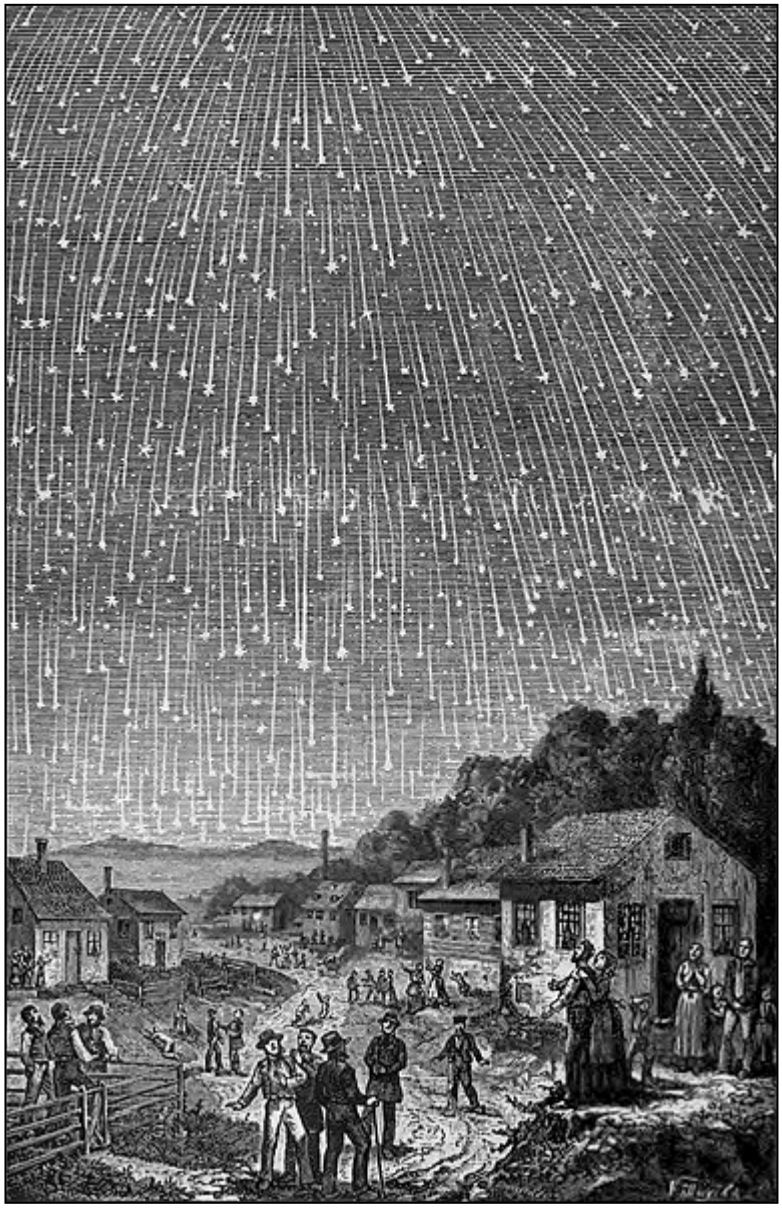
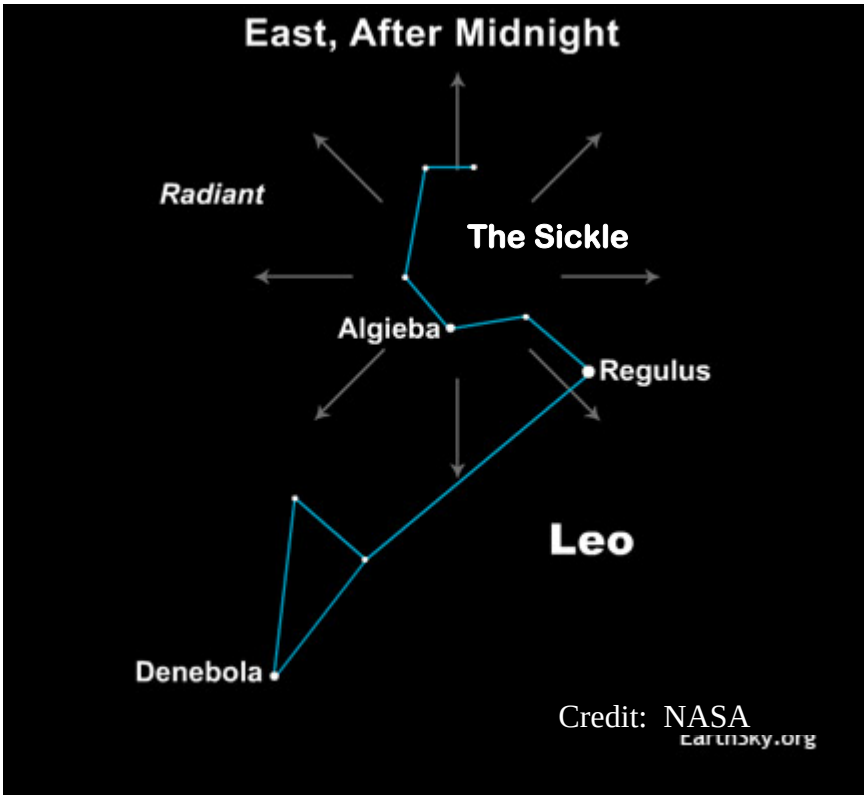
Chapter 4. The Not-Yet-Stormy Lion

The State of Alabama has, on its license plates, "Stars Fell on Alabama", though this does not refer to the Sylacauga meteor that hit Mrs. Ann Hodges. It instead references a phenomenon known mostly for the Leonids meteor showers. Every third of a century the snoozing constellation Leo the Lion gets its dander up and roars. These are years with numbers ending at or near to 33, 66 or 99 (put a 19, 20, etc. before them). Most years the Lion sends out around 20 meteors per hour, acceptable but hardly spectacular, but during these special years it is 20 meteors……PER SECOND...or more. This is no meteor shower, it is a meteor storm.



The Alabama slogan references a Leonid storm of 1833. No known piece of Lion actually hits Earth; they all burn away in the atmosphere high up. But great fear abounded due to ignorance about what meteors were. Furthermore, these meteor storms are not viewed worldwide! They last for only a few hours of Earthly rotation so you must be in the right place at the right time. In 1833 it was viewed predominantly in the East Coast and Southeast region of the United States as a storm, though otherwise higher rates than usual were seen in any part of the darkened side of the globe.

On most November 17th's, in the midnight to dawn hours, the regular Leonid meteor shower peaks. It only lasts about a day, though some few can be seen the day before and after, and as in all years, the meteors that radiate out of the Head (or Sickle, a obvious backwards-



question-mark-shaped group of stars) of Leo the Lion are not especially out of the ordinary. You'll see meteors just before dawn, not weak, not spectacular (see the Geminids of December or Perseids of August for that). In years with a Moon visible you will see fewer because the nearby Moon brightens the sky, hiding the fainter 'falling stars'.

Back in the 1800s, nobody knew why there were showers, let alone storms; it turns out there is debris in a stream orbiting the Sun left behind by a comet that shares the debris' orbit, Comet Tempel-Tuttle. But it wasn't until the next storm, in 1866, that the connection was made.

Why don't we have a storm every year? Unlike other comets that have come and gone and left evenly distributed orbiting bits of rock, Comet Tempel-Tuttle — which orbits in that same 33-year period around the Sun — has a big clump of stuff near to it that swings over Earth every 33 years. Most years we get the thinly-spread majority of the debris crossing our orbit.

The 1966 Leonid Storm, a few seconds photographic exposure.