

# **The Experiments of Weather Instruments & Observations lab.**

**(First Semester)**

**ASD / 2<sup>nd</sup> Stage**

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# Rain

The amount of rainfall is defined as: The depth of water measured in units of millimeters (mm) that covers a horizontal surface.

## Rain gauges:

1. Rain Gauge device.
2. Inclined bucket device.
3. Rain recorder



*Inclined bucket device*



*Rain recorder*

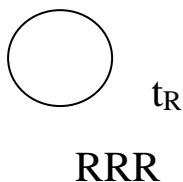
$6RRRt_R$



The sediment group is drawn on the station where (6) is the group guide

RRR the amount of sediment calculated from the table,  $t_R$  the period of sediment fall before the time of observation

Its location is as follows:



<i>Code number</i>	<i>RRR(mm)</i>
<b>001</b>	<b>1</b>
<b>989</b>	<b>989</b>
<b>990</b>	<b>trace</b>
<b>991</b>	<b>0.1</b>
<b>999</b>	<b>0.9</b>

<i>tR</i>	<i>Explanation</i>
<b>1</b>	<i>Total sedimentation amount during the observation period (6 hours) before</i>
<b>2</b>	<i>Total sedimentation amount during the observation period (12 hours) before</i>
<b>3</b>	<i>Total sedimentation amount during the observation period (18 hours) before</i>
<b>4</b>	<i>Total sedimentation amount during the observation period (24 hours) before</i>
<b>5</b>	<i>Total sedimentation amount during the observation period (1 hour) before</i>
<b>6</b>	<i>Total sedimentation amount during the observation period (2 hours) before</i>
<b>7</b>	<i>Total sedimentation amount during the observation period (3 hours) before</i>
<b>8</b>	<i>Total sedimentation amount during the observation period (9 hours) before</i>
<b>9</b>	<i>Total sedimentation amount during the observation period (15 hours) before</i>

7wwW<sub>1</sub>W<sub>2</sub>



*The group of the present weather and the past weather, as (7) the group's guide*

*ww Elements of the present weather and an hour before the observation and take the numbers (00 - 99) as:*

*(00 – 49) means that there are **no sediments** in the station before the preparation of the stock, as this group relates to the lack of visibility or sediments prior to the preparation of the stock.*







*(50 – 99) Precipitation is present at the time of stock preparation.*

*W<sub>1</sub> and W<sub>2</sub> are elements of the past weather, and represent the last two essential phenomena*

*It appeared during the past 6 hours for monitoring at the following times (00, 06, 12, 18)*



The following is a table of the meanings of the basic symbols of the elements of the present and past weather:

<i>Sym.</i>	<i>meaning</i>	<i>Sym.</i>	<i>meaning</i>
S	dust	*	snow
	eddy		drift
	fog		freezing
•	rain		showers
و	drizzle		Thunder storms

$8N_h C_L C_M C_H$



Group types of clouds where (8) group index

$N_h$  is the amount of low clouds, and if it is not available, it represents the amount of average clouds ( $C_M$ )

**\*note:**

This group is deleted if:

- There are **no clouds**, meaning that  $N = 0$
- The sky is **obscured** by one of the weather phenomena, meaning that  $N = 9$

The location of the clouds symbols around the station is as follows:

