

## Retreat of Northern Polar Ice Cap observed by Mars Orbiter Mission- Mars Colour Camera (MOM-MCC)

The northern polar ice cap is a mass of ice and dust layers, comprising mainly CO<sub>2</sub> & H<sub>2</sub>O. It is approximately 1,000 kilometers across. The polar cap shows dark, spiral-shaped bands (figure 1). These are deep troughs of polar caps. Using Mars Orbiter Mission-Mars Colour Camera (MOM-MCC), area of North Pole Ice Cap has been measured for retreat of Northern Polar Ice Cap during northern summer of Mars. Analysis of MCC data has shown the changes in the area of polar ice cap during the northern summer period of Mars (26th December 2015 to 22nd January 2016). MCC has acquired a large number of datasets of northern Polar Ice Caps from Solar Longitude (LS) 86° to Solar Longitude (LS) 98°. The retreat of North Polar Ice Cap was observed during this period. Figure 1 shows that the area of ice cover is decreasing from 381096 Sq. km. to 340538 Sq. km. (10.5%) between (LS) 86° to (LS) 98° (graph in figure 1). Blue lines in figure 1 show the area from where the ice is sublimated.

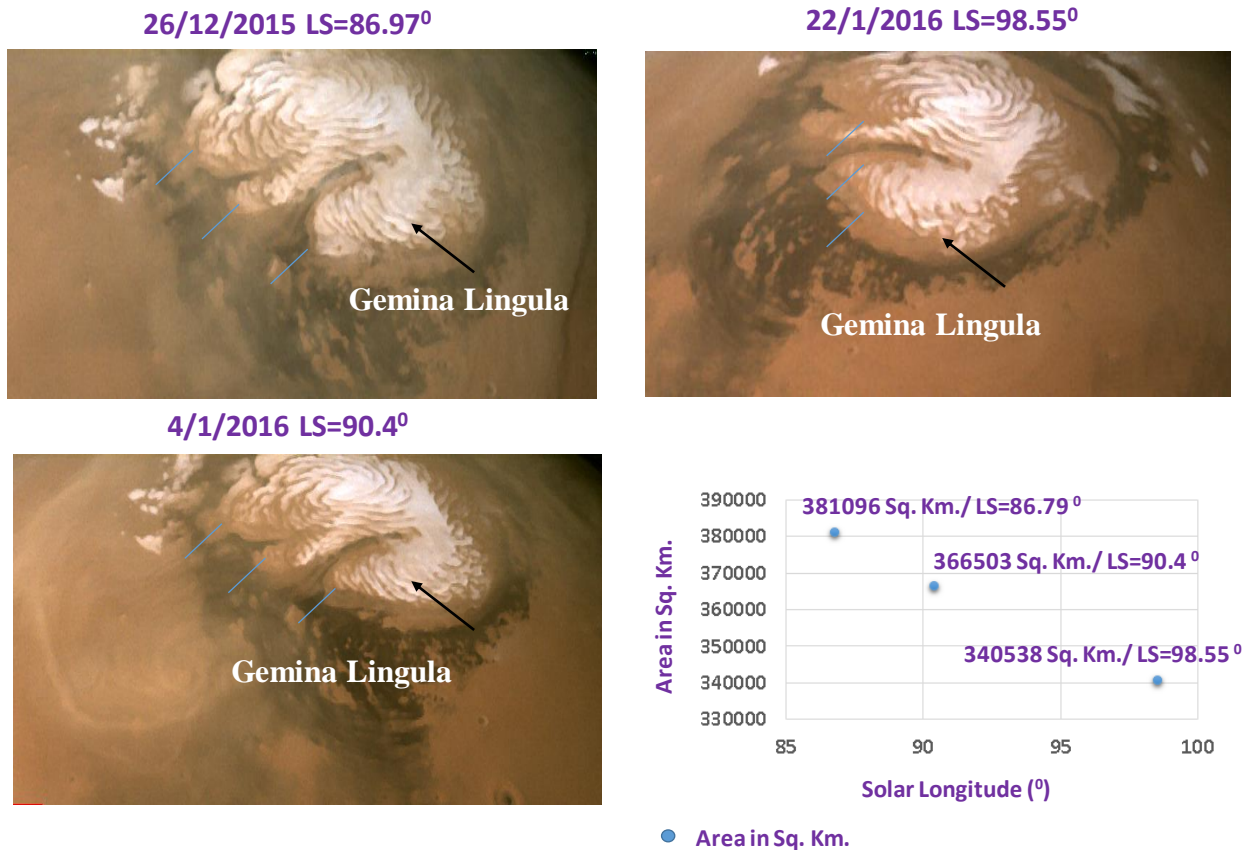


Figure 1: Images from MCC instrument onboard MOM, depicts views of the northern polar region of Mars on different Solar longitude.

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