

# The Kowloon Collapse

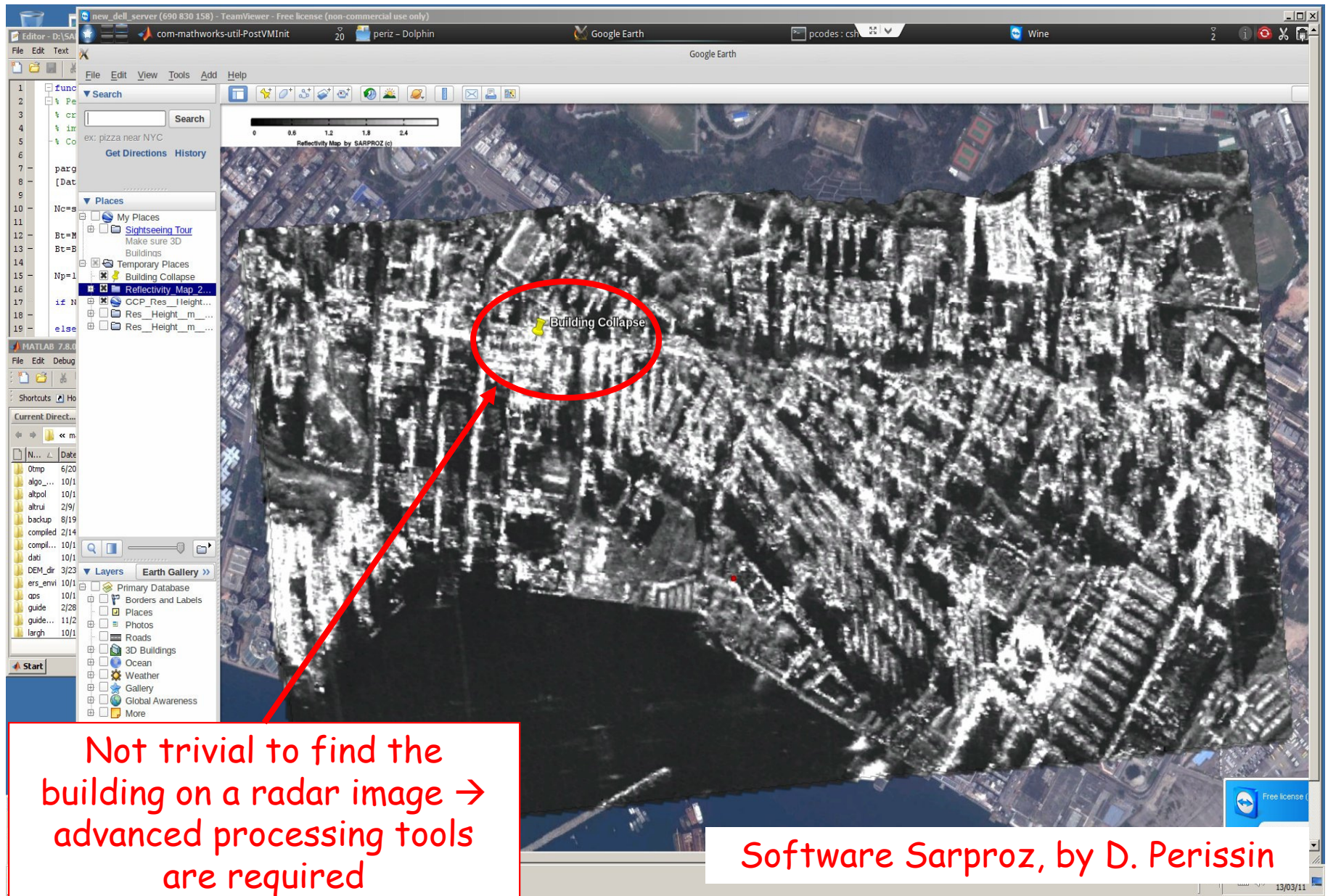
AT 45J MA TAU WAI ROAD  
TO KWA WAN, KOWLOON - K.I.L. 8627  
ON 29 JANUARY 2010



Credits:  
Daniele Perissin  
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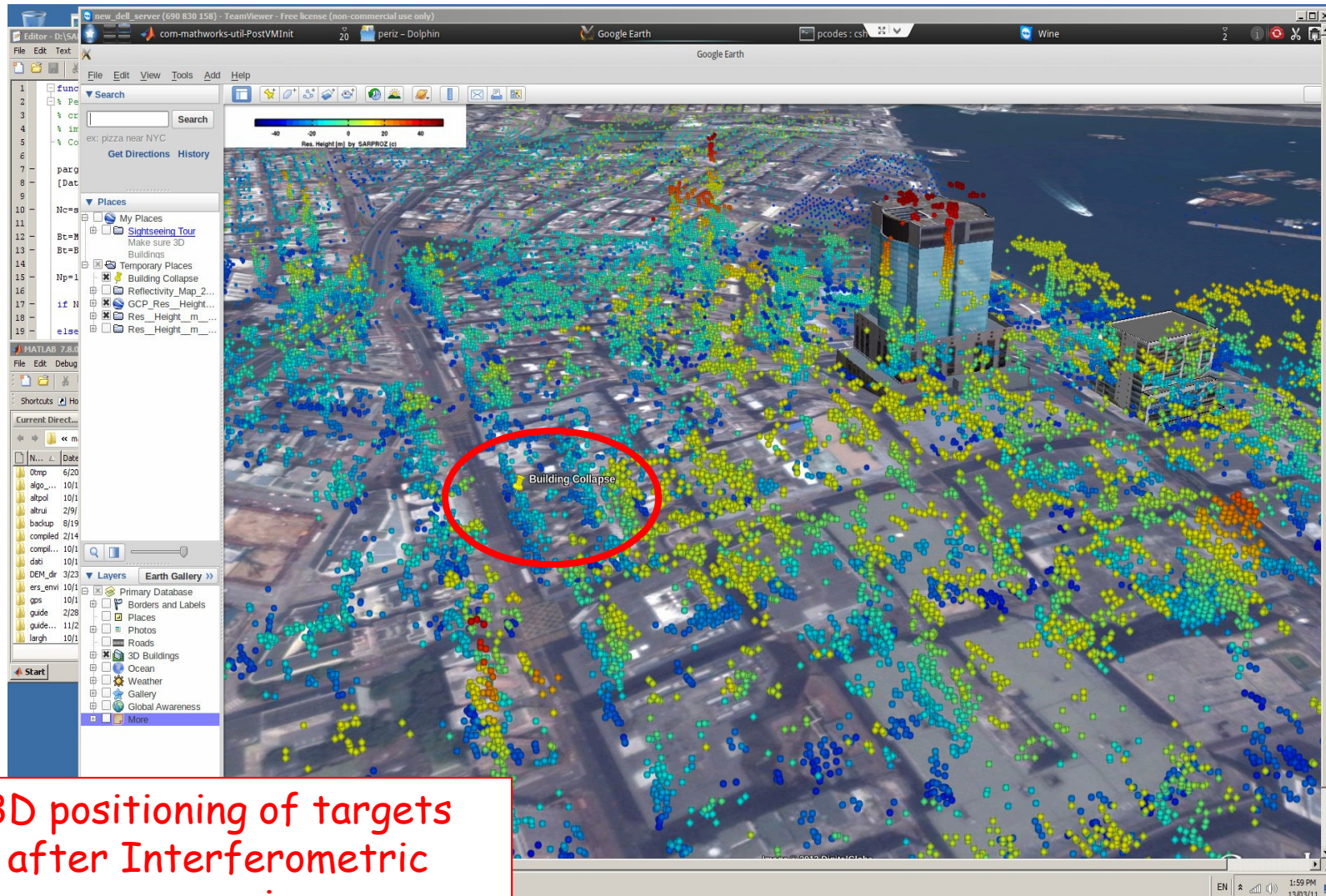


# Radar Reflectivity Map in Google Earth





# Detected Radar Targets in Google Earth



3D positioning of targets  
after Interferometric  
processing

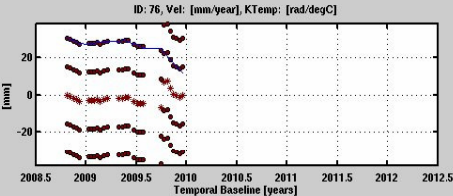
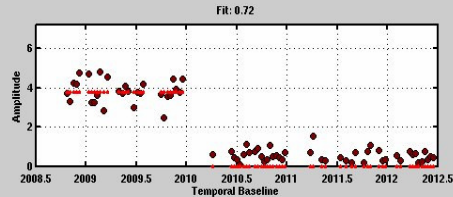
Software Sarproz, by D. Perissin

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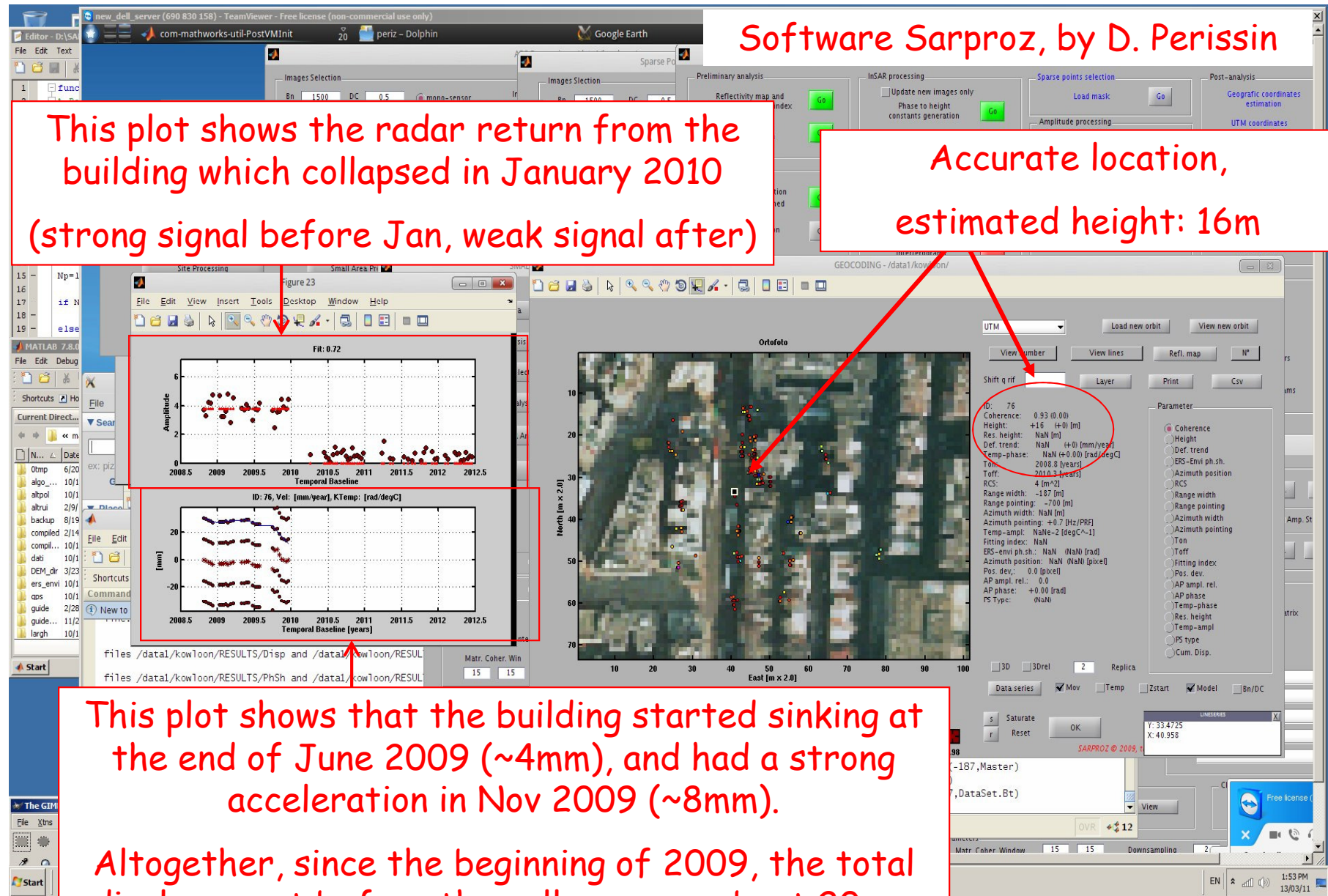
This plot shows the radar return from the building which collapsed in January 2010 (strong signal before Jan, weak signal after)

Accurate location, estimated height: 16m



This plot shows that the building started sinking at the end of June 2009 (~4mm), and had a strong acceleration in Nov 2009 (~8mm).

Altogether, since the beginning of 2009, the total displacement before the collapse was about 20mm





## Comments

The building at 45j Ma Tau Wai Road, To Kwa Wan, Kowloon was visible from radar images taken by the satellite TerraSAR-X since October 2008.

The interferometric analysis shows that the building started sinking in Summer 2009. Before November 2009, the detected movements were not enough to rise a warning (they could be interpreted as thermal expansion). However, after November 2009 it was clear that the building was affected by a different and stronger process.

The building beside the collapsed one and the ground (street level) do not show significant movements neither before nor after the collapse.

This means that data were available to rise a precise warning before the building collapsed. An in-situ survey driven by the warning could have revealed the possibility of collapse, saving 4 human lives.

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