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Mercury - the hollow planet

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Mercury is turning out to be a planet characterized by various kinds of endogenous hole (discounting impact craters), which are compared here. These include volcanic vents and collapse features on horizontal scales of tens of km, and smaller scale depressions ('hollows') associated with bright crater-floor deposits (BCFD).
The BCFD hollows are tens of metres deep and kilometres or less across and are characteristically flat-floored, with steep, scalloped walls. Their form suggests that they most likely result from removal of surface material by some kind of mass-wasting process, probably associated with volume-loss caused by removal (via sublimation?) of a volatile component. These do not appear to be primarily a result of undermining. Determining the composition of the high-albedo bluish surface coating in BCFDs will be a key goal for BepiColombo instruments such as MIXS (Mercury Imaging Xray Spectrometer).
In contrast, collapse features are non-circular rimless pits, typically on crater floors (pit-floor craters), whose morphology suggests collapse into void spaces left by magma withdrawal. This could be by drainage of either erupted lava (or impact melt) or of shallowly-intruded magma. Unlike the much smaller-scale BCFD hollows, these 'collapse pit' features tend to lack extensive flat floors and instead tend to be close to triangular in cross-section with inward slopes near to the critical angle of repose. The different scale and morphology of BCFD hollows and collapse pits argues for quite different modes of origin. However, BCFD hollows adjacent to and within the collapse pit inside Scarlatti crater suggest that the volatile material whose loss was responsible for the growth of the hollows may have been emplaced in association with the magma whose drainage caused the main collapse.
Another kind of volcanic collapse can be seen within a 25 km-wide volcanic vent outside the southern rim of the Caloris basin (22.5º N, 146.1º E), on a 28 m/pixel MDIS NAC image from orbit. Although the vent itself may have been excavated partly by explosive volcanism, the most recent event is collapse of a 7 km wide zone in the south centre of the vent. The sharpness of features within this (unmuted either by regolith-forming processes or by fall of volcanic ejecta) suggests that this collapse considerably post-dates the rest of the vent interior. It could reflect a late-stage minor 'throat clearing' explosive eruption, but (in the absence of evidence of associated volcanic ejecta) more likely reflects collapse into a void within the volcanic conduit, itself a result of magma-drainage.
A class of 'hole' that is so far conspicuous by its absence on Mercury is sinuous rilles (as opposed to much straighter tectonic grabens) or aligned skylights representing collapsed or partly-collapsed drained lava tubes. Tube-fed flows are to be expected during emplacement of volcanic plains, and it will be surprising if no examples are revealed on MESSENGER and BepiColombo high-resolution images.