



swiss olympic MEDICAL CENTER

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VISTA 2019

Citius, altius, fortius?

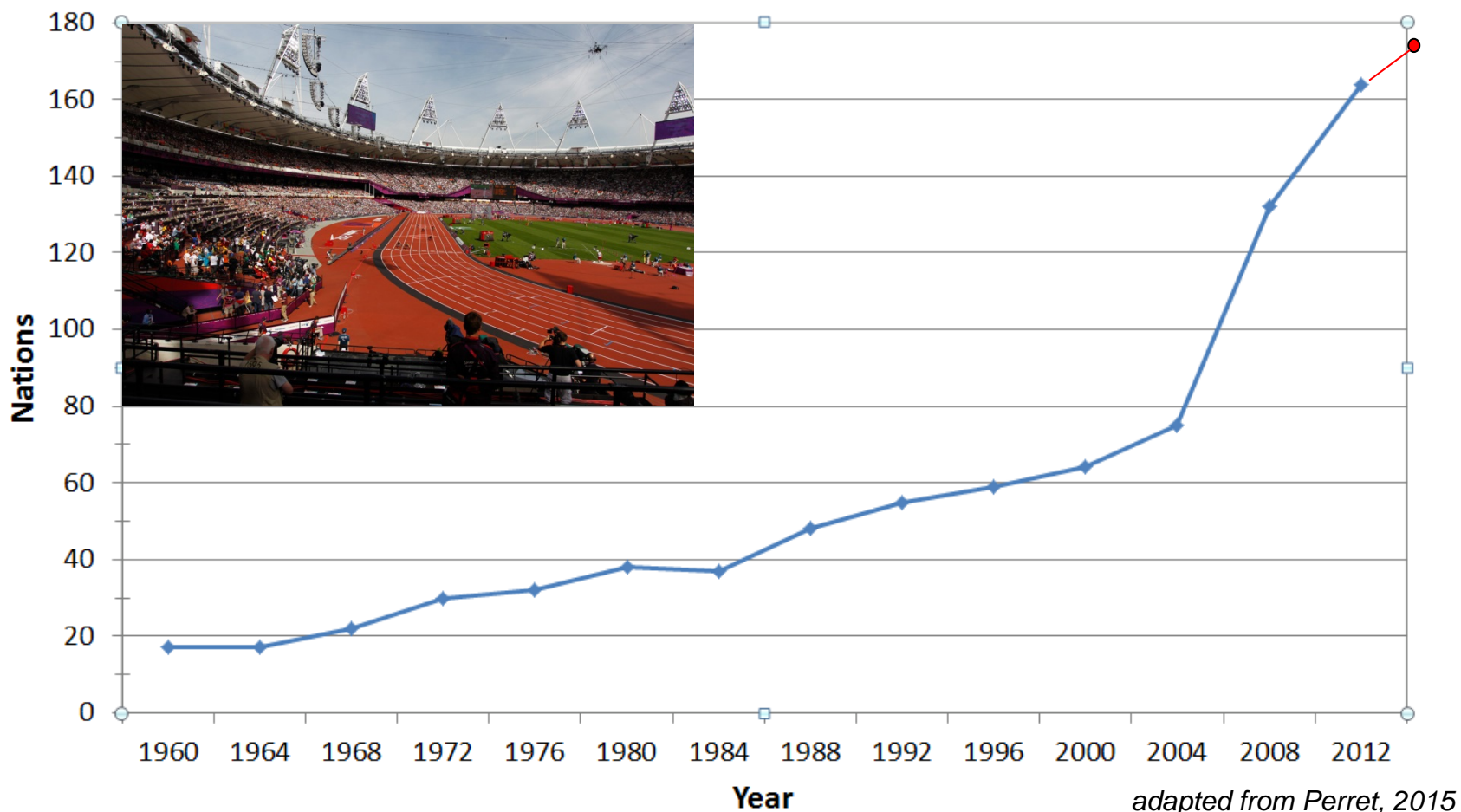
A 10 year analysis of women's T54 wheelchair athletics performance development

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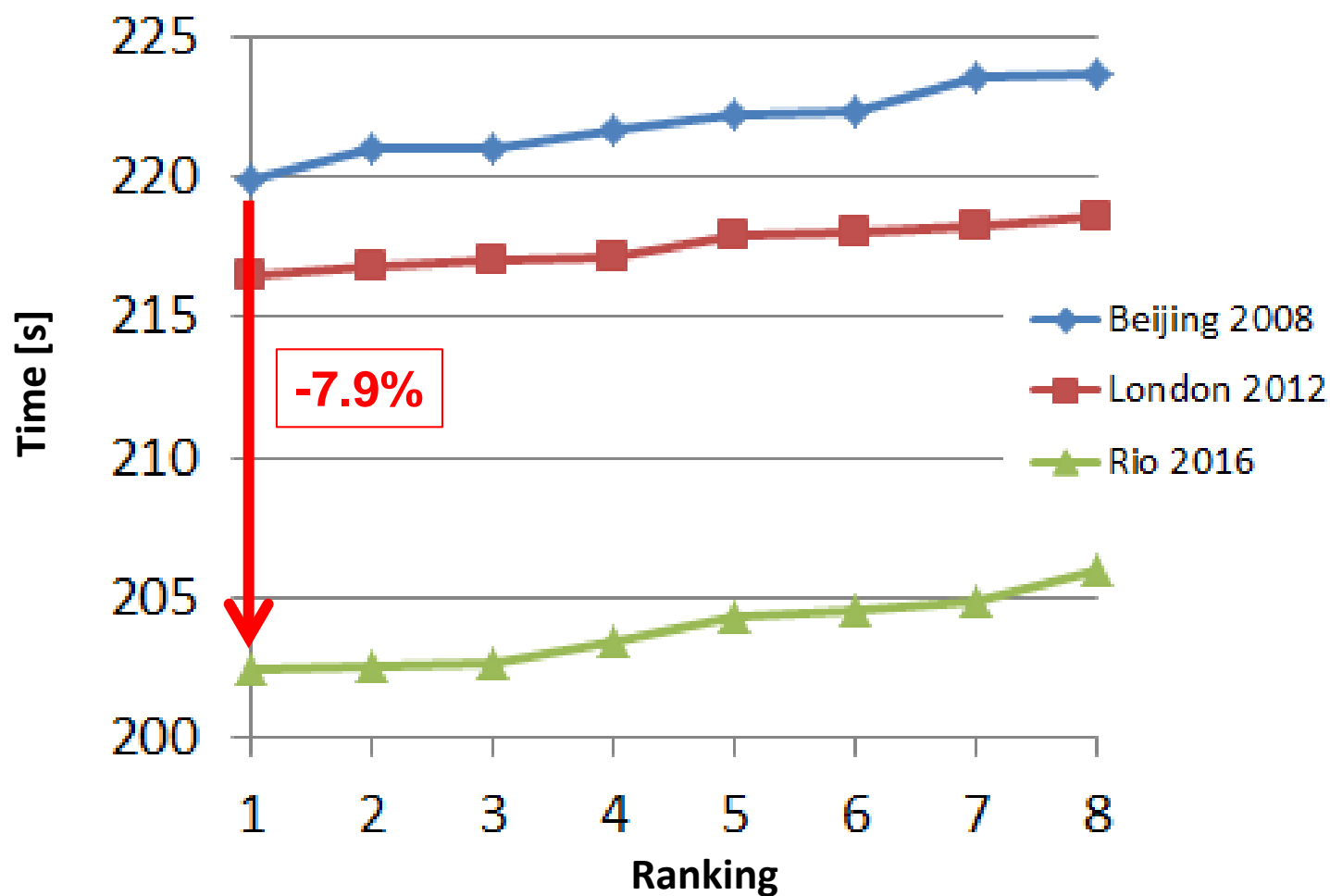
Amsterdam, 6th of September 2019

Increasing interest in Paralympic sports

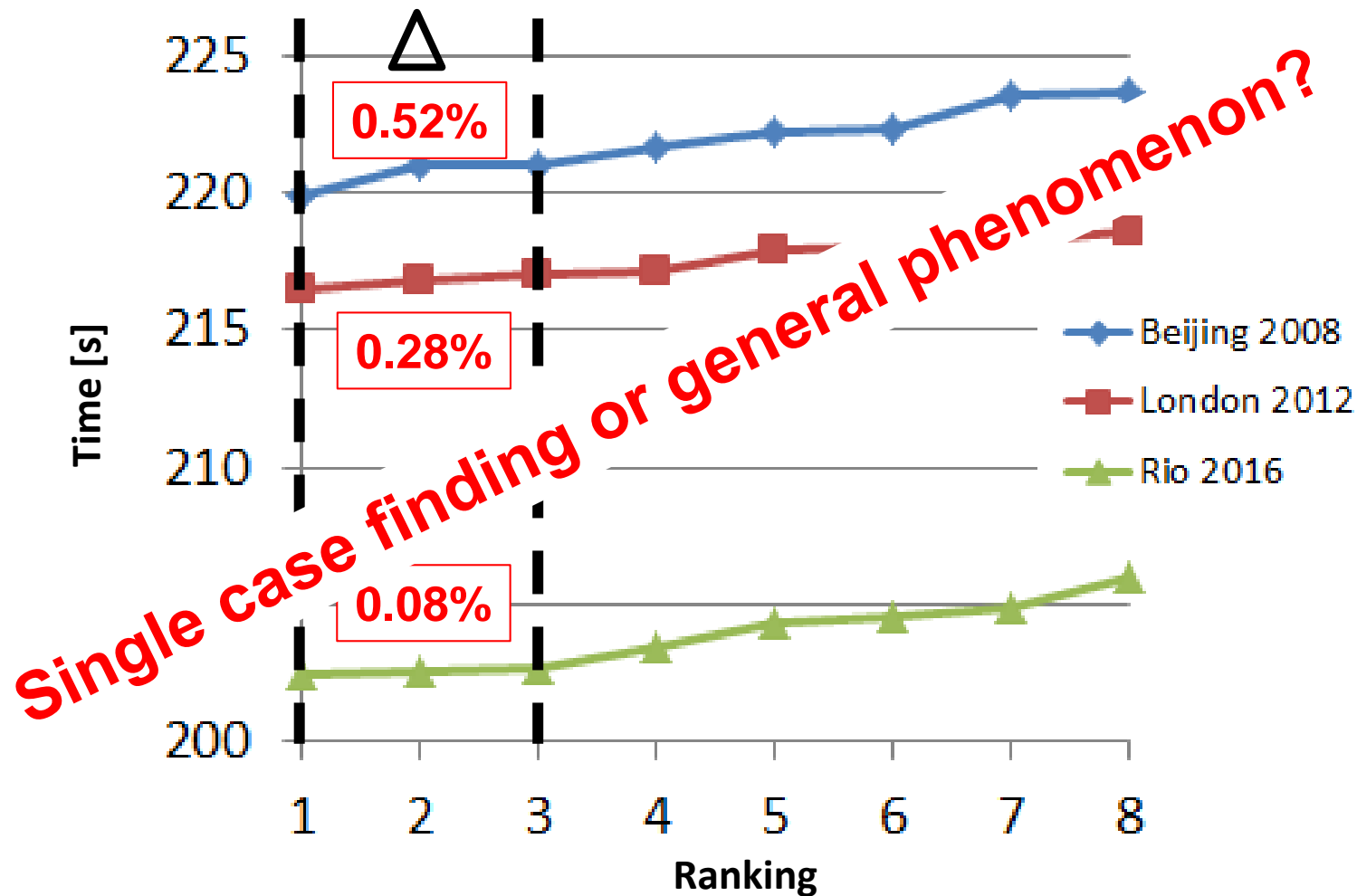
Nations at Paralympic Summer Games



Women T54 finals 2008-2016 finish times



Women T54 finals 2008-2016 medal ranking



Aim of the study

- To analyse performance developments for all of the women's T54 track events (from 100m to 5000m) over the past decade based on world rankings

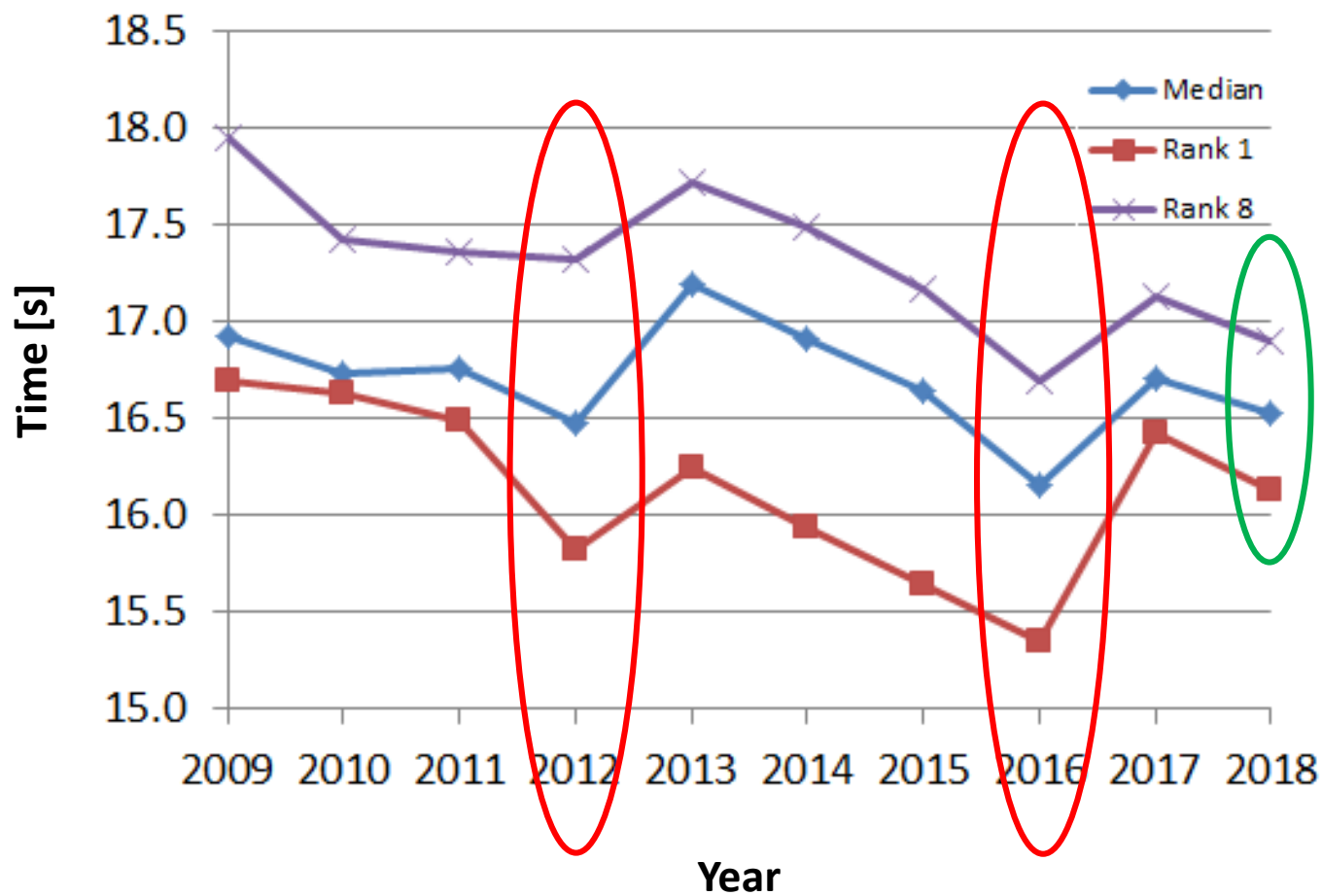


Methods

- World ranking data from 2009 to 2018 (<https://www.paralympic.org/athletics/rankings>)
- Calculations based on top 8 athletes
- Descriptive statistics



World ranking results 100m



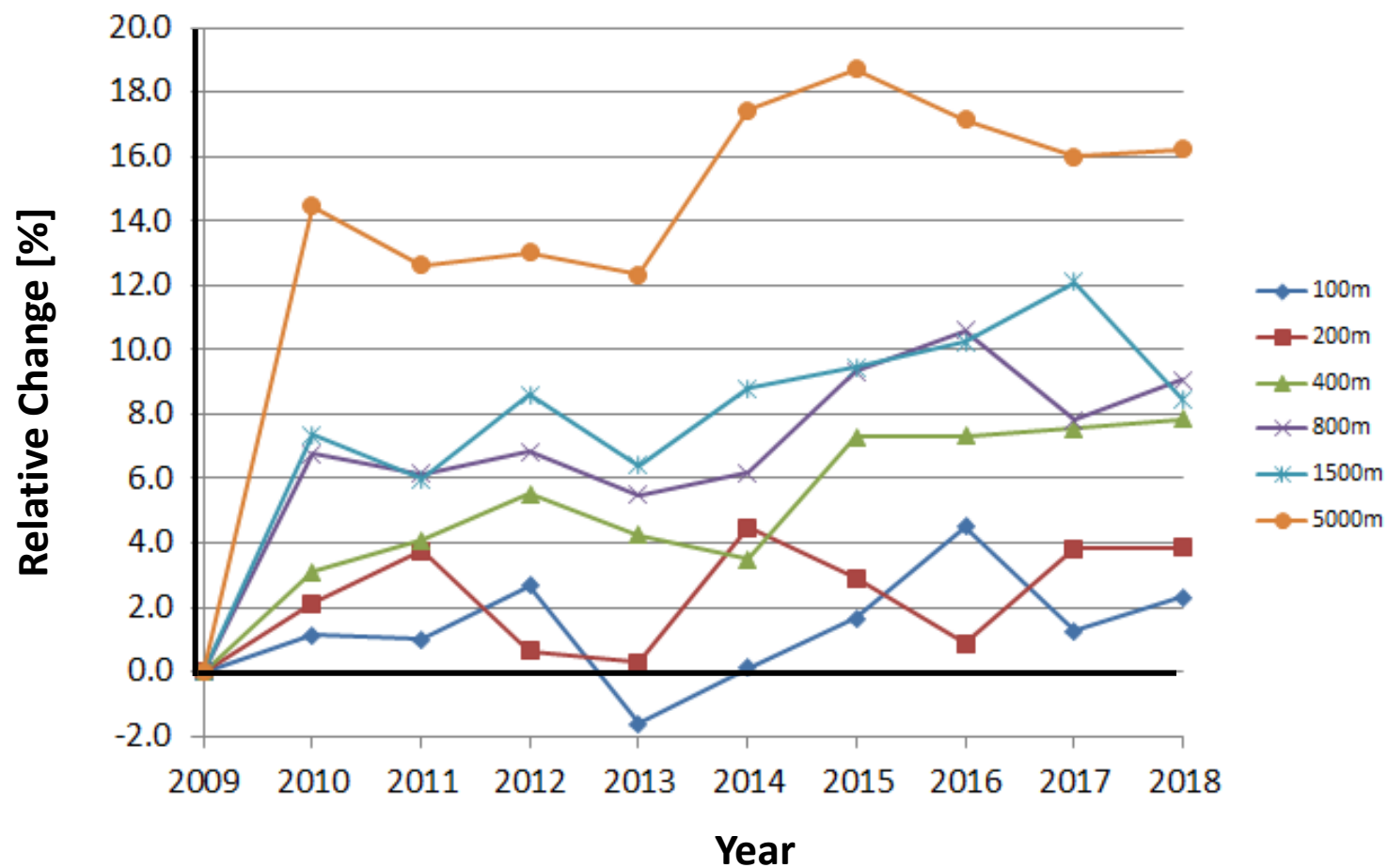
Fastests times [s] during Paralympic cycle

Year	100m	200m	400m	800m	1500m	5000m
2009	16.93	31.03	59.34	118.16	226.22	818.11
2010	16.74	30.37	57.49	110.16	209.59	699.79
2011	16.76	29.86	56.92	110.89	212.67	714.82
2012	16.47	30.82	56.06	110.09	206.77	711.44
2013	17.20	30.94	56.81	111.68	211.71	717.29
2014	16.91	29.64	57.26	110.84	206.32	675.41
2015	16.65	30.12	55.01	107.13	204.87	664.97
2016	16.16	30.75	55.00	105.62	203.07	677.77
2017	16.71	29.84	54.85	108.91	198.81	687.14
2018	16.53	29.83	54.68	107.44	207.02	685.25

Slowest and fastest median times [s]

Year	100m	200m	400m	800m	1500m	5000m
2009	16.93	31.03	59.34	118.16	226.22	818.11
2010	16.74	30.37	57.49	110.16	209.59	699.79
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Relative development since 2009 (baseline)



Conclusion

- Higher increase of long distance race performance compared to sprint performance over the last decade
 - *Increasing popularity of e.g. marathons?*
- Peak performance mainly during Paralympic years
 - *Athlete's focus and peaking?*
- Times of top athletes move closer together
 - *Competitions become more exciting*
- Faster times at Tokyo 2020 can be expected



Thank you for your attention!

