

## The measurement of ascent speed of the ephemeral active regions using the cloud model

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Ephemeral active regions (ERs) are small and short-lived regions that emerge in large numbers on the solar surface. In this study, we measure the ascent speed of ERs, by using Beckers' cloud model.

We observe these ERs by Solar Magnetic Activity Research Telescope (SMART) at the Hida observatory with the wavelengths of H alpha center, +/-0.5 and +/-0.8 angstrom.

The SMART can observe the whole of the sun by high spatial resolution, so we obtain a lot of data of ERs emerging on the solar surface.

From this study we can say two points about ERs.

- (1)The maximum ascent speed of ERs is about 10km/s and smaller than that of usual Emerging flux regions.
- (2)The ascent duration time of ERs range from 20 minutes to 1 hour.

For detailed analysis, we intend to observe more ERs and make a statistical survey.