

## Poster

**Dui2, the new graphical user interface for Dials****Luis Fuentes-Montero <sup>1</sup>, David Waterman <sup>2</sup>, Gwyndaf Evans <sup>1</sup>**<sup>1</sup> *Diamond Light Source Ltd,* <sup>2</sup> *Science and Technology Facilities Council U.K.R.I.**luis.fuentes-montero@diamond.ac.uk*

Upon the introduction of Dui[1] within the CCP4 software suite[2], it was demonstrated that using a graphical user interface (GUI) significantly enhances the practicality of image processing with DIALS[3]. Moreover, Dui emerged as a valuable instructional tool for helping with the comprehension of DIALS and data processing principles. A key attribute of Dui lies in its facilitation of controlled execution of DIALS, enabling users to intervene and make informed decisions in instances where automated pipeline tools such as Xia2[4] encounter failures or yield unexpected outcomes.

Building upon user feedback from the initial iteration, Dui underwent a refinement that led to the development of Dui2. Enhancements in this iteration include:

- Improved control graph allowing branching and joining at nodes
- Parallel processing capabilities enabling simultaneous execution of multiple DIALS commands
- Dual operational modes: traditional desktop application mode and remote mode

Consistent with its predecessor, Dui2 remains designed for seamless interaction without reliance on keyboard inputs. Following the execution of each DIALS command, Dui2 automatically generates informative graphical representations to aid users in result inspection.

[1] L. Fuentes-Montero, J. Parkhurst, M. Gerstel, R. Gildea, G. Winter, M. Vollmar, D. Waterman & G. Evans (2016). *\*Acta Cryst\**. A72, s189

[2] J. Agirre, M. Atanasova, H. Bagdonas, C. B. Ballard, A. Basle, J. Beilsten-Edmands, R. J. Borges, D. G. Brown et al. (2023). *\*Acta Cryst\**. D79, 449–461

[3] G. Winter, D. G. Waterman, J. M. Parkhurst, A. S. Brewster, R. J. Gildea, M. Gerstel, L. Fuentes-Montero et al. (2018). *\*Acta Cryst\**. D74, 85–97

[4] G. Winter (2010). *J. \*Appl. Cryst\**. 43, 186–190

*This work was supported by Diamond Light Source Ltd. and UKRI,STFC-CCP4.*