

ANALYSIS OF SATELLITE DATA ON 22 AUGUST 2006 (PLANE – CRASH OVER EASTERN PART OF UKRAINE)

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I. INTRODUCTION

The paper describes the analysis of satellite data on 22 August 2007. This date is sadly famous of a plane-crash over eastern part of Ukraine at 11:38 UTC. The plane disappeared from radar shortly after making a distress call. The aircraft was reportedly on fire before it crashed (Fig.1). Weather forecasters reported thunderstorms and lightning in the area at the time of the crash. 182 people died in the plane-crash close to Donetsk city.



FIG.1 The plane – crash

II. ANALYSIS OF METEOROLOGICAL SITUATION

Analysis of all available meteorological information shows that Eastern part of Ukraine was under the influence of a cold front with possible lightnings, thunderstorms and gusts. Available radar information shows that height of clouds reached up to 15 km, which is very rare over this territory in summer time.

III. ANALYSIS OF SATELLITE DATA

For satellite analysis we used NOAA and MSG data. The last NOAA data was one and a half hour before the plane crash. We used RGB and IR10 images for analysis (Fig.2-3). On the images there are convective clouds on the west from point of plane-crash, the cloud top temperature reached -70°C.

The MSG data (different RGB and IR10.8 images) shows different mesoscale convective systems (MCS's) over this territory. Animation tools for MSG data show development and state of MCS's. Analysis of IR10.8 very clearly shows the beginning of convective cloud development, which was the reason of plane-crash (Fig.4).

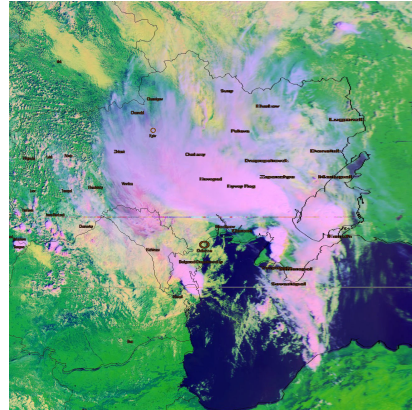


FIG.2. RGB NOAA image at 10:00 UTC 22.08.07

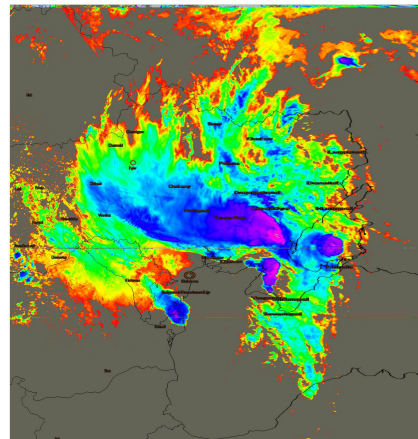


FIG.4. IR10.8 NOAA image at 10:00 UTC 22.08.07

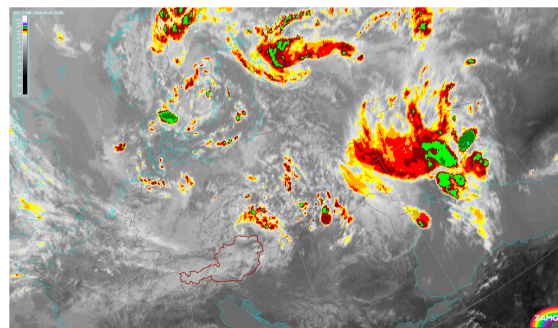


FIG.4. IR10.8 MSG data at 10:30 UTC 22.08.07