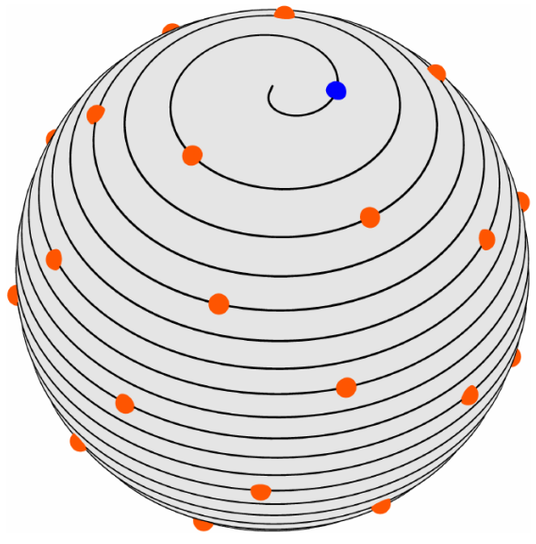
Our setting: Points in $\mathbb{S}^2$

Our potential: $\mathscr{E}_0(\omega_n) = \dfrac{d}{ds}\Big|_{s=0} \mathscr{E}_s(\omega_n) = \sum_{i\neq j} \log \|x_i - x_j\|^{-1}$

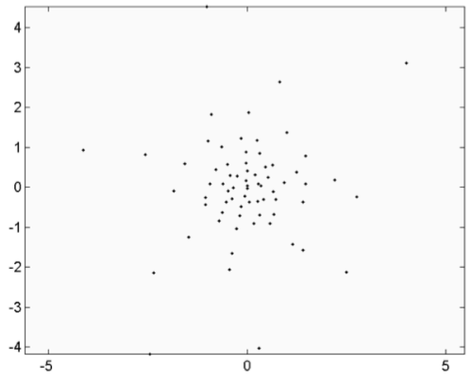
Our problem:

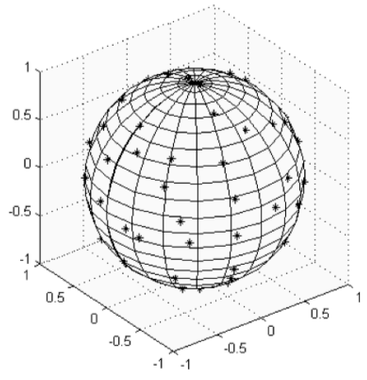
$$\min \mathscr{E}_{\log}\left(\mathbb{S}^2; N\right) = W_{\log}\left(\mathbb{S}^2\right) N^2 - \frac{1}{2} N \log(N) + C_{\log,2} N + o(N)$$

Some nice answers:

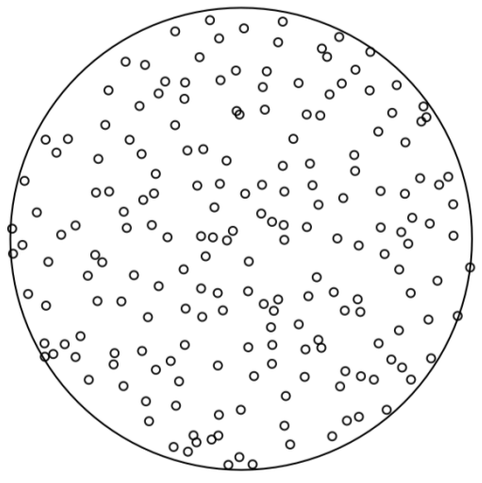


https://stackoverflow.com/questions/37520781/draw-points-connected-by-spiral-on-a-sphere-with-matplotlib





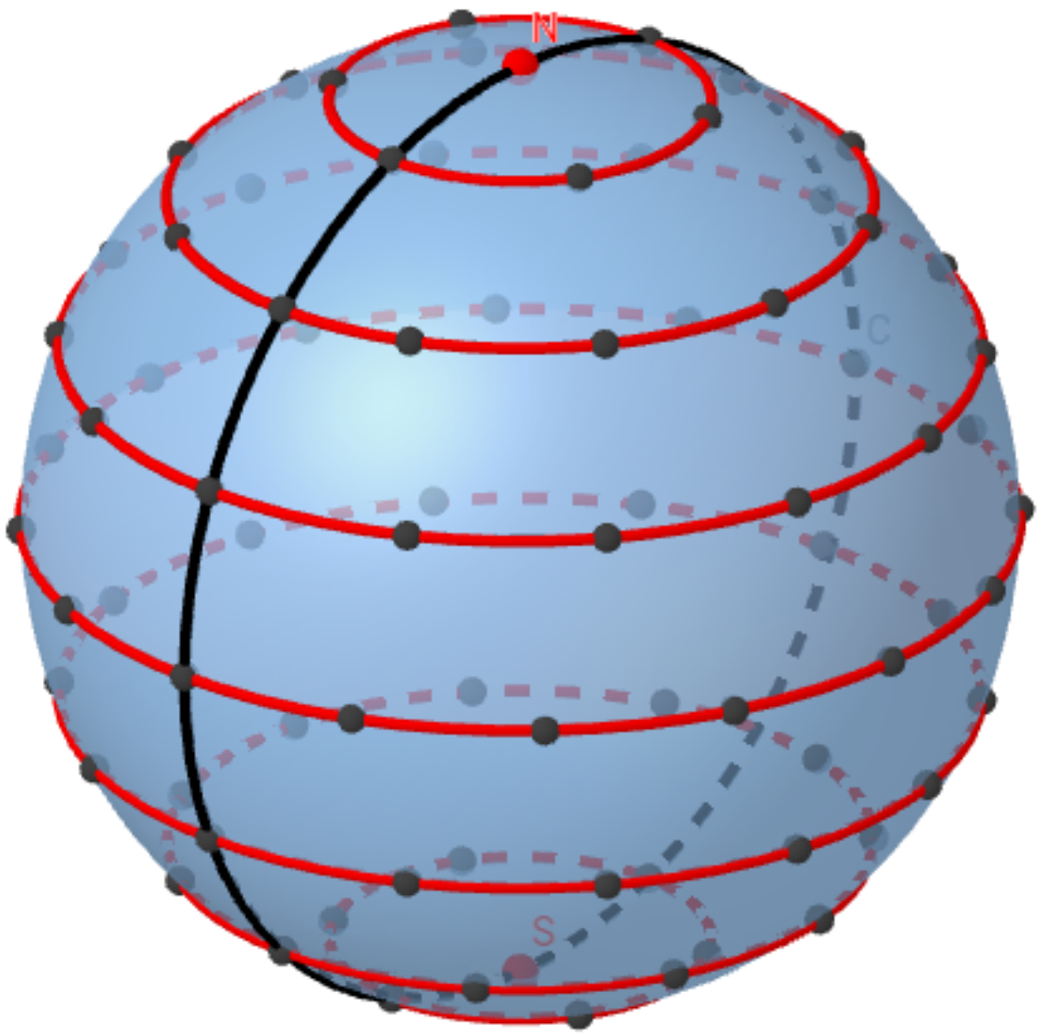
Armentano-Beltrán-Shub



Møller-Nielsen-Porcu-Rubak

Ujué Etayo, Universidad de Cantabria (j.w. Carlos Beltrán)

Our ensemble



- Low log-energy (numerically).
- Low log-energy analytically (almost done!).

An answer for the Bezout III problem?

A family of well conditioned polynomials.

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