Figure 3. from Realistic On-the-fly Outcomes of Planetary Collisions: Machine Learning Applied to Simulations of Giant Impacts null 2019 APJ 875 40 doi:10.3847/1538-4357/ab0e8a https://dx.doi.org/10.3847/1538-4357/ab0e8a © 2019. The American Astronomical Society. All rights reserved.

$$y = f(x)$$

## **OUTCOMES**

## **IMPACT CONDITIONS**

1<sup>st</sup> & 2<sup>st</sup> largest remnants

- Mass
- Orbital elements
- Rotation states
- Post-impact composition

Mass of the debris field

. . .

Mass of the target

Mass of the impactor

Impact angle

Impact velocity

Composition
Pre-impact rotation states

. . .