



Watteam POWERBEAT™ Lab Test #102

Rider Details

Rider: CH

Weight: 63kg

Age: 31

Riding experience: 15 years

Equipment Used

Crank: Ultegra 6800 172.5mm

Bike: Ridley CX

Power Meters:

1: POWERBEAT™ Dual

2: Competitor rear hub power meter

Ride Details

Test Number: 102

Test type: Intervals #2

(Z2 25MIN – 180 Watts) – 8x (30 Sec 650 Watts)-(2min 250 Watts) (1HR

Z2 – 180 Watts)

Test Course: Gravel #2

The following is a **summary** of one of our many Beta Test rides.

In this test ride the Beta Tester rode **Gravel Course #2**.

Gravel Course #2 consists of 25 kilometers (15.5 miles) with an elevation gain of 447m (1466 ft.).

During the course our Beta Tester performed **Interval Session #2**.

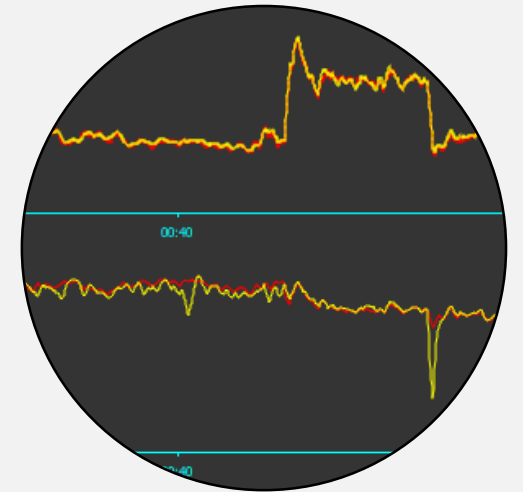
Interval Session #2 contains 8 reps. of 30 intense seconds of around 650 Watts, with a 2 minute “rest” at 250 Watts in between.

He started the ride with 25 minutes at Zone 2 (~180 Watts). Afterwards he performed Interval Session #2 and then 60 minutes again at Zone 2.

Total ride time of **Test #102**: 90 minutes.

Watteam’s lab analysis

- Both power meters displayed accurate Power readings.
- Competitor rear hub power meter had some difficulties reading correct cadence (rear hub power meters estimate cadence through power vectors, not direct cadence readings)
- POWERBEAT™ Dual has the benefit of measuring independent leg metrics, thus providing a whole spectrum of data such as Left/Right power balance, Torque Efficiency, Pedal Smoothness.





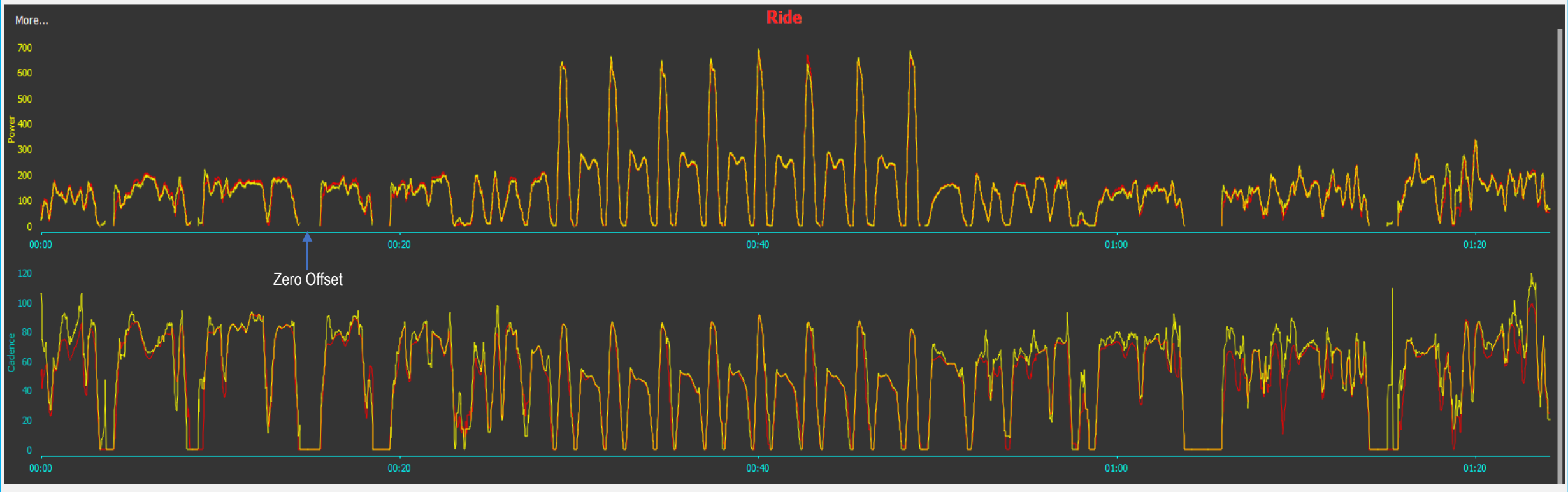
Wattteam POWERBEAT™ Lab Test #102

Crank: Shimano *Ultegra 6800 172.5 mm*

Test Conditions: 19°C, Dry, Sandy

Power Meters: *POWERBEAT™ Dual* vs *Competitor Rear Hub*

Duration: 1h30m

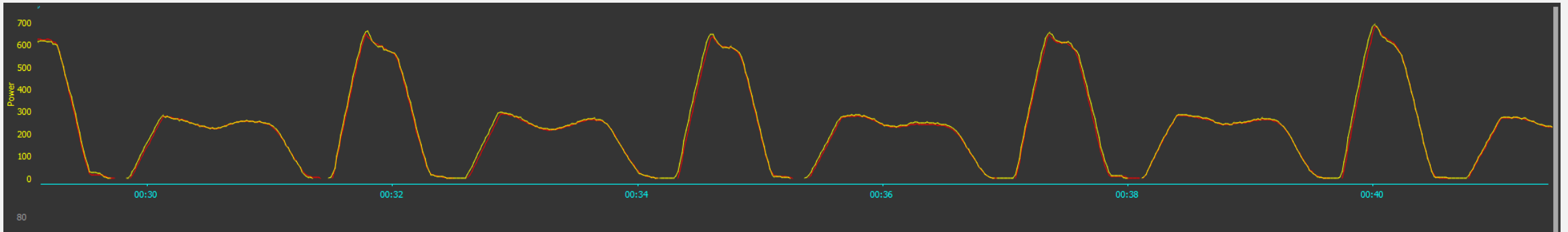




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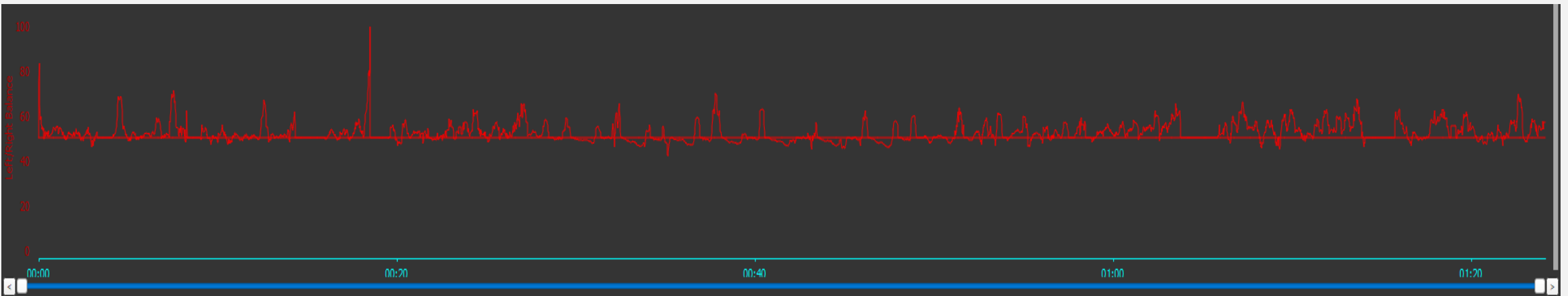
Closeup on Interval Section

We can see that both power meters are consistent and have steady power readings throughout the intervals. Furthermore, they both reach the same peaks of around 650 Watts.



Balance Readings

The balance readings show that our rider relies on his left leg a bit more than on his right. Competitor does not provide L/R power metric.





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POWERBEAT™ Dual Field Test – Metrics Summary

Average Power:

POWERBEAT™ Dual: 149 Watt

Competitor Power Meter: 150 Watt

Left/Right Balance:

POWERBEAT Dual: 53.4% / 46.6%

Competitor Power Meter : N/A

Entire Activity on 23 May 17 vs Entire Activity on 23 May 17

Totals

	Duration		Time Moving		Distance (km)		Activities		Work (kJ)		W' Work (kJ)		Elevation Gain (meters)	
Entire Activity	1:24:09		1:16:11		24.948		1		682		99		447	
Entire Activity	1:24:11	+2	1:16:13	+2	25.177	+0.229	1	+0	686	+5	107	+8	407	-40

Metrics*

	Cadence (rpm)		Power (watts)		Duration		NP (watts)		Left/Right Balance (%)	
Entire Activity	67		149		1:24:09		248		53.4	
Entire Activity	73	+6	150	+1	1:24:11	+2	251	+3	0.0	-53.4

Averages

	Athlete Weight (kg)		Speed (kph)		Power (watts)		Cadence (rpm)	
Entire Activity	75.00		19.7		149		67	
Entire Activity	75.00	+0.00	19.8	+0.2	150	+1	73	+6

Maximums

	Speed (kph)		Power (watts)		Cadence (rpm)		W' Expended (%)	
Entire Activity	43.2		851		116		102	
Entire Activity	42.7	-0.5	894	+43	225	+109	108	+6

<input checked="" type="checkbox"/>	Athlete	Date	Time	Duration	Distance (km)	Average Power (watts)	Average Cadence (rpm)	NP (watts)	Max Cadence (rpm)	Max Power (watts)	Average Left Torque Effectiveness (%)	Average Right Torque Effectiveness (%)
<input checked="" type="checkbox"/>	Chen	2017-05-23	05:55:38	01:24:09	24.948	149	67	248	116	851	76.2	74.8
<input checked="" type="checkbox"/>	Chen	2017-05-23	05:55:34	01:24:11	25.177	150	73	251	225	894	0.0	0.0