

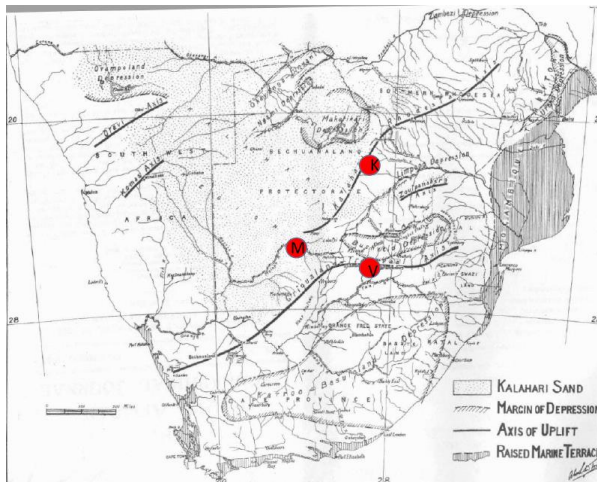
# The Kalahari Impact Hypothesis for Moon Genesis

## – Did the Morokweng Meteoritic Impact (145MA) Break Up the Gondwanaland and Continental Fluid Basalt Generate the Moon?

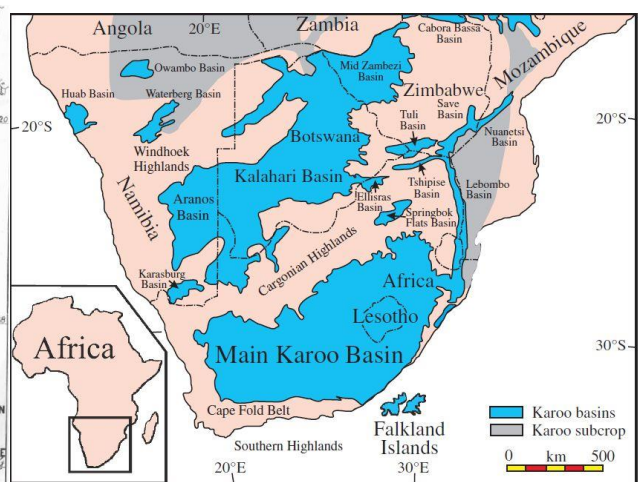
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The author visited the oldest human sites in the Late Pleistocene, namely Klasies River Mouth Caves in southern coast of South Africa, and realized that they are in the break-up edge of Gondwanaland, hard and thick sandstone layer. He agreed with Oberbeck (1993) that Plate-Tectonic Theory is not sufficient to explain the continental break-up and looked for potential meteoritic impacts in the Earth Impact Database of PASSC.

There are at least three gigantic meteoritic impacts in this region, Vredefort (S 27°0' E 27° 30') at 2023MA ± 4, Kgagodi (S 22°29' E 27°35') at <180MA, and Morokweng (S 26°28' E 23° 32') at 145.0MA ± 0.8. And they correspond well with two great geological axes (Griqualand-Transvaal Axis and Kalahari-Rhodesia Axis) described in map of Du Toit (1933).



Du Toit (1926)



Isbell (2008)

The Karoo continental flood basalts (CFB) were emplaced during a time scale of a few million years in advance to the breakup of the Gondwana supercontinent (~180 million years ago). The separation of Karoo basin into Kalahari and Main seems have taken place at the time of Morokweng impact. In the middle of Kalahari basin, there is a very flat plain, the Great Kalahari, which is like “a warped gramophone record unaffected at its centre but crinkled along its margins” (Du Toit 1933). There is no permanent water supply in the Kalahari, whose elevation is about 4000 feet at its margin and 3000 feet at lower part. The role of this “huge interior desert” is unclear (Du Toit 1933) and desired to be made clear.

The author proposes to interpret this flat region as a jet orifice of CFB. The jet injection of CFB should have continued for several million years so that its ejecta should form the Moon and the twined gravitational movement of Earth-Moon should tilt the Earth rotational axis to 23.4°

<http://www.passc.net/EarthImpactDatabase/> The Planetary and Space Science Centre (PASSC)

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