Based on data above, at 06 UTC wind direction dominant came from the southeast. At layer 308 meters the direction of the wind is 140° (southeast) with the speed of 8 knots, layer 613 meters the direction of the wind is 150° (southeast) with the speed of 8 knots, and layer 917 meters the direction of the wind is 155° (southeast) with the speed of 7 knots. Generally, the wind moved from east to west so that corresponded with volcanic ash dispersion at 06-12 UTC to the west.

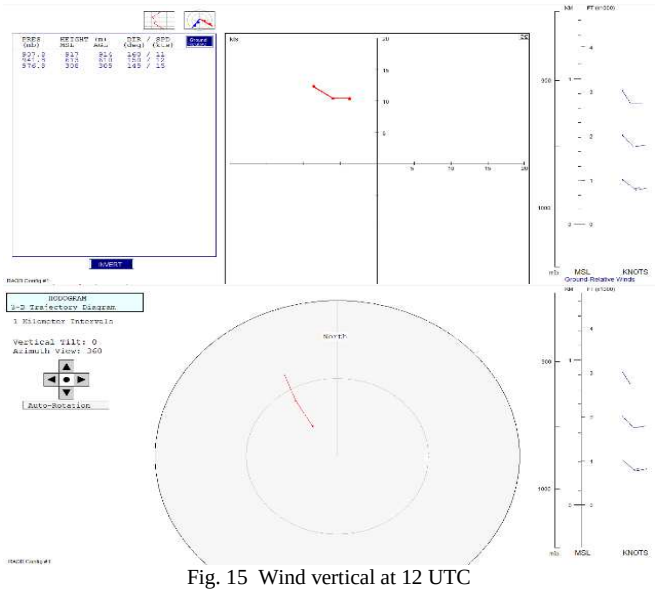

Fig. 15 Wind vertical at 12 UTC

Based on data above, at 12 UTC wind direction dominant came from the southeast. At layer 308 meters the direction of the wind is 145° (southeast) with the speed of 15 knots, layer 613 meters the direction of the wind is 150° (southeast) with the speed of 12 knots, and layer 917 meters the direction of the wind is 160° (southeast) with the speed of 11 knots. Generally, the wind moved from east to west so that corresponded with volcanic ash dispersion at 12 UTC to the west.

Can be concluded that volcanic ash dispersion PUFF model corresponded with pilot balloon observation at 00, 06, and 12 UTC which is dominated by west direction. This is also supported by VAAC Darwin information that mentioned the dispersion moved to the west.

IV. CONCLUSION

The information released by the PUFF model is more informative because it contains the dispersion of volcanic ash in each layer and the size of the dispersed particles. PUFF model output also very corresponds with vertical wind data from pilot balloon observation data of Selaparang Meteorological Station which the dispersion is dominated to the west. Ash volcanic dispersion data from PUFF model can be used in delivering the information to pilot because it has more details and can predict up to 20 hours after the eruption better than volcanic ash advisory information issued by VAAC Darwin. Eruption or plume height information is more accurate using remote sensing of weather radar if it is compared with the observation by weather observer because it can capture small size objects.

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