



FOUNDATIONS
ADVANCES

Volume 77 (2021)

Supporting information for article:

HgH₂ meets relativistic quantum crystallography. How to teach relativity to a non-relativistic wavefunction

Michal Podhorský, Lukáš Bučinský, Dylan Jayatilaka and Simon Grabowsky

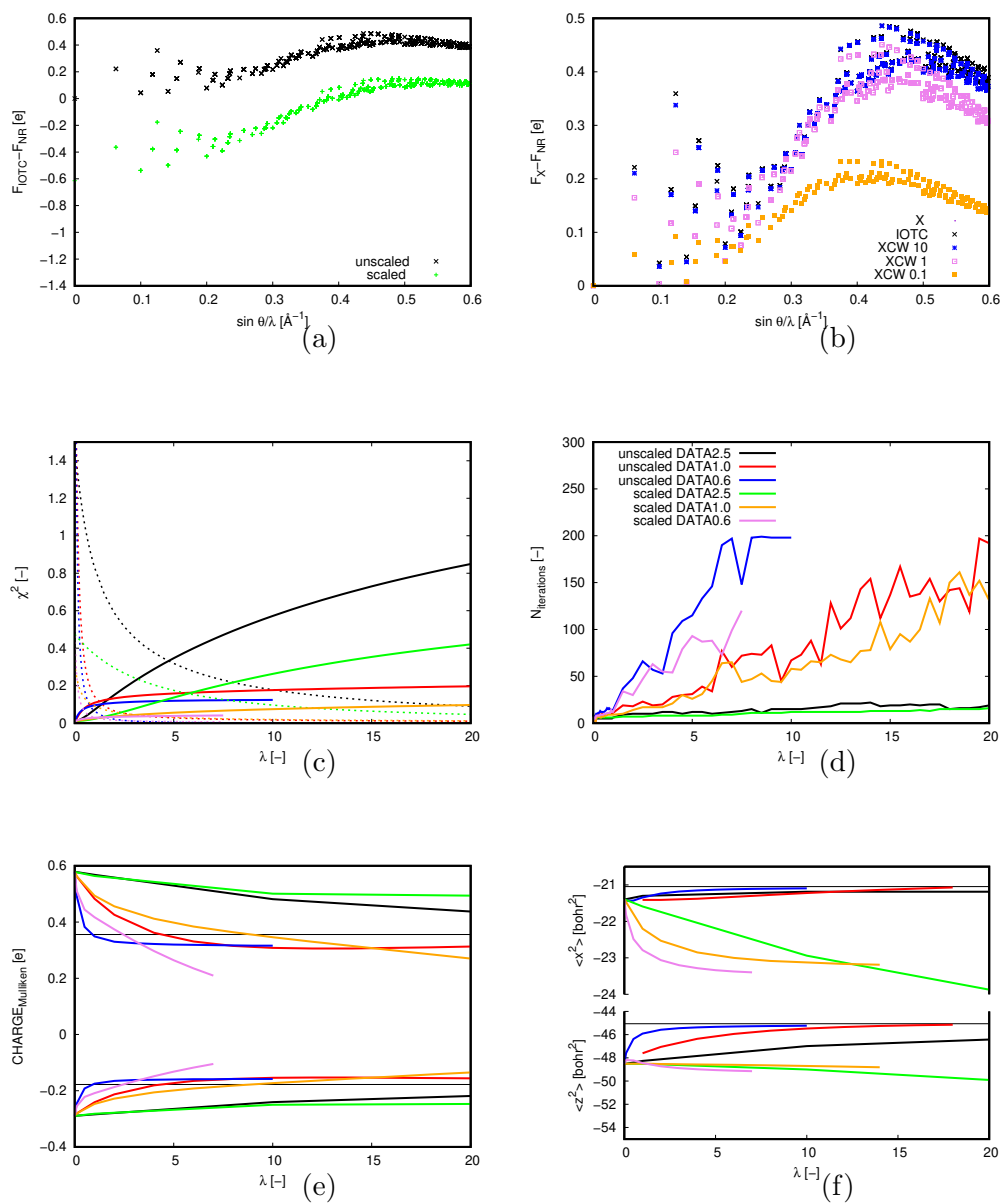


Fig. S1.

Low angle DATA0.6 results (a-b) and details of $\lambda < 20$ XCW fittings for DATA2.5 (c-f): (a) difference of IOTC and NR structure factor magnitudes of DATA0.6 for the unscaled (black crosses) and scaled (green plus signs) cases; (b) difference of IOTC and XCW structure factor magnitudes with NR ones for unscaled DATA0.6; (c) XCW fitting statistics χ^2 (dashed, left axis) and total energies (solid, arbitrary axis); (d) number of SCF iterations in the XCW fitting procedure (including the color legend which is valid for all sub-figures); (e) Mulliken charges with IOTC Hg (positive) and H (negative) as straight black lines; (f) $\langle x^2 \rangle$ and $\langle z^2 \rangle$ expectation values with IOTC $\langle x^2 \rangle$ and $\langle z^2 \rangle$ expectation values as straight black lines

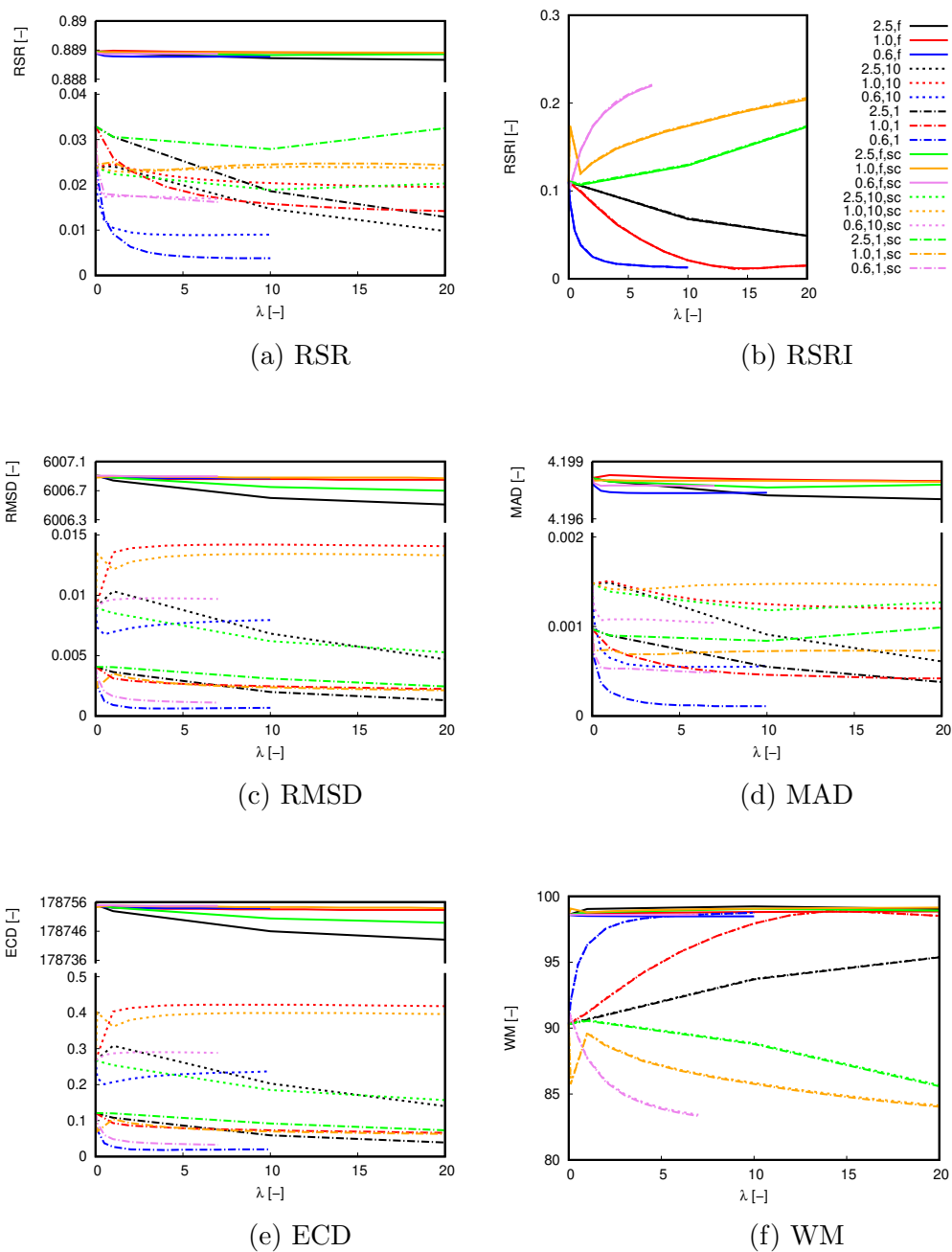


Fig. S2. Fitting statistics detail for $\lambda < 20$: (a) RSR; (b) RSRI; (c) RMSD; (d) MAD; (e) ECD; (f) WM similarity index. See the legend in the plot RSRI, where the first float is for the data resolution, the second value is for the electron density limit (f=no limit, 10= $10.0e.bohr^{-3}$, 1= $1.0e.bohr^{-3}$) and sc denotes scaling during XCW fitting.