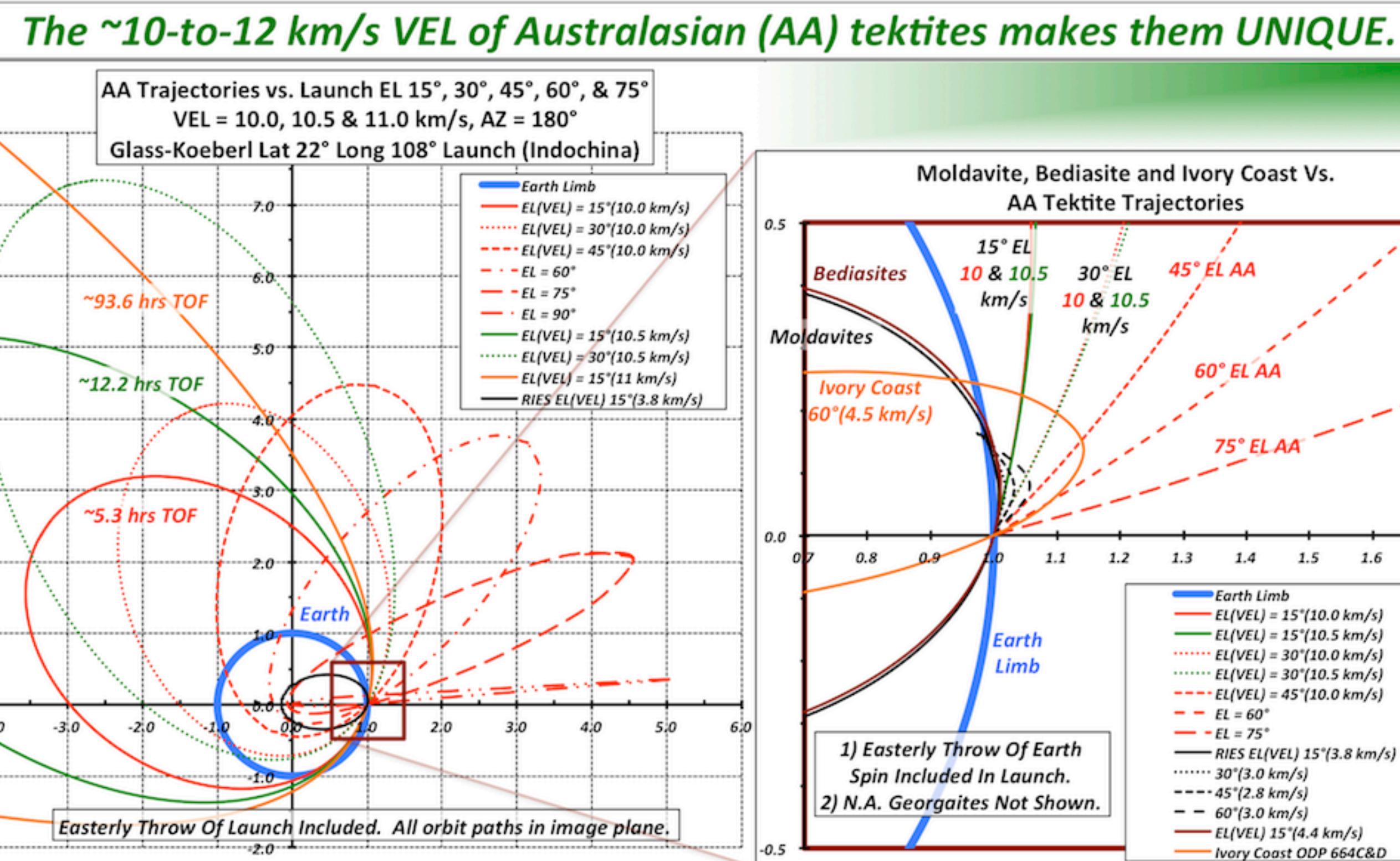
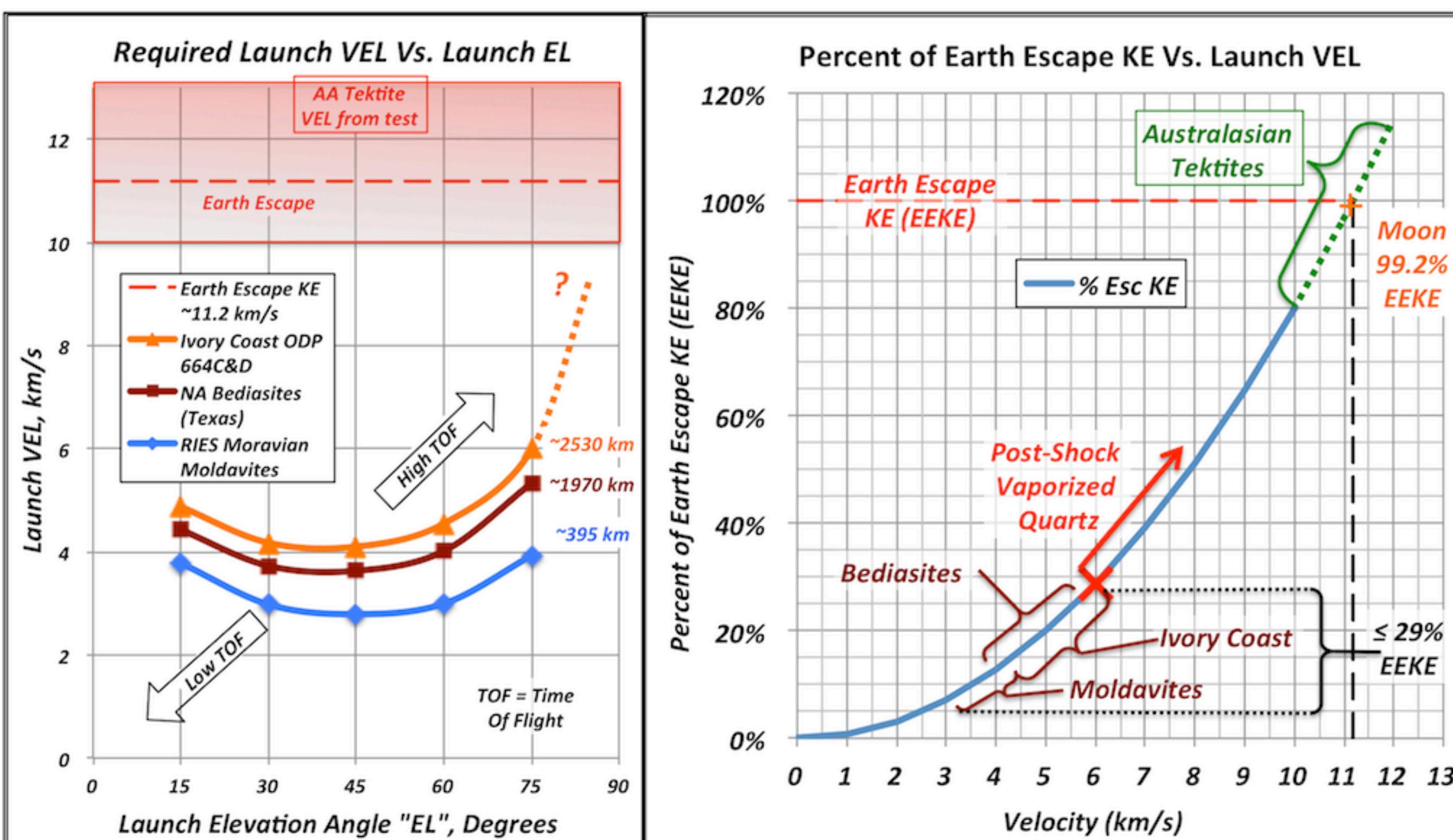


# TEKTITE SUBORBITAL SUMMARY

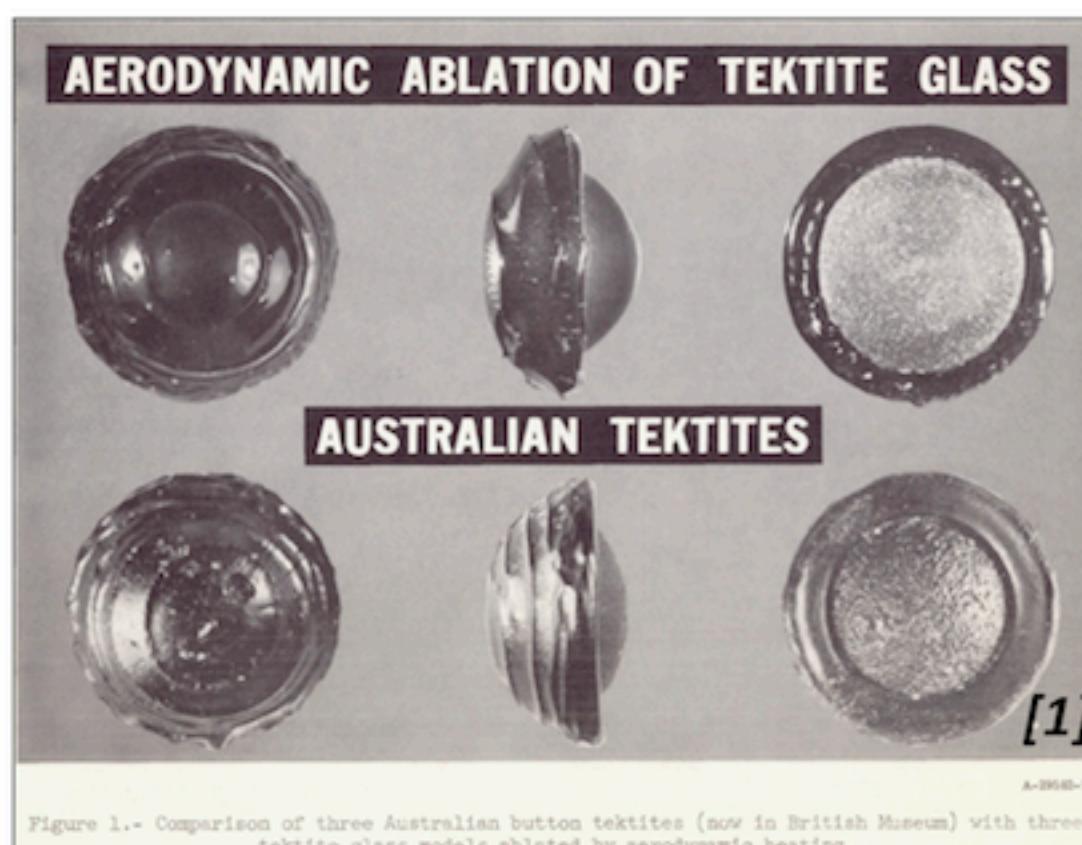
THE AUSTRALASIAN (AA) TEKTITE PARENT IMPACT STRUCTURE REMAINS UNLOCATED. SUBORBITAL ANALYSIS (SA) INDICATES INDOCHINA IS THE WRONG SIDE OF EARTH TO SEARCH. SHOCK FALLS ~3X SHORT AS SOLE KE SOURCE. THE BIGGER STORY: NORTH AMERICAN PLEISTOCENE CAROLINA BAYS SHOW UNDENIABLE EVIDENCE OF SUBORBITAL TRANSPORT - BALLISTIC TARGETING OVOIDS ARE REPEATED 46,500+ TIMES.



Semi-major axes, inertial range, Time-Of-Flight (TOF) and Earth's rotation during loft are all of completely different order in the AA case. Inset shows central European Moldavites, North American (N.A.) Bediasites & Ivory Coast (IC) tektites with tiny range vs. AA tektites, the latter near Earth escape KE of ~11.2 km/s [1].



The above panes show the large difference in velocity (VEL) and kinetic energy (KE) required to distribute Ivory Coast, N.A. Bediasite and Moldavite tektites vs. Australasian (AA) tektites. The AA tektites, with a measured 10 to 12 km/s VEL, were thought to be of Lunar Origin in the 1960's (see below)[1]. Long range...



In 1963, Chapman & Larson (NASA Ames) published TN 1556: "Lunar Origin of Tektites". Conditions in the lab reproduced ablated AA tektites (left). Area "PB1" at right straddles theta of 180°, or antipodal transport, w/ VEL of < 11.2 km/s, V<sub>esc</sub> [1].

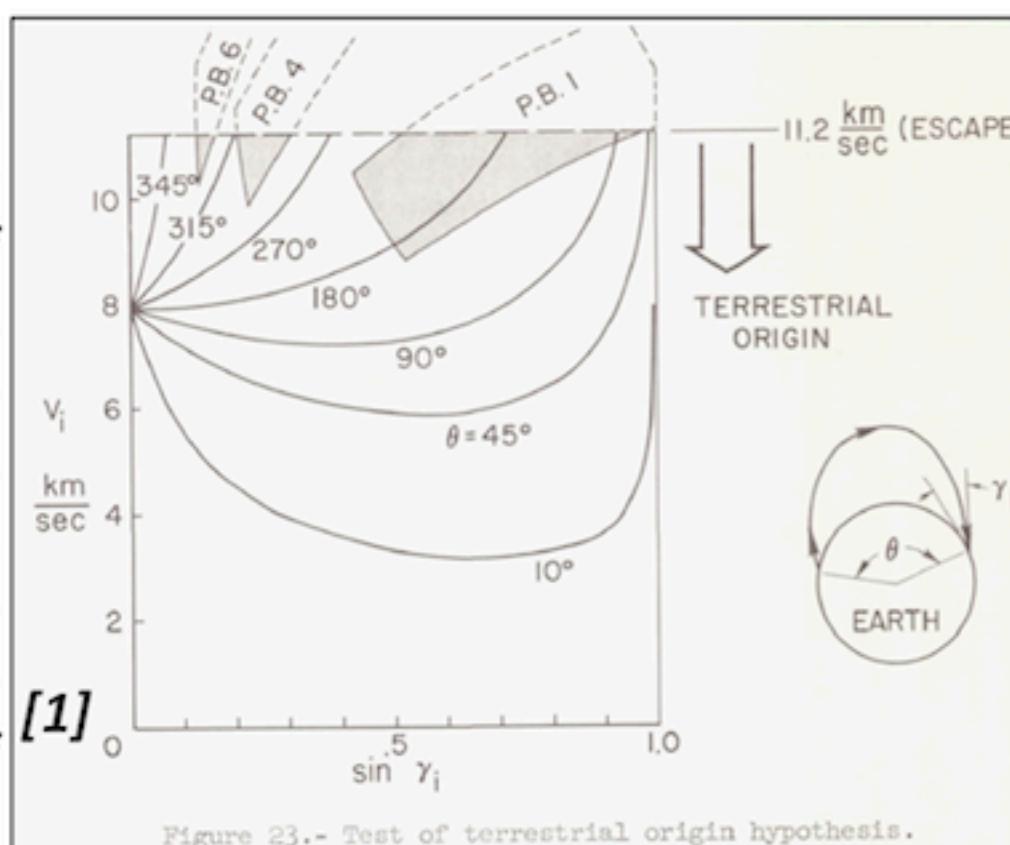
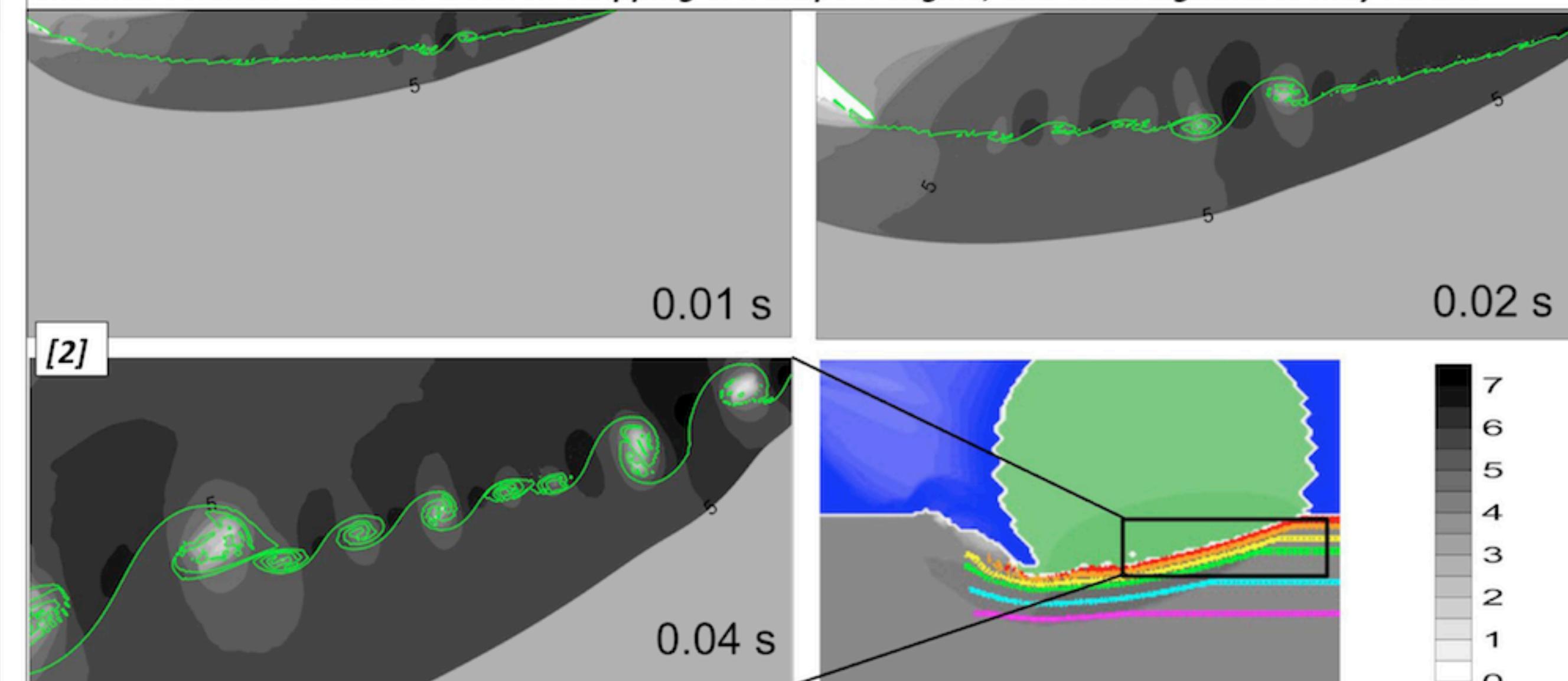


Image & modified text from Tagle et al. [2]. Improved resolution 2D hydrocode model of 30° oblique impact at 500 CPPR resolution shows reduced density Kelvin-Helmholtz Instabilities (KHI) within the shocked volume. Is this an electron stripping & transport engine, and what signatures may result?



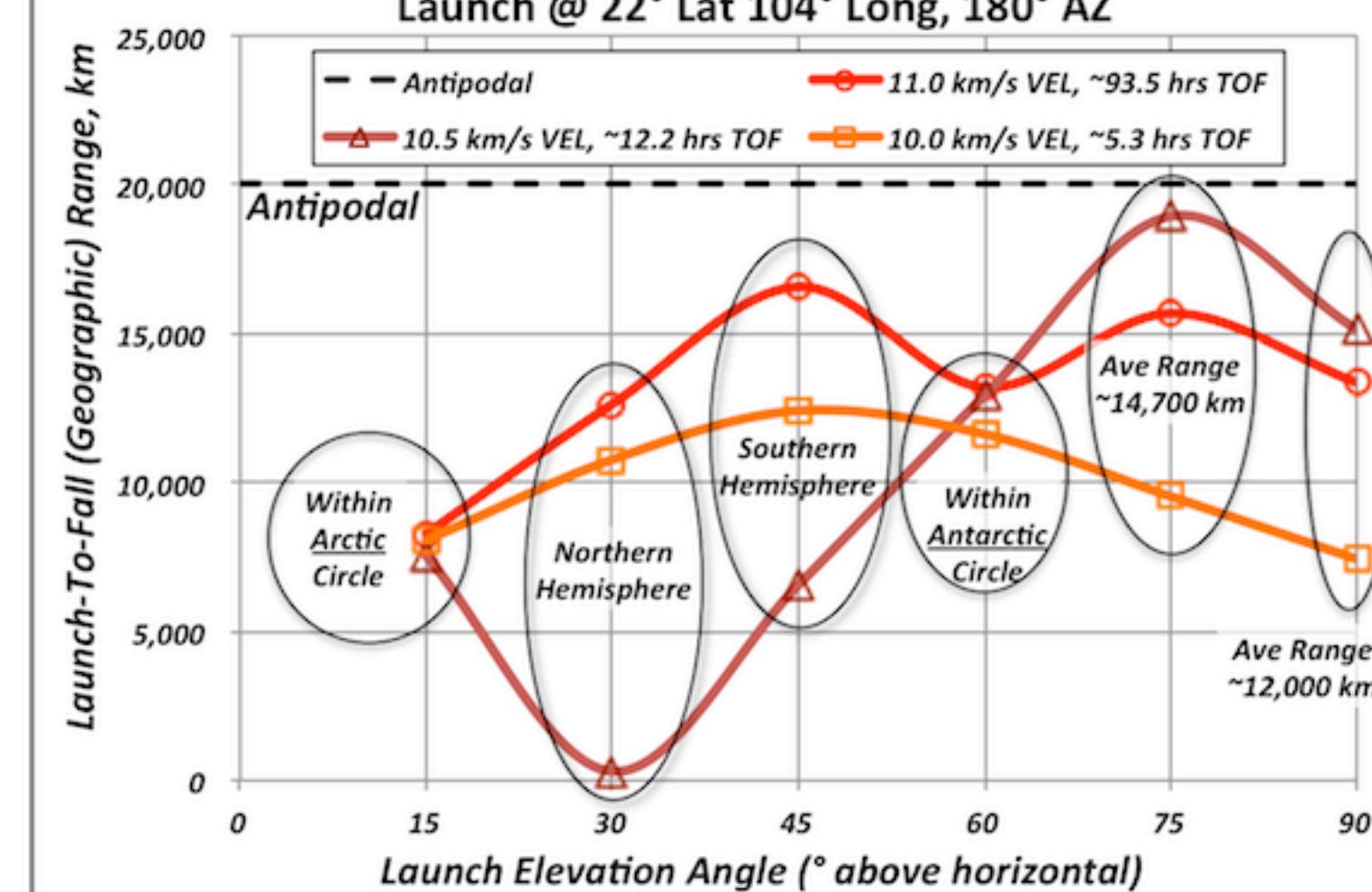
**Fig. 2 of [2]. Numerical model of a 1-km-diameter projectile impact at 18 km/s and 30° to horizon.** The color plate (low resolution model) shows the projectile (green), the target (gray with colorful layers at various depths) and no mixing. The lower left plate is an enlarged higher resolution image of the projectile/target contact. Shades of gray correspond to material densities. The green line represents the boundary between target/projectile materials. Earlier moments show development of Kelvin-Helmholtz Instabilities (KHI). Shock dome darker green in lower right. Density decreases in KHI cores.

Do KHI vortices provide more active ionization through coincident strong shear gradients and centripetal acceleration within the shocked volume? On larger scales, this may yield current flow and prolonged ionic species presence from both projectile and target for imprinting within tektite melt.

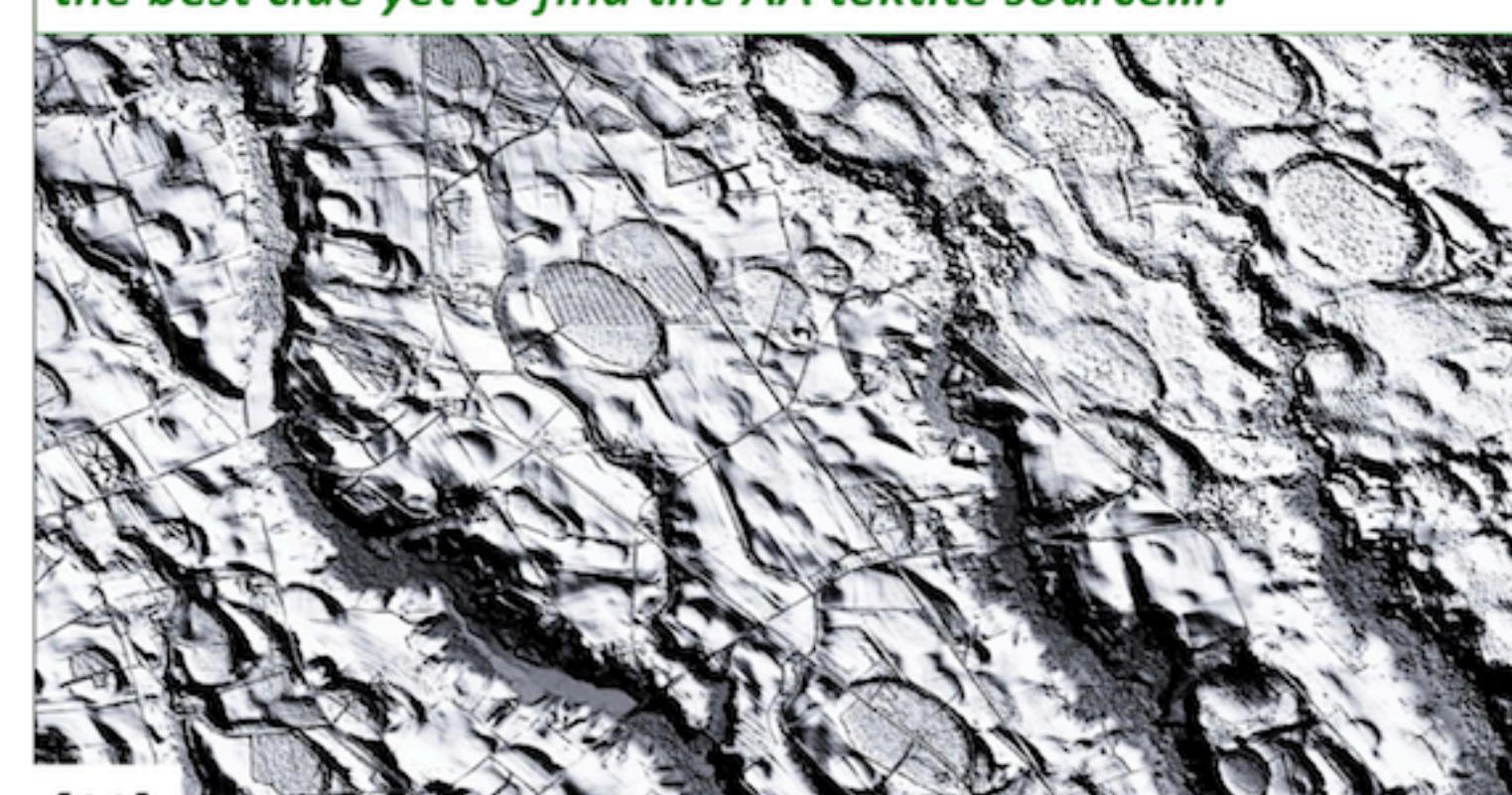
The AA tektite source contained sandstone, greywacke & shale [6]. The Fe oxidation state is uniform across wide regions of AA μ-tektite populations [7]. Could this be from mix and transport of the > 30 billion tons of melt [8]? A high shear environment (oblique impact) would aid such a mix process. An ice sheet overburden would add transport motive potential and allow tektite heating during ascent, demonstrated by an oblique ice sheet impact test (Schultz, AMES VGR) showing steam jet and vertical ejection angles.



AA Tektite Geographic Range vs. Launch Elevation (EL)  
From Glass-Koeberl Indochina Strewn Centroid  
Launch @ 22° Lat 104° Long, 180° AZ



**UNEXPLAINED REGIONAL CONFORMAL BLANKET:**  
400,000+ km<sup>2</sup> "Carolina bays" depositional unit of angular to sub-angular pure quartz sand atop level terrains lacks biogenic detritus, with red or orange clay at its basal contact & no known transport means. Its 46,500+ rimmed oval depressions of 100m to 6+km scale are rigidly oriented by latitude & conform to just six planforms [9], now described identically by perturbational Suborbital Analysis [10]. Is this unexplained North American blanket formation the best clue yet to find the AA tektite source...?



T.H.S. Harris  
LPSC 2016  
Session 306  
Poster Location #119  
[Abstract #1033]

If you see something, say something.  
This work privately funded by a concerned independent scientist.

USRA

REFERENCES: For related work see LPSC 2016 Session 305, poster location #90, Abstract #1214 – T.H.S. Harris [1] Chapman & Larson 1963 NASA AMES TN 1556 [2] R. Tagle et al. 2014 45th LPSC #2222 [3] E. Pierazzo & H. J. Melosh 2000 M & PS 35 [4] A.M. Stickle & P.H. Schultz 2012 J. of Geophysical Research Vol 117 [5] B.P. Glass & Christian Koeberl 2006 M & PS 41 Nr 2 [6] Y-T. Lee et al. 2004 Geochem. J. Vol. 38 [7] G. Giuli et al. 2014 M & PS 49 Nr 4 [8] Schmidt G. et al. 1993 Geochim. Et Cosmochim. Acta 57 [9] M. Davias 2011 GSA Annual Mtg Session 262 #307 [10] T.H.S. Harris 2015 GSA Annual Mtg Session No. 292 Booth# 120 [11] M. Davias, Cintos.org