



Watteam POWERBEAT™ Lab Test #42

Rider Details

Rider: YT
Weight: 75kg
Age : 28
Riding experience: .. 6 years

Equipment Used

Crank: .. Dura Ace 9100 170mm
Bike: KTM Revelator 4K
Power Meters:
1: POWERBEAT™ Dual
2: Competitor Rear Hub Power Meter

Ride Details

Test Number: 42
Test type: Long Outdoors Road

Our test rider went out to a long, easy weekend ride on his bike.

His ride consisted of a long, relatively flat course, and he was accompanied by many other riders. The nature of the ride consisted of a lot of stops, turnarounds, and small peaks in power (~450 Watts), while keeping the overall pace low, at around 150 Watt average.

The rider started with a 20 minutes warm-up spin in the cold of morning, then he stopped for a zero-offset and some coffee with friends. The temperature went up slightly as the ride went along, but some occasional spring downpours caught the riders a few times.

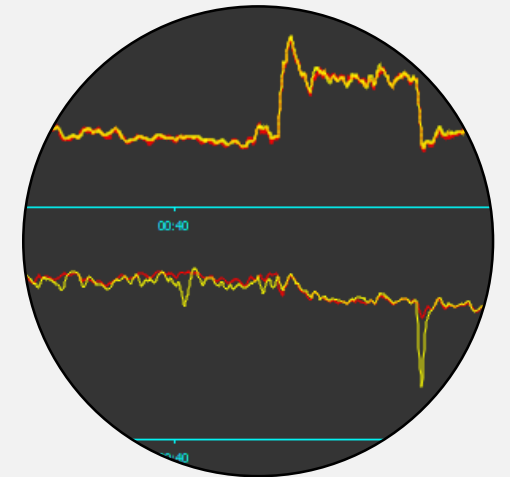
Near the end of the ride, our rider did a steady climb of around 20 minutes at 230 Watts back to his home town, and finished with an easy spin of 160 Watts for a couple of minutes before heading home.

Watteam's lab analysis:

- Both power meters showed good, consistent Power readings.
- Both power meters continued to work perfectly in wet conditions.
- The POWERBEAT Dual gave us valuable balance data, as shown in the following report.

Overall Results and Conclusions:

- Slight difference in cadence readings, possibly because of different methods of measuring.
- POWERBEAT™ Dual has the benefits of independent leg readings
- At 132 Avg. Power, the ride covered mostly Zone 2 Watt range, with some small peaks of around 400 to 500 Watts.





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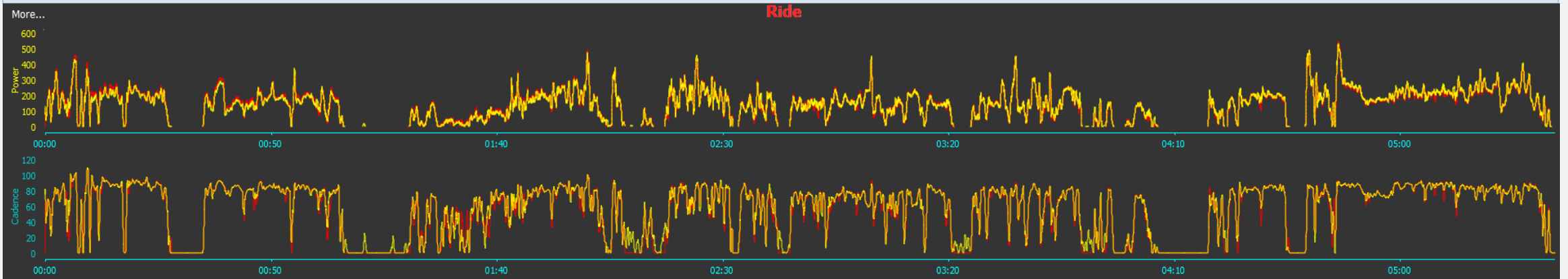
Crank: Shimano Dura Ace 9100

Test Conditions: 20°C, Wet – Occasional Rain

Power Meters: POWERBEAT Dual vs Rear Hub Power Meter

Duration: 5h30m, Distance: 120KM (75 Miles)

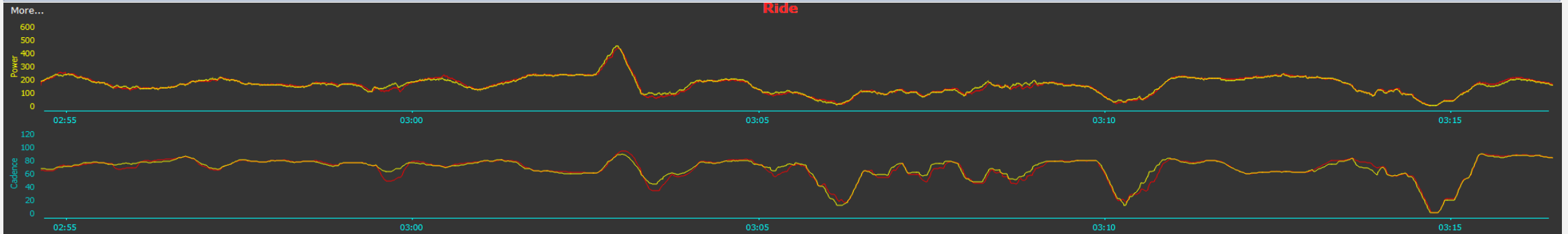
POWER AND CADANCE READINGS: Our rider began his long ride in a relatively easy pace. He stopped to do a zero offset after 20 minutes. He then proceeded his ride with quite a few stops along the way and a few very short intervals of around 450 Watts, while keeping the overall pace very low and easy at around 130 Watt average. The rider finished his ride with a 20 minutes steady climb back home at around 230 Watts.





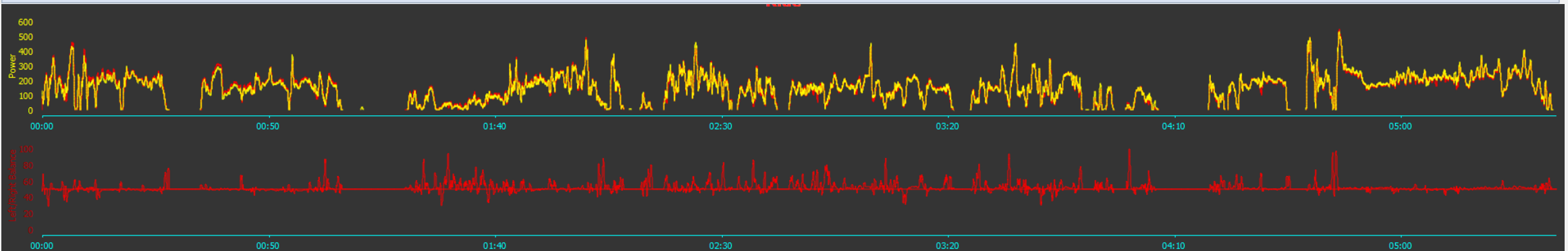
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In this 20 min close-up from around 2h55m into the ride, we can see that both power meters are steady and close in their power readings. They both record the same small peak of around 450 Watts.



Balance Readings:

The balance readings from the POWERBEAT™, shown below along with the Watts graphs from both power meters, tell us that our rider is slightly stronger on his left side. Having the two graphs side by side also show us some correlation between higher peaks in Watts and left-sided “leanings”, meaning that our rider is pushing slightly harder on his left leg when riding very short, strong efforts.





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POWERBEAT™ Dual Field Test – Metrics Summary

Average Power:

POWERBEAT™ Dual: 132Watt

Competitor Power Meter: 133Watt

Left/Right Balance:

POWERBEAT Dual: 52% / 48%

Competitor Power Meter : N/A

Entire Activity on 24 Mar 18 vs Entire Activity on 24 Mar 18

Totals

| | Duration | Time Moving | Distance (km) | Activities | Work (kJ) | W' Work (kJ) | Elevation Gain (meters) |
|-----------------|------------|----------------|----------------|------------|-----------|--------------|-------------------------|
| Entire Activity | 5:34:21 | 4:34:39 | 119.377 | 1 | 2647 | 211 | 974 |
| Entire Activity | 5:34:22 +1 | 4:44:16 +09:37 | 119.722 +0.345 | 1 +0 | 2648 +1 | 230 +19 | 687 -287 |

Metrics*

| | TriScore | xPower (watts) | Relative Intensity | TRIMP Points | Aerobic Decoupling (%) |
|-----------------|----------|----------------|--------------------|--------------|------------------------|
| Entire Activity | 319 | 189 | 0.756 | 0 | 0.0 |
| Entire Activity | 319 -0 | 190 +1 | 0.759 +0.002 | 249 +249 | -17.0 -17.0 |

Averages

| | Athlete Weight (kg) | Speed (kph) | Power (watts) | Heart Rate (bpm) | Core Temperature (C) | Cadence (rpm) |
|-----------------|---------------------|-------------|---------------|------------------|----------------------|---------------|
| Entire Activity | 75.00 | 26.2 | 132 | 0 | 0.0 | 76 |
| Entire Activity | 75.00 +0.00 | 26.4 +0.2 | 133 +1 | 127 +127 | 38.0 +38.0 | 75 -1 |

Maximums

| | Speed (kph) | Power (watts) | Heartrate (bpm) | Core Temperature (C) | Cadence (rpm) | W' Expended (%) |
|-----------------|-------------|---------------|-----------------|----------------------|---------------|-----------------|
| Entire Activity | 69.5 | 839 | 0 | 0.0 | 130 | 110 |
| Entire Activity | 68.8 -0.7 | 838 -1 | 181 +181 | 38.8 +38.8 | 254 +124 | 127 +17 |

| Athlete | Date | Time | Duration | Distance (km) | Work (kJ) | Average Power (watts) | NP (watts) | Max Power (watts) | Average Cadence (rpm) | Average Speed (kph) | Left/Right Balance (%) |
|---------|------------|----------|----------|---------------|-----------|-----------------------|------------|-------------------|-----------------------|---------------------|------------------------|
| Yuval | 2018-03-24 | 06:14:42 | 05:34:21 | 119.377 | 2647 | 132 | 199 | 839 | 76 | 26.2 | 52.0 |
| Yuval | 2018-03-24 | 06:14:43 | 05:34:22 | 119.722 | 2648 | 133 | 199 | 838 | 75 | 26.4 | 0.0 |