## Progress Monitoring Probe 14

## Doppler Radar

In the past, regular radar was used to study storms. This radar only measured how hard rain was falling. Scientists using this radar studied the patterns of rainfall and then guessed if a tornado was forming. Their guesses sometimes led to false alarms. Other times, they discovered a tornado too late to prevent loss of life. Clearly, a better instrument was needed.

Total words:

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Then Doppler radar was developed to measure more than just 160 rainfall. It was first created to show detailed information about the direction and speed of aircraft. When looking at the weather, Doppler radar follows raindrops instead of planes. By following the drops in a thunderstorm, it can "see" the direction and speed of the wind.

If Doppler radar shows raindrops moving both toward and away from it, experts know that a tornado may be forming. The weather service will then issue a "tornado watch" for the area. A tornado watch warns people to stay alert for possible tornadoes. If the radar later shows very strong winds moving in a circle, experts know that it has found a tornado core. The weather 271

## Doppler Radar (Continued)

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## Doppler Radar

When people hear the word tornado, they pay close attention for a very good reason. Tornadoes cause a huge amount of damage to both life and property every year and are extremely unpredictable. A tornado may appear instantaneously and then, just as quickly, it may vanish. Fortunately, weather stations across the country are using a new method to track tornadoes called Doppler radar. Doppler radar helps weather stations identify the conditions that generate tornados. With early warning of an approaching tornado, many lives and homes can be saved.

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service then sends out a "tornado warning," which warns people that a tornado exists in the area.

Doppler radar has made a big difference in people's lives. Tornado watches can be issued as much as seven hours in advance, giving people time to prepare. If a watch later becomes a warning, they are not caught by surprise. Tornadoes still produce some of the most dangerous of all weather conditions, but Doppler radar has made a big difference in how much damage they do.