

Ermakov D. Satellite radiothermvision of atmospheric processes: method and applications. Ser.: Springer Praxis Books. Cham: Springer, 2021. 199 p.

This book summarizes the author's research resulted in developing the satellite radiothermvision approach which allows retrieving dynamical and energy characteristics of atmospheric mesoscale and synoptic-scale processes based on a close scheme of satellite passive radiometry data processing.

The book introduces new applications of the satellite passive microwave observations to detailed systematic study of tropical cyclones' evolution, climatology and characteristics of atmospheric river, parameters of global atmospheric circulation and their variations on climatically significant scales.

The results presented in the book demonstrate a clear relation between the convergence/divergence of latent heat from the lower atmosphere to the center of tropical cyclone with variations of its intensity and provide a better insight into the tropical cyclone dynamical energy balance based on remote data.