

# FASTSUM

- **Aim:**

- Study finite  $T$  with anisotropic lattices ( $\xi = 3.5$ )

- **Currently:**

- Gen2 ( $m_\pi = 384$ ) and Gen2L ( $m_\pi = 236$ )
- Gauge: Symanzik-improved, tree-level tadpole
- Fermion:  $N_f = 2 + 1$  Wilson-Clover (stout, tree-level tadpole)
- Temperatures:  $T = 23 - 375$  MeV

- **Soon:**

- Gen3 ( $\xi = 7.0$ ) and Gen2P ( $m_\pi = 135$ )



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- **Codes:**

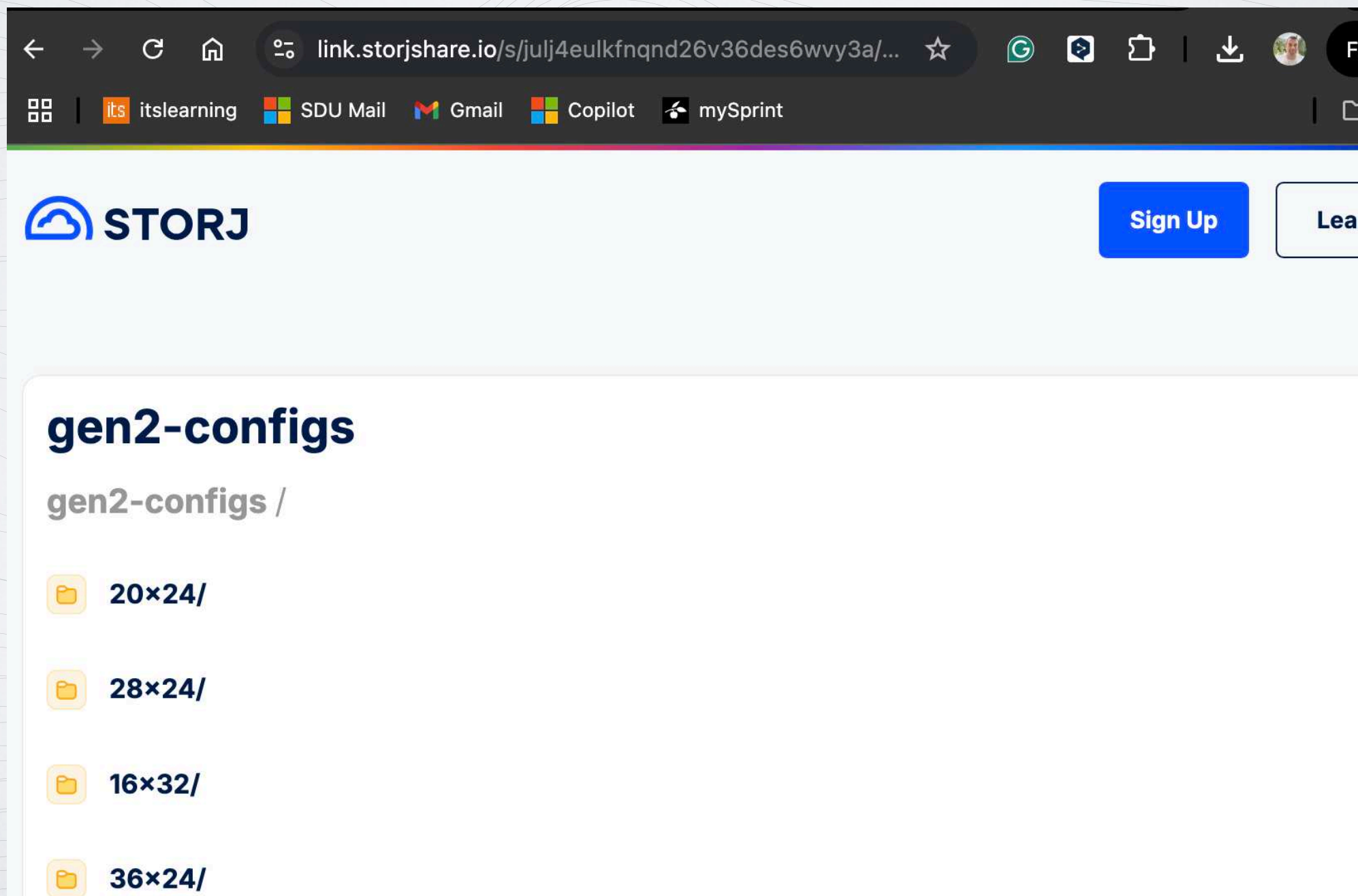
- OpenQCD-FASTSUM (anisotropy and stout link smearing)
- QUDA (Multigrid) + Chroma (used on GPU)

- **Storage:**

- Two servers @ Swansea university (80 TB and 230 TB)
- All ensembles (Gen2 and Gen2L available on **Storj**)
- Published DOI on **Zenodo**

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- **Sharing:**
  - Stroj (access through UK's DiRAC)
  - [link.storjshare.io/s/julj4eulkfnqnd26v36des6wvy3a/gen2-configs/](https://link.storjshare.io/s/julj4eulkfnqnd26v36des6wvy3a/gen2-configs/)





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- **Citable:** Zenodo database
  - DOI allows for citation
  - Human readable + Tagging system

The screenshot shows a web browser window displaying a Zenodo record. The address bar shows the URL `zenodo.org/records/8403827`. The browser's taskbar at the bottom includes icons for itslearning, SDU Mail, Gmail, Copilot, and mySprint. The Zenodo header is blue with the 'zenodo' logo and a hamburger menu icon. Below the header, a grey box contains a placeholder image and the text 'International Lattice Data Grid'. The main content area has a white background. It features the publication date 'Published October 3, 2023 | Version v1' and two buttons: 'Dataset' and 'Open'. The title 'FASTSUM Generation 2 Anisotropic Thermal Lattice QCD Gauge Ensembles' is prominently displayed. Below the title, the authors are listed in three lines: 'Aarts, Gert<sup>1</sup> ; Allton, Christopher<sup>1</sup> ; Amato, Alessandro ; Bignell, Ryan<sup>1</sup> ; Burns, Timothy J.<sup>1</sup> ; De Boni, Davide<sup>1</sup> ; Evans, Wynne ; Glesaaen, Aleksandra<sup>1</sup> ; Giudice, Pietro ; Hands, Simon<sup>2</sup> ; Harris, Tim<sup>3</sup> ; Jaeger, Benjamin<sup>4</sup> ; Kelly, Aoife<sup>5</sup> ; Kim, Sevyong<sup>6</sup> ; Lombardo, Maria Paola<sup>7</sup> ; Nikolaev, Aleksandr<sup>1</sup> .