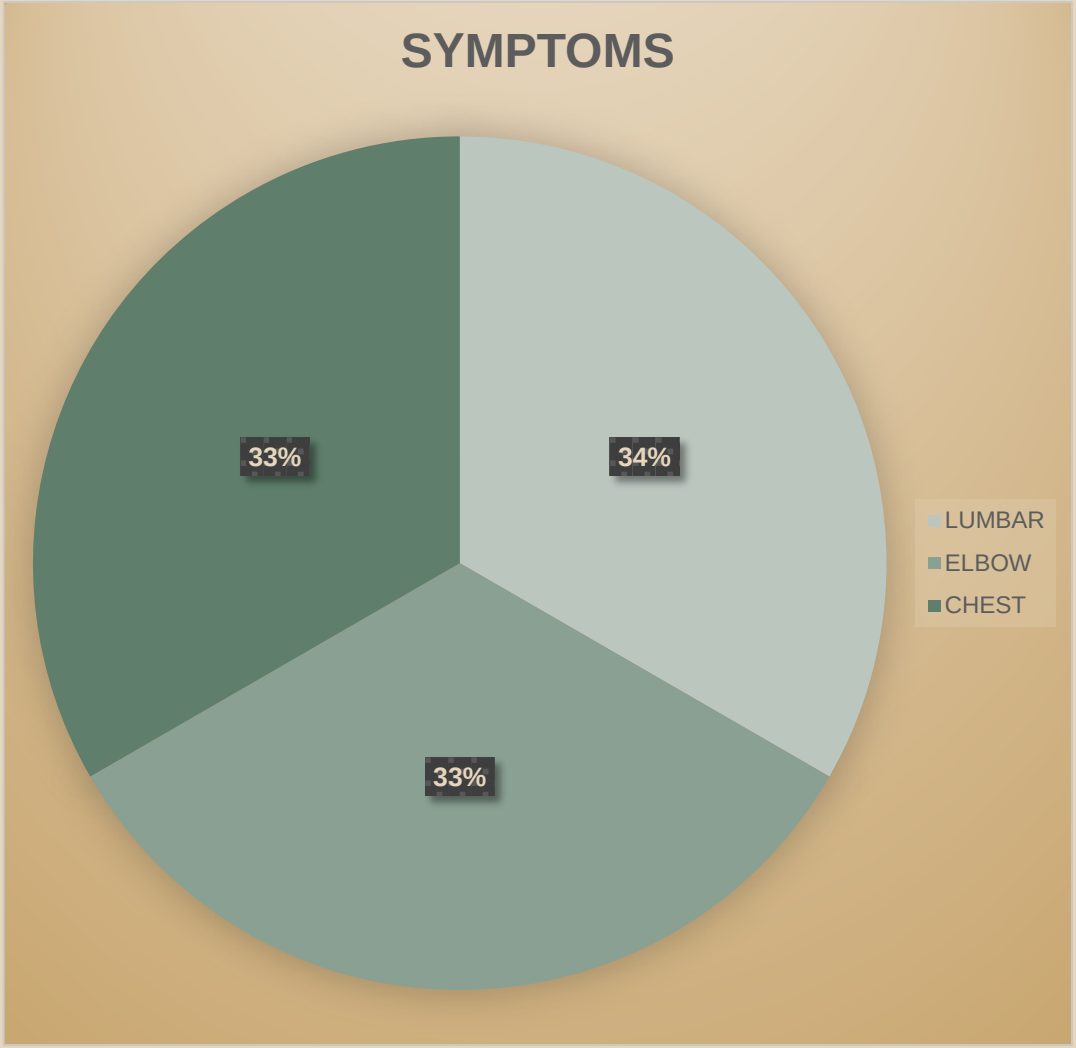
According to the Belgian Academy of Osteopathy
"Osteopathy is a palpatory, diagnostic and therapy of disorders of joint mobility and tissue approach."

Statistic of the most affected regions of the Paralympic athletes of Brazilian team in 2013 and 2014

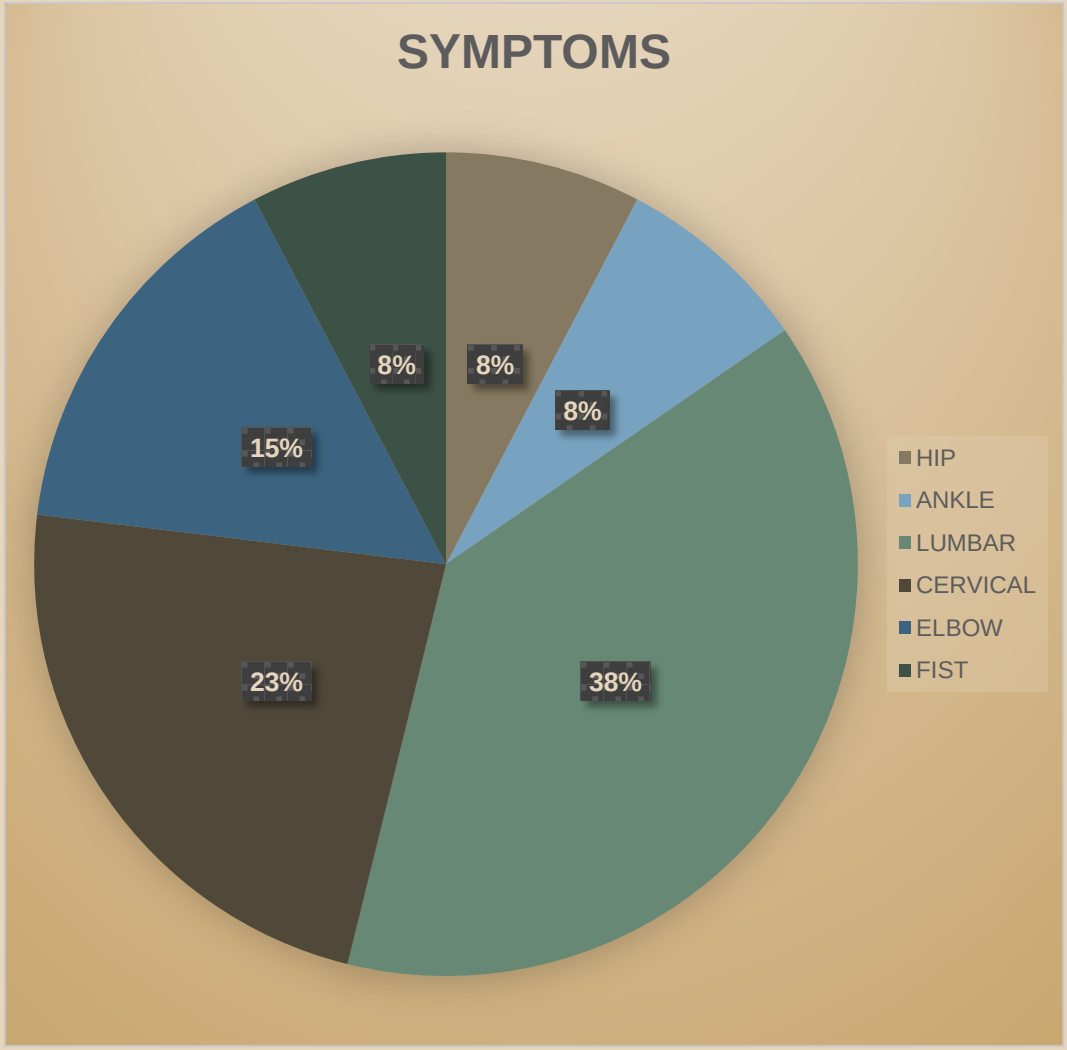
CATEGORY AS



CATEGORY TA



CATEGORY LTA



Composition process - 2x TA

guilhermesoares@cbr-remo.com.br
Phone Number: (21)99165-9928

PARA ROWING CLASSIFICATION

Roberto Nahon (BRA)

07/11/2014

FISA

Classification and Para-Rowing Overview

Classification

What is Classification?

It is an official process that:

- Provides structure for competition
- Follows recommendations from IPC
- Determines Eligibility of Athletes
- Minimizes effect of impairment on competition

Classification Guidelines

What it means:

- Inclusion
- Athlete Grouping – Based on function, not on diagnosis

FISA Classifiers

Medical Classifier

- Medical Doctor
- Physiotherapist
- Doctor of Osteopathic Medicine

Technical Classifier

- Rowing Coach
- Former Rower
- Sport Scientist

FISA Classifiers

Classifiers

- Appointed by FISA Executive Committee, Para-rowing Commission, and Head of Classification
- Medical and Technical
- Experience with para-rowing
- Recommended

Five Sport Classes

- ID
- LTA-PD
- LTA-PD (2x)
- LTA-VI (B1, B2, B3)
- TA
- AS
- N/E (Not Eligible to Compete)

Rower Eligibility

- To be eligible to compete an athlete must have an impairment that leads to a permanent and verifiable activity limitation

- Rowers must provide documentation of this diagnosis, signed by a physician, in English

Classification – LTA Sport Class

- **Must Meet the Minimum Disability**
- **Physical Disability**
  - Will be assessed by FISA Classification Panel
- **Visual Impairment**
  - Must be assessed by VI FISA Classification Panel and issued a Sport Class of B1, B2, or B3

Classification – LTA Sport Class

- **Must Meet the Minimum Disability**
- **Physical Disability**
  - Will be assessed by FISA Classification Panel
- **Visual Impairment**
  - Must be assessed by VI FISA Classification Panel and issued a Sport Class of B1, B2, or B3
- **Intellectual Disability**
  - **Must be included on INAS list on website**
  - **Also working on technical evaluation of ID rowers on ergometer for sport specific testing and will use a computer battery of tests completed by INAS**

Minimum Disability

Minimum Disability for Rowers With a Physical Disability

- Full loss of at least three (3) fingers on one hand
- Partial metatarsal amputation on one foot
- Loss of 10 points on one limb or 15 points across 2 limbs using Functional Classification Assessment Chart

LTA Sport Class

Typical characteristics of LTA rower

- Amputation: minimum of one single foot, tarsal-metatarsal, or three fingers of one hand
- Neurological impairment equal to incomplete lesion at S1
- Cerebral Palsy Class 8 (CP-ISRA)
- Visual impairment: IBSA Classification
- Intellectual impairment: INAS-FID criteria
- Other neurological impairment of single arm

Classification – TA Sport Class

TA Sport Class

- Trunk function
- Unable to use sliding seat to propel boat
- Significantly weakened function of the lower extremities
- Significant loss of movement of the lower extremities

TA Characteristics

Typical Characteristics of TA Rower

- Bilateral around the knee amputations
- Impaired quadriceps
- Neurological impairment equal to complete lesion at L3
- Neurological impairment equal to incomplete lesion at L1
- Cerebral Palsy Class 5 (CP-ISRA)

Classification – AS Sport Class

AS Sport Class

- Minimal to No Trunk function
- Able to apply force using predominantly the arms and shoulders
- Decreased sitting balance usually present

AS Characteristics

Typical Characteristics of AS Rower

- Neurological Impairment equal to complete lesion at T12
- Neurological Impairment equal to incomplete lesion at T10
- Cerebral Palsy Class 4 (CP-ISRA)

Classification Process

Process for Rowers with Visual Impairment

- Review paperwork and sign where appropriate
- Indicate correct sport class
- Functional Evaluation not needed at this point

Classification Process

- Interview Rower (brief)
- Documentation check
- Medical evaluation
- Technical evaluation
- On Water evaluation

Classification Process - Conclusion

CONCLUSION OF CLASSIFICATION AND COMPLETION OF DOCUMENTATION

Once confirmed with all necessary above tests, the classifiers will jointly determine the “Final Classification” and the recommended sport class and status will be noted on the application form.

Classification Process - Conclusion

CONCLUSION OF CLASSIFICATION AND COMPLETION OF DOCUMENTATION

Once confirmed with all necessary above tests, the classifiers will jointly determine the "Final Classification" and the recommended sport class and status will be noted on the application form.

A 'C' (Confirmed) sport class status will be given if the rower is classified by a FISA International Classification Panel, none of whom are from that rower's country, and the rower's status is not likely to change.

Classification Process - Conclusion

CONCLUSION OF CLASSIFICATION AND COMPLETION OF DOCUMENTATION

Once confirmed with all necessary above tests, the classifiers will jointly determine the "Final Classification" and the recommended sport class and status will be noted on the application form.

A 'C' (Confirmed) sport class status will be given if the rower is classified by a FISA International Classification Panel, none of whom are from that rower's country, and the rower's status is not likely to change.

An 'N' (New) status will be given if the rower is classified by a classifier from the same NF as the athlete.

Classification Process - Conclusion

CONCLUSION OF CLASSIFICATION AND COMPLETION OF DOCUMENTATION

Once confirmed with all necessary above tests, the classifiers will jointly determine the "Final Classification" and the recommended sport class and status will be noted on the application form.

A "C" (Confirmed) sport class status will be given if the rower is classified by a FISA International Classification Panel, none of whom are from that rower's country, and the rower's status is not likely to change.

An "N" (New) status will be given if the rower is classified by a classifier from the same NF as the athlete.

An "R" (Review) status will be given if the rower is classified by a FISA Classification Panel and the rower has a progressive disability that may improve, and/or at least one member of the panel is from that rower's country, or there is any question regarding the sport class issued.

Classification Process - Conclusion

CONCLUSION OF CLASSIFICATION AND COMPLETION OF DOCUMENTATION

Once confirmed with all necessary above tests, the classifiers will jointly determine the "Final Classification" and the recommended sport class and status will be noted on the application form.

A **"C" (Confirmed)** sport class status will be given if the rower is classified by a FISA International Classification Panel, none of whom are from that rower's country, and the rower's status is not likely to change.

An **"N" (New)** status will be given if the rower is classified by a classifier from the same NF as the athlete.

An **"R" (Review)** status will be given if the rower is classified by a FISA Classification Panel and the rower has a progressive disability that may improve, and/or at least one member of the panel is from that rower's country, or there is any question regarding the sport class issued.

A **"N/E" (Not Eligible)** status will be given to athletes who do not meet the minimal disability for Para-Rowing classification

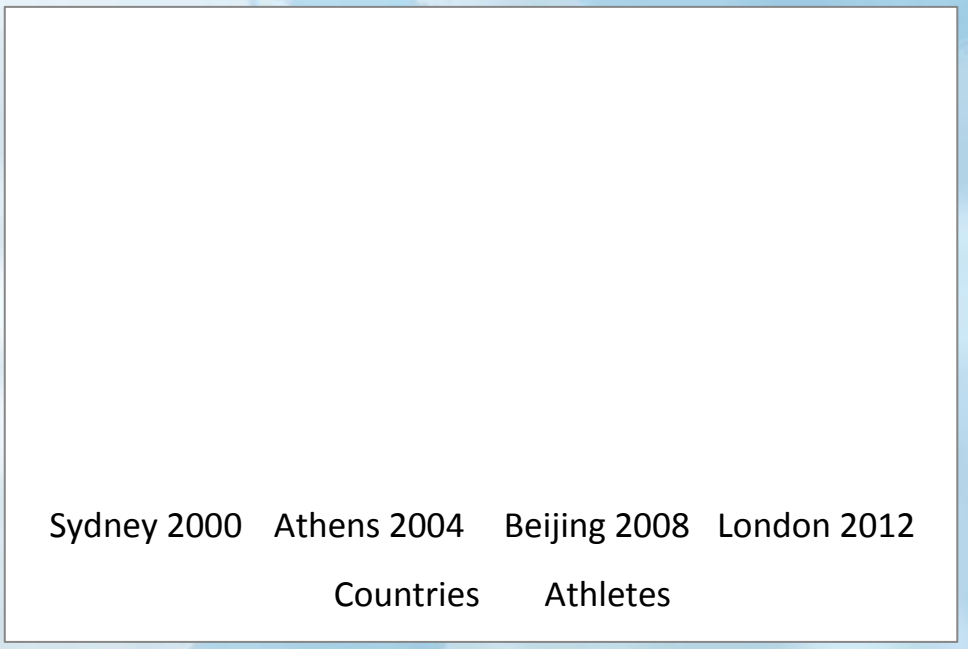
Reclassification

A R[illegible]er's Sport Class may only change if

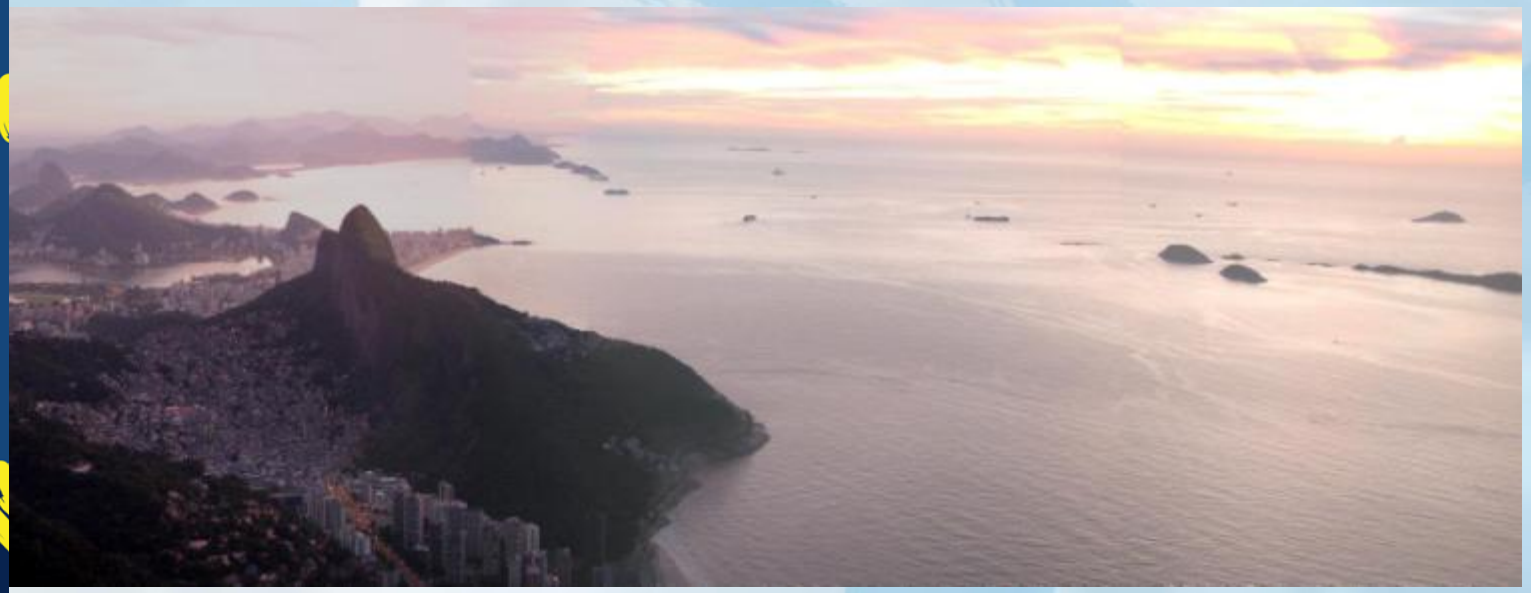
- There is a change of disability
- There is a change in the classification process
- A protest occurs, and the sport class changes as a result of the protest
- That is a continuous evaluation

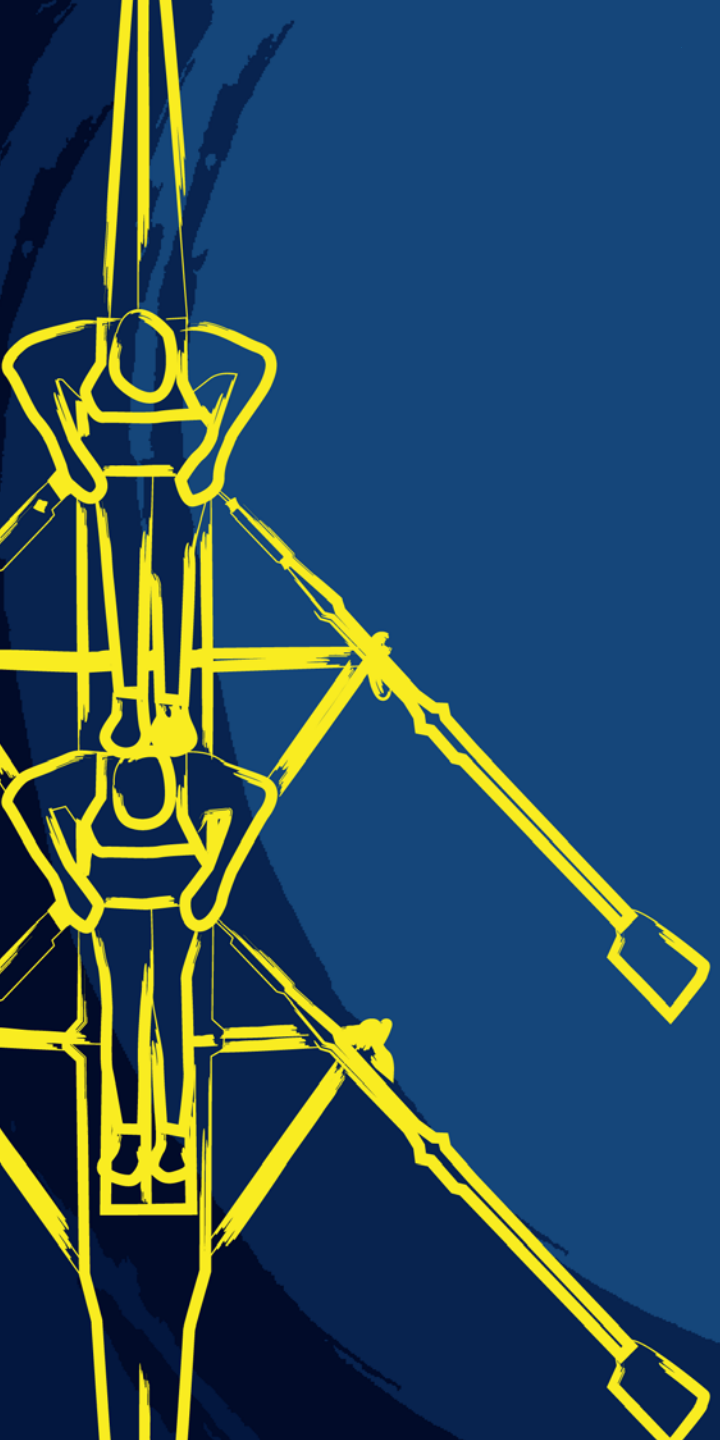
Why don't you join us?

- Paralympics and Olympics together
- Number of participants
- Growth rate (2000-2012)
  - Athletes = 13%
  - Countries = 33%



Questions?



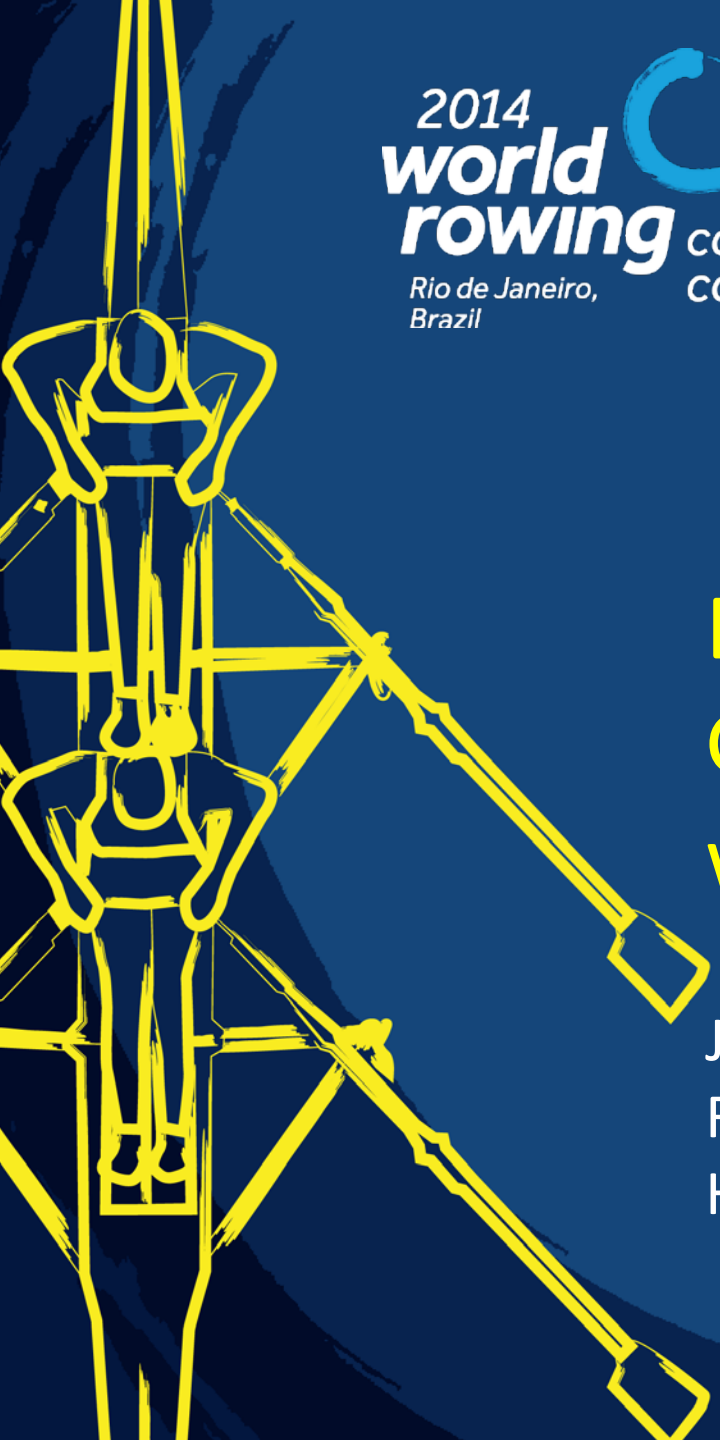


COFFEE BREAK

07/11/2014

2014 world rowing coaches conference
Rio de Janeiro, Brazil

Instituto Olímpico Brasileiro



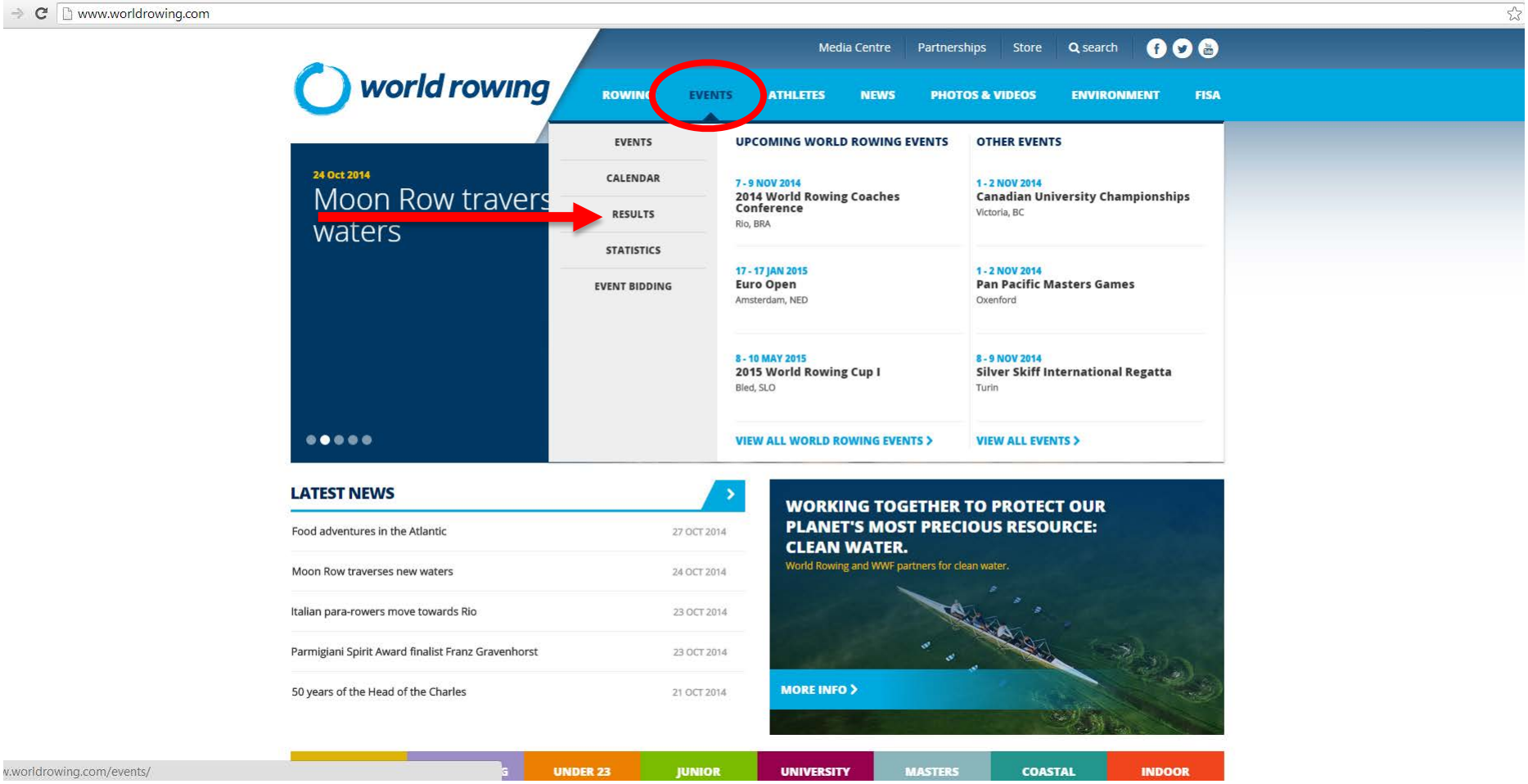
Downloading and analyzing GPS Data from the FISA website

Jillian O'Mara
Rosie Mayglothing
Henk-Jan Zwolle

1. Accessing race data on worldrowing.com
2. Using race data
3. What would you like to add

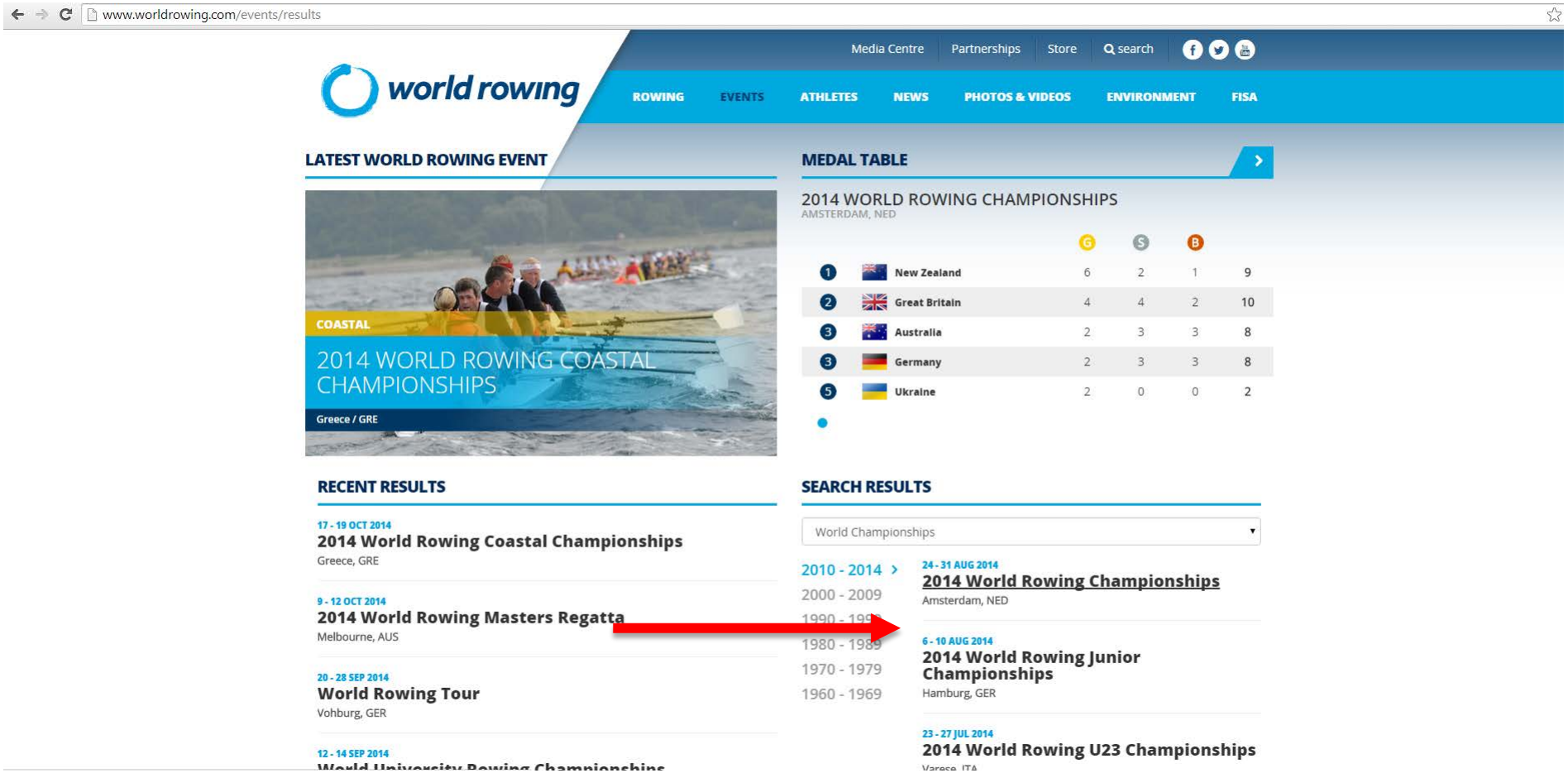
Accessing race data on worldrowing.com

1. Access www.world rowing.com → Events → Results



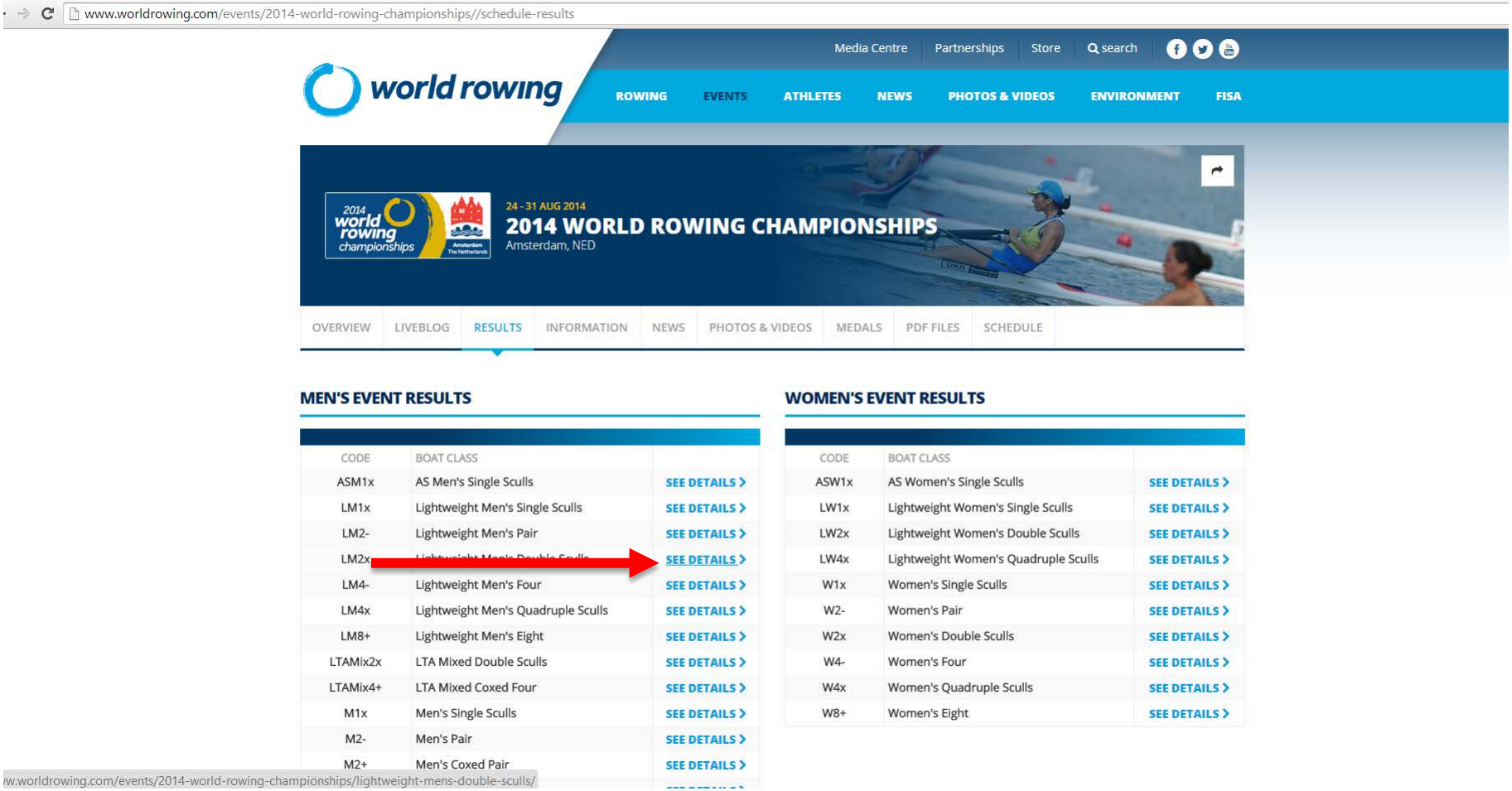
Accessing race data on worldrowing.com

2. Search for the event



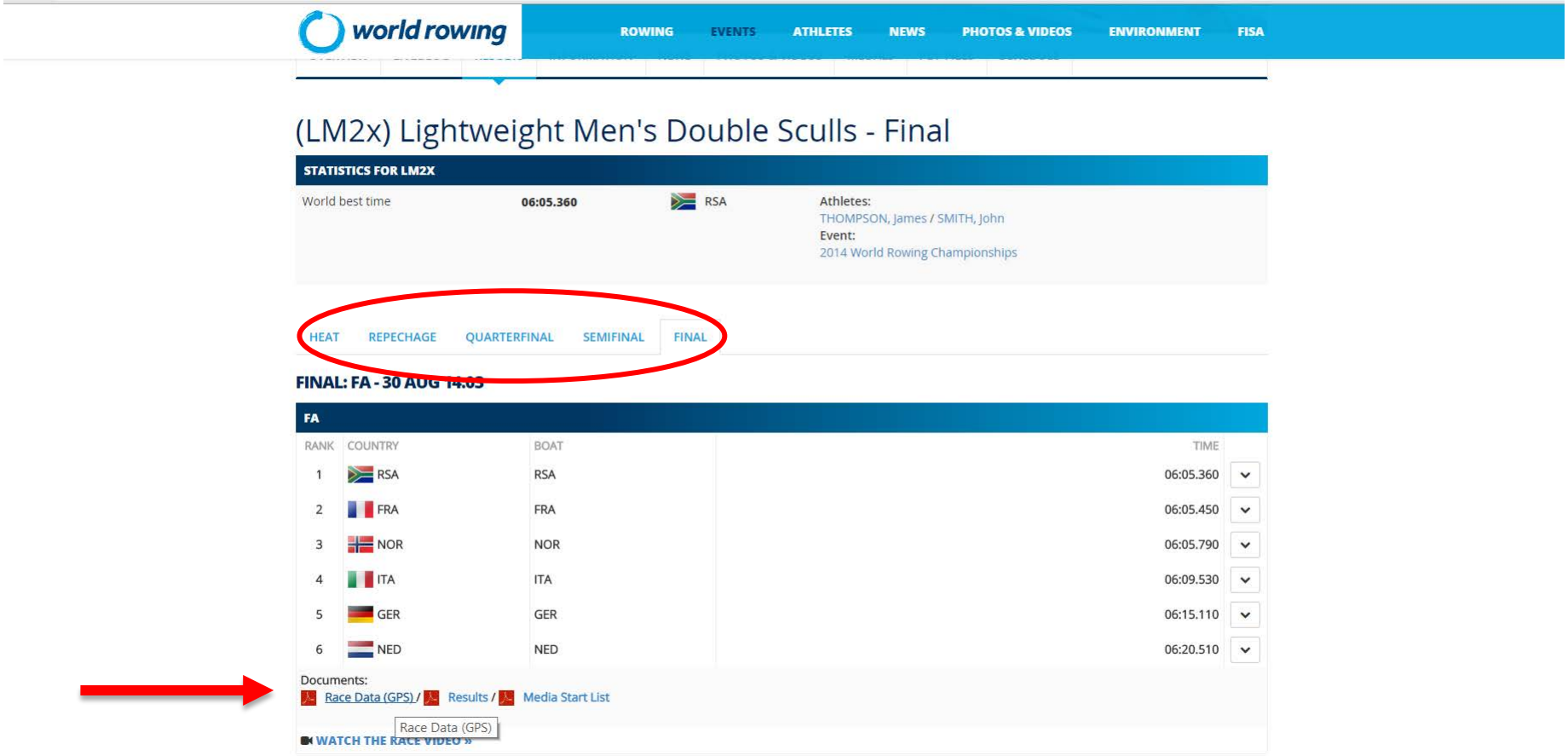
Accessing race data on worldrowing.com

3. Click on the boat class “see details” in the results section



Accessing race data on worldrowing.com

4. Find the desired race (heat, semifinal, final, etc)
5. Download PDF of GPS Data



Accessing race data on worldrowing.com

www.worldrowing.com/assets/pdfs/WCH_2014/ROM122101_MGPS.pdf

2014 world rowing championships
Amsterdam The Netherlands

WCH Amsterdam, NED — **24 - 31 August 2014**

9 (Event)

RACE DATA

LM2x

Lightweight Men's Double Sculls

FA

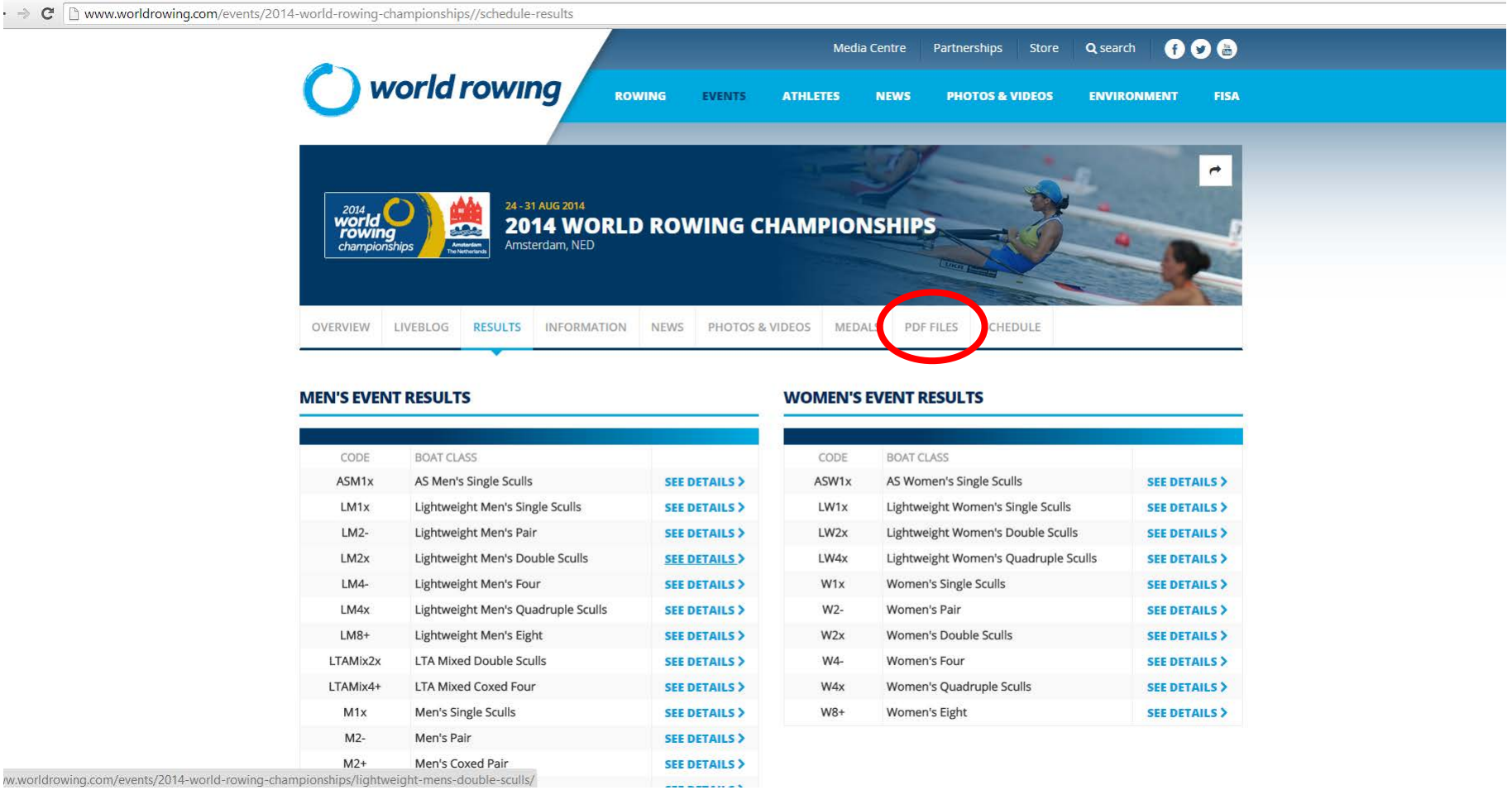
SAT 30 AUG 2014

Race 258

Dist. [m]	RSA		NOR		ITA		FRA		GER		NED	
	Speed [m/s]	Stroke	Speed [m/s]	Stroke	Speed [m/s]	Stroke	Speed [m/s]	Stroke	Speed [m/s]	Stroke	Speed [m/s]	Stroke
50	4.1	49.0	4.3	45.0	4.2	49.0	4.3	47.0	4.3	41.0	4.1	46.0
100	5.4	45.0	5.5	43.0	5.5	46.0	5.7	45.0	5.5	46.0	5.4	45.0
150	5.7	45.0	5.7	41.0	5.7	44.0	5.9	42.0	5.8	44.0	5.5	43.0
200	5.8	43.0	5.7	40.0	5.8	43.0	5.9	40.0	5.8	43.0	5.6	42.0
250	5.7	41.0	5.7	40.0	5.7	42.0	5.7	39.0	5.8	43.0	5.7	41.0
300	5.6	41.0	5.7	39.0	5.7	40.0	5.6	38.0	5.7	42.0	5.5	40.0
350	5.6	40.0	5.7	38.0	5.6	39.0	5.6	38.0	5.7	41.0	5.5	38.0
400	5.5	40.0	5.6	38.0	5.6	39.0	5.6	37.0	5.5	41.0	5.4	38.0
450	5.5	39.0	5.5	37.0	5.5	39.0	5.5	37.0	5.5	40.0	5.4	37.0
500	5.4	38.0	5.5	37.0	5.5	38.0	5.5	37.0	5.4	40.0	5.3	37.0
550	5.5	38.0	5.5	37.0	5.4	38.0	5.5	37.0	5.4	40.0	5.3	37.0
600	5.4	38.0	5.4	36.0	5.4	38.0	5.5	37.0	5.4	40.0	5.2	36.0
650	5.5	38.0	5.4	36.0	5.5	38.0	5.3	37.0	5.3	39.0	5.2	36.0
700	5.4	37.0	5.4	36.0	5.4	38.0	5.4	37.0	5.4	39.0	5.2	36.0
750	5.4	37.0	5.3	35.0	5.5	38.0	5.4	36.0	5.4	39.0	5.3	35.0
800	5.4	37.0	5.4	35.0	5.5	38.0	5.4	36.0	5.3	39.0	5.2	35.0
850	5.4	36.0	5.4	35.0	5.5	38.0	5.4	36.0	5.3	38.0	5.2	36.0
900	5.4	37.0	5.4	35.0	5.5	38.0	5.4	36.0	5.2	38.0	5.2	37.0
950	5.4	36.0	5.4	35.0	5.4	38.0	5.3	36.0	5.2	38.0	5.2	36.0
1000	5.4	36.0	5.3	35.0	5.4	38.0	5.4	36.0	5.2	38.0	5.2	36.0
1050	5.5	36.0	5.4	35.0	5.5	39.0	5.4	36.0	5.2	38.0	5.3	36.0
1100	5.5	37.0	5.4	35.0	5.5	39.0	5.4	36.0	5.2	38.0	5.3	36.0
1150	5.4	37.0	5.4	35.0	5.4	39.0	5.4	37.0	5.2	38.0	5.2	36.0
1200	5.5	37.0	5.3	35.0	5.3	39.0	5.4	37.0	5.3	38.0	5.2	36.0
1250	5.5	37.0	5.4	35.0	5.3	38.0	5.4	37.0	5.3	38.0	5.2	36.0
1300	5.5	36.0	5.3	35.0	5.4	38.0	5.4	37.0	5.2	37.0	5.2	35.0
1350	5.4	37.0	5.4	35.0	5.4	38.0	5.4	37.0	5.2	38.0	5.2	36.0
1400	5.4	36.0	5.4	35.0	5.3	38.0	5.4	37.0	5.1	38.0	5.2	37.0
1450	5.5	36.0	5.4	36.0	5.3	38.0	5.4	37.0	5.1	38.0	5.2	37.0
1500	5.4	37.0	5.5	36.0	5.3	39.0	5.4	38.0	5.1	37.0	5.2	36.0
1550	5.4	37.0	5.5	37.0	5.3	39.0	5.4	38.0	5.2	39.0	5.2	36.0
1600	5.5	37.0	5.5	37.0	5.3	40.0	5.4	38.0	5.3	39.0	5.3	36.0
1650	5.6	38.0	5.5	37.0	5.3	40.0	5.4	38.0	5.3	38.0	5.3	36.0
1700	5.5	37.0	5.6	37.0	5.4	40.0	5.4	39.0	5.2	38.0	5.2	36.0
1750	5.5	38.0	5.5	37.0	5.3	39.0	5.4	38.0	5.2	38.0	5.2	36.0
1800	5.6	37.0	5.6	38.0	5.4	41.0	5.5	40.0	5.2	38.0	5.2	37.0
1850	5.7	42.0	5.6	39.0	5.5	41.0	5.5	39.0	5.3	38.0	5.2	37.0
1900	5.6	42.0	5.6	39.0	5.3	40.0	5.5	39.0	5.4	38.0	5.3	37.0
1950	5.7	43.0	5.6	39.0	5.2	40.0	5.6	42.0	5.4	38.0	5.2	37.0
2000	5.6	44.0	5.6	39.0	5.1	38.0	5.6	41.0	5.3	37.0	5.2	37.0

Accessing race data on worldrowing.com

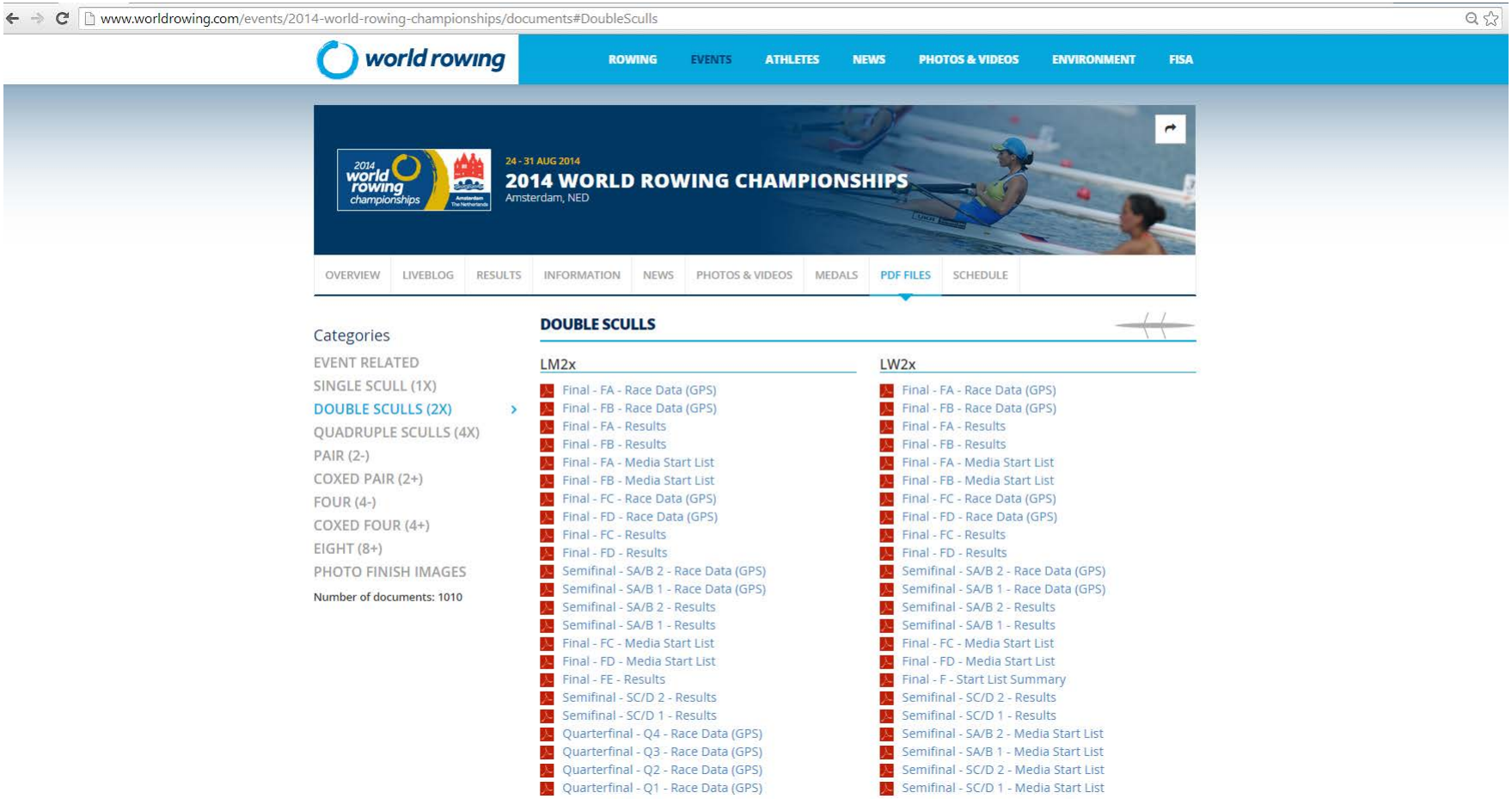
For access to all PDF files from the event, click on the “PDF Files” tab



2014 world rowing coaches conference
Rio de Janeiro, Brazil

Accessing race data on worldrowing.com

Click on the corresponding boat class and PDF file

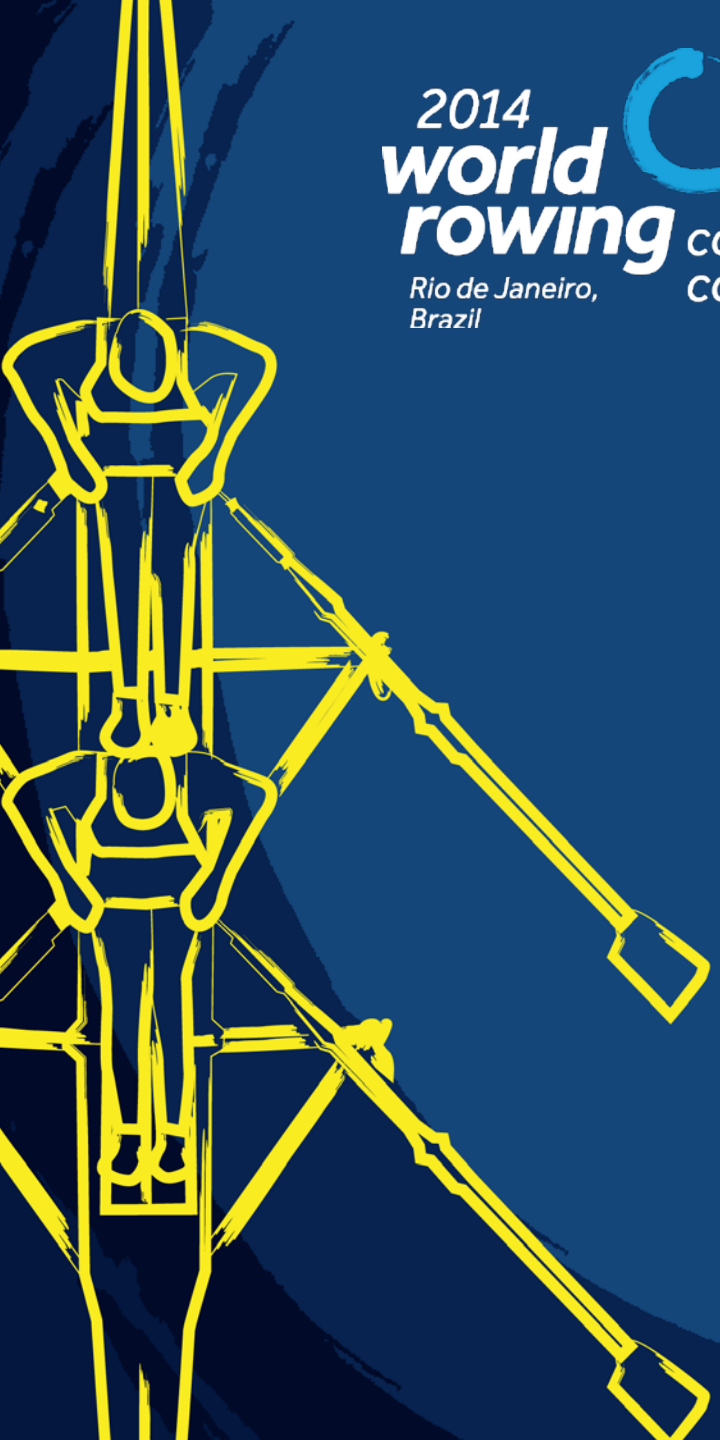


Accessing race data on worldrowing.com

- **Due to inclement weather and technical problems GPS Data may not be available for all races**
- **GPS Data is *only* available in PDF format**
- **For other race data and results (including 500m split times), please see the results section**
- **In certain circumstances, National Federations may receive certain results in excel format upon request, please email *databases@fisa.org***
- **For other questions or concerns regarding the website, please email *jillian.omara@fisa.org***

2014 world rowing coaches conference
Rio de Janeiro, Brazil

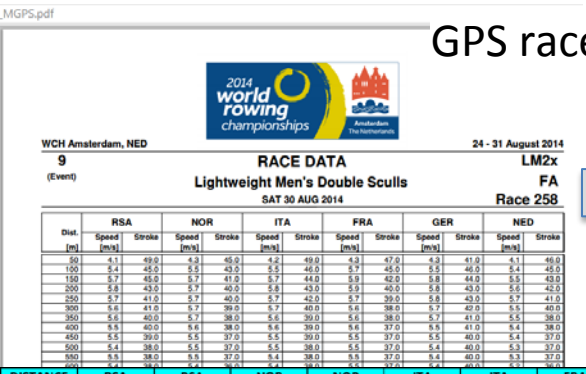
Instituto Olímpico Brasileiro



Using GPS race data

Step 1:
Export PDF Data into Excel Template

GPS race data


_MGPS.pdf

2014 world rowing championships

WCH Amsterdam, NED — 24 - 31 August 2014

9 (Event) — RACE DATA — LM2x

Lightweight Men's Double Sculls — FA

SAT 30 AUG 2014 — Race 258

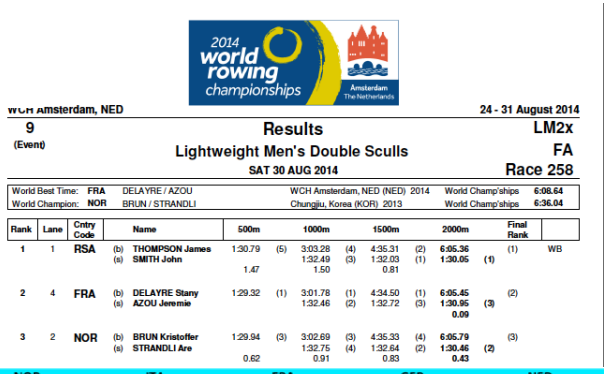
Dist. [m]	RSA Speed [m/s]	RSA Stroke	NOR Speed [m/s]	NOR Stroke	ITA Speed [m/s]	ITA Stroke	FRA Speed [m/s]	FRA Stroke	GER Speed [m/s]	GER Stroke	NED Speed [m/s]	NED Stroke
50	4.1	49.0	4.3	45.0	4.2	49.0	4.3	47.0	4.3	41.0	4.1	46.0
100	5.4	45.0	5.5	43.0	5.5	46.0	5.7	45.0	5.5	46.0	5.4	45.0
150	5.7	45.0	5.7	41.0	5.7	44.0	5.9	42.0	5.8	44.0	5.5	43.0
200	5.8	43.0	5.7	40.0	5.8	43.0	5.9	40.0	5.8	43.0	5.6	42.0
250	5.7	41.0	5.7	40.0	5.7	42.0	5.7	39.0	5.8	43.0	5.7	41.0
300	5.6	41.0	5.7	39.0	5.7	40.0	5.6	38.0	5.7	42.0	5.5	40.0
350	5.6	40.0	5.7	38.0	5.6	39.0	5.6	38.0	5.7	41.0	5.5	38.0
400	5.5	40.0	5.6	38.0	5.6	39.0	5.6	37.0	5.5	41.0	5.4	38.0
450	5.5	39.0	5.5	37.0	5.5	39.0	5.5	37.0	5.5	40.0	5.4	37.0
500	5.4	38.0	5.5	37.0	5.5	38.0	5.5	37.0	5.4	40.0	5.3	37.0
550	5.5	38.0	5.5	37.0	5.4	38.0	5.5	37.0	5.4	40.0	5.3	37.0
600	5.5	38.0	5.4	36.0	5.4	38.0	5.5	37.0	5.4	40.0	5.2	36.0

DISTANCE	RSA Speed [m/s]	RSA Stroke (Str/min)	NOR Speed [m/s]	NOR Stroke (Str/min)	ITA Speed [m/s]	ITA Stroke (Str/min)	FRA Speed [m/s]	FRA Stroke (Str/min)	GER Speed [m/s]	GER Stroke (Str/min)	NED Speed [m/s]	NED Stroke (Str/min)
50	4.1	49	4.3	45	4.2	49	4.3	47	4.3	41	4.1	46
100	5.4	45	5.5	43	5.5	46	5.7	45	5.5	46	5.4	45
150	5.7	45	5.7	41	5.7	44	5.9	42	5.8	44	5.5	43
200	5.8	43	5.7	40	5.8	43	5.9	40	5.8	43	5.6	42
250	5.7	41	5.7	40	5.7	42	5.7	39	5.8	43	5.7	41
300	5.6	41	5.7	39	5.7	40	5.6	38	5.7	42	5.5	40
350	5.6	40	5.7	38	5.6	39	5.6	38	5.7	41	5.5	38
400	5.5	40	5.6	38	5.6	39	5.6	37	5.5	41	5.4	38
450	5.5	39	5.5	37	5.5	39	5.5	37	5.5	40	5.4	37
500	5.4	38	5.5	37	5.5	38	5.5	37	5.4	40	5.3	37
550	5.5	38	5.5	37	5.4	38	5.5	37	5.4	40	5.3	37
600	5.4	38	5.4	36	5.4	38	5.5	37	5.4	40	5.2	36
650	5.5	38	5.4	36	5.5	38	5.3	37	5.3	39	5.2	36
700	5.4	37	5.4	36	5.4	38	5.4	37	5.4	39	5.2	36
750	5.4	37	5.3	35	5.5	38	5.4	36	5.4	39	5.3	35
800	5.4	37	5.4	35	5.5	38	5.4	36	5.3	39	5.2	35
850	5.4	36	5.4	35	5.5	38	5.4	36	5.3	38	5.2	36
900	5.4	37	5.4	35	5.5	38	5.4	36	5.2	38	5.2	37
950	5.4	36	5.4	35	5.4	38	5.3	36	5.2	38	5.2	36
1000	5.4	36	5.3	35	5.4	38	5.4	36	5.2	38	5.2	36
1050	5.5	36	5.4	35	5.5	39	5.4	36	5.2	38	5.3	36
1100	5.5	37	5.4	35	5.5	39	5.4	36	5.2			
1150	5.4	37	5.4	35	5.4	39	5.4	37	5.2			
1200	5.5	37	5.3	35	5.3	39	5.4	37	5.3			
1250	5.5	37	5.4	35	5.3	38	5.4	37	5.3			
1300	5.5	36	5.3	35	5.4	38	5.4	37	5.2			
1350	5.4	37	5.4	35	5.4	38	5.4	37	5.2			
1400	5.4	36	5.4	35	5.3	38	5.4	37	5.1	38	5.2	37
1450	5.5	36	5.4	36	5.3	38	5.4	37	5.1	38	5.2	37
1500	5.4	37	5.5	36	5.3	39	5.4	38	5.1			
1550	5.4	37	5.5	37	5.3	39	5.4	38	5.2			
1600	5.5	37	5.5	37	5.3	40	5.4	38	5.3			
1650	5.6	38	5.5	37	5.3	40	5.4	38	5.3			
1700	5.5	37	5.6	37	5.4	40	5.4	39	5.2			
1750	5.5	38	5.5	37	5.3	39	5.4	38	5.2			
1800	5.6	37	5.6	38	5.4	41	5.5	40	5.2	38	5.2	37
1850	5.7	42	5.6	39	5.5	41	5.5	39	5.3	38	5.2	37
1900	5.6	42	5.6	39	5.3	40	5.5	39	5.4	38	5.3	37
1950	5.7	43	5.6	39	5.2	40	5.6	42	5.4	38	5.2	37
2000	5.6	44	5.6	39	5.1	38	5.6	41	5.3	37	5.2	37

Report

Compare

Result data


2014 world rowing championships

WCH Amsterdam, NED — 24 - 31 August 2014

9 (Event) — Results — LM2x

Lightweight Men's Double Sculls — FA

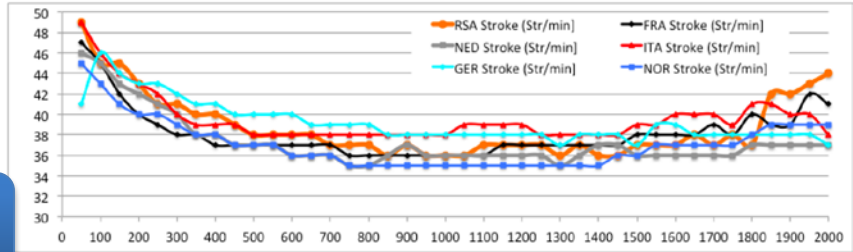
SAT 30 AUG 2014 — Race 258

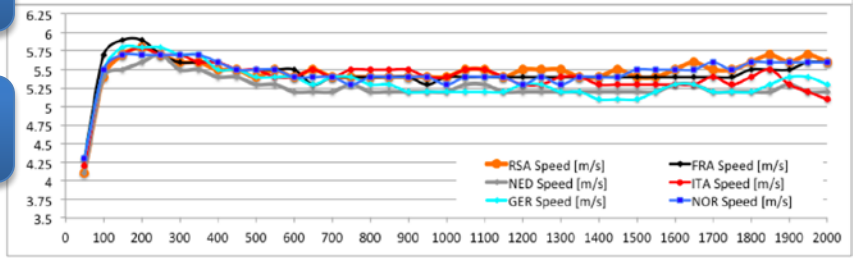
World Best Time:	FRA	DELAYRE / AZOU	WCH Amsterdam, NED (NED)	2014	World Champ'ships 6:08.64
World Champion:	NOR	BRUN / STRANDLI	Chungju, Korea (KOR)	2013	World Champ'ships 6:36.04

Rank	Lane	Cntry Code	Name	500m	1000m	1500m	2000m	Final Rank	
1	1	RSA	(b) THOMPSON James	1:30.79 (5)	3:03.28 (4)	4:35.31 (2)	6:05.36	(1)	WB
			(s) SMITH John	1.47	1:32.49 (3) 1.50	1:32.03 (1) 0.81	1:30.05 (1)		
2	4	FRA	(b) DELAYRE Stany	1:29.32 (1)	3:01.78 (1)	4:34.50 (1)	6:05.45	(2)	
			(s) AZOU Jeremie		1:32.46 (2)	1:32.72 (3)	1:30.95 (3) 0.09		
3	2	NOR	(b) BRUN Kristoffer	1:29.94 (3)	3:02.69 (3)	4:35.33 (4)	6:05.79	(3)	
			(s) STRANDLI Are	0.62	1:32.75 (4) 0.91	1:32.64 (2) 0.83	1:30.46 (2) 0.43		

500m Times	RSA	NOR	ITA	FRA	GER	NED
Lane	1	2	3	4	5	6
Place	1	3	4	2	5	6
500m	01:30.8	01:29.9	01:30.4	01:29.3	01:29.8	01:33.1
1000m	03:03.3	03:02.7	03:02.3	03:01.8	03:04.2	03:08.7
1500m	04:35.3	04:35.3	04:35.3	04:34.5	04:40.3	04:44.6
2000m	06:05.4	06:05.8	06:09.5	06:05.5	06:15.1	06:20.5

500m Splits	RSA	NOR	ITA	FRA	GER	NED
500m	01:30.8	01:29.9	01:30.4	01:29.3	01:29.8	01:33.1
1000m	01:32.5	01:32.7	01:31.8	01:32.5	01:34.4	01:35.6
1500m	01:32.0	01:32.6	01:33.1	01:32.7	01:36.1	01:35.9
2000m	01:30.1	01:30.5	01:34.2	01:31.0	01:34.8	01:36.0





2014 world rowing coaches conference
Rio de Janeiro, Brazil

Step 2: View Report

Report

Lightweight Men's Double Scull (LM2x)
Final FA: 30th August 2014

Comparison of the 2000m Results GPS race profiles of the 6 Final A crews

Weather conditions:
Wind direction:
Water temp.:

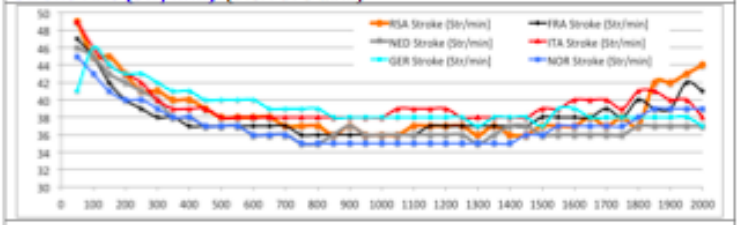
500m times

DISTANCE	RCA	NOR	ITA	FRA	GER	NED
Lane	1	2	3	4	5	6
Place	1	3	4	2	5	6
500m	01:30.8	01:29.9	01:30.4	01:29.3	01:29.8	01:33.1
1000m	03:03.3	03:02.7	03:02.3	03:01.8	03:04.2	03:08.7
1500m	04:35.3	04:35.3	04:35.3	04:34.5	04:40.3	04:44.6
2000m	06:05.4	06:05.8	06:09.5	06:05.5	06:15.1	06:20.5

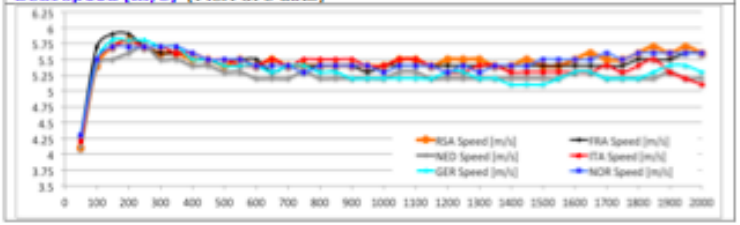
500m splits

DISTANCE	RCA	NOR	ITA	FRA	GER	NED
500m	01:30.8	01:29.9	01:30.4	01:29.3	01:29.8	01:33.1
1000m	01:32.5	01:32.7	01:31.8	01:32.5	01:34.4	01:35.6
1500m	01:32.0	01:32.6	01:33.1	01:32.7	01:36.1	01:35.9
2000m	01:30.1	01:30.5	01:34.2	01:31.0	01:34.8	01:36.0

Stroke rate (Str/min) (FISA GPS data)



Boat speed (m/s) (FISA GPS data)



2014 world rowing coaches conference
Rio de Janeiro, Brazil

Step 3:
Compare your Race to Database

Compare

Lightweight Men's Double Scull (LM2x)
Comparison: Final FA 2013 - 2014

Comparison of the 2000m Results GPS race profiles of the 6 Final A crews

Weather conditions:
Wind direction:
Water temp.:

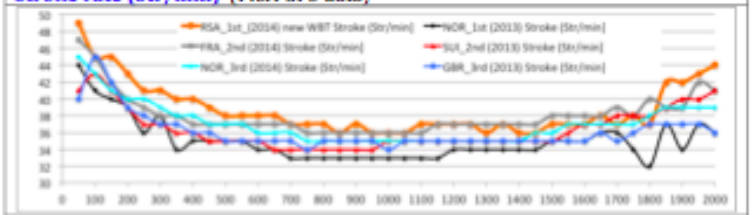
500m times

YEAR	2014	2014	2014	2013	2013	2013
Country	RCA	FRA	NOR	NOR	SUI	GBR
Lane	1	4	2	5	3	4
Place	1	2	3	1	2	3
500m	01:30.8	01:29.3	01:29.9	01:35.0	01:36.0	01:37.0
1000m	03:03.3	03:01.8	03:02.7	03:15.9	03:16.0	03:17.0
1500m	04:35.3	04:34.5	04:35.3	04:56.7	04:57.9	04:58.7
2000m	06:05.4	06:05.5	06:05.8	06:36.0	06:37.1	06:38.0

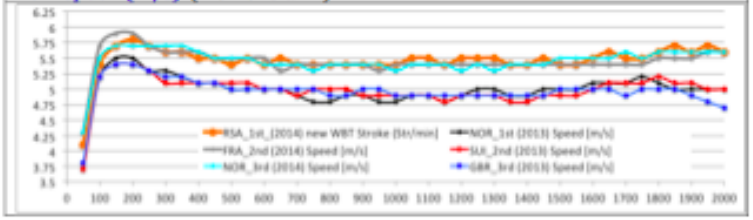
500m splits

DISTANCE	RCA	FRA	NOR	NOR	SUI	GBR
500m	01:30.8	01:29.3	01:29.9	01:35.0	01:36.0	01:37.0
1000m	01:32.5	01:32.5	01:32.7	01:40.8	01:40.0	01:40.1
1500m	01:32.0	01:32.7	01:32.6	01:40.9	01:41.9	01:41.7
2000m	01:30.1	01:31.0	01:30.5	01:39.3	01:39.2	01:39.3

Stroke rate (Str/min) (FISA GPS data)

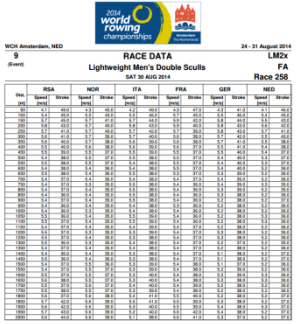


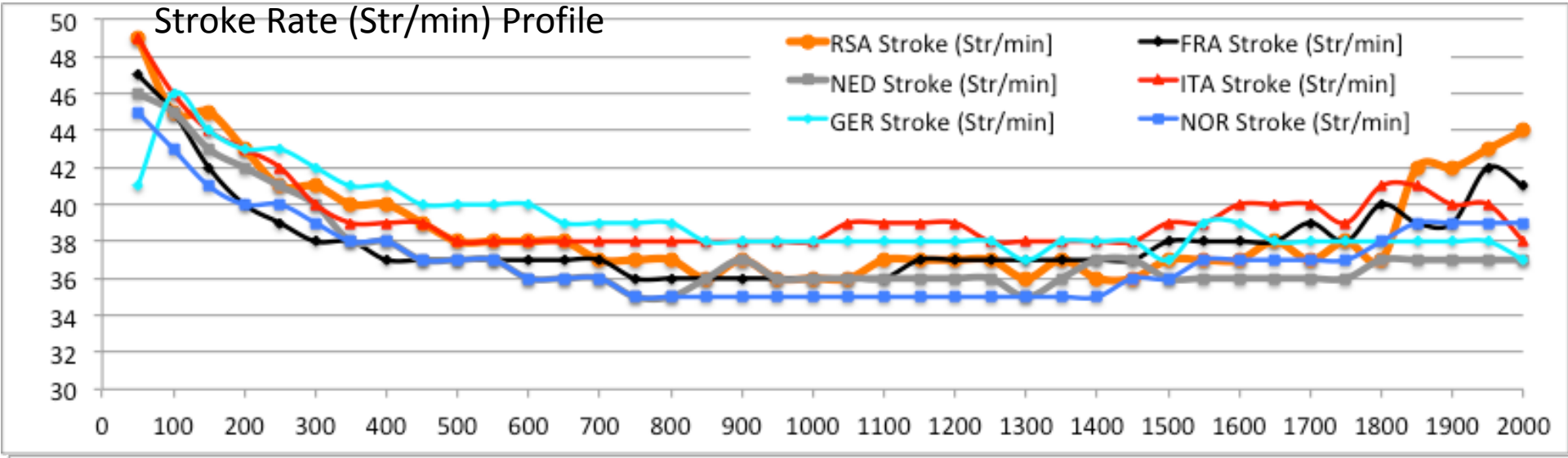
Boat speed (m/s) (FISA GPS data)

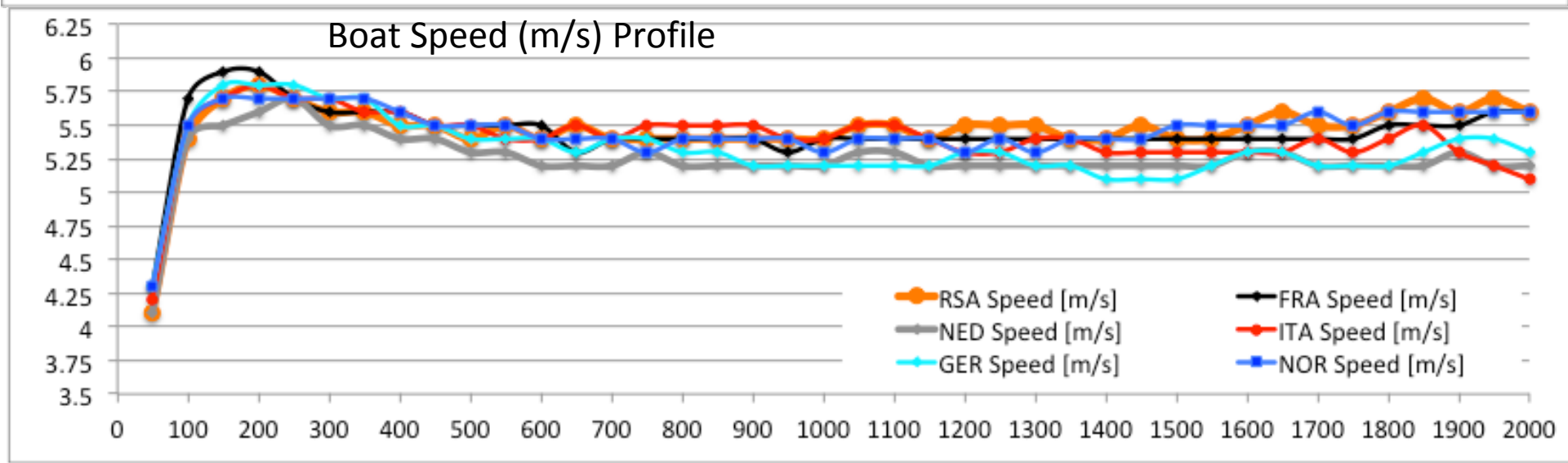


2014 world rowing coaches conference
Rio de Janeiro, Brazil

Example 1:
2000m Race Analysis: LM2x FA

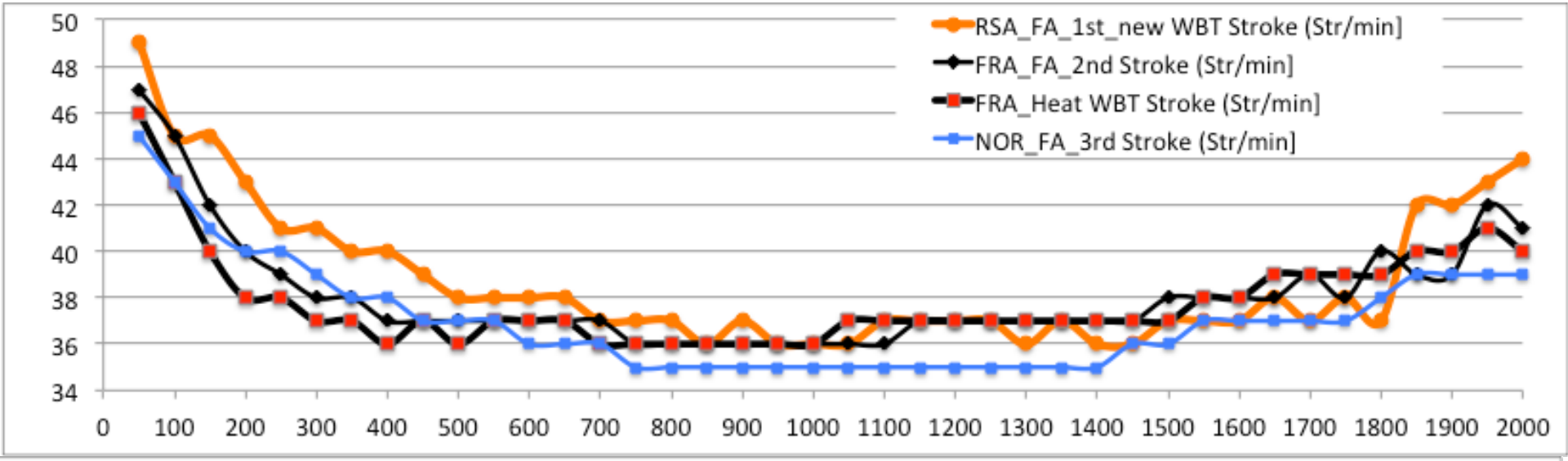


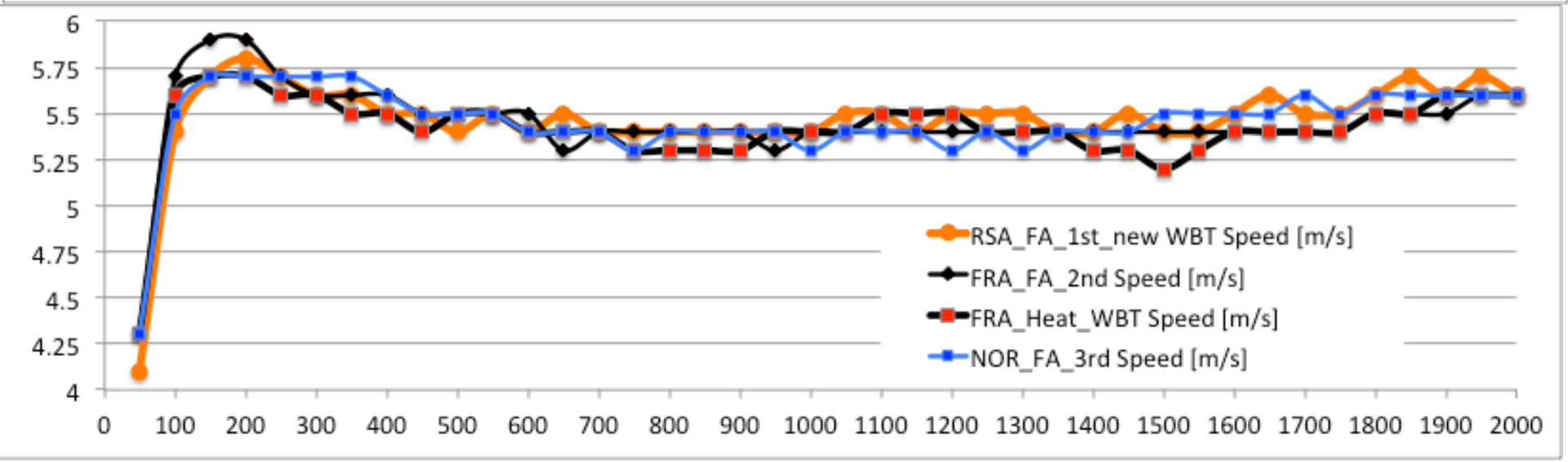




2014 world rowing coaches conference
Rio de Janeiro, Brazil

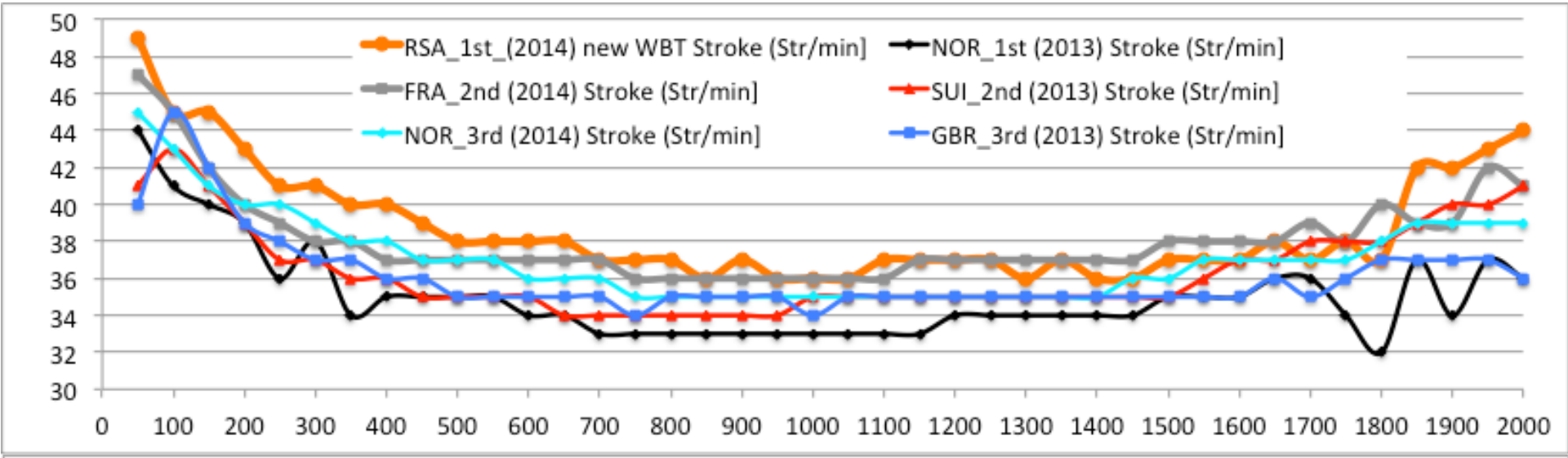
Example 2a:
2000m Race Analysis: LM2x FA
Top 3 (WBT) vs FRA (Heat WBT)

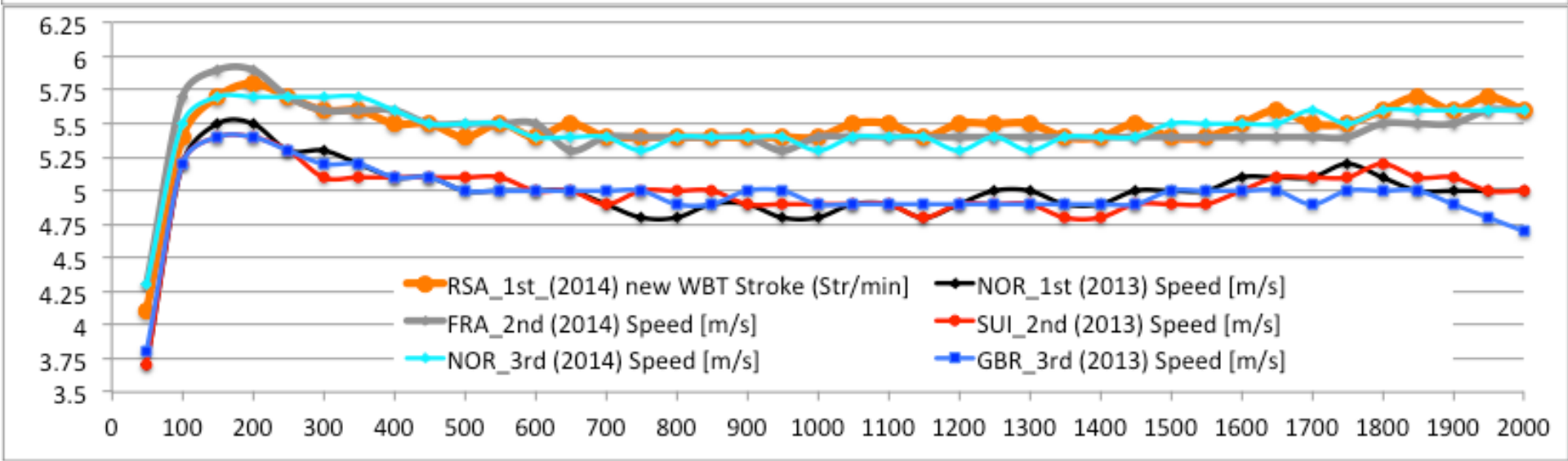




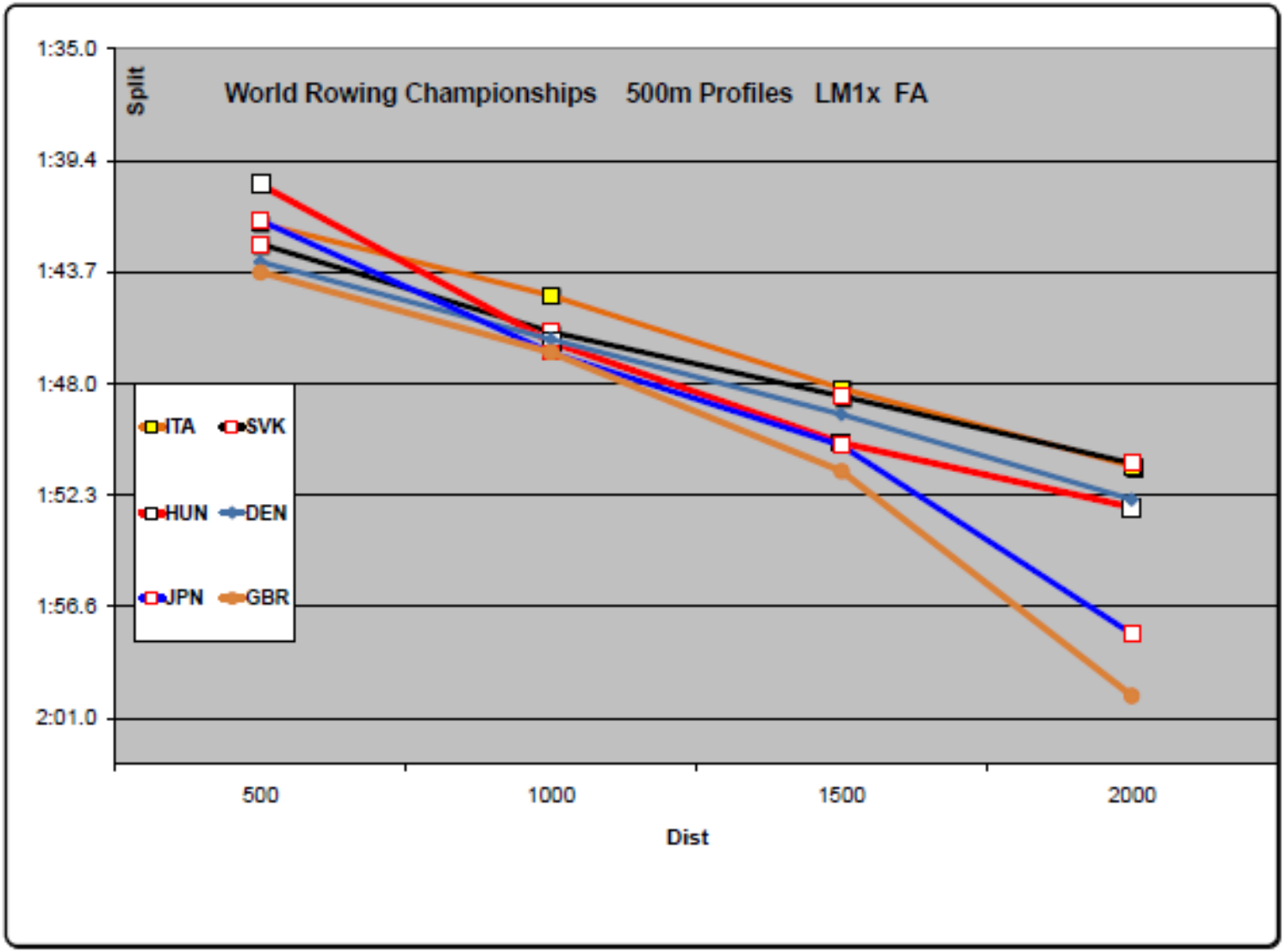
2014 world rowing coaches conference
Rio de Janeiro, Brazil

Example 2b:
2000m Race Analysis: LM2x FA
Top 3 (2013) vs Top 3 (2014)

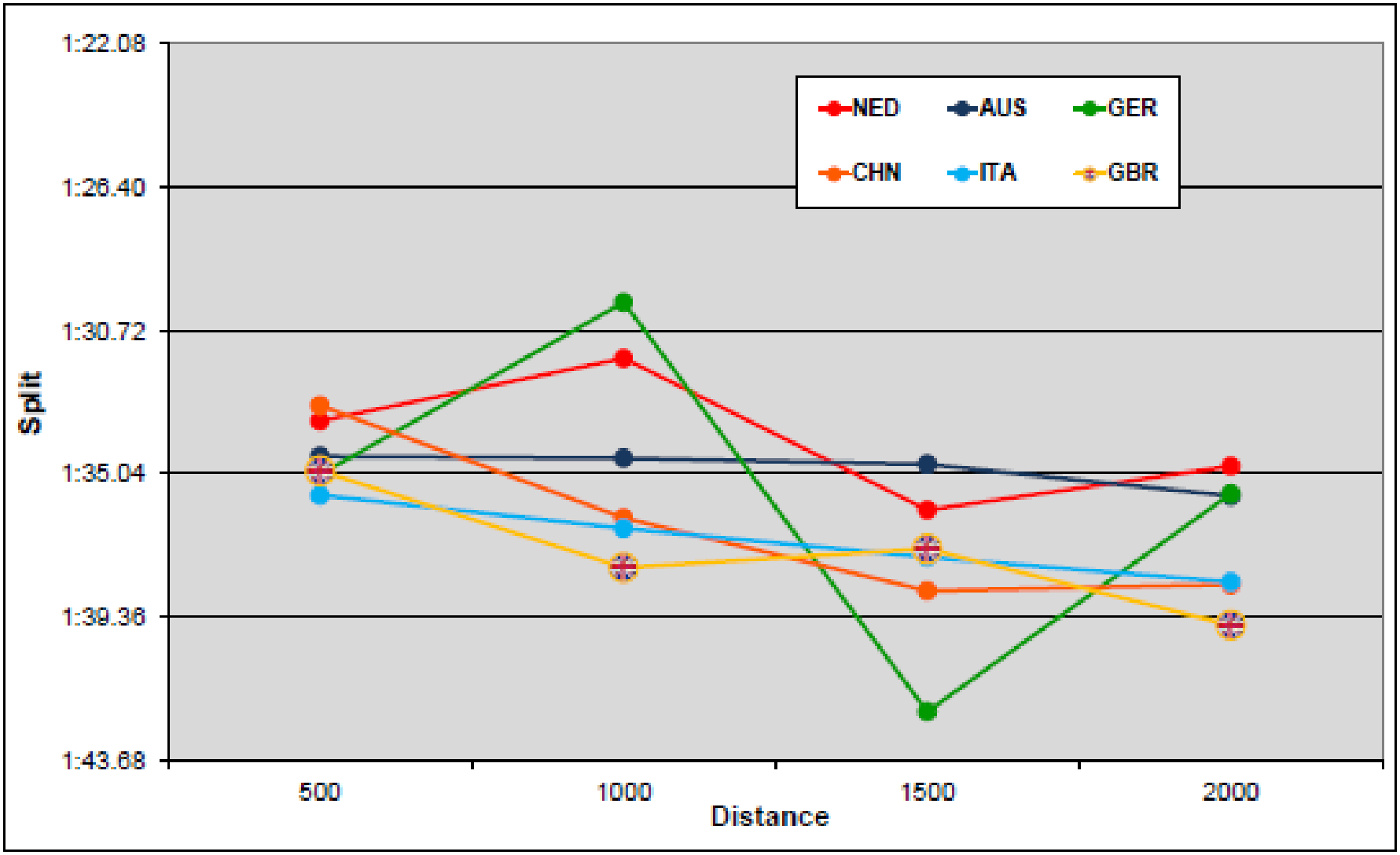




2000m Race Analysis: LM1x FA Karapiro 2010



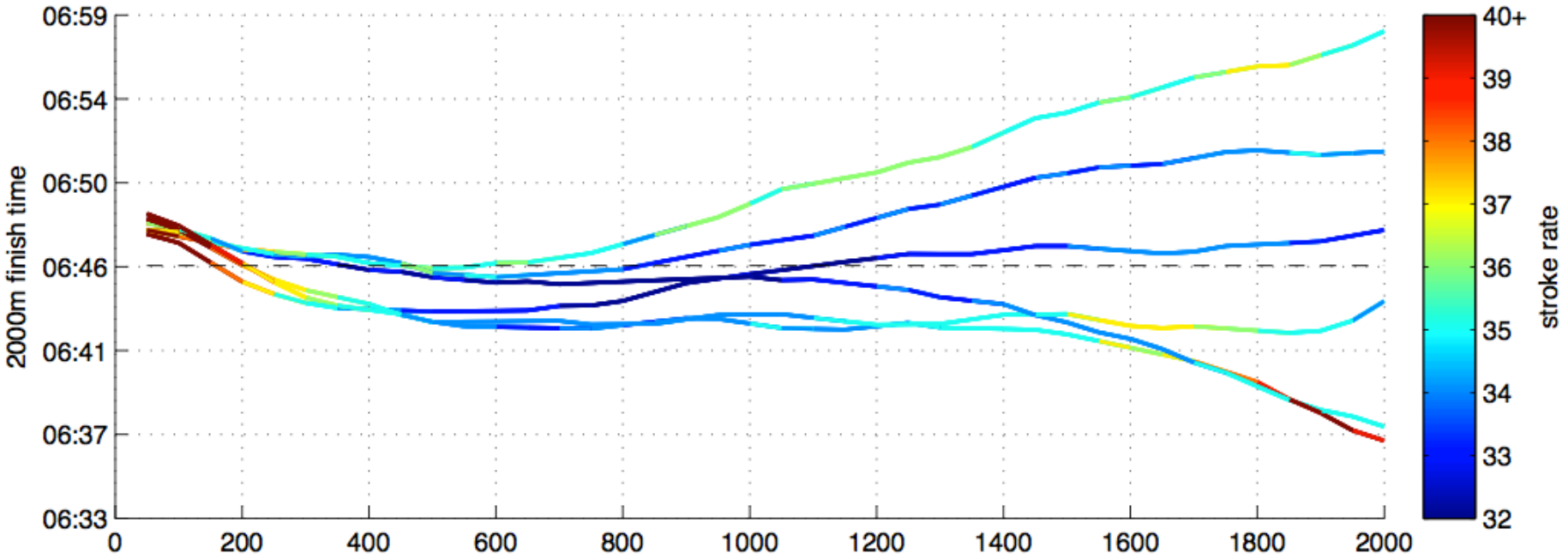
2000m Race Analysis: LW4x FA Amsterdam 2014



Race analysis using GPS data

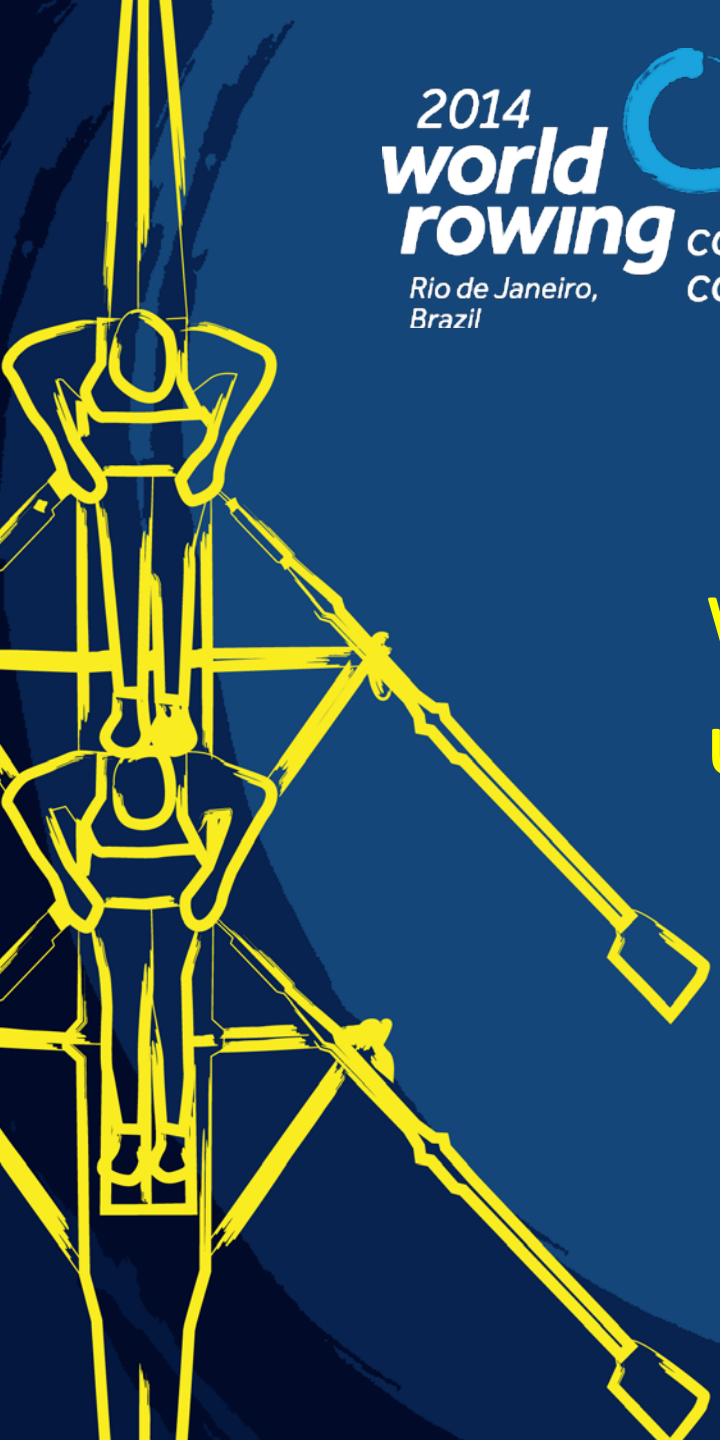
Developed by Mathijs Hofmeister, VU university Amsterdam

Men 1x final

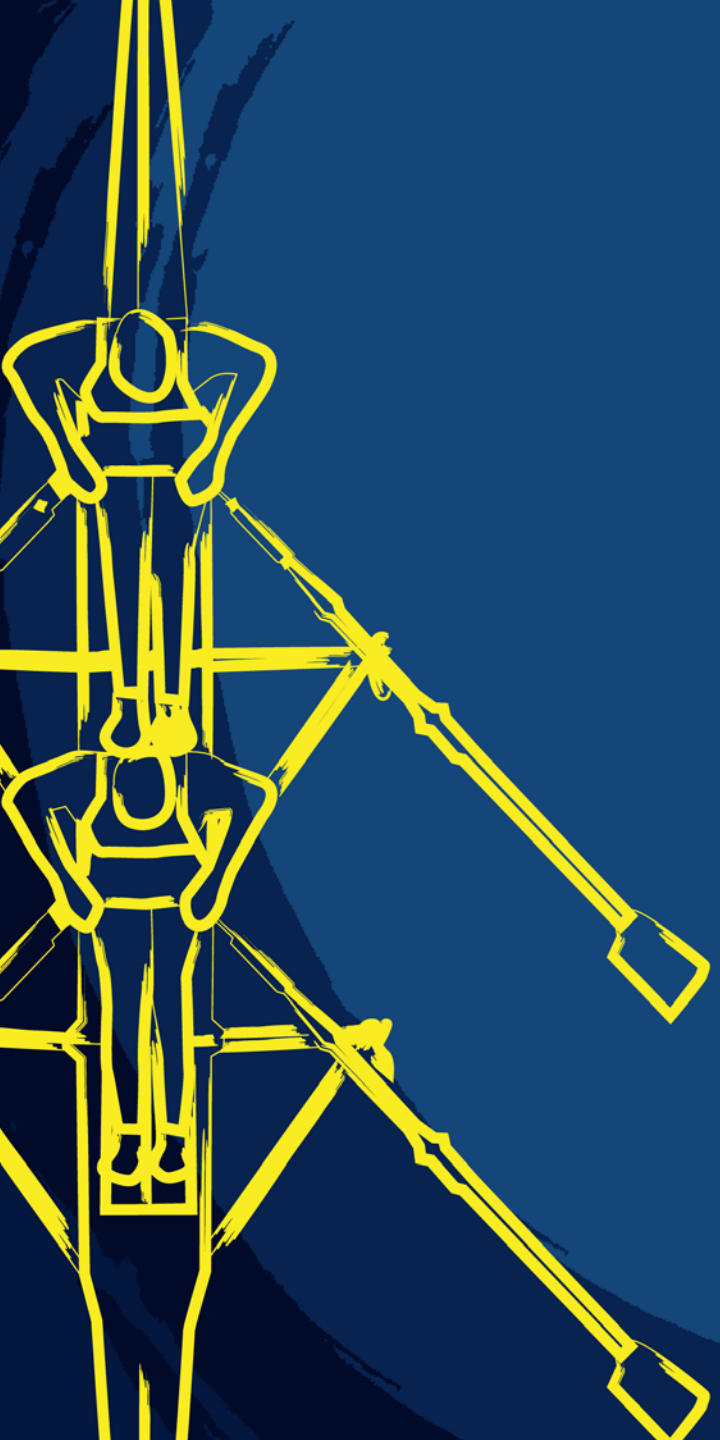


2014 world rowing coaches conference
Rio de Janeiro, Brazil

Instituto Olímpico Brasileiro



What other applications for using these data would like?



CLOSE

07/11/2014

2014 world rowing coaches conference

Rio de Janeiro, Brazil