Table S6: Modelled C, S, and HSE abundances compared to measured (nominal) HSE abundances and their uncertainties from Palme and O'Neill (2014), S in the mantle from Wang & Becker (2013), and S in the core from Dreibus & Palme (1996). We also report the relative error of modelled values to the measured values. Bold elements were used in the least squares fitting routine described in the text.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | Nominal Values | Nominal Uncertainty | Relative Error (%) | Modeled Values\* | Relative Error (%) |
| Mantle |  |  |  |  |  |  |
| S | ppm | 231 | 64 | 28 | **358** | 55 |
| C | ppm | 75 | 20 | 27 | 275 | 267 |
| Pt | ppb | 7.6 | 1.5 | 20 | **5.34** | 30 |
| Pd | ppb | 7.1 | 1.4 | 20 | **8.82** | 24 |
| Ru | ppb | 7.4 | 1.5 | 20 | **9.3** | 26 |
| Ir | ppb | 3.5 | 0.4 | 11 | **3.31** | 5 |
| W | ppb | 12 | 4 | 33 | 47.8 | 298 |
| Mo | ppb | 47 | 19 | 40 | 83.2 | 77 |
| Core |  |  |  |  |  |  |
| S | wt% | 1.7 | 0.3 | 18 | 2.64 | 55 |
| C | wt% | 0.2 | 0.05 | 25 | 0.0159 | 92 |
| *Reduced Chi Sq = 2.37* |  |  |  |  |  |
| \*fitted values in bold |  |  |  |  |  |