

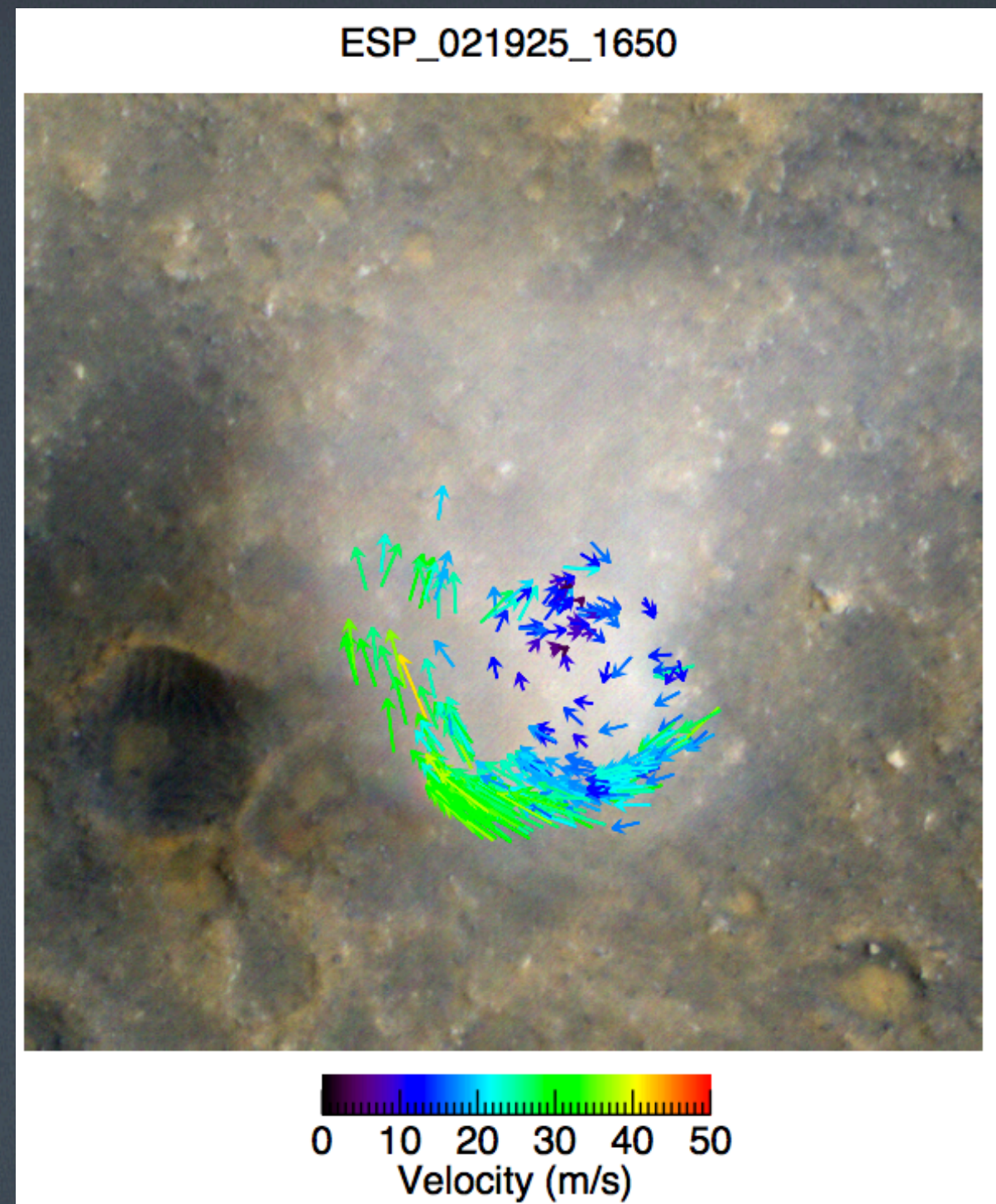
HiRISE Wind Measurements of Martian Dust Devils

HiRISE can serendipitously observe active features, such as dust devils, in motion.

Tracking cloud features by eye and with software reveals circulation and translational motion. Typical winds are 20-40 mph, but may gust to ~80-90 mph (Category 1 hurricane).

The interior of the dust devil rotates like a solid body, matching theoretical studies and laboratory experiments investigating dust devil dynamics.

Implied pressure drop at vortex core can enhance dust lifting and injection into the Martian atmosphere aloft. This suggests dust devils play a role in the Martian climate.



Choi, D.S. and Dundas, C.M. (2011) "Measurements of Martian Dust Devils Winds with HiRISE." *Geophysical Research Letters*, in press, doi: 10.1029/2011GL049806