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# New Re-Os organic-rich shale and sulphide geochronology data from the Pre-Sturtian Chuar Group, Grand Canyon

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The Neoproterozoic Chuar Group is an exceptionally well-exposed and unmetamorphosed succession of siliciclastics and carbonates with a thickness of ~1600 m. Deposition of the Chuar Group began ~782 Ma and ended 742 ± 6 Ma (U-Pb detrital zircon data and U-Pb reworked tuff age, respectively). The Chuar Group hosts an assemblage of diverse microfossils including vase-shaped microfossils and records major perturbations to biogeochemical cycles. Here we present new Re-Os geochronology data from organic-rich shale and from sulphide (marcasite) that further constrain the duration and depositional history of this pre-Sturtian succession and enhances global correlation with other Neoproterozoic sedimentary successions. In addition to the new geochronology data, we also present a more complete statistical analysis of uncertainties in the Re-Os shale geochronometer in an effort to quantify the different contributors to age uncertainties and identify opportunities to reduce them. This will help to further integration of Re-Os into the EARTHTIME initiative.