The intergalactic medium near high-redshift galaxies

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1. Absorption by the intergalactic medium near galaxies can be used to calibrate galaxy redshifts measured from rest-frame ultraviolet lines. (Chapter 2)

2. Star-forming galaxies at $z \sim 2.4$ reside in large HI overdensities, and HI overdensities are surrounded by regions with an increased number of galaxies. Galaxy overdensity increases with the strength of the HI absorption, and decreases with the scale over which it is measured. (Chapter 3)

3. Gas infall onto galaxy overdensities at $z \sim 2.4$ has been observed on scales $\sim 1.4 - 2$ proper Mpc from star-forming galaxies. (Chapter 3)

4. The HI Lyman-α absorption around rest-frame UV selected galaxies at $z \sim 2.4$ implies that they reside in dark matter haloes with mass $\log_{10}(\mathrm{M}/\mathrm{M}_{\odot}) > 11.6^{+0.2}_{-0.2}$. (Chapter 4)

5. The majority of the HI Lyman-α absorption near star-forming galaxies at $z \sim 2.4$ is produced by cold flows. (Chapter 5)

6. A potentially observable signature of outflows is that they increase the temperature of weak HI absorbers near galaxies. (Chapter 5)

7. PhD students should be encouraged to spend a small fraction of their time on risky and exciting projects, as potential rewards would benefit both scientific progress and the individual. (Abraham Loeb, 2010, arXiv:1008.1586)

8. Not insisting on specialized journal issues dedicated to a single mission (e.g. Herschel), would both increase the quality of papers resulting from such a mission, and the readership.

9. Reading the "PhD comics" book would be helpful preparation for every beginning PhD student. (www.phdcomics.com)

10. Both society as a whole and the individuals involved would benefit from a critical assessment of the post-doc system, especially with regards to the number of post-docs hired and the number of faculty positions becoming available. At the moment, the system seems accidental.

11. One of the most worrying outcomes of a failing educational system is a public that accepts and insists on laws and policies that are not informed by the scientific method.

12. One way to bring science closer to the public, is to prevent the results of research funded by taxpayers from being hidden behind the pay-walls of commercial publishing companies.