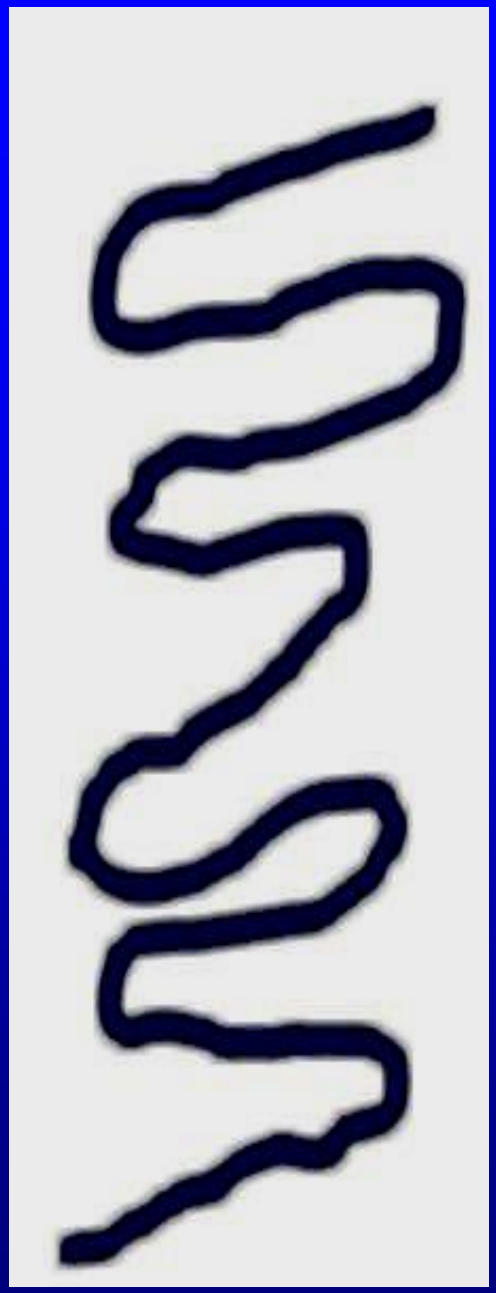
Altitudetraining



Success

Altitudetraining with norwegian walkers

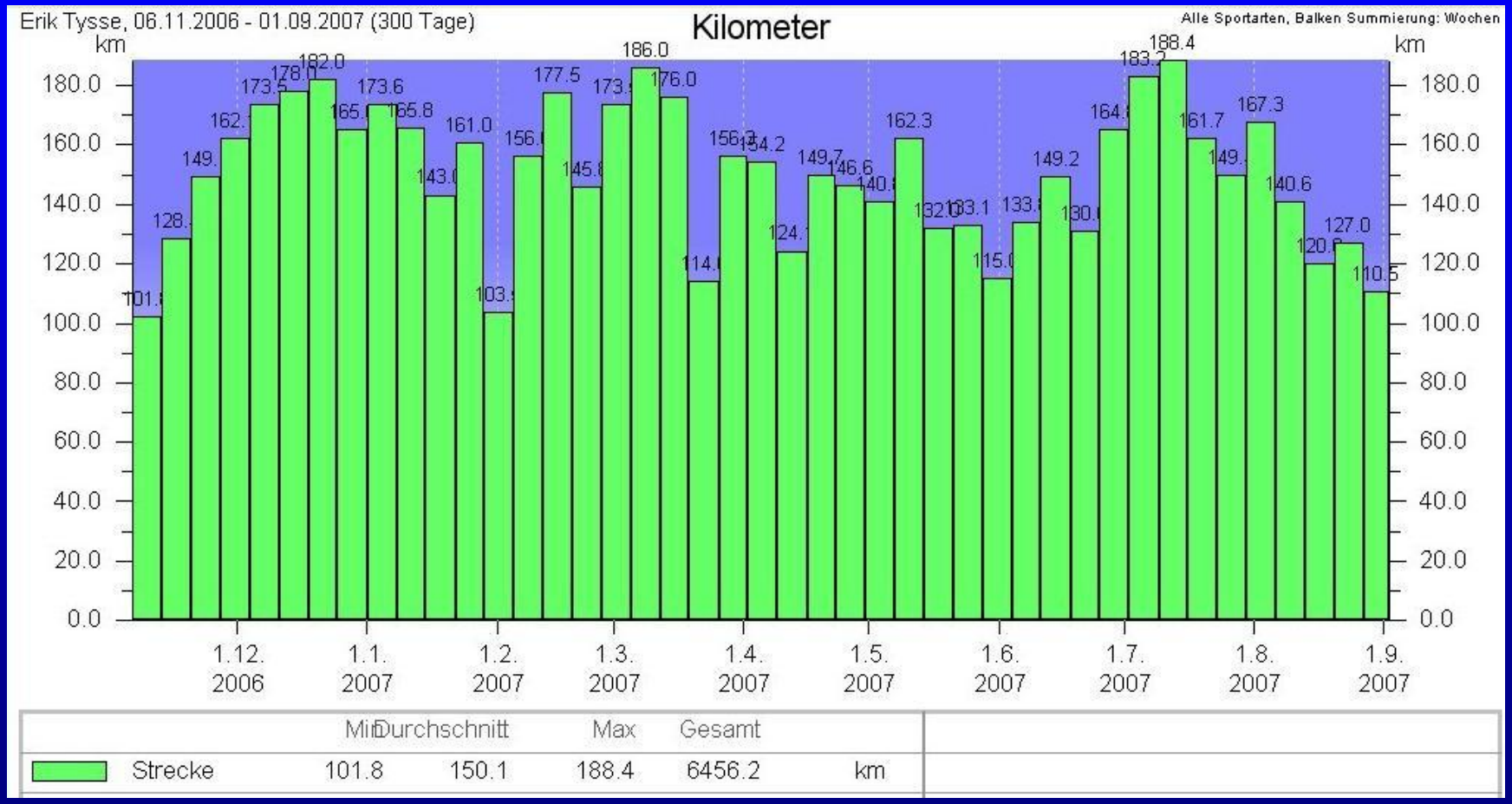
Trond Nymark, Kjersti T. Plätzer, Erik Tysse

	Olympics	Worlds	Europeans	W-Cup	E-Cup
Kjersti (20km-PB 1.27. 07)	2. (2000) 2. (2008)	4. (2007)	4. (2006)	5. (2002)	3. (2000)
Erik (20km-PB 1.19.11) (50km-PB 3.45.08)	sick (2004) 5. (2008)	8. (2007) 5. (2007)	7. (2006)	6. (2008)	8. (2005)
Trond (50km-PB 3.41.30)	13. (2004) Dnf (2008)	4. (2005)	4. (2006)	2. (2006)	2. (2007)

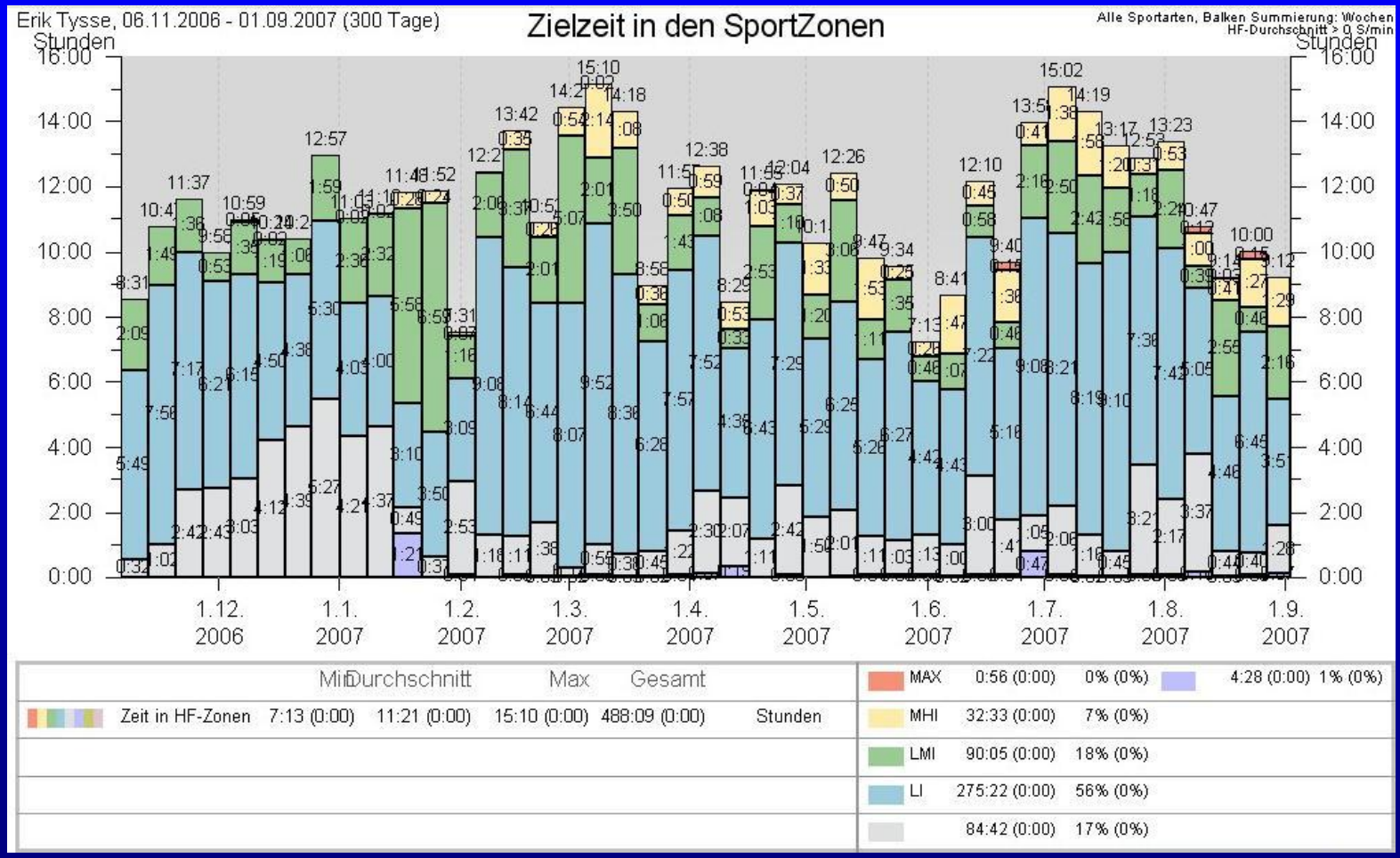
Conditions/thoughts before travel to altitude

- What is the goal with the altitudetraining?
- Altitude as preparation for a competition or as base training
- Many years altitude, individuell planned (?? days after altitude competition?)
- Consistency through the whole season
- Tests/diagnostics
- High base endurance level
- Start of the season with many weeks of lipid/aerobic training (HR and Lactat acid control)
- Aerobic endurance strength (many kilometer in ”hilly” areas)

Kilometer a week – 06/07

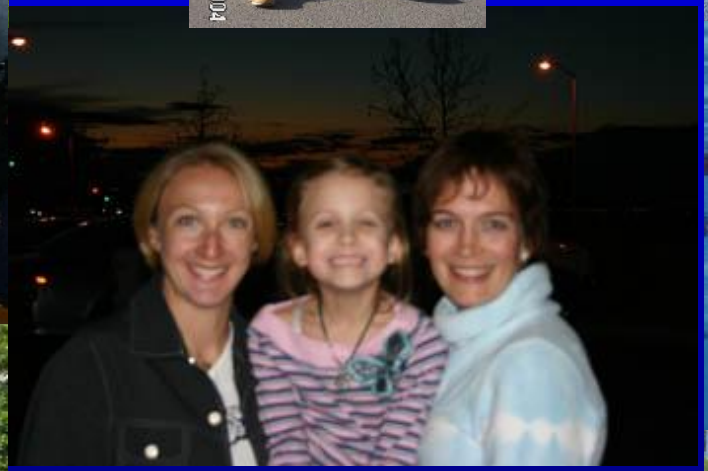


Times in Zones – 2006/07



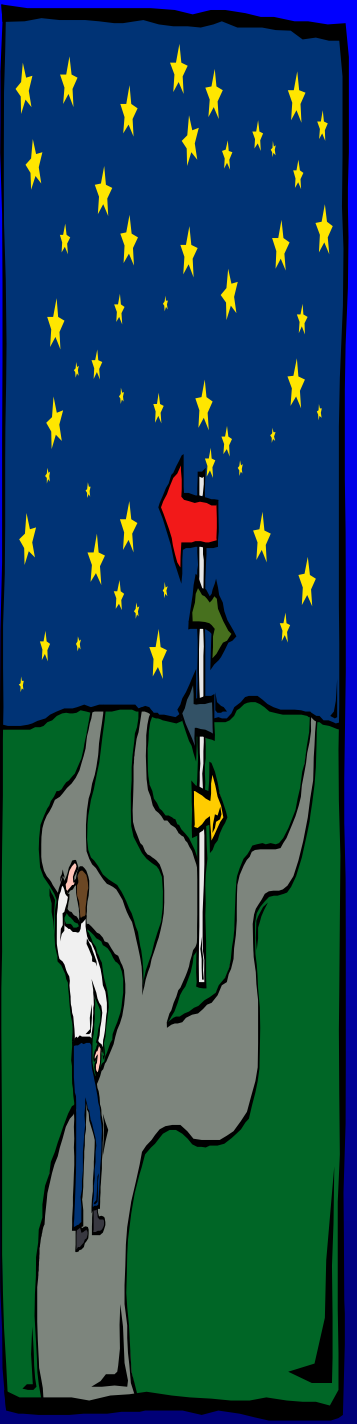
What do the best in the World train?

How do they recover?



Financial aspects

- Choice of training area (optim. training-/sparetime condition
- Which altitude?
- Length of stay?
- Min. 21 days at altitude, better 25-28 days
- How often at altitude?
- Multiple altitude stay per season – altitude chain?



Each choice has a consequence!!!

- Many years altitudetraining
  - collect experience
- No risk at altitude
  - ”less is often more”
- Training contents/sessions at altitude (what do you want?)
- Individuell training
- Group dynamics (danger for individuell development)
- Coach/athletes, tight care through personal coach (coach follows training)

Training at altitude

- Easy acclimatizing at altitude-3-5 days in WE1-level
- Recovery TS <70%-75% of target, or alternative methods
- High share WE1-km in middle speed 80%-85% of target
- Middle (1-3km) and long (4-6km) int. sessions in level 90%-95% of target
- Tight care of personal coach (Coach at TS)
- easy acclimatize in the last days at altitude, 2-4 days of WE1-level
- ”Screening” (HR and Lactat acid control)

Training at altitude

- enough recovery
- Fluids during training sessions
- carbohydrat/proteinrich nutrition after training (<20min)
- Physiotherapy/Massage/Osteopathy
- Give new moments in training
- Feel well and have fun!!! ☺

Trainingsweek 07/2005 Trond Nymark in Dullstrom/Südafrika

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
20km W 80%-85%	10x2km W 90%	2h Hike <75%	20km W 80%	35km W 90%	OFF	45km W 85%
8km R + 60‘ Athl.	16x500m W 95%	OFF	6km R + 60‘ Athl.	OFF	OFF	10km R 80%

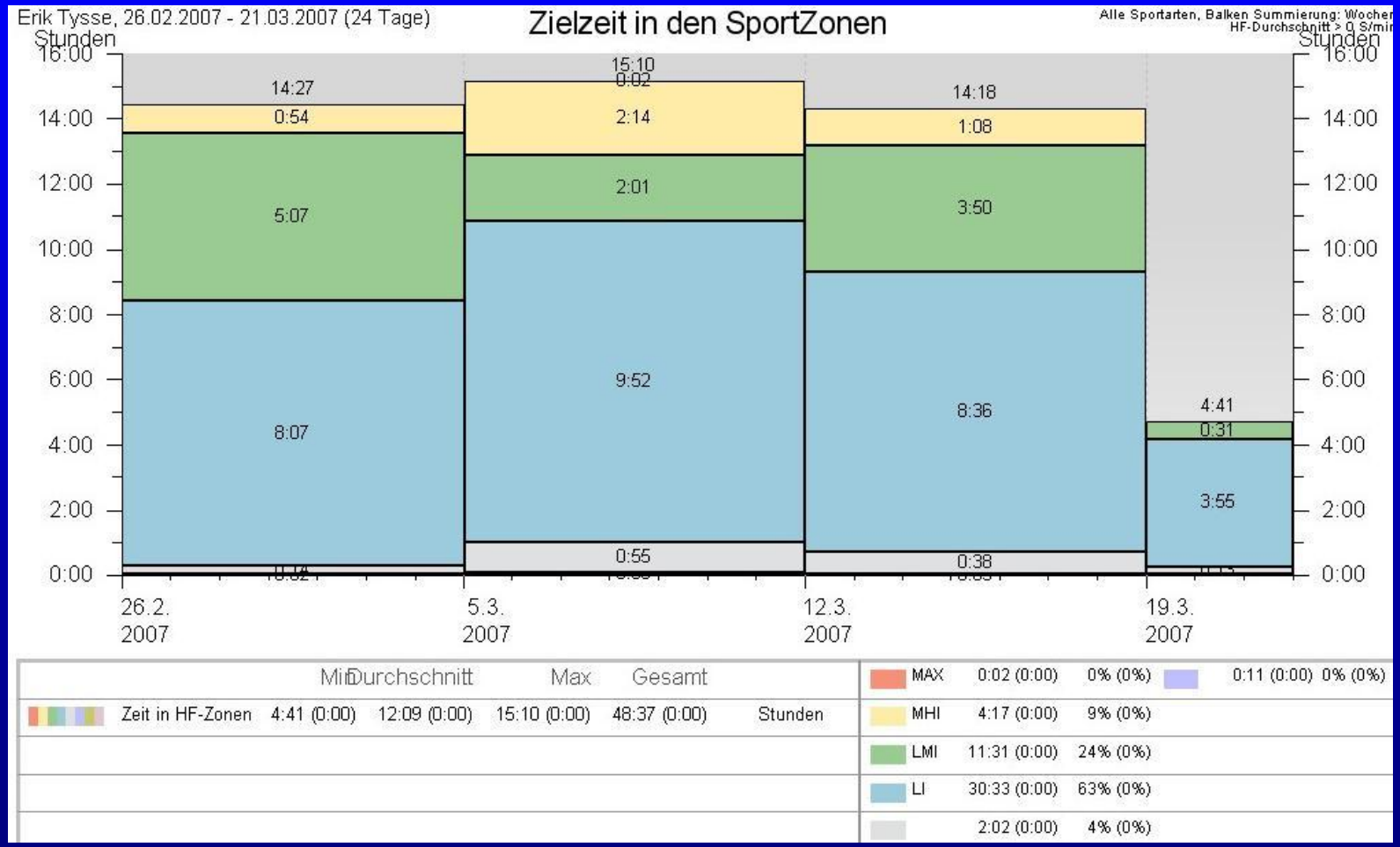
Trainingsweek 25/2006 Kjersti T. Plätzer in St. Moritz/Switzerland

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
15km W 80%-85%	15km W 80%-85%	9x1km W 95%	20km W 80%-85%	12km W 80%-85%	4x3km W 92%-95%	21,5km W 80%-85%
40’ Alt. endurance <75%	OFF	1h Hike <75%	OFF	40’ Alt. endurance <75%	40‘ Aquajogg	Frei

Trainingsweek 10/2007 Erik Tysse in Flagstaff/USA

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
15km W 80%-85%	6x2,5km W 95%	21km W 80%-85%	16km W 80%-85%	15km W 80%-85%	14x1km W 95%	25km W 80%-85%
8km R <80%	8km jogg <80%	10km W 80%	OFF	8km R <80%	6km jogg <80%	OFF

Altitude Flagstaff - targettime in zones – 2006/07



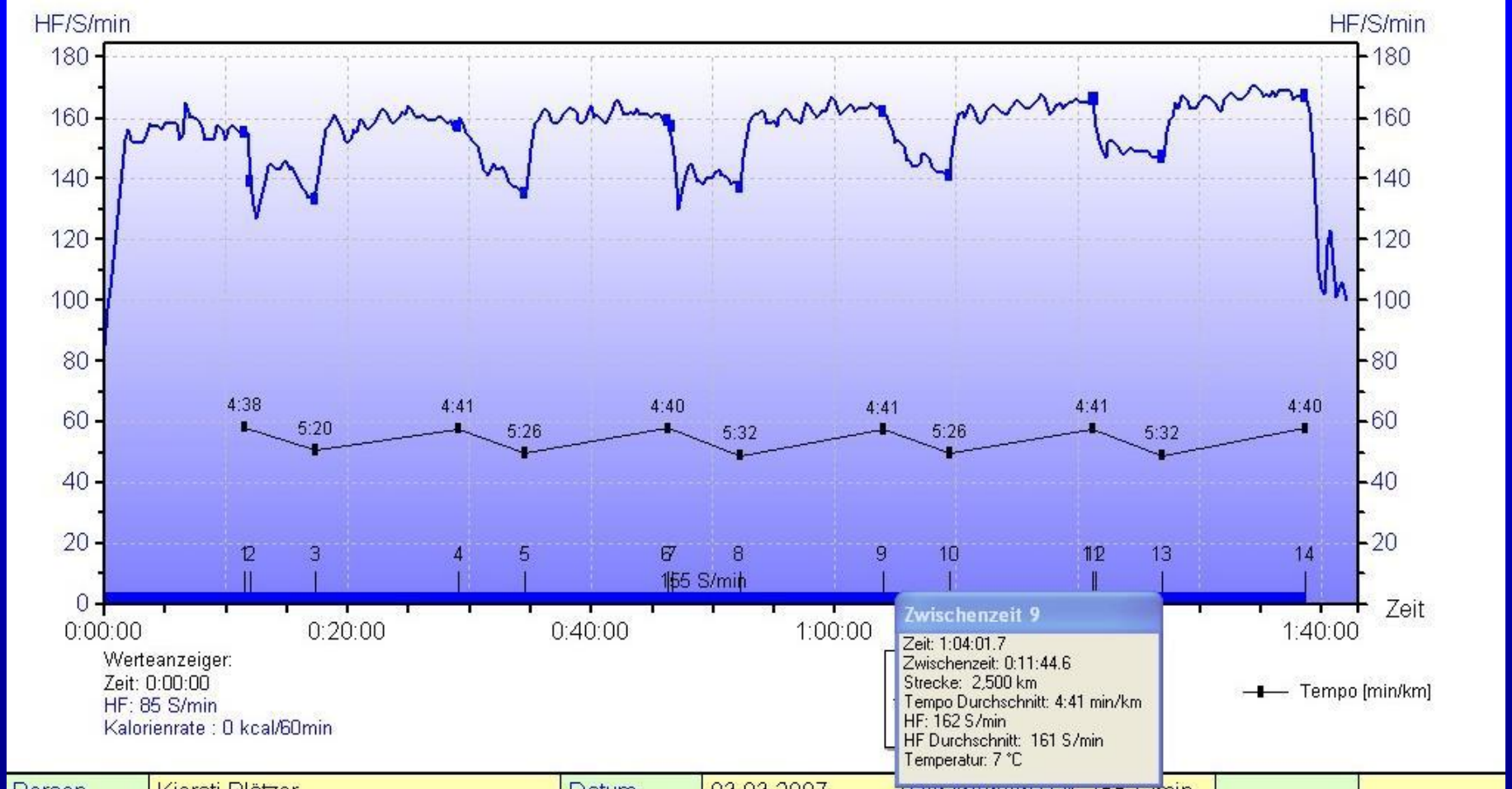
Kjersti 100% = 3,79m/s = 20km (1.28.00)

		1	2	5	10	15	20
95 %	**3,58m/s**	4.39/km	9.18/2km	23.15/5km	46.30/10km		
90 %	**3,42m/s**	4.52/km	9.44/2km	24.20/5km	48.40/10km	1.13.00/15km	1.37.20/20km
85 %	**3,22m/s**	5.11/km	10.22/2km	25.55/5km	51.50/10km	1.17.45/15km	1.43.40/20km
80 %	**3,03m/s**	5.30/km	11.00/2km	27.30/5km	55.00/10km	1.22.30/15km	1.50.00/20km
75 %	**2,85m/s**	5.51/km	11.42/2km	29.15/5km	58.30/10km	1.27.45/15km	1.57.00/20km

3,58 m/s	95 %	=	1km=	4:39
3,42 m/s	90 %	=	10km=	48:40
3,22m/s-3,58m/s	85 %	=	1km=	5:11
3,03m/s-3,42m/s	80 %	=	10km=	55:00
2,85m/s-3,03m/s	75 %	=	10km=	58:30

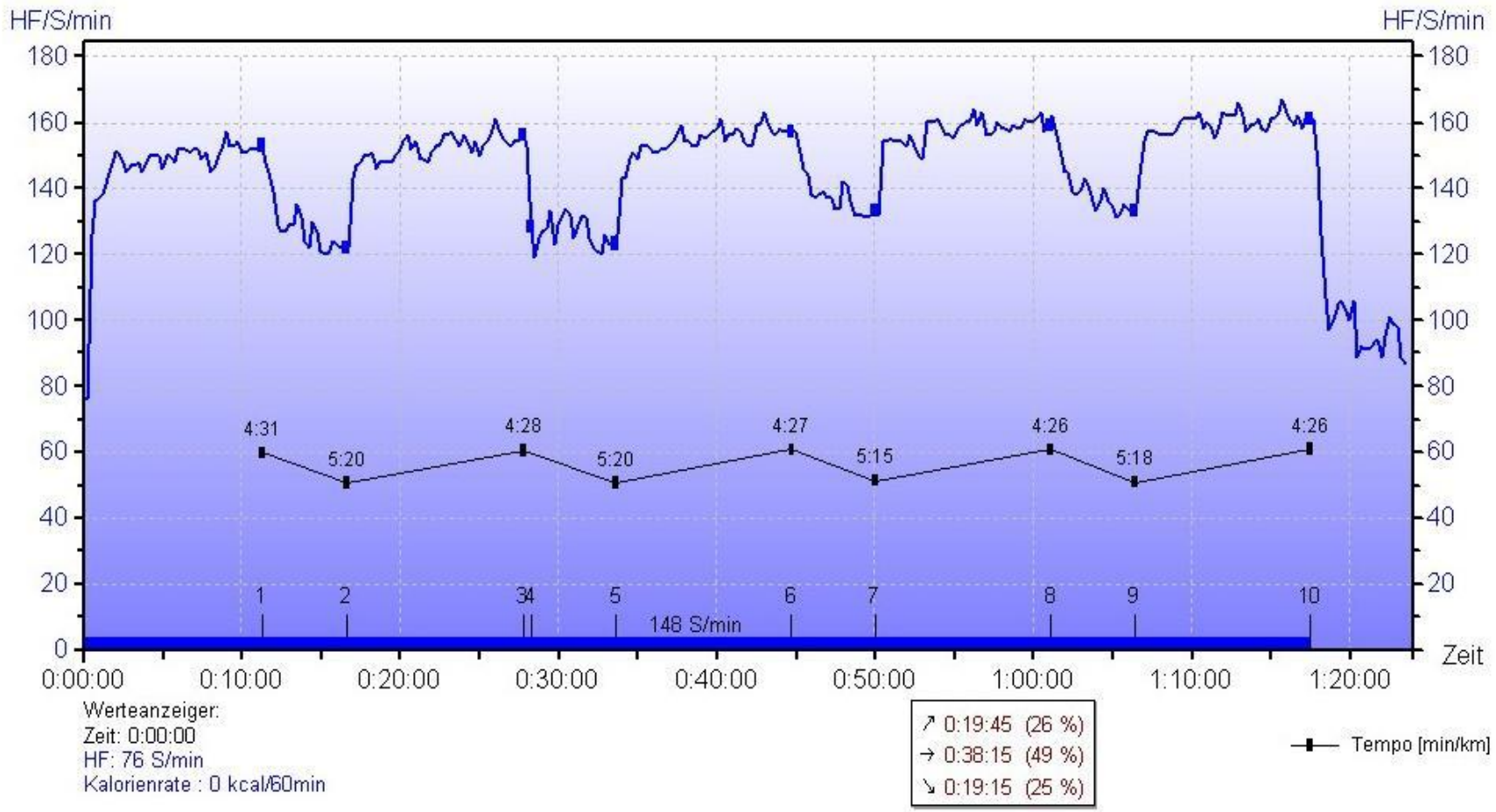
Kjersti Tysse Plätzer	**22.1.2000**		**22.2.2000**		**10.01.2004**		**17.02.2007**	
Aerobe Schwelle (vL2):	3,53m/s	4.43/km	3,6m/s	4.38/km	3,61m/s	4.37/km	3,7m/s	4.29/km
HF bei vL2:			163		162		149	
Anaerobe Schwelle (vL4):	3,80m/s	4.23/km	3,85m/s	4.20/km	3,81m/s	4.22,5/km	3,92m/s	4.15/km
HF bei vL4:			ca.180		174		ca.165	

TE in Flagstaff/USA



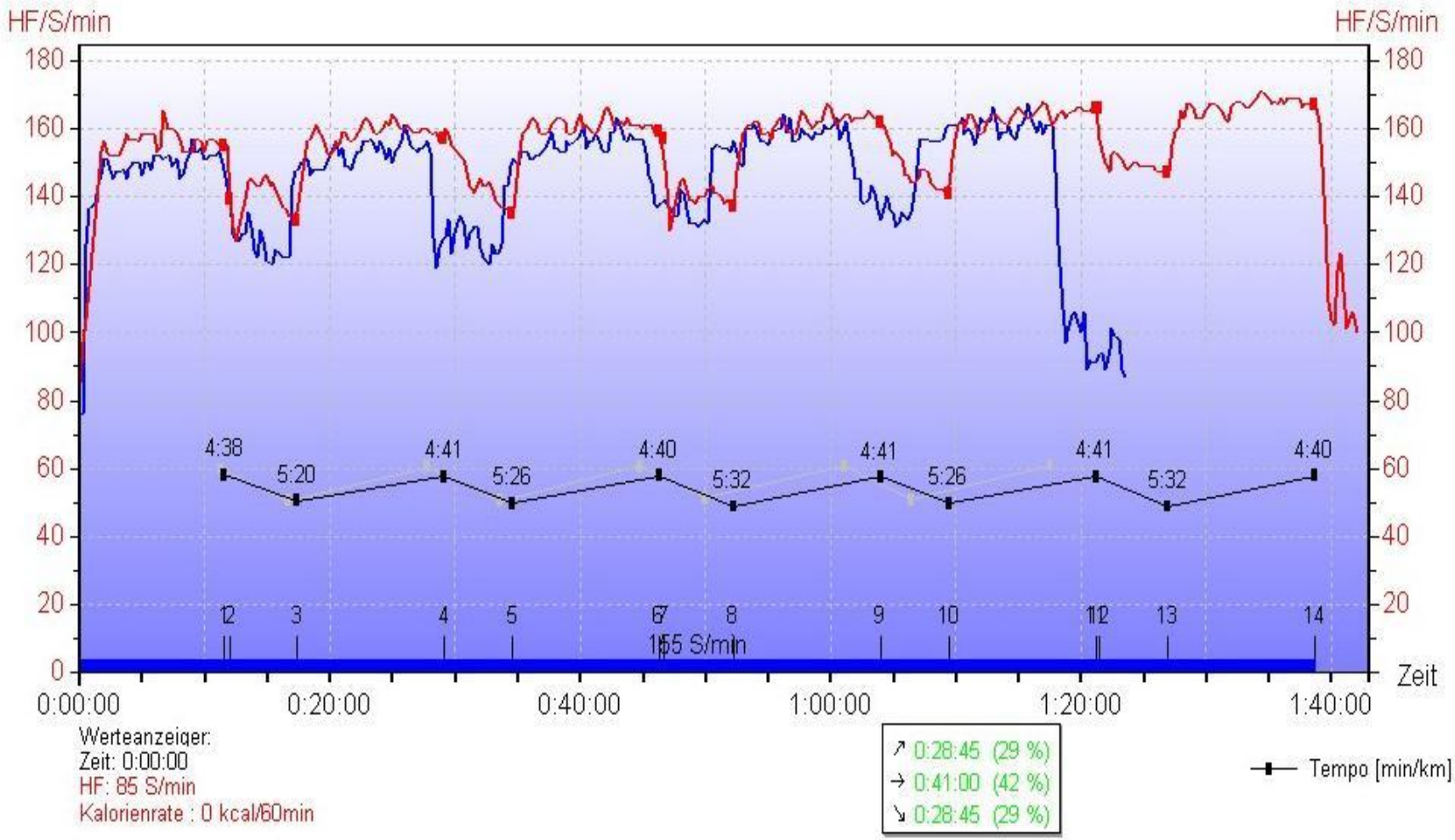
Person	Kjersti Plätzer	Datum	03.03.2007	Herzfrequenz D	155 S/min		
Einheit	6x2,5km m/1km pause	Zeit	10:36:33	Herzfrequenz m	171 S/min		
Sportart	Gehen	Dauer	1:42:00.7	Strecke	20.0 km		
Anmerkung	KDK:3,0-2,4-3,0(#1-3-6), sterk vind og -4grader			Auswahl	0:00:00 - 1:38:45 (1:38:45.0)		

TS after Flagstaff/USA



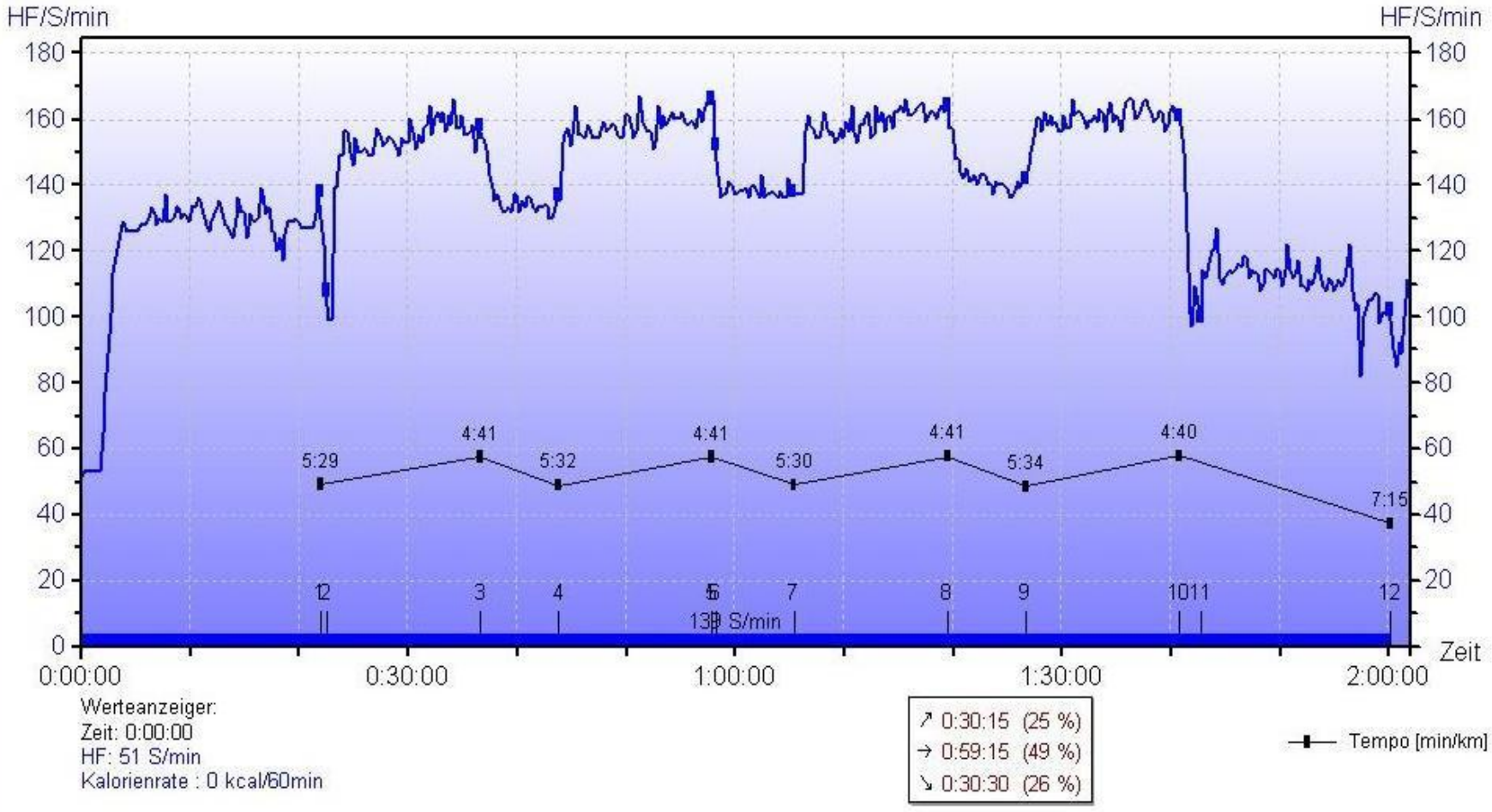
Person	Kjersti Plätzer	Datum	21.04.2007	Herzfrequenz Du	148 S/min		
Einheit	5x2,5km m/1km pause	Zeit	11:47:39	Herzfrequenz ma	167 S/min		
Sportart	Gehen	Dauer	1:23:39.7	Strecke	16.5 km		
Anmerkung	KDK:2,4-1,8(#2-5)			Auswahl	0:00:00 - 1:17:30 (1:17:30.0)		

Comparison of workouts



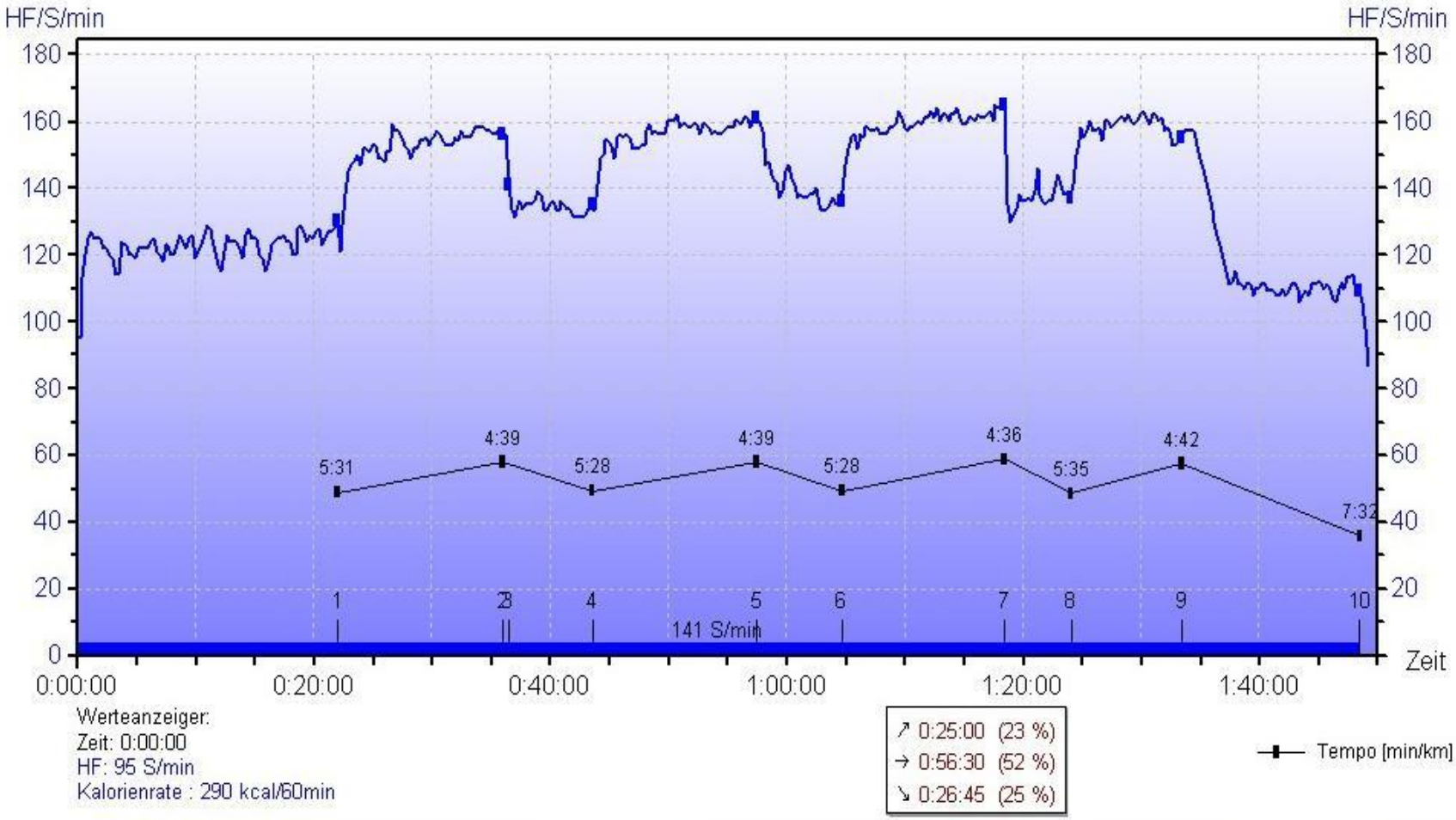
Nein	Einheit	Datum	Cursor HF	Herzfrequenz	Dauer	Anmerkung
1. —	5x2,5km m/1km pause	21.04.2007	76	148 / 167	1:23:39.7	KDK:2,4-1,8(#2-5)
2. ▭	6x2,5km m/1km pause	03.03.2007	85	155 / 171	1:42:00.7	KDK:3,0-2,4-3,0(#1-3-6), sterk vind og

TS in St. Moritz/Schweiz



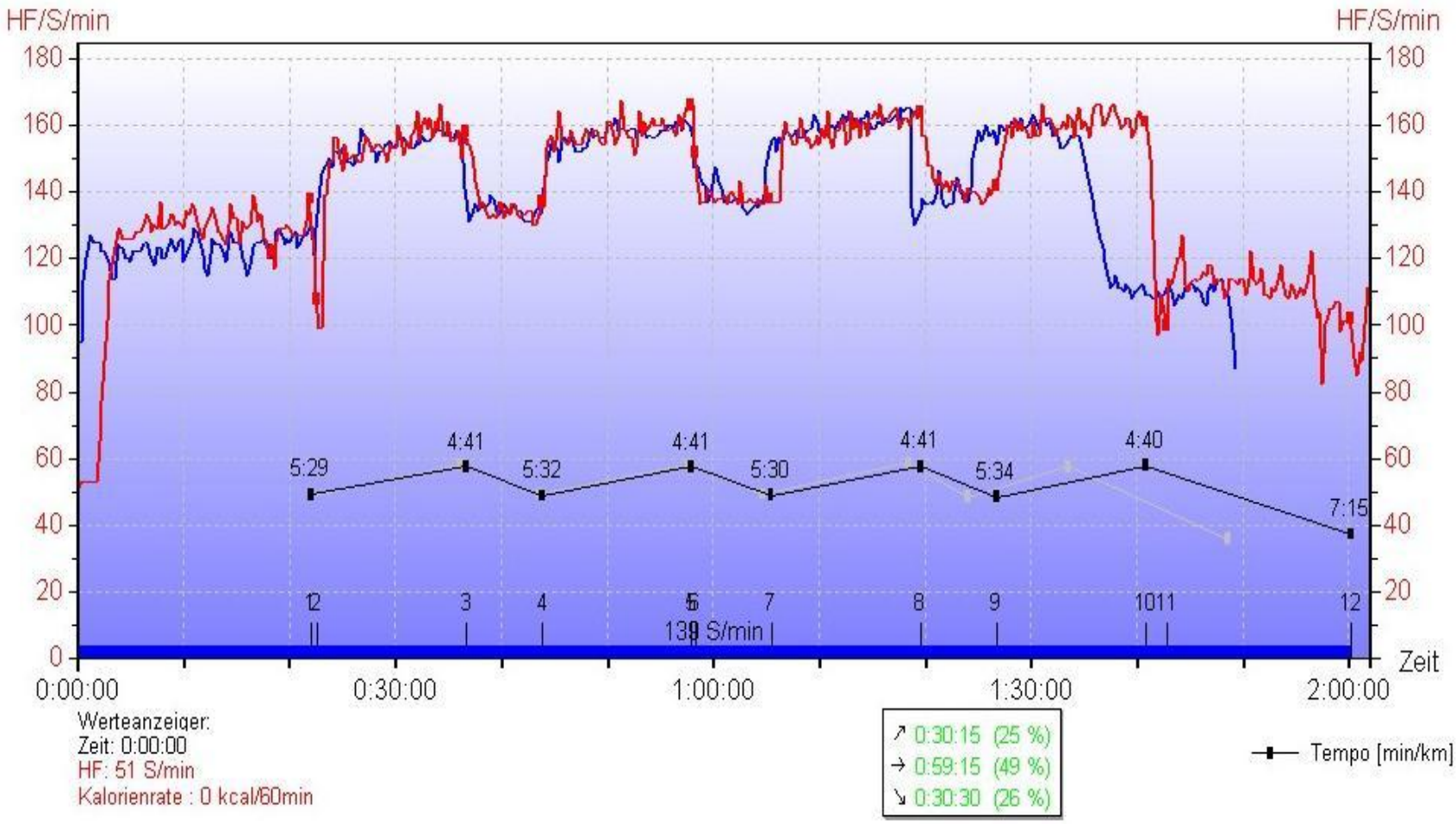
Person	Kjersti Plätzer	Datum	10.07.2007	Herzfrequenz Du	139 S/min		
Einheit	4x3km m/1,3km P	Zeit	08:55:28	Herzfrequenz ma	167 S/min		
Sportart	Gehen	Dauer	2:01:45.7	Strecke	22.3 km		
Anmerkung	KDK:3,4-2,7(#2-4)			Auswahl	0:00:00 - 2:00:15 (2:00:15.0)		

TS in St. Moritz/Switzerland - 14 days later



Person	Kjersti Plätzer	Datum	24.07.2007	Herzfrequenz D	141 S/min		
Einheit	3x3km+1x2km	Zeit	08:58:50	Herzfrequenz m	165 S/min		
Sportart	Gehen	Dauer	1:49:22.8	Strecke	20.6 km		
Anmerkung	KDK:3,1-3,3(#1-3)			Auswahl	0:00:00 - 1:48:30 (1:48:30.0)		

Comparison of workouts



Nein	Einheit	Datum	Cursor HF	Herzfrequenz	Dauer	Anmerkung
1.	3x3km+1x2km	24.07.2007	95	141 / 165	1:49:22.8	KDK:3,1-3,3(#1-3)
2.	4x3km m/1,3km P	10.07.2007	51	139 / 167	2:01:45.7	KDK:3,4-2,7(#2-4)

Psychological aspects determine the physis – especially challenging on longterm altitude training camps

Kjersti T. Plätzer

- Motivation – as mental drive

  - rested to altitude training camps – no stress
  - just healthy (not sick/injured) athletes to altitude
  - make sure to give new „moments“ (sightseeing)

- Doubts

  – threat on the way to success/result
  – Brain goes into defense status – ” rubberband”

The mental ”Surplus”

- gives
  - happyness
  - correct thoughts
  - drive

- the results are
  - good physical, mental and technical results

Sydney 2000

Beijing 2008

Altitudetraining