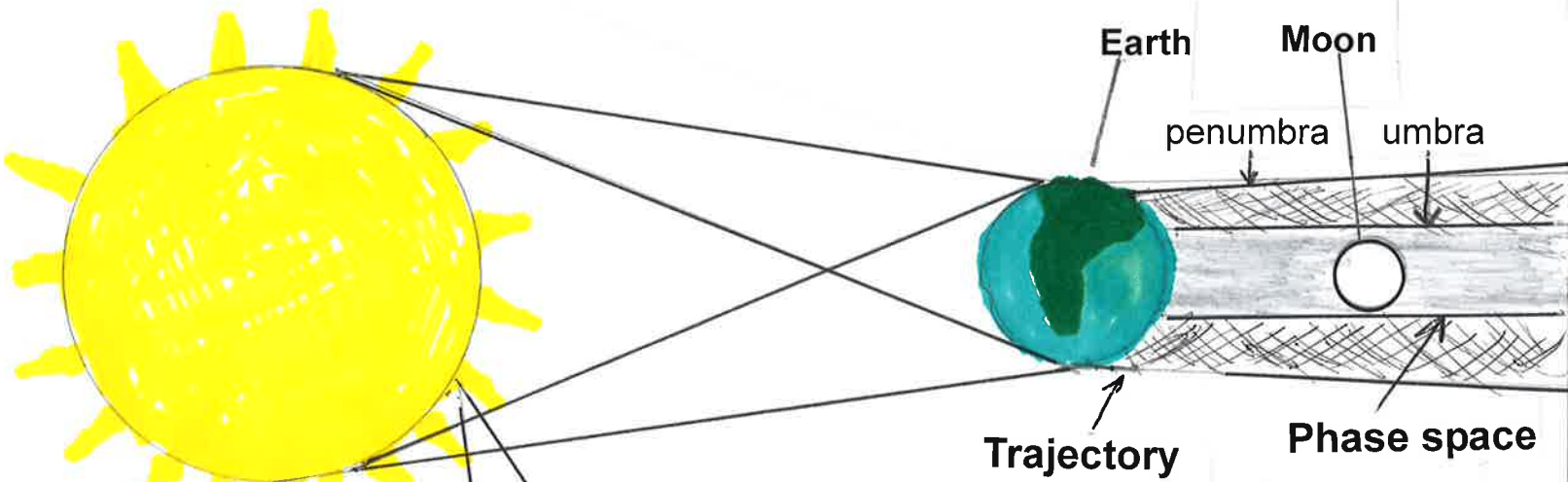
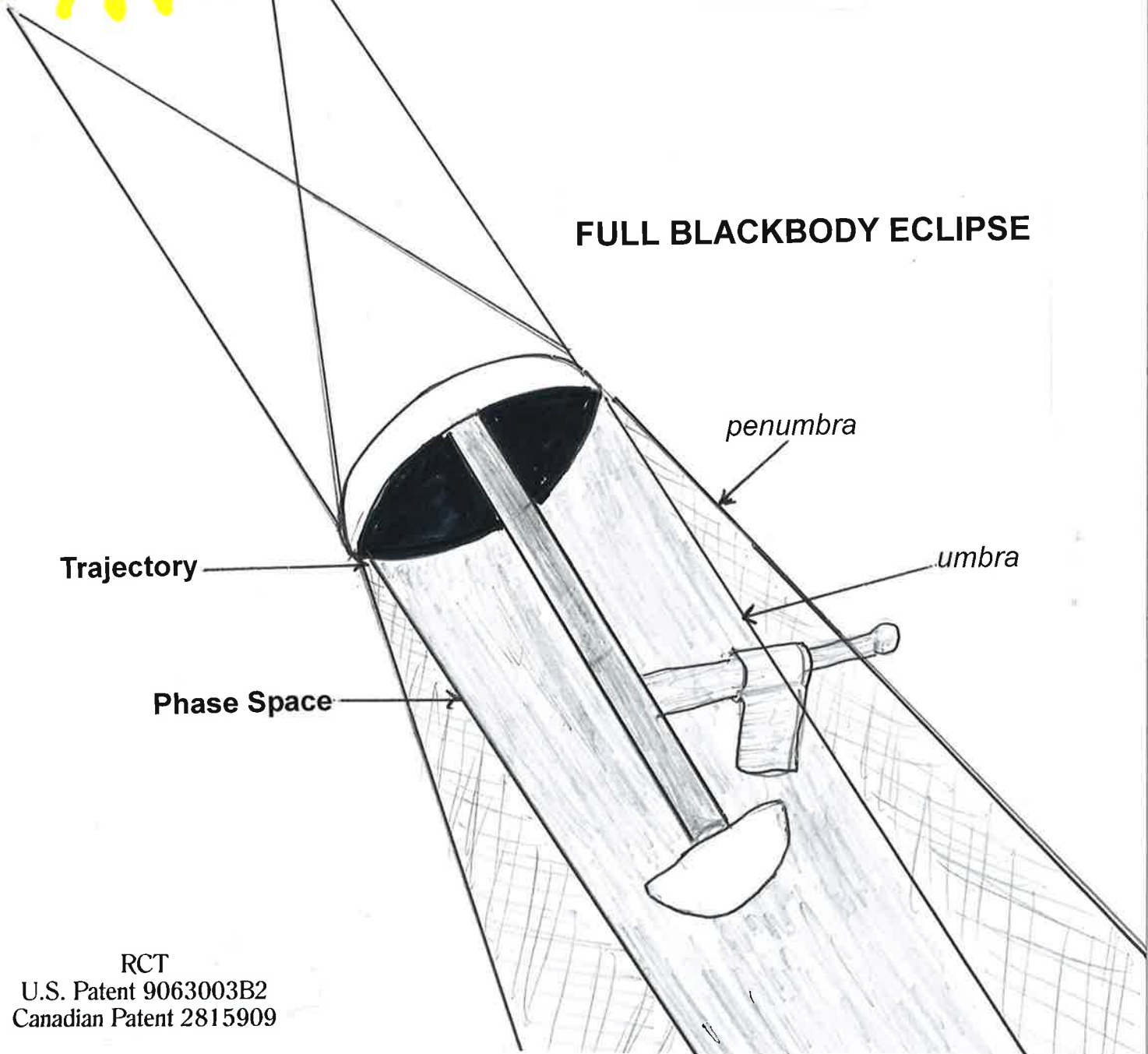


STRANGE ATTRACTORS, GNOMONICS

Total Lunar Eclipse



FULL BLACKBODY ECLIPSE



RCT
U.S. Patent 9063003B2
Canadian Patent 2815909

GNOMONICS

A gnomon is the portion of a sundial that casts a Shadow (or umbra) onto the scale or dial. Radiation Compensated Thermometers track the sun not for time but outdoor temperature-in-the-shade, The upper reflector totally eclipses the lower one, constantly shading the receiver with the umbra. A total black-body eclipse.

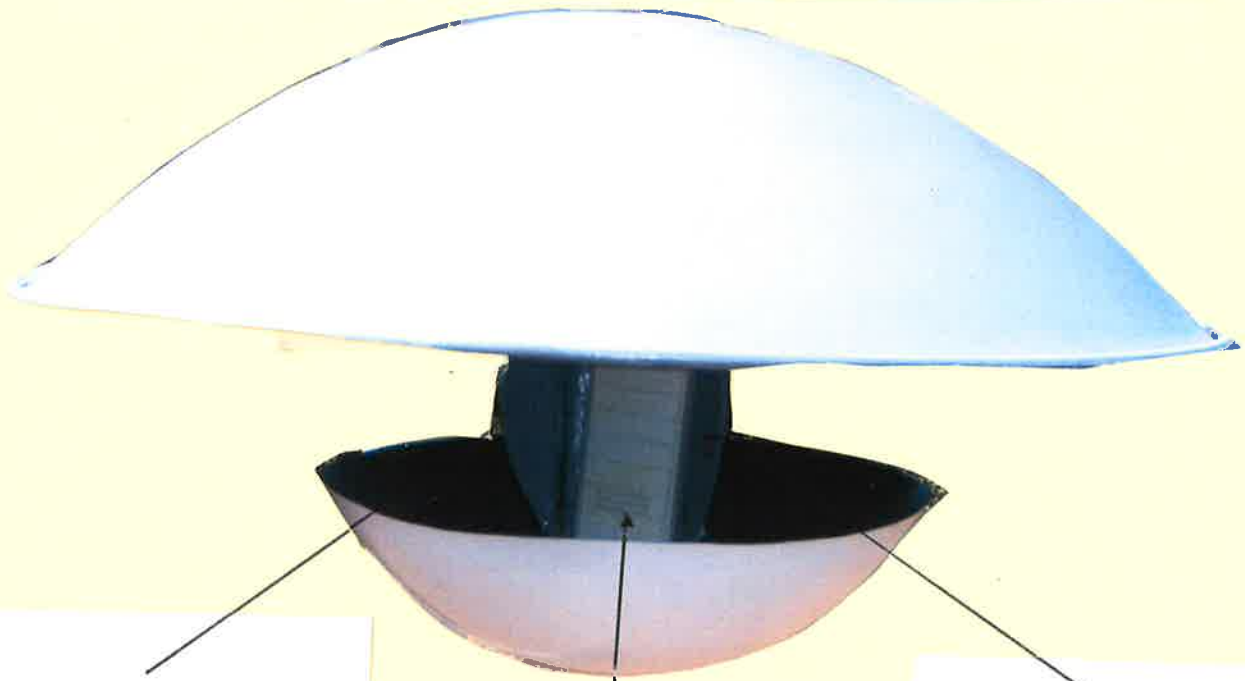
STRANGE ATTRACTORS

Attractors must possess both a trajectory and phase space. The umbra portion is “thrown” or cast with a specific trajectory. Tracking the sun’s transit has a trajectory. A radiant light source both curves and bends around elliptical or spherical objects creating the umbra inside the penumbra of an eclipse. The umbra between the upper and lower reflector qualifies as phase space. The large and small bodies in the eclipse become optically “locked in” with one another in orbit.

RCT as a BOLOMETER

The root word of bolometer is “bolo” which means “to throw.” In this case not only is the umbra “thrown,” the black-body receiver also qualifies as a bolometric device as well.

2; With stationary design; temperature sensor/shield is aligned facing Celestial North

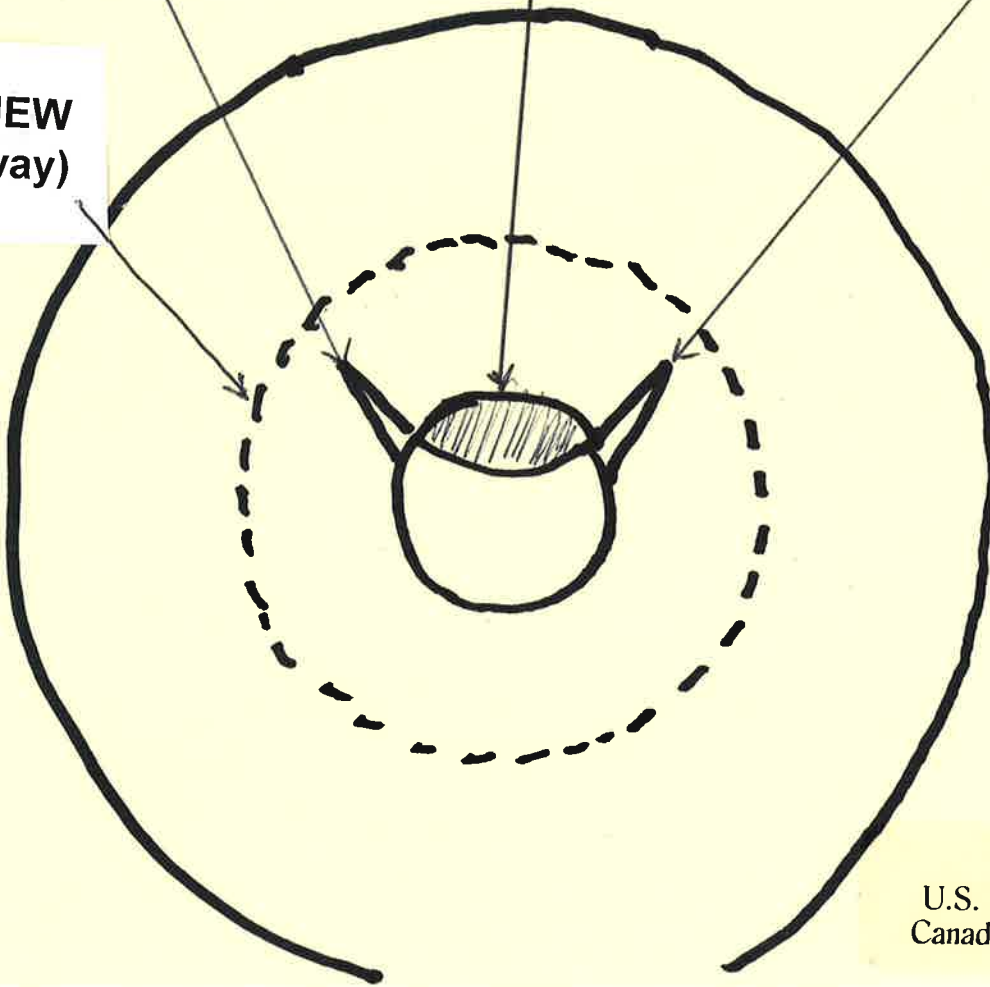


DEFLECTION FIN

WIRELESS SENSOR

DEFLECTION FIN

TOP-VIEW
(cut-away)



RCT
U.S. Patent 9063003B2
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Recent Developments: DRHT

The original prototype had a 12” reflector/receiver at the bottom and a 24” top reflector at over 9 feet tall. In 2016 A steel-reinforced prototype was built. This upgraded model was easier to adjust azimuth and elevation. This sturdy prototype was much more accurate. There is a built-in compass at the base aligned to Celestial North. Elevation is adjustable in 11.75° increments. With this large model it may be feasible to “piggy-back” a radiometer on the top reflector in order to measure total solar irradiance.

In 2017 two miniaturized DRHT prototypes were fabricated. The Aluminum prototype was ½ the size of the original mentioned above. The second prototype was fabricated from Copper and 10% smaller than the Aluminum prototype. These were successfully tested. This proves the DRHT black-body effect is universal regardless of scale and non-ferrous metals used in construction.

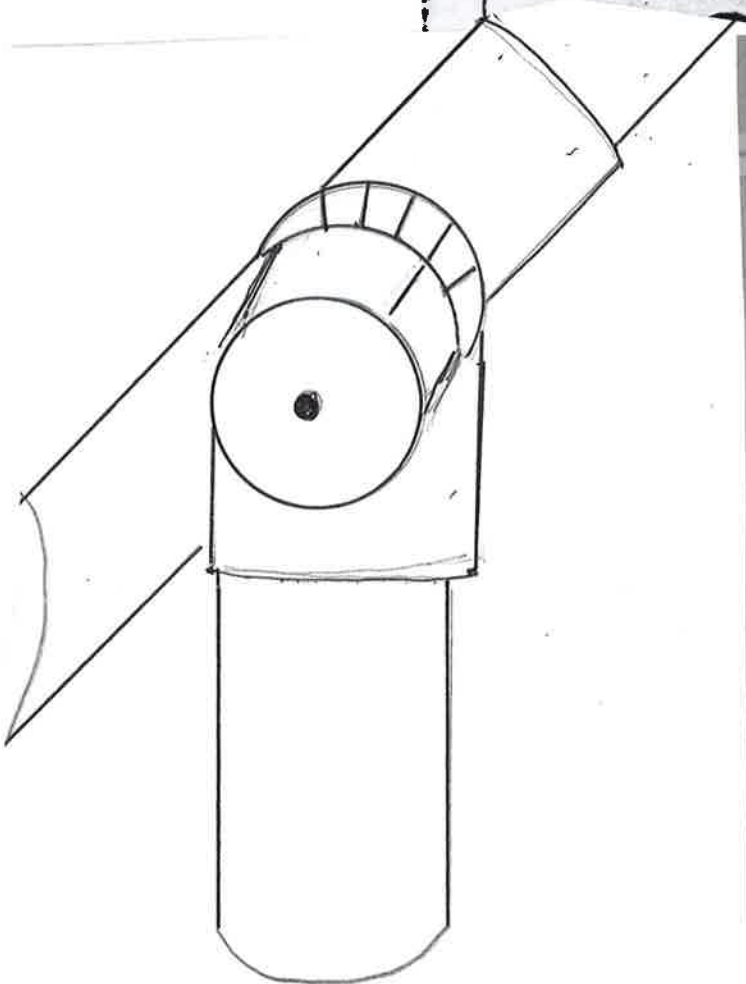
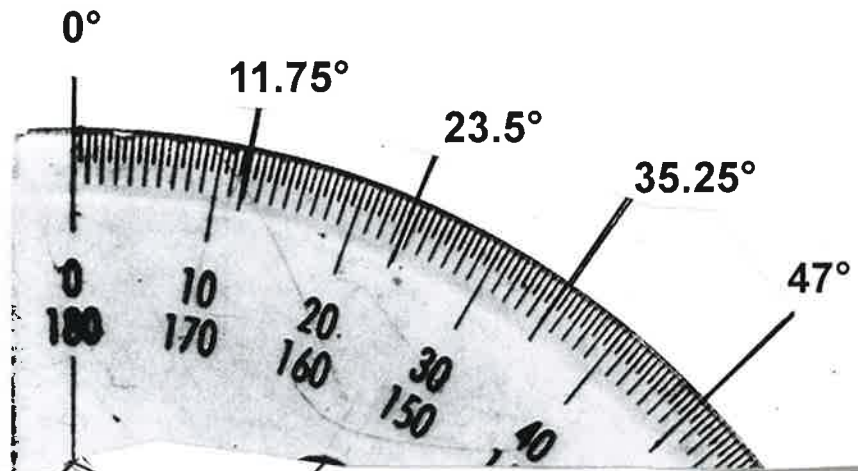
The DRHT functions best under clear skies--at least for now. Applications include a reference temperature source for field calibration of temperature probes. Temperature error of other radiation shields can also be determined.

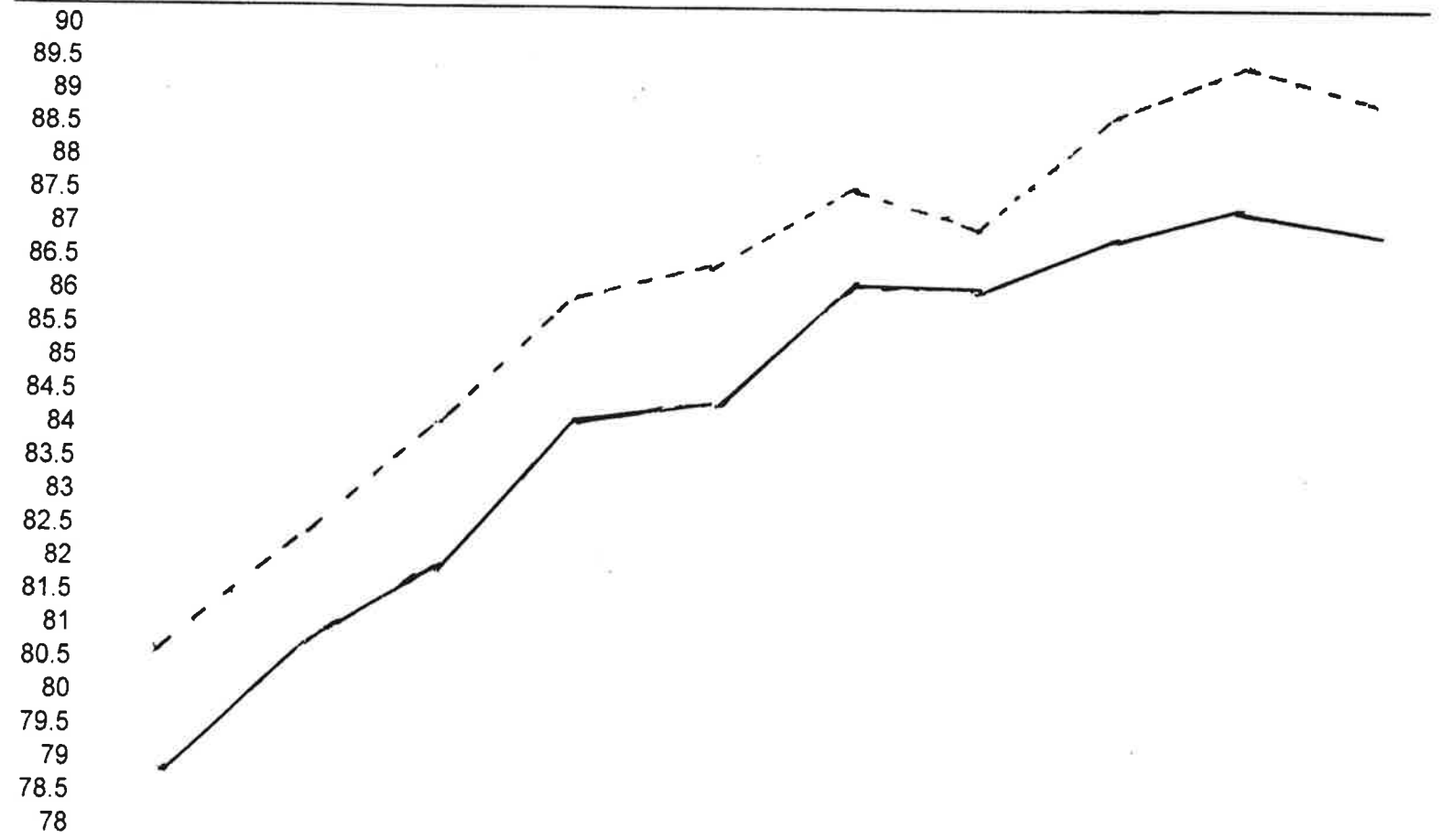
RCT
U.S. Patent 9063003B2
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Design #1

Elevation Angles for Solar Tracking: 11.75° increments

Directional Radiant Heat Thermometer





Elevation: 23.5° 23.5° 11.75° 11.75° 11.75° 11.75° 11.75° 23.5° 23.5° 23.5°

--- GPRS ---
 — DRHT —

17-Aug	✓			✓		
10:00	78.8	77.3	78.4	80.6	78.9	80
	80.7	78.2	80.4	82.4	80	82.4
	82	80.4	81.6	84	81.5	83
	84.2	79.8	83.1	86	81.3	84.5
	84.5	81.5	82.9	86.3	83.6	84.7
	86.3	81.5	84.9	87.6	84.2	84.9
	86.1	83.6	84.3	86.9	84.9	86.5
	86.9	83.3	86.9	88.8	84.7	88.1
	87.2	85.4	86.5	89.4	85.6	88.3
	87	84.5	86.5	88.7	86.5	88.3
Total	843.7	815.5	835.5	860.7	831.2	850.7
x	84.4	81.5	83.5	86.1	83.1	85.1

RCT
U.S. Patent 9063003B2
Canadian Patent 2815909



3rd Design

