



Banner Clouds at Zugspitze Mountain in Germany

Jan H. Schween, J. Reuder

Meteorological Institute LM University Munich

Banner clouds are clouds which form on the Lee side of ridges or mountains. Well known is the cloud at the Matterhorn mountain in Switzerland. Since one would expect that the air is raised equally on both sides of the mountain a cloud should form on both sides. In contrast hereto banner clouds appear only at the lee side.

Zugspitze mountain in Germany is served from two sides by cablecars. This unique situation enables the investigation of the formation, dynamics and thermodynamics of banner clouds. Both cablecars were equipped with meteorological instruments. Two masts equipped with meteorological instruments were set up on both sides of the ridge to the west of the summit. A field campaign was organized to study the wind field and thermal stratification around the mountain. A description of this field campaign and first results will be shown.