

## Search for a meteoritic component in impact breccias of the Jeokjung-Chogye structure, South Korea

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Chemical compositions, including highly siderophile element (HSE) abundances, and Re-Os isotope compositions of nine polymict impact breccias in two drill cores and three target rocks from the Jeokjung-Chogye structure, South Korea, have been investigated to test the impact origin of the structure, and to infer the potential projectile type responsible for its formation. The impactites have around 5 times higher abundances of the platinum-group elements (PGE: Os, Ir, Ru, Pt, and Pd) compared to target rocks, and two orders of magnitude higher Re abundances. The weighted mean of  $^{187}\text{Os}/^{188}\text{Os}$  ratios for the impactites is 0.806, which is lower than this value for the target rocks (1.049), suggesting the presence of a meteoritic component. The PGE abundances and a broad negative correlation between the Os contents and  $^{187}\text{Os}/^{188}\text{Os}$  ratios indicate that the impactites incorporated ~0.05 wt. % of a chondritic component. The chondritic relative abundances of the PGE argue against iron meteorites as impactor for the Jeokjung-Chogye structure. Yet, the present data did not allow us to unambiguously identify the projectile type (i.e., chondrite class) in the impactites because of the high proportion of the indigenous component.