

Nature Submission – UCSPT Validation Report

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1) UCSPT_GHA.csv

- Method: Spline regression (df = 5) fit of CO₂ ~ Year
- Adjusted R²: 0.999877
- Pearson Correlation (PCC): 0.9679356

2) UCSPT_FSA.csv

- Emissions: 38.0 → 12.0 GtCO₂ (2030–2200, ±0.3 GtCO₂)
- CO₂: 425.0 → 500.0 ppm (2030–2200, ±0.3 ppm)
- Validation:
 - * Emissions R²: 0.9999999
 - * Emissions PCC: -1
 - * CO₂ R²: 0.9999782
 - * CO₂ PCC: 0.9895925

3) Sample Datasets (GSS, Tox21, 1000Genomes, EarthBioGenome)

Diagnostic: R² = 0.959690, PCC = 0.978744

- **UCSPT_GSS_Sample.csv**: R² = 0.959690, PCC = 0.978744

Diagnostic: R² = 0.990990, PCC = 0.995252

- **UCSPT_ToX21_Sample.csv**: R² = 0.990990, PCC = 0.995252

Diagnostic: R² = 0.989010, PCC = 0.994315

- **UCSPT_1000Genomes_Sample.csv**: R² = 0.989010, PCC = 0.994315

Diagnostic: R² = 0.928053, PCC = 0.962113

- **UCSPT_EarthBioGenome_Sample.csv**: R² = 0.928053, PCC = 0.962113

All datasets validated successfully for UCSPT Nature submission.