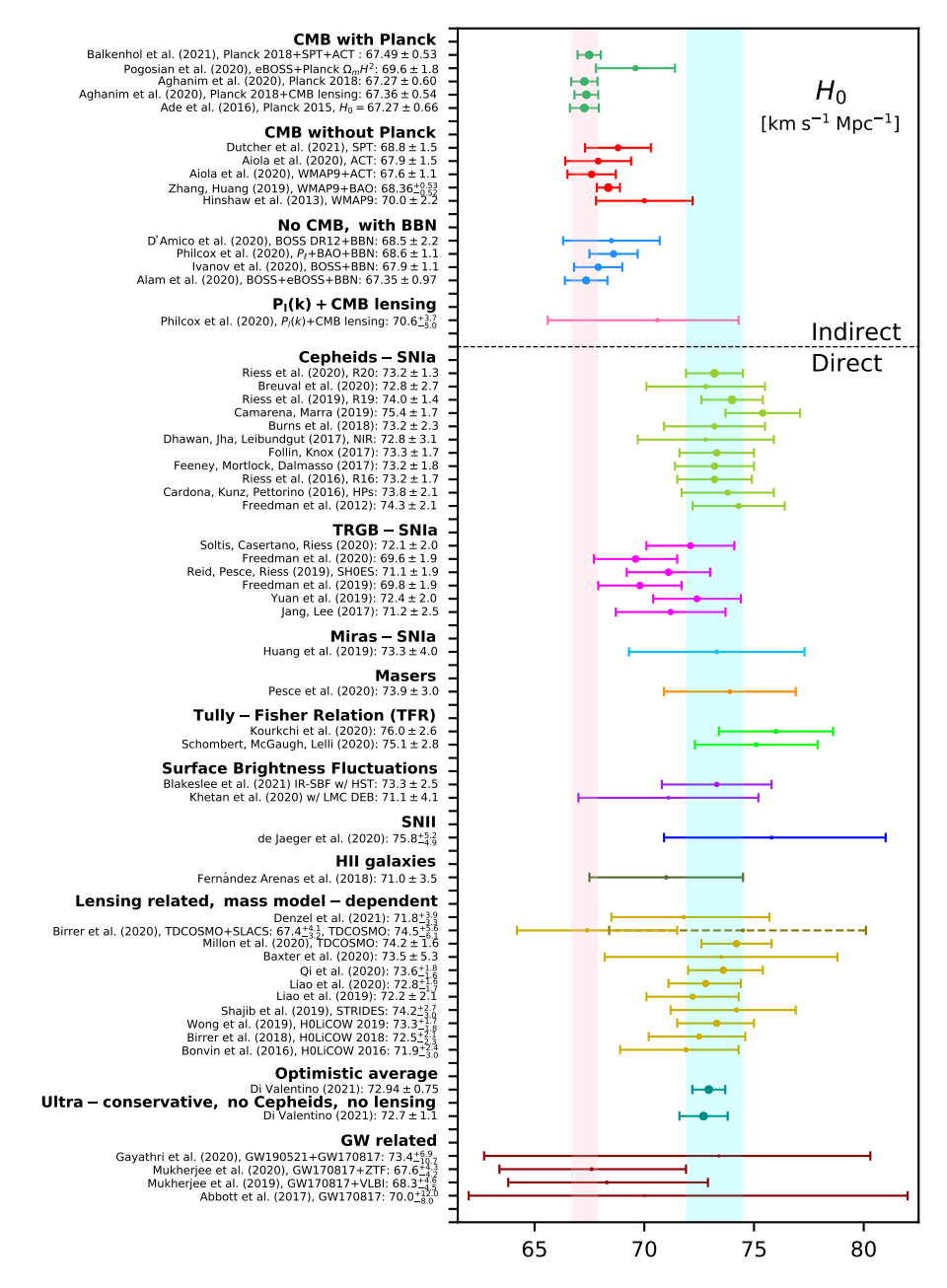
CMB with Planck
Balkenhol et al. (2021), Planck 2018+SPT+ACT : 67.49 ± 0.53
Pogosian et al. (2020), eBOSS+Planck $Ω_m h^2$: 69.6 ± 1.8
Aghanim et al. (2020), Planck 2018: 67.27 ± 0.60
Aghanim et al. (2020), Planck 2018+CMB lensing: 67.36 ± 0.54
Ade et al. (2016), Planck 2015, H_0 = 67.27 ± 0.66
CMB without Planck
Dutcher et al. (2021), SPT: 68.8 ± 1.5
Aiola et al. (2020), ACT: 67.9 ± 1.5
Aiola et al. (2020), WMAP9+ACT: 67.6 ± 1.1
Zhang, Huang (2019), WMAP9+BAO: 68.36$^{+0.53}_{-0.52}$
Hinshaw et al. (2013), WMAP9: 70.0 ± 2.2
No CMB, with BBN
D'Amico et al. (2020), BOSS DR12+BBN: 68.5 ± 2.2
Philcox et al. (2020), P_t+BAO+BBN: 68.6 ± 1.1
Ivanov et al. (2020), BOSS+BBN: 67.9 ± 1.1
Alam et al. (2020), BOSS+eBOSS+BBN: 67.35 ± 0.97
P_l(k) + CMB lensing
Philcox et al. (2020), $P_l(k)$+CMB lensing: 70.6$^{+3.7}_{-3.0}$
Indirect
Direct
Cepheids – SNIa
Riess et al. (2020), R20: 73.2 ± 1.3
Breuval et al. (2020): 72.8 ± 2.7
Riess et al. (2019), R19: 74.0 ± 1.4
Camarena, Marra (2019): 75.4 ± 1.7
Burns et al. (2018): 73.2 ± 2.3
Dhawan, Jha, Leibundgut (2017), NIR: 72.8 ± 3.1
Follin, Knox (2017): 73.3 ± 1.7
Feeney, Mortlock, Dalmasso (2017): 73.2 ± 1.8
Riess et al. (2016), R16: 73.2 ± 1.7
Cardona, Kunz, Pettorino (2016), HPs: 73.8 ± 2.1
Freedman et al. (2012): 74.3 ± 2.1
TRGB – SNIa
Soltis, Casertano, Riess (2020): 72.1 ± 2.0
Freedman et al. (2020): 69.6 ± 1.9
Reid, Pesce, Riess (2019), SH0ES: 71.1 ± 1.9
Freedman et al. (2019): 69.8 ± 1.9
Yuan et al. (2019): 72.4 ± 2.0
Jang, Lee (2017): 71.2 ± 2.5
Miras – SNIa
Huang et al. (2019): 73.3 ± 4.0
Masers
Pesce et al. (2020): 73.9 ± 3.0
Tully – Fisher Relation (TFR)
Kourkchi et al. (2020): 76.0 ± 2.6
Schombert, McGaugh, Lelli (2020): 75.1 ± 2.8
Surface Brightness Fluctuations
Blakeslee et al. (2021) IR-SBF w/ HST: 73.3 ± 2.5
Khetan et al. (2020) w/ LMC DEB: 71.1 ± 4.1
SNII
de Jaeger et al. (2020): 75.8$^{+5.2}_{-4.9}$
HII galaxies
Fernández Arenas et al. (2018): 71.0 ± 3.5
Lensing related, mass model – dependent
Denzel et al. (2021): 71.8$^{+3.9}_{-3.3}$
Birrer et al. (2020), TDCOSMO+SLACS: 67.4$^{+4.1}_{-3.2}$, TDCOSMO: 74.5$^{+5.6}_{-6.1}$
Millon et al. (2020), TDCOSMO: 74.2 ± 1.6
Baxter et al. (2020): 73.5 ± 5.3
Qi et al. (2020): 73.6$^{+1.8}_{-1.6}$
Liao et al. (2020): 72.8$^{+1.6}_{-1.7}$
Liao et al. (2019): 72.2 ± 2.1
Shajib et al. (2019), STRIDES: 74.2$^{+2.7}_{-3.0}$
Wong et al. (2019), H0LiCOW 2019: 73.3$^{+1.7}_{-1.8}$
Birrer et al. (2018), H0LiCOW 2018: 72.5$^{+2.1}_{-2.3}$
Bonvin et al. (2016), H0LiCOW 2016: 71.9$^{+2.4}_{-3.0}$
Optimistic average
Di Valentino (2021): 72.94 ± 0.75
Ultra – conservative, no Cepheids, no lensing
Di Valentino (2021): 72.7 ± 1.1
GW related
Gayathri et al. (2020), GW190521+GW170817: 73.4$^{+6.9}_{-10.2}$
Mukherjee et al. (2020), GW170817+ZTF: 67.6$^{+4.3}_{-4.2}$
Mukherjee et al. (2019), GW170817+VLBI: 68.3$^{+4.6}_{-4.5}$
Abbott et al. (2017), GW170817: 70.0$^{+12.0}_{-8.0}$
H_0
[km s^{-1} Mpc^{-1}]
65
70
75
80