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GROWTH PROCESS OF ICE CRYSTALS FROM FROZEN WATER DROPLETS (ABSTRACT)

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Frozen water droplets 20–80 um in diameter were dropped into supercooled clouds produced in a large cloud chamber 6.5 m high. They were collected at the bottom of the chamber. They grew to various shapes from spherical frozen particles to hexagonal ice crystals. By observing their shapes, it was possible to estimate the growth process of frozen droplets. A typical case accompanied with the appearance of 20 crystal faces, was observed. They were two basal, six prism and twelve pyramidal faces. In addition to these crystal faces, small $(11\bar{2}0)$ crystal faces were observed between two prism faces in a few cases. Frozen droplets nucleated at low temperatures (below about $-20°C$), 20 crystal faces were not appeared in most cases. Only two basal faces were observed and several steps were formed instead of prism and pyramidal faces.

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