

## Bibliografía TFG FS2029-FSC Rafael Jurado Ariza UCO

- [1] A. Albrecht and P. J. Steinhardt, "Cosmology for grand unified theories with radiatively induced symmetry breaking," Physical Review Letters, vol. 48, no. 17, pp. 1220–1223, 1982. <a href="https://doi.org/10.1103/PhysRevLett.48.1220">https://doi.org/10.1103/PhysRevLett.48.1220</a>
- [2] A. H. Guth, "Inflationary universe: A possible solution to the horizon and flatness problems," Physical Review D, vol. 23, no. 2, pp. 347–356, 1981. https://doi.org/10.1103/PhysRevD.23.347
- [3] A. D. Linde, "A new inflationary universe scenario: a possible solution of the horizon, flatness, homogeneity, isotropy and primordial monopole problems," Physics Letters B, vol. 108, no. 6, pp. 389–393, 1982. <a href="https://doi.org/10.1016/0370-2693(82)91219-9">https://doi.org/10.1016/0370-2693(82)91219-9</a>
- [4] P. Peebles, Principles of physical cosmology. vol. 27. <a href="https://doi.org/10.1515/9780691206721">https://doi.org/10.1515/9780691206721</a>
  Princeton university press, 1993,
- [5] V. F. Mukhanov and G. V. Chibisov, "Quantum Fluctuations and a Nonsingular Universe," JETP Lett., vol. 33, pp. 532–535, 1981. http://jetpletters.ru/ps/1510/article 23079.pdf
- [6] J. M. Bardeen, P. J. Steinhardt, and M. S. Turner, "Spontaneous creation of almost scale-free density perturbations in an inflationary universe," Physical Review D, vol. 28, no. 4, p. 679, 1983. https://doi.org/10.1103/PhysRevD.28.679
- [7] S. W. Hawking, "The development of irregularities in a single bubble inflationary universe," Physics Letters B, vol. 115, no. 4, pp. 295–297, 1982. https://doi.org/10.1016/0370-2693(82)90373-2
- [8] A. A. Starobinsky, "Dynamics of phase transition in the new inflationary universe scenario and generation of perturbations," Physics Letters B, vol. 117, no. 3-4, pp. 175–178, 1982. <a href="https://doi.org/10.1016/0370-2693(82)90541-X">https://doi.org/10.1016/0370-2693(82)90541-X</a>
- [9] A. H. Guth and S.-Y. Pi, "Quantum mechanics of the scalar field in the new inflationary universe," Physical Review D, vol. 32, no. 8, p. 1899, 1985. https://doi.org/10.1103/PhysRevD.32.1899
- [10] G. Gamow, "Expanding universe and the origin of elements," Physical review, vol. 70, no. 7-8, pp. 572–573, 1946. <a href="https://doi.org/10.1103/PhysRev.70.572.2">https://doi.org/10.1103/PhysRev.70.572.2</a>
- [11] R. A. Alpher and R. Herman, "Evolution of the universe," Nature, vol. 162, no. 4124, pp. 774–775, 1948. <a href="https://doi.org/10.1038/162774b0">https://doi.org/10.1038/162774b0</a>
- [12] R. A. Alpher, J. W. Follin Jr, and R. C. Herman, "Physical conditions in the initial stages of the expanding universe," Physical Review, vol. 92, no. 6, pp. 1347–1361, 1953. <a href="https://doi.org/10.1103/PhysRev.92.1347">https://doi.org/10.1103/PhysRev.92.1347</a>
- [13] A. R. Liddle, "An introduction to cosmological inflation," High energy physics and

```
cosmology, p. 260, 1998. <a href="https://doi.org/10.48550/arXiv.astro-ph/9901124">https://doi.org/10.48550/arXiv.astro-ph/9901124</a>
[14] E. Hubble, "A relation between distance and radial velocity among extra-galactic nebulae," Proceedings of the national academy of sciences, vol. 15, no. 3, pp. 168–173, 1929. <a href="https://doi.org/10.1073/pnas.15.3.168">https://doi.org/10.1073/pnas.15.3.168</a>
[15] D. Baumann, Cosmology. Cambridge University Press, 2022.
```

[16] A. A. Penzias and R. W. Wilson, "A measurement of excess antenna temperature at 4080 mc/s." The Astrophysical Journal, vol. 142, pp. 419–421, 1965.

## https://doi.org/10.1086/148307

https://doi.org/10.1017/9781108937092

[17] S. Dodelson and F. Schmidt, Modern cosmology. https://doi.org/10.1016/C2017-0-01943-2 Academic Press, 2020.

[18] C. Knobel, "An introduction into the theory of cosmological structure formation," arXiv, 2012. <a href="https://doi.org/10.48550/arXiv.1208.5931">https://doi.org/10.48550/arXiv.1208.5931</a>

[19] A. R. Liddle and D. H. Lyth, Cosmological inflation and large-scale structure.
Cambridge university press, 2000. <a href="https://doi.org/10.1017/CBO9781139175180">https://doi.org/10.1017/CBO9780511804533</a>
[20] J. A. Peacock, Cosmological physics. Cambridge university press, 1998.
https://doi.org/10.1017/CBO9780511804533

[21] A. Friedmann, "On the curvature of space," Zeitschrift für Physik, vol. 10, pp. 377–386, 1922. https://doi.org/10.1023/A:1026751225741

[22] W. B. Bonnor, "Jeans' formula for gravitational instability," Monthly Notices of the Royal Astronomical Society, vol. 117, no. 1, pp. 104–117, 1957. https://doi.org/10.1093/mnras/117.1.104

[23] H. Mo, F. van den Bosch, and S. White, Galaxy Formation and Evolution. Cambridge University Press, 2010. <a href="https://doi.org/10.1017/CBO9780511807244">https://doi.org/10.1017/CBO9780511807244</a>

 $\hbox{\cite{align*} $I$} \hbox{\cite{block} $K$. S. Miller, "Complex random fields," Information Sciences, vol.~9, no.~3, pp.}$ 

185-225, 1975. https://doi.org/10.1016/0020-0255(75)90024-9

[25] R. J. Adler, The Geometry of Random Fields. Society for Industrial and Applied Mathematics, 2010. https://doi.org/10.1137/1.9780898718980

[26] P. Peebles, The Large-scale Structure of the Universe, ser. Princeton Series in Physics. Princeton University Press, 1980. <a href="https://doi.org/10.1063/1.2914699">https://doi.org/10.1063/1.2914699</a>

[27] P. Watts and P. Coles, "Statistical cosmology with quadratic density fields,"

Monthly Notices of the Royal Astronomical Society, vol. 338, no. 3, pp. 806–815,

2003. <a href="https://doi.org/10.1046/j.1365-8711.2003.06130.x">https://doi.org/10.1046/j.1365-8711.2003.06130.x</a>

[28] N. Aghanim et al., "Planck 2018 results. iv. diffuse component separation,"

Astronomy & Astrophysics, vol. 641, no. A4, 2020. https://doi.org/10.1051/0004-6361/201833881

[29] E. R. Harrison, "Fluctuations at the threshold of classical cosmology," Phys. Rev.

D, vol. 1, pp. 2726–2730, May 1970. https://doi.org/10.1103/PhysRevD.1.2726

[30] Y. B. Zel'dovich and I. D. Novikov, "A hypothesis for the initial spectrum of perturbations in the metric of the friedmann model universe." Soviet Astronomy, vol. 13, pp. 754–757, 1970. <a href="https://articles.adsabs.harvard.edu/pdf/1970SvA....13..754Z">https://articles.adsabs.harvard.edu/pdf/1970SvA....13..754Z</a>

[31] P. J. Peebles and J. Yu, "Primeval adiabatic perturbation in an expanding

- universe," The Astrophysical Journal, vol. 162, pp. 815–836, 1970. <a href="https://articles.adsabs.harvard.edu/pdf/1970ApJ...162..815P">https://articles.adsabs.harvard.edu/pdf/1970ApJ...162..815P</a>
- [32] N. Aghanim et al., "Planck 2018 results. vi. cosmological parameters," Astronomy & Astrophysics, vol. 641, no. A6, 2020. <a href="https://doi.org/10.1051/0004-6361/201833910">https://doi.org/10.1051/0004-6361/201833910</a>
  [33] N. Aghanim et al., "Planck 2018 results. i. overview and the cosmological legacy of planck," Astronomy & Astrophysics, vol. 641, no. A1, 2020. <a href="https://doi.org/10.1051/0004-6361/201833880">https://doi.org/10.1051/0004-6361/201833880</a>
- [34] D. J. Eisenstein and W. Hu, "Baryonic features in the matter transfer function," The Astrophysical Journal, vol. 496, no. 2, p. 605, 1998. <a href="https://doi.org/10.1086/305424">https://doi.org/10.1086/305424</a>
  [35] C. R. Harris et al., "Array programming with NumPy," Nature, vol. 585, no. 7825, pp. 357–362, Sep. 2020. <a href="https://doi.org/10.1038/s41586-020-2649-2">https://doi.org/10.1038/s41586-020-2649-2</a>
- [36] S. G. Murray, "powerbox: A python package for creating structured fields with isotropic power spectra," Journal of Open Source Software, vol. 3, no. 28, p. 850, 2018. <a href="https://doi.org/10.21105/joss.00850">https://doi.org/10.21105/joss.00850</a>
- [37] J. W. Cooley and J. W. Tukey, "An algorithm for the machine calculation of complex fourier series," Mathematics of computation, vol. 19, no. 90, pp. 297–301, 1965. <a href="https://doi.org/10.2307/2003354">https://doi.org/10.2307/2003354</a>
- [38] G. C. Danielson and C. Lanczos, "Some improvements in practical fourier analysis and their application to x-ray scattering from liquids," Journal of the Franklin Institute, vol. 233, no. 5, pp. 435–452, 1942.
- https://doi.org/10.1016/S0016-0032(42)90624-0
  [39] W. H. Press, S. A. Teukolsky, W. T. Vetterling, and B. P. Flannery, Numerical recipes

https://dl.acm.org/doi/10.5555/1403886

[40] M. E. O'Neill, "Pcg: A family of simple fast space-efficient statistically good algorithms for random number generation," ACM Transactions on Mathematical Software, 2014. <a href="https://www.cs.hmc.edu/tr/hmc-cs-2014-0905.pdf">https://www.cs.hmc.edu/tr/hmc-cs-2014-0905.pdf</a>

3rd edition: The art of scientific computing. Cambridge university press, 2007.

[41] J. D. Hunter, "Matplotlib: A 2d graphics environment," Computing in Science & Engineering, vol. 9, no. 3, pp. 90–95, 2007. <a href="https://doi.org/10.1109/MCSE.2007.55">https://doi.org/10.1109/MCSE.2007.55</a>
[42] O. I. Ltd., "Animated gif editor and gif maker," 2012. <a href="https://ezgif.com/">https://ezgif.com/</a>