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Spirals Throughout Nature

The natural world is full of spirals. Nautilus shells, sunflowers, DNA and whirlpools each exhibit their own unique variation on this classic shape.

The spiral seen in this image, taken by the crew of ISS Expedition 38, reveals what happens when air masses of different pressures interact with each other. High-pressure air will always rush toward an area of lower pressure. If the Earth didn't spin on its axis, this rushing air mass would move in a straight line. But the Earth DOES spin on its axis, and the air is de-flected thanks to a phenomenon known as the Coriolis Effect. The result is a cyclonic weather system. This one is still relatively benign, but if the pressure difference becomes great enough a spiral like this can develop into a full blown hurricane.

You may already have noticed that this cyclone looks an awful lot like a spiral galaxy. In fact the same principle of physical law determines their shape. Cyclones, spiral galaxies, spinning figure skaters, and a well-thrown football are all manifestations of the conservation of angular momentum.





