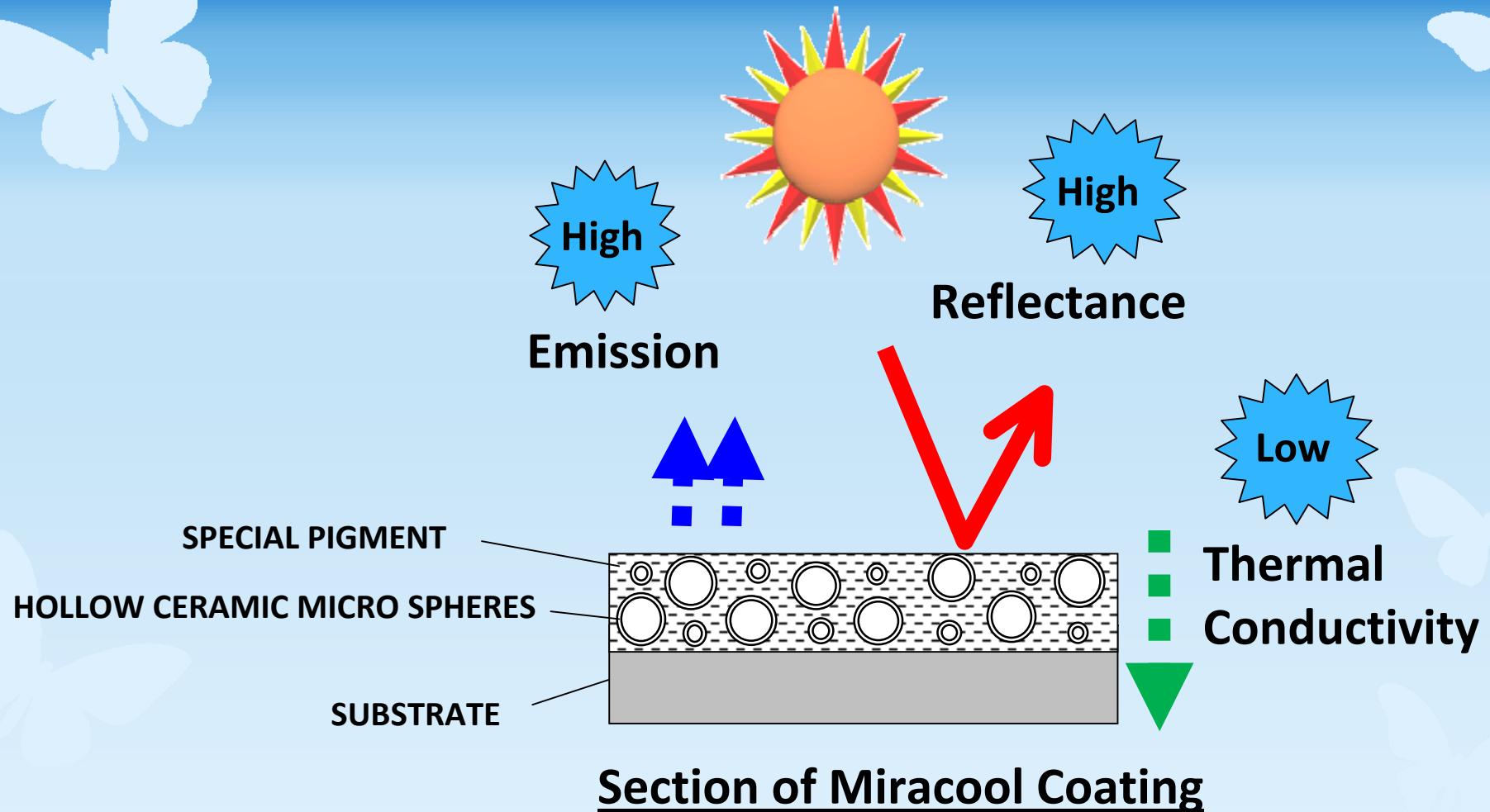


The background is a solid blue color. There are several white butterfly silhouettes scattered across the page. One is in the top left, one in the top right, one in the middle right, one in the bottom right, and one in the bottom left.

MIRACOOOL Pilot Project In Sorsogon City, In Philippines

**MIRACOOOL Co., Ltd.
5 November 2013**

THERMAL CHARACTERISTICS OF HEAT SHIELDING PAINT "MIRACOOOL"



EFFECT OF MIRACOOOL

Decrease of Surface
Temperature of the Roof



Reduction of Heat Flow from
the Roof into Rooms



Less Cooling Load



Low Room Temp.



Saving Energy



Comfortable

PILOT PROJECT IN SORSOGON CITY, PHILIPPINES



- Presentation of “MIRACOOOL” was carried out at the second Environmental Technology Expert Group Meeting in September, 2010.
- “MIRACOOOL” was selected for one of the pilot projects. Location of the project was Sorsogon city, Philippines.
- “MIRACOOOL” was applied for the following buildings in March, 2011.
 - (1) Sorsogon Pilot Elementary School
 - (2) Barangay Community Hall
 - (3) Core Shelter Housing: 3 units
- Temperature data were recorded by officials of Sorsogon city in May-Aug, 2011.

(1) SORSOGON PILOT ELEMENTARY SCHOOL



Entrance



Primary Coating



Top coating by
MIRACOO SW200



Completed



Ceiling



Roof Top

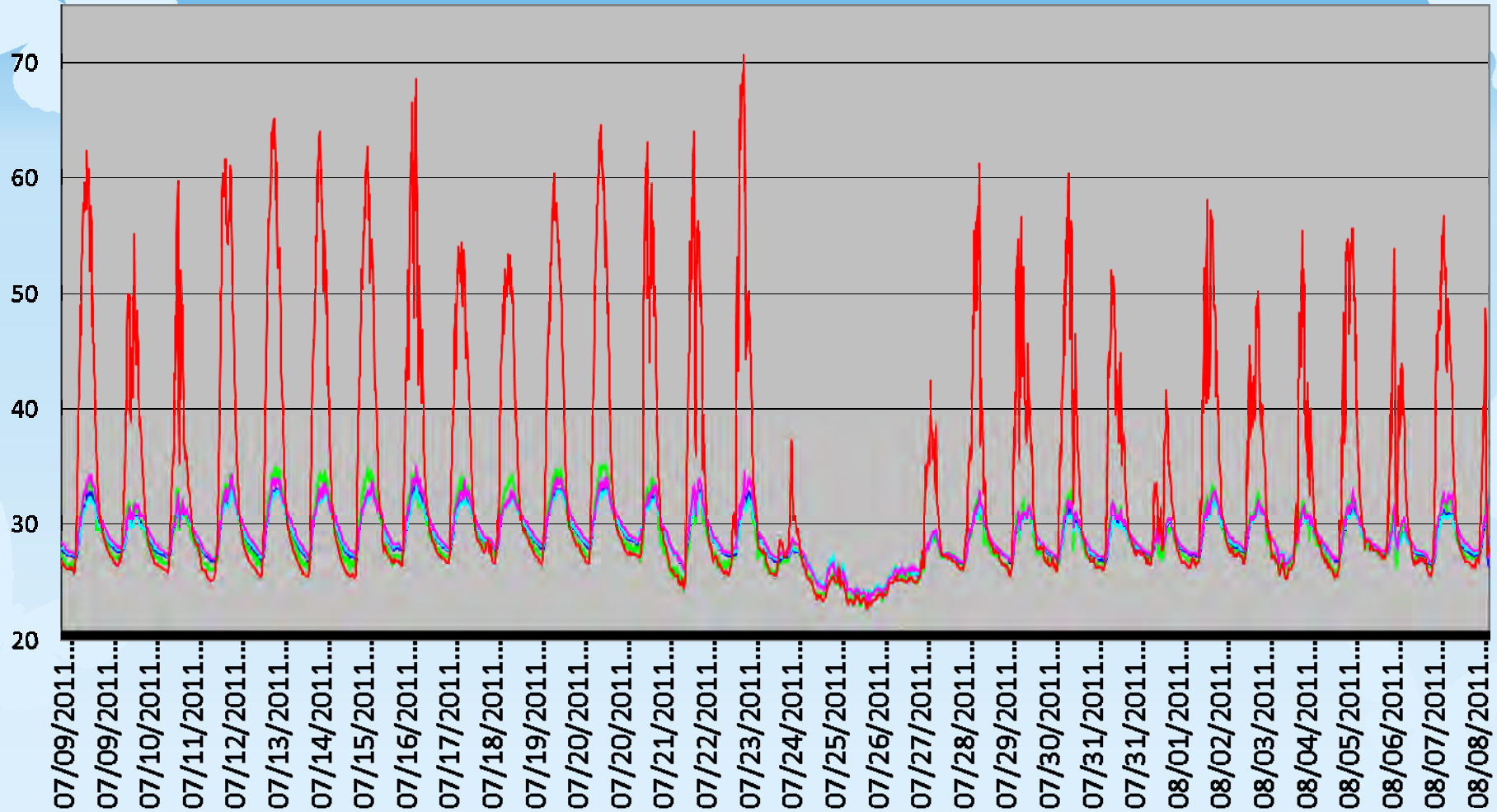


Classroom

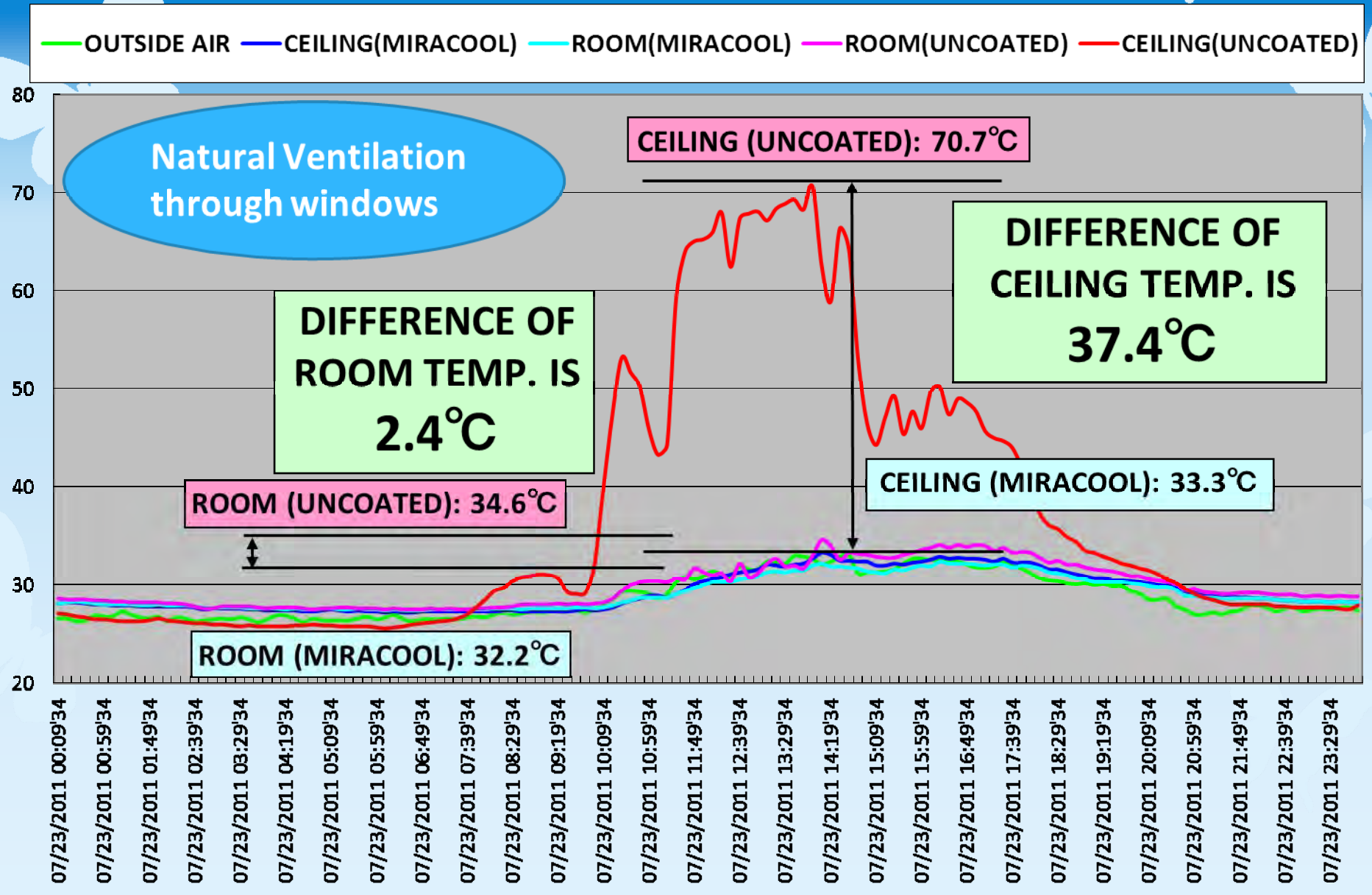
9/July/2011 ~ 8/August/2011



— OUTSIDE AIR — CEILING(MIRACOO) — ROOM(MIRACOO) — ROOM(UNCOATED) — CEILING(UNCOATED)



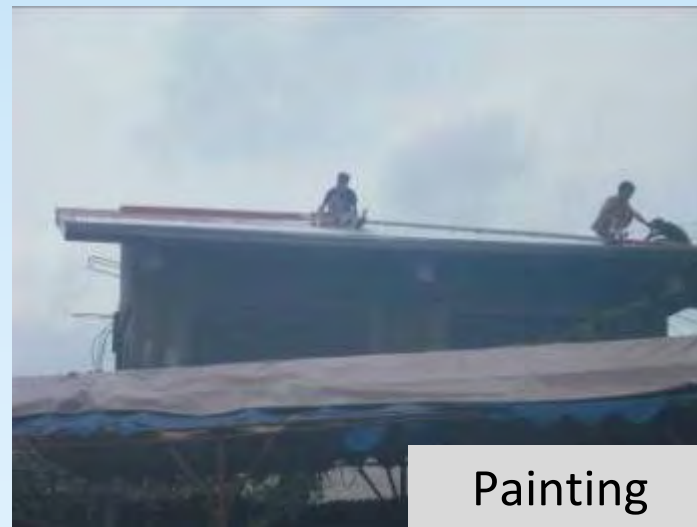
23/July/2011



(2) BARANGAY COMMUNITY HALL



Ceiling



Painting

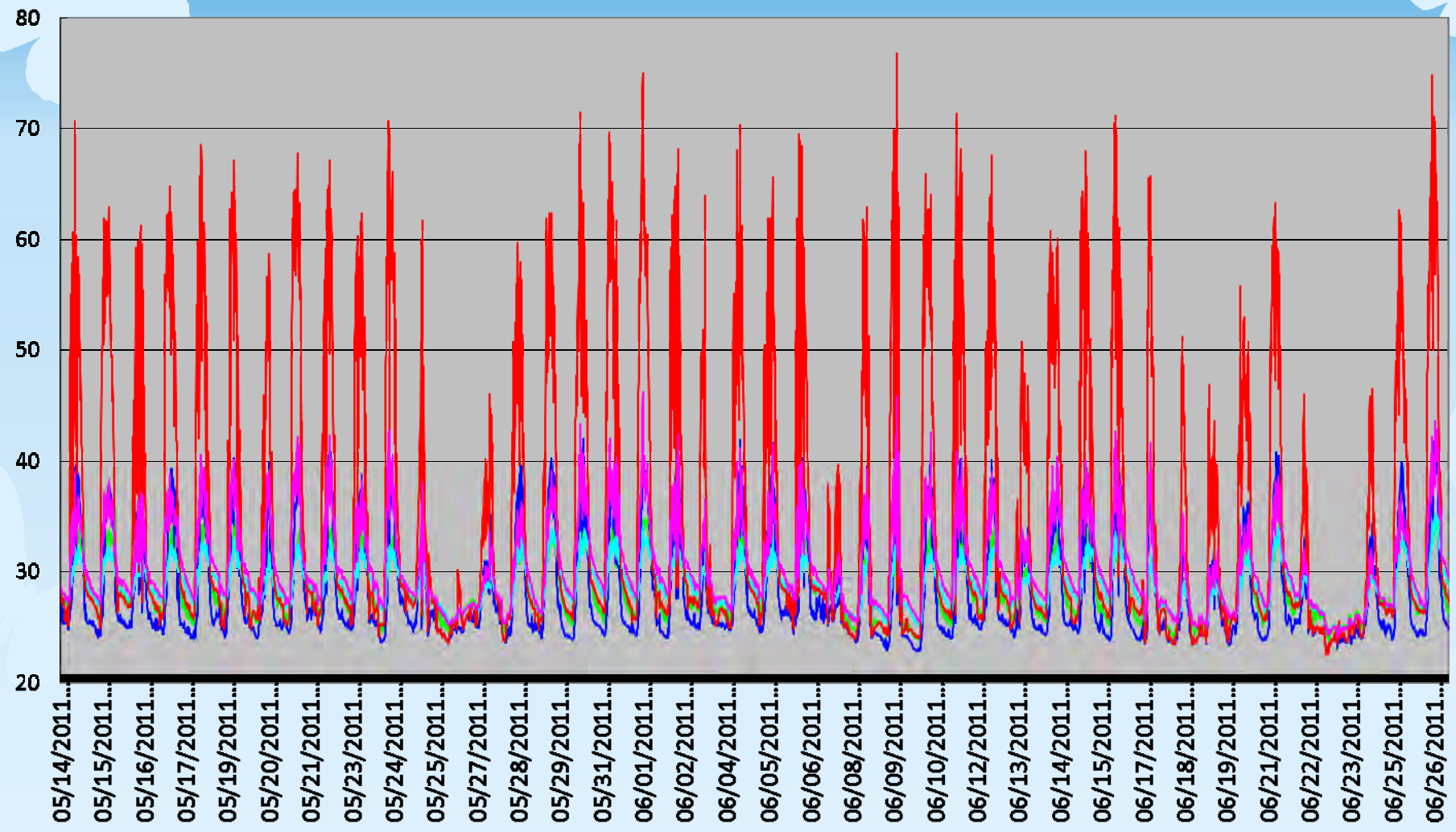
(3) CORE SHELTER HOUSING



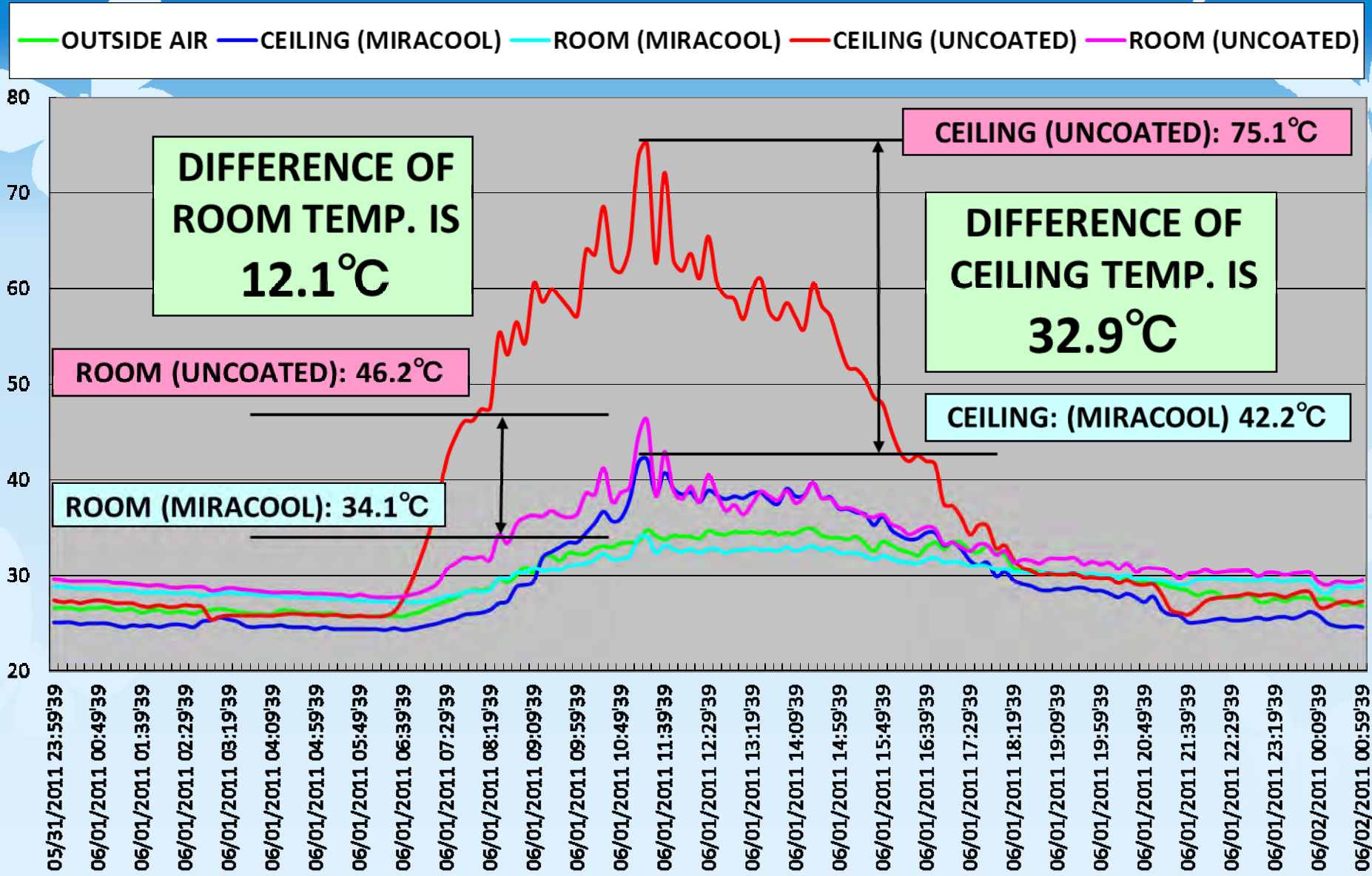
Ceiling



14/May/2011 ~ 26/June/2011



1/June/2011



PERFORMANCE REQUIRED FOR HEAT-SHIELDING PAINT

Initial Thermal Performance


Durability

Continuity of Performance

MIRACOOOL SW200

- Performance is rated by The “Cool Roof Rating Council” after three years outdoor exposure in Arizona, Florida and Ohio in USA.
- ENERGY STAR Mark was granted consequently.
- Verified by “Japan Environmental Technology Verification” by Ministry of The Environment of Japan.



		Initial	Weathered
	Solar Reflectance	0.89	0.83
	Thermal Emittance	0.89	0.90
	Rated Product ID Number	0 0 0 1	
	Licensed Seller ID Number	0 0 2 0	
	Classification	Production Line	
<small>Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary. Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</small>			



THE MOST SUITABLE LOCATION FOR “MIRACOOOL” TO BE APPLIED.

Hot Climate Caused by Solar Radiation

Electricity Cost is High

No or Less Insulation on Roof

- There is a limitation to reduce product price due to high cost of the raw materials in order to maintain high thermal performance, durability and continuity of performance.
- Therefore the most of the job records of “MIRACOOOL” in abroad are for factories and warehouses of Japanese companies which afford to spend such the high cost.
- We would like to introduce “MIRACOOOL” for those local people and organizations in developing countries who are the most sought of “MIRACOOOL”, in collaboration with national governments, local authorities, non-governmental organizations (NGOs), community organizations and the private sectors.

The background is a solid blue color with a gradient that is lighter at the bottom. There are several white butterfly silhouettes scattered across the page: one in the top left, one in the top right, one in the middle right, one in the bottom left, and one in the bottom right.

Thank you very much for your attention.

Miracool Co., Ltd.

<http://www.miracool.jp>