State of Israel
Ministry of Transport
Israel Meteorological Service

25 Kislev 5786
15 December, 2025

Summary of the Rain Event: 7–12 December 2025 ("Byron")

An extreme and exceptional rain system passed through our region commencing the night of December 7–8, and primarily between December 10–12, at which point it was designated "Byron" under the European framework for naming significant storms. The system yielded substantial precipitation amounts, reaching 150–200 mm and above.

The rains fell, in part, at high intensities; consequently, strong flows and flash floods occurred in the streams of the Judean Desert and in the tributaries of the Lakhish, Shikma, and Besor streams. Additionally, urban flooding occurred, primarily in Yavne and Ashkelon, and rescue forces were required to extract trapped individuals.

The heavy rainfall erased the precipitation deficit in many areas of the southern and western parts of the country and even resulted in a significant surplus in some of them. In the Dan region, the deficit was significantly reduced, whereas in the northern mountains, it was reduced only moderately.

Synoptic Situation and Rainfall Progression

Several days prior to the event in our region, an upper-level trough extended from northwestern Europe to the coast of Libya, accompanied by a surface low in the area of Greece (on December 4–5, when the event received the name Byron). On the 6th of the month, situated ahead of the upper-level trough, a rain and flood event occurred in the south of the country. The upper-level trough and the surface low advanced slowly eastward, and for several days, southerly to southwesterly flows prevailed in our region ahead of the systems. They crossed our region on the 10th and 11th of the month. Details regarding the synoptic situation are available in the appendix.

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On the night of the 7th–8th, while the cyclonic system was situated west of Cyprus with southerly to southwesterly flows, rains began to fall in the northwestern coastal area, from the Haifa area northward and in the Western Galilee. By morning hours, approximately 15–30 mm had accumulated in these areas. During the 8th, rains continued in the same areas, and towards evening, precipitation reached the central and southern coastal plain as well as more inland parts of the north. Following a lull during the night hours, rains fell on the early morning of the 9th, primarily in the northern coastal plain down to the Sharon region, such that by morning, a daily accumulation of approximately 20–40 mm had been recorded in these areas.

On the 9th, during the day, rains again concentrated mainly on the northwestern coast, and towards evening, a frontal line passed with significant precipitation in the north and center of the country. During the night (night of the 9th–10th), the rains reached more inland and southern parts.

The daily rainfall amount up to the morning of the 10th reached 30–60 mm in the northern and central coastal plain, and 10–30 mm in inland areas.

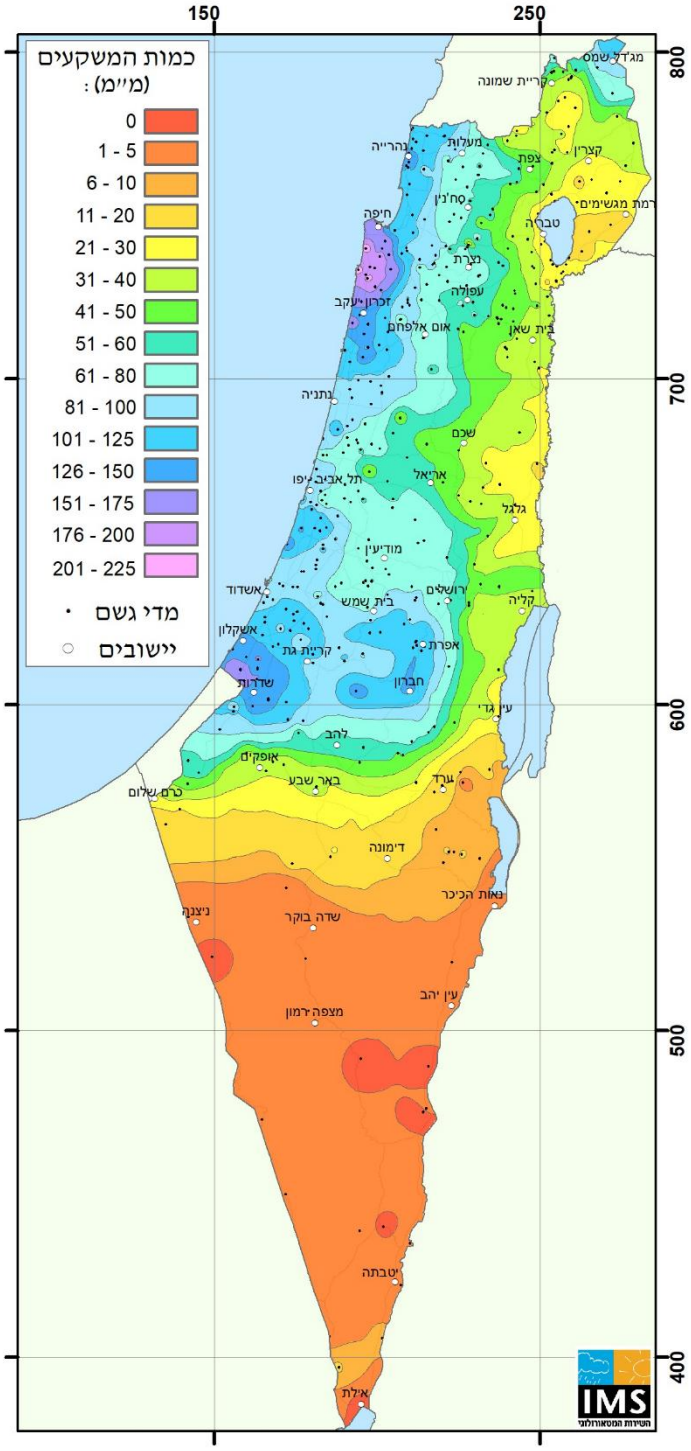
On the morning of the 10th, rainy conditions persisted in the north and center of the country; however, towards noon, following the passage of the first trough line of the main system, the rains returned to concentrate primarily in the north. During the afternoon and evening hours, the rains returned to the center of the country and subsequently extended as far as the northern Negev, though not in large amounts. In the central coastal plain, a developed cell caused heavy hail in the Kfar Chabad area. By the morning hours of December 11, a daily amount of 50–80 mm had fallen in the Haifa area, and 10–30 mm in other areas.

During the 11th, rainfall intensified, particularly from the afternoon hours, falling continuously primarily in the central and southern coastal plain, the Judean Mountains, and the Shephelah. Another developed cloud line, detached from the southern focus, passed through the Acre and Nahariya area, delivering 20–25 mm there within a short period and causing urban flooding in southern Nahariya. From the evening and night hours, the rains concentrated mainly in the southern coastal plain and the northwestern Negev. The rains that fell during the day and night fell, in part, at high intensities (details regarding this follow below) and caused flooding and damage. The daily accumulation up to the morning of the 12th was the highest of the system on a national level, with amounts of 50–100 mm in the central and southern coastal plain and the Judean Mountains, and 20–50 mm in other areas of the country. On the 12th, rains continued to fall primarily in the southern coastal plain and ceased during the day.

Rainfall Amounts in the System

The largest rainfall amounts in the entire event fell in the Haifa and Carmel area up to Zikhron Ya'akov, where 150–200 mm were measured, and even more in the Carmel Coast (Atlit 212 mm, Nahal Me'arot 209 mm, HaHotrim 207 mm). In the southern coastal plain (south of Ashdod) down to the northern Gaza Envelope area, large amounts of 130–170 mm fell; in the Shephelah and the Gush Etzion area, 100–150 mm; and similarly in the northern coastal plain (north of Acre). In the central and southern coastal plain (up to the Ashdod area) and the Judean Mountains, 80–120 mm fell.

In the more inland areas, amounts were less substantial—in the Galilee, Jezreel Valley, Samaria, and Hula Valley, 40–70 mm fell, and in the Sea of Galilee area and the Golan Heights, 20–40 mm. In the Jordan Valley, the Dead Sea area, and the northern Negev, amounts of 30–40 mm fell, which are significant for these regions. In the Arava, 3–8 mm fell, and in the central and southern Negev, less than 5 mm (Map 1 and Table 1).



Map 1: Rainfall amounts (mm), 7–12 December 2025

Rainfall Intensities and Event Exceptionality

During the event, strong rainfall intensities were recorded intermittently, primarily from the 11th to the morning of the 12th of the month. In northern Tel Aviv, over 30 mm per hour fell on the 11th during the afternoon hours, and in Rishon LeZion, more than 25 mm per hour was recorded. In the Ashdod-Yavne area, over 20 mm fell within less than half an hour during the afternoon, and 40–50 mm per hour, causing exceptional flooding in Yavne and inundation in other localities in the region. In the Nahariya area, flooding also occurred following precipitation of approximately 20–30 mm within less than an hour.

In the Ashkelon area, high rainfall intensities occurred during the evening and night hours, with amounts of approximately 20–25 mm within about half an hour; rains continued to fall throughout the night in the catchment basins of the Shikma and Lakhish streams. Consequently, flooding occurred in Ashkelon, Kiryat Gat, and Beit Shikma, and security forces were compelled to evacuate residents.

On the rain day of December 11, approximately 100 mm or more fell at stations in the southern coastal plain and the northern Gaza Envelope. At Erez, 110 mm was measured, and at Yad Mordechai, 97 mm. At these veteran stations, similar or rainier days have occurred in only approximately 4–5 instances over some 80 years of measurement. Large daily amounts were also recorded in Gush Etzion. At Rosh Tzurim, 97 mm was measured; in the station's 50 years of measurement, there have been only three other similar instances, most recently in 1997. At the Eliav station in the eastern Lakhish region, a daily amount of 112 mm fell. Although this is a new station, in comparison with nearby Beit Guvrin, which has been measuring since 1950, this is an unprecedented daily amount for this area.
In addition to flooding in various localities, the heavy rains caused flash floods in the Judean Desert streams and the closure of Highway 90 in the Dead Sea area.

Flash floods also occurred in streams in the Shephelah and the northwestern Negev; this was particularly notable for its exceptional nature in the Shikma Stream basin and its tributaries, characterized by strong flows and road blockages in the area (Highway 6 at the Ma'ahaz Interchange, Highway 40, Highway 232, and others).

It is evident, therefore, that the event was exceptional in several regions (the southern Shephelah, the Lakhish region, the northern Gaza Envelope, and the Hebron Mountains). In other parts of the country, it was not extraordinary, and at a national level, the average storm rainfall is not particularly exceptional and recurs once every few years.

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Table 1: Rainfall amounts at several stations from 7-12 December 2025

Station	Rainfall Amount (mm)	Station	Rainfall Amount (mm)	Station	Rainfall Amount (mm)
Rosh Haniqra	103	Rehovot	103	Har Harasha	66
Nahariyya	140	Qevuzat Yavne	90	Zova	86
Shavei Zion	139	Azrikam	115	Jerusalem Center	61
Akko	116	Negba	103	Ma'ale Adumim	44
Haifa (Port)	168	Ashkelon Port	134	Beit Jamal	99
Haifa Technion	164	Erez	169	Zur Hadassa	112
Hai-Bar Carmel	171	Yakhini	137	Rosh Zurim	122
Yagur	108	Be'eri	83	Dorot	138
Atlit	212	Besor	47	Beit Qama	88
Ein Carmel	189	Kefar Giladi	48	Beer Sheva	33
Nahal Me'arot	209	Elon	111	Sede Boqer	1
Kerem Maharal	149	Gamla	24	Mizpe Ramon	3
En Hashofet	89	Merom Golan	38	Banias	67
Zichron Yaakov	139	Kabri	119	Dafna	37
Amikam	108	Zefat Har Kenaan	42	Kefar Blum	29
Gilad	83	Harashim	65	Kefar Nahum	25
Nahal Taninim	165	Karmiel	62	Zemah	28
Gan Shmuel	135	Deir Hana	50	Sede Eliyyahu	39
En HaHoresh	97	Nazareth	64	Gilgal	29
Kefar Hess	80	Newe Ya'ar	86	Beit HaArava	37
Hakfar Hayarok	112	Afula	60	Mizuqei Dragot	34
Nahshonim	60	Nir David	38	Sedom	8
Tel Aviv Coast	106	Ma'ale Gilboa	40	Hazeva	4
Bet Dagan	113	Qarne Shomron	57	Paran	0.4
Ben Gurion Airport	83	Itamar	29	Timna (Ramon Airport)	6
Rishon Lezion	112	Ariel	48	Eilat	0.1

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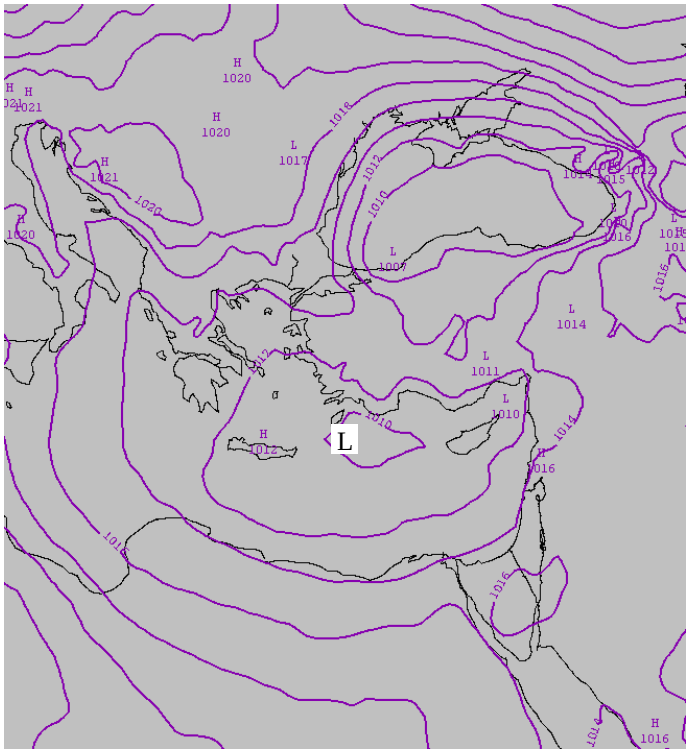
Appendix: Synoptic Review

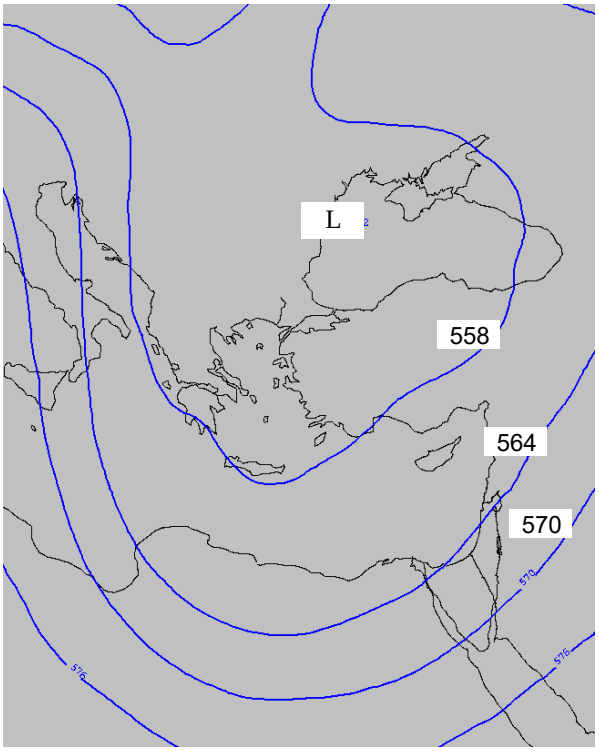
On the night of the 7th–8th of the month, an upper-level trough extends from northeastern Europe and Greece to the coast of western Egypt. At the surface, a low is centered over southern Greece, with its forward sector reaching Cyprus and northwestern Israel. The following day, the upper-level trough moved eastward, extending from Russia to Turkey and the Egyptian coast. The surface low progressed as well, with its center positioned southwest of Cyprus.

On the night of the 9th–10th of the month, the systems approach Israel—the upper-level trough extends from Russia to the Black Sea and the Eastern Mediterranean, while the surface low is situated off the northern coast of the country. The following day (night of the 10th–11th), it is observed that the forward axis of the upper-level trough has crossed our region, and an additional axis extends toward western Turkey and the Egyptian coast. The surface low is located off the Israeli coast and is shallower.

On the 11th of the month, during the afternoon hours, the axis of the second trough crosses our region, while at the surface, the center of the low is situated south of Cyprus. At this stage, the system reaches its peak intensity regarding precipitation; with the slight eastward movement of the upper-level trough and the positioning of the surface low off the coast of Israel (night of the 11th–12th), the bulk of the precipitation is focused on the Southern Coastal Plain and the Judean Mountains. By noon on the 12th of the month, the systems are already situated to the east of our region.



Surface Map, 08.12.2025, 00 UTC



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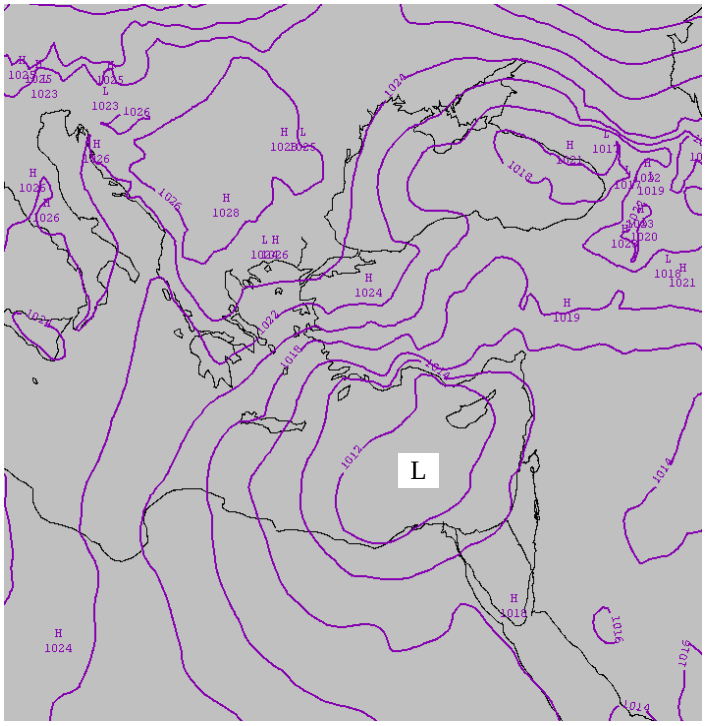
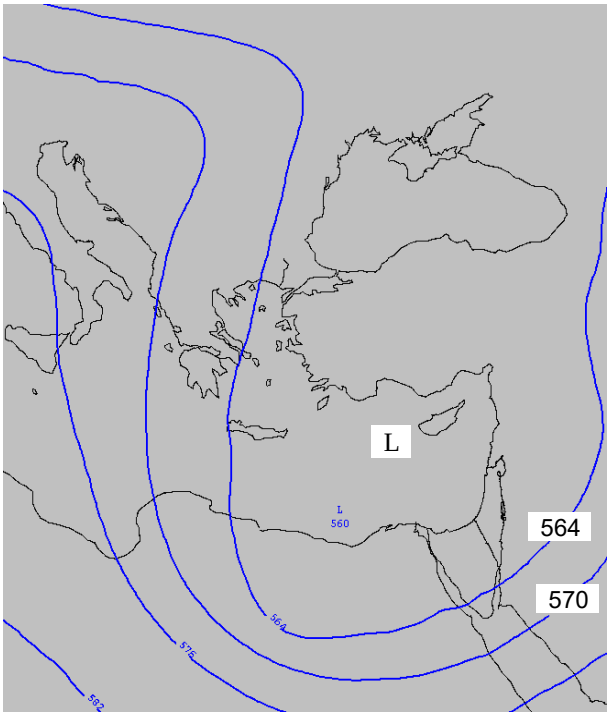


Surface Map, 09.12.2025, 00 UTC



500 mb Map, 09.12.2025, 00 UTC

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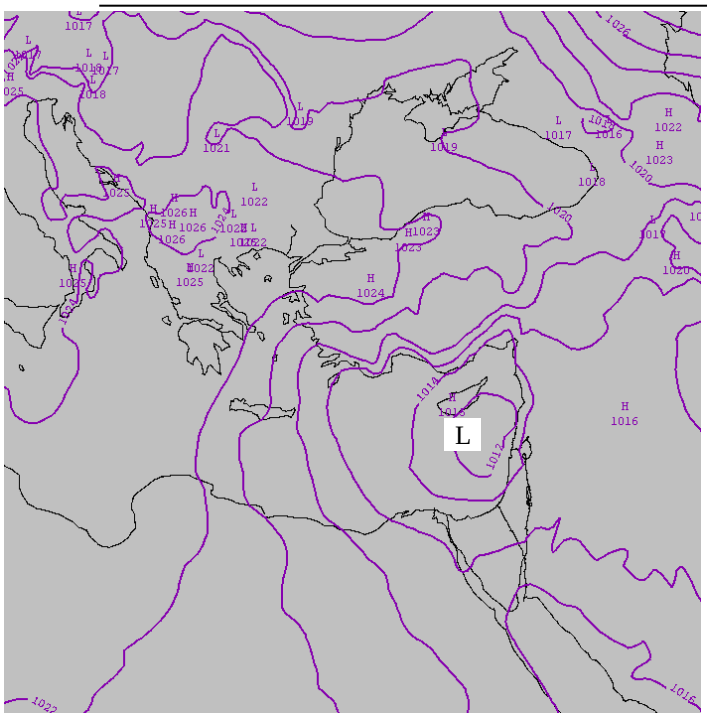
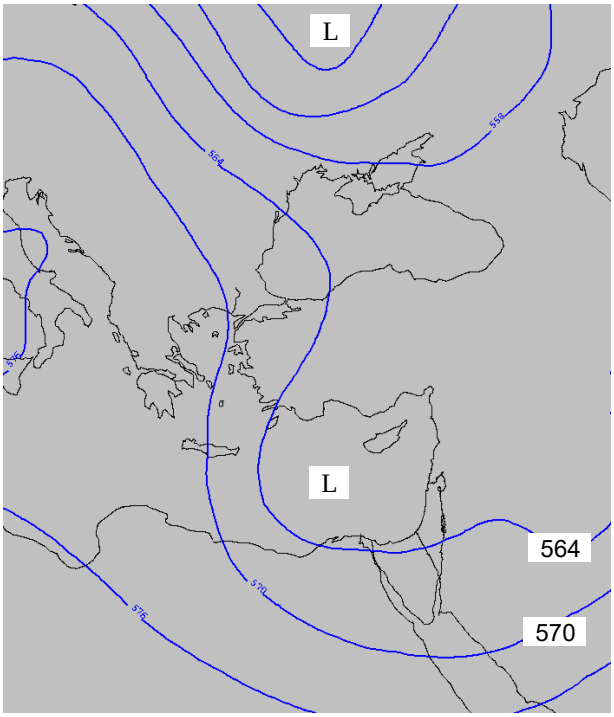


Surface Map, 10.12.2025, 00 UTC



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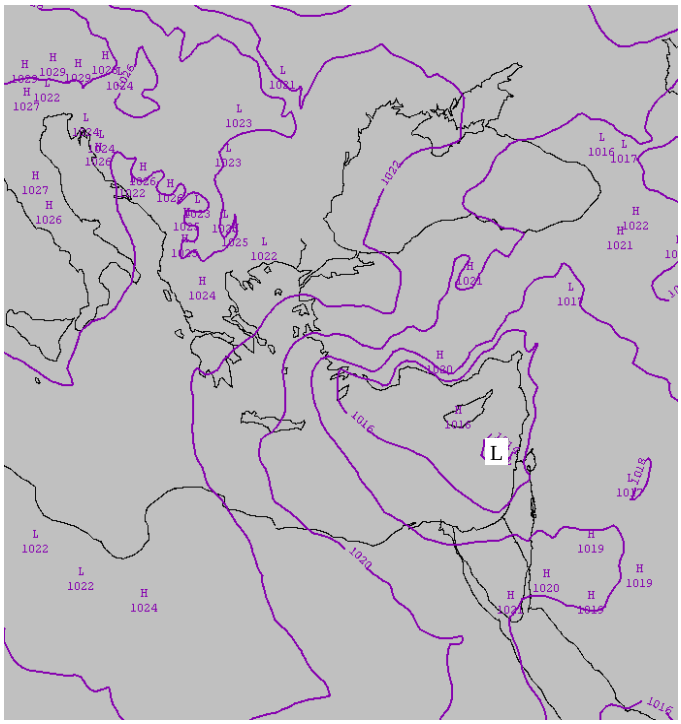
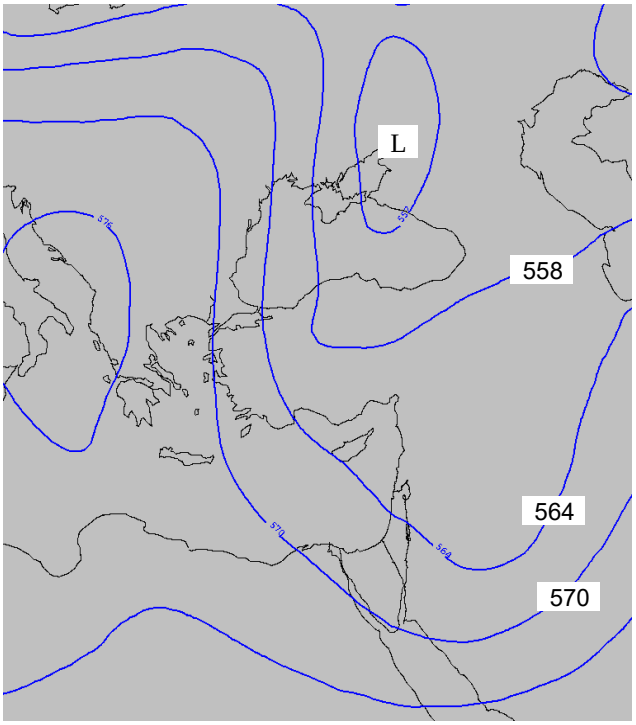


Surface Map, 11.12.2025, 00 UTC



500 mb Map, 11.12.2025, 00 UTC

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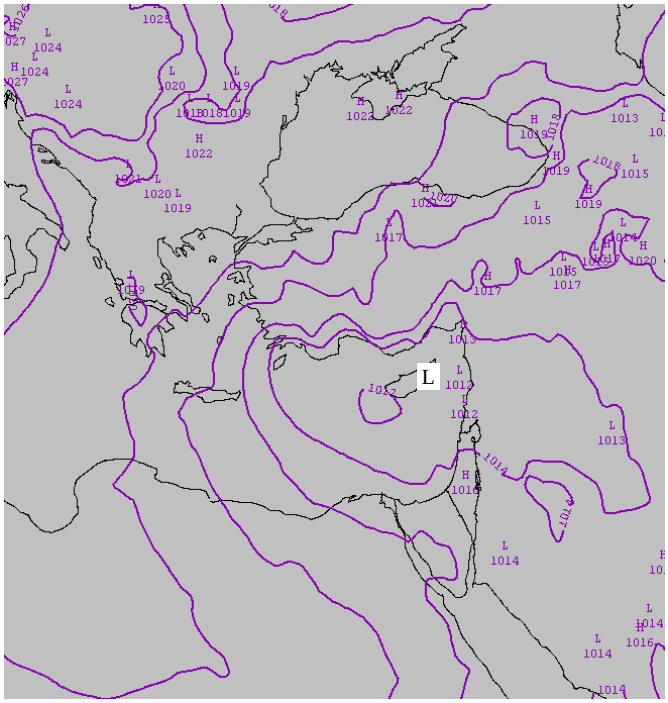
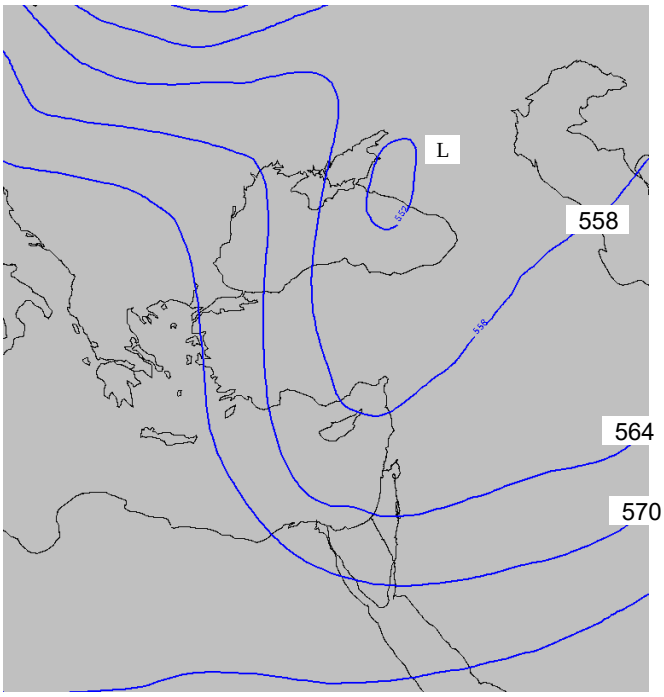


Surface Map, 11.12.2025, 12 UTC



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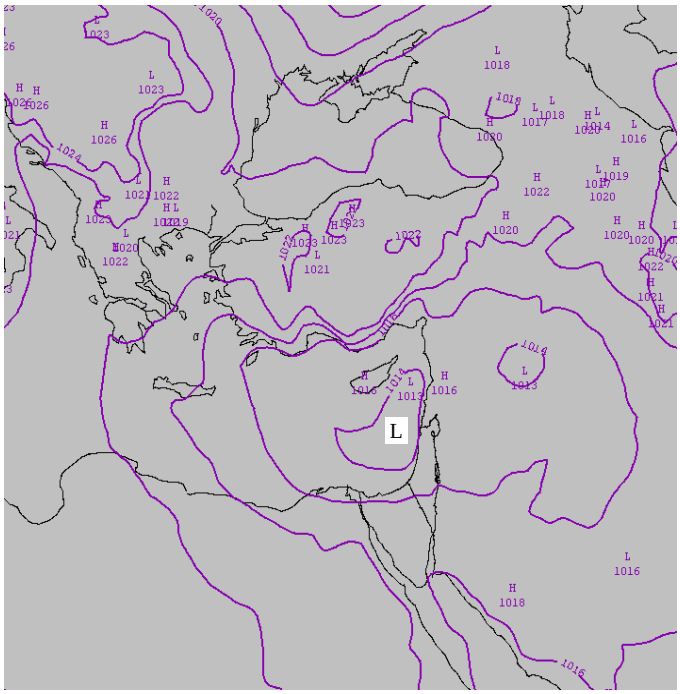
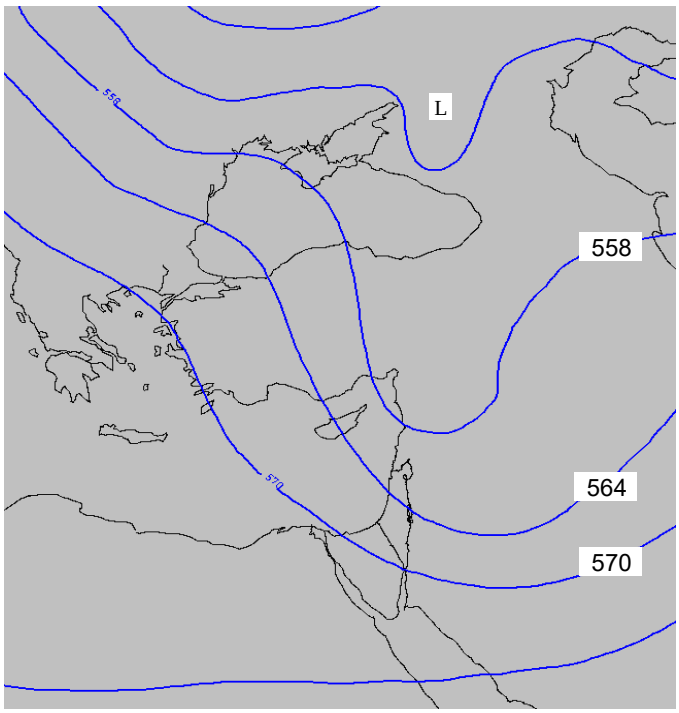


Surface Map, 12.12.2025, 00 UTC



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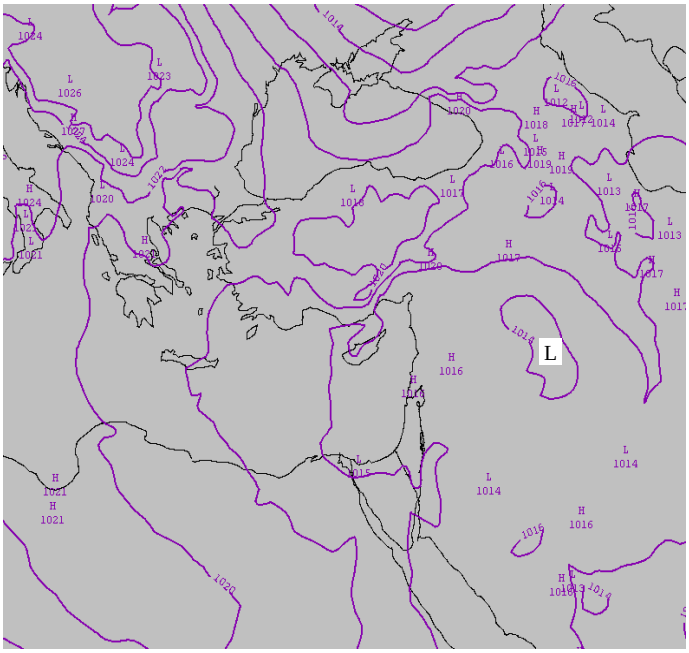

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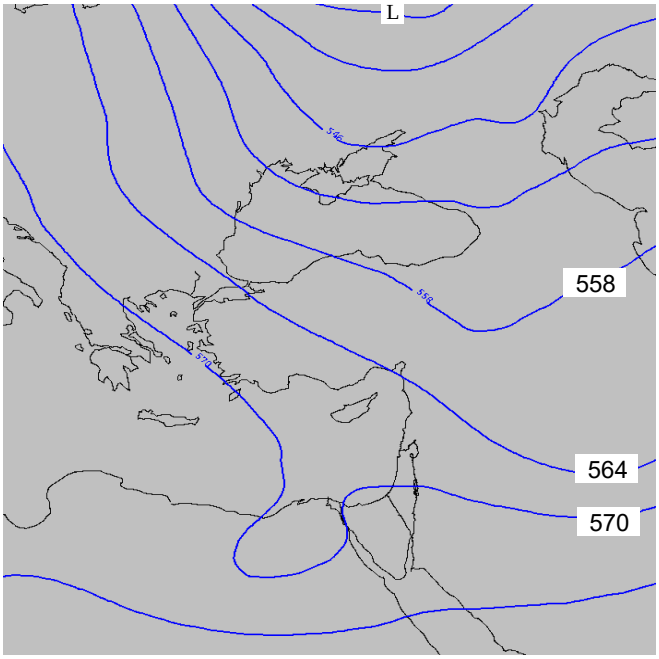

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