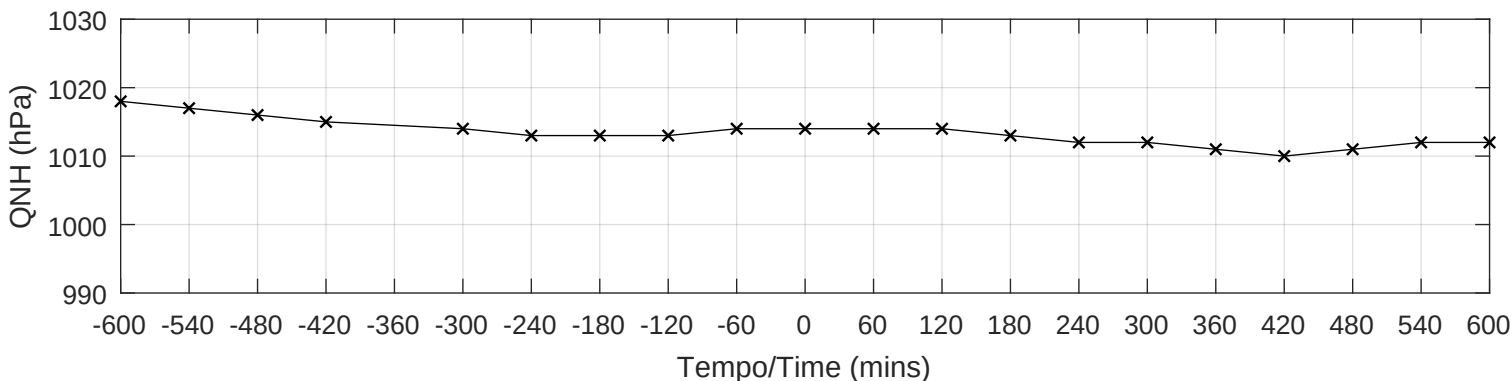
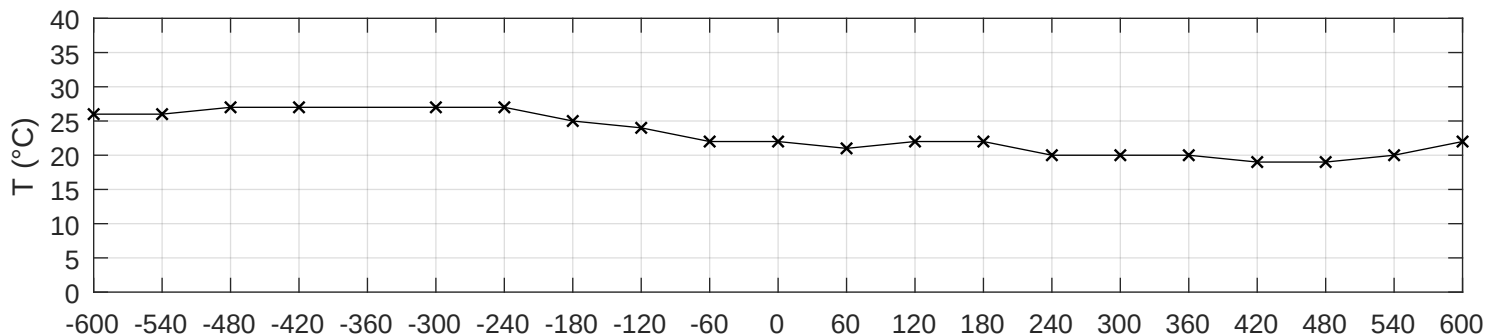
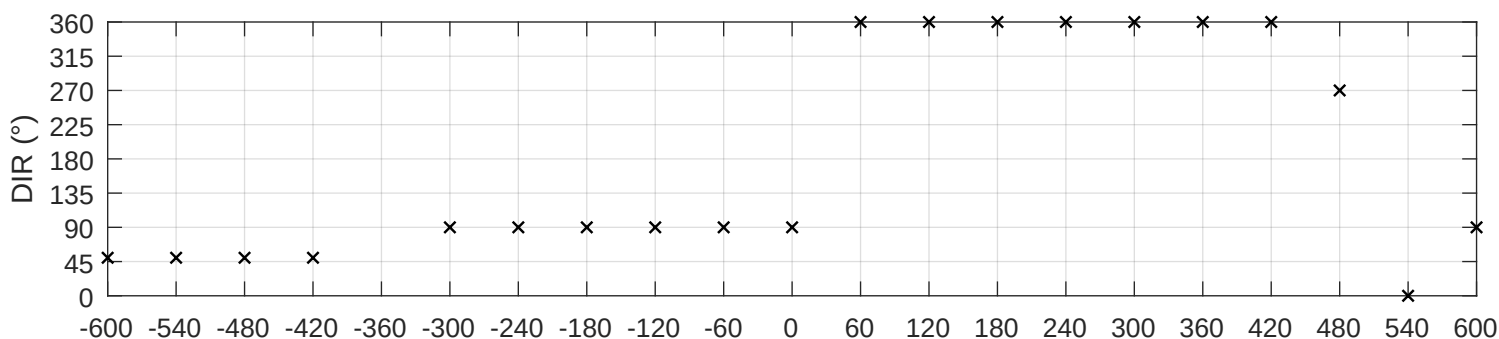
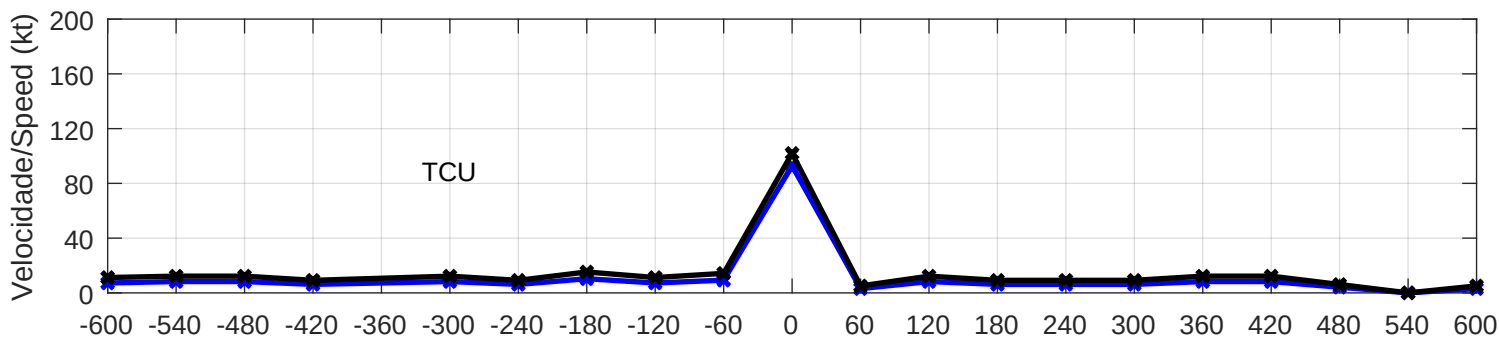


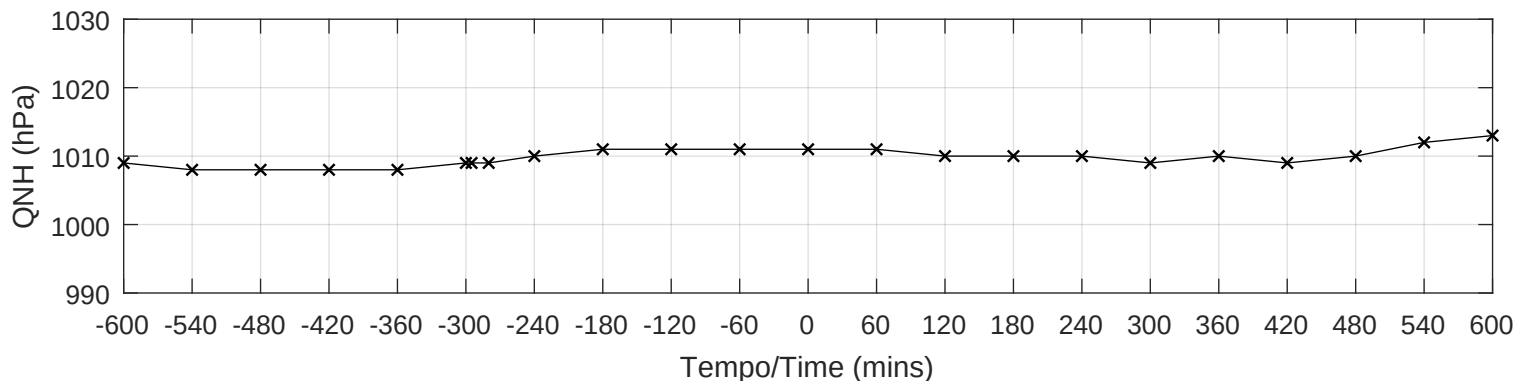
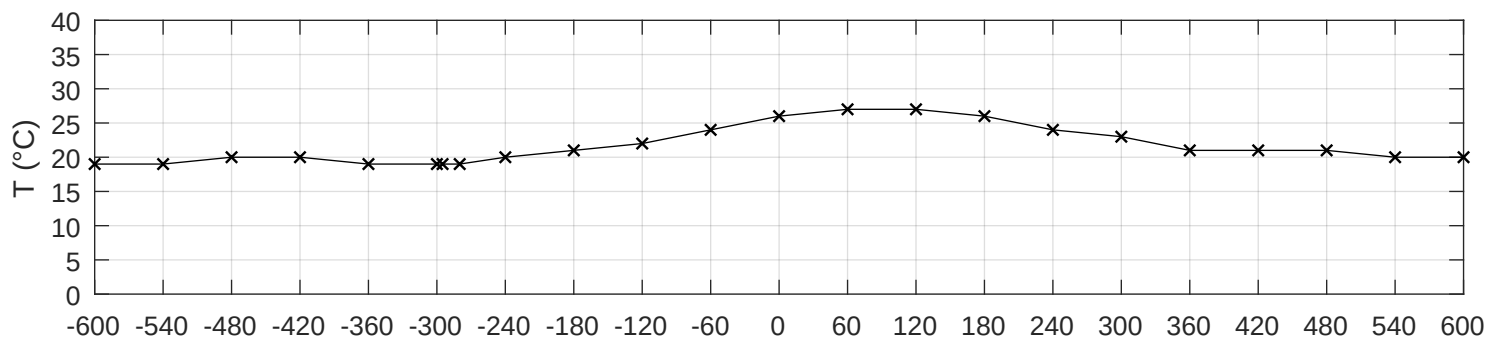
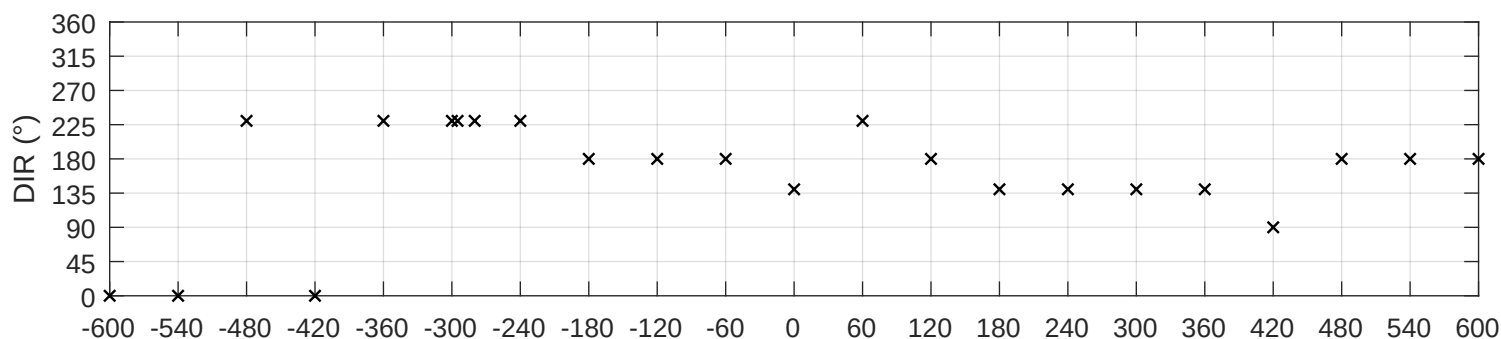
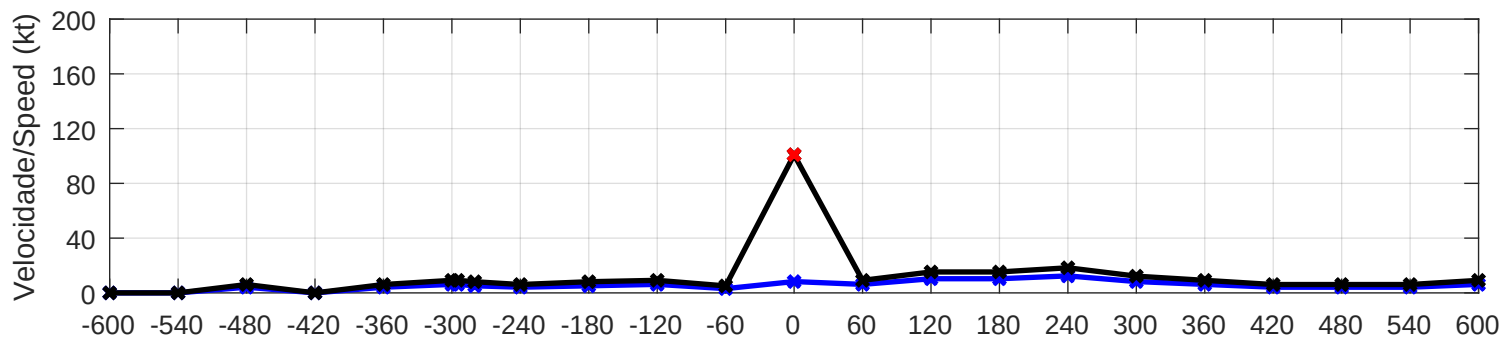
# SANT/87121 EVENTO/EVENT 1 - 10/02/1999, 02:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction          | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 100$ kt                 | $R_{-6} = 8.2$                | $T_{med,3} = 23.7$ °C        | $DIR = 90^\circ$                                | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 90$ kt              | $R_{-3} = 7.5$                | $\Delta T_{min,3} = -3.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                 |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 11.5$               | $\Delta Q_{max,3} = 1.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                |                                | (320)                           |
| $G_{cor} = 101.9$ kt           | $R_{+6} = 10.7$               | $\Delta$ Grupo/Group = 2     | METAR SANT 100200Z 00909KT 9999 SKC 22/19 Q1014 |                                |                                 |
| $V_{cor} = 93.1$ kt            |                               |                              |                                                 |                                |                                 |



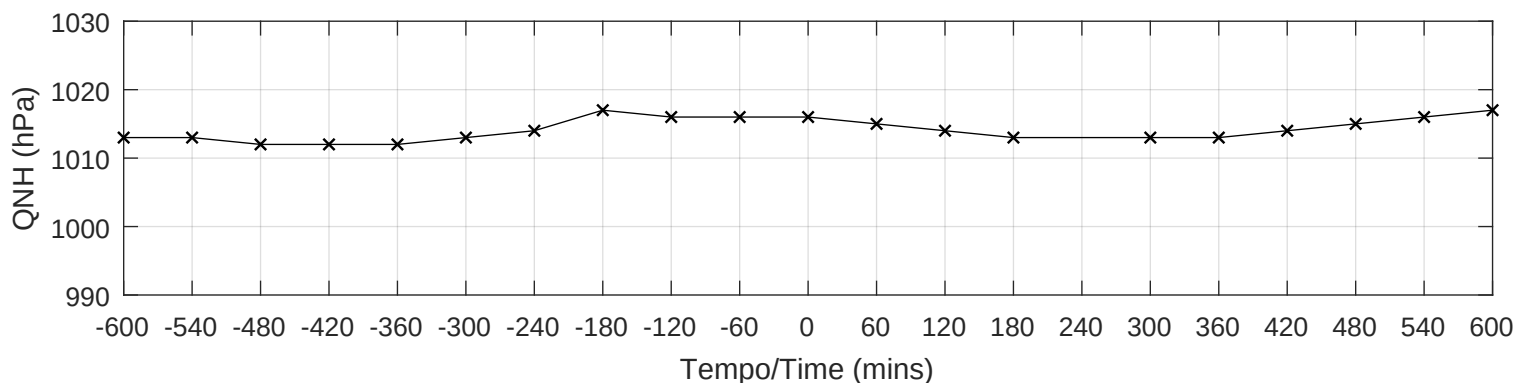
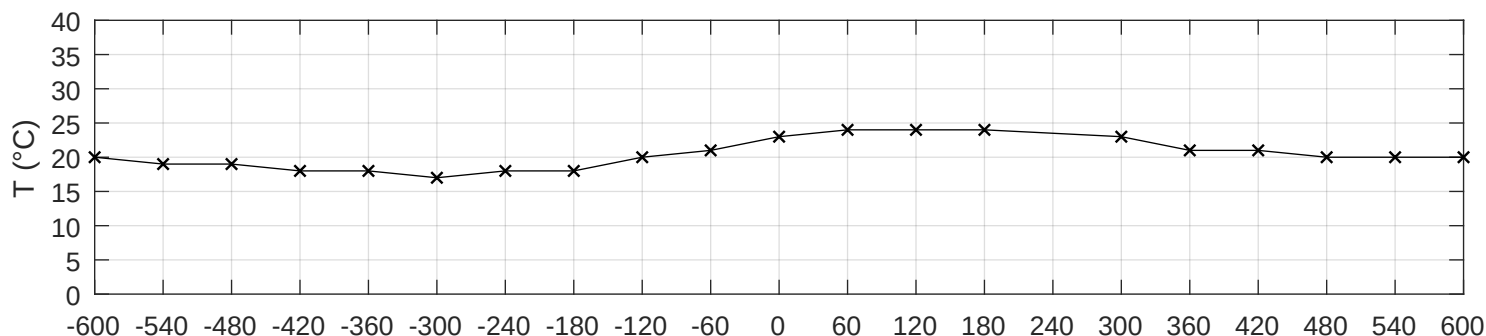
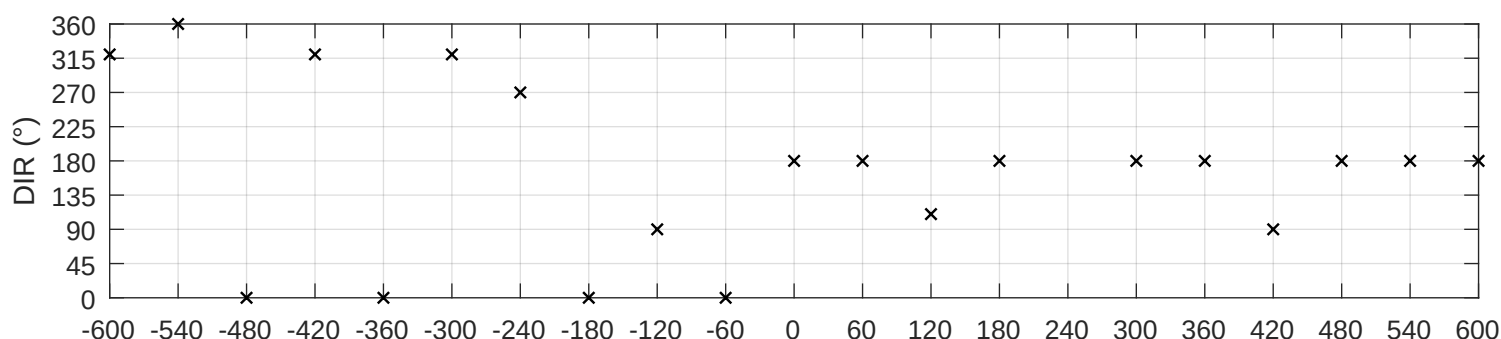
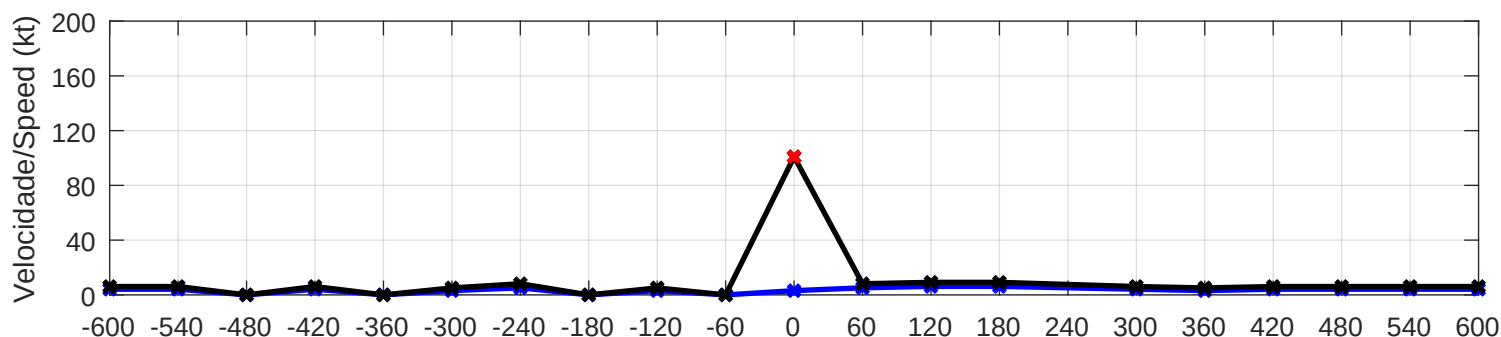
# SANT/87121 EVENTO/EVENT 2 - 16/03/2006, 16:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 14.0$               | $T_{med,3} = 22.3 \text{ }^{\circ}\text{C}$       | $DIR = 140^{\circ}$                                        | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 8 \text{ kt}$       | $R_{-3} = 13.5$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 40^{\circ}$                         |                                | SUSPECT                         |
| $G_V = 12.4$                   | $R_{+3} = 7.6$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 90^{\circ}$                         |                                | (315)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 7.6$                | $\Delta \text{ Grupo/Group} = 3$                  | SANT 161600Z 14008G99KT 9999 SCT025 BKN100<br>26/21 Q1011= |                                |                                 |
| $V_{cor} = 8.3 \text{ kt}$     |                               |                                                   |                                                            |                                |                                 |



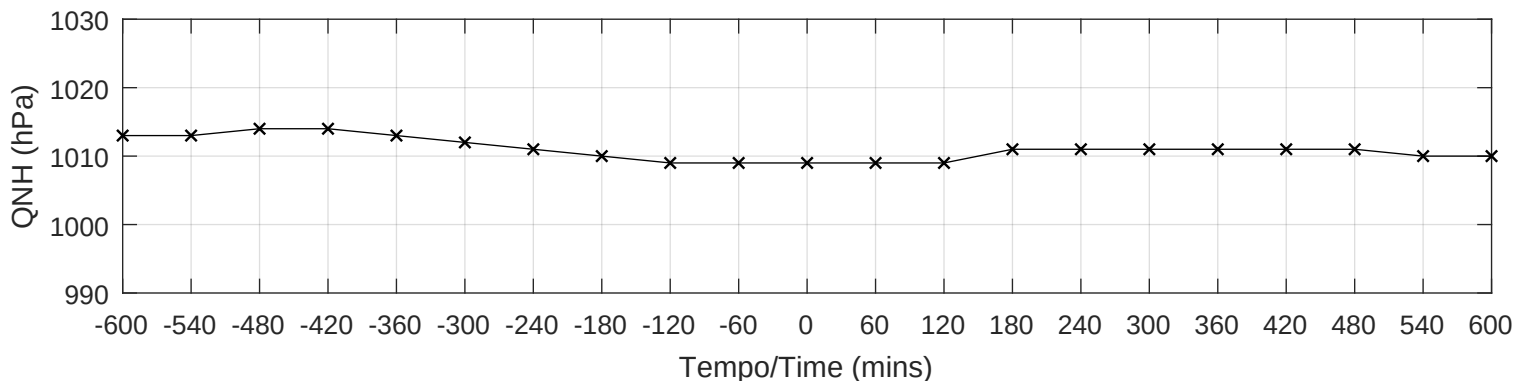
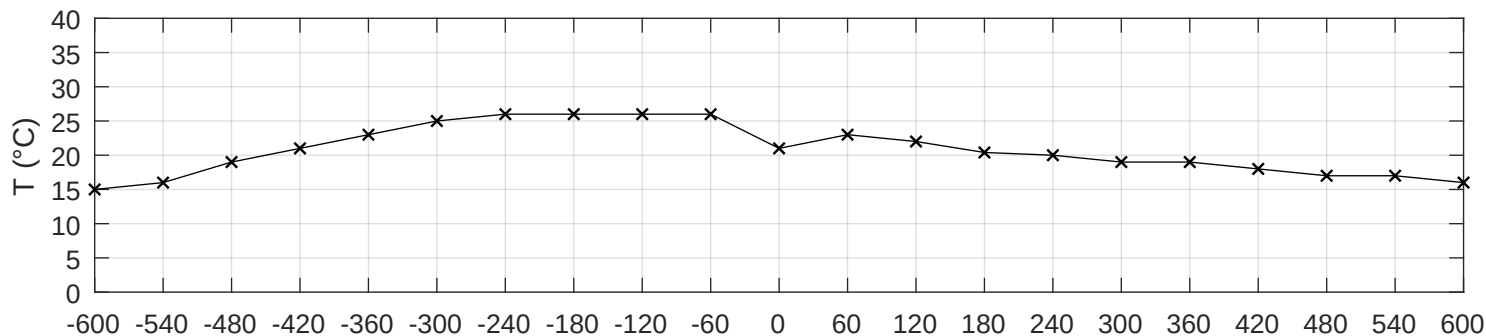
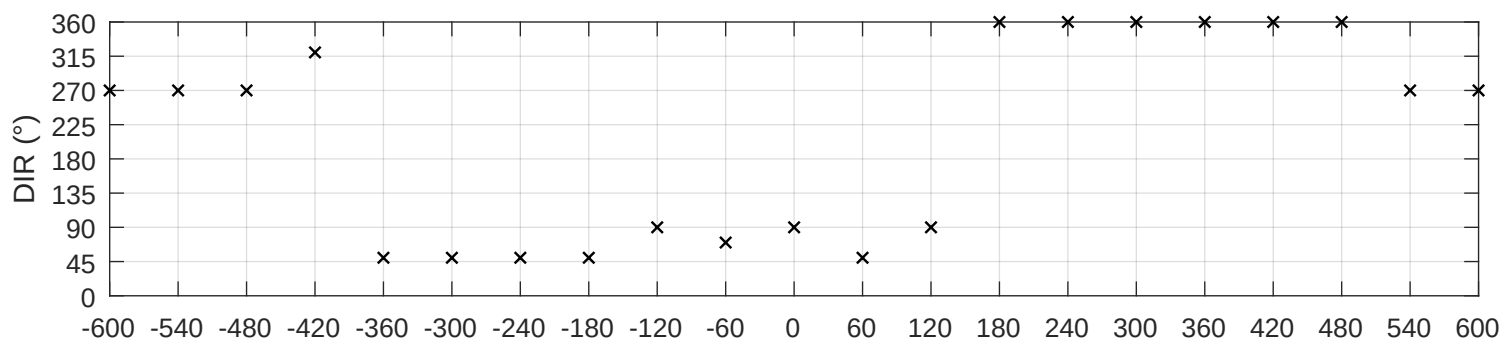
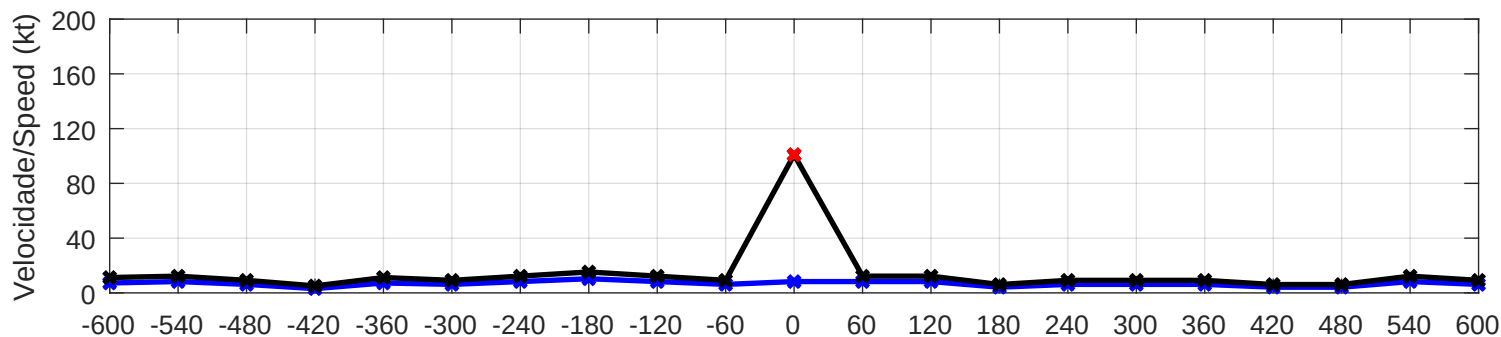
# SANT/87121 EVENTO/EVENT 3 - 31/03/2006, 15:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction           | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 33.0$               | $T_{med,3} = 19.7 \text{ }^{\circ}\text{C}$       | $DIR = 180^{\circ}$                              | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 3 \text{ kt}$       | $R_{-3} = 59.4$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$               |                                | SUSPECT                         |
| $G_V = 33.0$                   | $R_{+3} = 11.4$               | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 70^{\circ}$               |                                | (315)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 13.4$               | $\Delta \text{ Grupo/Group} = 3$                  | SANT 311500Z 18003G99KT 9999 BKN027 23/19 Q1016= |                                |                                 |
| $V_{cor} = 3.1 \text{ kt}$     |                               |                                                   |                                                  |                                |                                 |



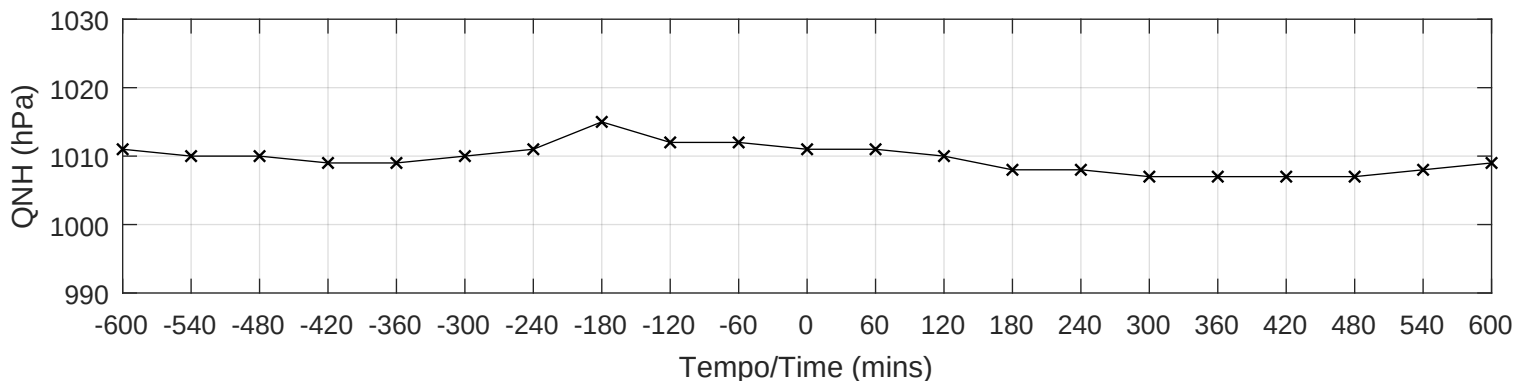
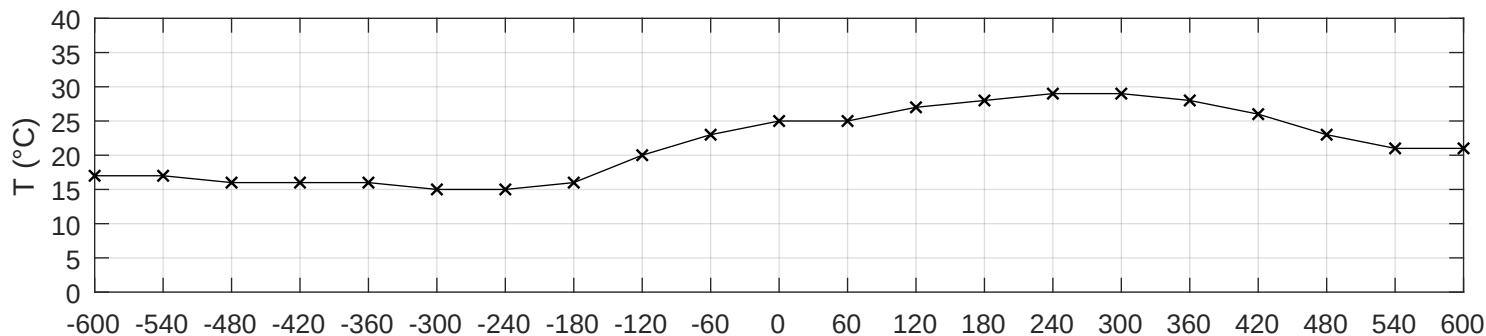
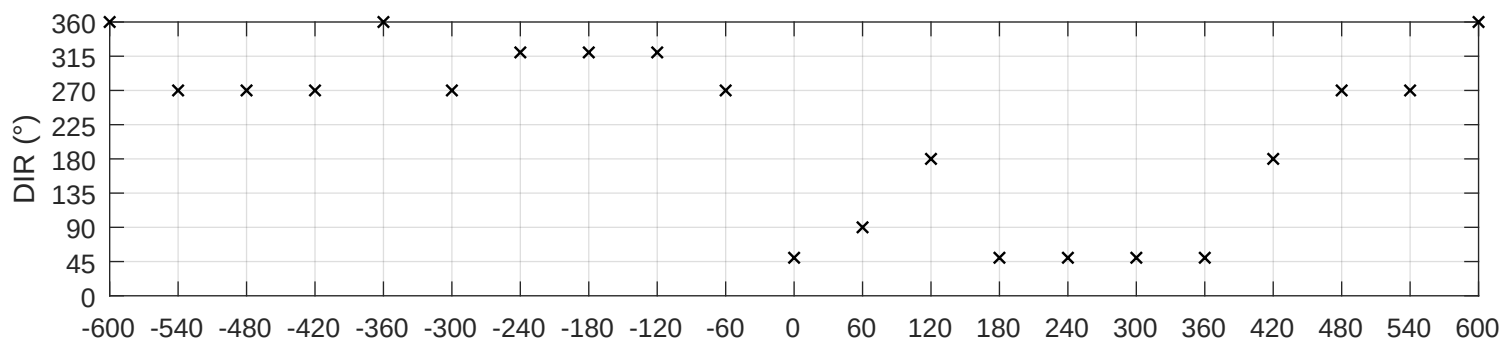
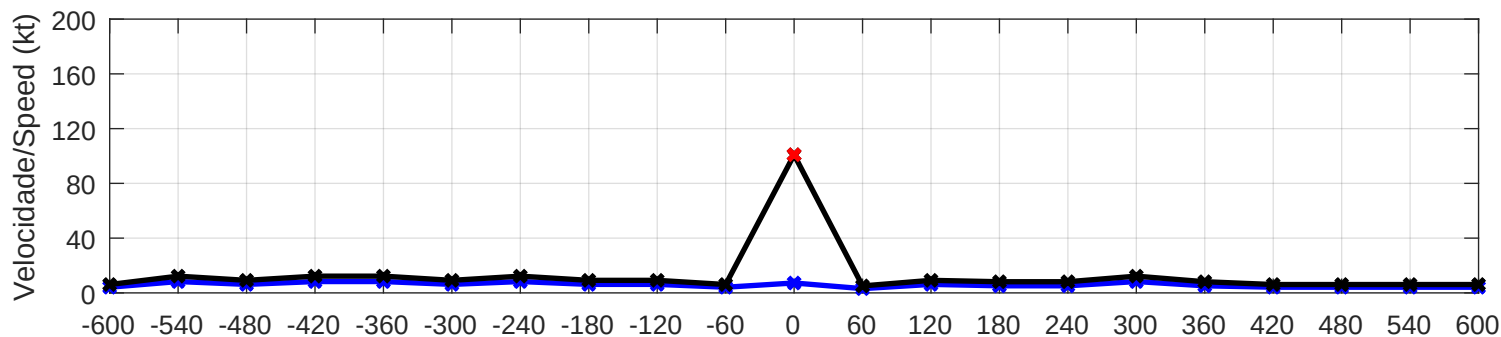
# SANT/87121 EVENTO/EVENT 4 - 10/04/2006, 21:00 UTC (MSS - REDEMETS)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 8.7$                | $T_{med,3} = 26.0 \text{ }^{\circ}\text{C}$        | $DIR = 90^{\circ}$                                         | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 8 \text{ kt}$       | $R_{-3} = 8.3$                | $\Delta T_{min,3} = -5.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 40^{\circ}$                         |                                | SUSPECT                         |
| $G_V = 12.4$                   | $R_{+3} = 9.9$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 90^{\circ}$                         |                                | (315)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 10.4$               | $\Delta \text{ Grupo/Group} = 3$                   | SANT 102100Z 09008G99KT 9999 FEW030 SCT035<br>21/18 Q1009= |                                |                                 |
| $V_{cor} = 8.3 \text{ kt}$     |                               |                                                    |                                                            |                                |                                 |



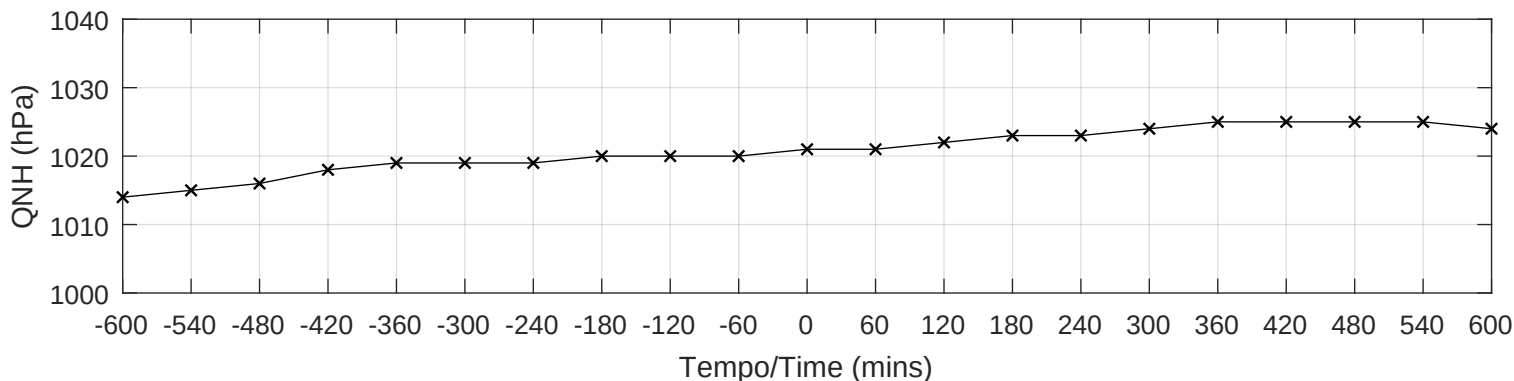
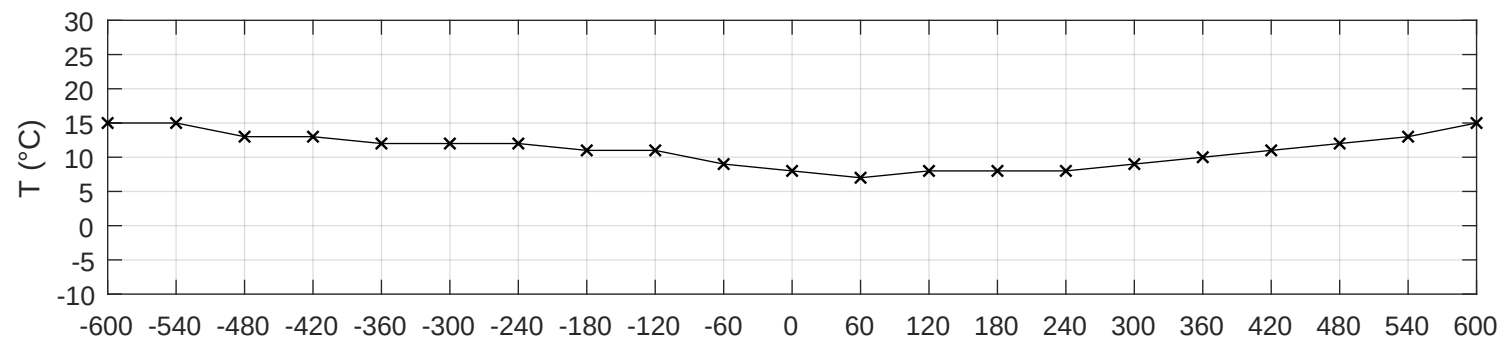
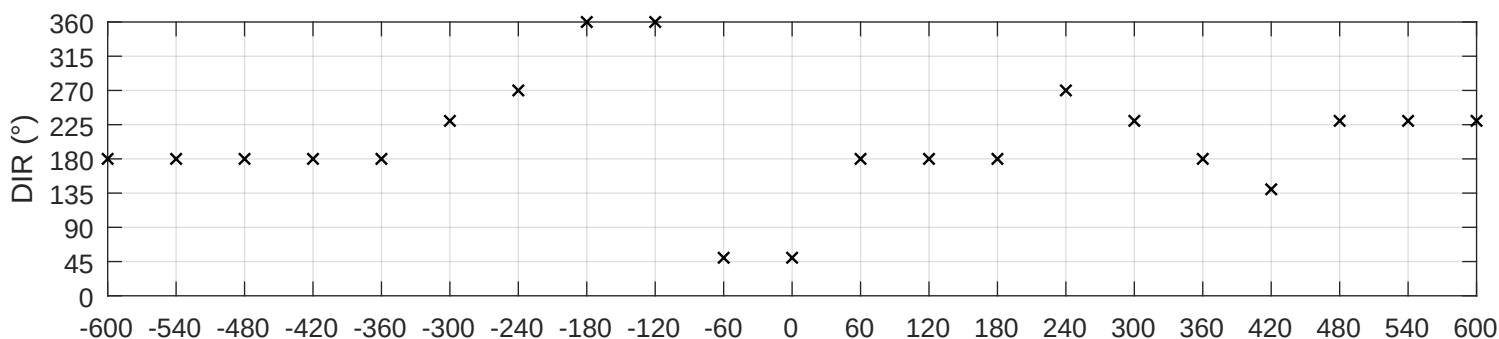
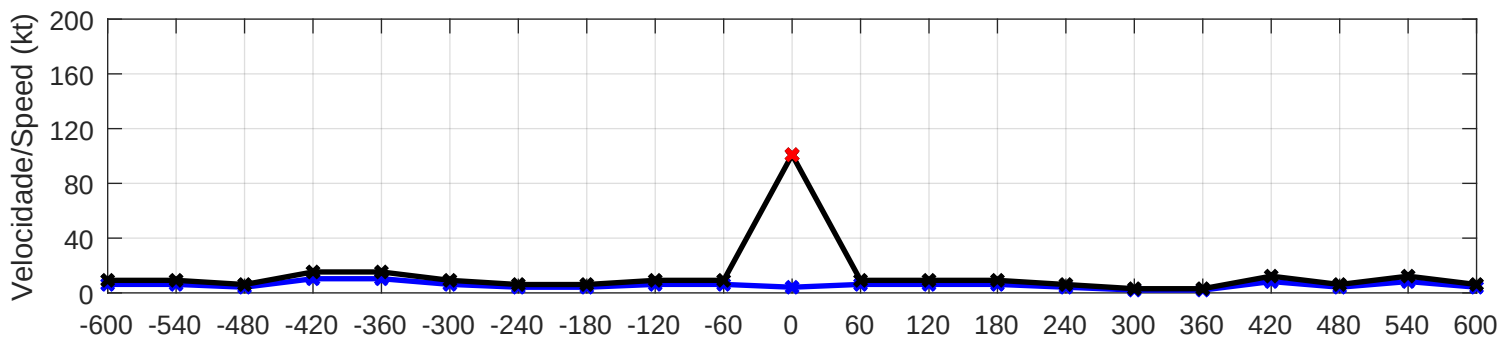
# SANT/87121 EVENTO/EVENT 5 - 11/04/2006, 15:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction           | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 10.4$               | $T_{med,3} = 19.7 \text{ }^{\circ}\text{C}$       | $DIR = 50^{\circ}$                               | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 7 \text{ kt}$       | $R_{-3} = 12.4$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 140^{\circ}$              |                                | SUSPECT                         |
| $G_V = 14.1$                   | $R_{+3} = 13.5$               | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 130^{\circ}$              |                                | (315)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 11.9$               | $\Delta \text{ Grupo/Group} = 3$                  | SANT 111500Z 05007G99KT 9999 FEW035 25/19 Q1011= |                                |                                 |
| $V_{cor} = 7.2 \text{ kt}$     |                               |                                                   |                                                  |                                |                                 |



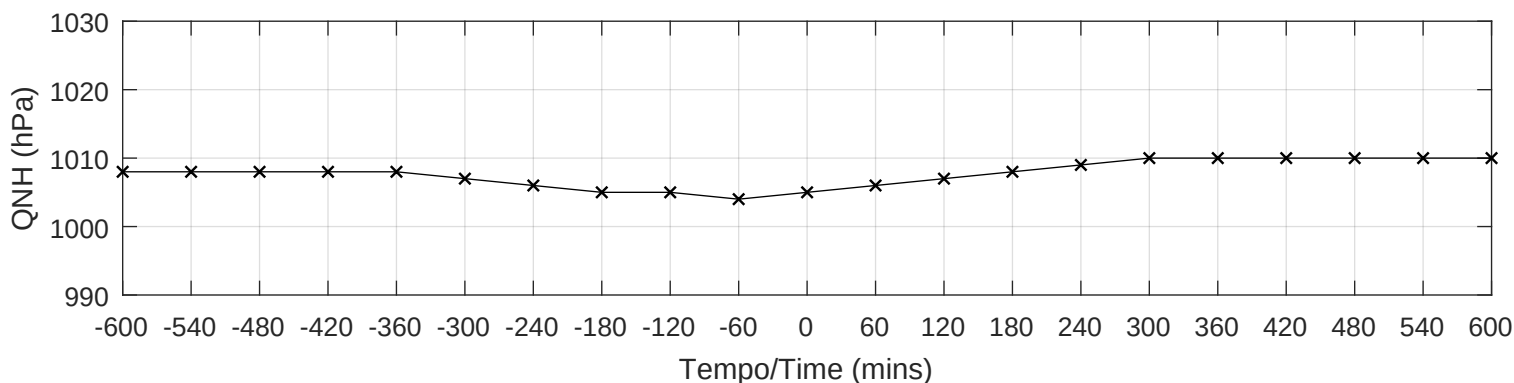
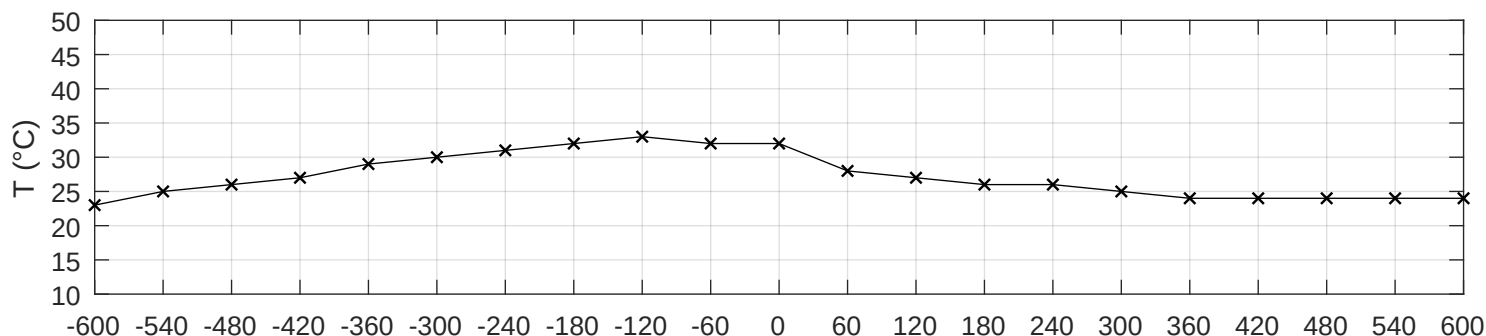
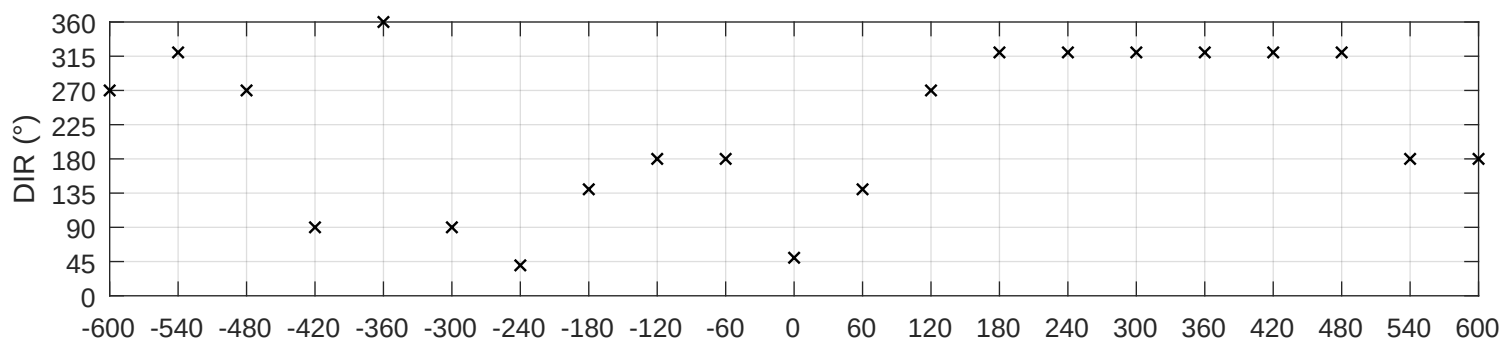
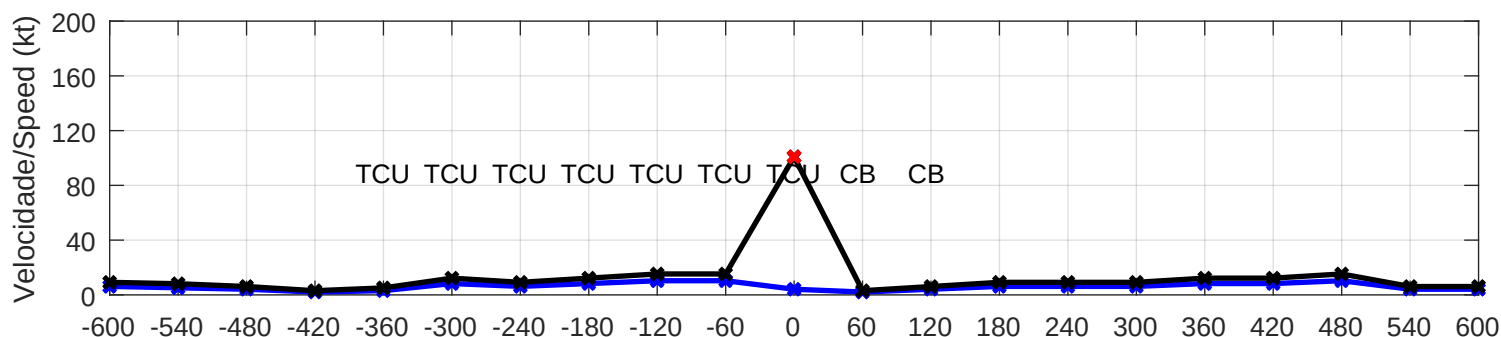
# SANT/87121 EVENTO/EVENT 6 - 26/08/2007, 07:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|--------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 11.0$               | $T_{med,3} = 10.3 \text{ }^{\circ}\text{C}$        | $DIR = 50^{\circ}$                         | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 4 \text{ kt}$       | $R_{-3} = 12.4$               | $\Delta T_{min,3} = -4.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$         |                                | SUSPECT                         |
| $G_V = 24.8$                   | $R_{+3} = 11.0$               | $\Delta Q_{max,3} = 1.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 130^{\circ}$        |                                | (315)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 15.2$               | $\Delta \text{ Grupo/Group} = 3$                   | SANT 260700Z 05004G99KT CAVOK 08/04 Q1021= |                                |                                 |
| $V_{cor} = 4.1 \text{ kt}$     |                               |                                                    |                                            |                                |                                 |



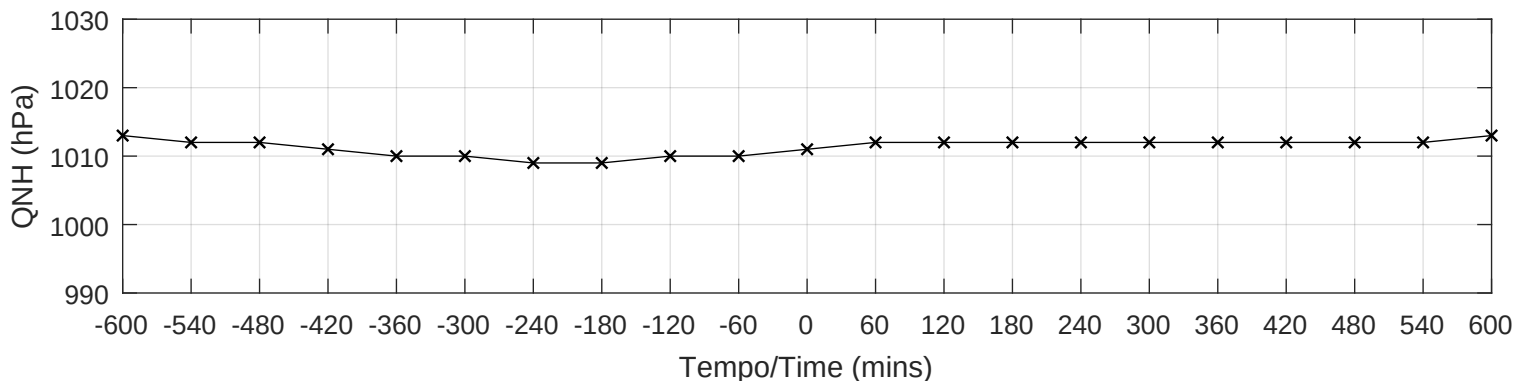
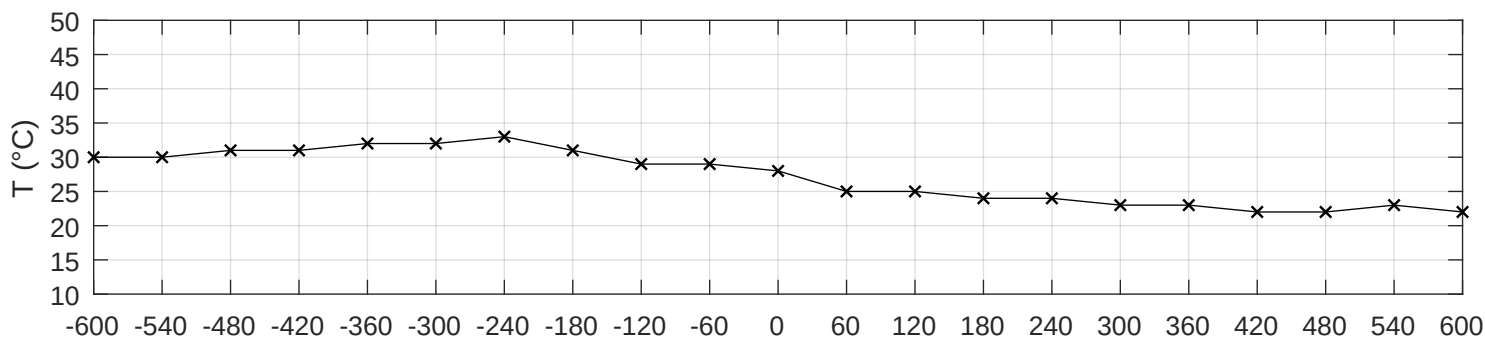
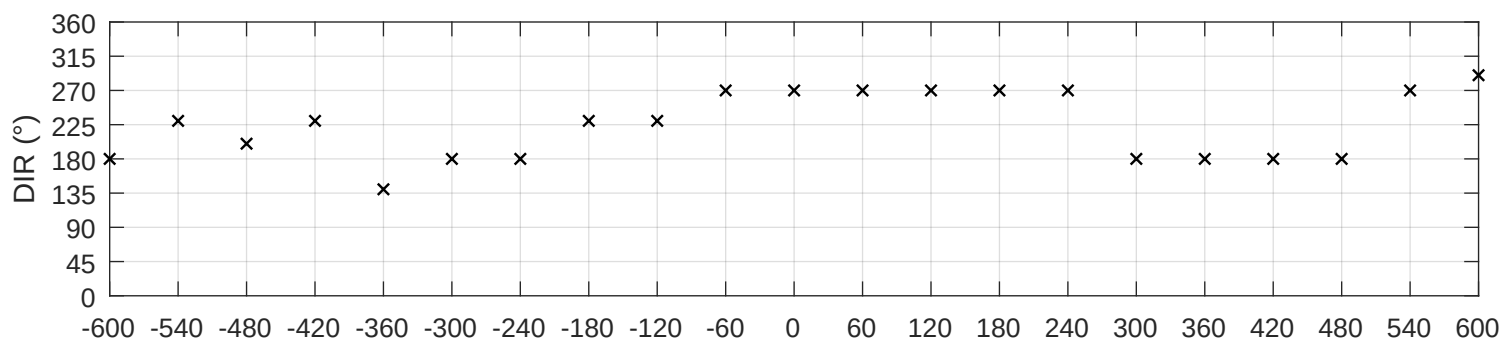
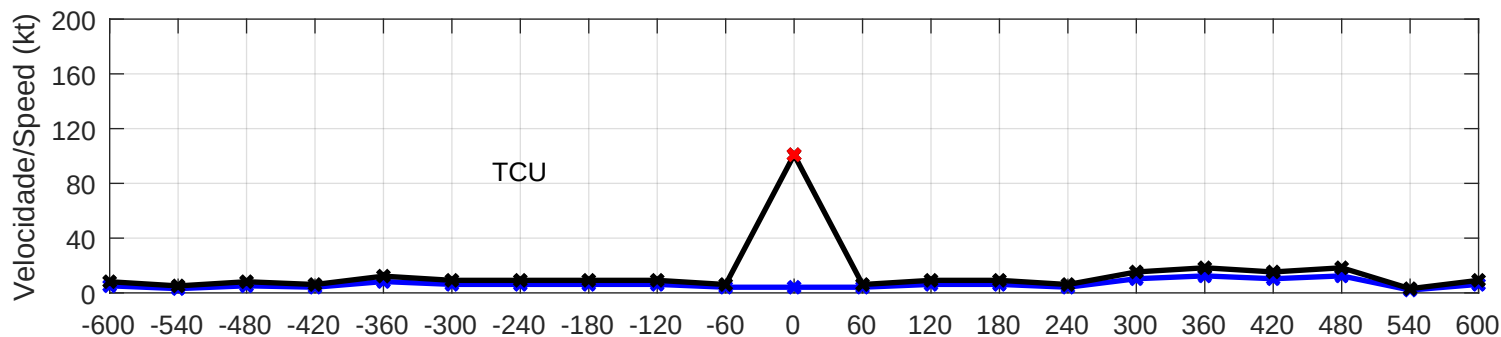
# SANT/87121 EVENTO/EVENT 7 - 08/12/2007, 21:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 8.7$                | $T_{med,3} = 32.3 \text{ }^{\circ}\text{C}$        | $DIR = 50^{\circ}$                                             | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 4 \text{ kt}$       | $R_{-3} = 7.1$                | $\Delta T_{min,3} = -5.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 130^{\circ}$                            |                                | SUSPECT                         |
| $G_V = 24.8$                   | $R_{+3} = 16.5$               | $\Delta Q_{max,3} = 2.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 140^{\circ}$                            |                                | (311)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 12.4$               | $\Delta$ Grupo/Group = 2                           | SANT 082100Z 05004G99KT 9999<br>FEW040TCUFEW050CB 32/22 Q1005= |                                |                                 |
| $V_{cor} = 4.1 \text{ kt}$     |                               |                                                    |                                                                |                                |                                 |



# SANT/87121 EVENTO/EVENT 8 - 26/12/2008, 01:00 UTC (MSS - REDEMET)

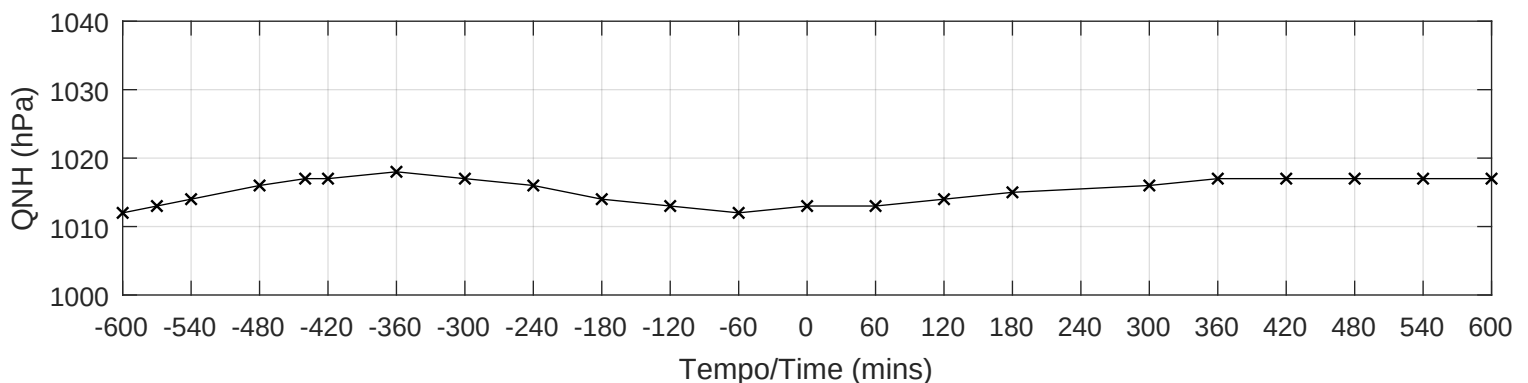
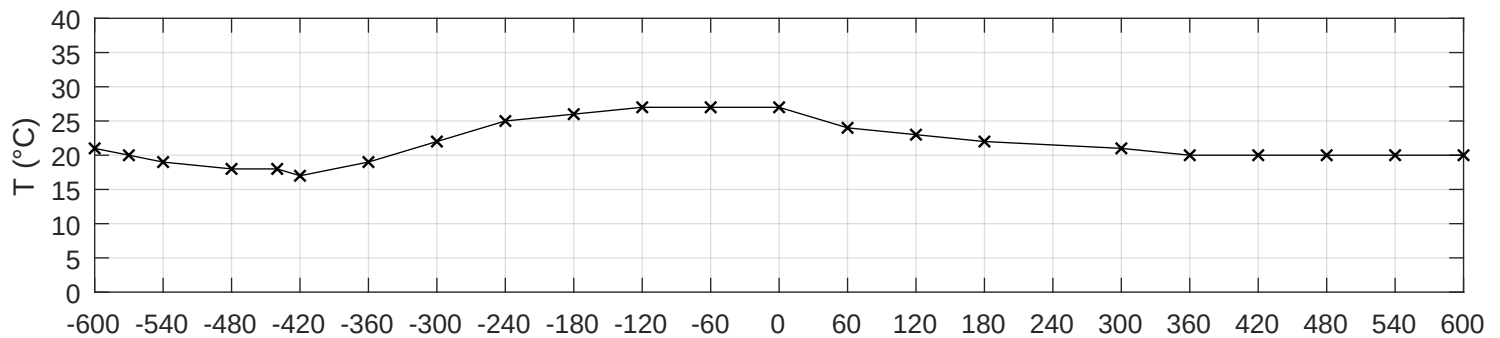
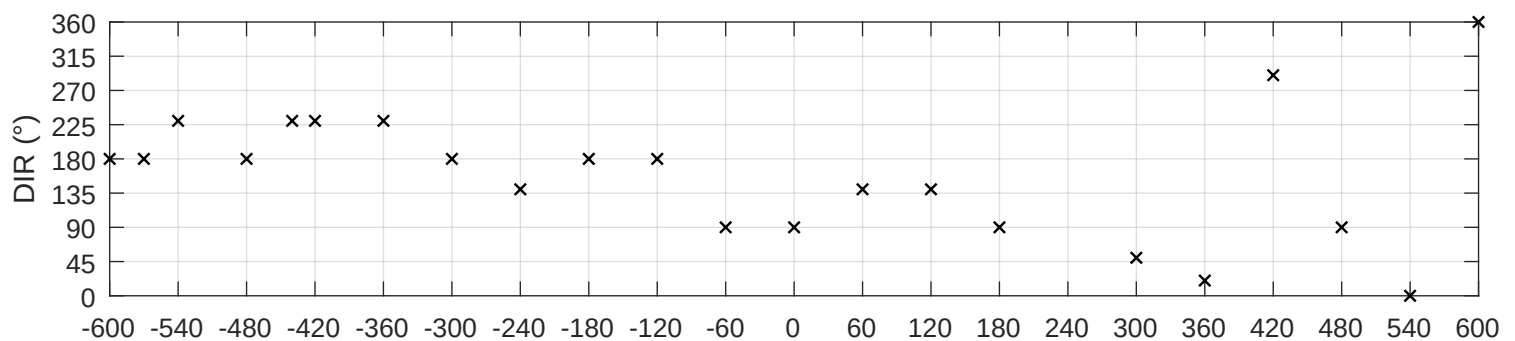
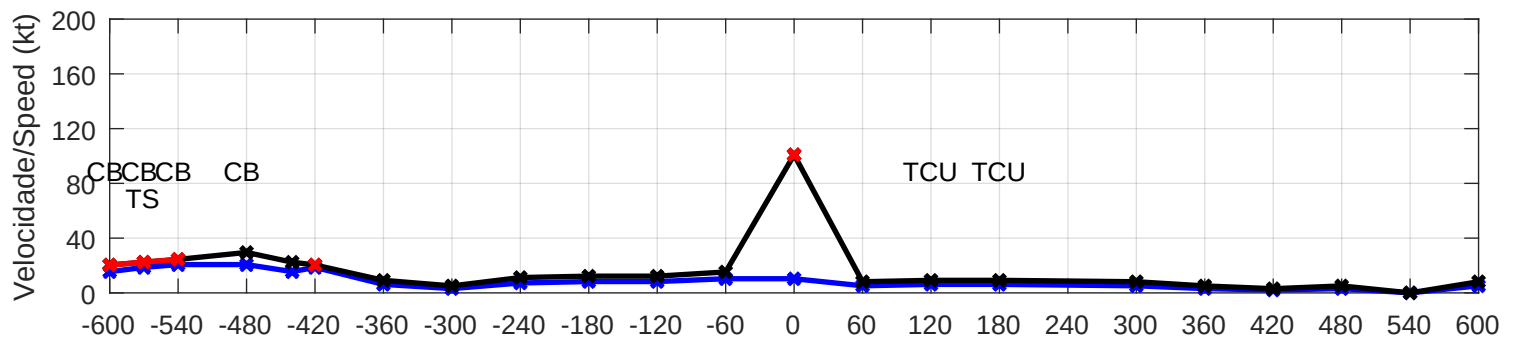
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction             | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 11.0$               | $T_{med,3} = 29.7 \text{ }^{\circ}\text{C}$        | $DIR = 270^{\circ}$                                | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 4 \text{ kt}$       | $R_{-3} = 12.4$               | $\Delta T_{min,3} = -4.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 40^{\circ}$                 |                                | SUSPECT                         |
| $G_V = 24.8$                   | $R_{+3} = 12.4$               | $\Delta Q_{max,3} = 2.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 0^{\circ}$                  |                                | (311)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 9.4$                | $\Delta \text{ Grupo/Group} = 2$                   | SANT 260100Z 27004G99KT 9999 BKN035<br>28/21Q1011= |                                |                                 |
| $V_{cor} = 4.1 \text{ kt}$     |                               |                                                    |                                                    |                                |                                 |





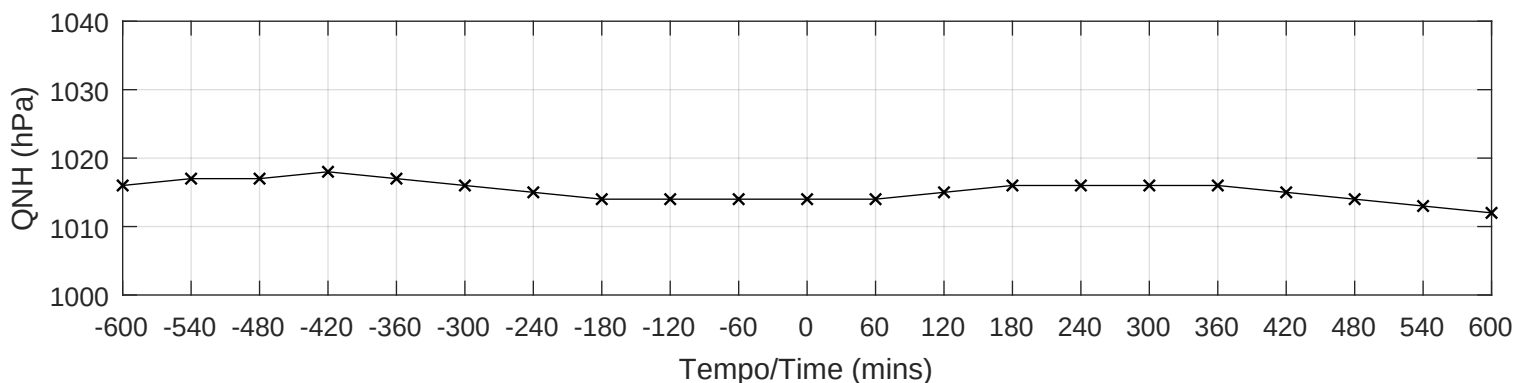
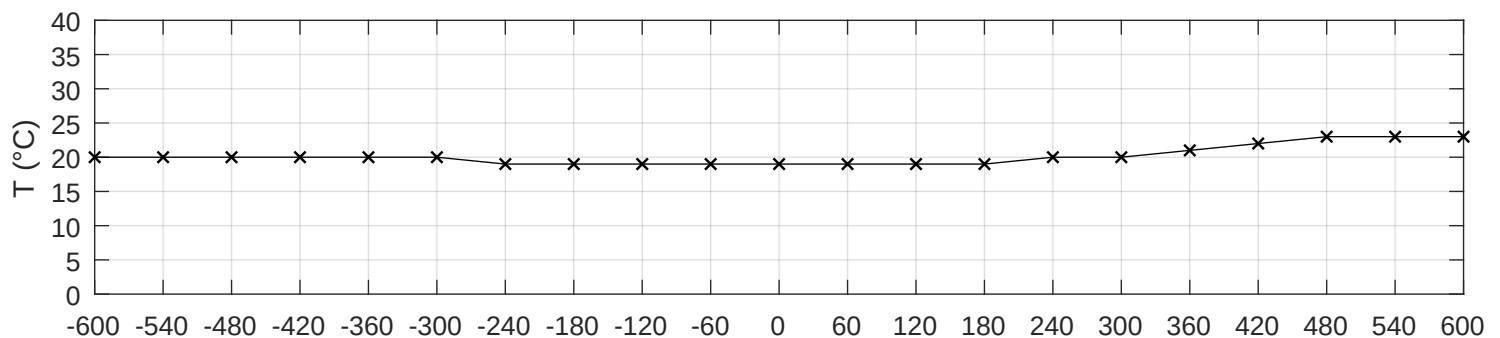
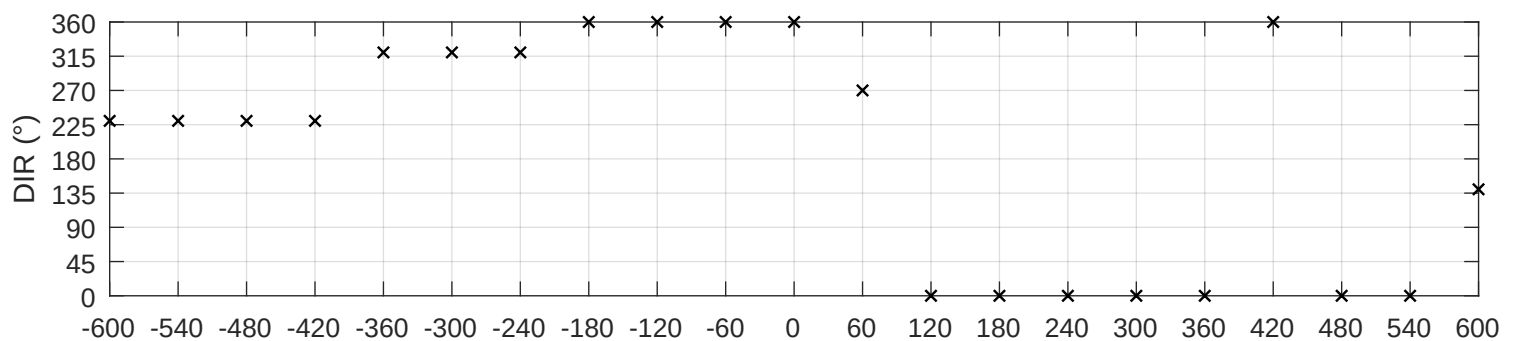
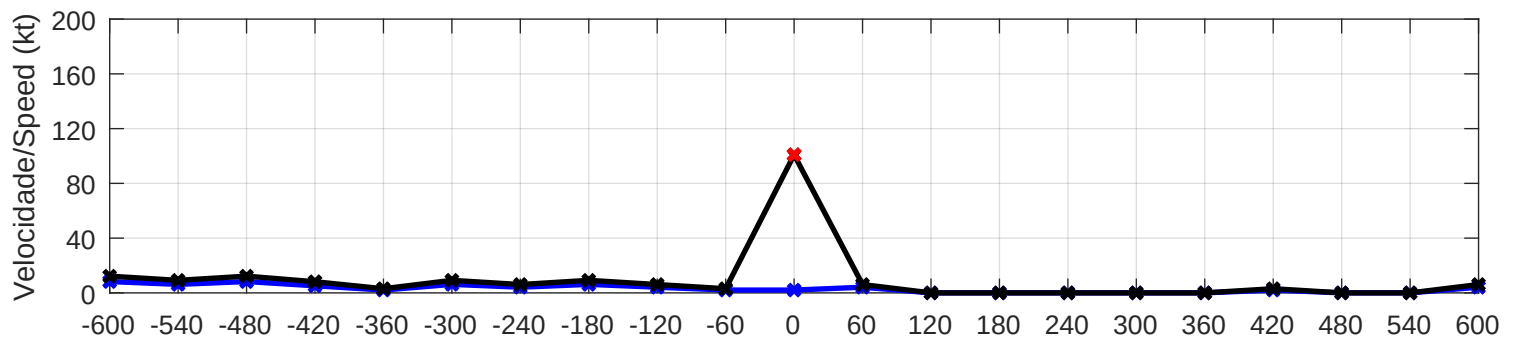
# SANT/87121 EVENTO/EVENT 9 - 23/03/2009, 20:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|----------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 9.3$                | $T_{med,3} = 26.7 \text{ }^{\circ}\text{C}$        | $DIR = 90^{\circ}$                     | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 10 \text{ kt}$      | $R_{-3} = 7.6$                | $\Delta T_{min,3} = -3.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$     |                                | SUSPECT                         |
| $G_V = 9.9$                    | $R_{+3} = 11.4$               | $\Delta Q_{max,3} = 1.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 50^{\circ}$     |                                | (315)                           |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 12.7$               | $\Delta \text{ Grupo/Group} = 3$                   | SANT 232000Z 09010G99KT 9999 SCT035    |                                |                                 |
| $V_{cor} = 10.3 \text{ kt}$    |                               |                                                    | 27/20Q1013=                            |                                |                                 |



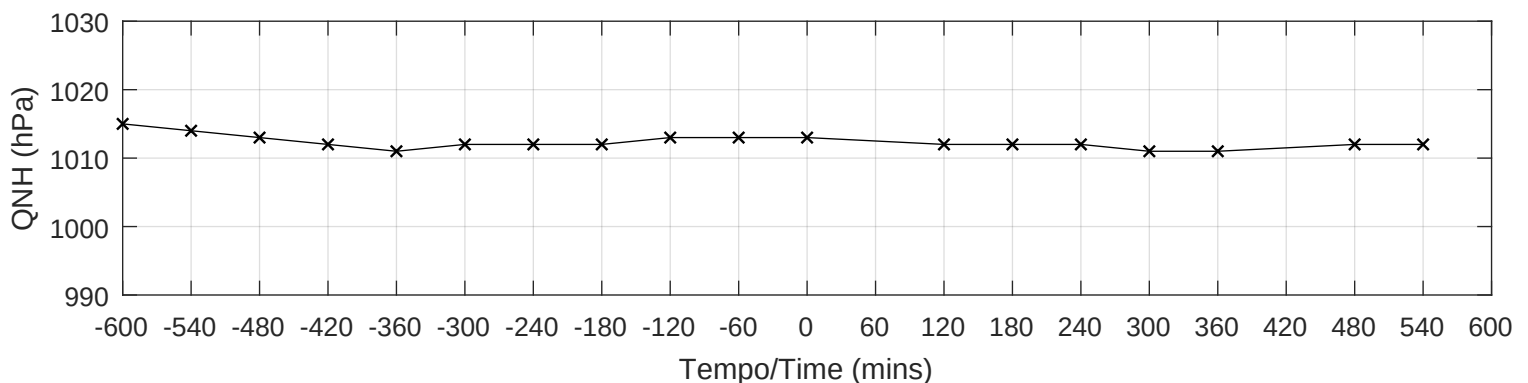
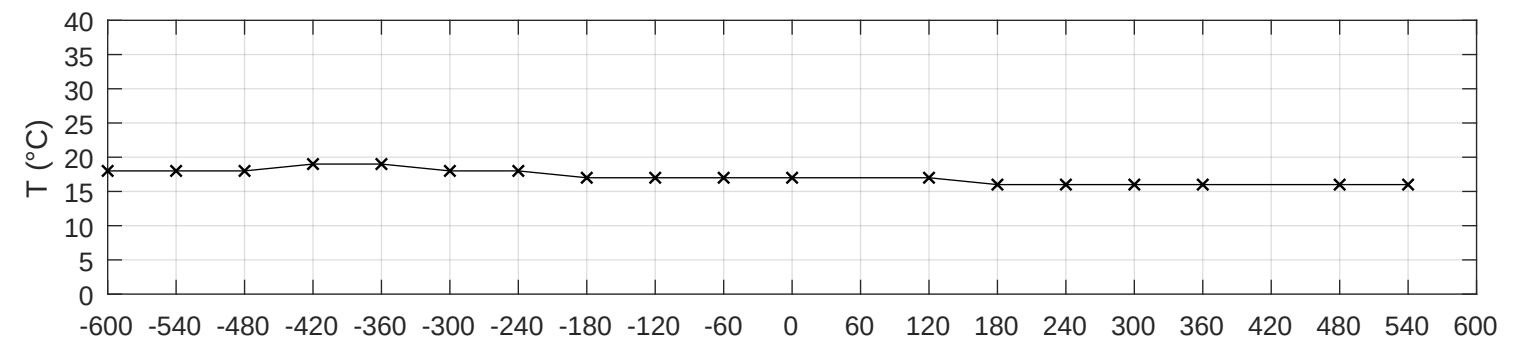
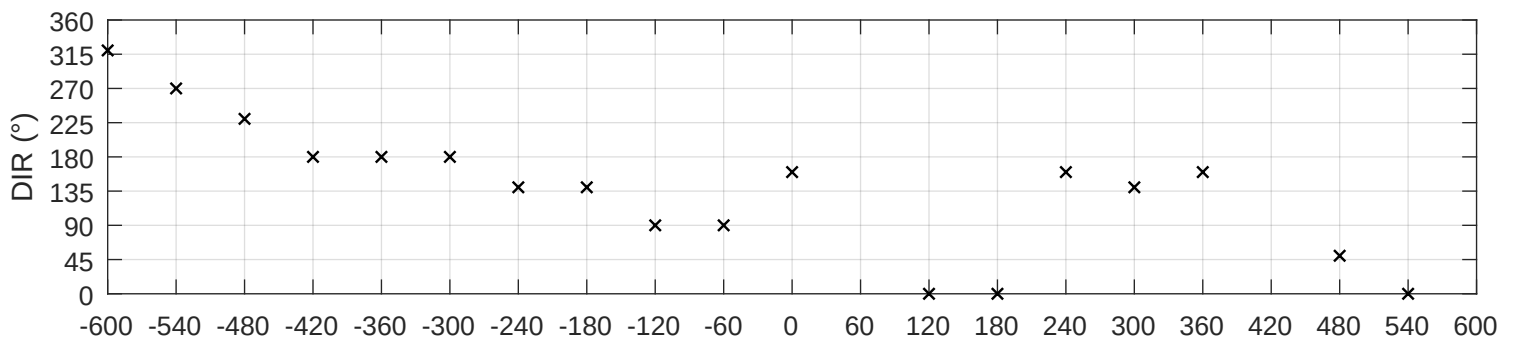
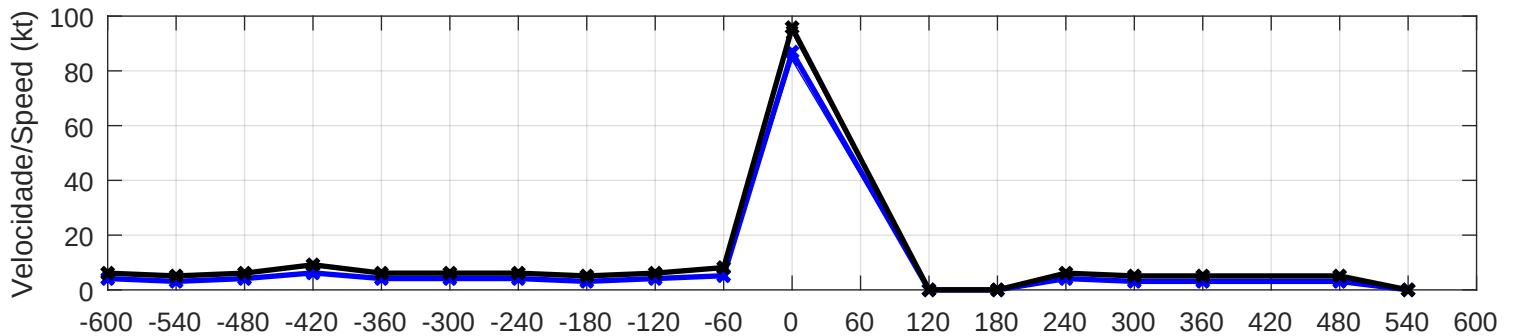
# SANT/87121 EVENTO/EVENT 10 - 20/04/2012, 09:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.<br>$\Delta$ Direction     | Temp. Elétrica<br>Thunderstorm     | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|------------------------------------|---------------------------------|
| $G_{obs} = 99 \text{ kt}$      | $R_{-6} = 16.5$               | $T_{med,3} = 19.0 \text{ }^{\circ}\text{C}$       | $DIR = 360^{\circ}$                | NÃO/NO                          |
| $V_{obs} = 2 \text{ kt}$       | $R_{-3} = 16.5$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 0^{\circ}$  | SUSPEITO                        |
| $G_V = 49.5$                   | $R_{+3} = 49.5$               | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 90^{\circ}$ | SUSPECT                         |
| $G_{cor} = 100.9 \text{ kt}$   | $R_{+6} = 99.0$               | $\Delta \text{ Grupo/Group} = 3$                  | METAR SANT 200900Z 36002G99KT      | (315)                           |
| $V_{cor} = 2.1 \text{ kt}$     |                               |                                                   | BKN10019/18 Q1014=                 | 9999 SCT010                     |



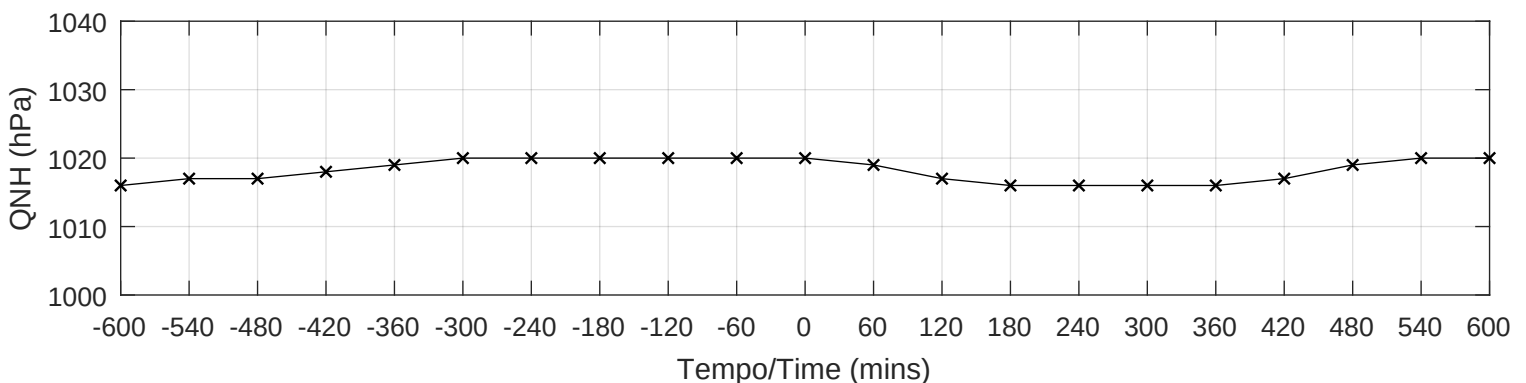
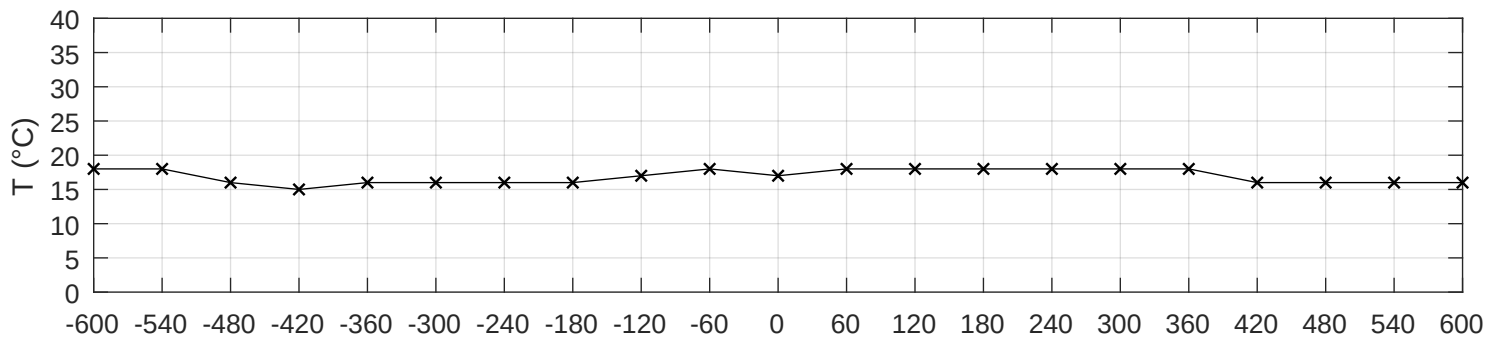
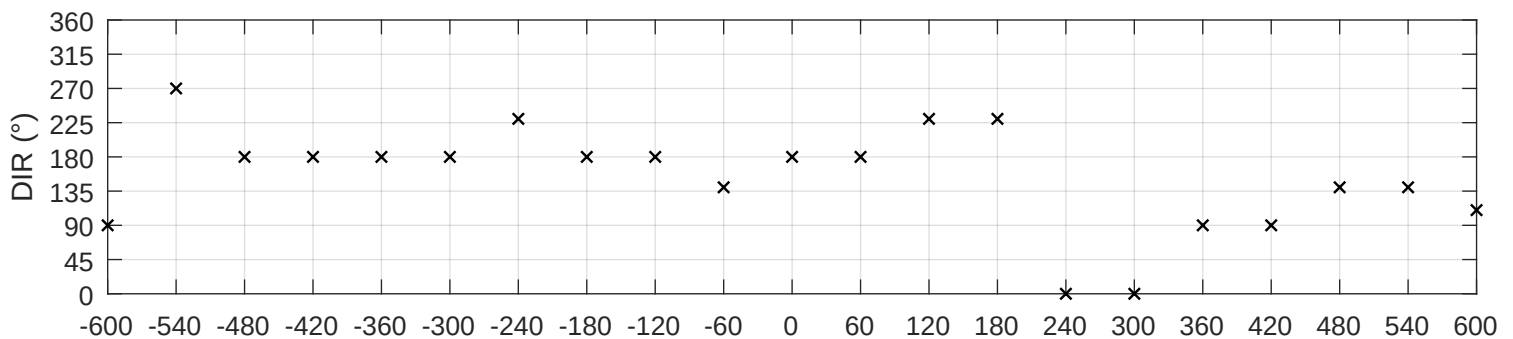
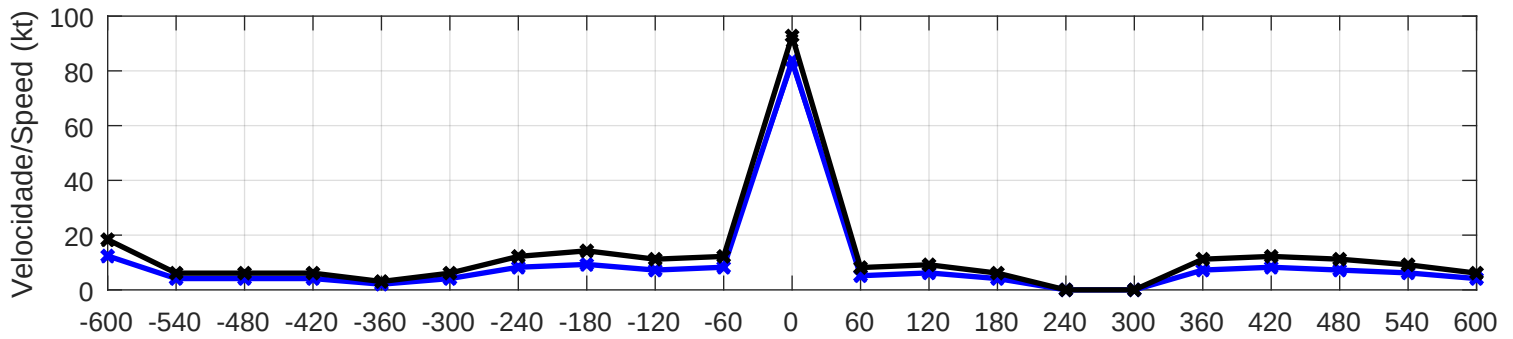
# SANT/87121 EVENTO/EVENT 11 - 09/06/1998, 02:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                   | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 94$ kt                  | $R_{-6} = 15.2$               | $T_{med,3} = 17.0$ °C        | $DIR = 160^\circ$                                        | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 84$ kt              | $R_{-3} = 14.8$               | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 70^\circ$                         |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = Inf$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                          |                                | (324)                           |
| $G_{cor} = 95.8$ kt            | $R_{+6} = 29.4$               | $\Delta$ Grupo/Group = 3     | METAR SANT 090200Z 16084KT 5000 FU 0VC030<br>17/16 Q1013 |                                |                                 |
| $V_{cor} = 86.9$ kt            |                               |                              |                                                          |                                |                                 |



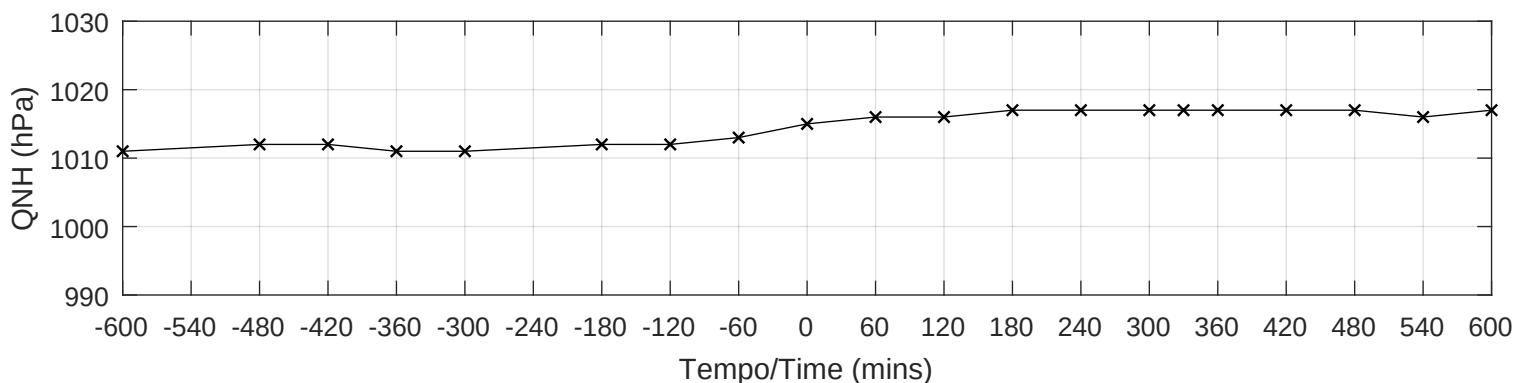
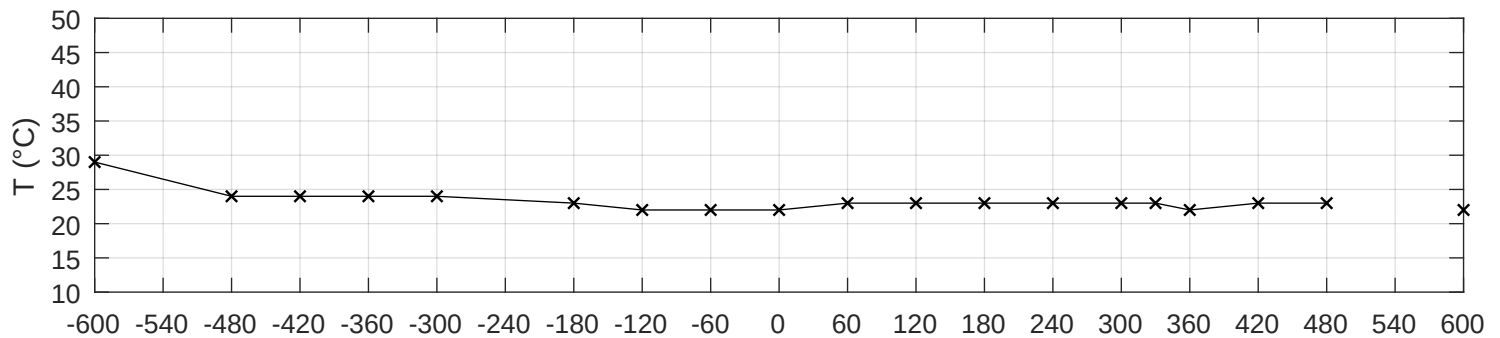
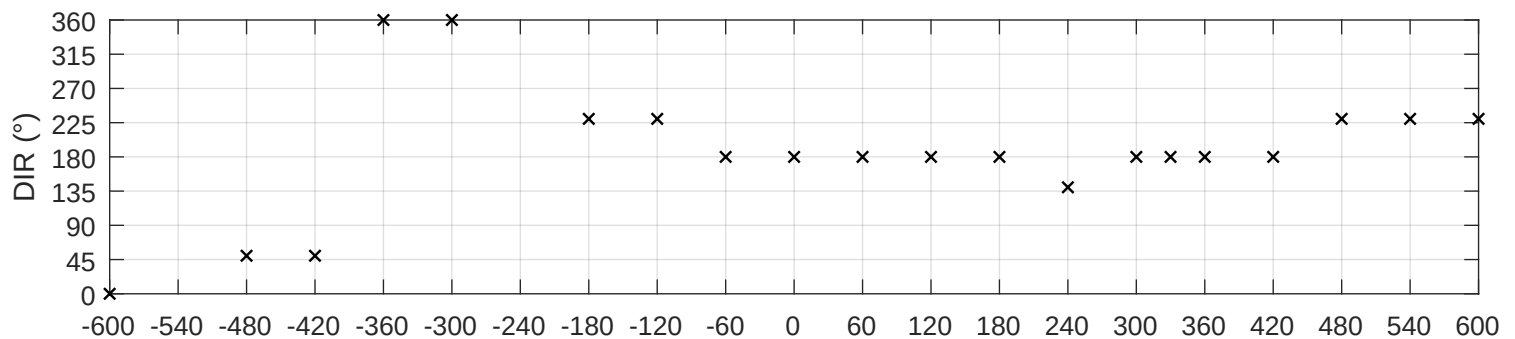
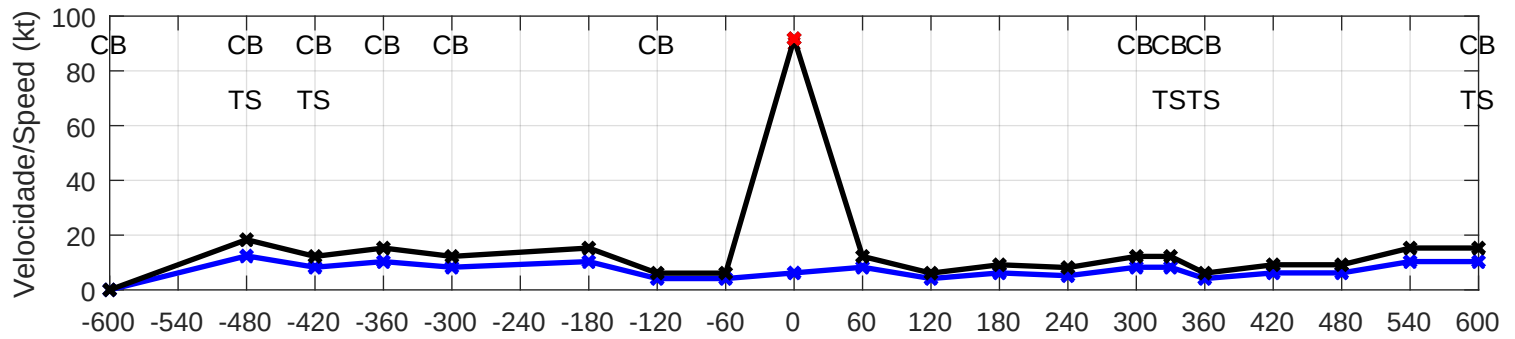
# SANT/87121 EVENTO/EVENT 12 - 18/02/2013, 17:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                              | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|---------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 91$ kt                  | $R_{-6} = 9.4$                | $T_{med,3} = 17.0$ °C        | $DIR = 180^\circ$                                                   | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 81$ kt              | $R_{-3} = 7.4$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 40^\circ$                                    |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 11.9$               | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 50^\circ$                                    |                                | (324)                           |
| $G_{cor} = 92.7$ kt            | $R_{+6} = 16.1$               | $\Delta$ Grupo/Group = 3     | METAR SANT 181700Z 18081KT 6000 SCT006<br>SCT008BKN030 17/16 Q1020= |                                |                                 |
| $V_{cor} = 83.8$ kt            |                               |                              |                                                                     |                                |                                 |



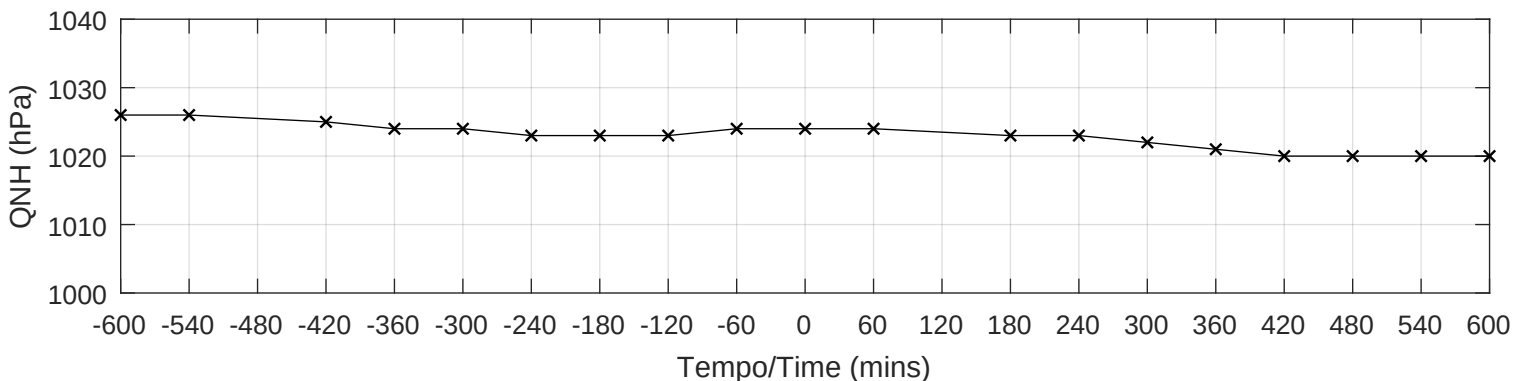
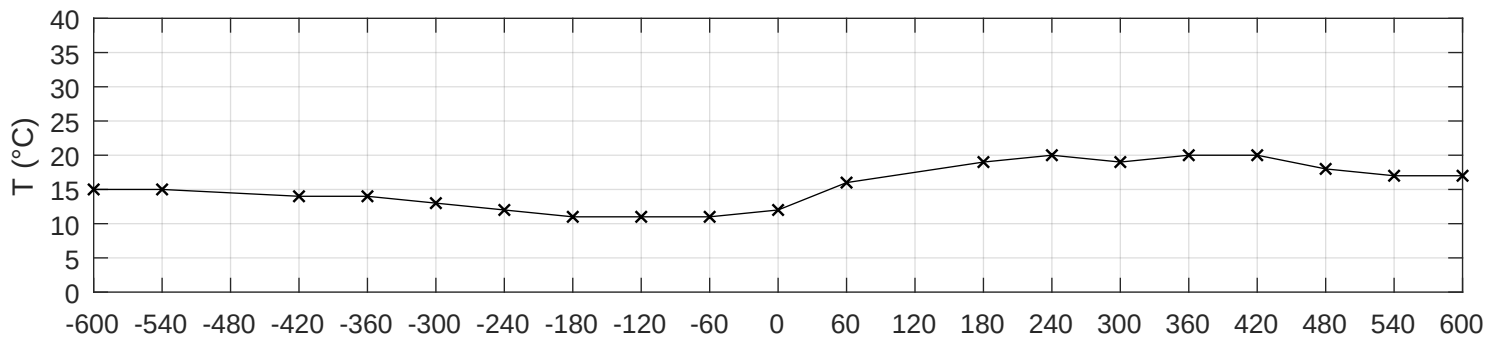
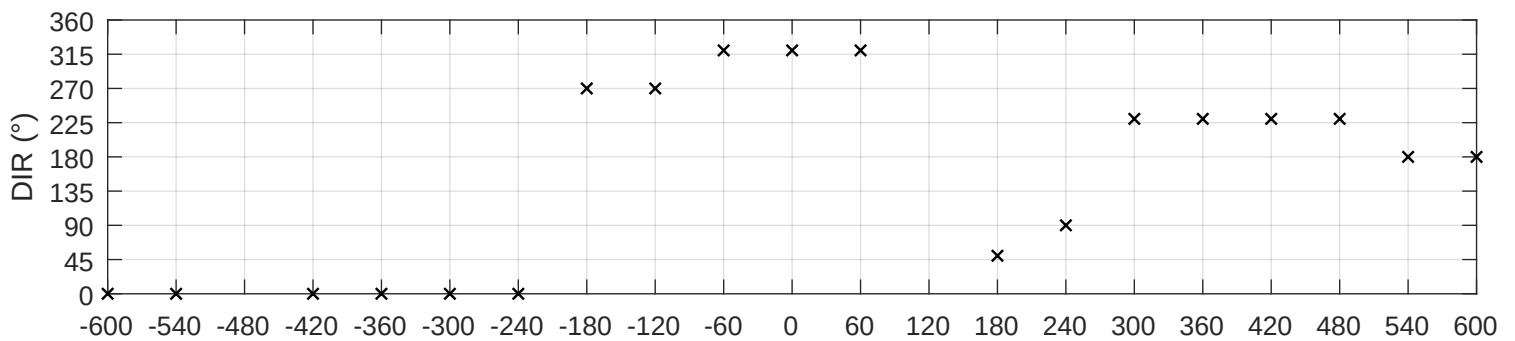
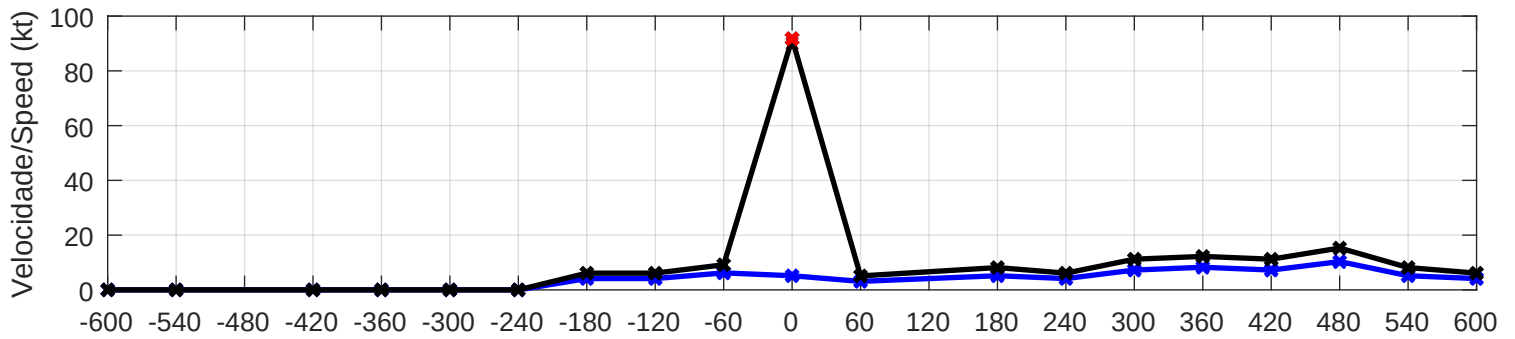
# SANT/87121 EVENTO/EVENT 13 - 24/12/2005, 11:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                        | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|---------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 90 \text{ kt}$      | $R_{-6} = 8.3$                | $T_{med,3} = 22.3 \text{ }^{\circ}\text{C}$       | $DIR = 180^{\circ}$                                           | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 6 \text{ kt}$       | $R_{-3} = 10.0$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                            |                                | SUSPECT                         |
| $G_V = 15.0$                   | $R_{+3} = 10.0$               | $\Delta Q_{max,3} = 4.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 0^{\circ}$                             |                                | (311)                           |
| $G_{cor} = 91.7 \text{ kt}$    | $R_{+6} = 10.2$               | $\Delta \text{ Grupo/Group} = 2$                  | SANT 241100Z 18006G90KT 9000 BR BKN005<br>OVC008 22/21 Q1015= |                                |                                 |
| $V_{cor} = 6.2 \text{ kt}$     |                               |                                                   |                                                               |                                |                                 |



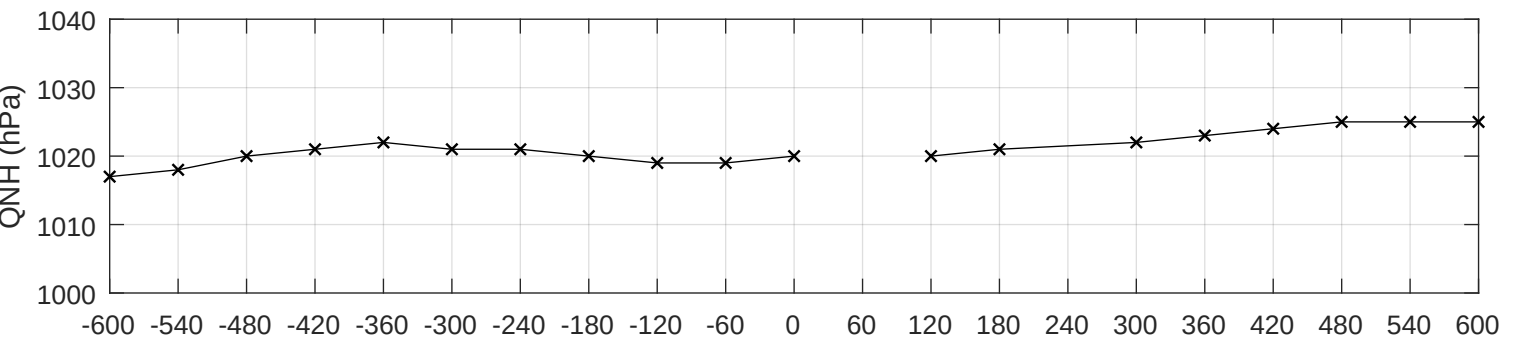
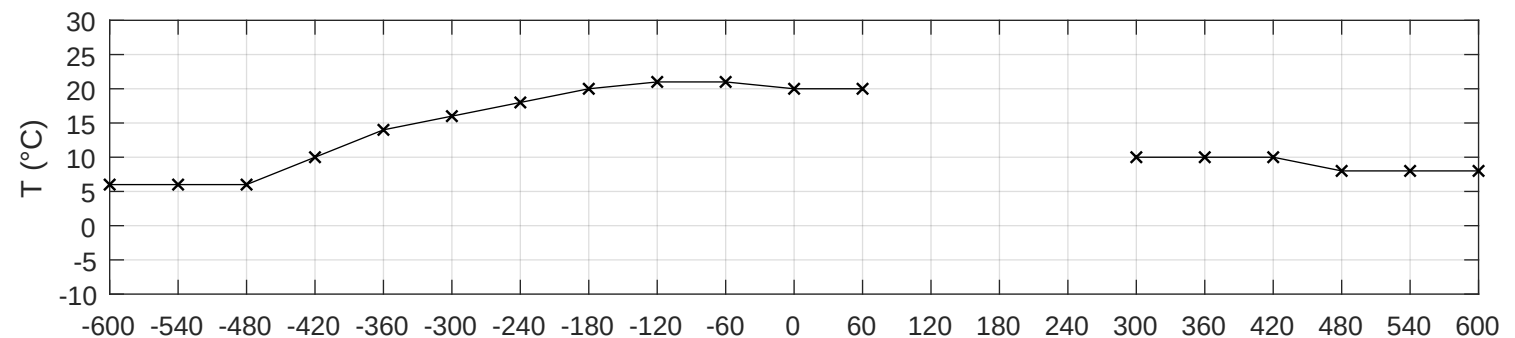
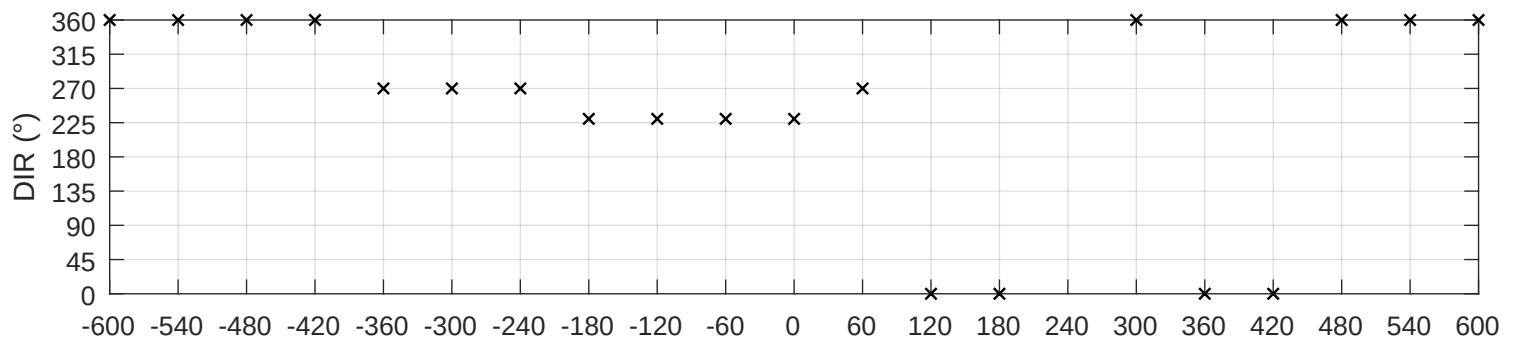
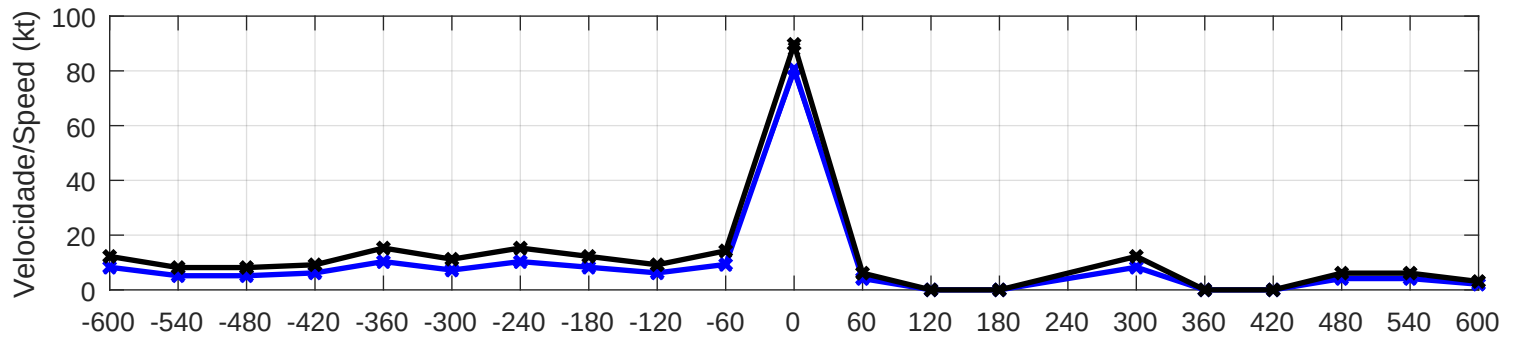
# SANT/87121 EVENTO/EVENT 14 - 03/05/2006, 12:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction           | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 90 \text{ kt}$      | $R_{-6} = 25.7$               | $T_{med,3} = 11.0 \text{ }^{\circ}\text{C}$       | $DIR = 320^{\circ}$                              | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 5 \text{ kt}$       | $R_{-3} = 12.9$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$               |                                | SUSPECT                         |
| $G_V = 18.0$                   | $R_{+3} = 13.8$               | $\Delta Q_{max,3} = 1.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 90^{\circ}$               |                                | (315)                           |
| $G_{cor} = 91.7 \text{ kt}$    | $R_{+6} = 10.7$               | $\Delta \text{ Grupo/Group} = 3$                  | SANT 031200Z 32005G90KT 9000 SCT100 12/11 Q1024= |                                |                                 |
| $V_{cor} = 5.2 \text{ kt}$     |                               |                                                   |                                                  |                                |                                 |



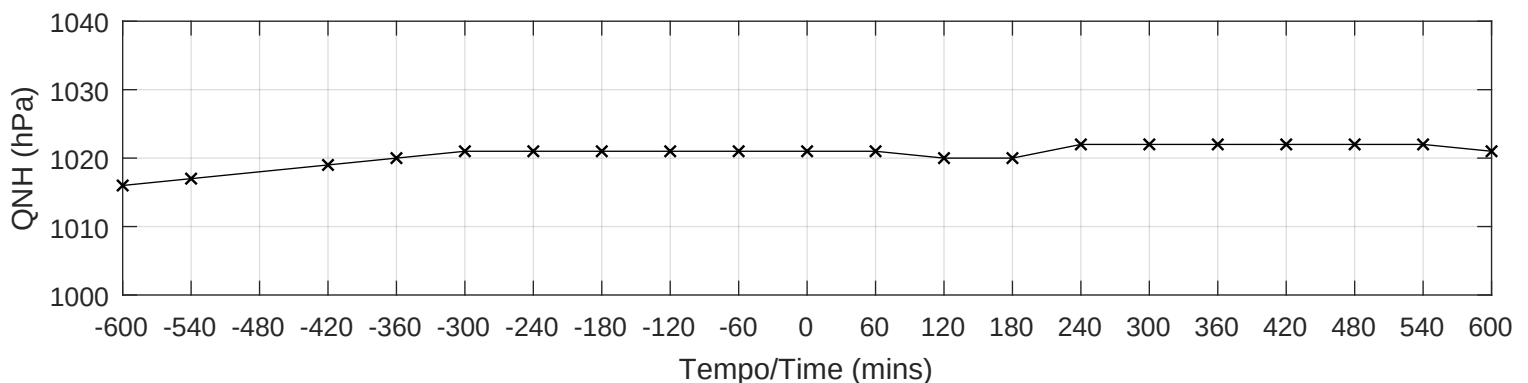
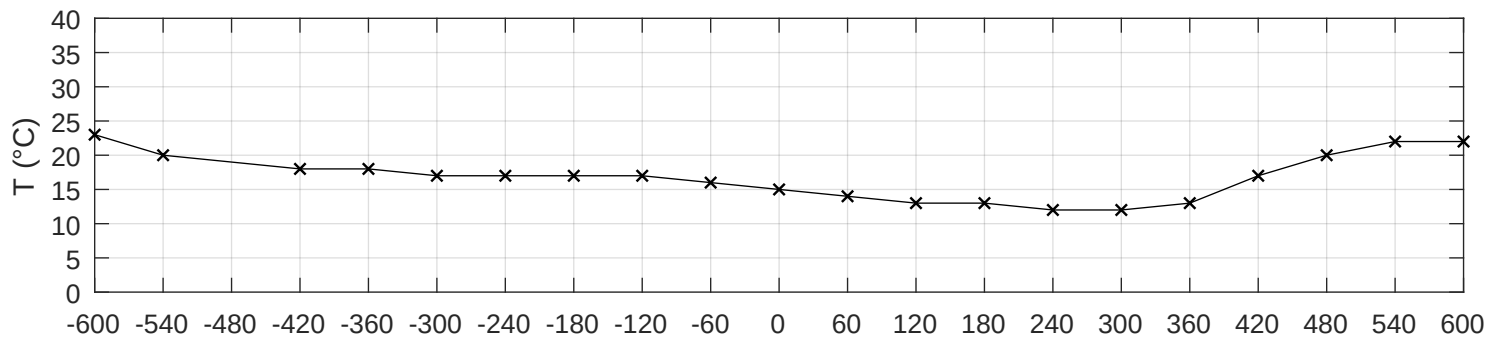
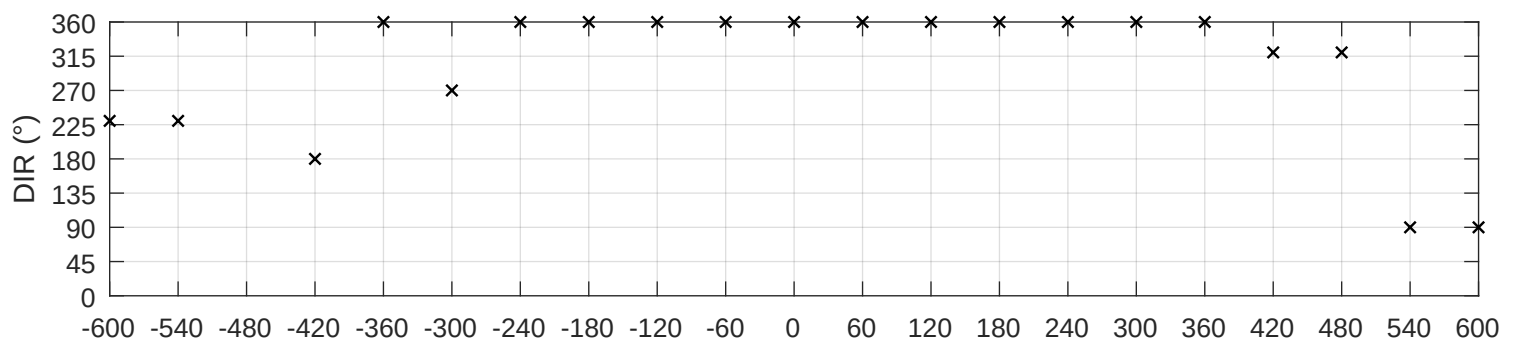
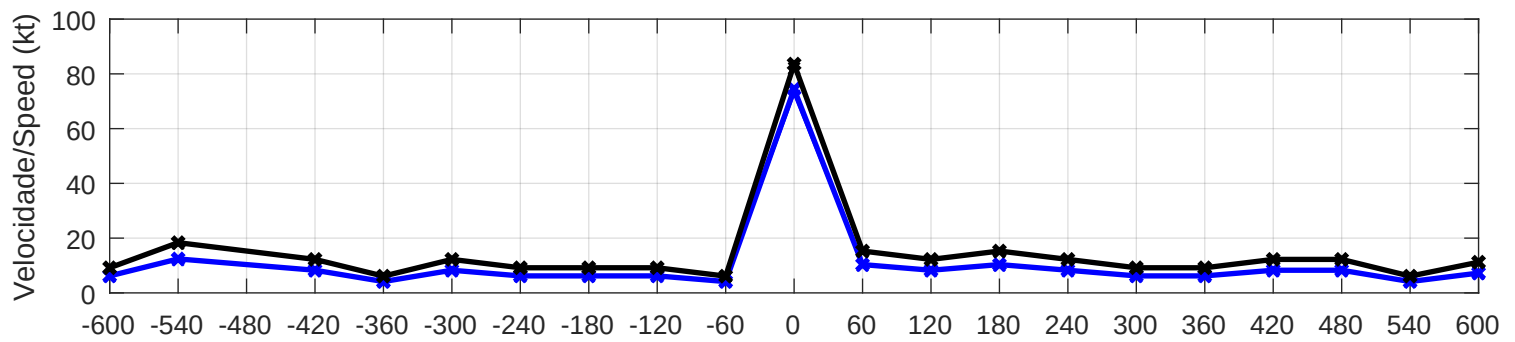
# SANT/87121 EVENTO/EVENT 15 - 27/07/1996, 20:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                            | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 88$ kt                  | $R_{-6} = 6.9$                | $T_{med,3} = 20.7$ °C        | $DIR = 230^\circ$                                                 | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 78$ kt              | $R_{-3} = 7.5$                | $\Delta T_{min,3} = -1.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                                   |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 44.0$               | $\Delta Q_{max,3} = 1.0$ hPa | $\Delta DIR_{max,+3} = 40^\circ$                                  |                                | (324)                           |
| $G_{cor} = 89.7$ kt            | $R_{+6} = 24.4$               | $\Delta$ Grupo/Group = 3     | METAR SANT 272000Z 23078KT 8000 FU BKN156<br>EEE 1560 20/08 Q1020 |                                |                                 |
| $V_{cor} = 80.7$ kt            |                               |                              |                                                                   |                                |                                 |



# SANT/87121 EVENTO/EVENT 16 - 06/05/1998, 06:00 UTC (MSS - WUNDERGROUND)

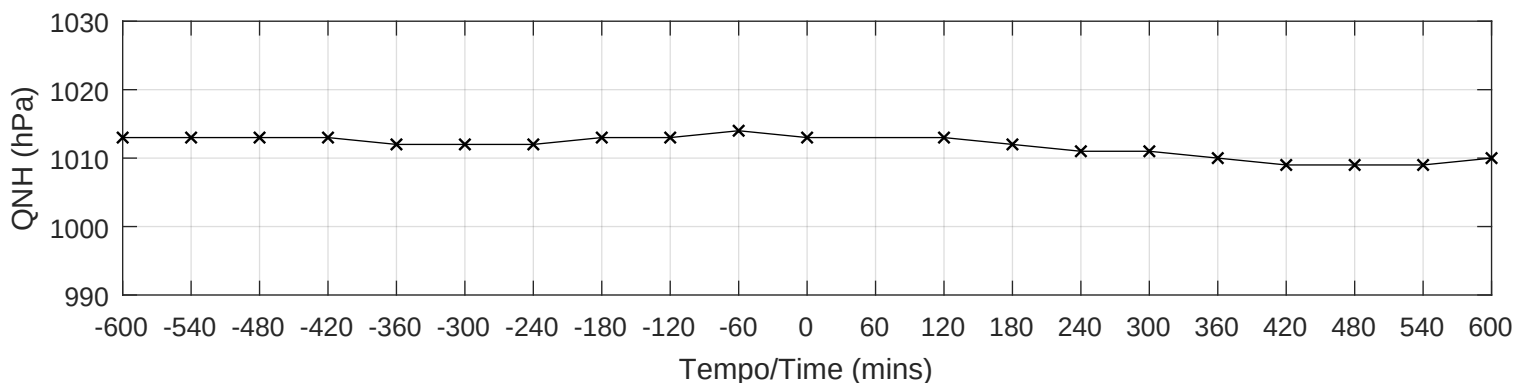
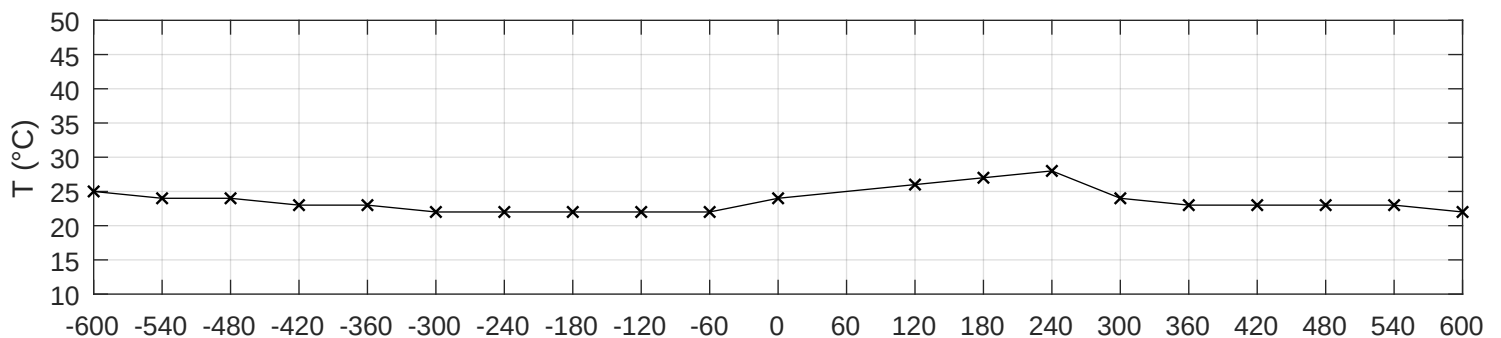
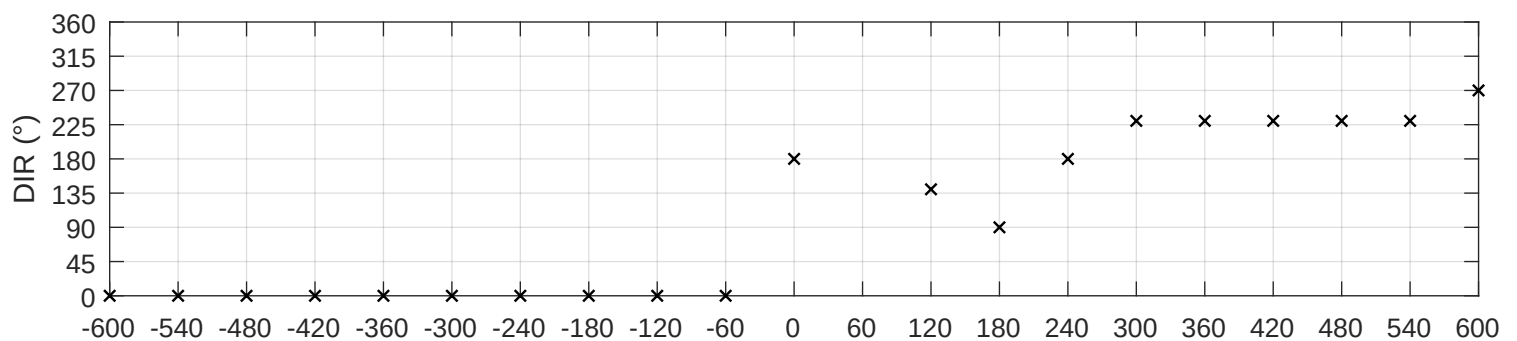
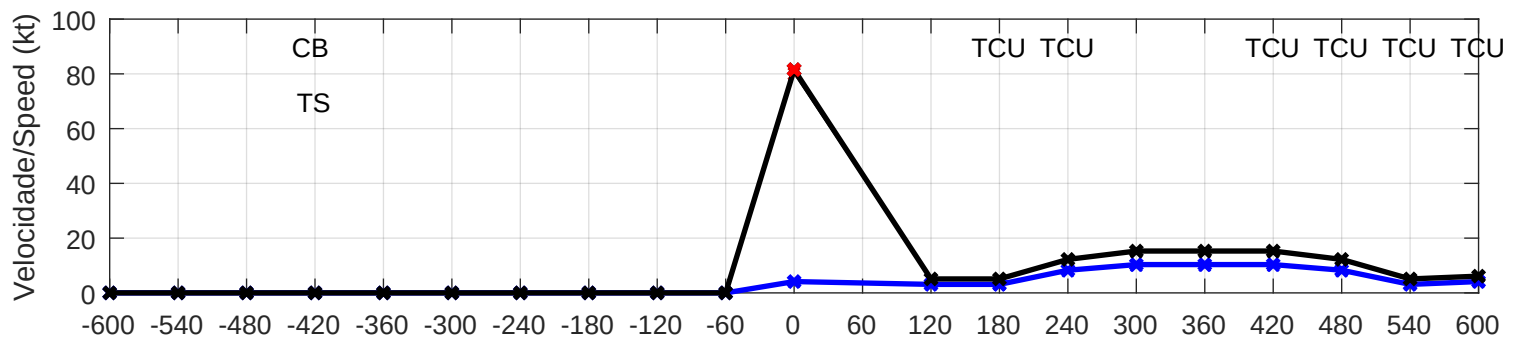
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 82$ kt                  | $R_{-6} = 9.6$                | $T_{med,3} = 16.7$ °C        | $DIR = 360^\circ$                                     | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 72$ kt              | $R_{-3} = 10.3$               | $\Delta T_{min,3} = -3.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                       |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 5.9$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                       |                                | (320)                           |
| $G_{cor} = 83.6$ kt            | $R_{+6} = 6.8$                | $\Delta$ Grupo/Group = 2     | METAR SANT 060600Z 36072KT 9999 SCT100<br>15/13 Q1021 |                                |                                 |
| $V_{cor} = 74.5$ kt            |                               |                              |                                                       |                                |                                 |





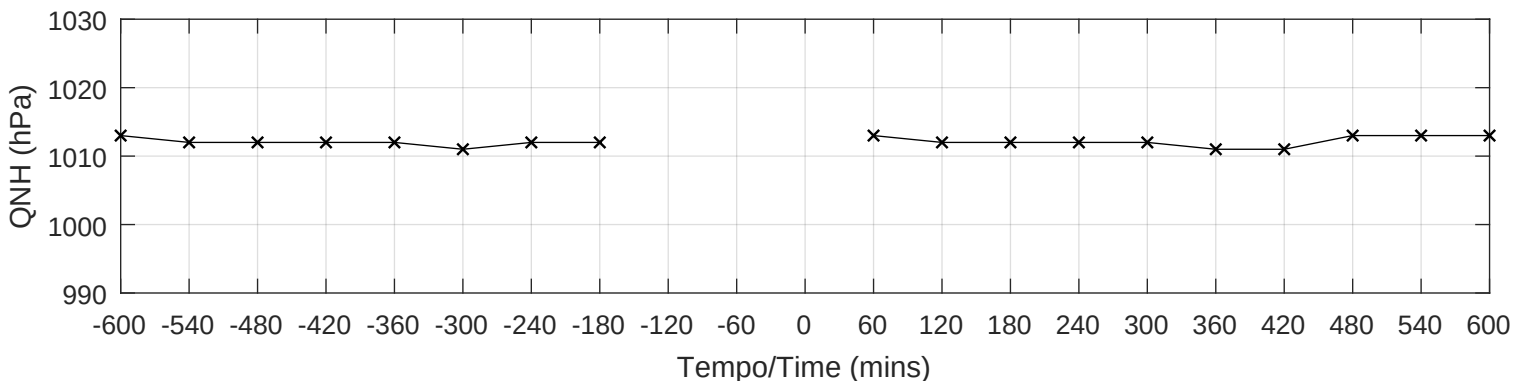
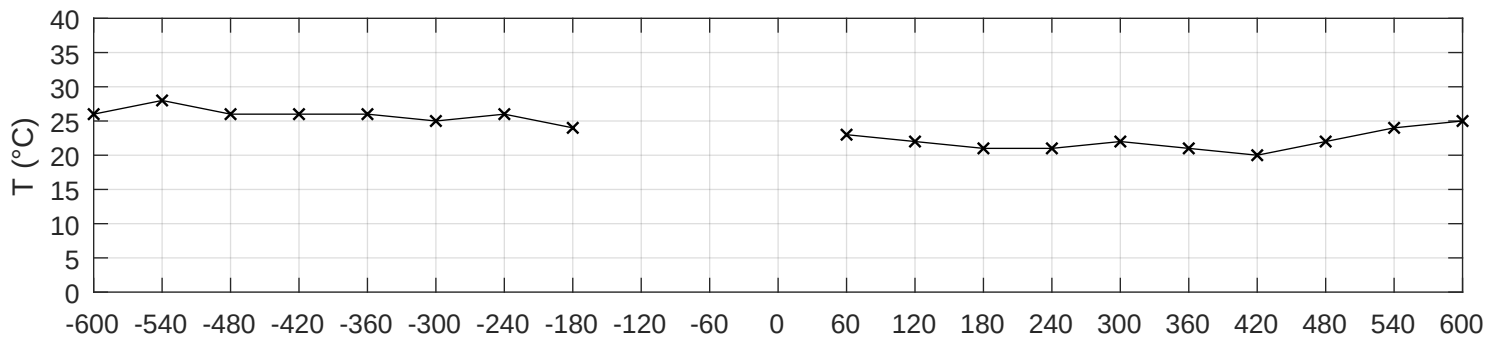
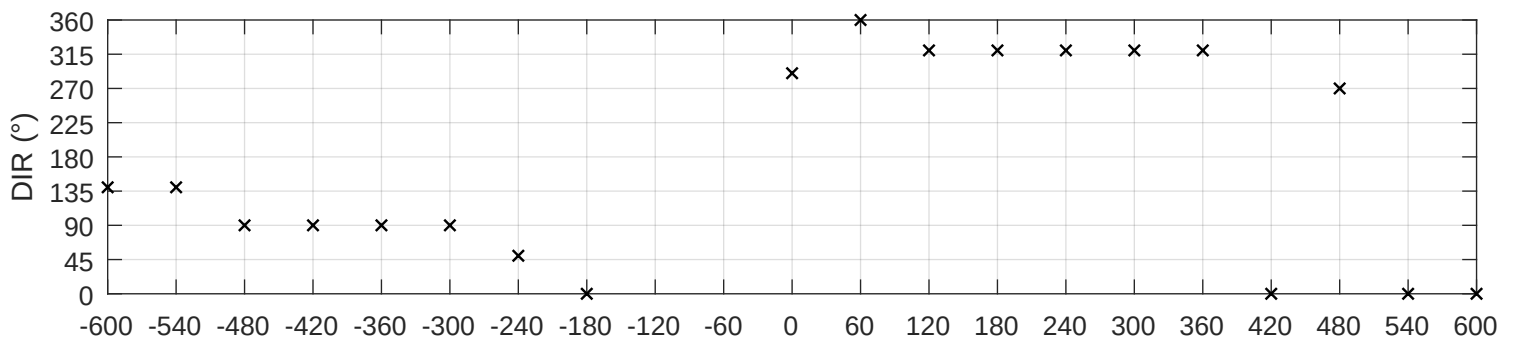
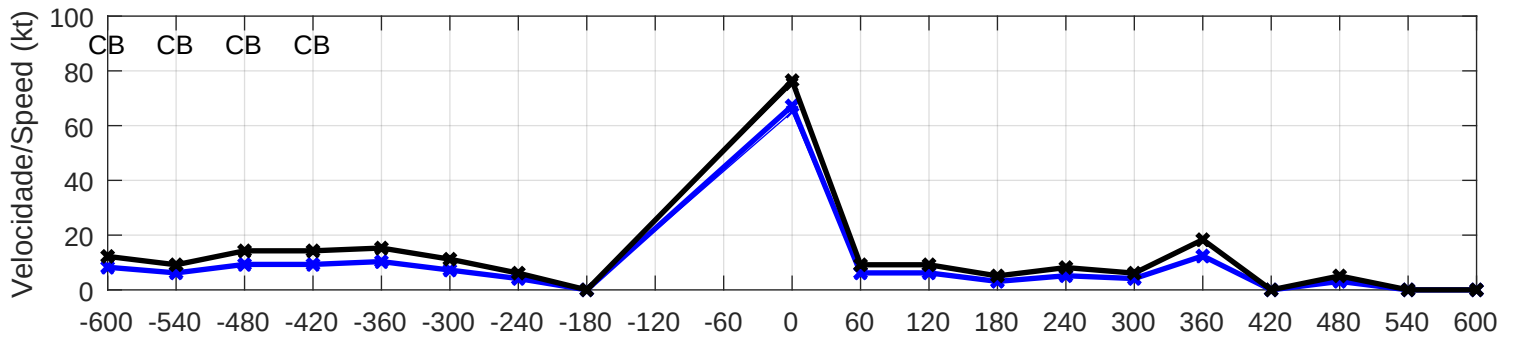
# SANT/87121 EVENTO/EVENT 17 - 21/03/2006, 13:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 80 \text{ kt}$      | $R_{-6} = \text{Inf}$         | $T_{med,3} = 22.0 \text{ }^{\circ}\text{C}$       | $DIR = 180^{\circ}$                                    | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 4 \text{ kt}$       | $R_{-3} = \text{Inf}$         | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 0^{\circ}$                      |                                | SUSPECT                         |
| $G_V = 20.0$                   | $R_{+3} = 16.0$               | $\Delta Q_{max,3} = 1.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 90^{\circ}$                     |                                | (315)                           |
| $G_{cor} = 81.5 \text{ kt}$    | $R_{+6} = 7.7$                | $\Delta \text{ Grupo/Group} = 3$                  | SANT 211300Z 18004G80KT 8000 BR BKN015<br>24/21 Q1013= |                                |                                 |
| $V_{cor} = 4.1 \text{ kt}$     |                               |                                                   |                                                        |                                |                                 |



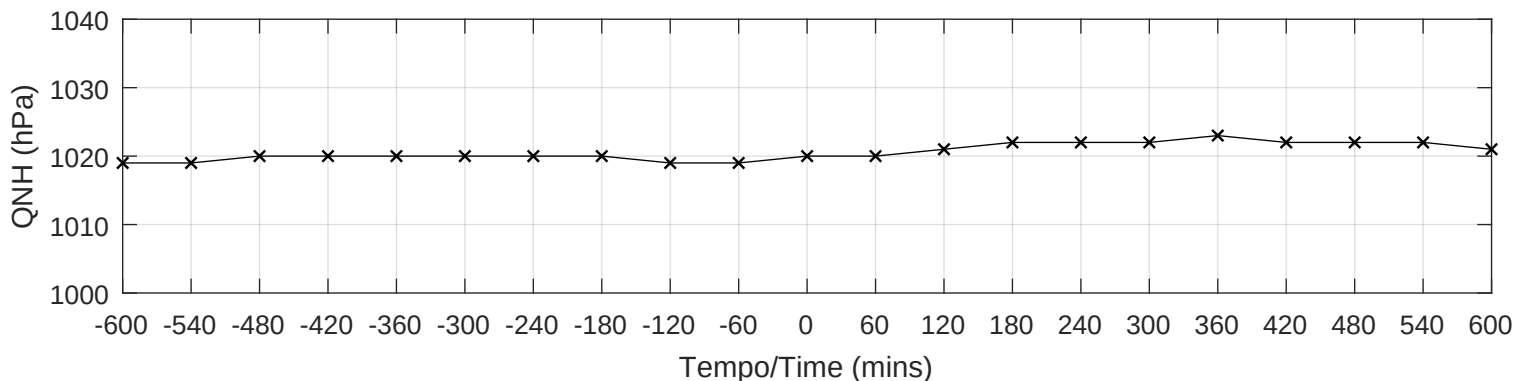
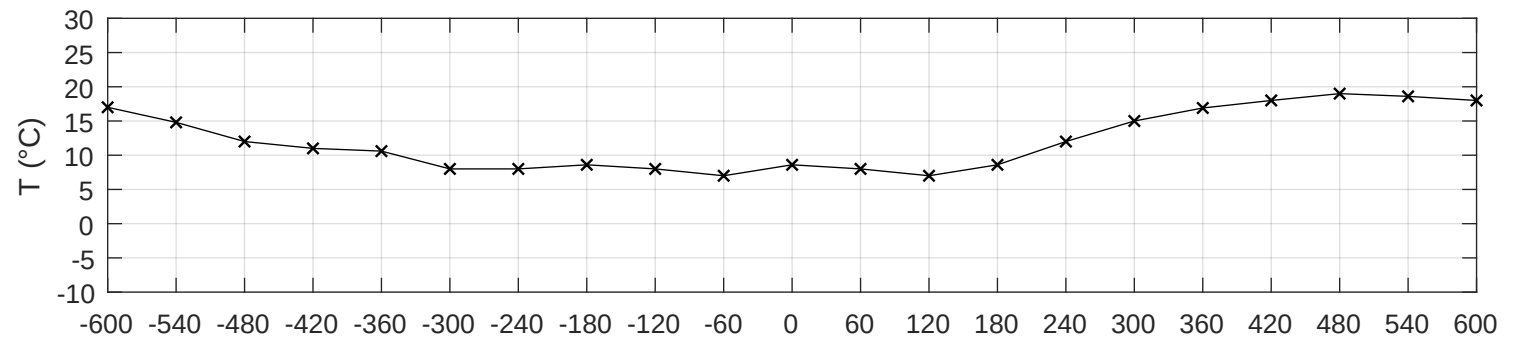
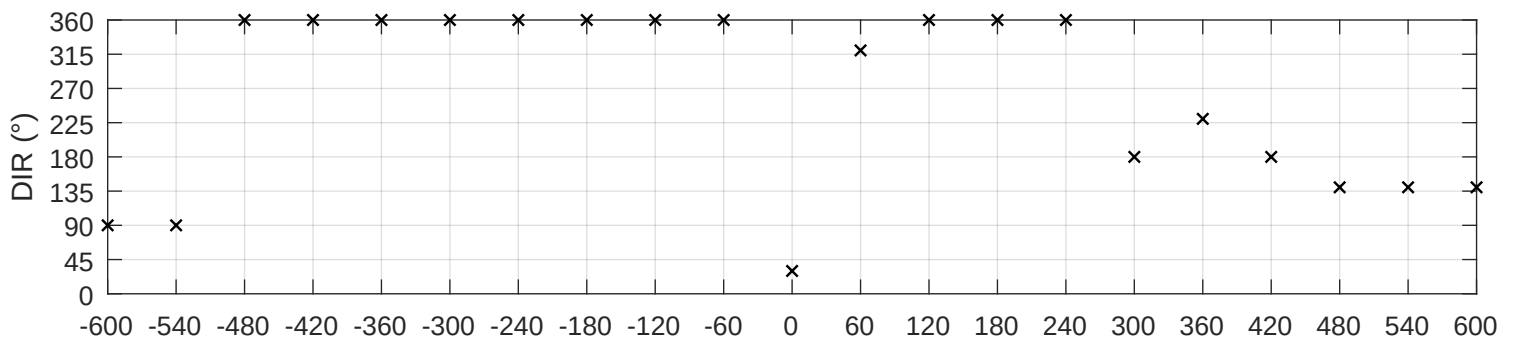
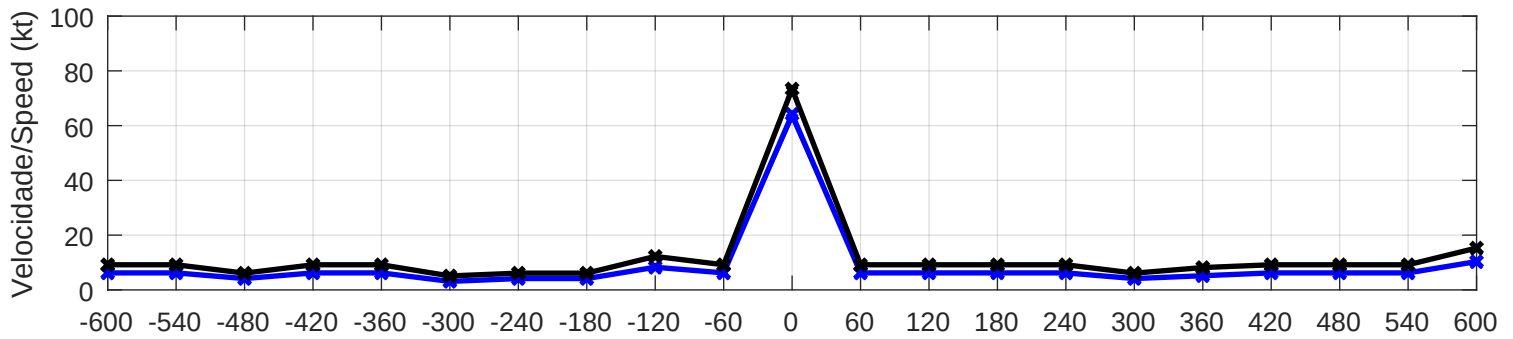
# SANT/87121 EVENTO/EVENT 18 - 29/12/2005, 03:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------|--------------------------------|---------------------------------|
| $G^* = 75$ kt                  | $R_{-6} = 9.4$                | $T_{med,3} = 24.0$ °C        | $DIR = 290^\circ$                      | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 65$ kt              | $R_{-3} = Inf$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 0^\circ$        |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 9.8$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 70^\circ$       |                                | (324)                           |
| $G_{cor} = 76.4$ kt            | $R_{+6} = 8.2$                | $\Delta$ Grupo/Group = 3     | AAXX 29034 87121 87121 42965 03212     |                                |                                 |
| $V_{cor} = 67.2$ kt            |                               |                              |                                        |                                |                                 |



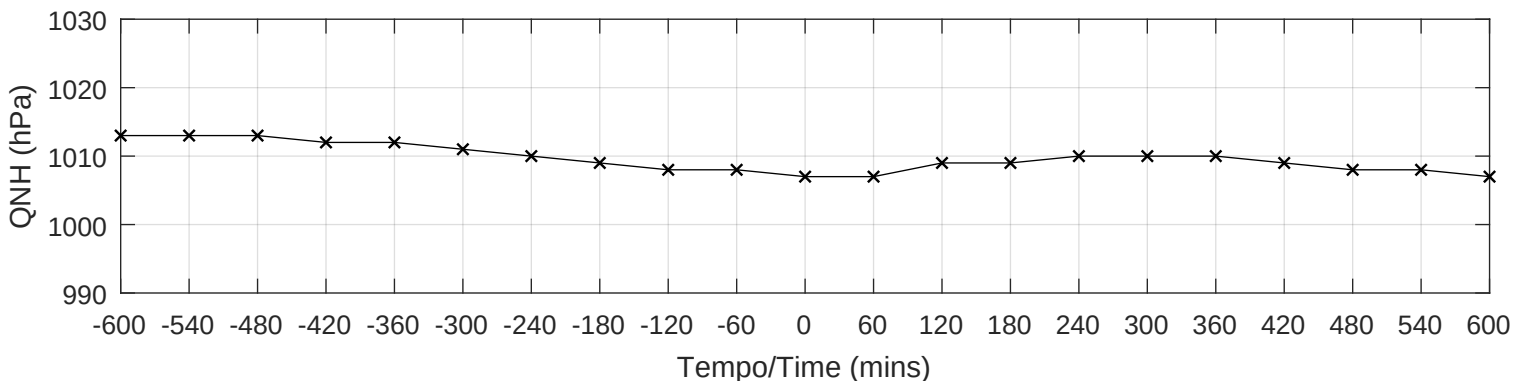
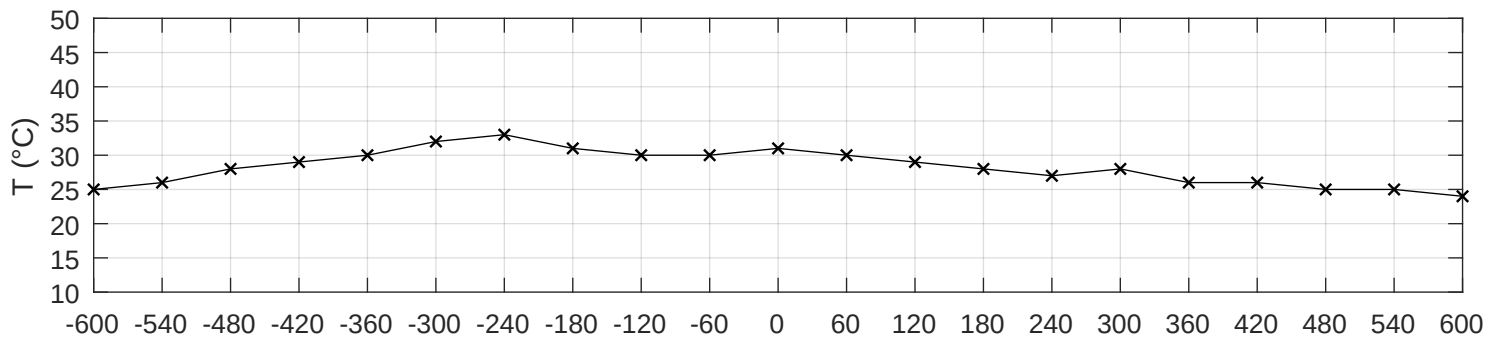
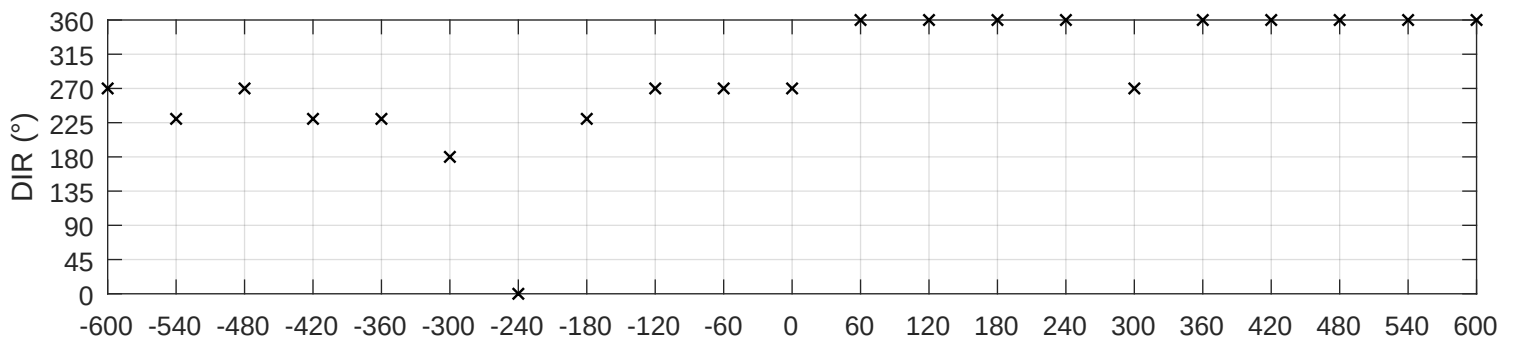
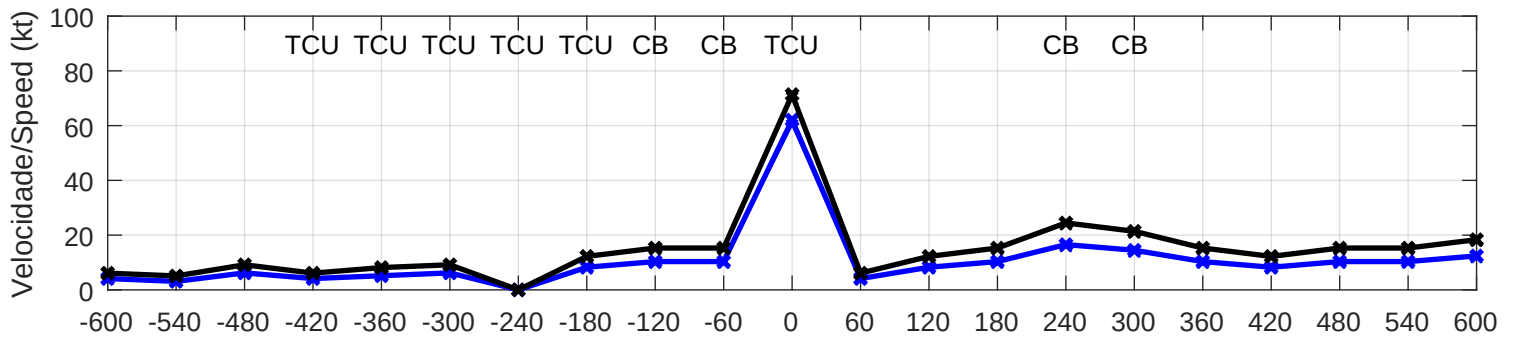
# SANT/87121 EVENTO/EVENT 19 - 03/05/2001, 09:00 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 72$ kt                  | $R_{-6} = 9.2$                | $T_{med,3} = 7.9$ °C         | $DIR = 30^\circ$                                               | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 62$ kt              | $R_{-3} = 8.0$                | $\Delta T_{min,3} = -1.0$ °C | $\Delta DIR_{max,-3} = 30^\circ$                               |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 8.0$                | $\Delta Q_{max,3} = 1.0$ hPa | $\Delta DIR_{max,+3} = 70^\circ$                               |                                | (324)                           |
| $G_{cor} = 73.4$ kt            | $R_{+6} = 8.6$                | $\Delta$ Grupo/Group = 3     | AAXX 03094 87121 42965 /0362 10086 20061<br>39666 40189 56003= |                                |                                 |
| $V_{cor} = 64.1$ kt            |                               |                              |                                                                |                                |                                 |



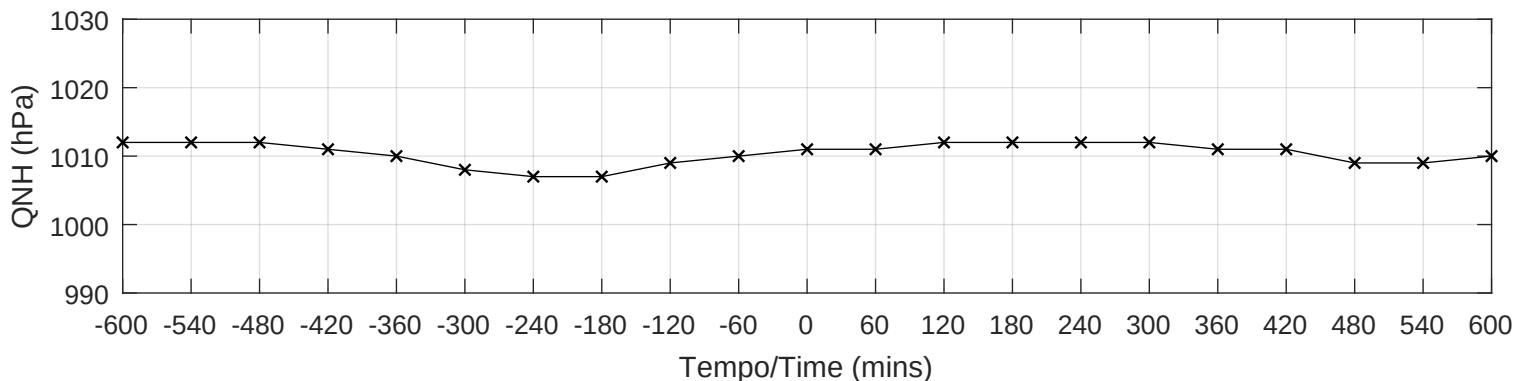
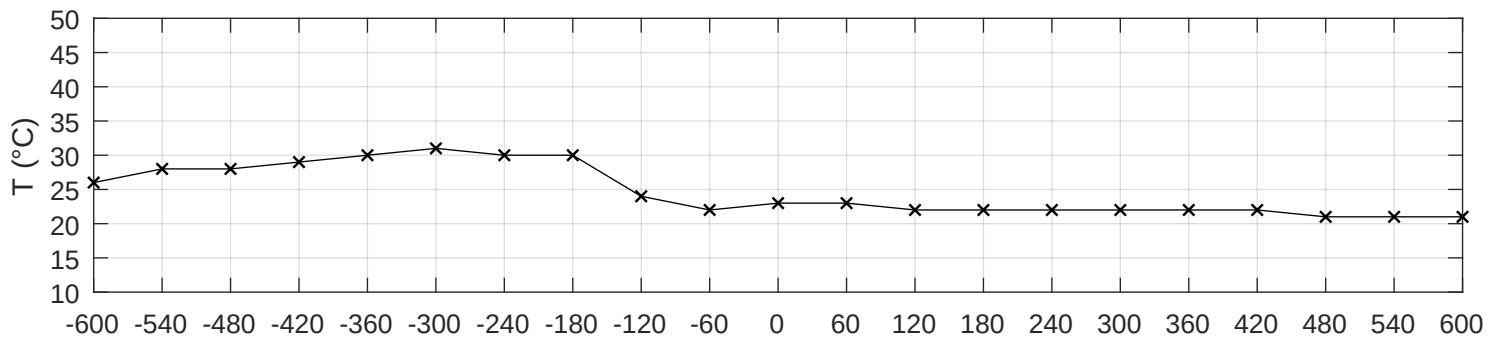
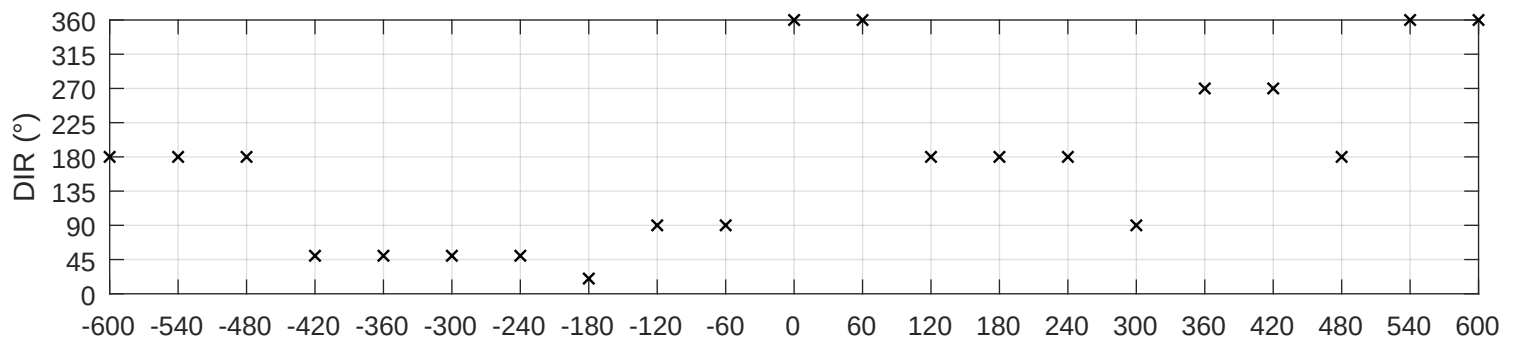
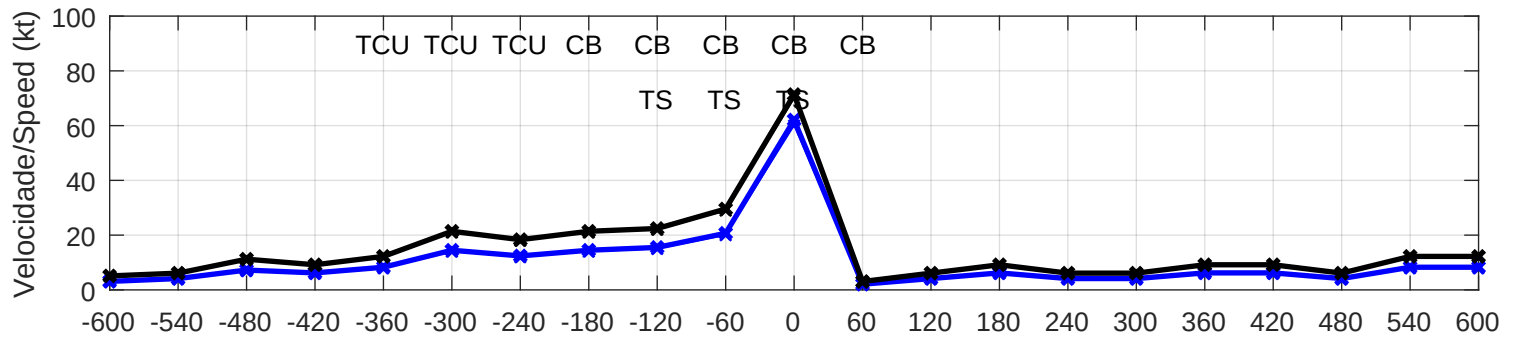
# SANT/87121 EVENTO/EVENT 20 - 06/01/2000, 22:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                                   | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 70$ kt                  | $R_{-6} = 7.1$                | $T_{med,3} = 30.3$ °C        | $DIR = 270^\circ$                                                        | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 60$ kt              | $R_{-3} = 5.0$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 40^\circ$                                         |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 6.4$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                                         |                                | (324)                           |
| $G_{cor} = 71.3$ kt            | $R_{+6} = 4.5$                | $\Delta$ Grupo/Group = 3     | METAR SANT 062200Z 27060KT 9999 FEW040TCU<br>FEW050CB SCT100 31/19 Q1007 |                                |                                 |
| $V_{cor} = 62.0$ kt            |                               |                              |                                                                          |                                |                                 |



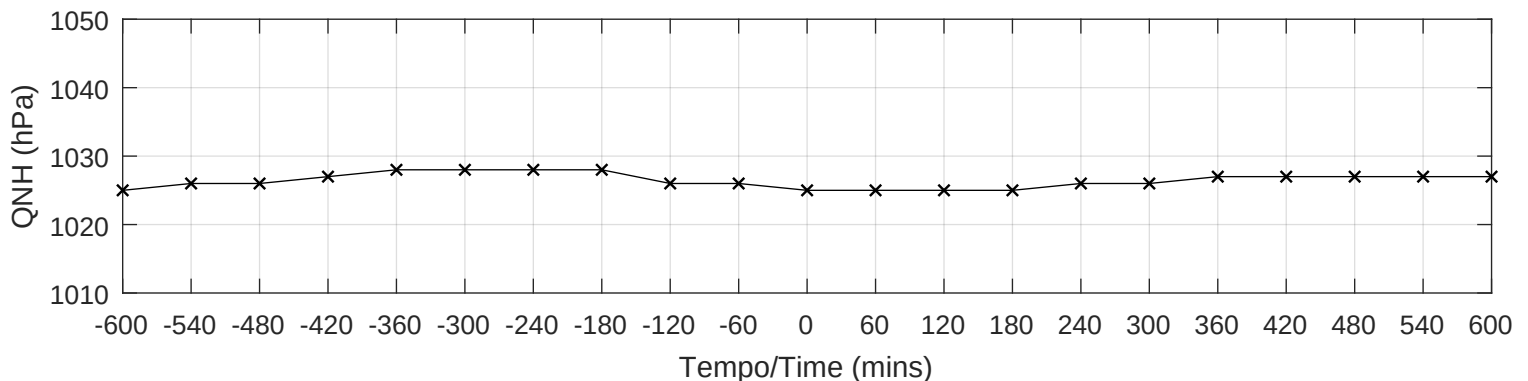
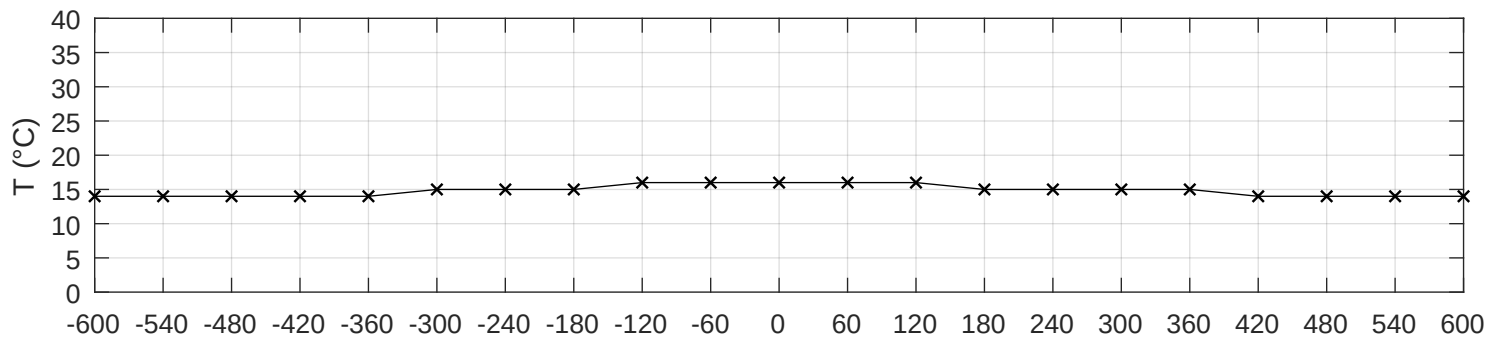
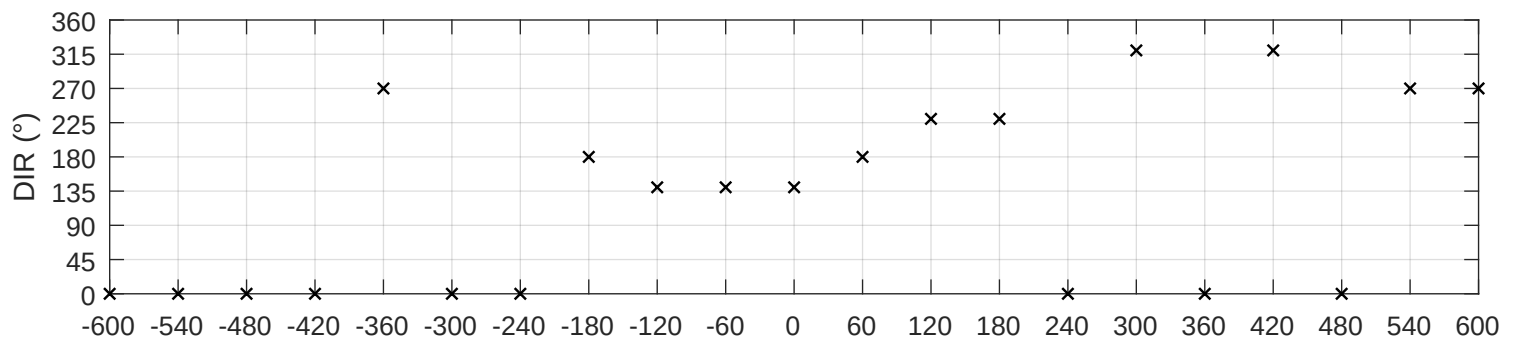
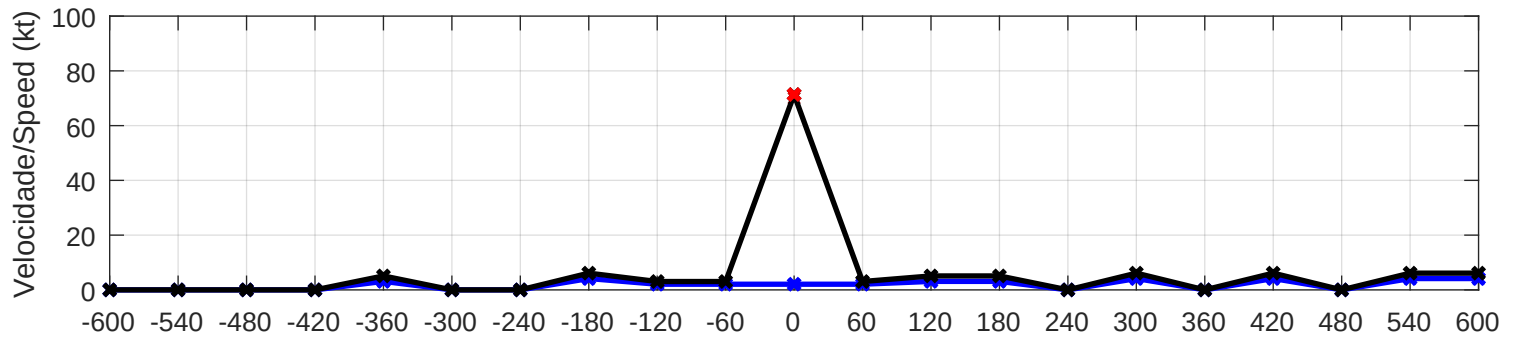
# SANT/87121 EVENTO/EVENT 21 - 05/04/2004, 00:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                            | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 70$ kt                  | $R_{-6} = 3.4$                | $T_{med,3} = 25.3$ °C        | $DIR = 360^\circ$                                                 | SIM/YES                        | SUSPEITO                        |
| $V_{obs} = 60$ kt              | $R_{-3} = 2.9$                | $\Delta T_{min,3} = -2.0$ °C | $\Delta DIR_{max,-3} = 90^\circ$                                  |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 11.7$               | $\Delta Q_{max,3} = 2.0$ hPa | $\Delta DIR_{max,+3} = 180^\circ$                                 |                                | (320)                           |
| $G_{cor} = 71.3$ kt            | $R_{+6} = 10.8$               | $\Delta$ Grupo/Group = 2     | METAR SANT 050000Z 36060KT 9999 TS BKN012<br>FEW050CB 23/21 Q1011 |                                |                                 |
| $V_{cor} = 62.0$ kt            |                               |                              |                                                                   |                                |                                 |



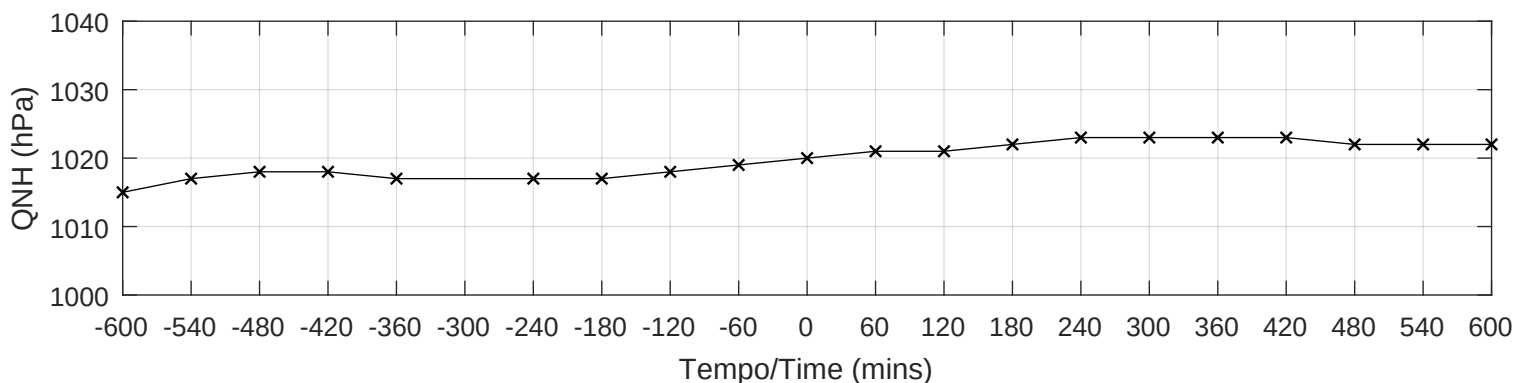
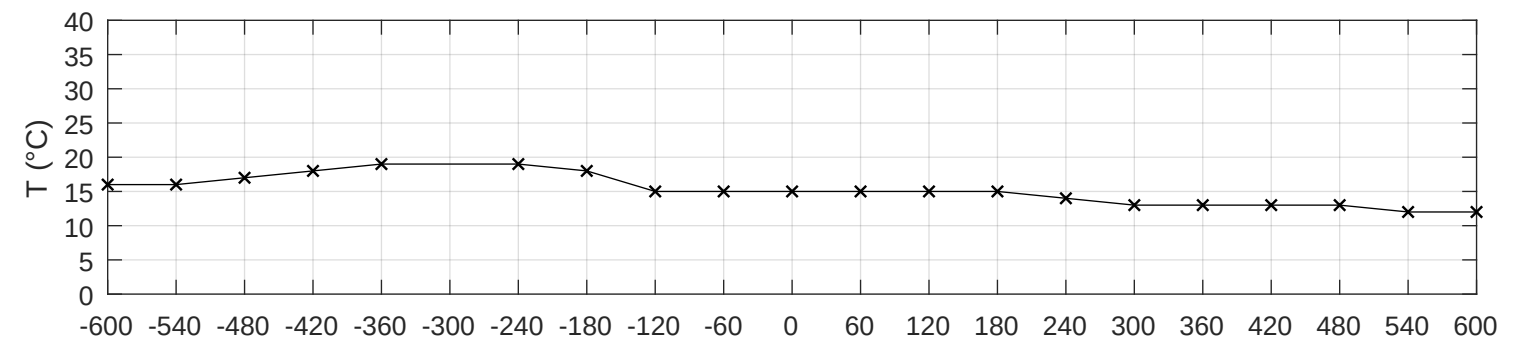
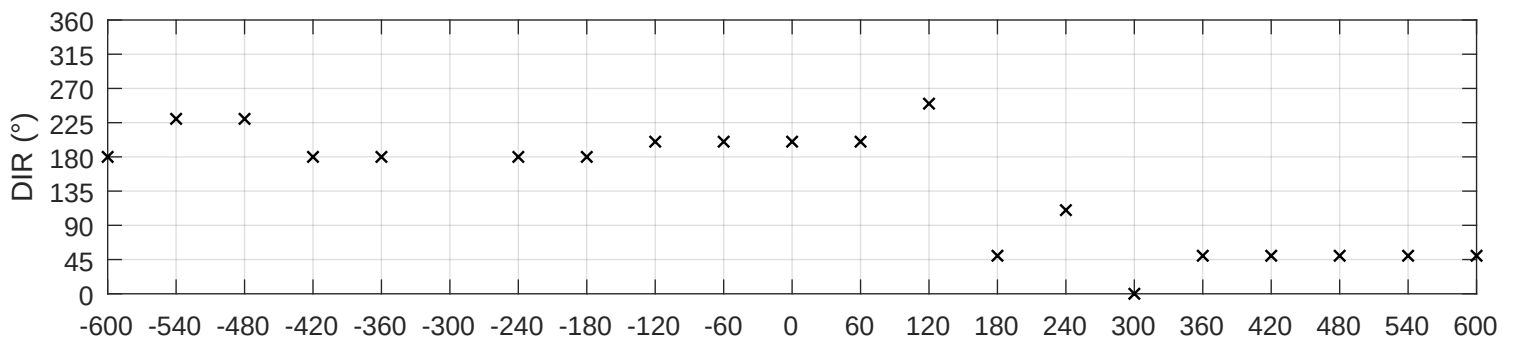
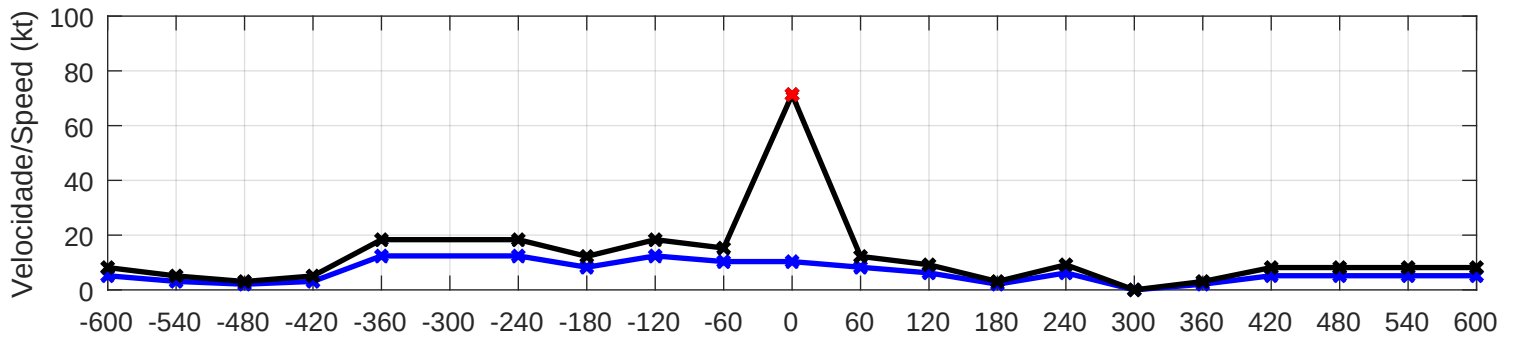
# SANT/87121 EVENTO/EVENT 22 - 07/05/2006, 19:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                        | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|---------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 70$ kt              | $R_{-6} = 24.7$               | $T_{med,3} = 15.7$ °C        | $DIR = 140^\circ$                                             | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 2$ kt               | $R_{-3} = 17.5$               | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 40^\circ$                              |                                | SUSPECT                         |
| $G_V = 35.0$                   | $R_{+3} = 16.2$               | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                              |                                | (315)                           |
| $G_{cor} = 71.3$ kt            | $R_{+6} = 22.1$               | $\Delta$ Grupo/Group = 3     | SANT 071900Z 14002G70KT 7000 BR BKN008<br>OVC030 16/14 Q1025= |                                |                                 |
| $V_{cor} = 2.1$ kt             |                               |                              |                                                               |                                |                                 |



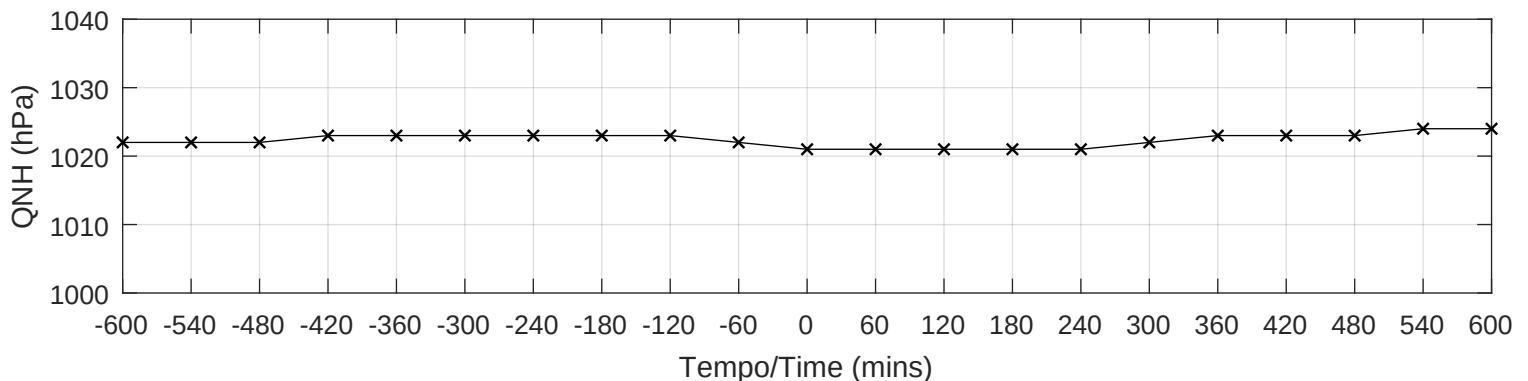
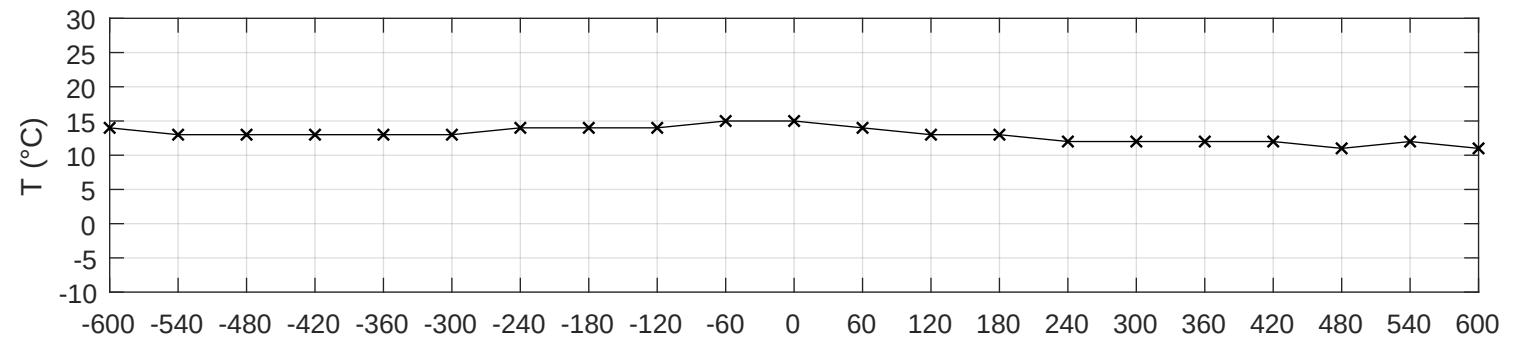
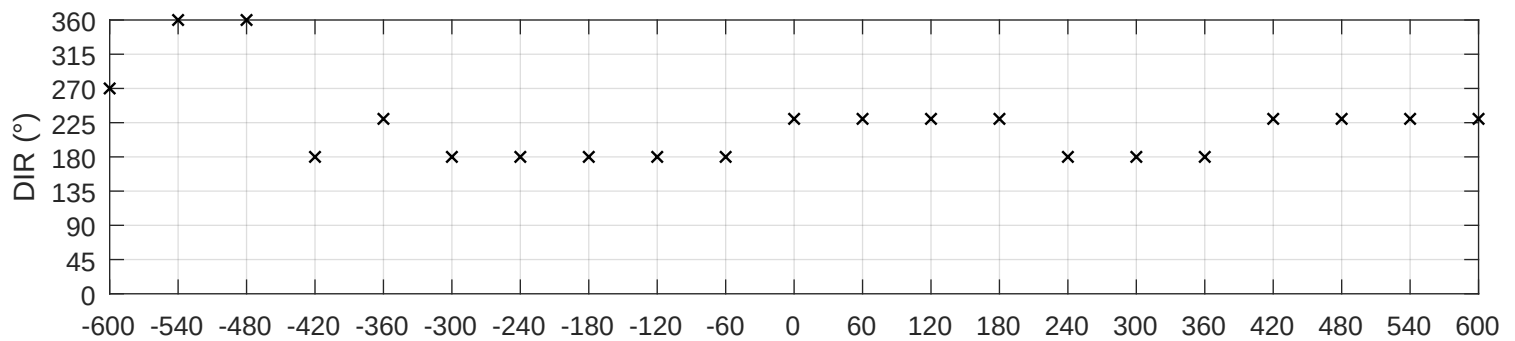
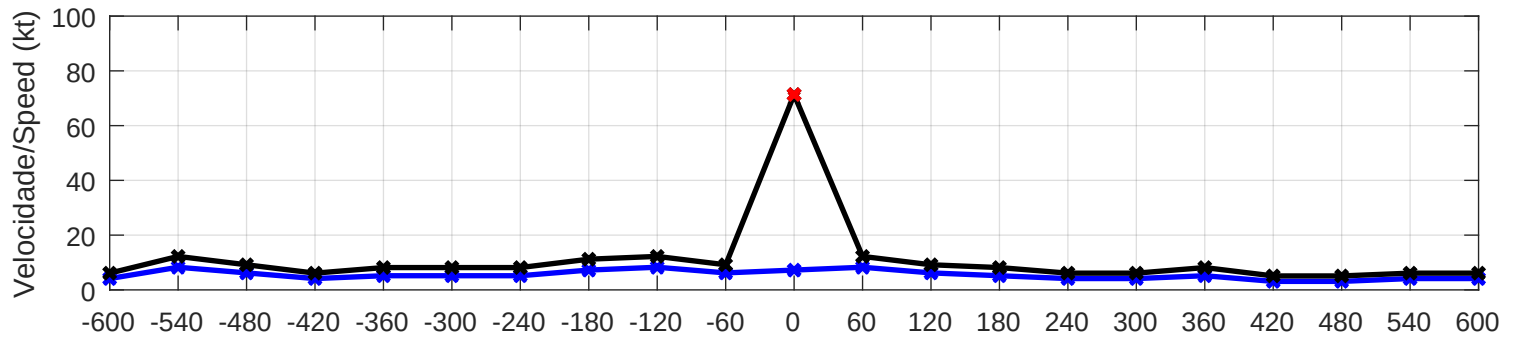
# SANT/87121 EVENTO/EVENT 23 - 09/06/2006, 22:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                        | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|---------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 70 \text{ kt}$      | $R_{-6} = 4.3$                | $T_{med,3} = 16.0 \text{ }^{\circ}\text{C}$       | $DIR = 200^{\circ}$                                           | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 10 \text{ kt}$      | $R_{-3} = 4.7$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 20^{\circ}$                            |                                | SUSPECT                         |
| $G_V = 7.0$                    | $R_{+3} = 8.8$                | $\Delta Q_{max,3} = 3.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 150^{\circ}$                           |                                | (311)                           |
| $G_{cor} = 71.3 \text{ kt}$    | $R_{+6} = 11.7$               | $\Delta \text{ Grupo/Group} = 2$                  | SANT 092200Z 20010G70KT 7000 FU BKN035<br>SCT100 15/10 Q1020= |                                |                                 |
| $V_{cor} = 10.3 \text{ kt}$    |                               |                                                   |                                                               |                                |                                 |



# SANT/87121 EVENTO/EVENT 24 - 27/06/2006, 18:00 UTC (MSS - REDEMET)

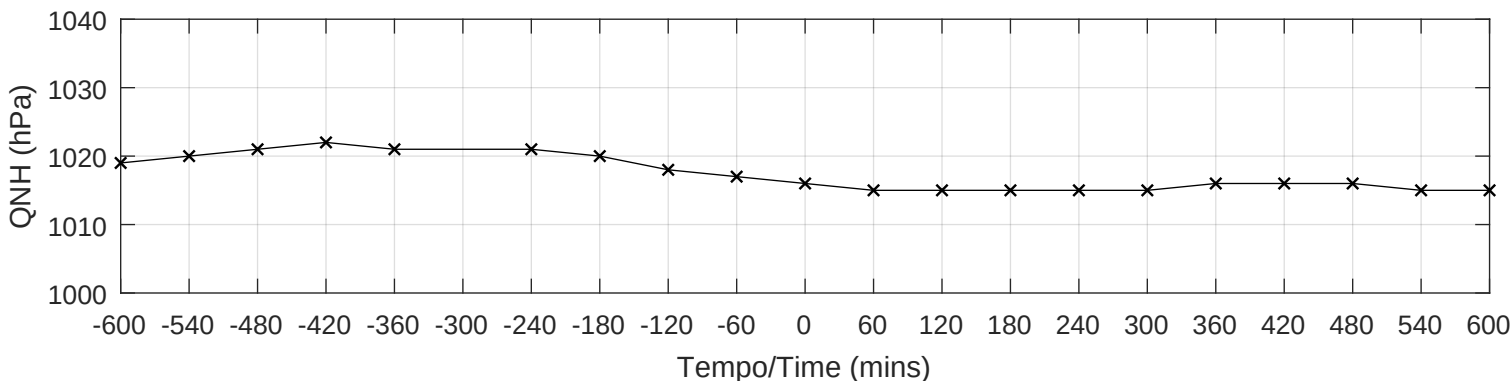
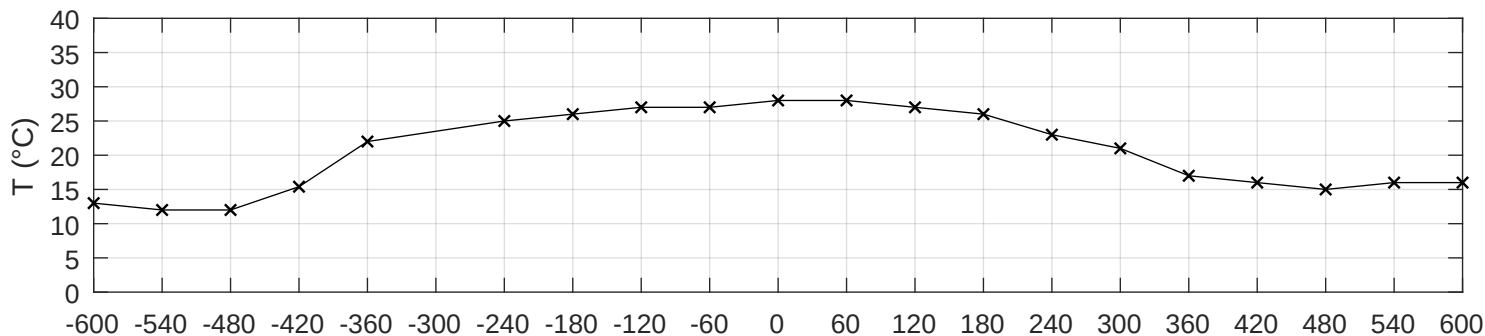
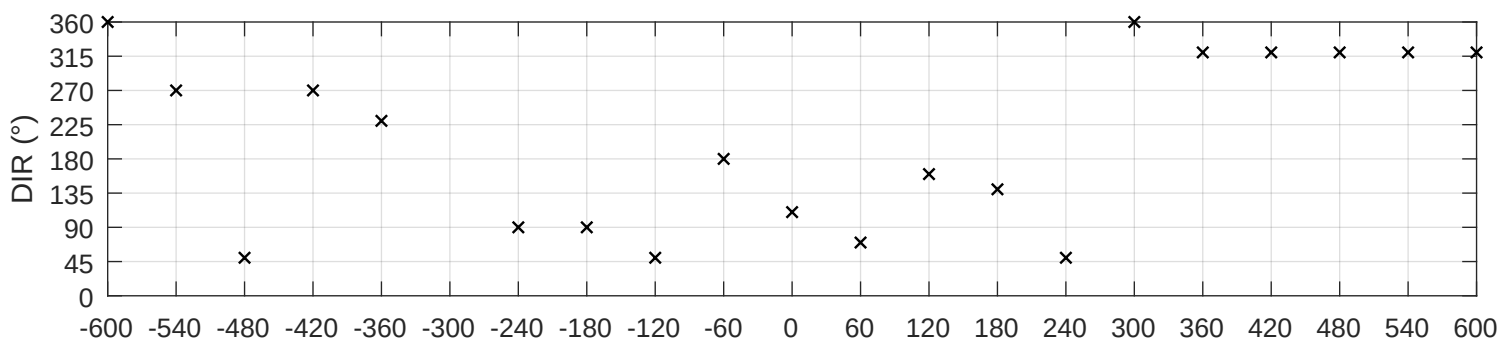
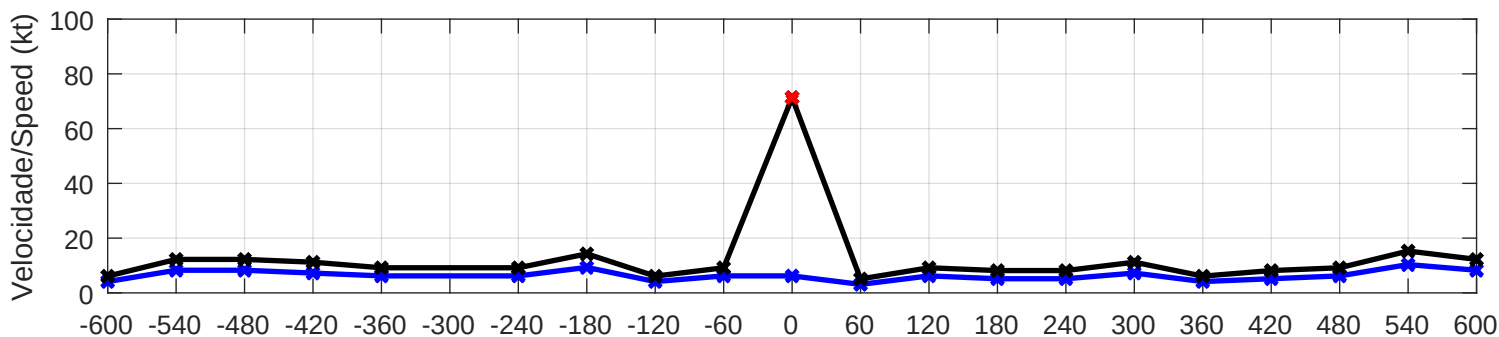
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 70$ kt              | $R_{-6} = 7.5$                | $T_{med,3} = 14.3$ °C        | $DIR = 230^\circ$                                      | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 7$ kt               | $R_{-3} = 6.6$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 50^\circ$                       |                                | SUSPECT                         |
| $G_V = 10.0$                   | $R_{+3} = 7.2$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                        |                                | (315)                           |
| $G_{cor} = 71.3$ kt            | $R_{+6} = 8.6$                | $\Delta$ Grupo/Group = 3     | SANT 271800Z 23007G70KT 7000 FU SCT100<br>15/08 Q1021= |                                |                                 |
| $V_{cor} = 7.2$ kt             |                               |                              |                                                        |                                |                                 |





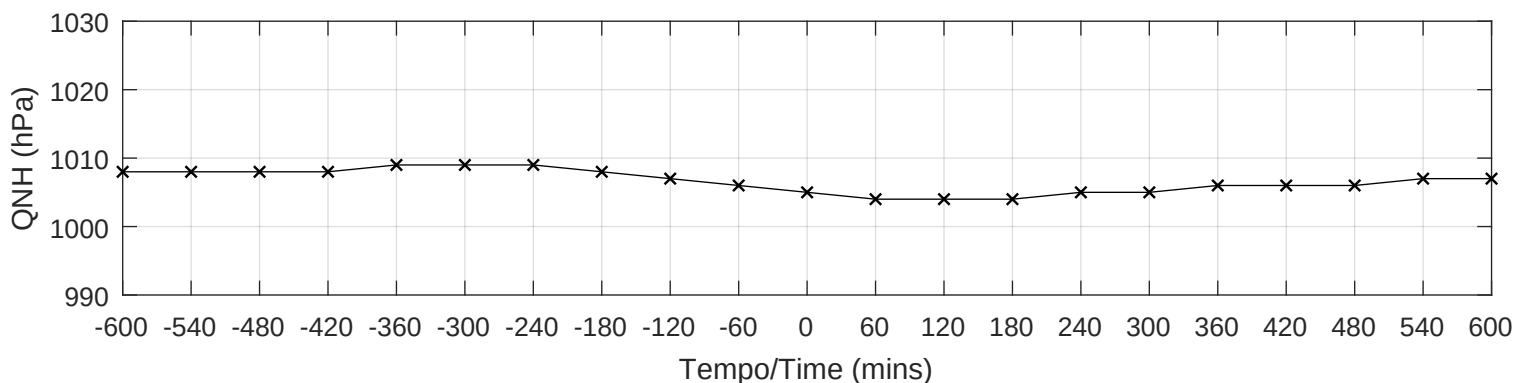
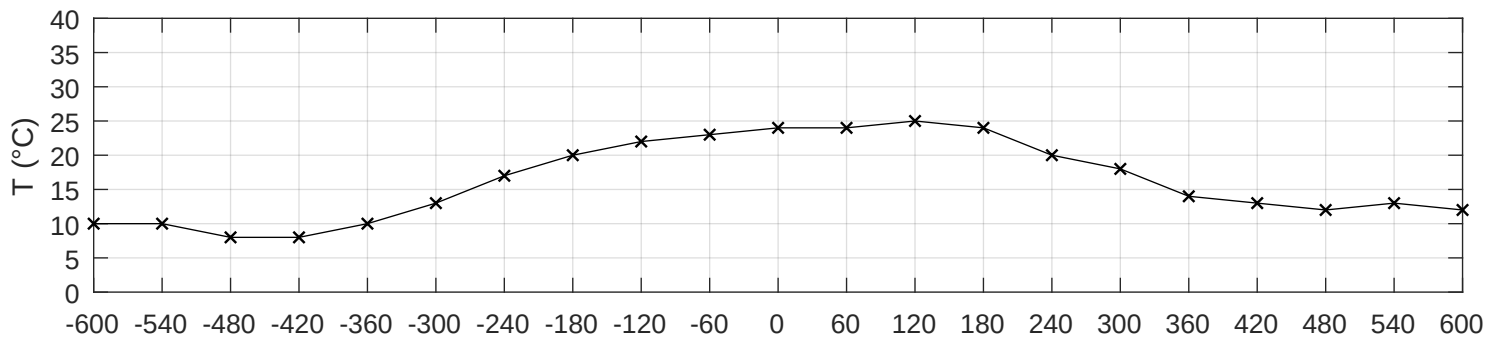
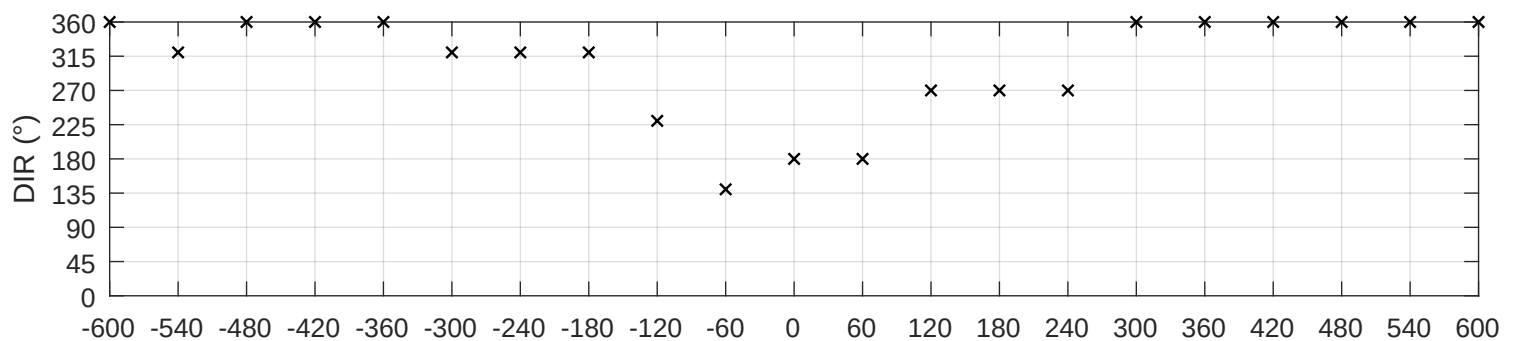
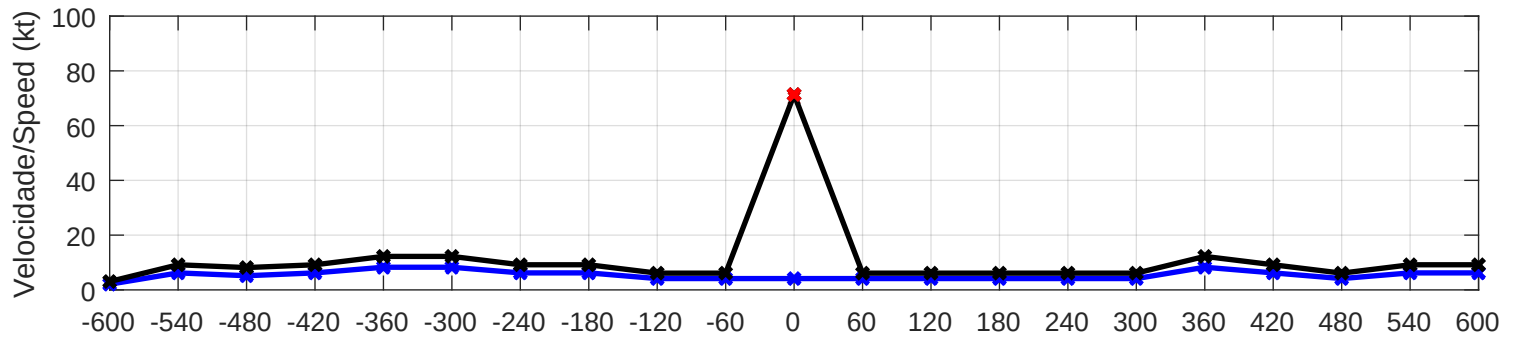
# SANT/87121 EVENTO/EVENT 25 - 20/09/2006, 19:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction            | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|---------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 70 \text{ kt}$      | $R_{-6} = 7.4$                | $T_{med,3} = 26.7 \text{ }^{\circ}\text{C}$       | $DIR = 110^{\circ}$                               | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 6 \text{ kt}$       | $R_{-3} = 7.2$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 70^{\circ}$                |                                | SUSPECT                         |
| $G_V = 11.7$                   | $R_{+3} = 9.5$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 50^{\circ}$                |                                | (315)                           |
| $G_{cor} = 71.3 \text{ kt}$    | $R_{+6} = 8.9$                | $\Delta \text{ Grupo/Group} = 3$                  | SANT 201900Z 11006G70KT 7000 FU SKC 28/M02 Q1016= |                                |                                 |
| $V_{cor} = 6.2 \text{ kt}$     |                               |                                                   |                                                   |                                |                                 |



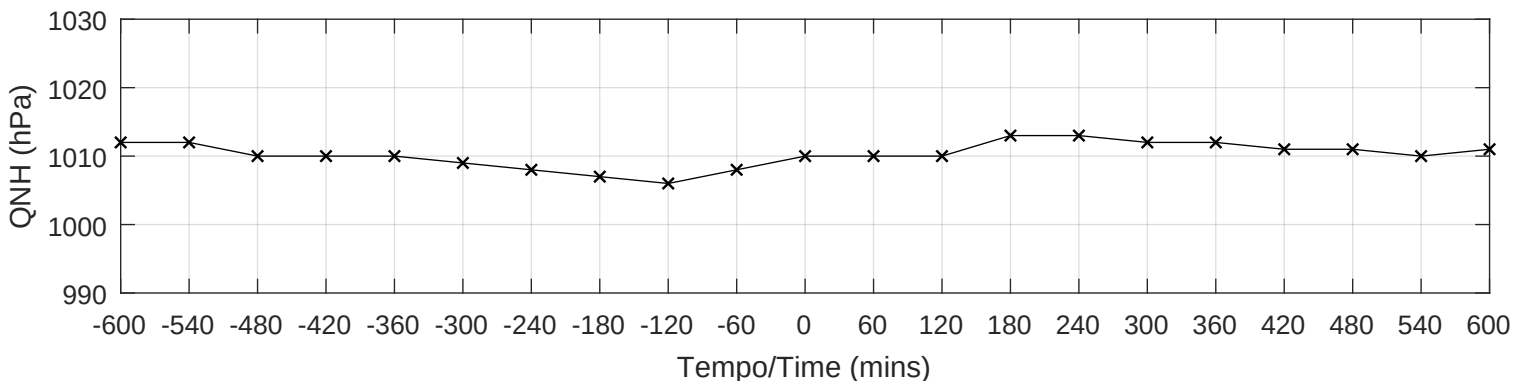
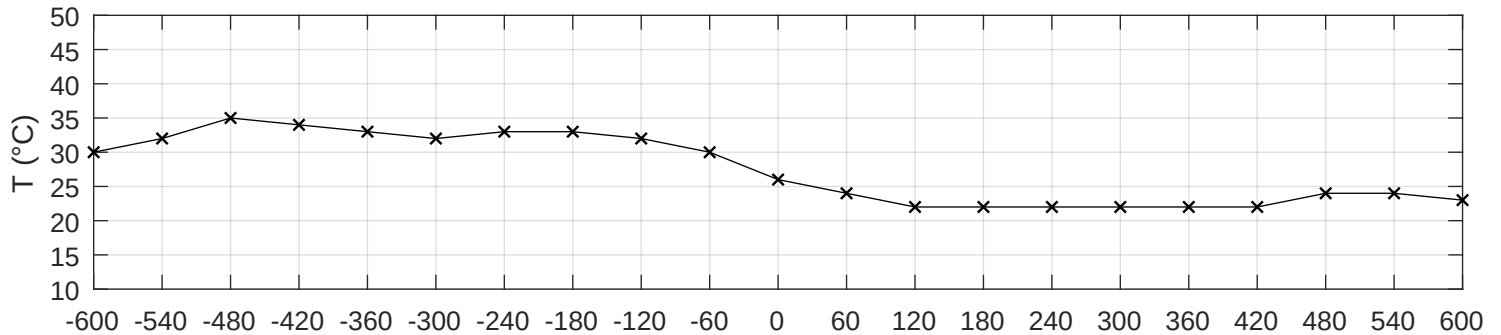
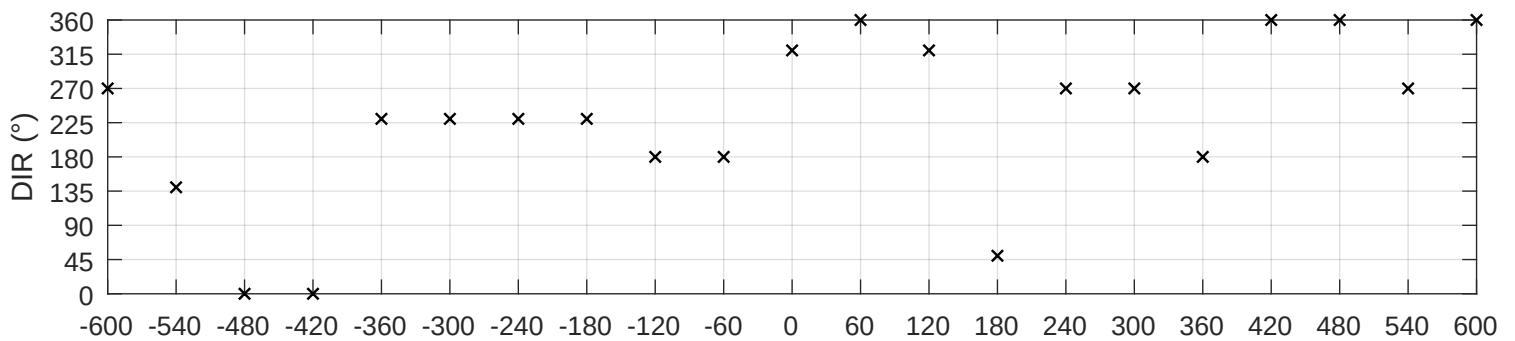
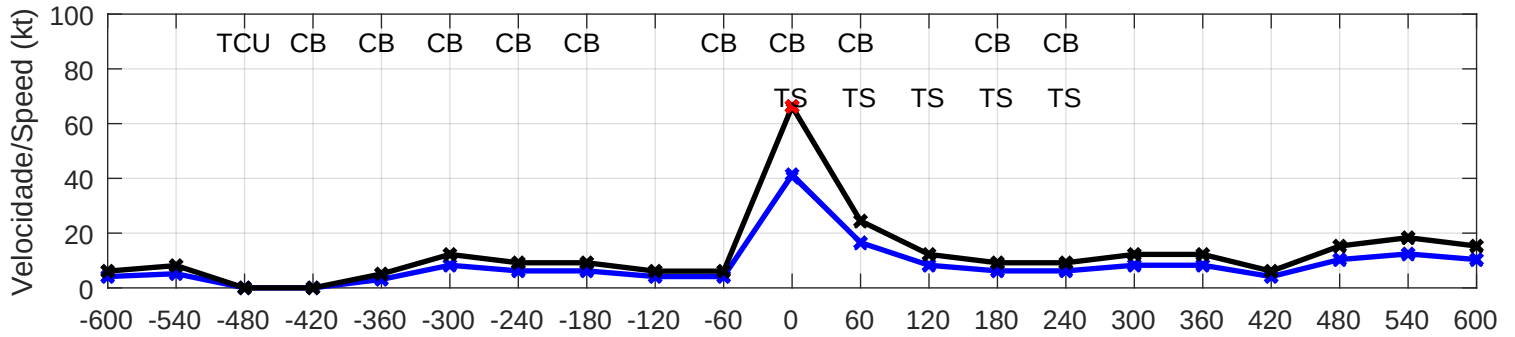
# SANT/87121 EVENTO/EVENT 26 - 14/07/2018, 18:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.<br>$\Delta$ Direction     | Temp. Elétrica<br>Thunderstorm         | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|----------------------------------------|---------------------------------|
| $G_{obs} = 70 \text{ kt}$      | $R_{-6} = 7.8$                | $T_{med,3} = 21.7 \text{ }^{\circ}\text{C}$       | $DIR = 180^{\circ}$                    | NÃO/NO                          |
| $V_{obs} = 4 \text{ kt}$       | $R_{-3} = 10.0$               | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 140^{\circ}$    | SUSPEITO                        |
| $G_V = 17.5$                   | $R_{+3} = 11.7$               | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 90^{\circ}$     | SUSPECT                         |
| $G_{cor} = 71.3 \text{ kt}$    | $R_{+6} = 10.0$               | $\Delta \text{ Grupo/Group} = 3$                  | METAR SANT 141800Z 18004G70KT 7000 NSC | (315)                           |
| $V_{cor} = 4.1 \text{ kt}$     |                               |                                                   | 24/09Q1005=                            |                                 |



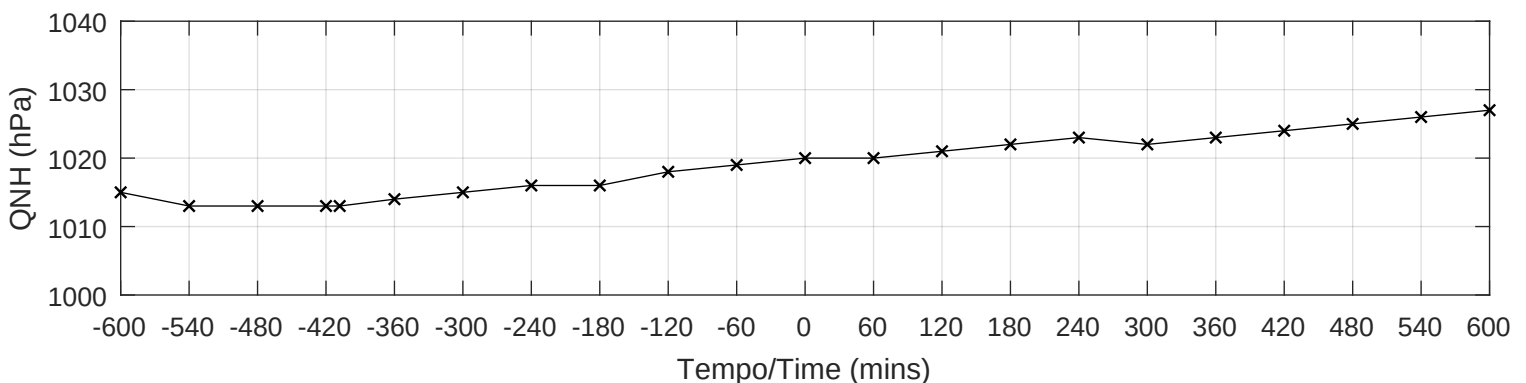
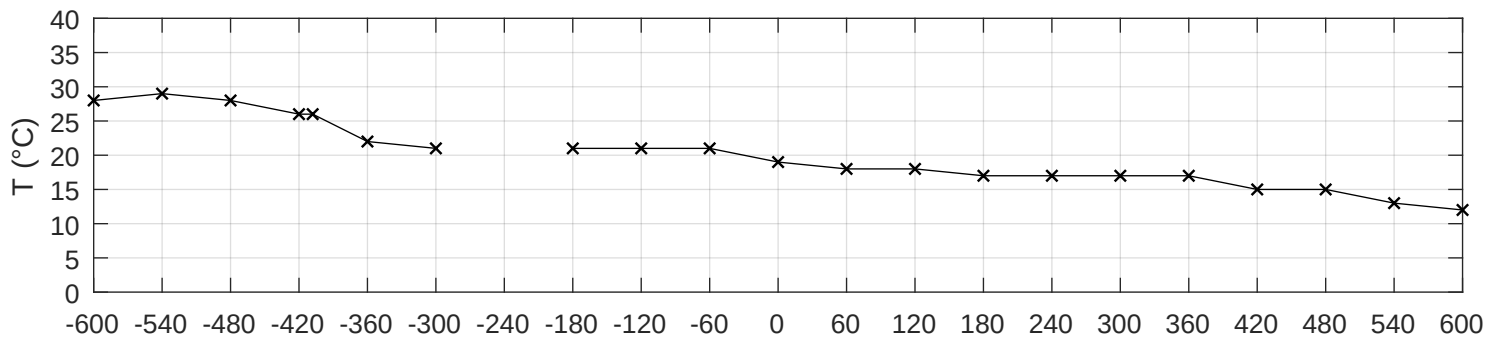
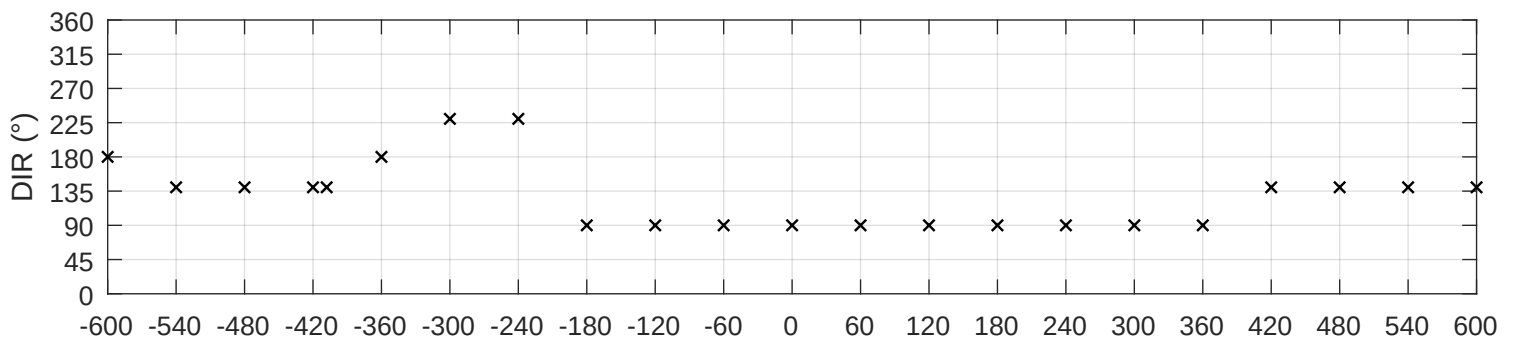
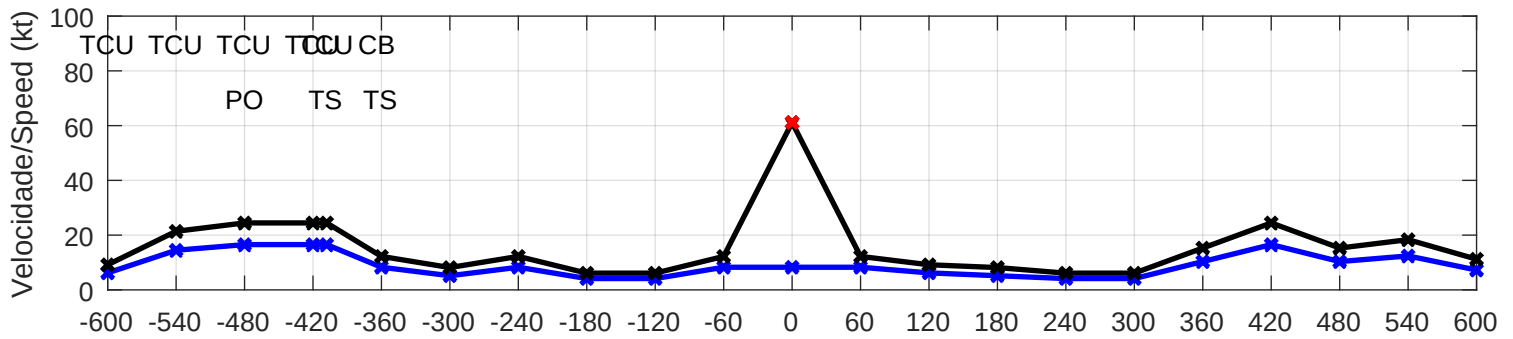
# SANT/87121 EVENTO/EVENT 27 - 18/01/2012, 00:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 65 \text{ kt}$      | $R_{-6} = 8.3$                | $T_{med,3} = 31.7 \text{ }^{\circ}\text{C}$        | $DIR = 320^{\circ}$                                                            | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 40 \text{ kt}$      | $R_{-3} = 9.3$                | $\Delta T_{min,3} = -8.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 140^{\circ}$                                            |                                | NON-SYNOPTIC                    |
| $G_V = 1.6$                    | $R_{+3} = 4.3$                | $\Delta Q_{max,3} = 4.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 90^{\circ}$                                             |                                | (110)                           |
| $G_{cor} = 66.2 \text{ kt}$    | $R_{+6} = 5.0$                | $\Delta \text{ Grupo/Group} = 1$                   | METAR SANT 180000Z 32040G65KT 7000 -TSRA<br>SCT040SCT050CB SCT100 26/20 Q1010= |                                |                                 |
| $V_{cor} = 41.4 \text{ kt}$    |                               |                                                    |                                                                                |                                |                                 |



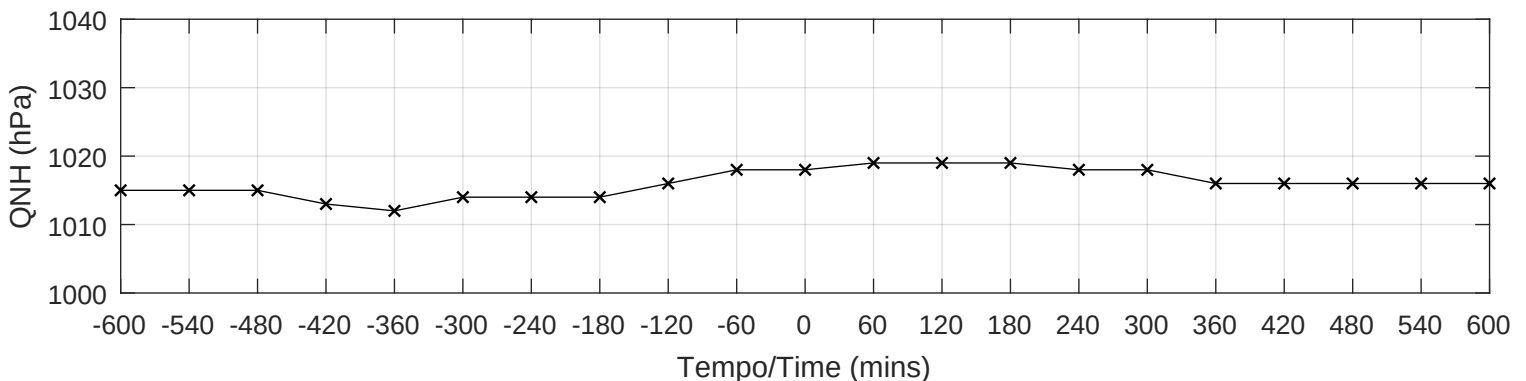
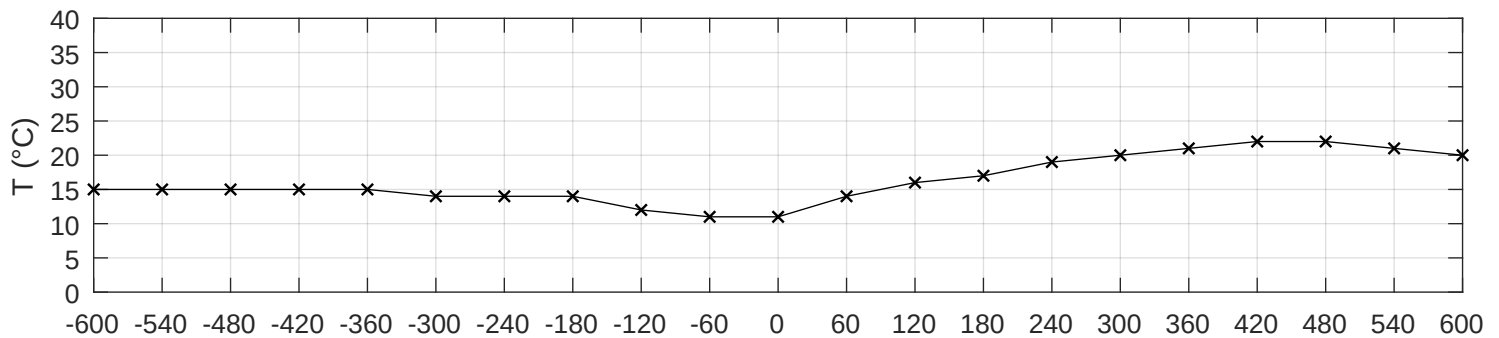
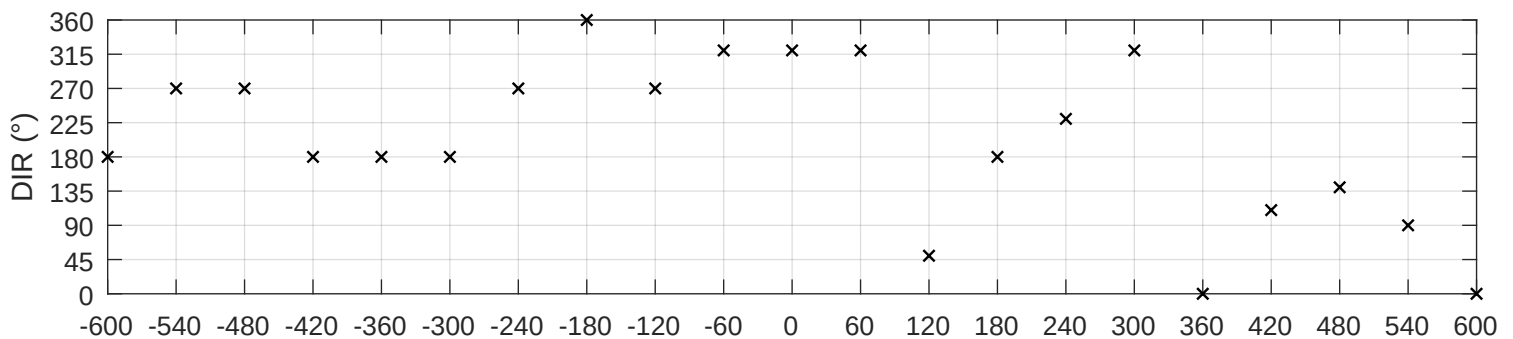
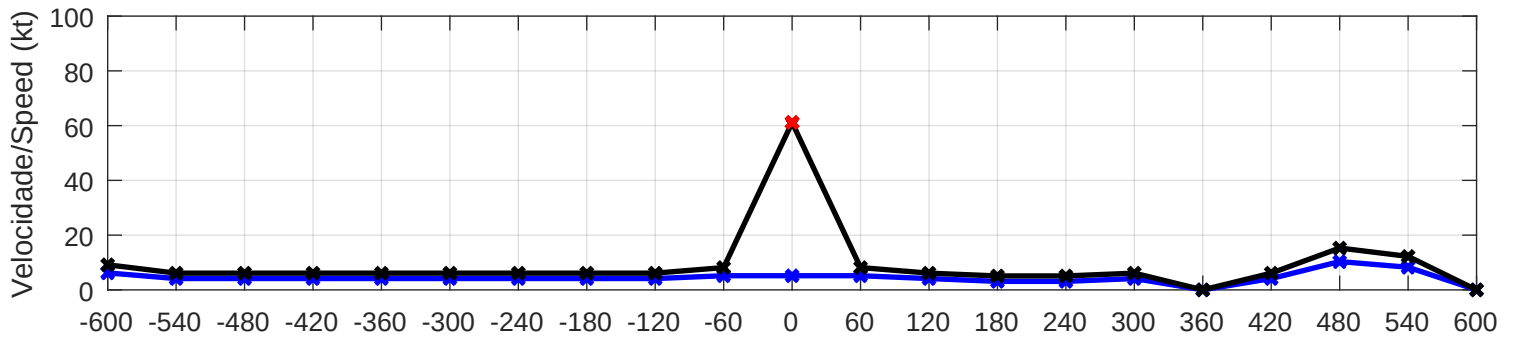
# SANT/87121 EVENTO/EVENT 28 - 30/04/2006, 02:00 UTC (MSS - REDEMETS)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 60$ kt              | $R_{-6} = 6.4$                | $T_{med,3} = 21.0$ °C        | $DIR = 90^\circ$                                               | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 8$ kt               | $R_{-3} = 7.5$                | $\Delta T_{min,3} = -3.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                                |                                | SUSPECT                         |
| $G_V = 7.5$                    | $R_{+3} = 6.2$                | $\Delta Q_{max,3} = 2.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                                |                                | (311)                           |
| $G_{cor} = 61.1$ kt            | $R_{+6} = 6.4$                | $\Delta$ Grupo/Group = 1     | SANT 300200Z 09008G60KT 6000 -DZ BKN005<br>OVC030 19/18 Q1020= |                                |                                 |
| $V_{cor} = 8.3$ kt             |                               |                              |                                                                |                                |                                 |



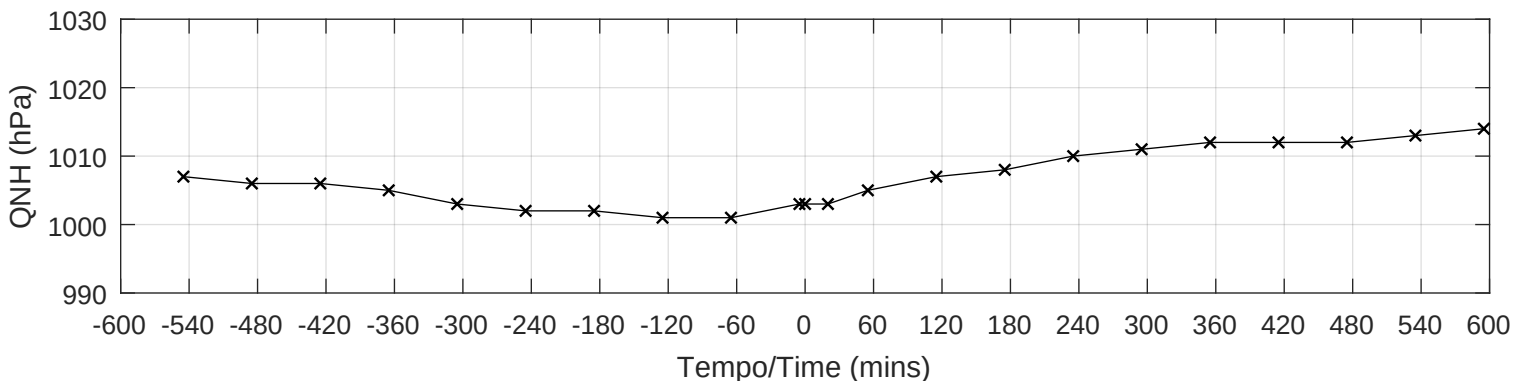
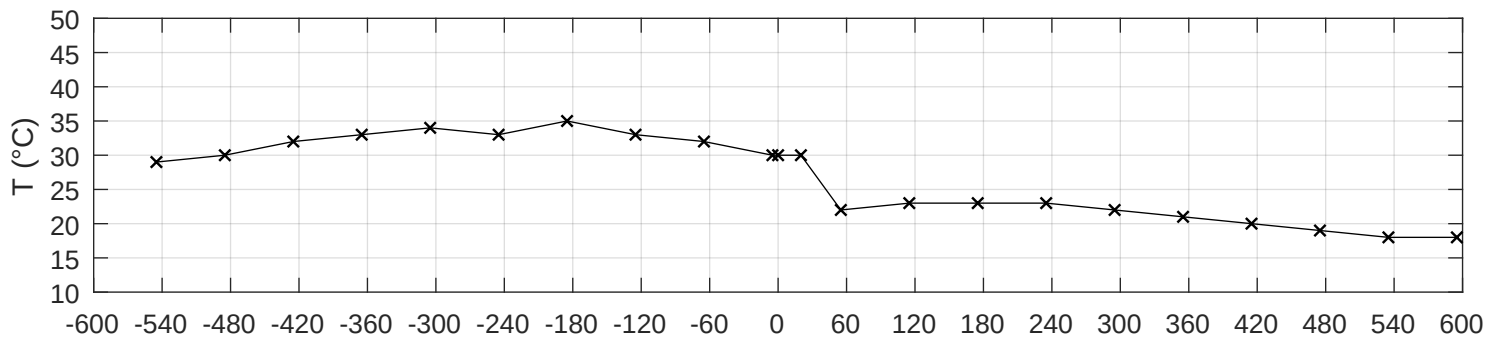
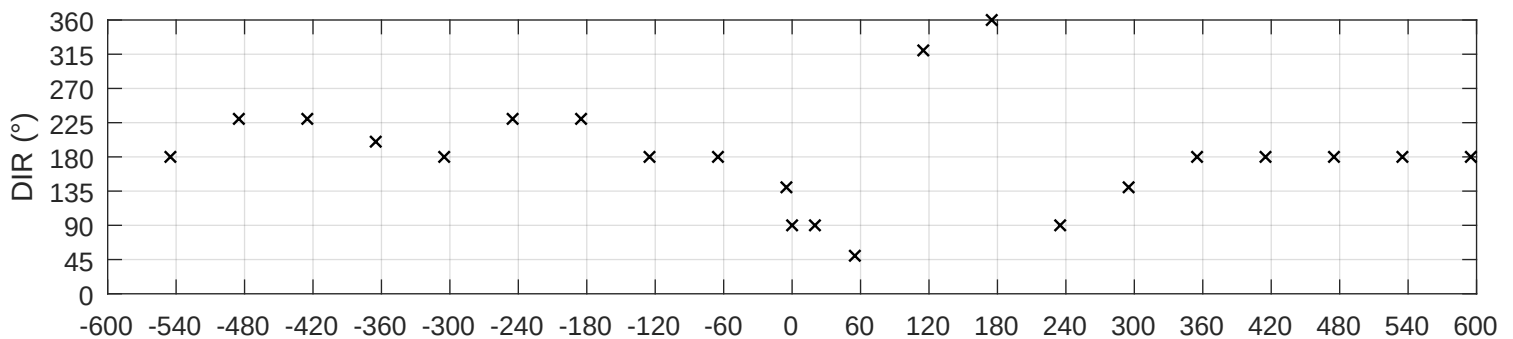
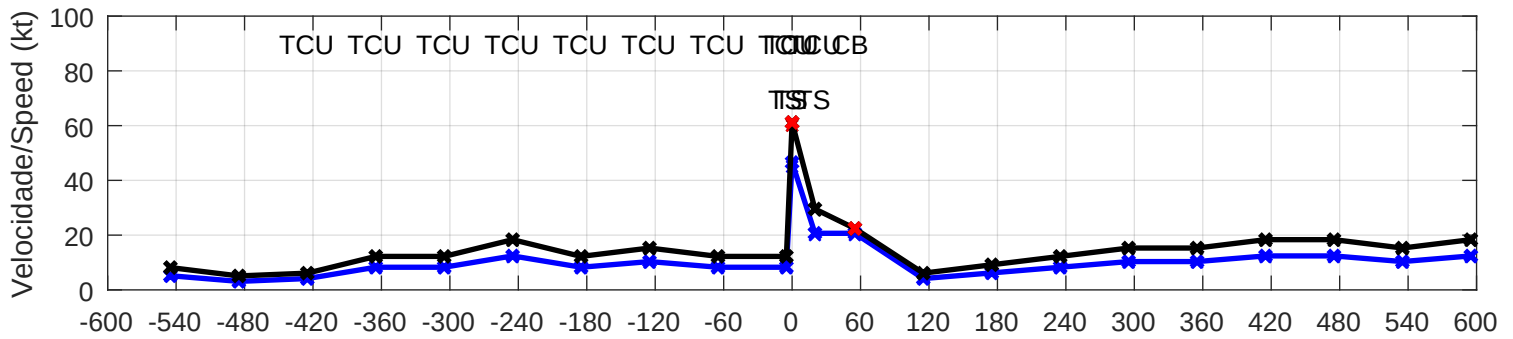
# SANT/87121 EVENTO/EVENT 29 - 03/06/2006, 11:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 60 \text{ kt}$      | $R_{-6} = 9.5$                | $T_{med,3} = 12.3 \text{ }^{\circ}\text{C}$        | $DIR = 320^{\circ}$                                    | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 5 \text{ kt}$       | $R_{-3} = 9.0$                | $\Delta T_{min,3} = -1.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                     |                                | SUSPECT                         |
| $G_V = 12.0$                   | $R_{+3} = 9.5$                | $\Delta Q_{max,3} = 3.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 140^{\circ}$                    |                                | (311)                           |
| $G_{cor} = 61.1 \text{ kt}$    | $R_{+6} = 12.0$               | $\Delta \text{ Grupo/Group} = 2$                   | SANT 031100Z 32005G60KT 6000 BR SCT030<br>11/09 Q1018= |                                |                                 |
| $V_{cor} = 5.2 \text{ kt}$     |                               |                                                    |                                                        |                                |                                 |



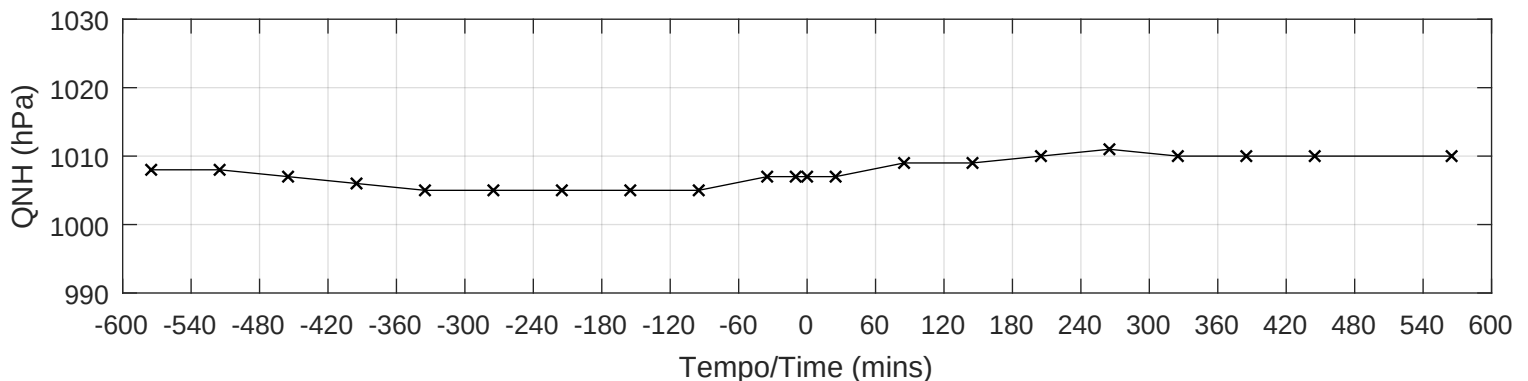
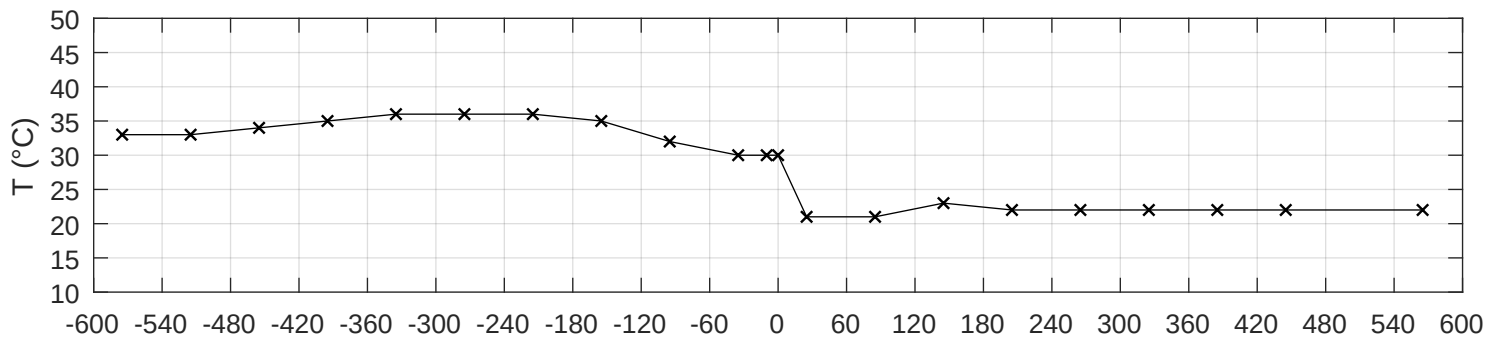
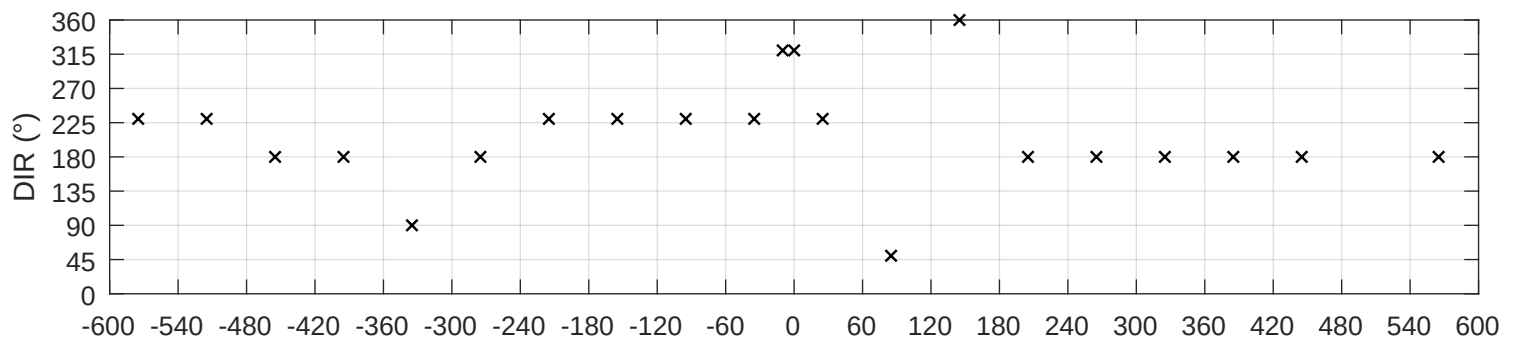
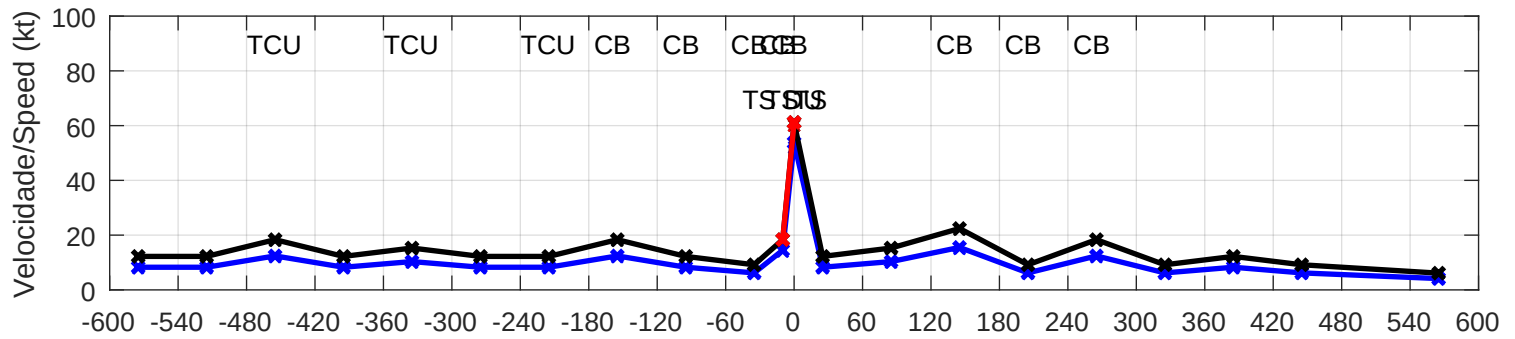
# SANT/87121 EVENTO/EVENT 30 - 27/11/2010, 23:05 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                                    | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|---------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 60$ kt              | $R_{-6} = 4.4$                | $T_{med,3} = 32.5$ °C         | $DIR = 90^\circ$                                                          | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 45$ kt              | $R_{-3} = 4.5$                | $\Delta T_{min,3} = -10.0$ °C | $\Delta DIR_{max,-3} = 90^\circ$                                          |                                | NON-SYNOPTIC                    |
| $G_V = 1.3$                    | $R_{+3} = 4.0$                | $\Delta Q_{max,3} = 4.0$ hPa  | $\Delta DIR_{max,+3} = 130^\circ$                                         |                                | (110)                           |
| $G_{cor} = 61.1$ kt            | $R_{+6} = 4.1$                | $\Delta$ Grupo/Group = 1      | SANT 272305Z 09045G60KT 500+TSRA<br>FEW035FEW045TCU SCT050CB 30/19 Q1003= |                                |                                 |
| $V_{cor} = 46.5$ kt            |                               |                               |                                                                           |                                |                                 |



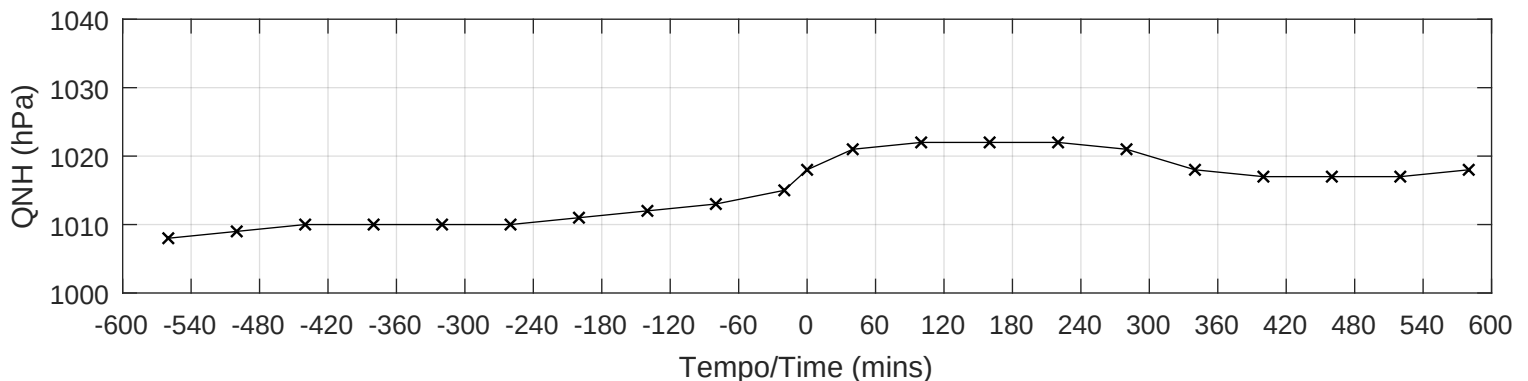
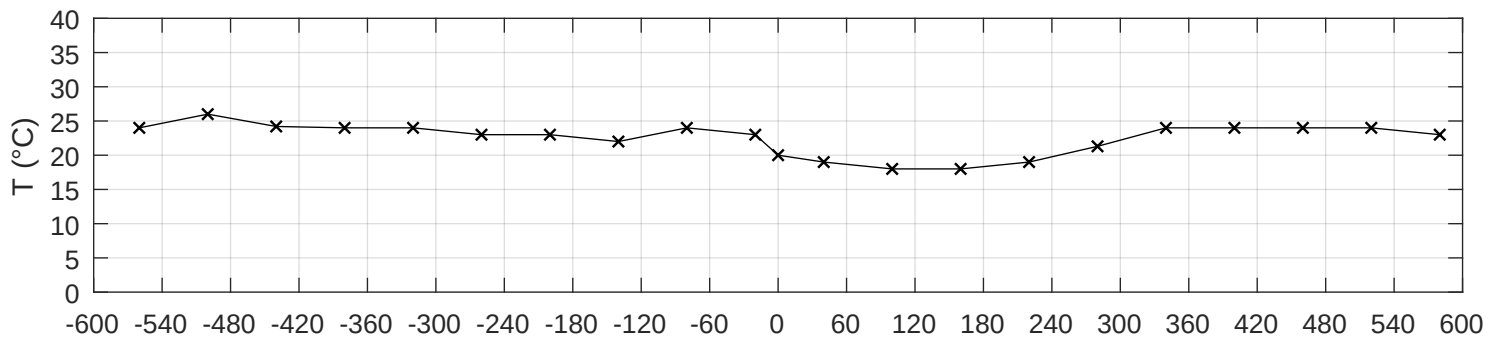
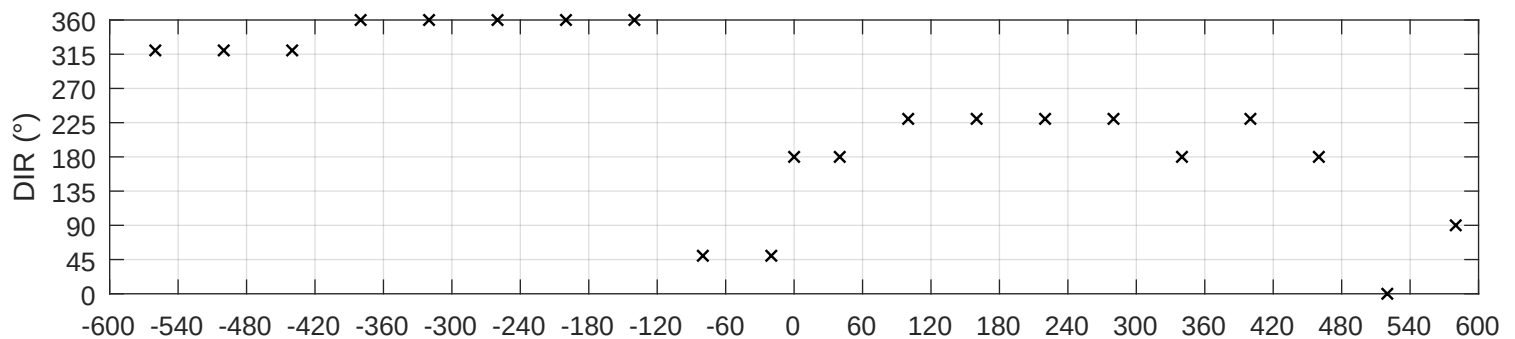
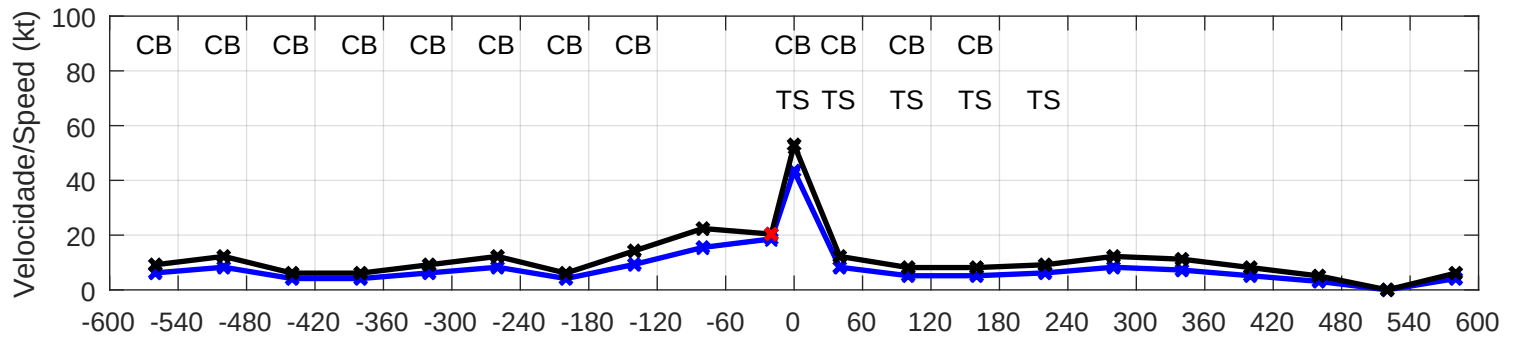
# SANT/87121 EVENTO/EVENT 31 - 28/10/2012, 00:35 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                             | $\Delta$ Direção<br>$\Delta$ Direction                                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-----------------------------------------------------|------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 60 \text{ kt}$      | $R_{-6} = 4.4$                | $T_{med,3} = 33.5 \text{ }^{\circ}\text{C}$         | $DIR = 320^{\circ}$                                                    | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 52 \text{ kt}$      | $R_{-3} = 4.2$                | $\Delta T_{min,3} = -11.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$                                     |                                | NON-SYNOPTIC                    |
| $G_V = 1.2$                    | $R_{+3} = 3.7$                | $\Delta Q_{max,3} = 2.0 \text{ hPa}$                | $\Delta DIR_{max,+3} = 90^{\circ}$                                     |                                | (110)                           |
| $G_{cor} = 61.1 \text{ kt}$    | $R_{+6} = 4.2$                | $\Delta \text{ Grupo/Group} = 1$                    | SPECI SANT 280035Z 32052G60KT 0300+TSRA<br>BKN050CBOVC100 30/18 Q1007= |                                |                                 |
| $V_{cor} = 53.8 \text{ kt}$    |                               |                                                     |                                                                        |                                |                                 |



# SANT/87121 EVENTO/EVENT 32 - 28/02/2005, 13:20 UTC (MSS - WUNDERGROUND)

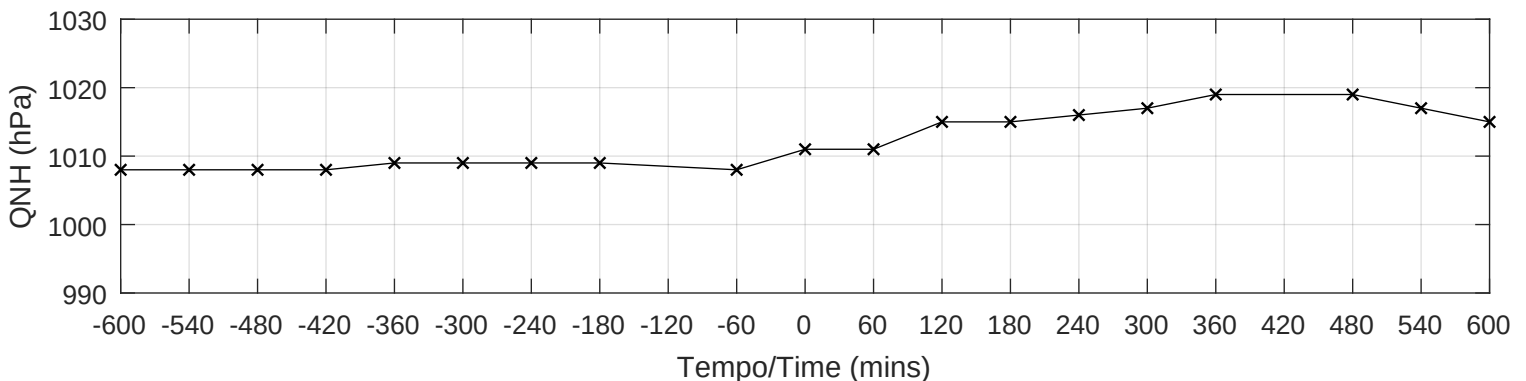
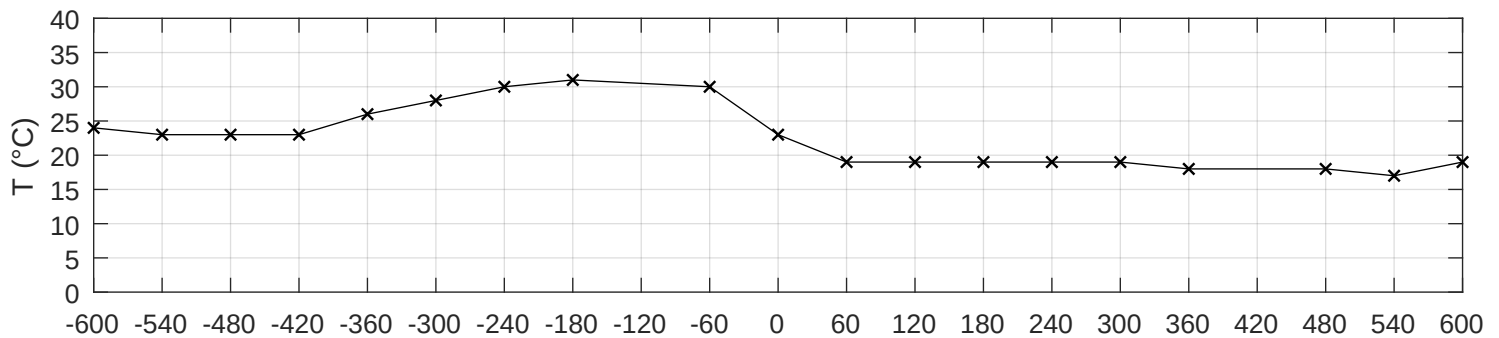
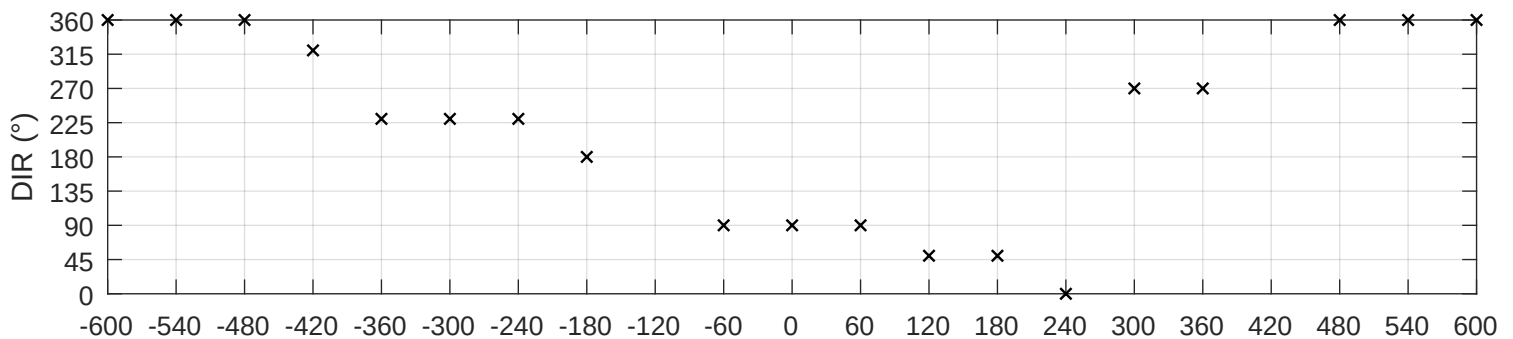
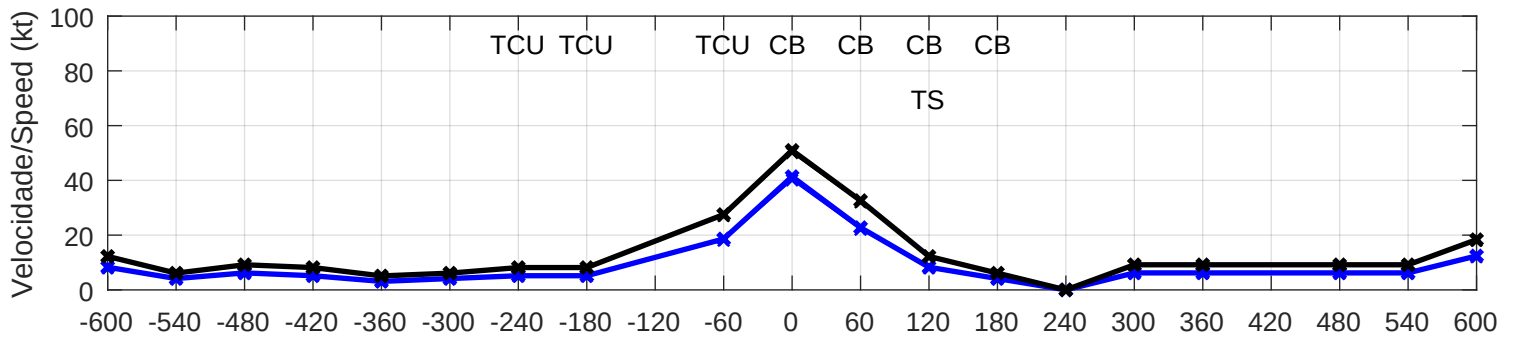
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                               | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 52$ kt                  | $R_{-6} = 4.0$                | $T_{med,3} = 23.0$ °C        | $DIR = 180^\circ$                                                    | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 42$ kt              | $R_{-3} = 2.8$                | $\Delta T_{min,3} = -5.0$ °C | $\Delta DIR_{max,-3} = 180^\circ$                                    |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 5.6$                | $\Delta Q_{max,3} = 8.0$ hPa | $\Delta DIR_{max,+3} = 50^\circ$                                     |                                | (120)                           |
| $G_{cor} = 53.0$ kt            | $R_{+6} = 5.2$                | $\Delta$ Grupo/Group = 1     | SPECI SANT 281320Z 18042KT 0600 +TSRA<br>BKN010 BKN040CB 20/18 Q1018 |                                |                                 |
| $V_{cor} = 43.4$ kt            |                               |                              |                                                                      |                                |                                 |





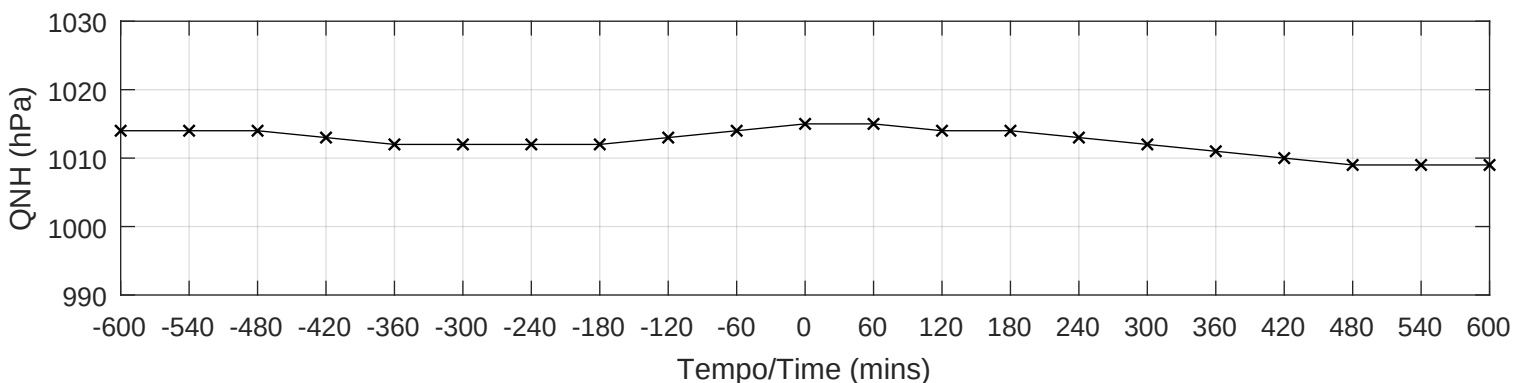
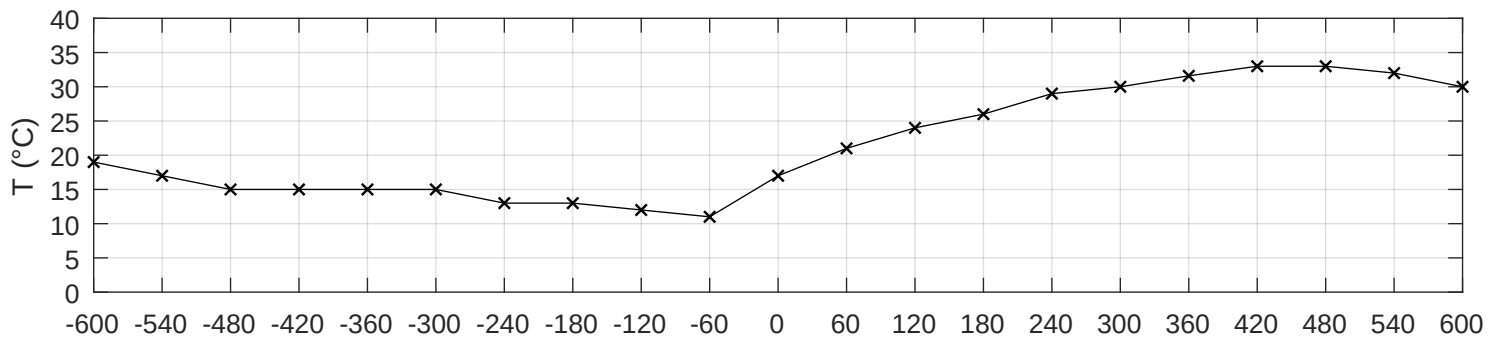
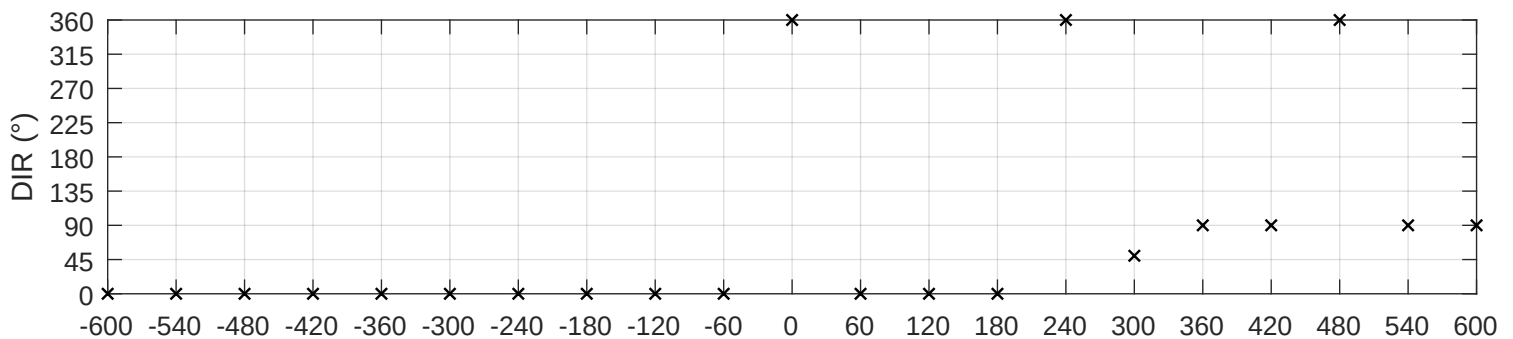
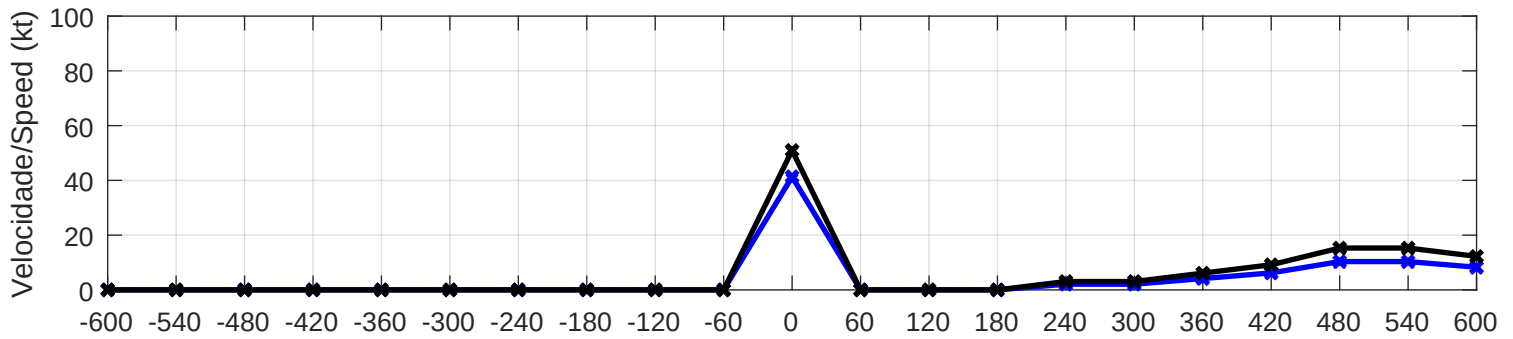
# SANT/87121 EVENTO/EVENT 33 - 31/12/1998, 18:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                                      | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|-----------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 50$ kt                  | $R_{-6} = 4.6$                | $T_{med,3} = 30.5$ °C         | $DIR = 90^\circ$                                                            | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 40$ kt              | $R_{-3} = 2.9$                | $\Delta T_{min,3} = -11.0$ °C | $\Delta DIR_{max,-3} = 90^\circ$                                            |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 3.0$                | $\Delta Q_{max,3} = 3.0$ hPa  | $\Delta DIR_{max,+3} = 40^\circ$                                            |                                | (123)                           |
| $G_{cor} = 51.0$ kt            | $R_{+6} = 4.4$                | $\Delta$ Grupo/Group = 1      | METAR SANT 311800Z 09040KT 6000M 07SA<br>FEW010 SCT035 SCT050CB 23/18 Q1011 |                                |                                 |
| $V_{cor} = 41.4$ kt            |                               |                               |                                                                             |                                |                                 |



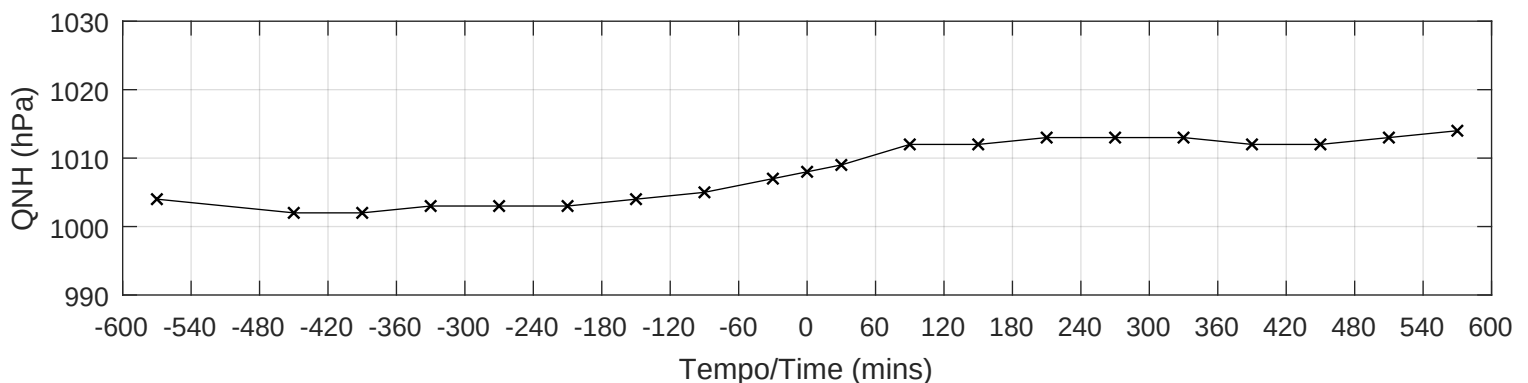
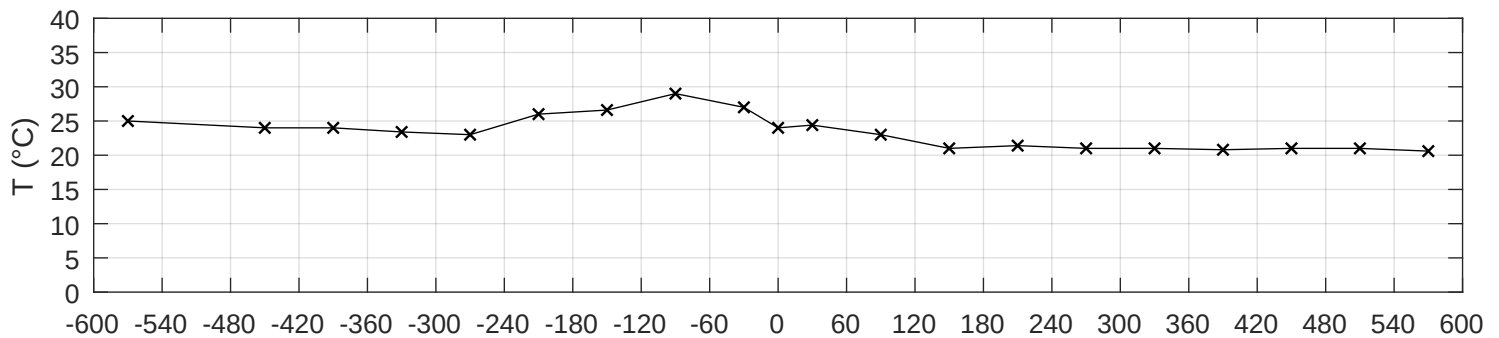
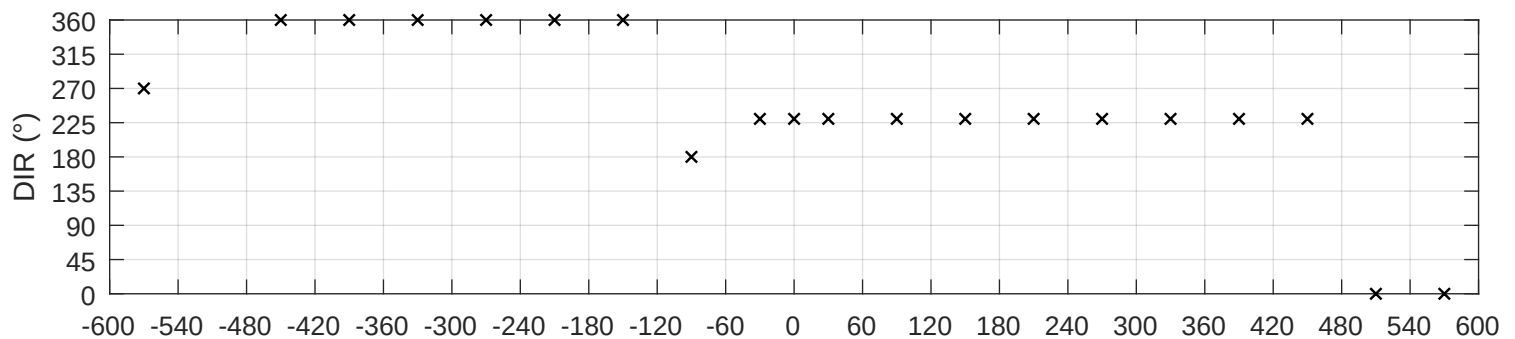
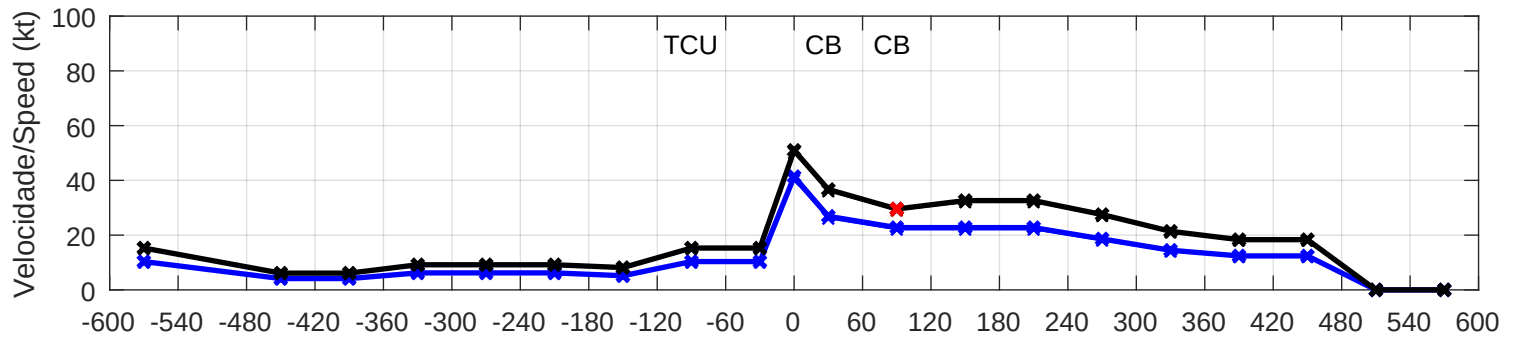
# SANT/87121 EVENTO/EVENT 34 - 06/10/2000, 12:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.             | $\Delta$ Direção<br>$\Delta$ Direction          | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------------|-------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 50$ kt                  | $R_{-6} = \text{Inf}$         | $T_{\text{med},3} = 12.0$ °C        | $\text{DIR} = 360^\circ$                        | NÃO/NO                         | SUSPEITO                        |
| $V_{\text{obs}} = 40$ kt       | $R_{-3} = \text{Inf}$         | $\Delta T_{\text{min},3} = -1.0$ °C | $\Delta \text{DIR}_{\text{max},-3} = 0^\circ$   |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = \text{Inf}$         | $\Delta Q_{\text{max},3} = 2.0$ hPa | $\Delta \text{DIR}_{\text{max},+3} = 0^\circ$   |                                | (321)                           |
| $G_{\text{cor}} = 51.0$ kt     | $R_{+6} = 25.0$               | $\Delta$ Grupo/Group = 2            | METAR SANT 061200Z 36040KT 8000 SKC 17/08 Q1015 |                                |                                 |
| $V_{\text{cor}} = 41.4$ kt     |                               |                                     |                                                 |                                |                                 |



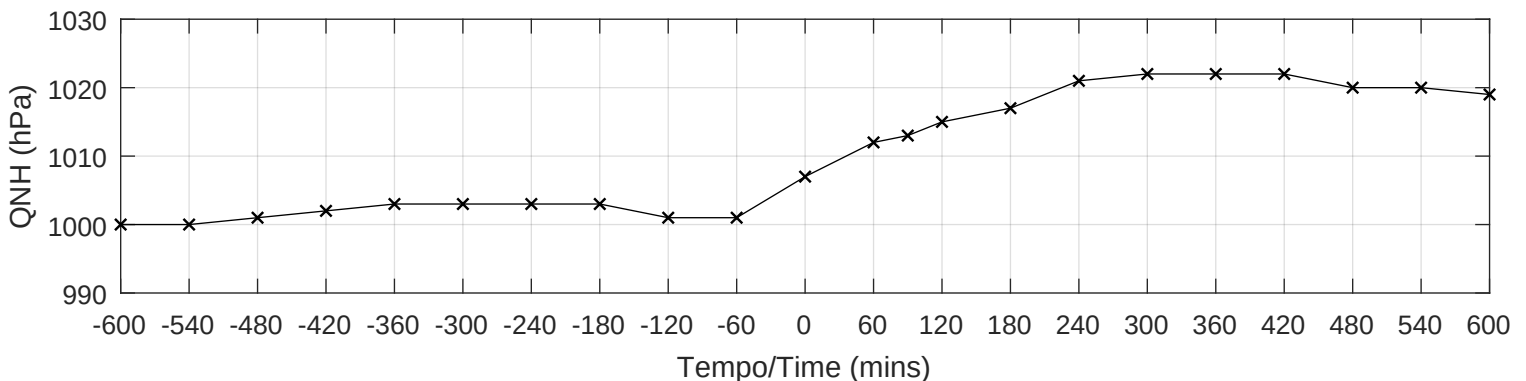
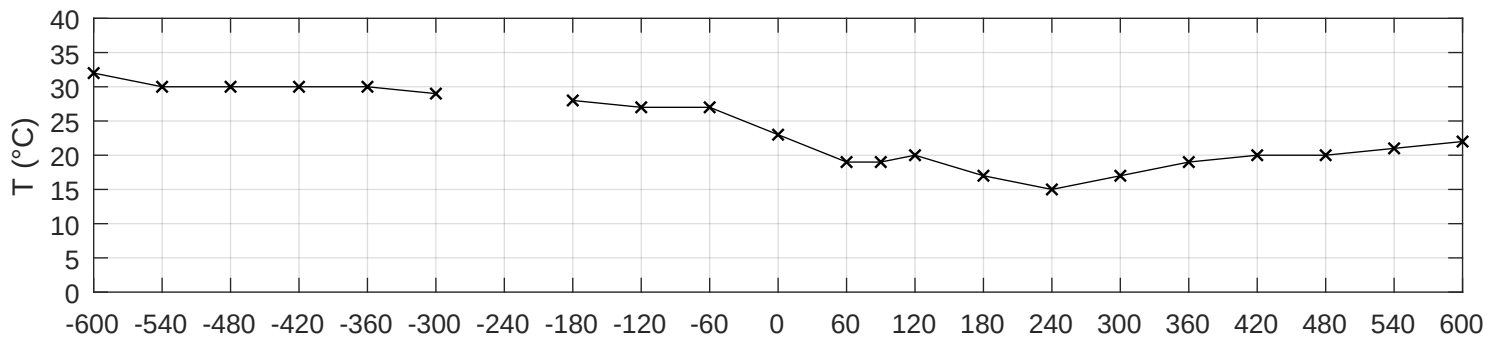
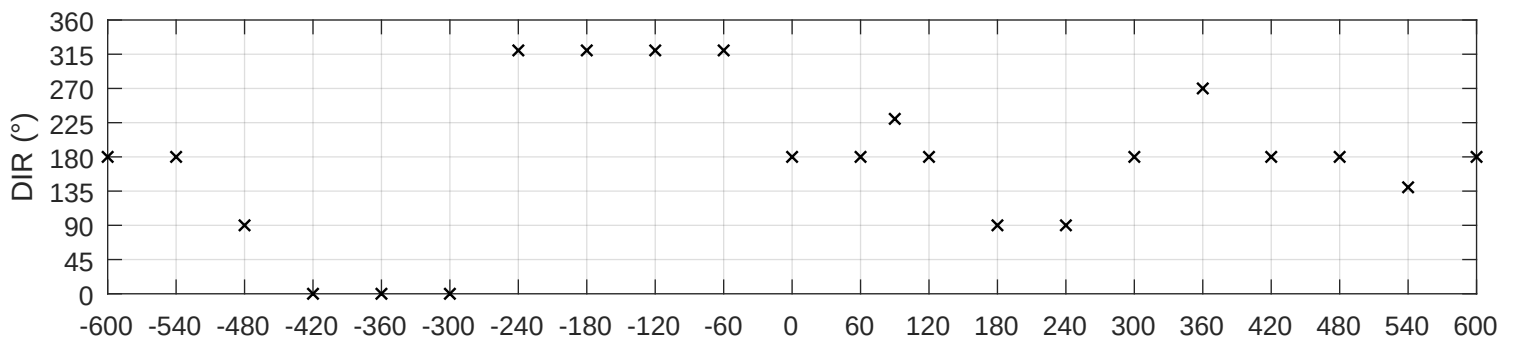
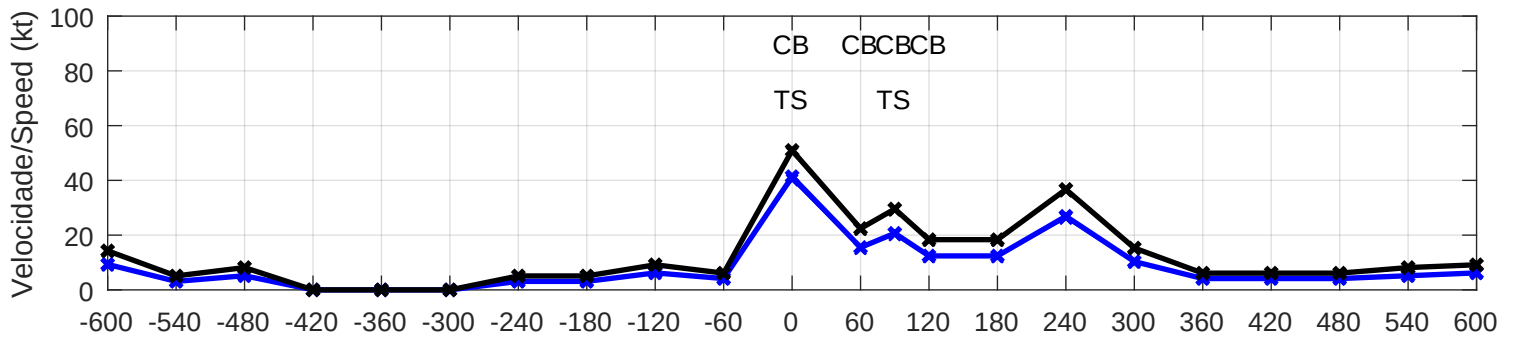
# SANT/87121 EVENTO/EVENT 35 - 28/01/2001, 14:30 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                      | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 50$ kt                  | $R_{-6} = 4.8$                | $T_{med,3} = 27.8$ °C        | $DIR = 230^\circ$                                           | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 40$ kt              | $R_{-3} = 4.1$                | $\Delta T_{min,3} = -5.0$ °C | $\Delta DIR_{max,-3} = 130^\circ$                           |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.5$                | $\Delta Q_{max,3} = 4.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                             |                                | (221)                           |
| $G_{cor} = 51.0$ kt            | $R_{+6} = 1.7$                | $\Delta$ Grupo/Group = 1     | SANT 281430Z 23040KT 2000 +RA BKN005 BKN030<br>24/23 Q1008= |                                |                                 |
| $V_{cor} = 41.4$ kt            |                               |                              |                                                             |                                |                                 |



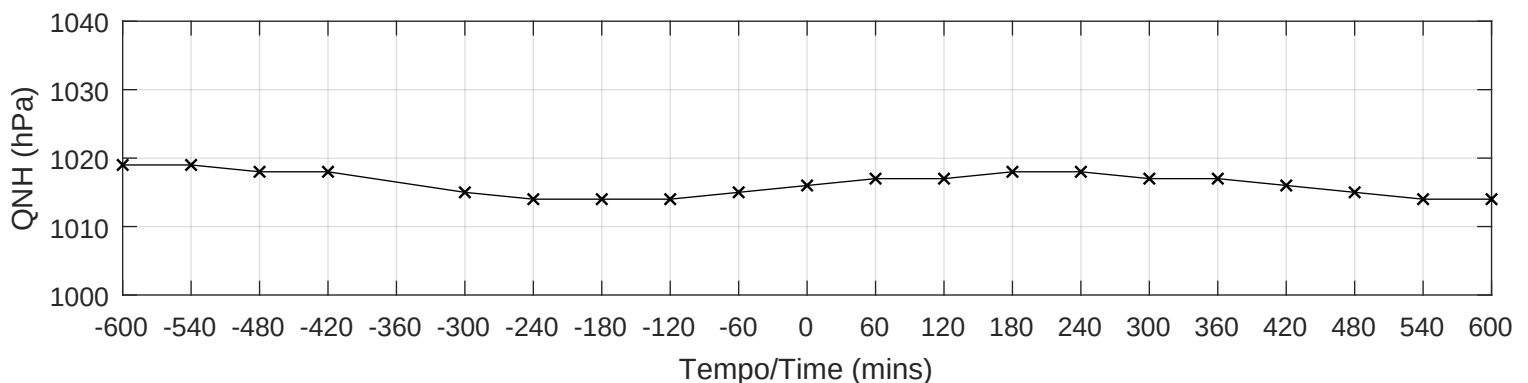
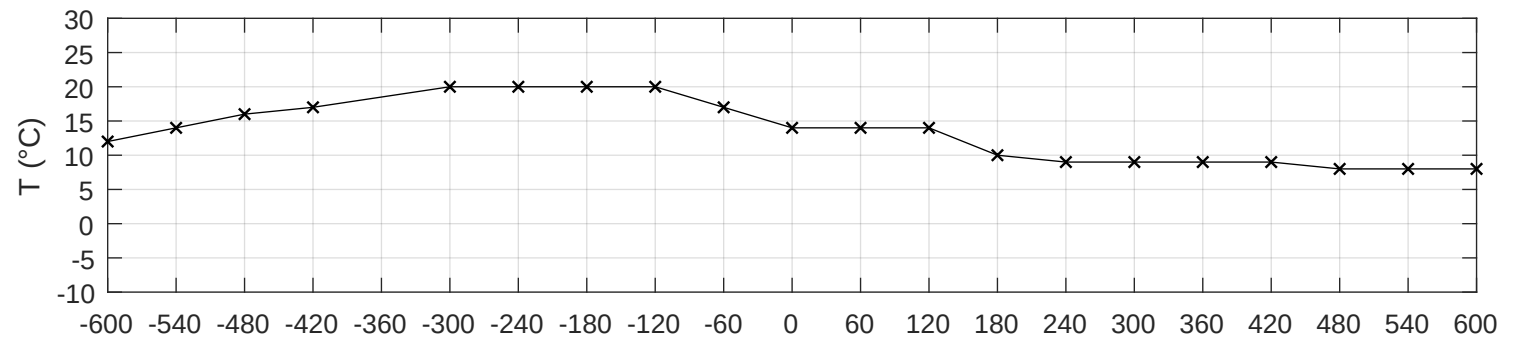
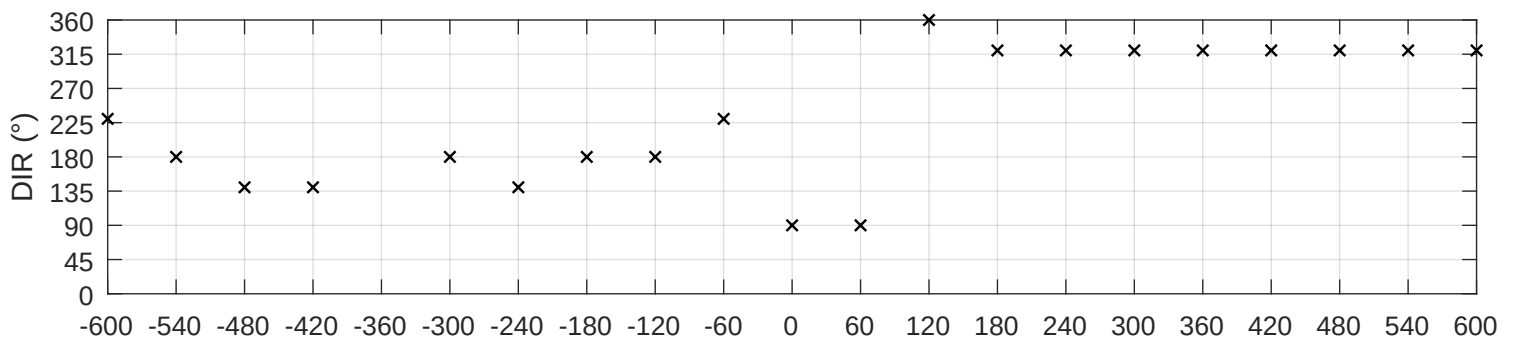
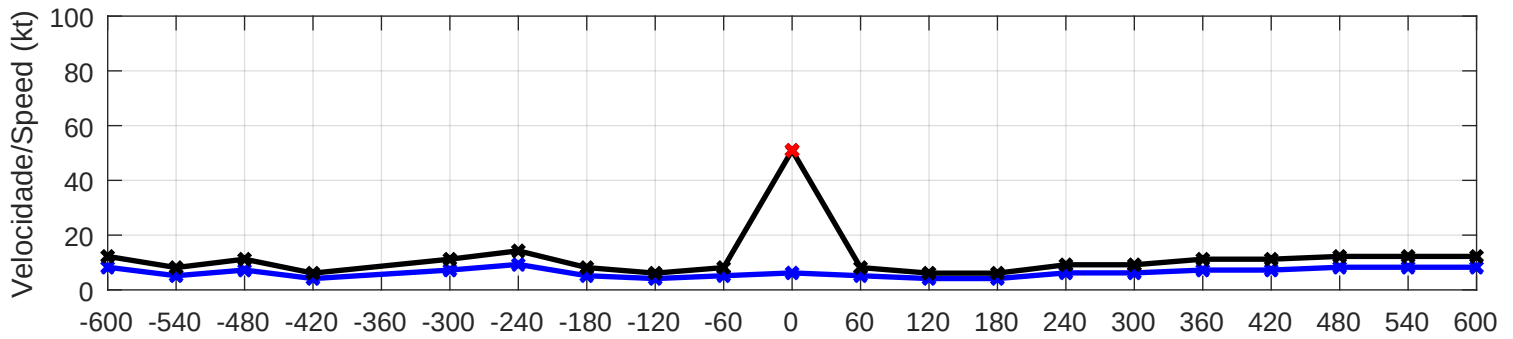
# SANT/87121 EVENTO/EVENT 36 - 22/12/2003, 09:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                               | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|----------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 50$ kt                  | $R_{-6} = 12.0$               | $T_{med,3} = 27.3$ °C         | $DIR = 180^\circ$                                                    | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 40$ kt              | $R_{-3} = 7.5$                | $\Delta T_{min,3} = -8.0$ °C  | $\Delta DIR_{max,-3} = 140^\circ$                                    |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 2.4$                | $\Delta Q_{max,3} = 11.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                                     |                                | (120)                           |
| $G_{cor} = 51.0$ kt            | $R_{+6} = 2.5$                | $\Delta$ Grupo/Group = 1      | METAR SANT 220900Z 18040KT 3000 +TSRA<br>BKN030 BKN040CB 23/21 Q1007 |                                |                                 |
| $V_{cor} = 41.4$ kt            |                               |                               |                                                                      |                                |                                 |



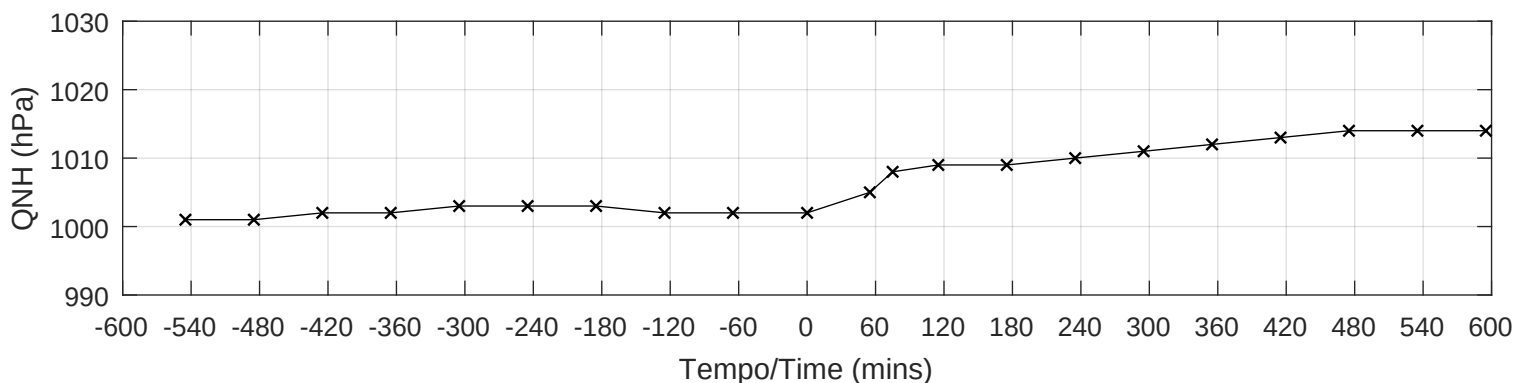
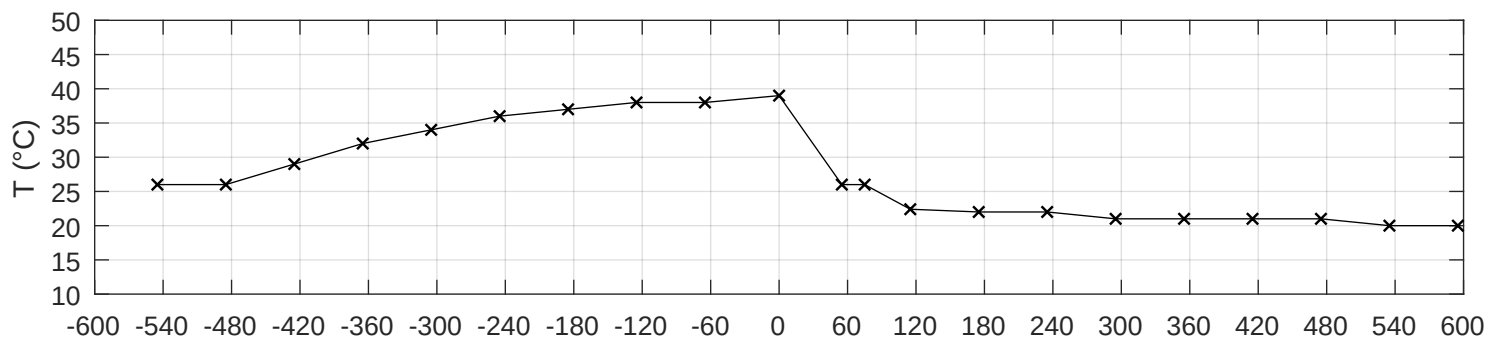
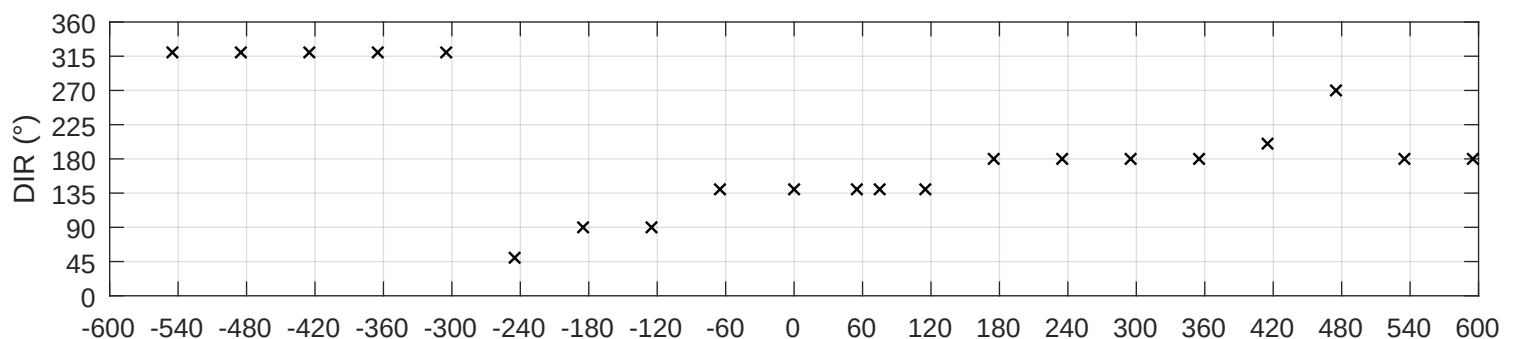
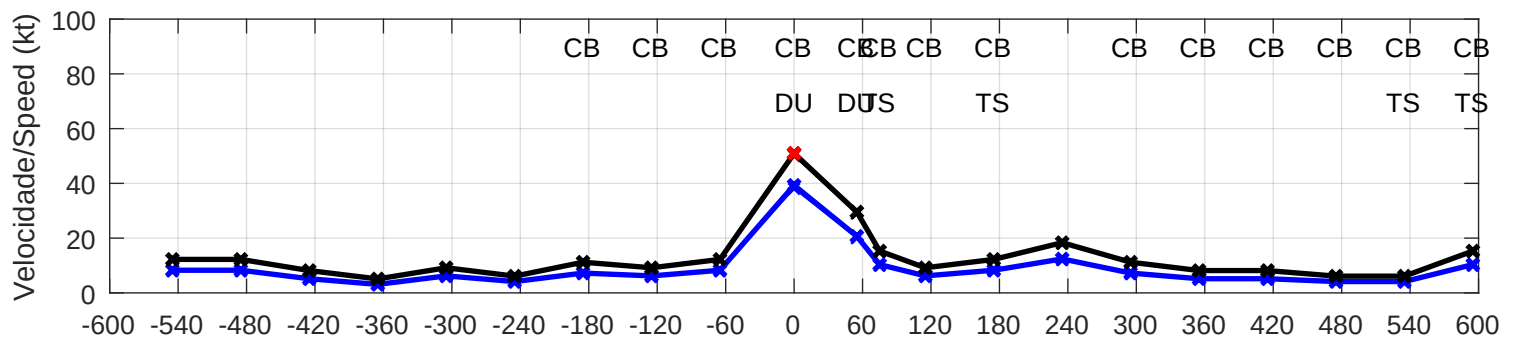
# SANT/87121 EVENTO/EVENT 37 - 05/08/2006, 23:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction           | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 50$ kt              | $R_{-6} = 5.3$                | $T_{med,3} = 19.0$ °C        | $DIR = 90^\circ$                                 | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 6$ kt               | $R_{-3} = 6.8$                | $\Delta T_{min,3} = -6.0$ °C | $\Delta DIR_{max,-3} = 140^\circ$                |                                | SUSPECT                         |
| $G_V = 8.3$                    | $R_{+3} = 7.5$                | $\Delta Q_{max,3} = 3.0$ hPa | $\Delta DIR_{max,+3} = 130^\circ$                |                                | (311)                           |
| $G_{cor} = 51.0$ kt            | $R_{+6} = 6.1$                | $\Delta$ Grupo/Group = 1     | SANT 052300Z 09006G50KT 5000 SKC 14/07<br>Q1016= |                                |                                 |
| $V_{cor} = 6.2$ kt             |                               |                              |                                                  |                                |                                 |



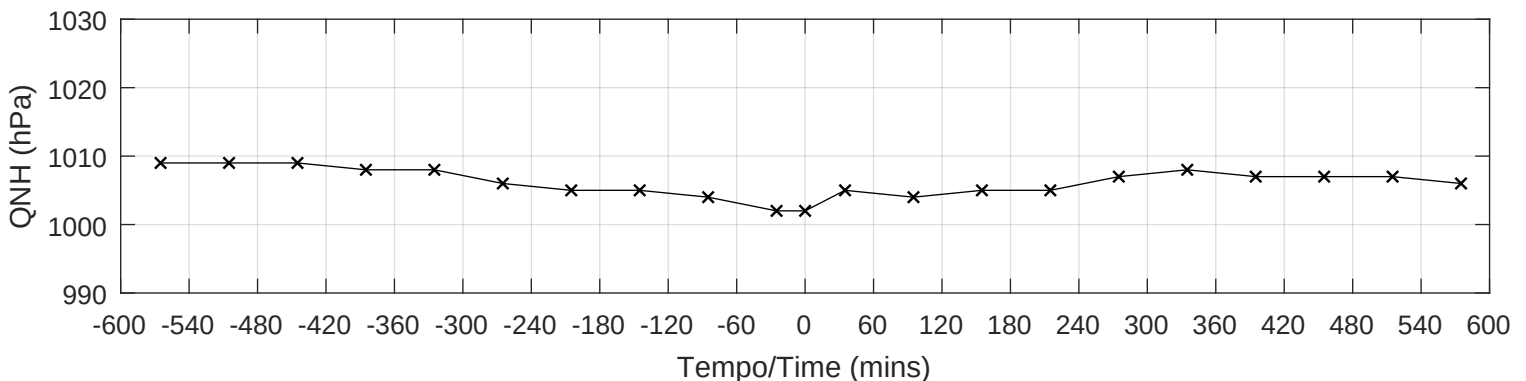
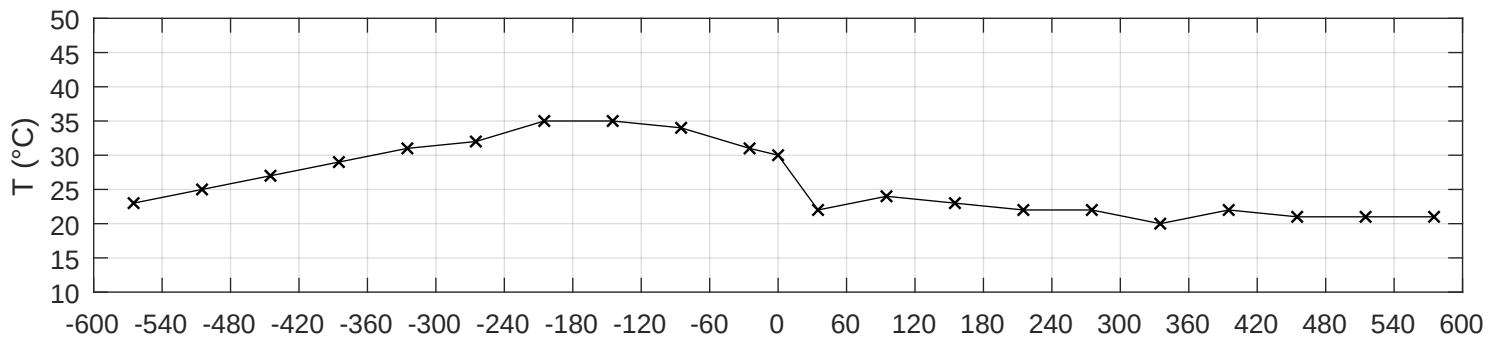
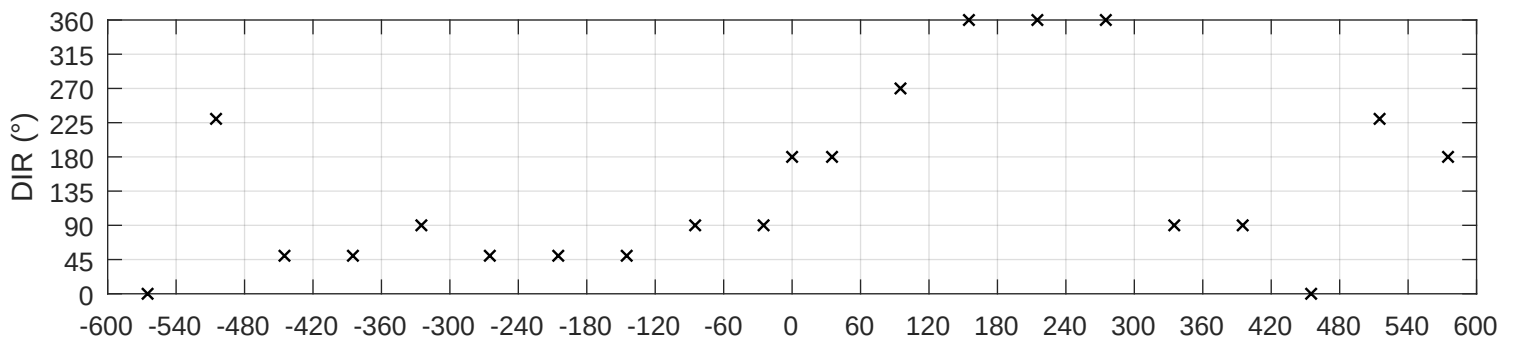
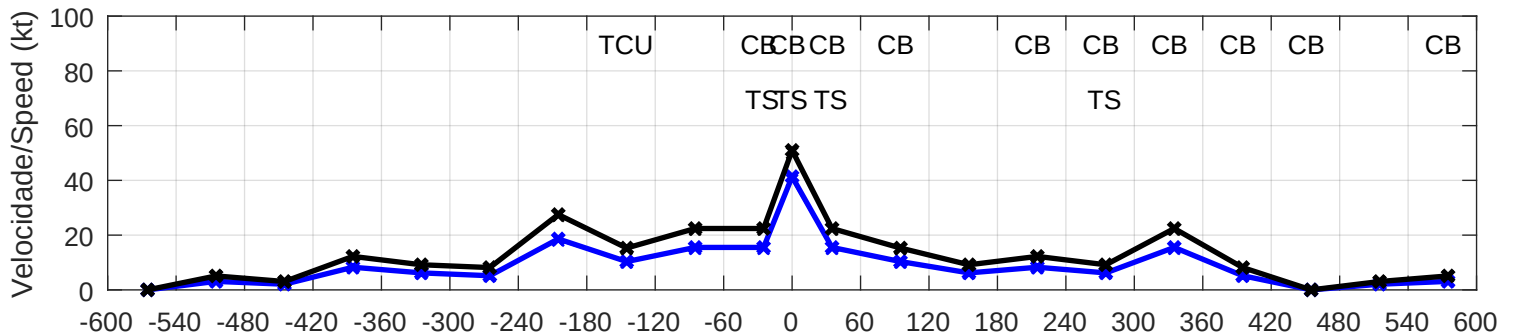
# SANT/87121 EVENTO/EVENT 38 - 17/02/2013, 19:05 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction  | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|-----------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 50$ kt              | $R_{-6} = 5.3$                | $T_{med,3} = 38.0$ °C         | $DIR = 140^\circ$                       | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 38$ kt              | $R_{-3} = 4.8$                | $\Delta T_{min,3} = -13.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$        |                                | NON-SYNOPTIC                    |
| $G_V = 1.3$                    | $R_{+3} = 3.7$                | $\Delta Q_{max,3} = 3.0$ hPa  | $\Delta DIR_{max,+3} = 40^\circ$        |                                | (113)                           |
| $G_{cor} = 51.0$ kt            | $R_{+6} = 3.9$                | $\Delta$ Grupo/Group = 1      | SPECI SANT 171905Z 14038G50KT 1000 DRDU |                                |                                 |
| $V_{cor} = 39.3$ kt            |                               |                               | SCT035FEW045CB 39/22 Q1002=             |                                |                                 |



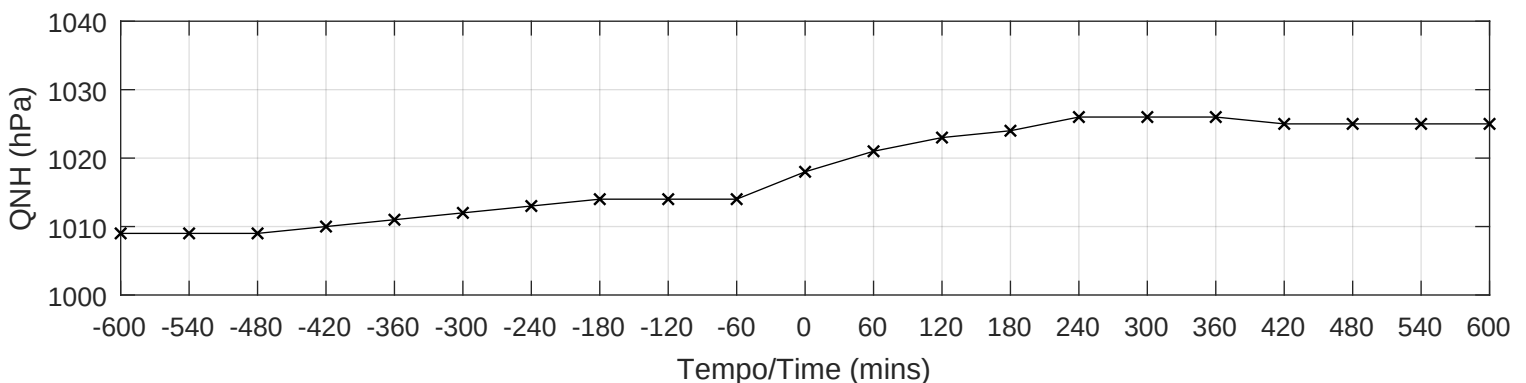
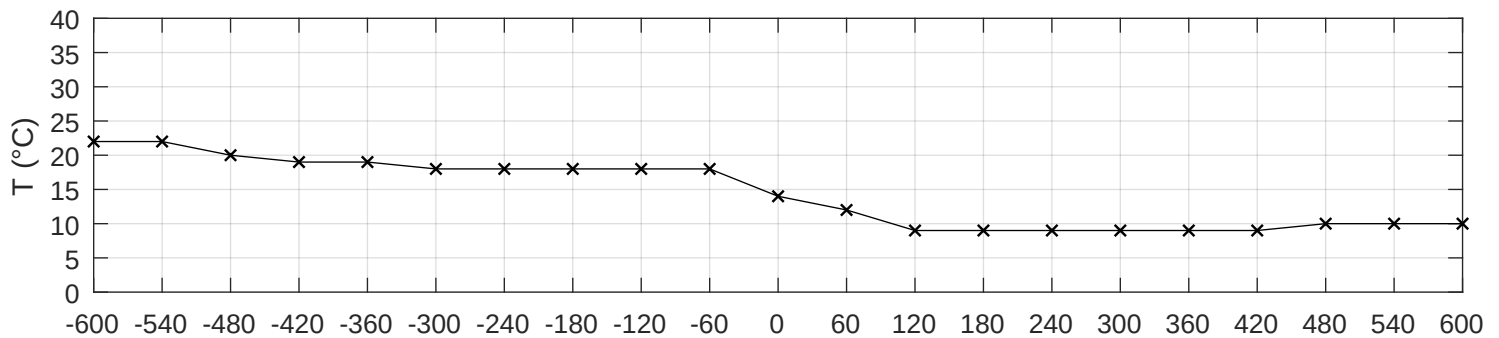
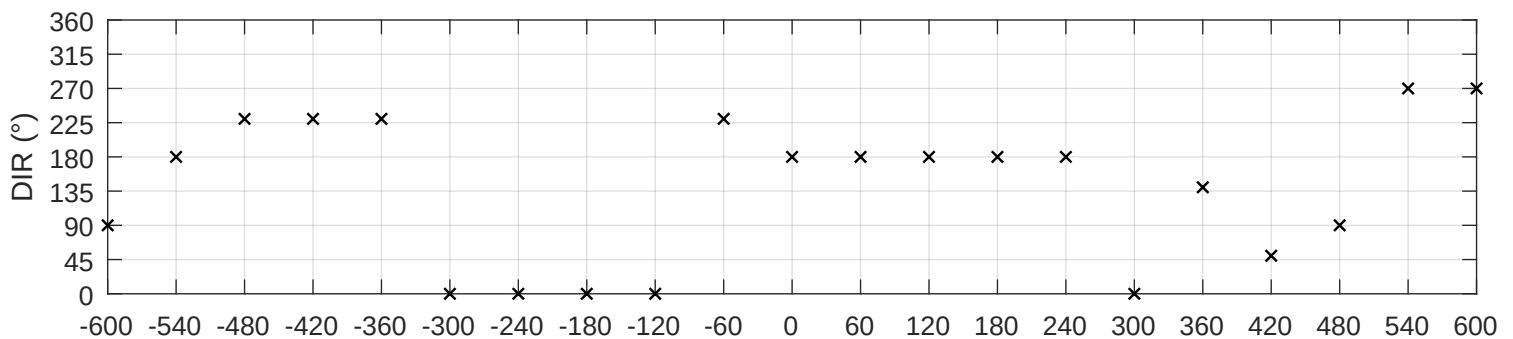
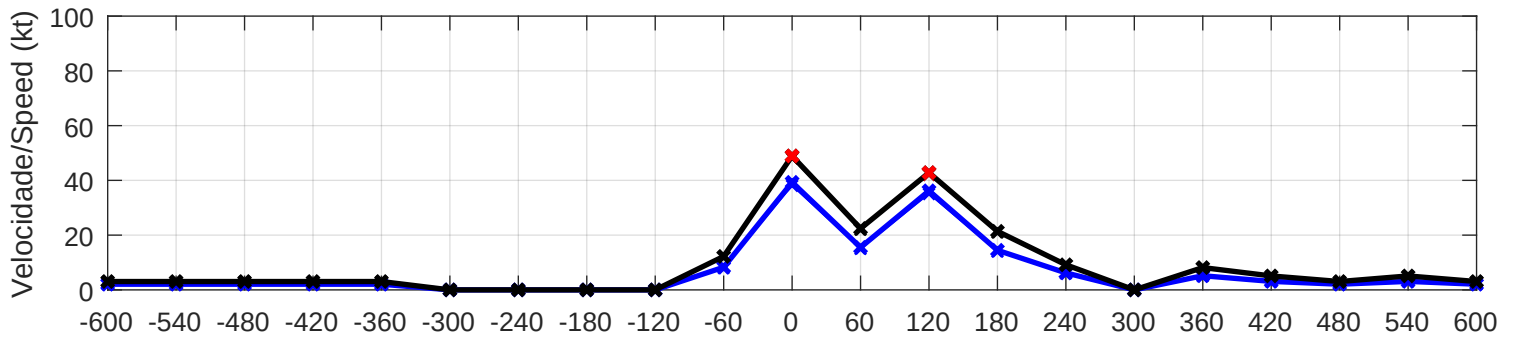
# SANT/87121 EVENTO/EVENT 39 - 03/02/2017, 20:25 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|-----------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 50$ kt                  | $R_{-6} = 3.0$                | $T_{med,3} = 34.5$ °C         | $DIR = 180^\circ$                                                     | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 40$ kt              | $R_{-3} = 2.6$                | $\Delta T_{min,3} = -12.0$ °C | $\Delta DIR_{max,-3} = 130^\circ$                                     |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 3.3$                | $\Delta Q_{max,3} = 3.0$ hPa  | $\Delta DIR_{max,+3} = 180^\circ$                                     |                                | (120)                           |
| $G_{cor} = 51.0$ kt            | $R_{+6} = 3.4$                | $\Delta$ Grupo/Group = 1      | SPECI SANT 032025Z 18040KT 0005 +TSRA<br>OVC010 SCT 040CB 30/21Q1002= |                                |                                 |
| $V_{cor} = 41.4$ kt            |                               |                               |                                                                       |                                |                                 |



# SANT/87121 EVENTO/EVENT 40 - 14/11/2000, 07:00 UTC (MSS - WUNDERGROUND)

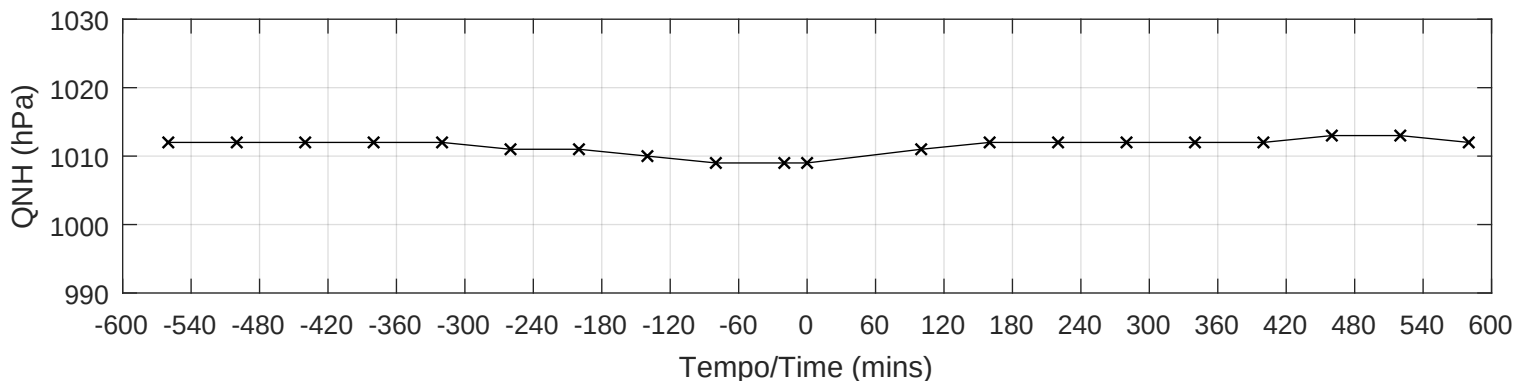
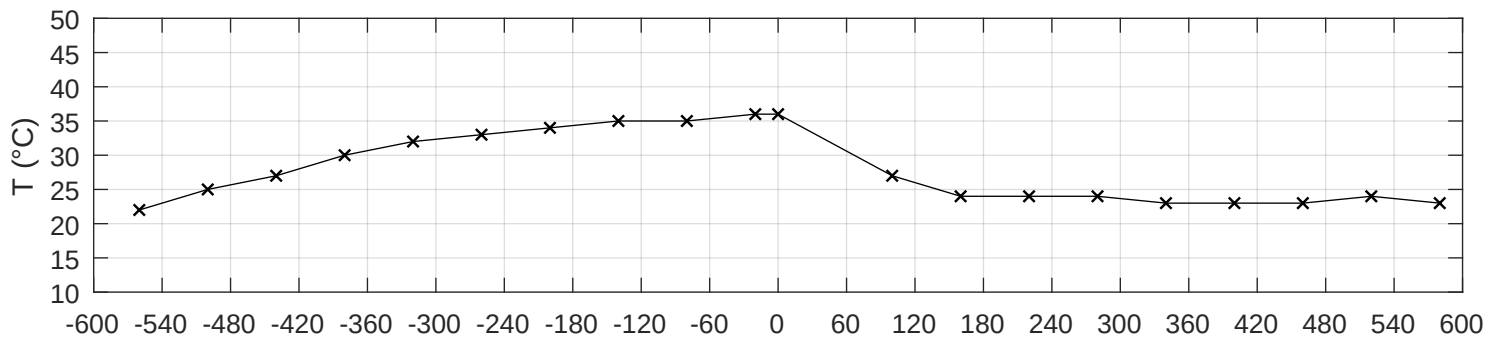
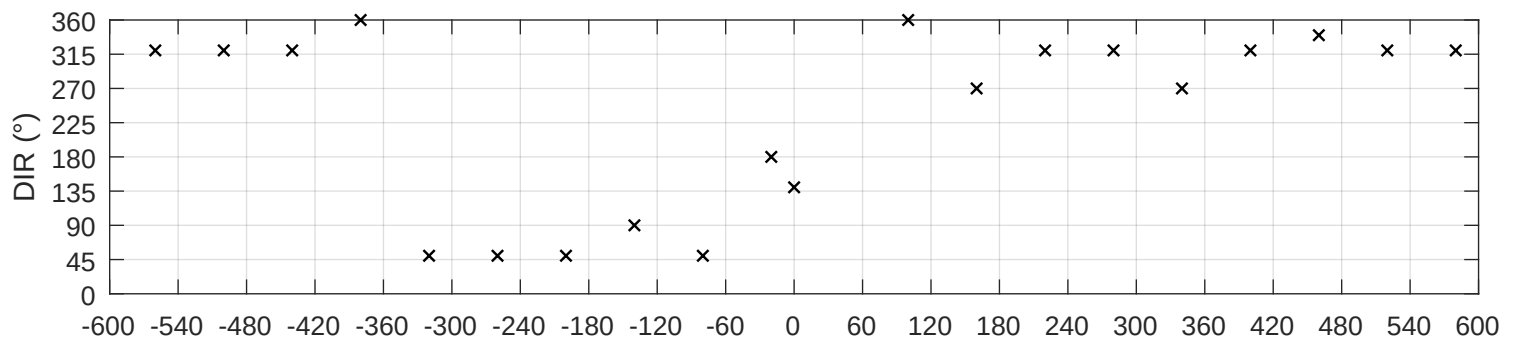
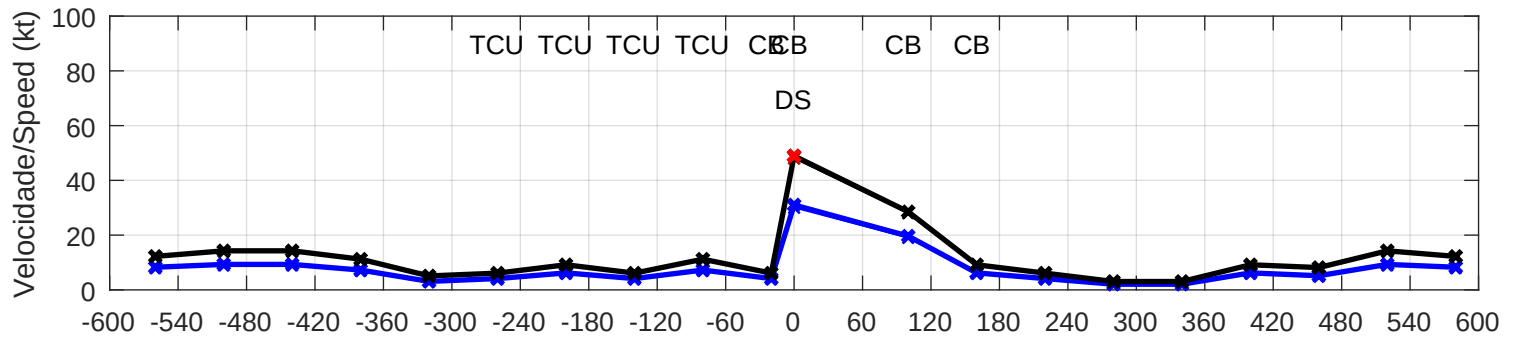
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                             | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|--------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 48 \text{ kt}$      | $R_{-6} = 19.2$               | $T_{med,3} = 18.0 \text{ }^{\circ}\text{C}$        | $DIR = 180^{\circ}$                                                | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 38 \text{ kt}$      | $R_{-3} = 12.0$               | $\Delta T_{min,3} = -6.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                                 |                                | NON-SYNOPTIC                    |
| $G_V = 1.3$                    | $R_{+3} = 1.7$                | $\Delta Q_{max,3} = 7.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 0^{\circ}$                                  |                                | (111)                           |
| $G_{cor} = 48.9 \text{ kt}$    | $R_{+6} = 2.8$                | $\Delta \text{ Grupo/Group} = 1$                   | METAR SANT 140700Z 18038G48KT 3000 RA<br>BKN010 BKN040 14/12 Q1018 |                                |                                 |
| $V_{cor} = 39.3 \text{ kt}$    |                               |                                                    |                                                                    |                                |                                 |





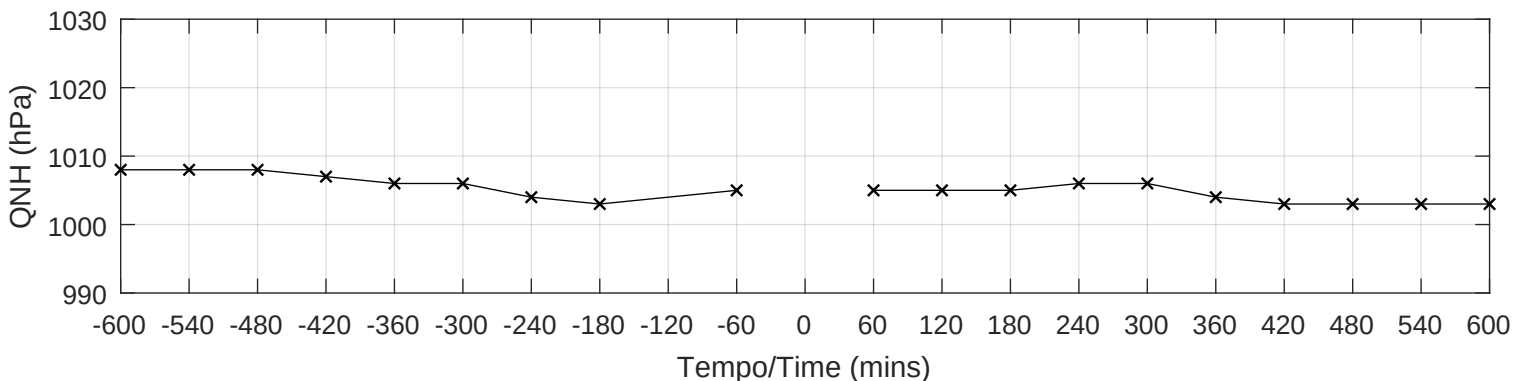
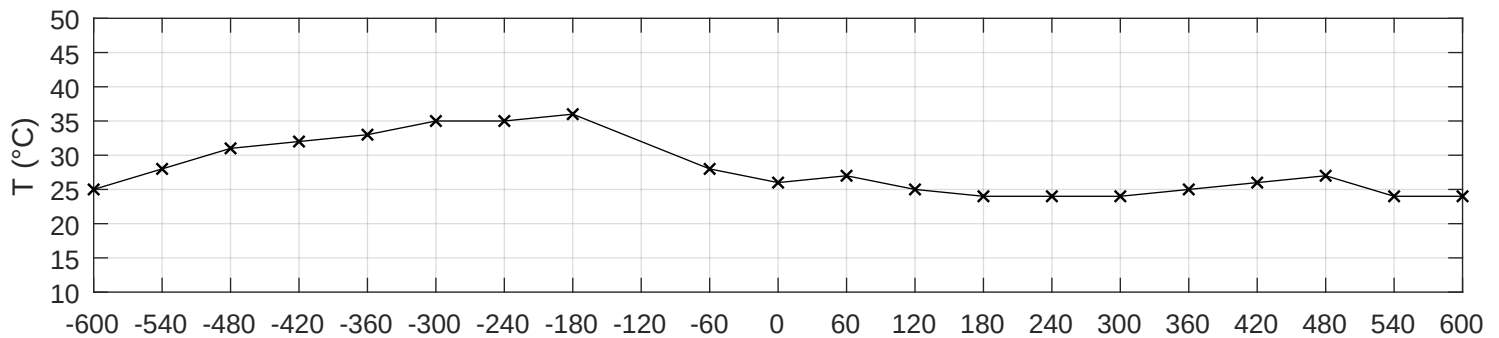
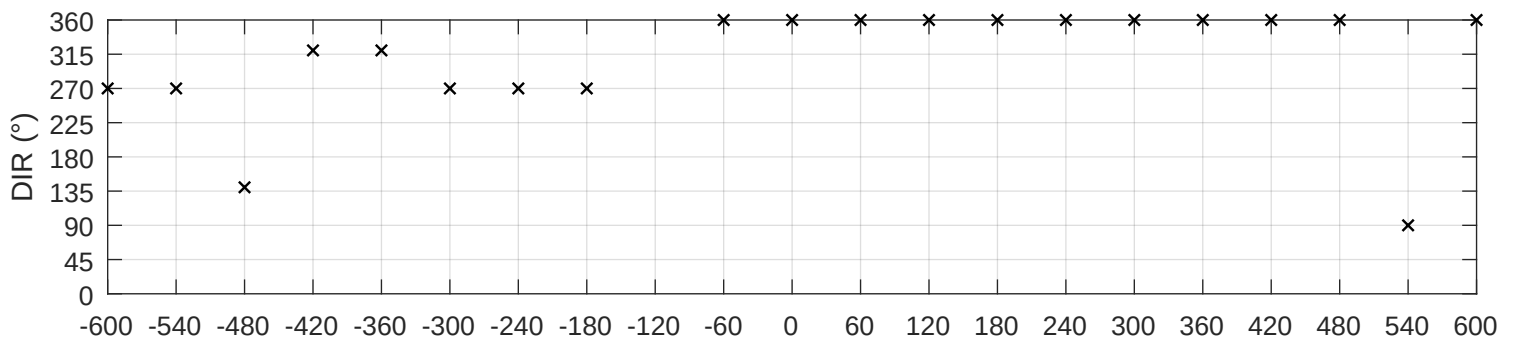
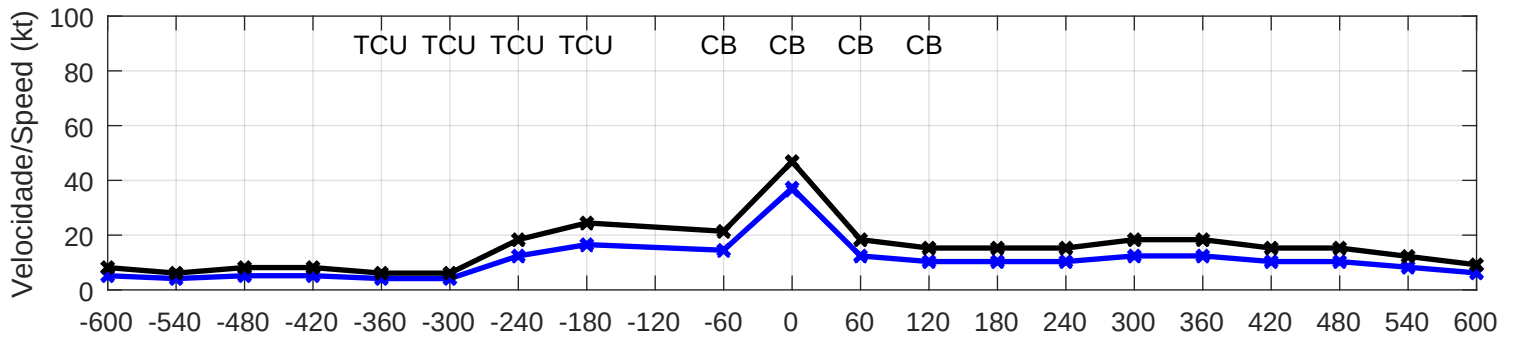
# SANT/87121 EVENTO/EVENT 41 - 31/12/2011, 19:20 UTC (MSS - REDEMETS)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 48 \text{ kt}$      | $R_{-6} = 6.6$                | $T_{med,3} = 35.0 \text{ }^{\circ}\text{C}$       | $DIR = 140^{\circ}$                                                    | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 5.9$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$                                     |                                | NON-SYNOPTIC                    |
| $G_V = 1.6$                    | $R_{+3} = 2.6$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 140^{\circ}$                                    |                                | (117)                           |
| $G_{cor} = 48.9 \text{ kt}$    | $R_{+6} = 4.9$                | $\Delta$ Grupo/Group = 3                          | METAR SANT 311920Z 14530G48KT 5000 +DS<br>SCT035CB SCT040 36/21 Q1009= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                   |                                                                        |                                |                                 |



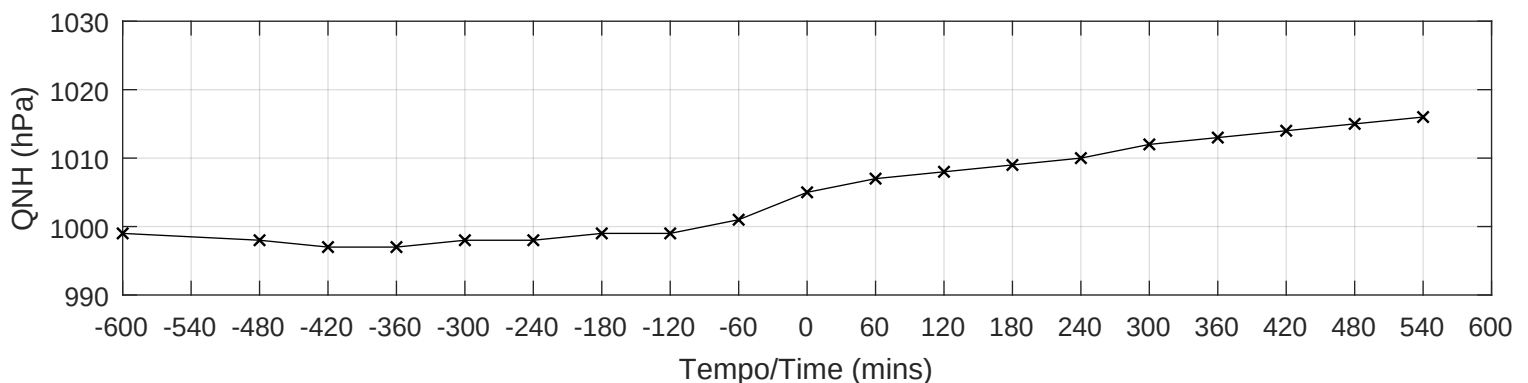
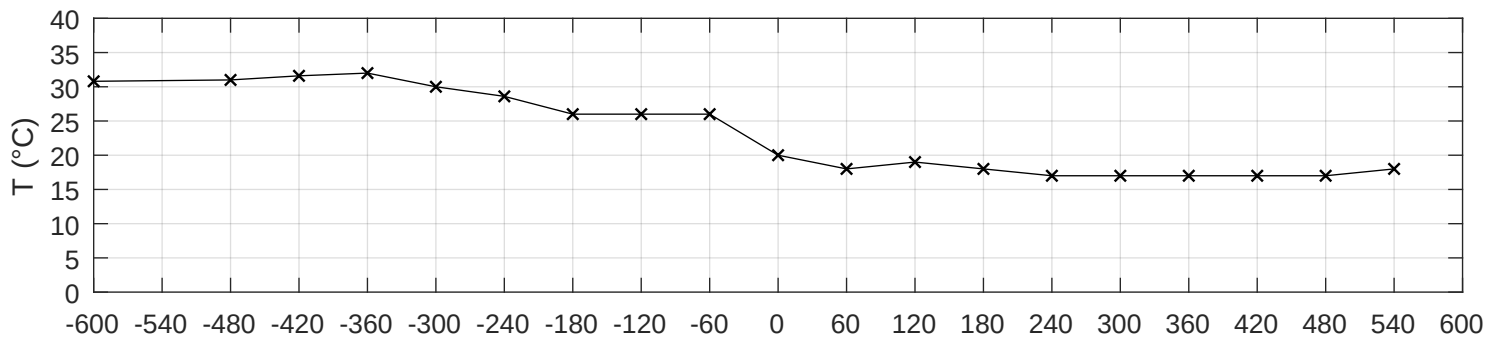
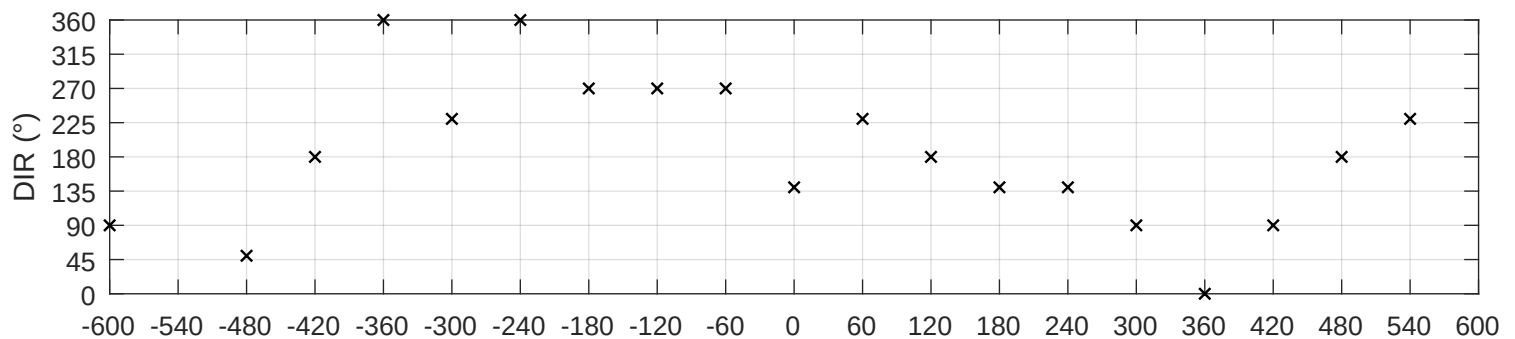
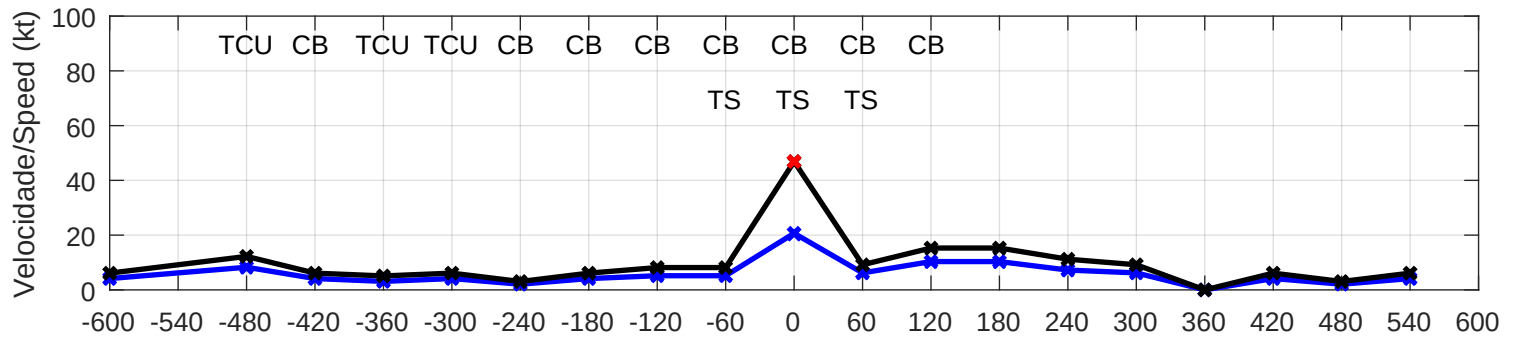
# SANT/87121 EVENTO/EVENT 42 - 16/12/1999, 22:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-----------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 46$ kt                  | $R_{-6} = 3.1$                | $T_{med,3} = 32.0$ °C        | $DIR = 360^\circ$                                                     | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 36$ kt              | $R_{-3} = 2.0$                | $\Delta T_{min,3} = -2.0$ °C | $\Delta DIR_{max,-3} = 90^\circ$                                      |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 2.9$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                                       |                                | (325)                           |
| $G_{cor} = 46.9$ kt            | $R_{+6} = 2.8$                | $\Delta$ Grupo/Group = 3     | METAR SANT 162200Z 36036KT 9999 SCT030<br>FEW050CB FEW100 26/15 Q1014 |                                |                                 |
| $V_{cor} = 37.2$ kt            |                               |                              |                                                                       |                                |                                 |



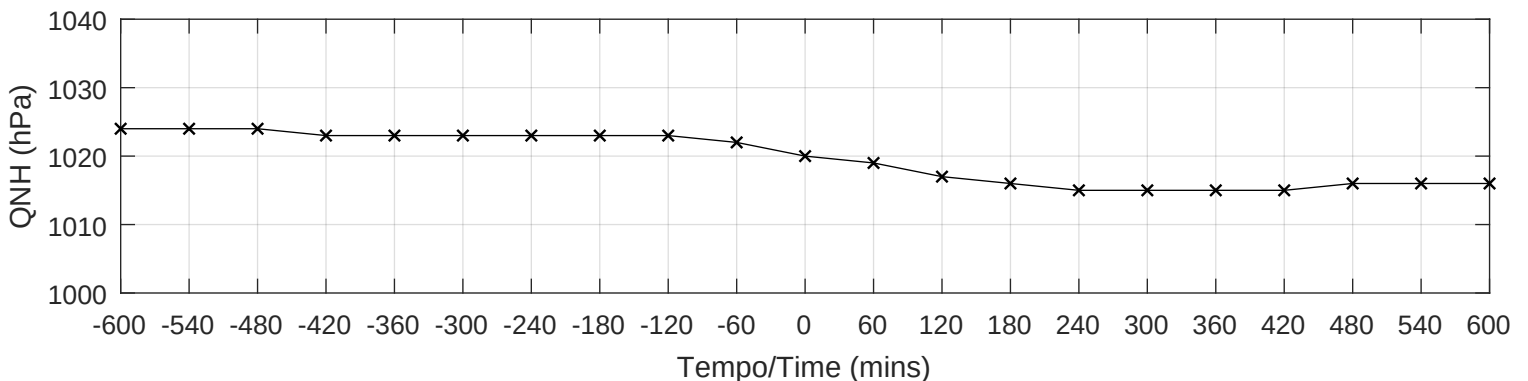
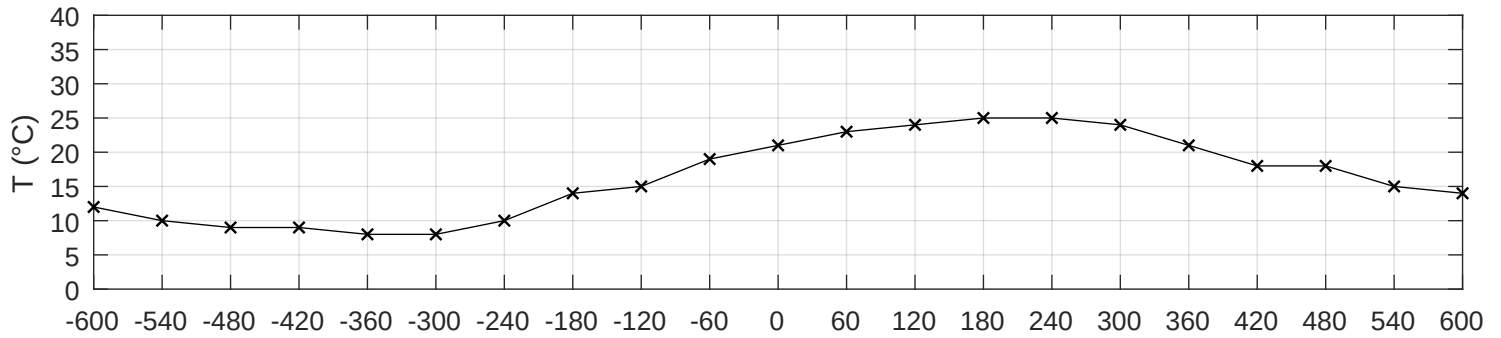
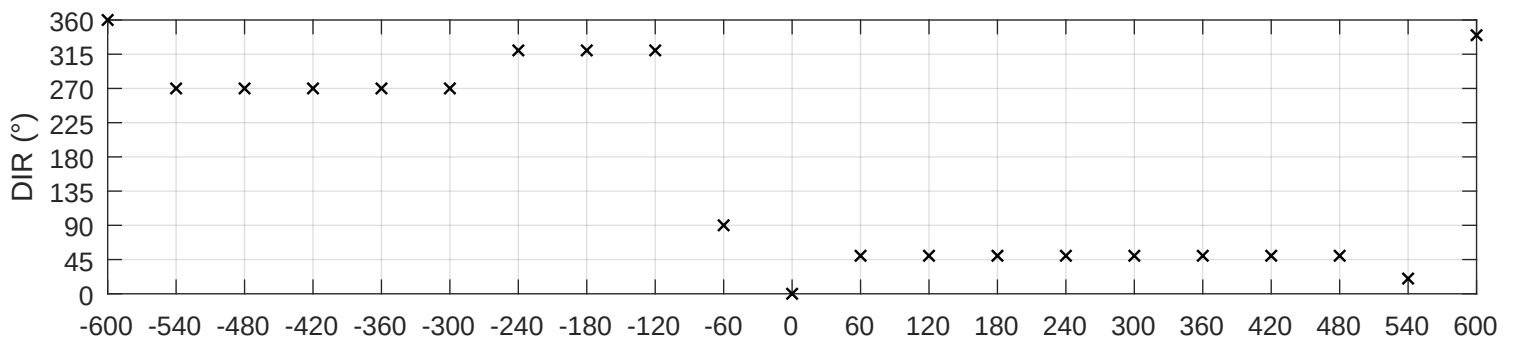
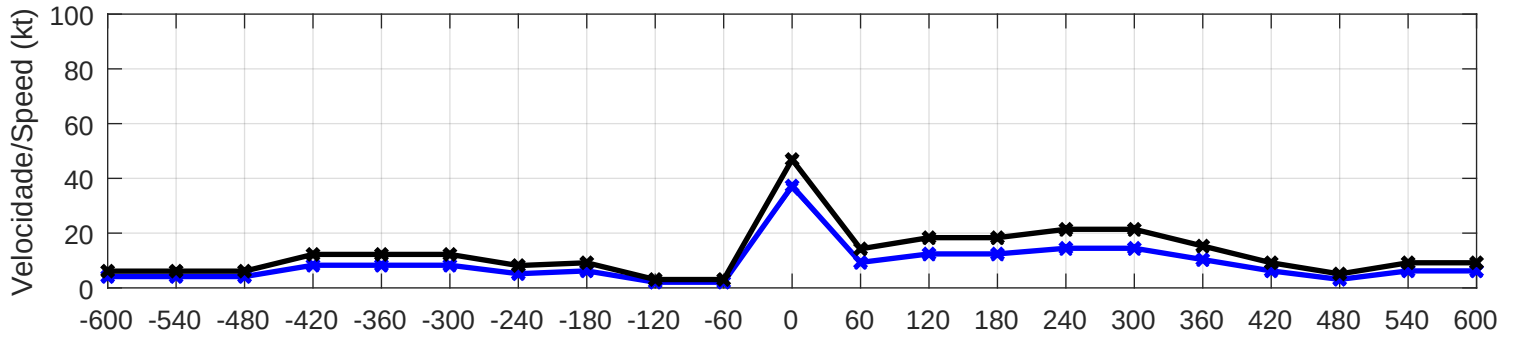
# SANT/87121 EVENTO/EVENT 43 - 17/02/2007, 04:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 46 \text{ kt}$      | $R_{-6} = 7.7$                | $T_{med,3} = 26.0 \text{ }^{\circ}\text{C}$        | $DIR = 140^{\circ}$                                                    | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 20 \text{ kt}$      | $R_{-3} = 6.3$                | $\Delta T_{min,3} = -8.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 130^{\circ}$                                    |                                | NON-SYNOPTIC                    |
| $G_V = 2.3$                    | $R_{+3} = 3.5$                | $\Delta Q_{max,3} = 8.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 90^{\circ}$                                     |                                | (110)                           |
| $G_{cor} = 46.9 \text{ kt}$    | $R_{+6} = 4.7$                | $\Delta \text{ Grupo/Group} = 1$                   | SANT 170400Z 14020G46KT 9999 TS BKN030<br>OVC035 SCT045CB 20/17 Q1005= |                                |                                 |
| $V_{cor} = 20.7 \text{ kt}$    |                               |                                                    |                                                                        |                                |                                 |



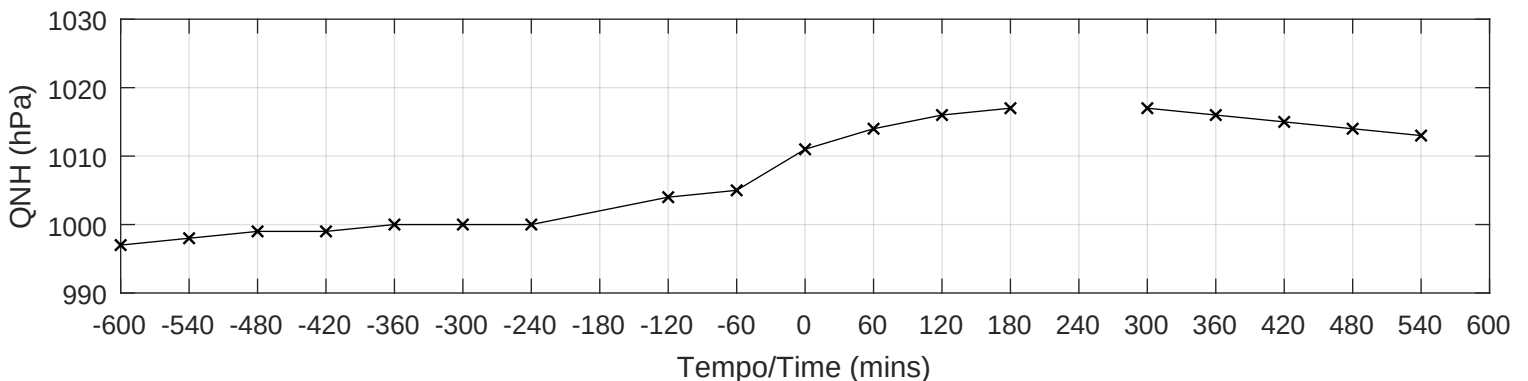
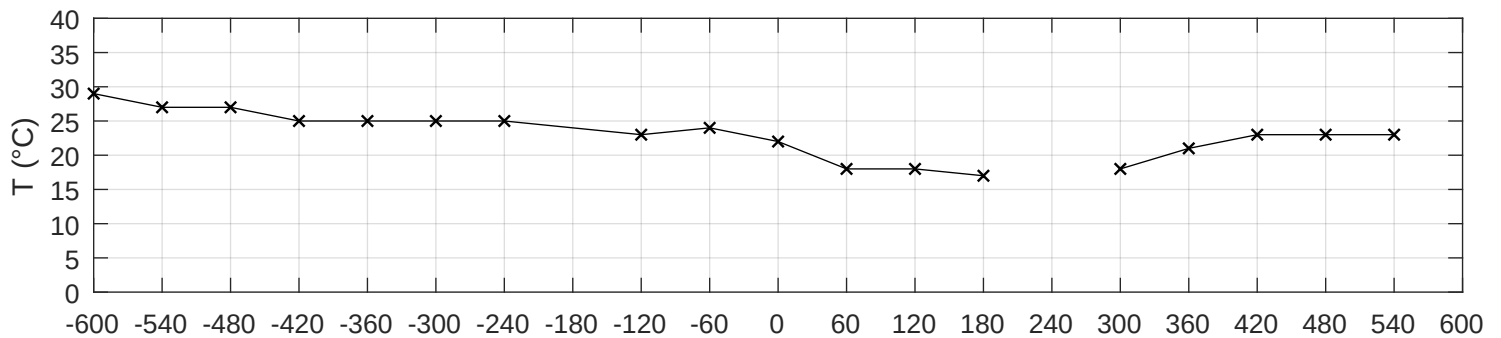
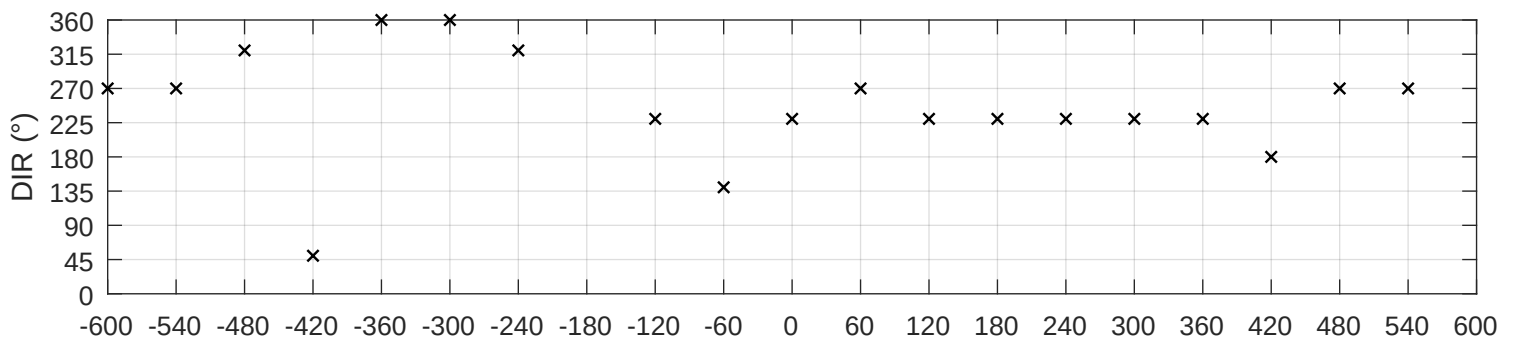
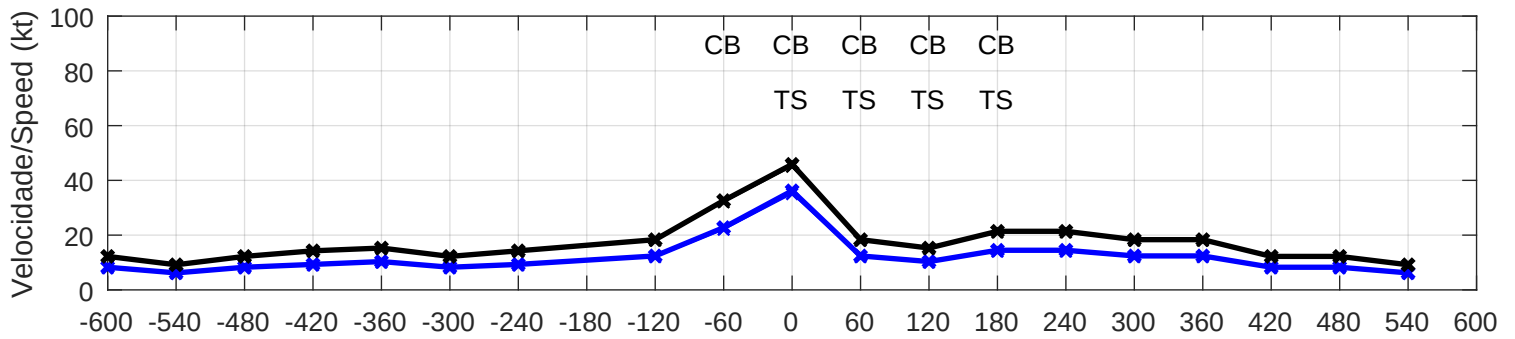
# SANT/87121 EVENTO/EVENT 44 - 20/08/2010, 16:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------|--------------------------------|---------------------------------|
| $G^* = 46$ kt                  | $R_{-6} = 5.9$                | $T_{med,3} = 16.0$ °C        | $DIR = 0^\circ$                        | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 36$ kt              | $R_{-3} = 9.2$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 90^\circ$       |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 2.8$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 50^\circ$       |                                | (324)                           |
| $G_{cor} = 46.9$ kt            | $R_{+6} = 2.6$                | $\Delta$ Grupo/Group = 3     | SANT 201600Z VRB36KT 6000 21/06 Q1020= |                                |                                 |
| $V_{cor} = 37.2$ kt            |                               |                              |                                        |                                |                                 |



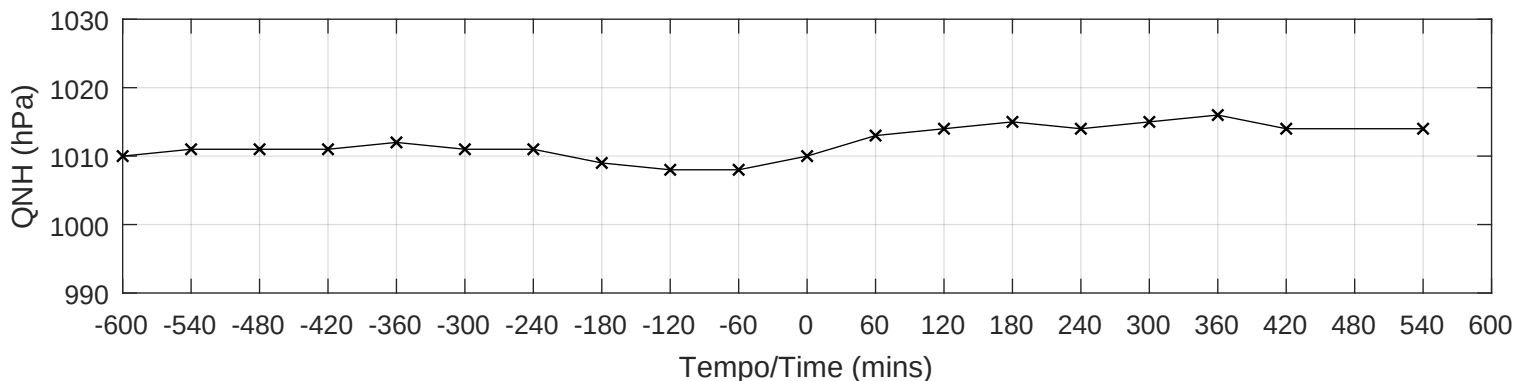
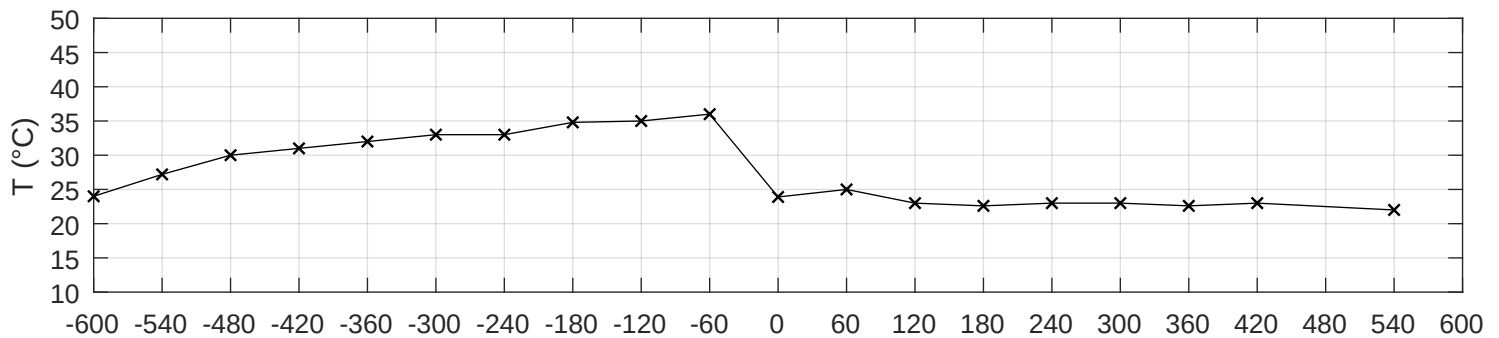
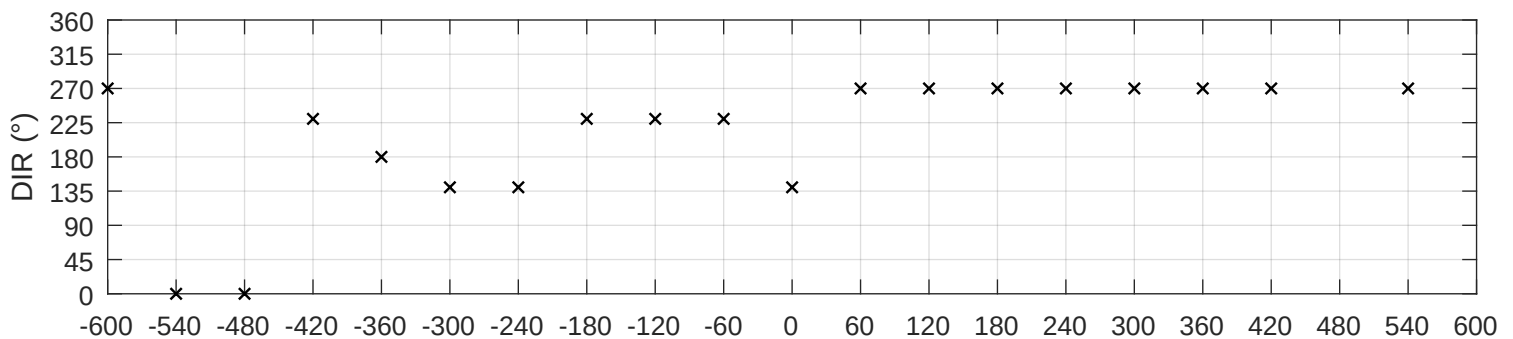
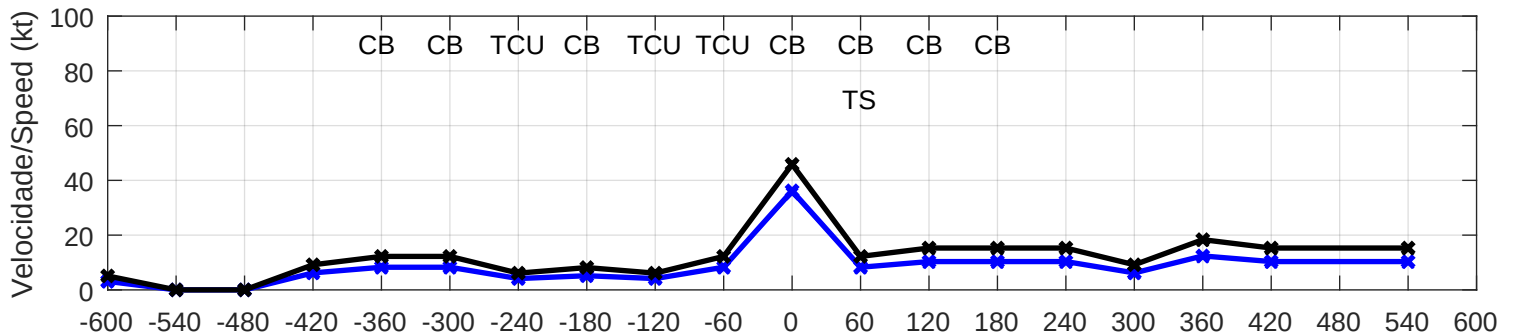
# SANT/87121 EVENTO/EVENT 45 - 02/02/1997, 10:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                                     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|----------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 45$ kt                  | $R_{-6} = 2.5$                | $T_{med,3} = 23.5$ °C         | $DIR = 230^\circ$                                                          | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 35$ kt              | $R_{-3} = 1.8$                | $\Delta T_{min,3} = -6.0$ °C  | $\Delta DIR_{max,-3} = 90^\circ$                                           |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 2.5$                | $\Delta Q_{max,3} = 10.0$ hPa | $\Delta DIR_{max,+3} = 40^\circ$                                           |                                | (120)                           |
| $G_{cor} = 45.9$ kt            | $R_{+6} = 2.4$                | $\Delta$ Grupo/Group = 1      | METAR SANT 021000Z 23035KT 2000 TSRA SCT010<br>SCT020 SCT045CB 22/17 Q1011 |                                |                                 |
| $V_{cor} = 36.2$ kt            |                               |                               |                                                                            |                                |                                 |



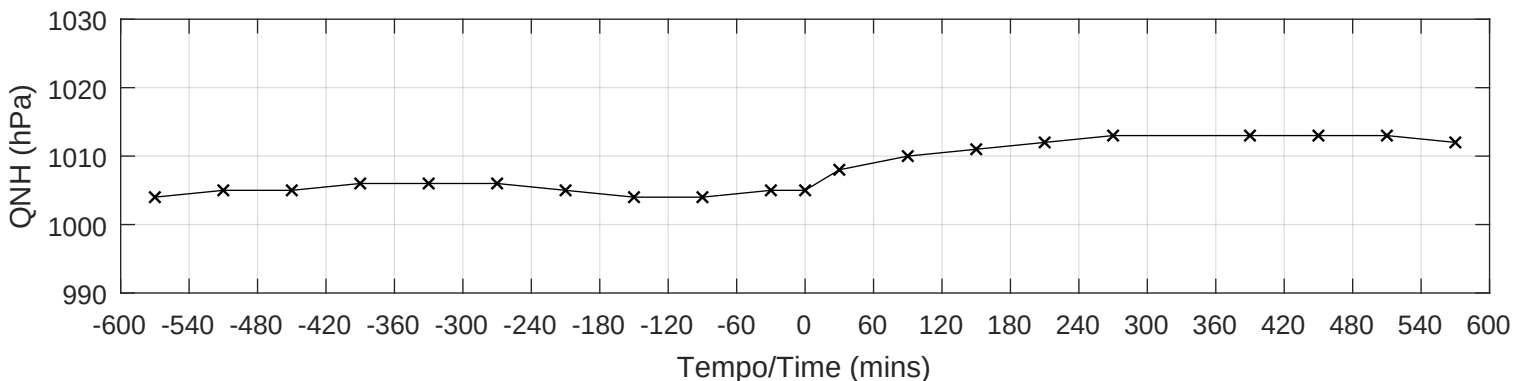
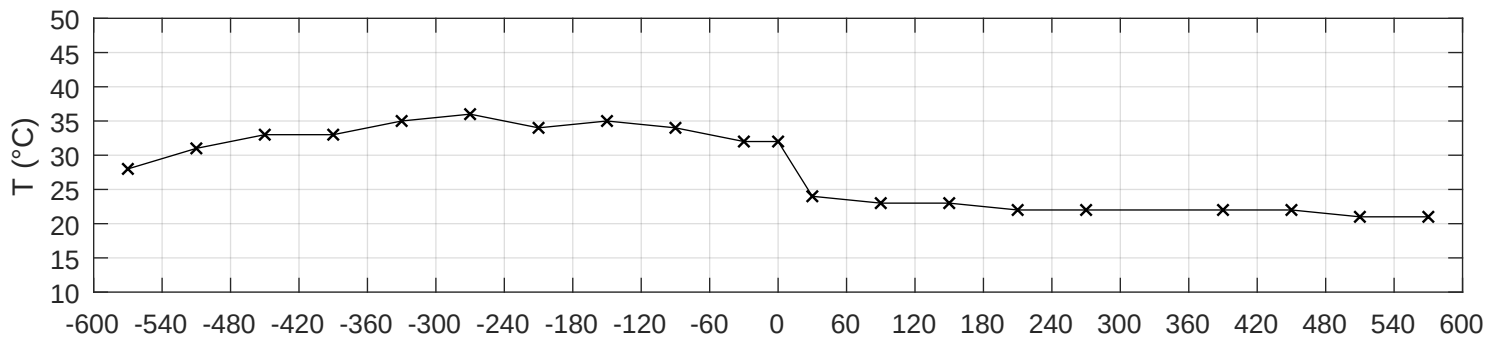
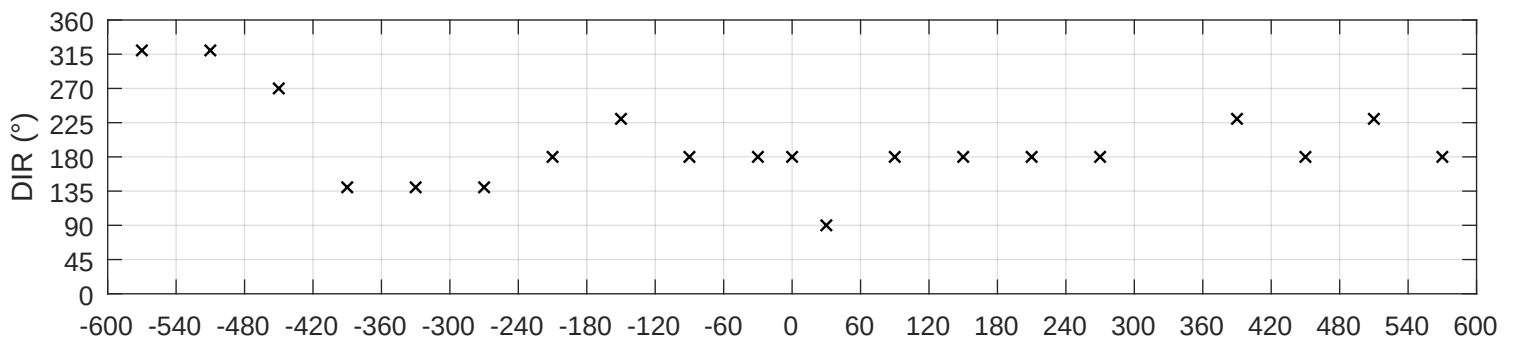
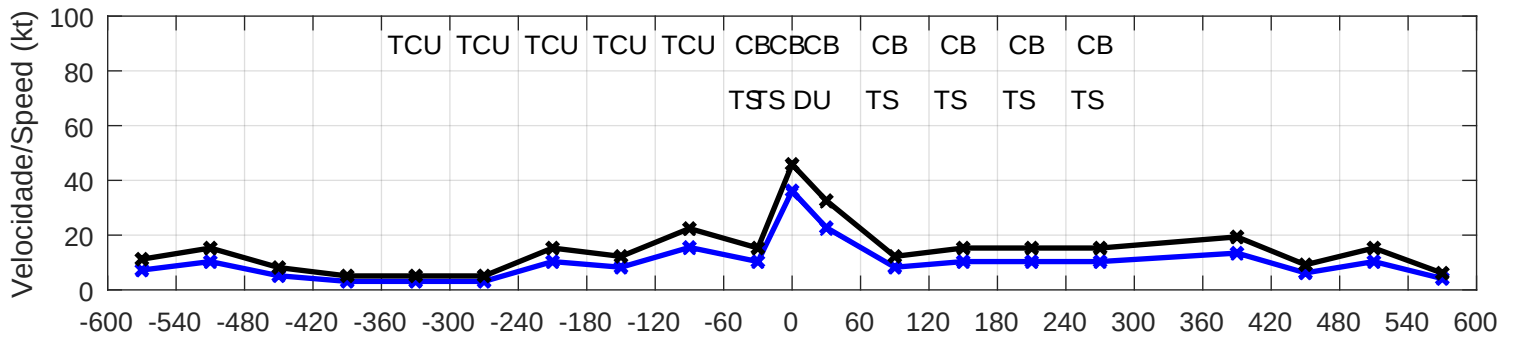
# SANT/87121 EVENTO/EVENT 46 - 21/01/2004, 21:00 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                                                                    | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 45$ kt                  | $R_{-6} = 4.8$                | $T_{med,3} = 35.3$ °C         | $DIR = 140^\circ$                                                                                         | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 35$ kt              | $R_{-3} = 5.2$                | $\Delta T_{min,3} = -12.1$ °C | $\Delta DIR_{max,-3} = 90^\circ$                                                                          |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 3.2$                | $\Delta Q_{max,3} = 5.0$ hPa  | $\Delta DIR_{max,+3} = 130^\circ$                                                                         |                                | (120)                           |
| $G_{cor} = 45.9$ kt            | $R_{+6} = 3.2$                | $\Delta$ Grupo/Group = 1      | AAXX 21214 87121 41557 71435 10239 20189<br>39577 40079 53011 70822 87900 333 56400<br>57940 86830 82950= |                                |                                 |
| $V_{cor} = 36.2$ kt            |                               |                               |                                                                                                           |                                |                                 |

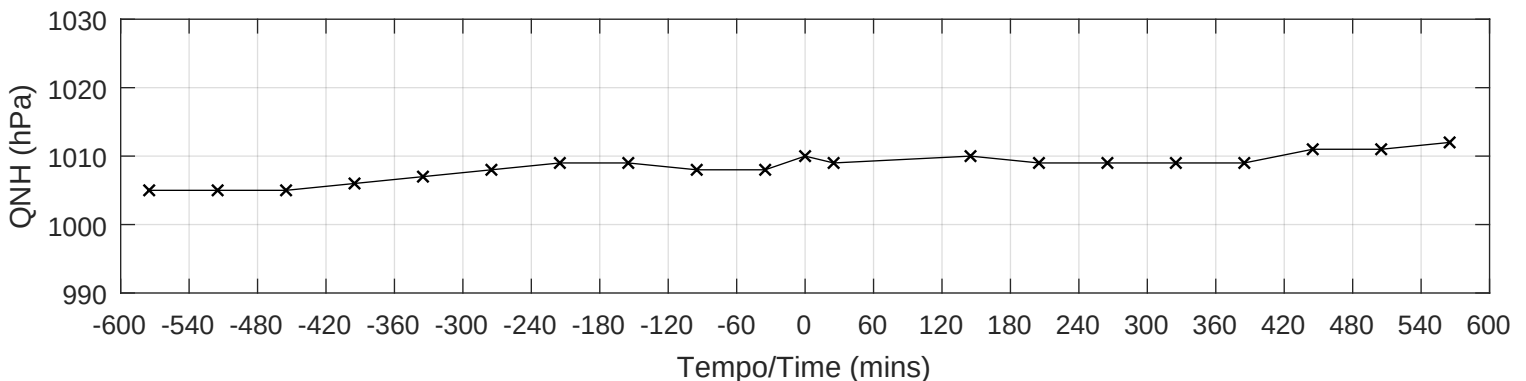


# SANT/87121 EVENTO/EVENT 47 - 24/12/2009, 20:30 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                              | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|---------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 45$ kt                  | $R_{-6} = 3.7$                | $T_{med,3} = 34.5$ °C         | $DIR = 180^\circ$                                                   | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 35$ kt              | $R_{-3} = 2.7$                | $\Delta T_{min,3} = -10.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$                                    |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 2.3$                | $\Delta Q_{max,3} = 4.0$ hPa  | $\Delta DIR_{max,+3} = 90^\circ$                                    |                                | (120)                           |
| $G_{cor} = 45.9$ kt            | $R_{+6} = 2.5$                | $\Delta$ Grupo/Group = 1      | SPECI SANT 242030Z 18035KT 7000 TSDU BKN005<br>FEW045CB 32/24 Q1005 |                                |                                 |
| $V_{cor} = 36.2$ kt            |                               |                               |                                                                     |                                |                                 |



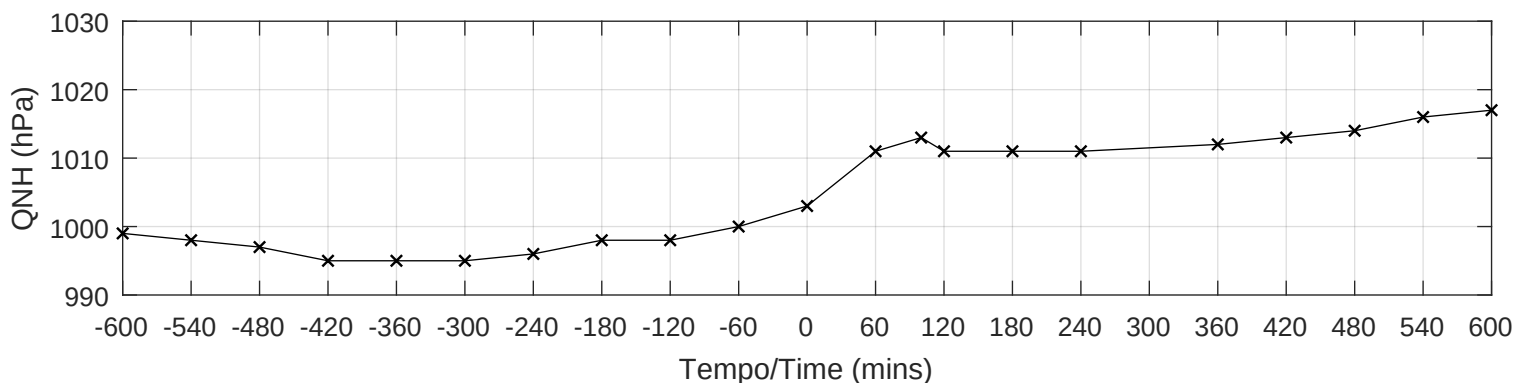
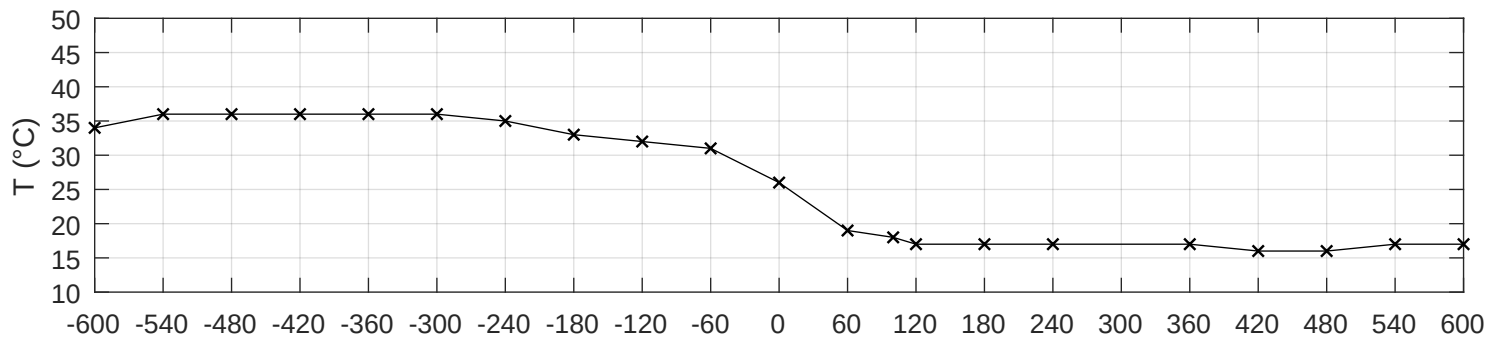
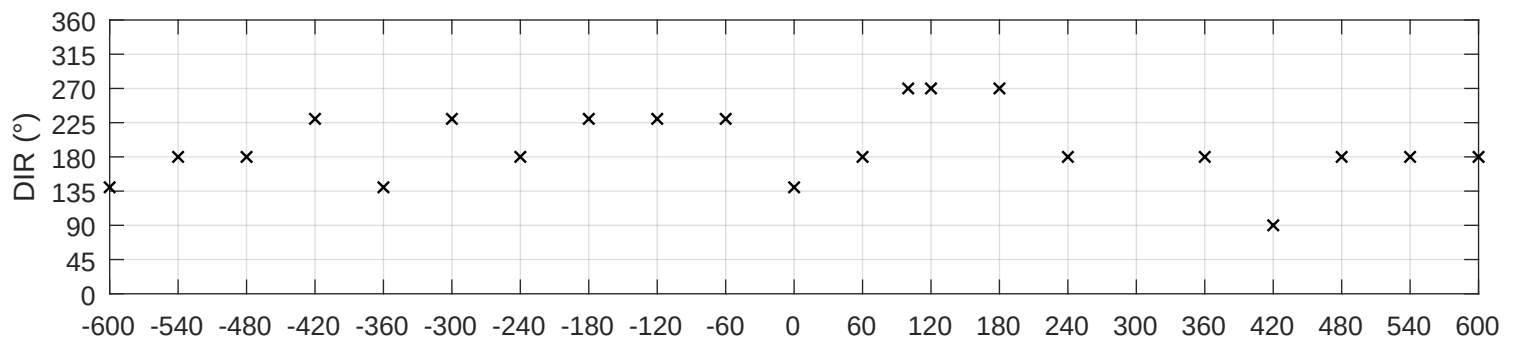
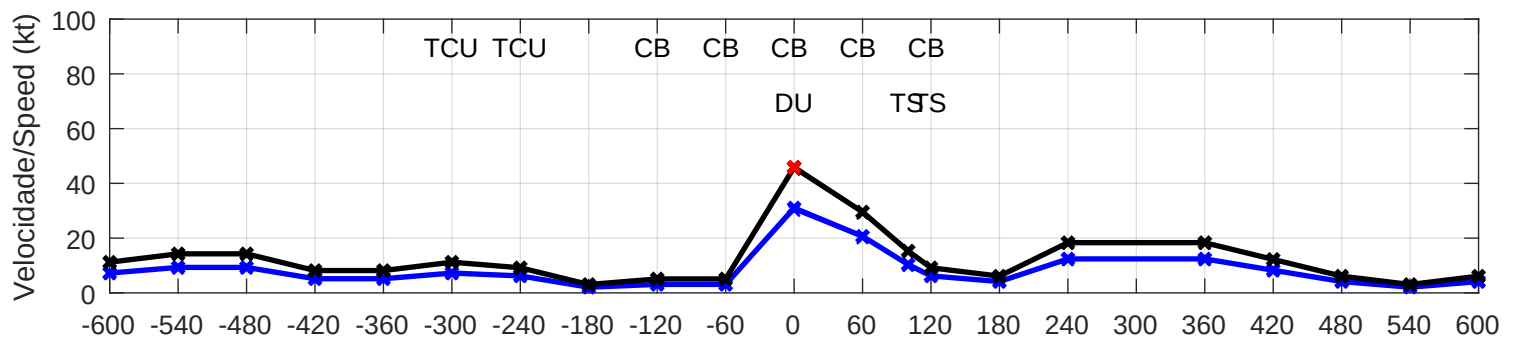
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                            | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 45 \text{ kt}$      | $R_{-6} = 3.9$                | $T_{med,3} = 31.0 \text{ }^{\circ}\text{C}$        | $DIR = 230^{\circ}$                                               | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 38 \text{ kt}$      | $R_{-3} = 4.0$                | $\Delta T_{min,3} = -7.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                                |                                | NON-SYNOPTIC                    |
| $G_V = 1.2$                    | $R_{+3} = 2.6$                | $\Delta Q_{max,3} = 2.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 50^{\circ}$                                |                                | (110)                           |
| $G_{cor} = 45.9 \text{ kt}$    | $R_{+6} = 4.9$                | $\Delta \text{ Grupo/Group} = 1$                   | SANT 261735Z 23038G45KT 4000 TSRA<br>SCT040BKN045TCU 29/26 Q1010= |                                |                                 |
| $V_{cor} = 39.3 \text{ kt}$    |                               |                                                    |                                                                   |                                |                                 |





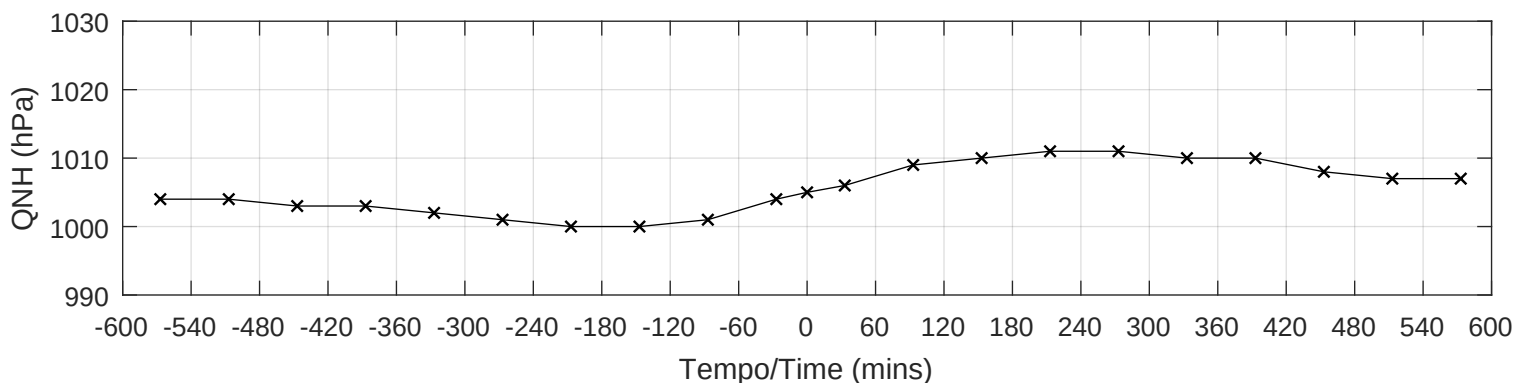
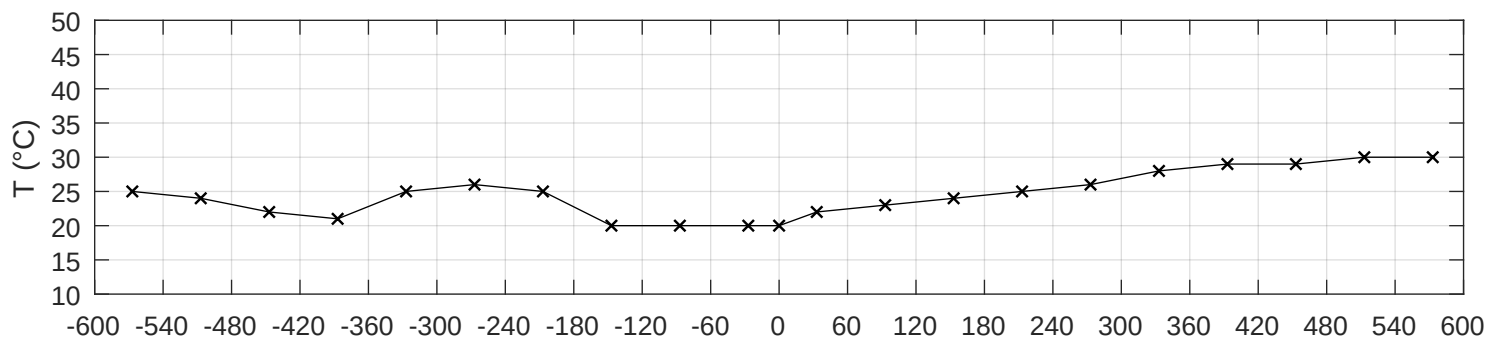
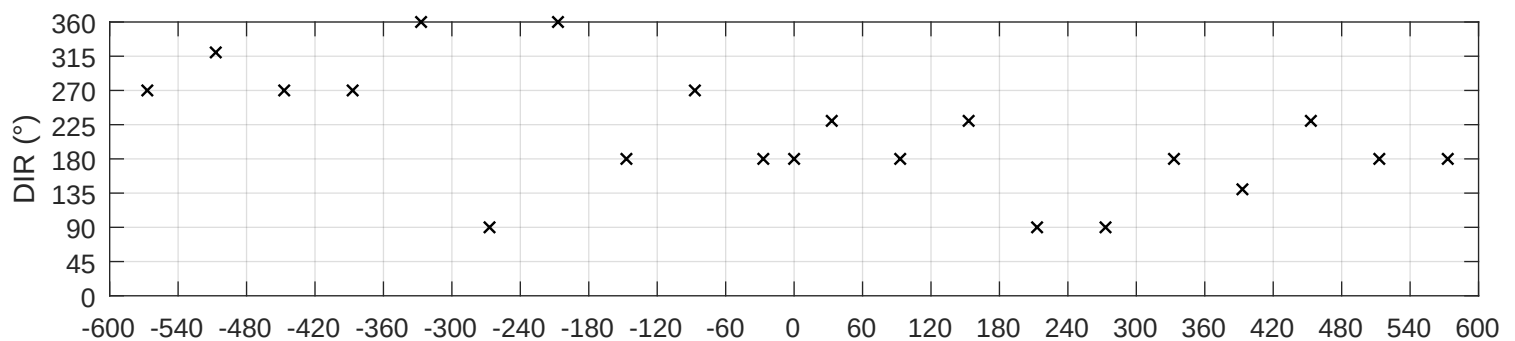
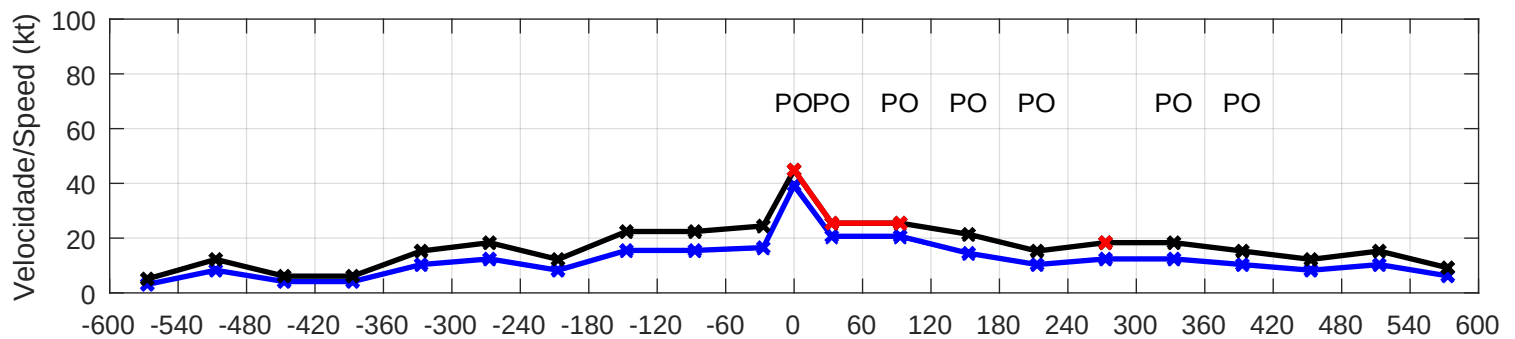
# SANT/87121 EVENTO/EVENT 49 - 30/11/2014, 02:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                             | $\Delta$ Direção<br>$\Delta$ Direction                                        | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 45 \text{ kt}$      | $R_{-6} = 6.6$                | $T_{med,3} = 32.0 \text{ }^{\circ}\text{C}$         | $DIR = 140^{\circ}$                                                           | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 10.4$               | $\Delta T_{min,3} = -13.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$                                            |                                | NON-SYNOPTIC                    |
| $G_V = 1.5$                    | $R_{+3} = 3.4$                | $\Delta Q_{max,3} = 13.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 130^{\circ}$                                           |                                | (113)                           |
| $G_{cor} = 45.9 \text{ kt}$    | $R_{+6} = 3.0$                | $\Delta$ Grupo/Group = 1                            | METAR SANT 300200Z 14030G45KT 5000 BLDU<br>SCT035SCT045CB BKN200 26/14 Q1003= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                     |                                                                               |                                |                                 |



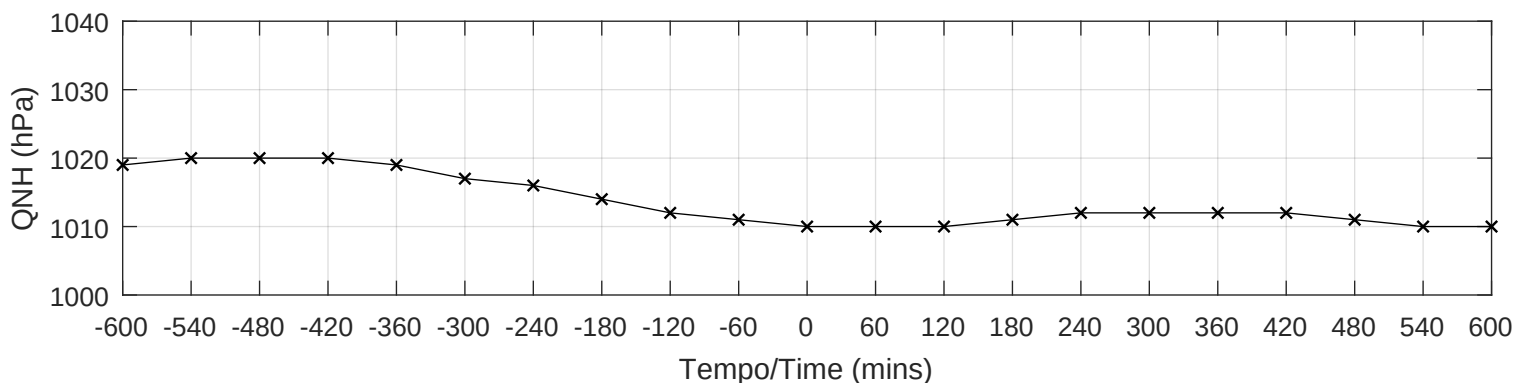
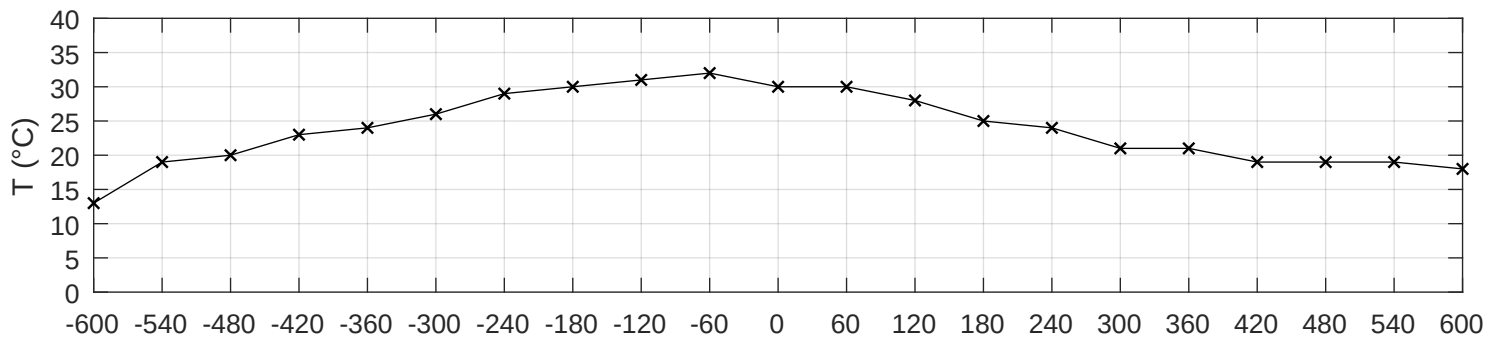
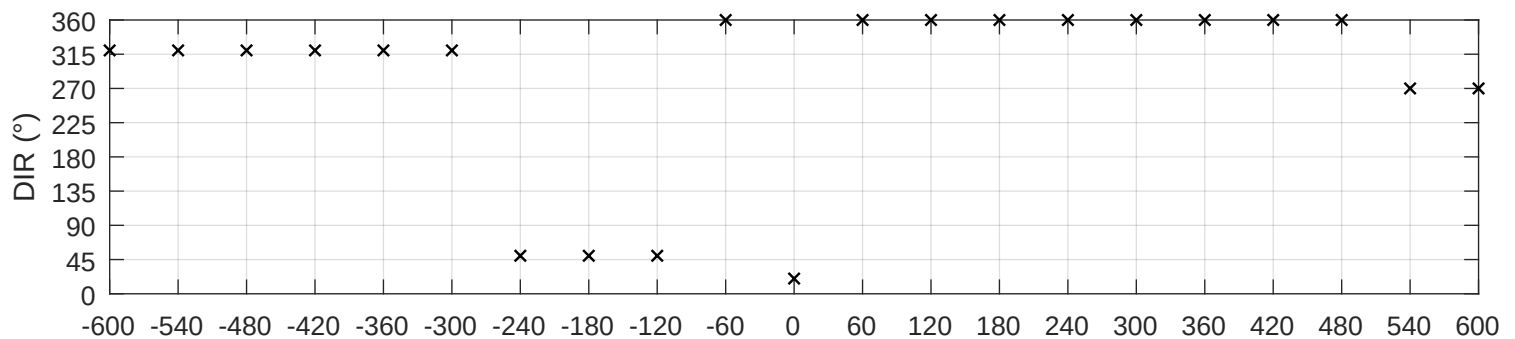
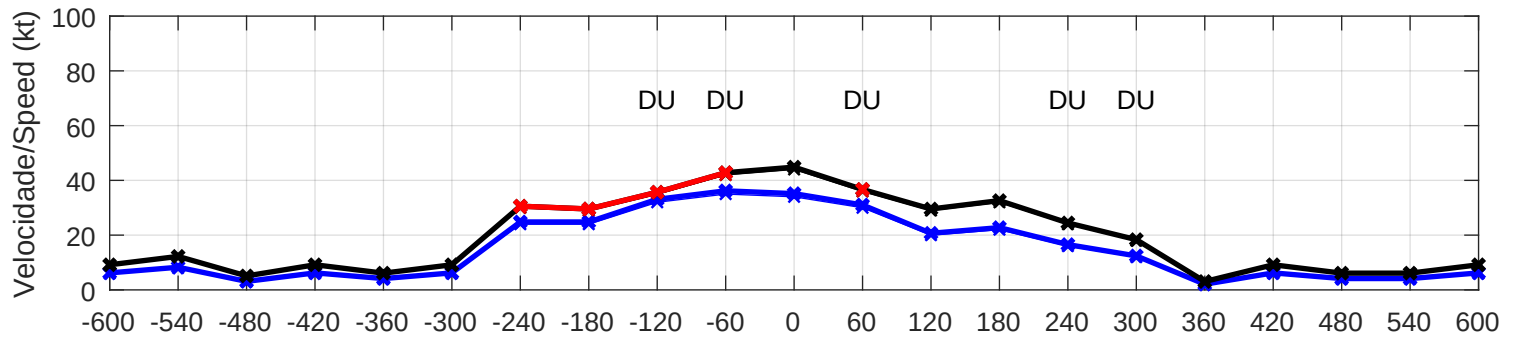
# SANT/87121 EVENTO/EVENT 50 - 15/10/2012, 10:27 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction             | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 44 \text{ kt}$      | $R_{-6} = 2.4$                | $T_{med,3} = 20.0 \text{ }^{\circ}\text{C}$       | $DIR = 180^{\circ}$                                | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 38 \text{ kt}$      | $R_{-3} = 2.0$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$                 |                                | NON-SYNOPTIC                    |
| $G_V = 1.2$                    | $R_{+3} = 1.9$                | $\Delta Q_{max,3} = 5.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 50^{\circ}$                 |                                | (111)                           |
| $G_{cor} = 44.8 \text{ kt}$    | $R_{+6} = 2.2$                | $\Delta \text{ Grupo/Group} = 1$                  | SPECI SANT 151027Z 18038G44KT 3000 PO 20/13 Q1005= |                                |                                 |
| $V_{cor} = 39.3 \text{ kt}$    |                               |                                                   |                                                    |                                |                                 |



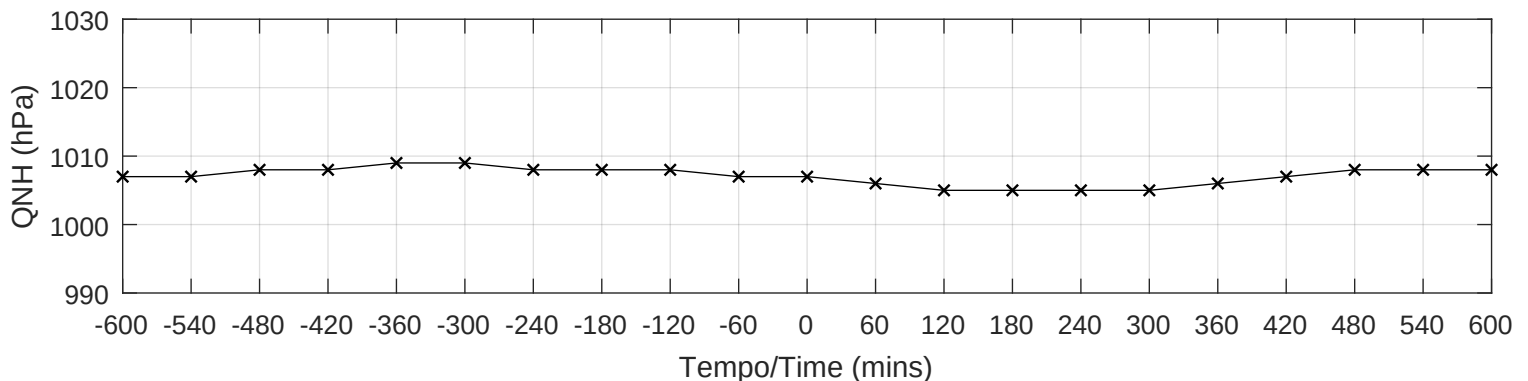
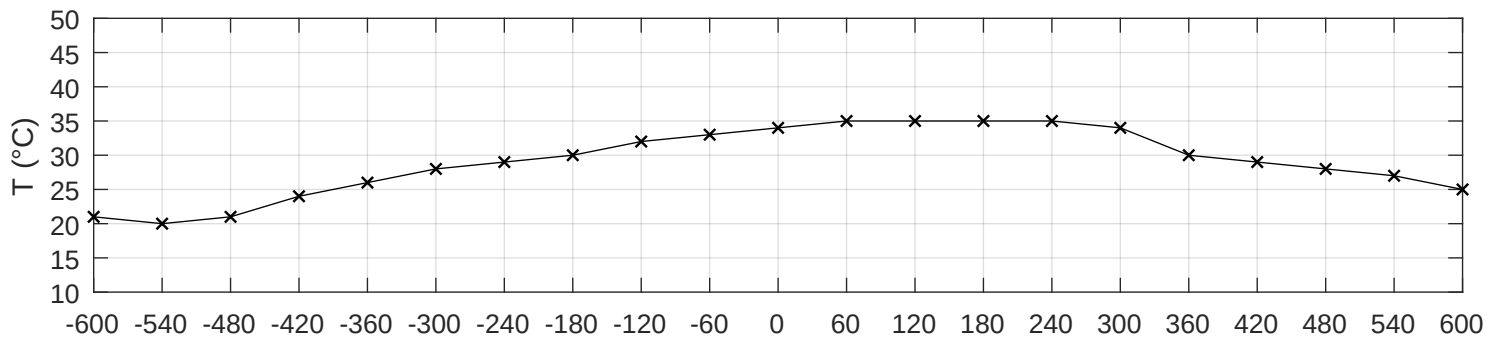
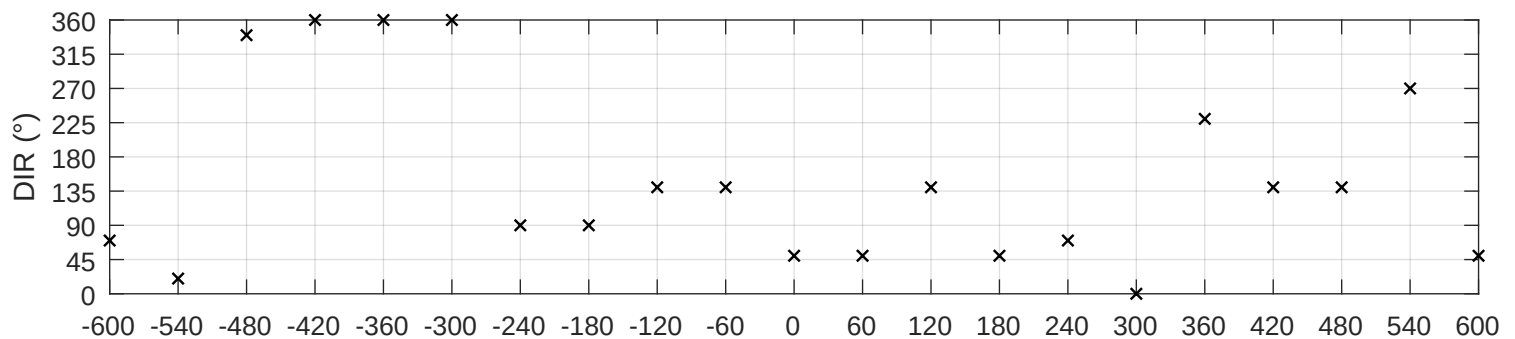
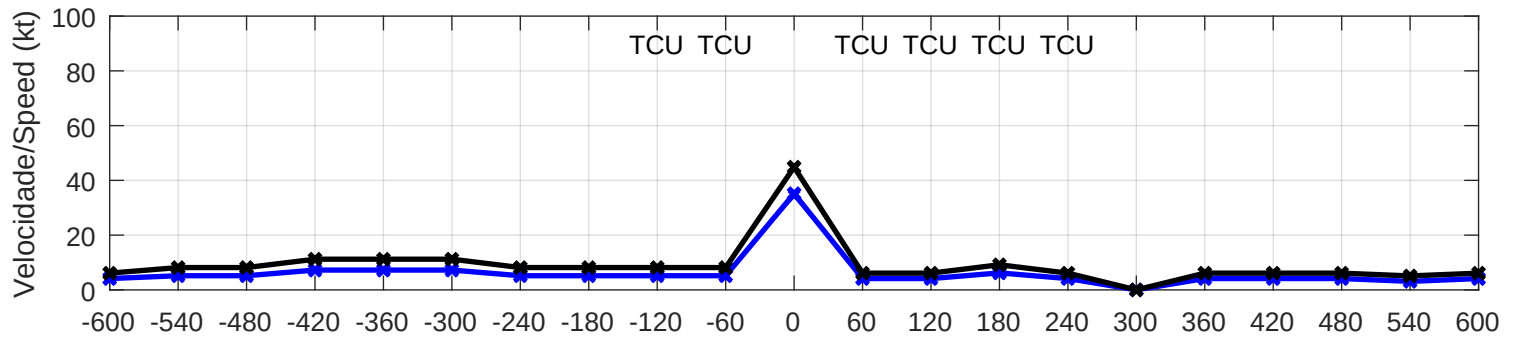
# SANT/87121 EVENTO/EVENT 51 - 21/09/2014, 20:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction           | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 44$ kt                  | $R_{-6} = 1.7$                | $T_{med,3} = 31.0$ °C        | $DIR = 20^\circ$                                 | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 34$ kt              | $R_{-3} = 1.2$                | $\Delta T_{min,3} = -2.0$ °C | $\Delta DIR_{max,-3} = 30^\circ$                 |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.4$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 20^\circ$                 |                                | (226)                           |
| $G_{cor} = 44.8$ kt            | $R_{+6} = 1.9$                | $\Delta$ Grupo/Group = 3     | METAR SANT 212000Z 02034KT 6000 NSC 30/07 Q1010= |                                |                                 |
| $V_{cor} = 35.2$ kt            |                               |                              |                                                  |                                |                                 |



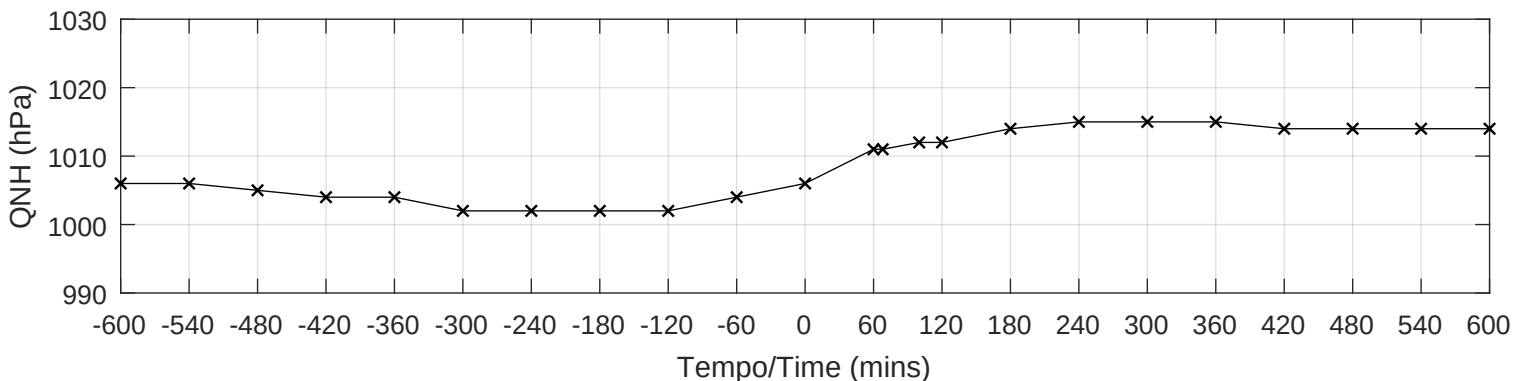
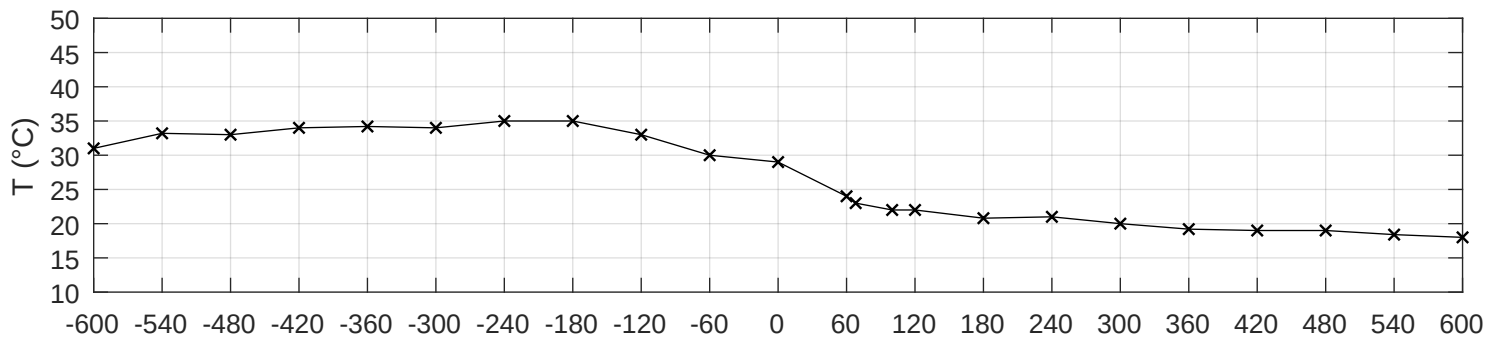
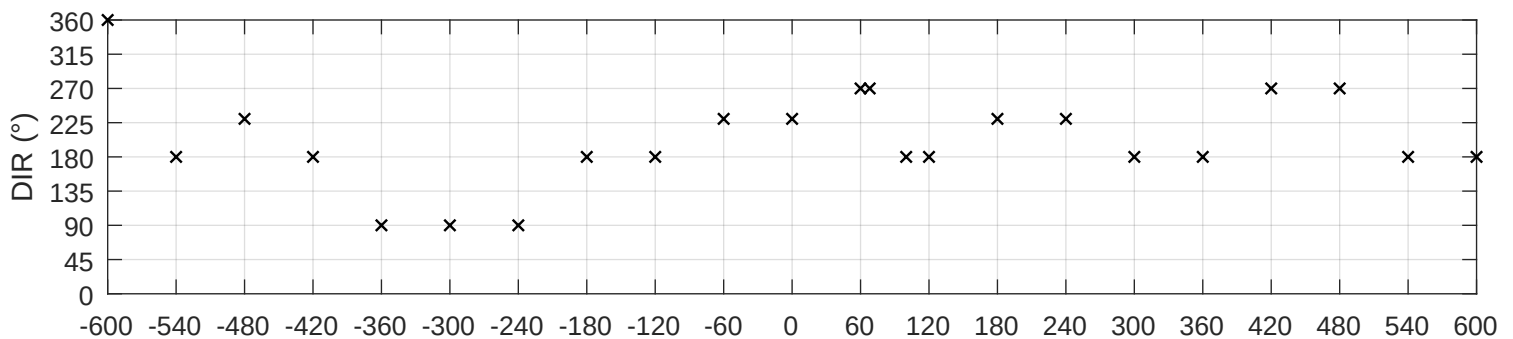
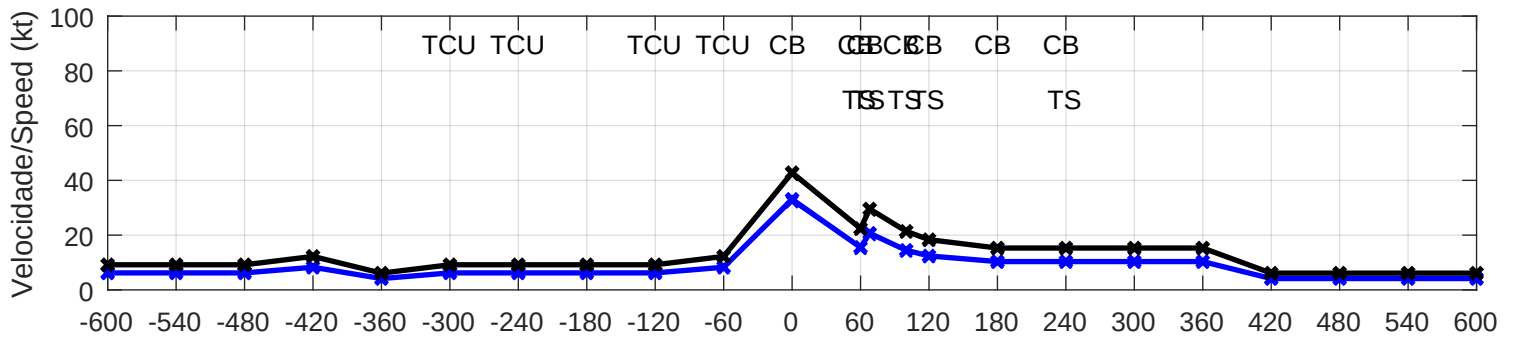
# SANT/87121 EVENTO/EVENT 52 - 26/12/2017, 18:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 44$ kt                  | $R_{-6} = 4.9$                | $T_{med,3} = 31.7$ °C        | $DIR = 50^\circ$                                      | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 34$ kt              | $R_{-3} = 5.5$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 90^\circ$                      |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 6.3$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                      |                                | (324)                           |
| $G_{cor} = 44.8$ kt            | $R_{+6} = 8.0$                | $\Delta$ Grupo/Group = 3     | METAR SANT 261800Z 05034KT 9999 FEW040<br>34/19Q1007= |                                |                                 |
| $V_{cor} = 35.2$ kt            |                               |                              |                                                       |                                |                                 |



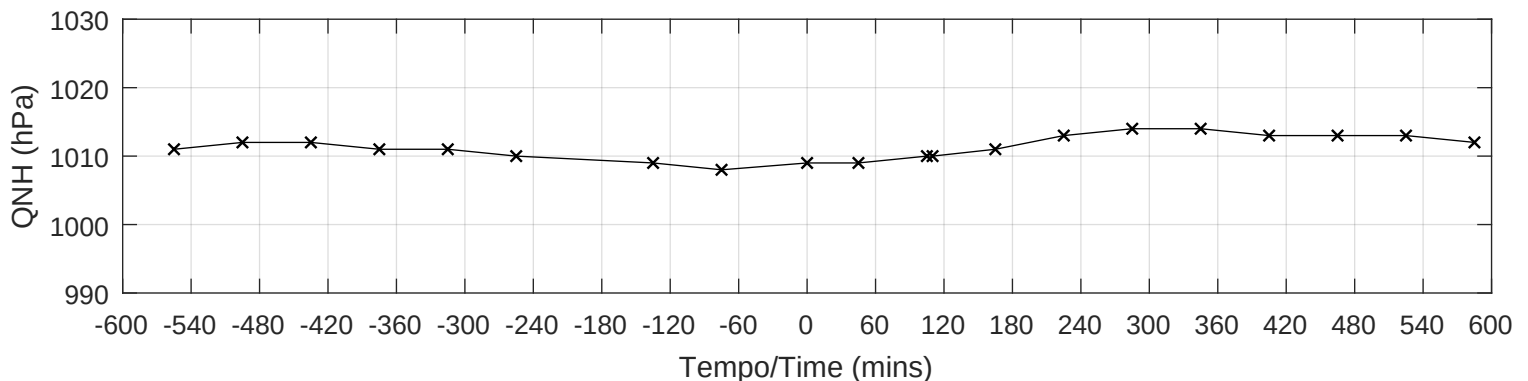
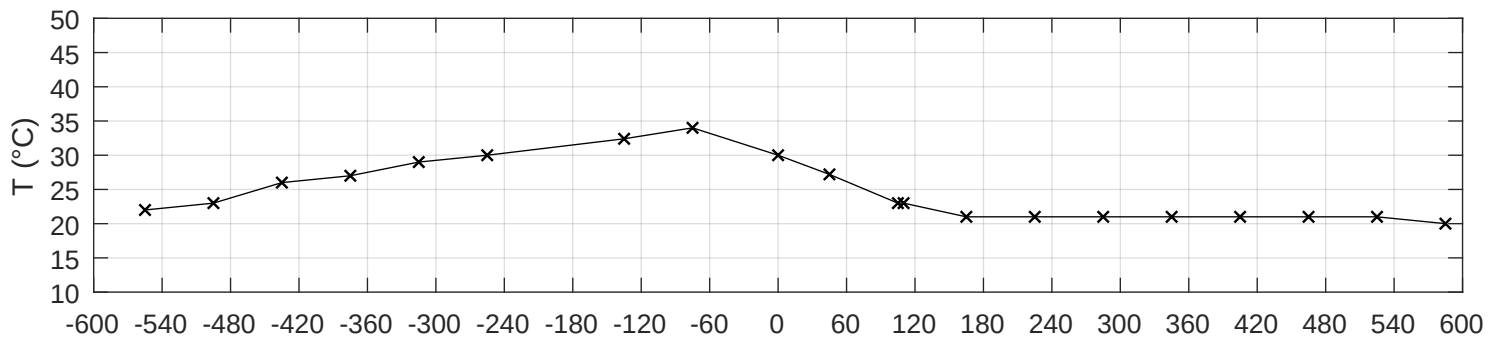
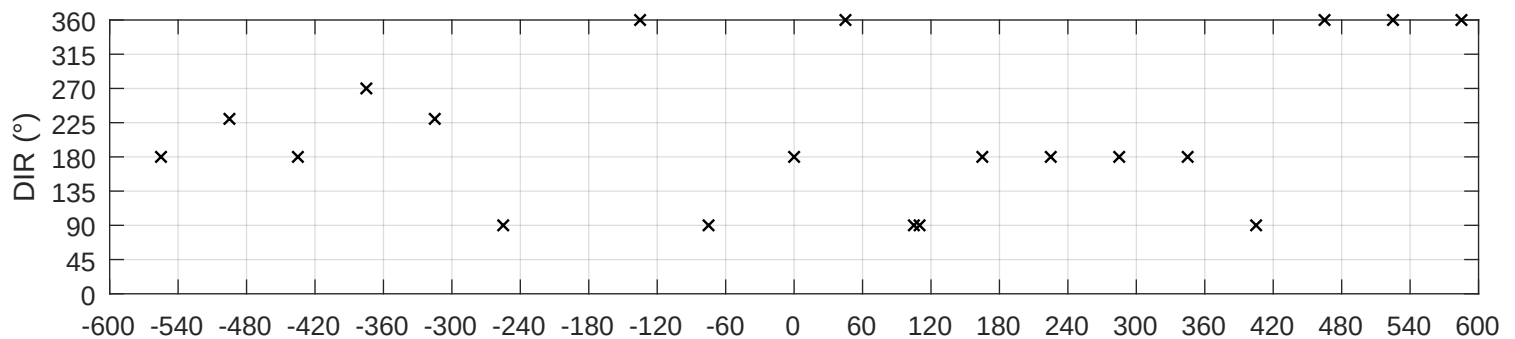
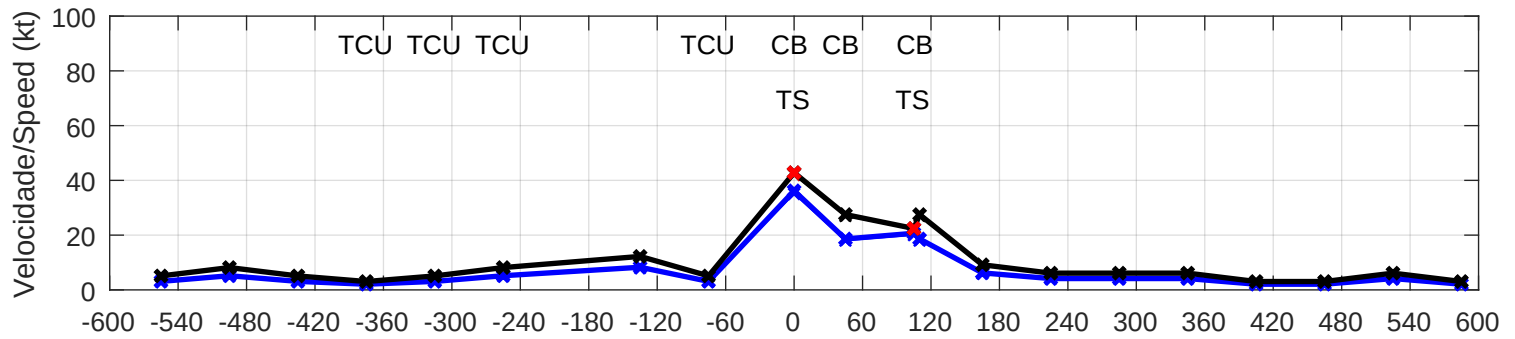
# SANT/87121 EVENTO/EVENT 53 - 19/03/2001, 00:00 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                                                                                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 42$ kt                  | $R_{-6} = 4.7$                | $T_{med,3} = 32.7$ °C        | $DIR = 230^\circ$                                                                                                     | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 32$ kt              | $R_{-3} = 4.2$                | $\Delta T_{min,3} = -9.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$                                                                                      |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 2.2$                | $\Delta Q_{max,3} = 9.0$ hPa | $\Delta DIR_{max,+3} = 50^\circ$                                                                                      |                                | (120)                           |
| $G_{cor} = 42.8$ kt            | $R_{+6} = 2.4$                | $\Delta$ Grupo/Group = 1     | AAXX 19004 87121 31665 72332 10290 20248<br>39532 40023 52033 71311 86960 333 10352<br>20274 56550 57950 85645 82950= |                                |                                 |
| $V_{cor} = 33.1$ kt            |                               |                              |                                                                                                                       |                                |                                 |



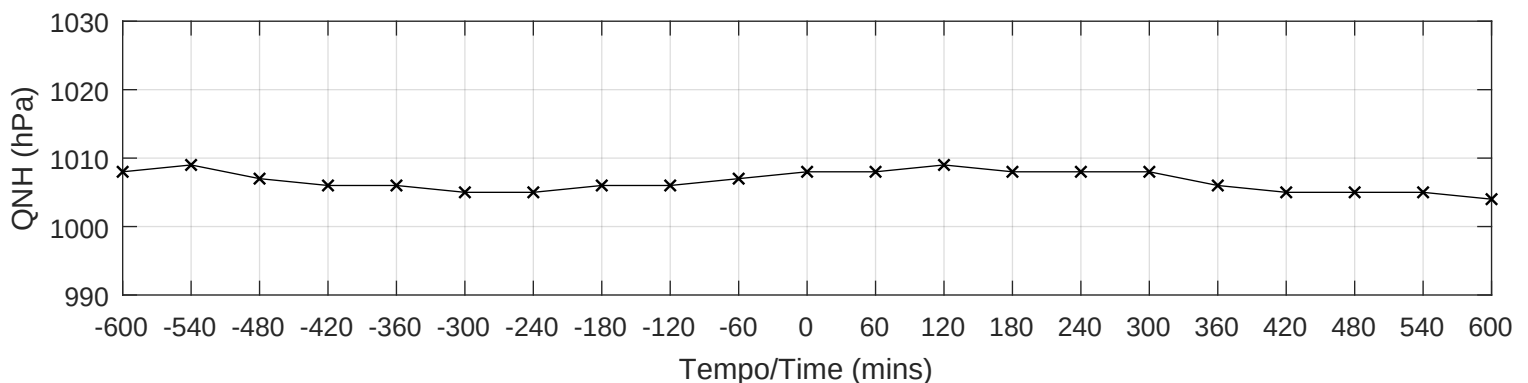
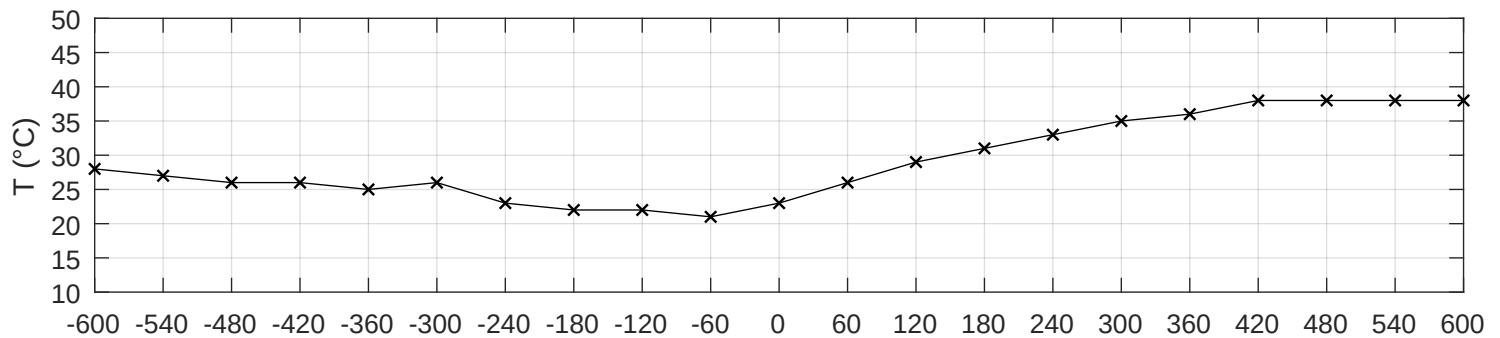
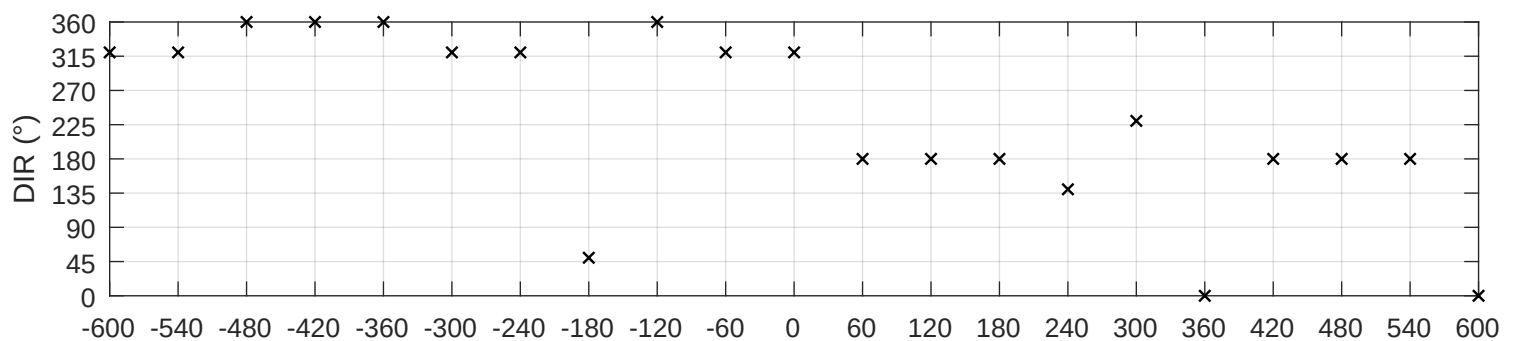
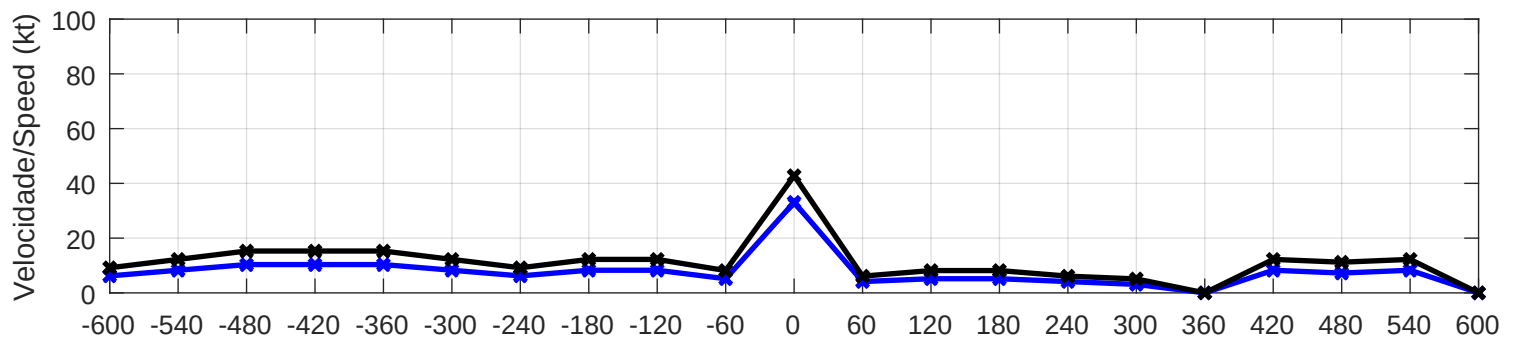
# SANT/87121 EVENTO/EVENT 54 - 05/12/2006, 20:15 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                      | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 42 \text{ kt}$      | $R_{-6} = 5.6$                | $T_{med,3} = 33.2 \text{ }^{\circ}\text{C}$        | $DIR = 180^{\circ}$                                         | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 35 \text{ kt}$      | $R_{-3} = 4.9$                | $\Delta T_{min,3} = -6.8 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 180^{\circ}$                         |                                | NON-SYNOPTIC                    |
| $G_V = 1.2$                    | $R_{+3} = 2.0$                | $\Delta Q_{max,3} = 1.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 180^{\circ}$                         |                                | (110)                           |
| $G_{cor} = 42.8 \text{ kt}$    | $R_{+6} = 3.1$                | $\Delta \text{ Grupo/Group} = 2$                   | SANT 052015Z 18035G42KT 3000 +TSRA BKN045CB<br>30/28 Q1009= |                                |                                 |
| $V_{cor} = 36.2 \text{ kt}$    |                               |                                                    |                                                             |                                |                                 |



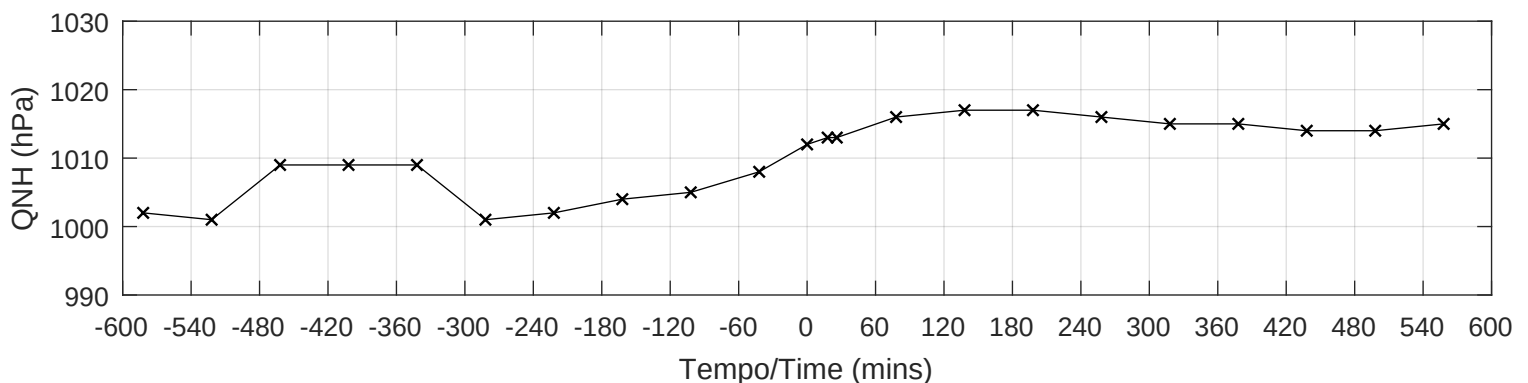
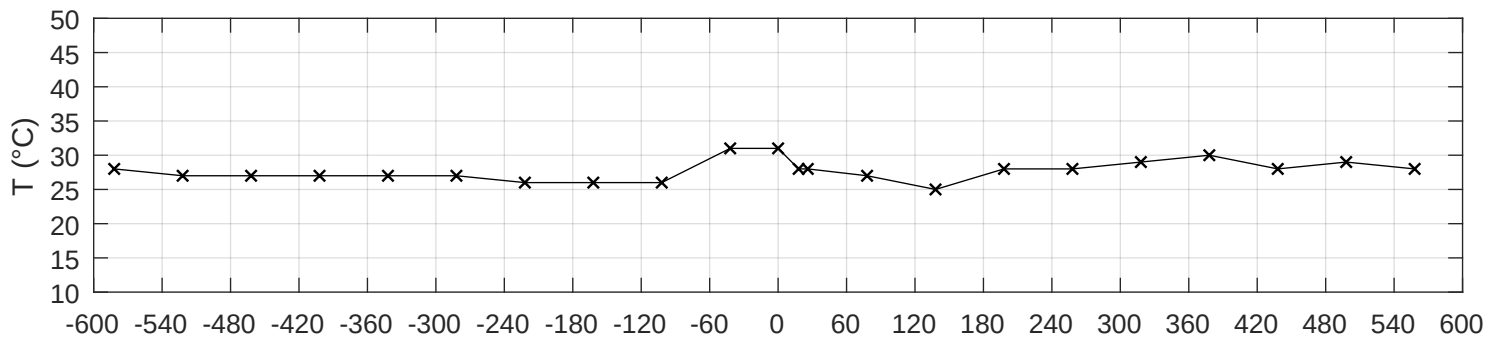
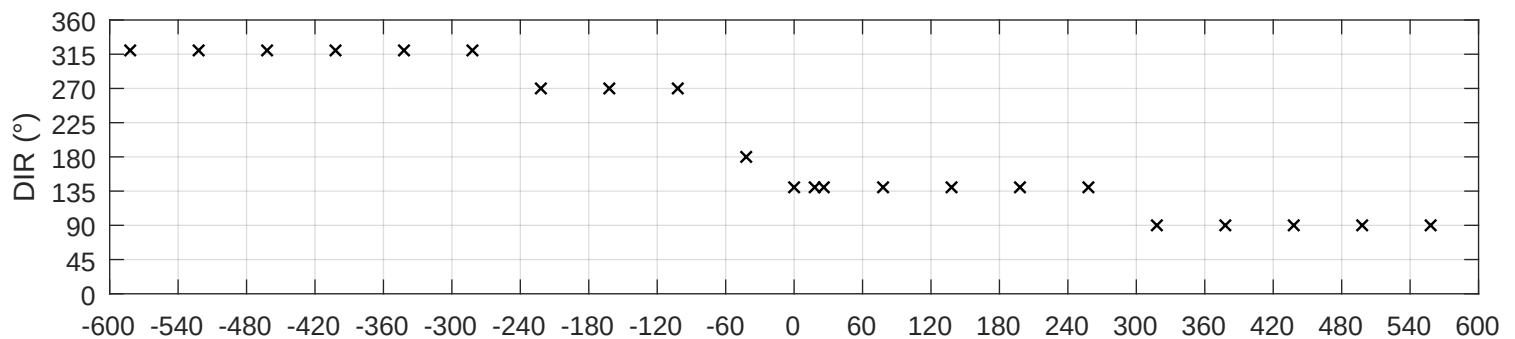
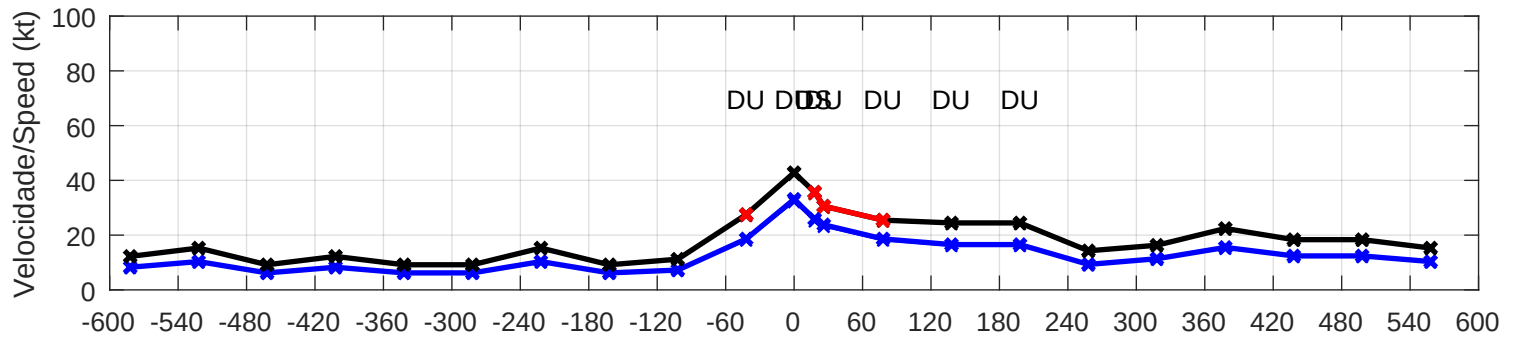
# SANT/87121 EVENTO/EVENT 55 - 23/11/2008, 11:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction          | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 42$ kt                  | $R_{-6} = 3.7$                | $T_{med,3} = 21.7$ °C        | $DIR = 320^\circ$                               | NÃO/NO                         | SUSPEITO                        |
| $V_{obs} = 32$ kt              | $R_{-3} = 3.9$                | $\Delta T_{min,3} = -1.0$ °C | $\Delta DIR_{max,-3} = 90^\circ$                |                                | SUSPECT                         |
| $G_V = []$                     | $R_{+3} = 5.7$                | $\Delta Q_{max,3} = 2.0$ hPa | $\Delta DIR_{max,+3} = 140^\circ$               |                                | (321)                           |
| $G_{cor} = 42.8$ kt            | $R_{+6} = 7.6$                | $\Delta$ Grupo/Group = 2     | SANT 231100Z 32032G04KT 9999 SKC<br>23/13Q1008= |                                |                                 |
| $V_{cor} = 33.1$ kt            |                               |                              |                                                 |                                |                                 |



# SANT/87121 EVENTO/EVENT 56 - 15/11/2013, 12:42 UTC (MSS - REDEMET)

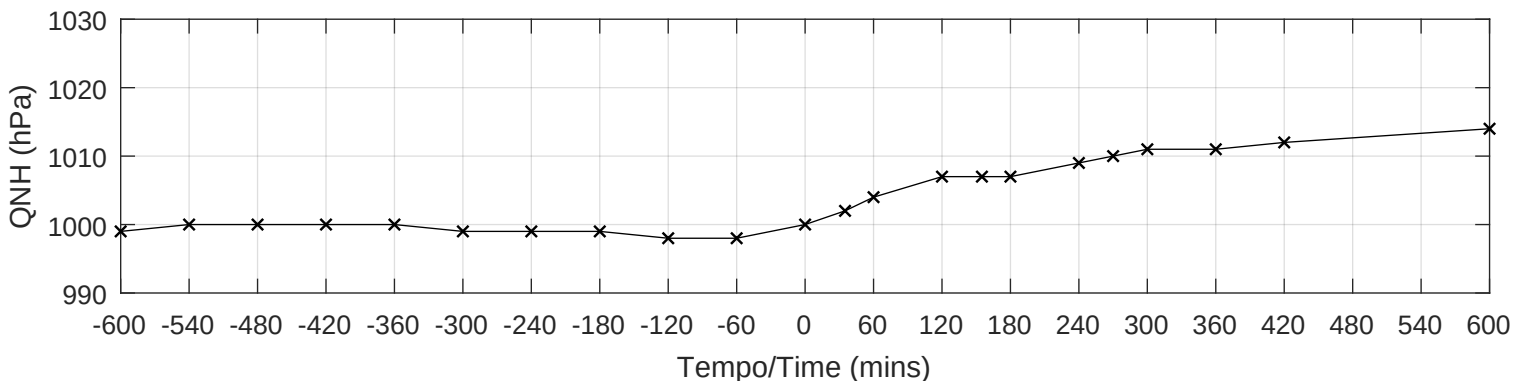
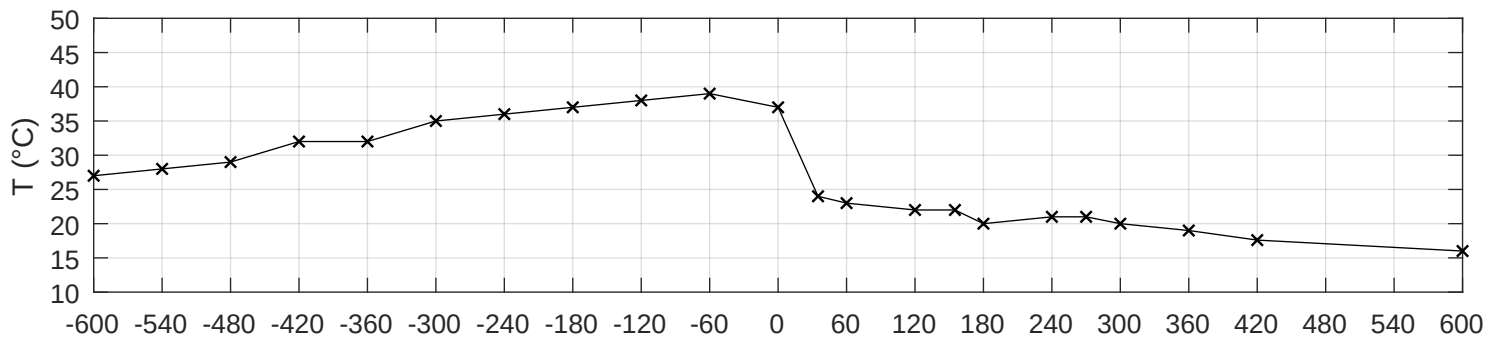
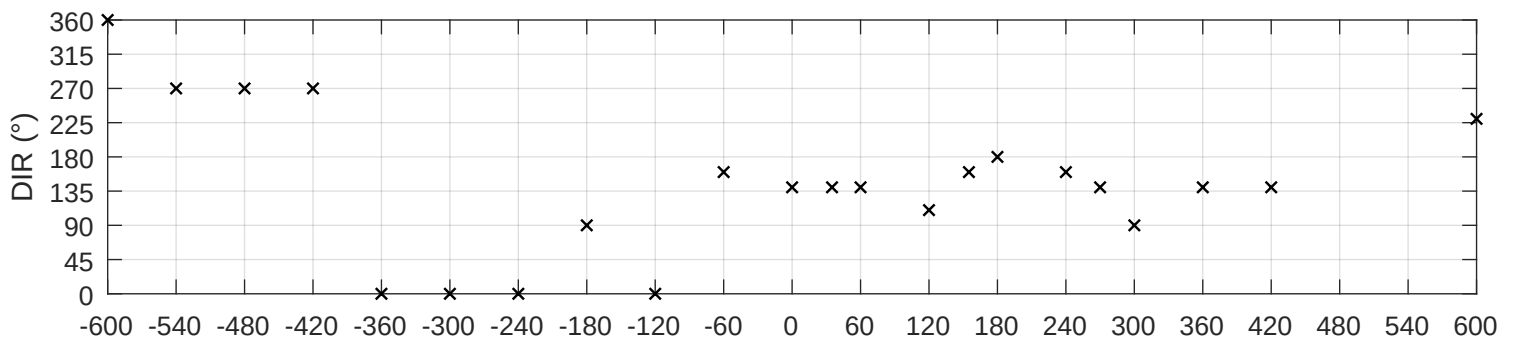
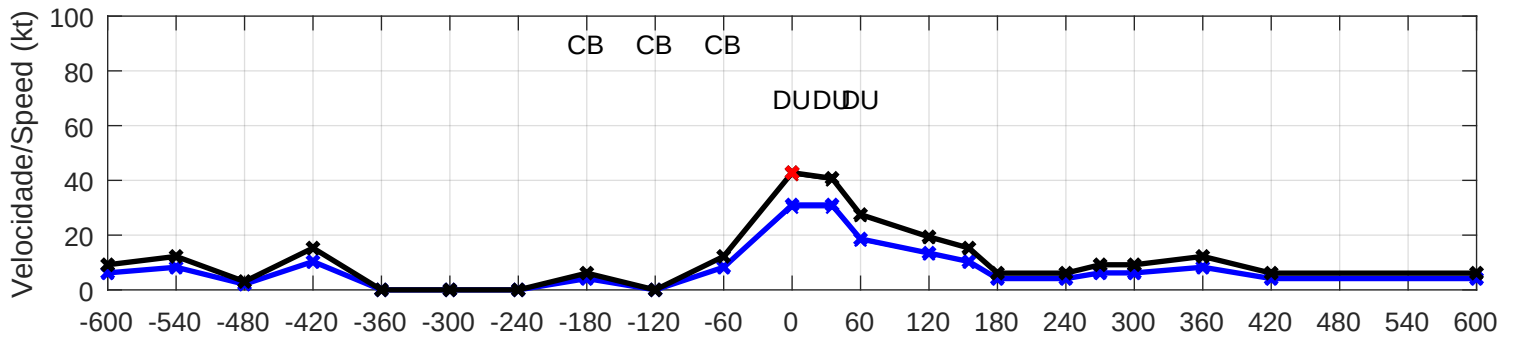
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction          | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 42$ kt                  | $R_{-6} = 3.3$                | $T_{med,3} = 26.0$ °C        | $DIR = 140^\circ$                               | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 32$ kt              | $R_{-3} = 2.9$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 130^\circ$               |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.6$                | $\Delta Q_{max,3} = 8.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                 |                                | (221)                           |
| $G_{cor} = 42.8$ kt            | $R_{+6} = 1.9$                | $\Delta$ Grupo/Group = 1     | SPECI SANT 151242Z 14032KT 0200 DU 31/15 Q1012= |                                |                                 |
| $V_{cor} = 33.1$ kt            |                               |                              |                                                 |                                |                                 |





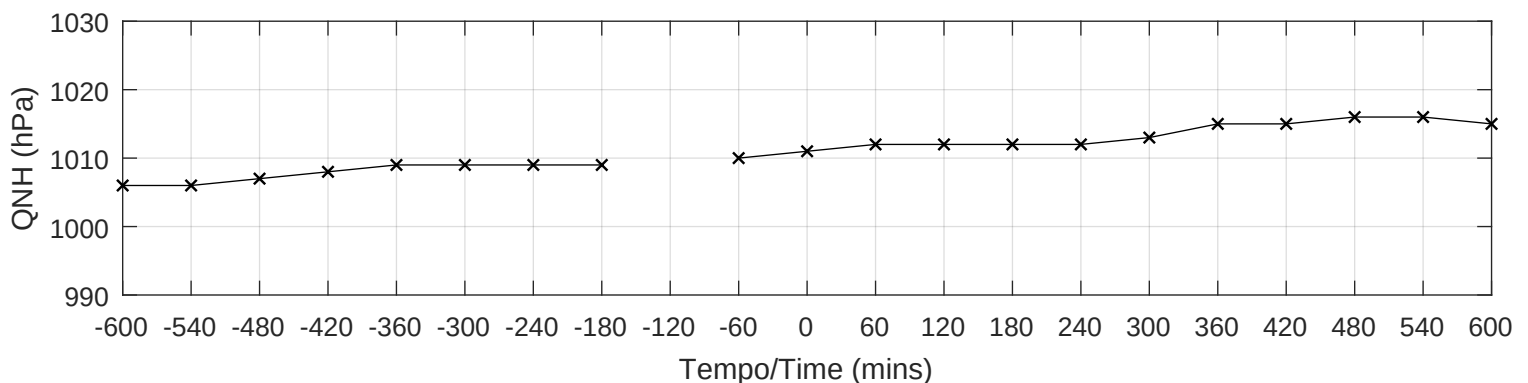
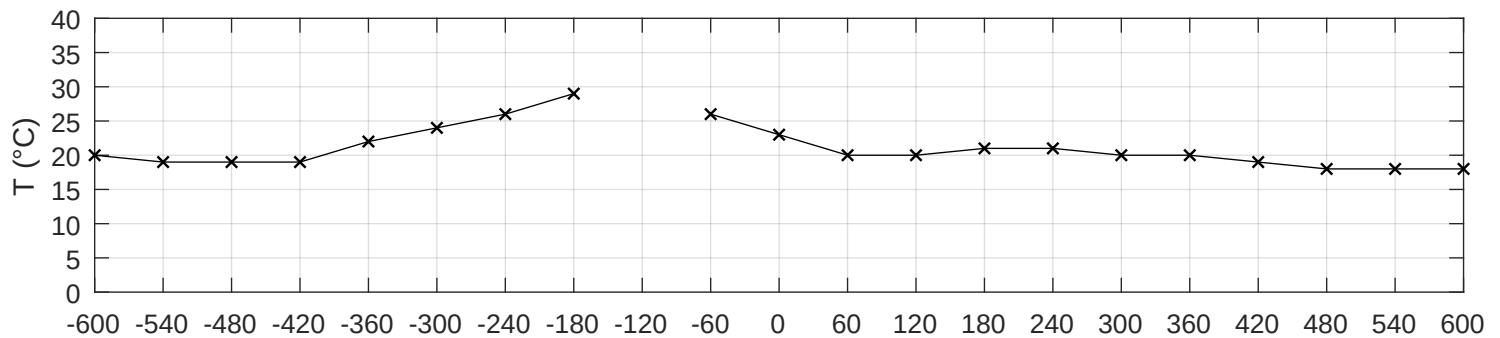
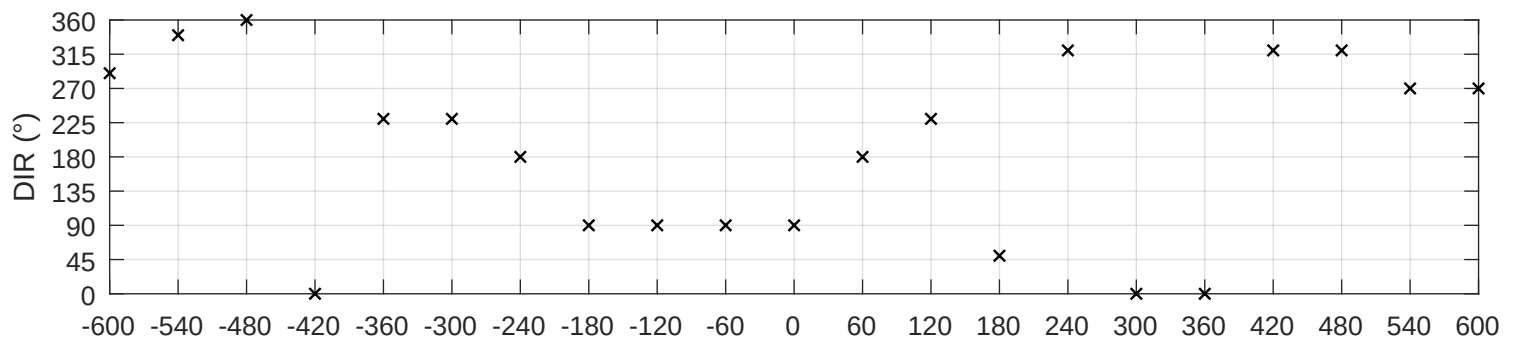
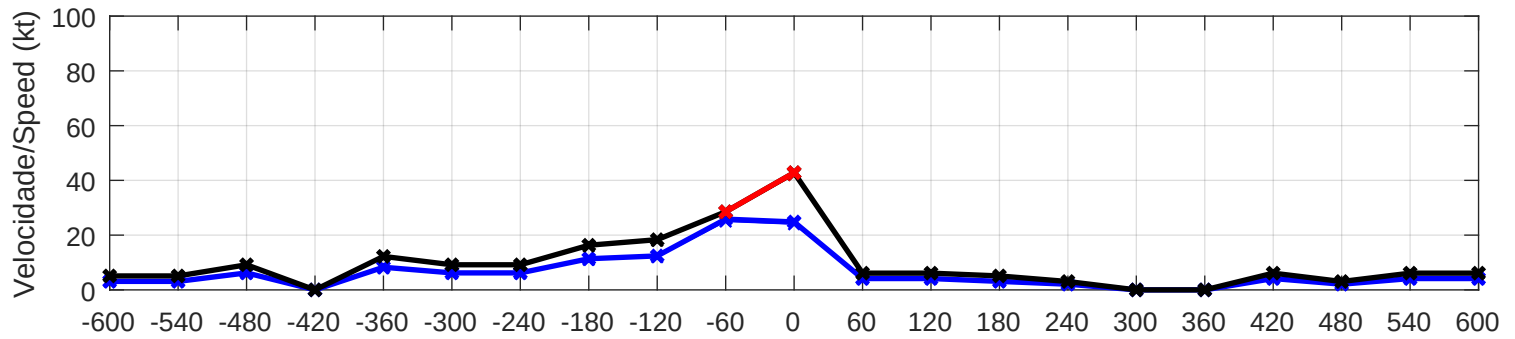
# SANT/87121 EVENTO/EVENT 57 - 02/01/2014, 20:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                             | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-----------------------------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 42 \text{ kt}$      | $R_{-6} = 14.0$               | $T_{med,3} = 38.0 \text{ }^{\circ}\text{C}$         | $DIR = 140^{\circ}$                                    | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 7.0$                | $\Delta T_{min,3} = -16.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                     |                                | NON-SYNOPTIC                    |
| $G_V = 1.4$                    | $R_{+3} = 2.1$                | $\Delta Q_{max,3} = 6.0 \text{ hPa}$                | $\Delta DIR_{max,+3} = 40^{\circ}$                     |                                | (113)                           |
| $G_{cor} = 42.8 \text{ kt}$    | $R_{+6} = 2.8$                | $\Delta \text{ Grupo/Group} = 1$                    | METAR SANT 022000Z 14030G42KT 0400 BLDU<br>37/24Q1000= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                     |                                                        |                                |                                 |



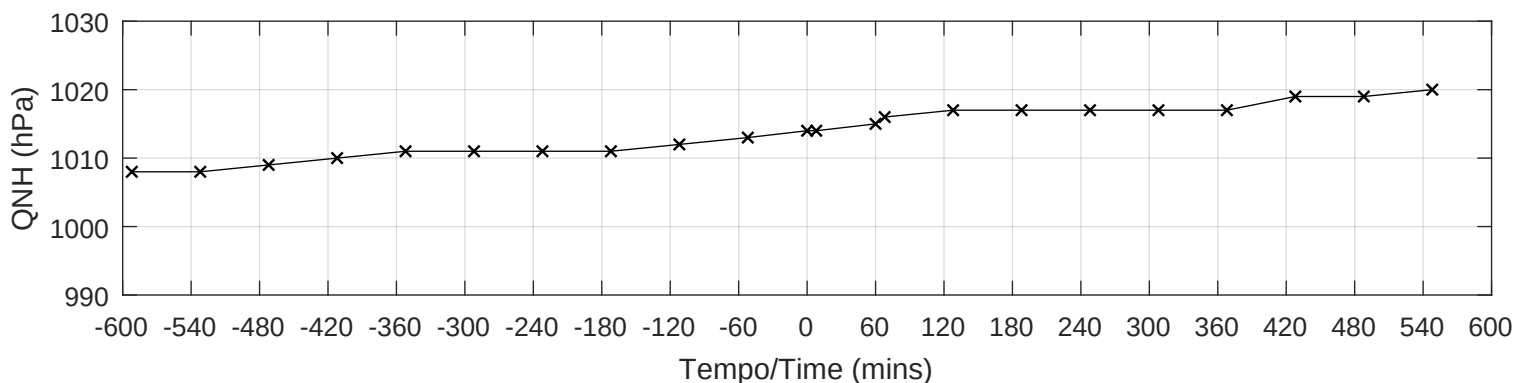
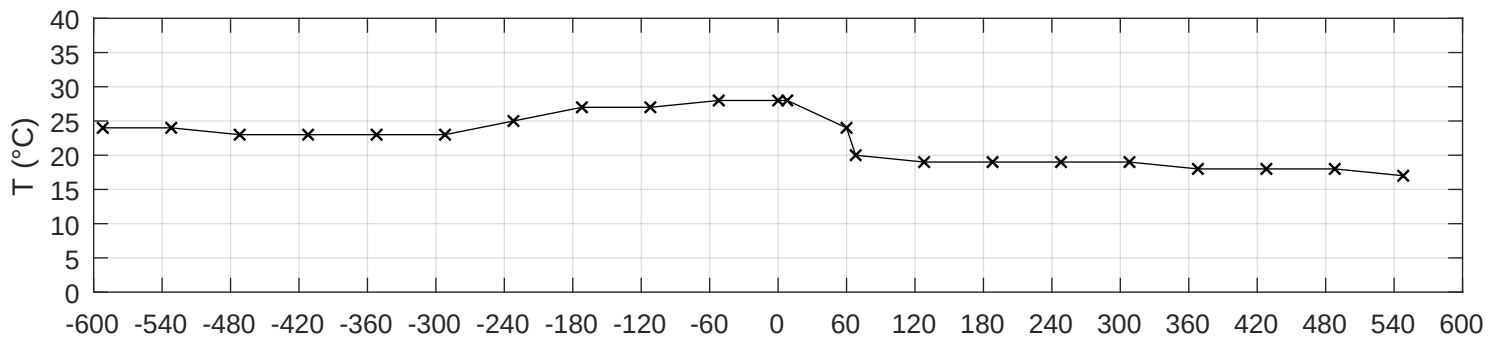
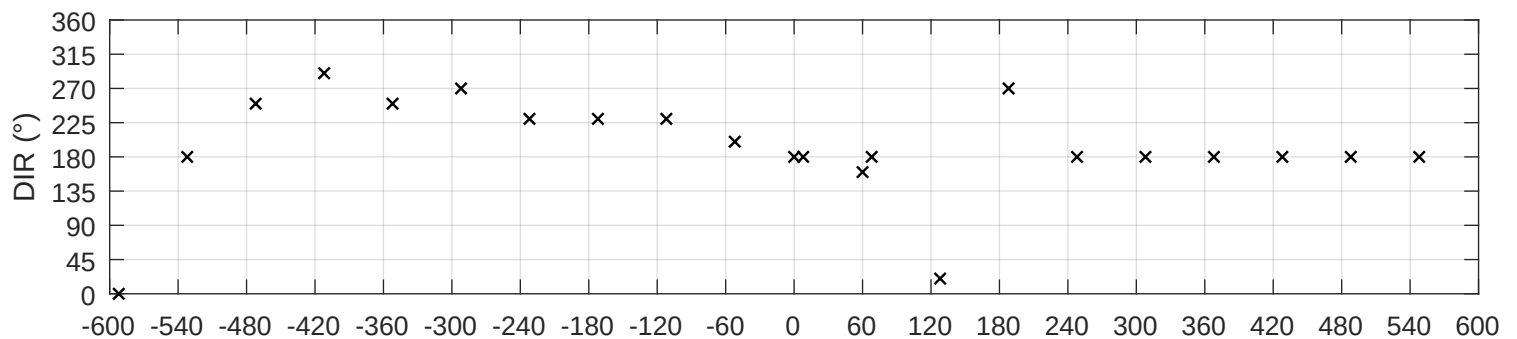
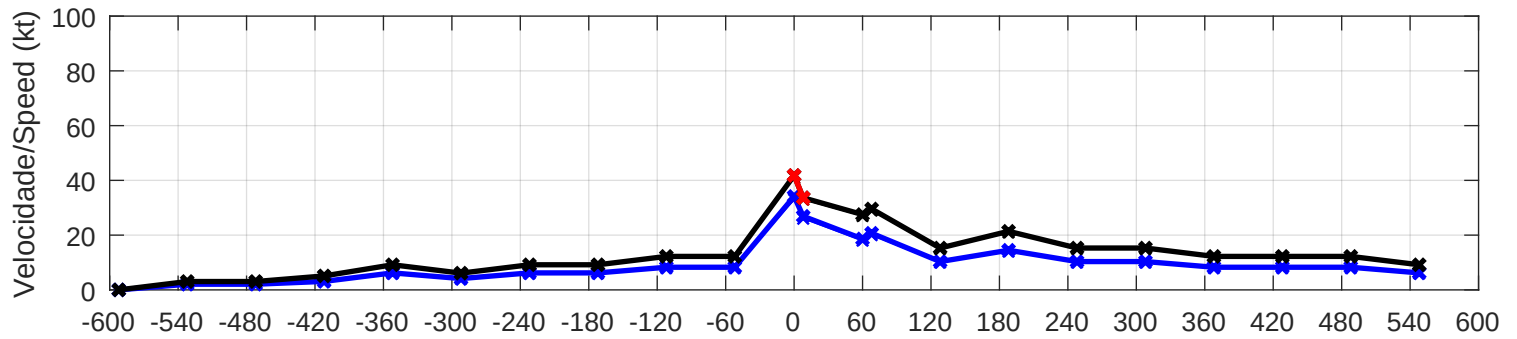
# SANT/87121 EVENTO/EVENT 58 - 13/10/2016, 18:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                      | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 42 \text{ kt}$      | $R_{-6} = 2.7$                | $T_{med,3} = 27.5 \text{ }^{\circ}\text{C}$        | $DIR = 90^{\circ}$                                          | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 24 \text{ kt}$      | $R_{-3} = 2.0$                | $\Delta T_{min,3} = -6.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 0^{\circ}$                           |                                | NON-SYNOPTIC                    |
| $G_V = 1.8$                    | $R_{+3} = 7.4$                | $\Delta Q_{max,3} = 2.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 140^{\circ}$                         |                                | (113)                           |
| $G_{cor} = 42.8 \text{ kt}$    | $R_{+6} = 12.6$               | $\Delta \text{ Grupo/Group} = 1$                   | METAR SANT 131800Z 09024G42KT 5000 RA<br>OVC03523/16 Q1011= |                                |                                 |
| $V_{cor} = 24.8 \text{ kt}$    |                               |                                                    |                                                             |                                |                                 |



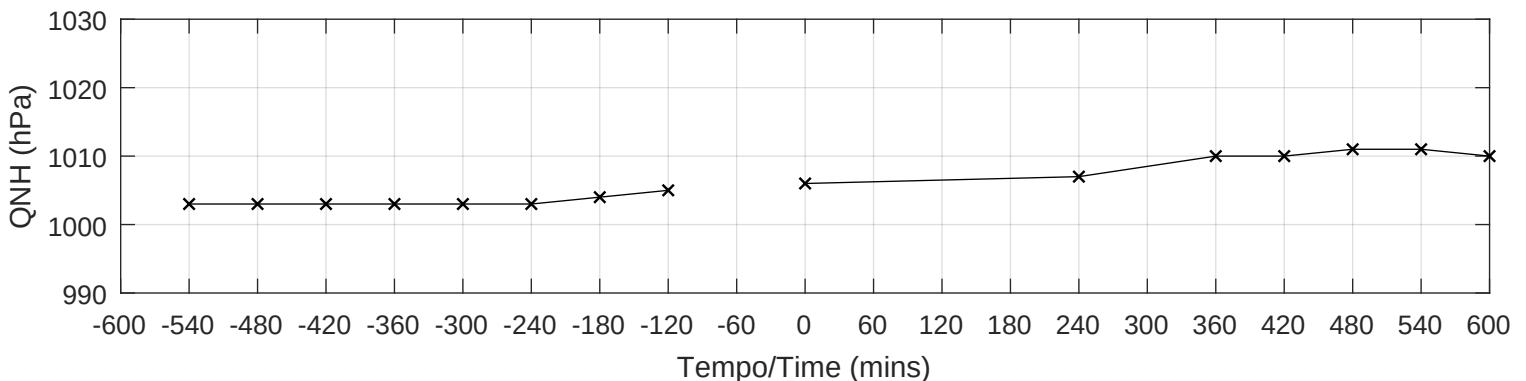
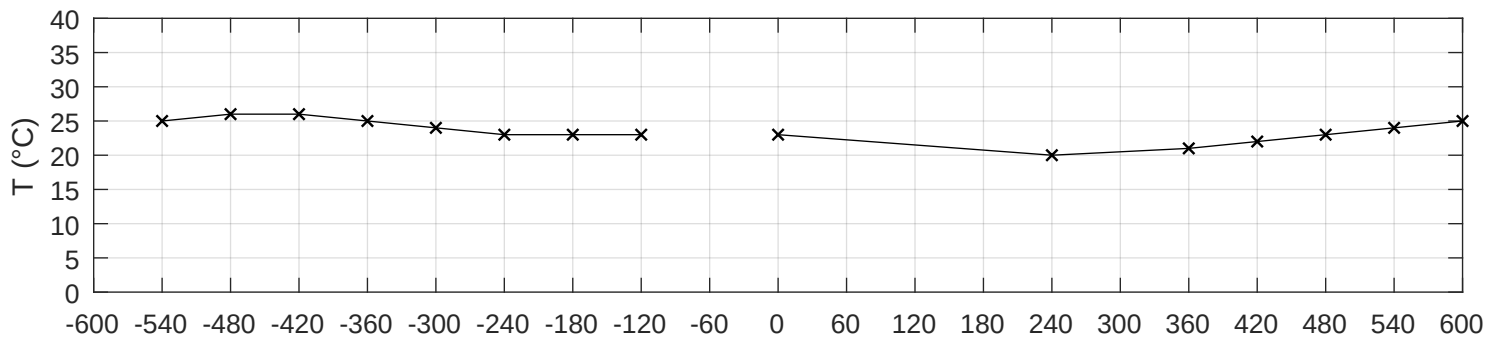
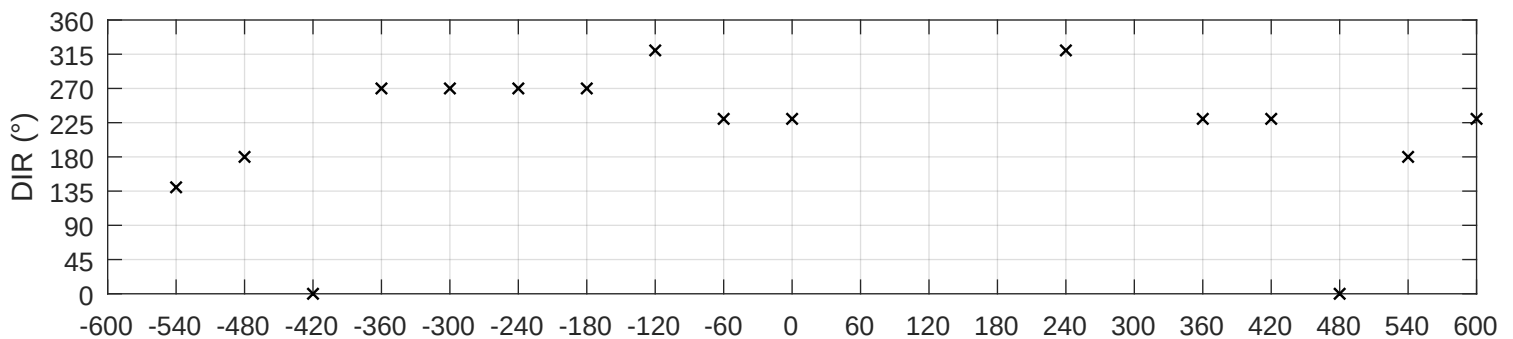
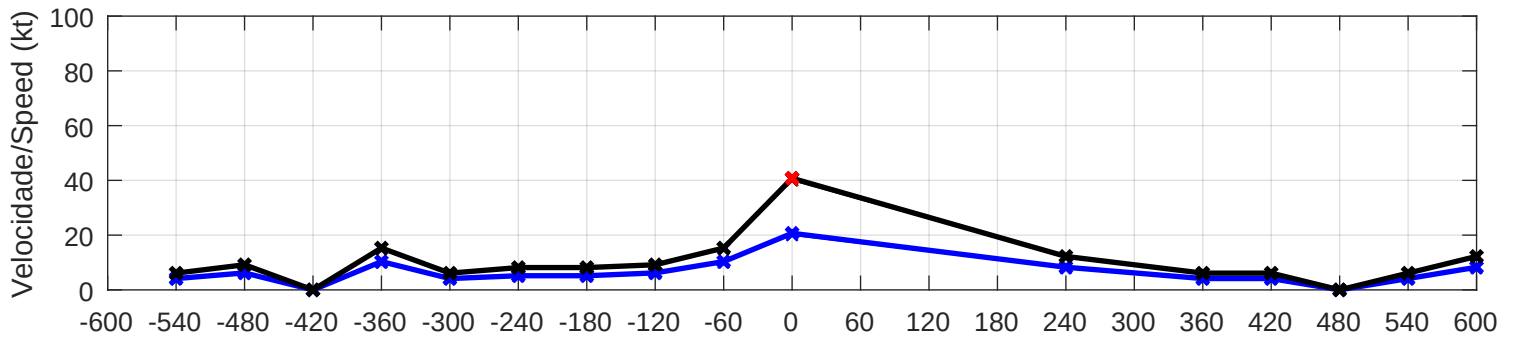
# SANT/87121 EVENTO/EVENT 59 - 17/01/2019, 15:52 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                              | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|---------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 41 \text{ kt}$      | $R_{-6} = 4.3$                | $T_{med,3} = 27.0 \text{ }^{\circ}\text{C}$        | $DIR = 180^{\circ}$                                                 | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 33 \text{ kt}$      | $R_{-3} = 3.7$                | $\Delta T_{min,3} = -4.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                                  |                                | NON-SYNOPTIC                    |
| $G_V = 1.2$                    | $R_{+3} = 1.6$                | $\Delta Q_{max,3} = 3.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 160^{\circ}$                                 |                                | (111)                           |
| $G_{cor} = 41.8 \text{ kt}$    | $R_{+6} = 1.9$                | $\Delta \text{ Grupo/Group} = 1$                   | SPECI SANT 171552Z 18033G41KT 3000 -RA<br>SCT015BKN027 28/24 Q1014= |                                |                                 |
| $V_{cor} = 34.1 \text{ kt}$    |                               |                                                    |                                                                     |                                |                                 |



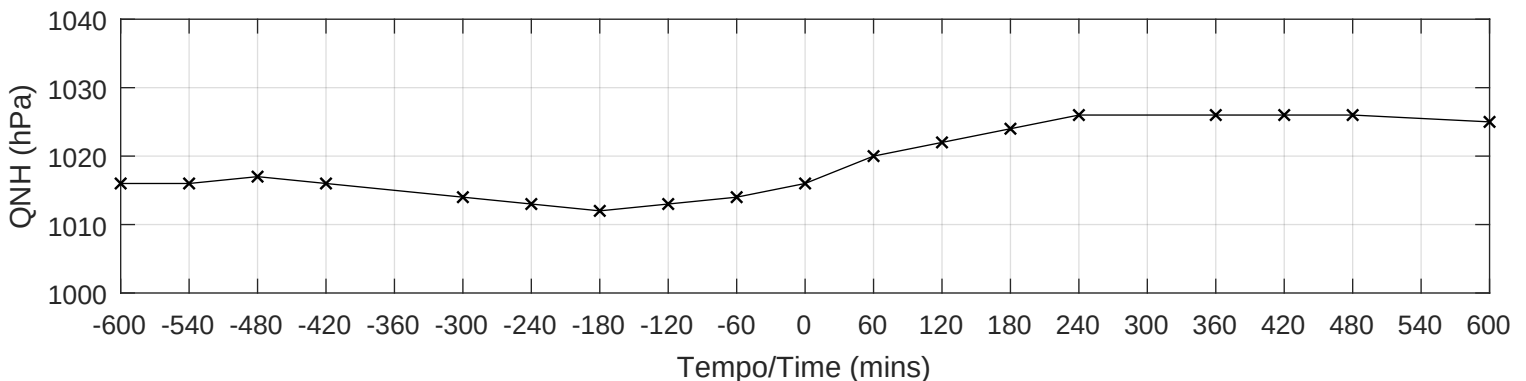
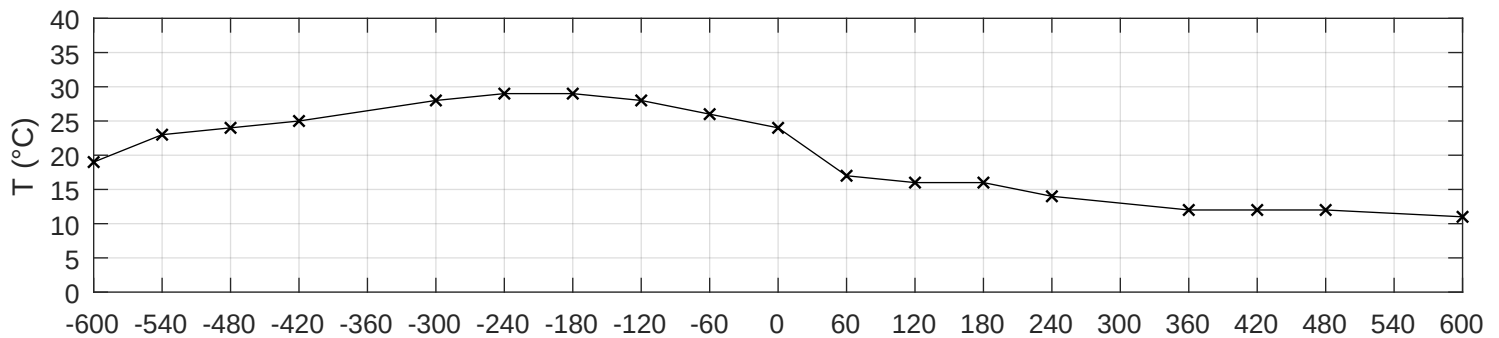
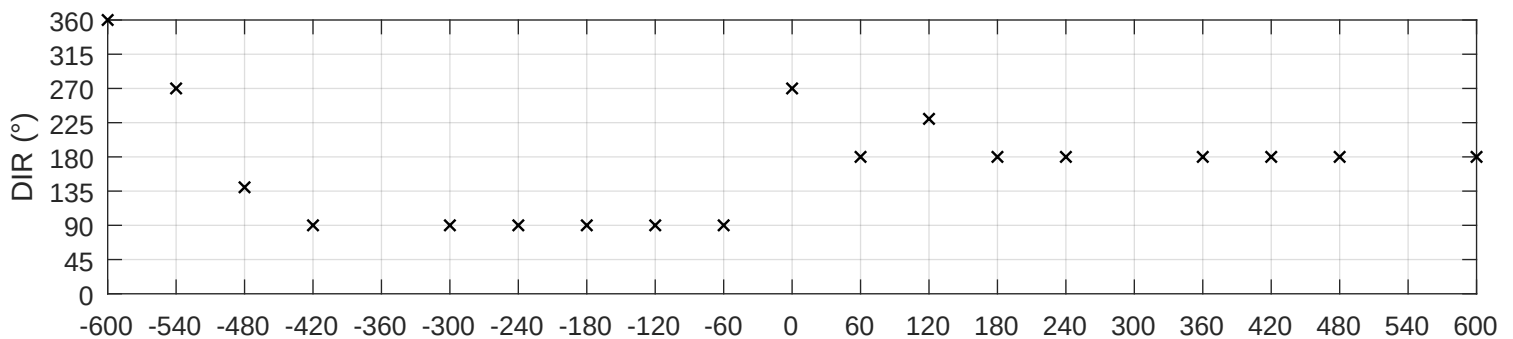
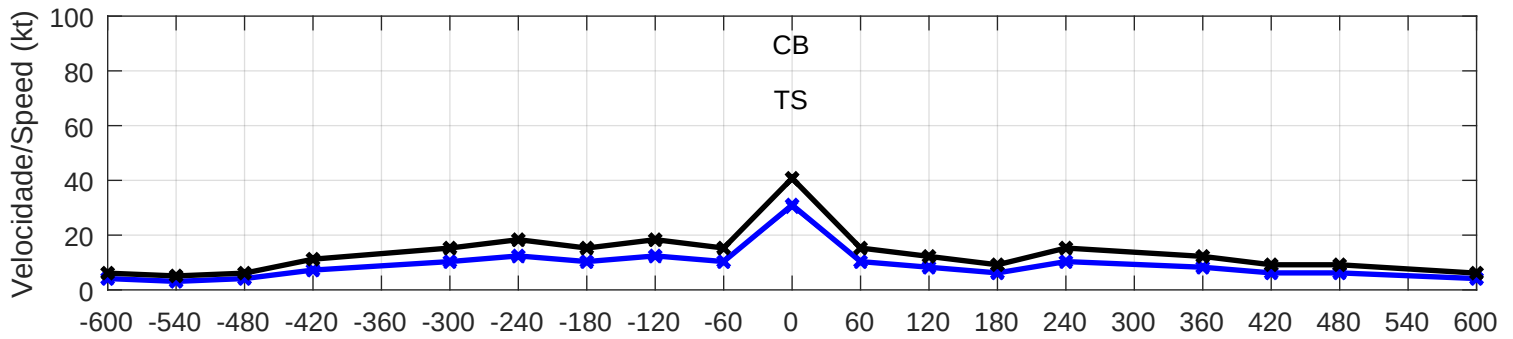
# SANT/87121 EVENTO/EVENT 60 - 13/12/1997, 05:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                                   | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 40 \text{ kt}$      | $R_{-6} = 3.9$                | $T_{med,3} = 23.0 \text{ }^{\circ}\text{C}$       | $DIR = 230^{\circ}$                                                      | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 20 \text{ kt}$      | $R_{-3} = 3.8$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$                                       |                                | NON-SYNOPTIC                    |
| $G_V = 2.0$                    | $R_{+3} = []$                 | $\Delta Q_{max,3} = 1.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = []$                                               |                                | (117)                           |
| $G_{cor} = 40.8 \text{ kt}$    | $R_{+6} = 4.4$                | $\Delta \text{ Grupo/Group} = 3$                  | METAR SANT 130500Z 23020KT RAF40KT 9999 -RA<br>SCT015 OVC025 23/22 Q1006 |                                |                                 |
| $V_{cor} = 20.7 \text{ kt}$    |                               |                                                   |                                                                          |                                |                                 |



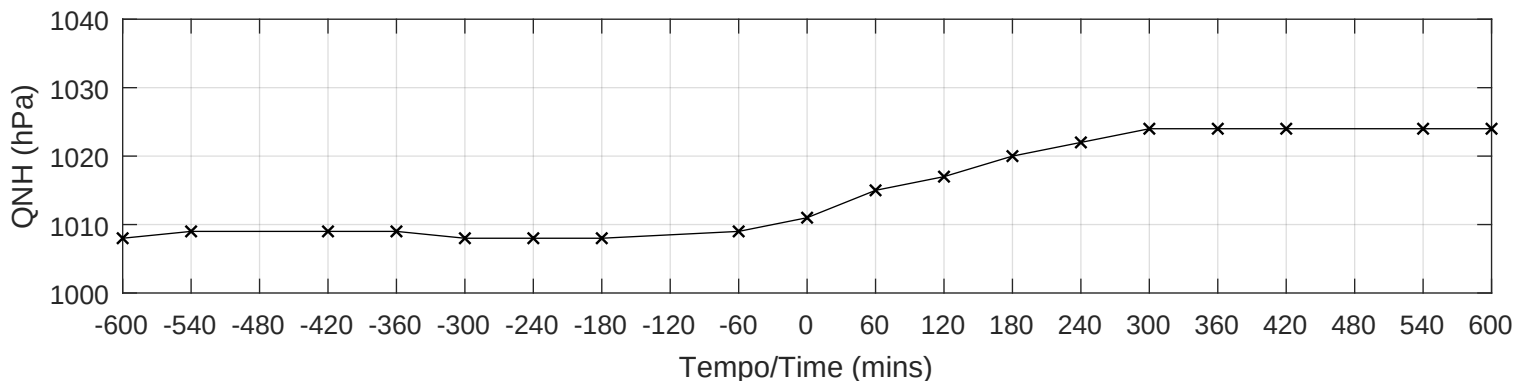
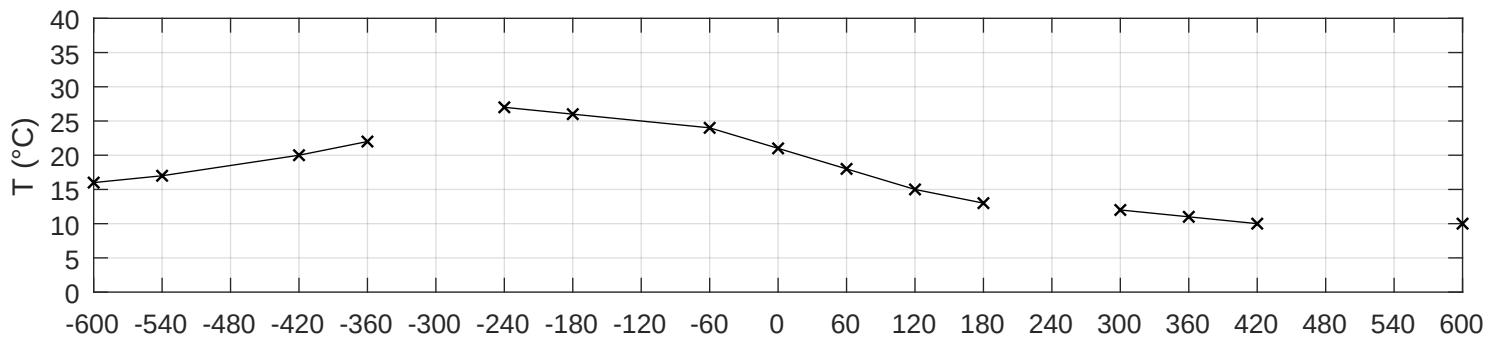
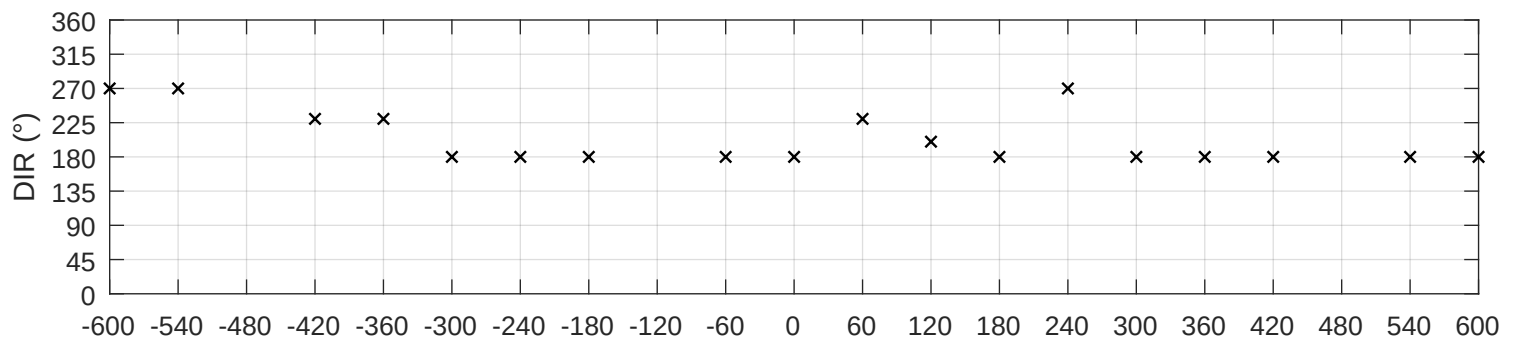
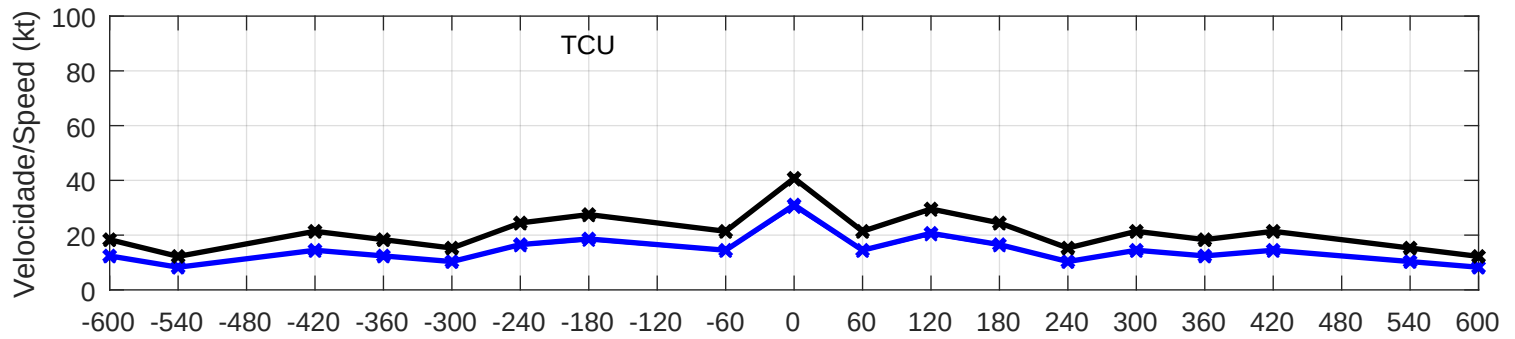
# SANT/87121 EVENTO/EVENT 61 - 08/09/1998, 23:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.       | $\Delta$ Direção<br>$\Delta$ Direction                               | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-------------------------------|----------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 40$ kt                  | $R_{-6} = 2.5$                | $T_{med,3} = 27.7$ °C         | $DIR = 270^\circ$                                                    | SIM/YES                        | NÃO-SINÓTICO                    |
| $V_{obs} = 30$ kt              | $R_{-3} = 2.5$                | $\Delta T_{min,3} = -11.0$ °C | $\Delta DIR_{max,-3} = 180^\circ$                                    |                                | NON-SYNOPTIC                    |
| $G_V = []$                     | $R_{+3} = 3.3$                | $\Delta Q_{max,3} = 7.0$ hPa  | $\Delta DIR_{max,+3} = 90^\circ$                                     |                                | (120)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 3.2$                | $\Delta$ Grupo/Group = 1      | METAR SANT 082300Z 27030KT 3000 TS+RA<br>SCT035 SCT045CB 24/10 Q1016 |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                               |                                                                      |                                |                                 |



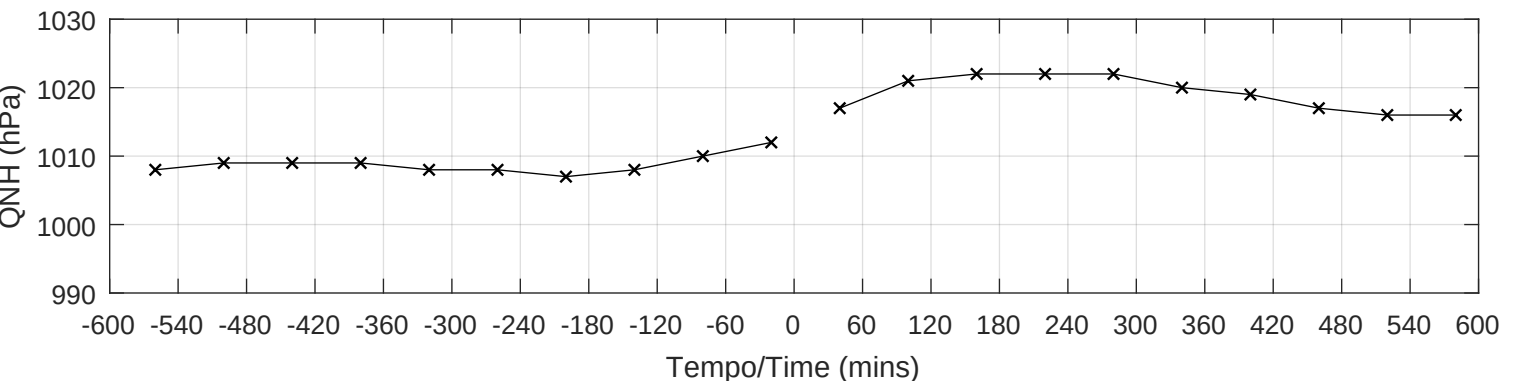
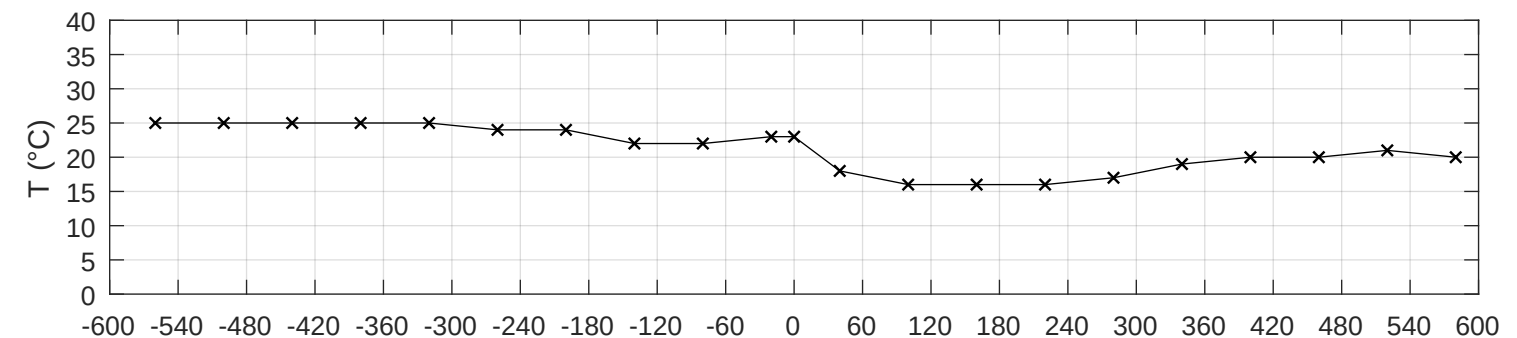
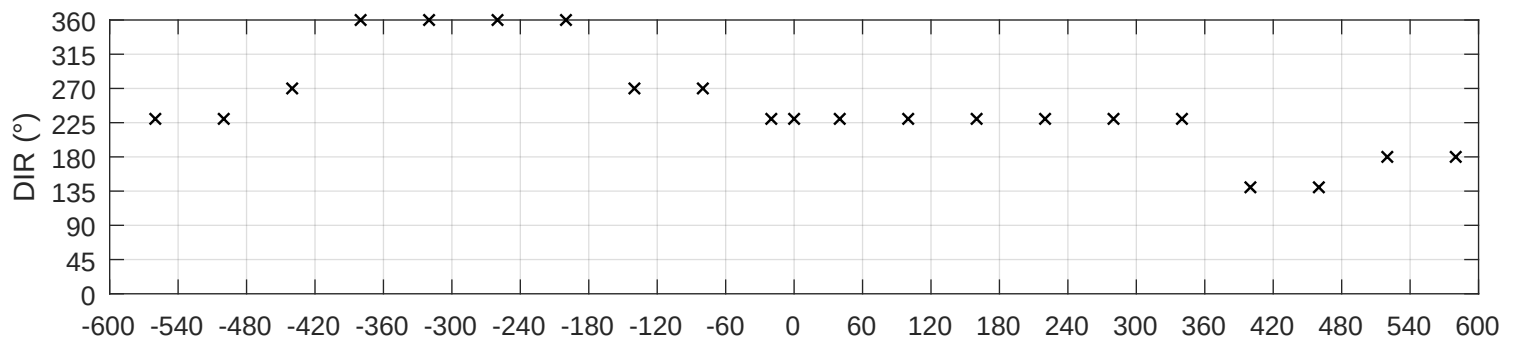
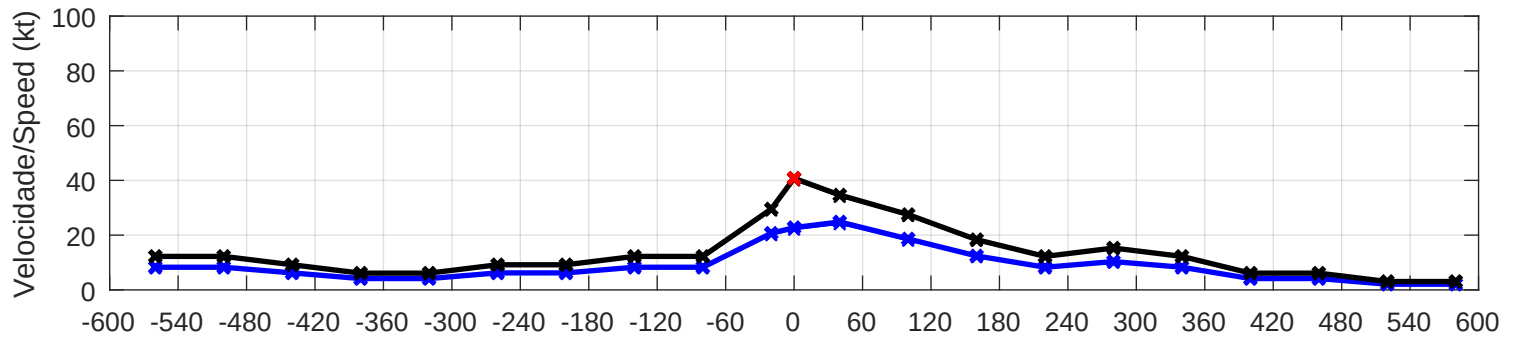
# SANT/87121 EVENTO/EVENT 62 - 17/09/1998, 20:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                          | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 40$ kt                  | $R_{-6} = 1.9$                | $T_{med,3} = 25.0$ °C        | $DIR = 180^\circ$                                               | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30$ kt              | $R_{-3} = 1.7$                | $\Delta T_{min,3} = -6.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                                 |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.6$                | $\Delta Q_{max,3} = 6.0$ hPa | $\Delta DIR_{max,+3} = 50^\circ$                                |                                | (222)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 1.9$                | $\Delta$ Grupo/Group = 1     | METAR SANT 172000Z 18030KT 2000 SA ACT040<br>BKN100 21/12 Q1011 |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                              |                                                                 |                                |                                 |



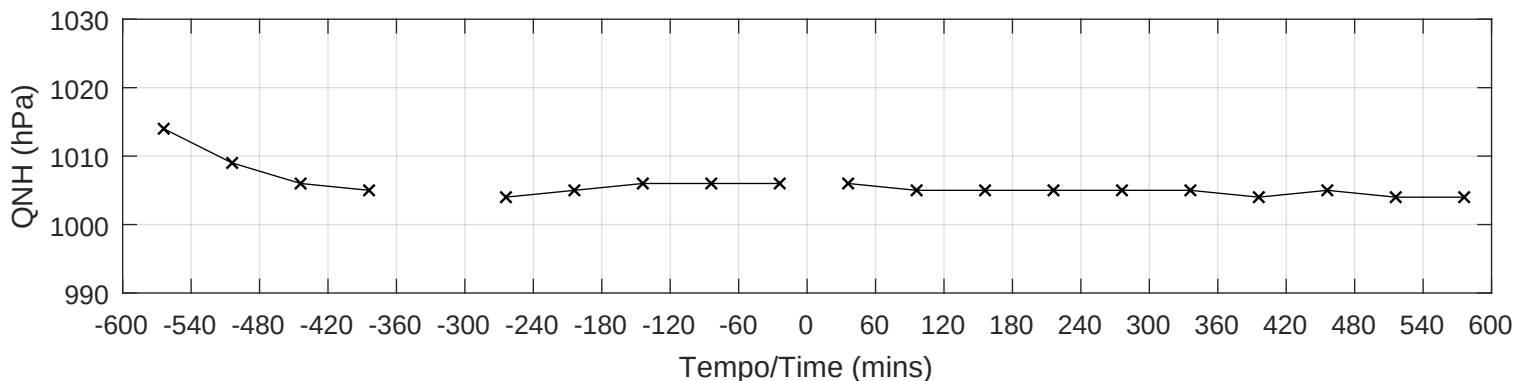
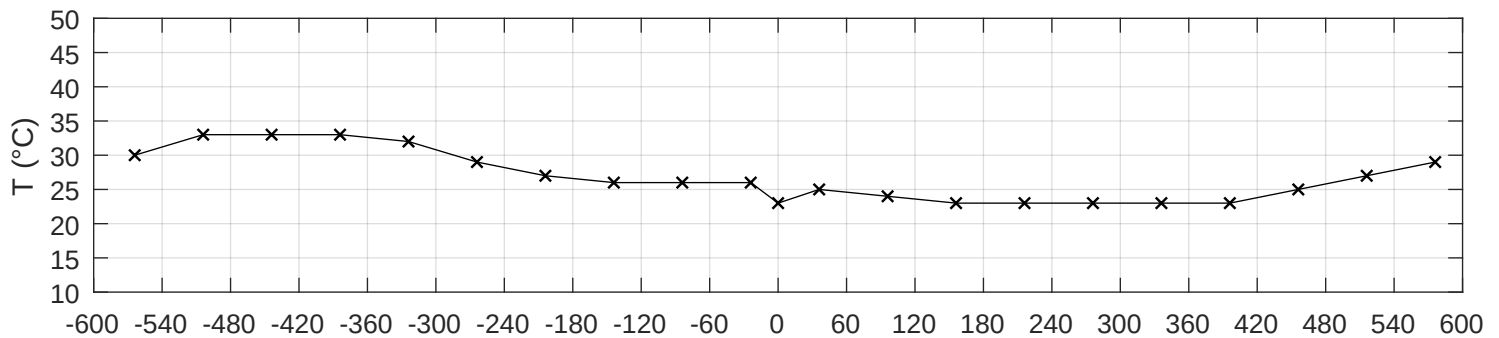
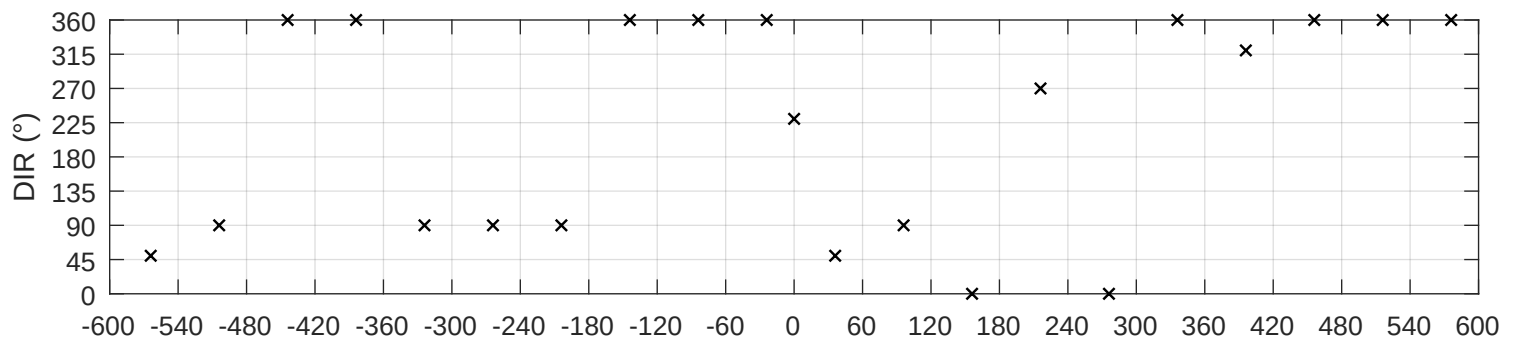
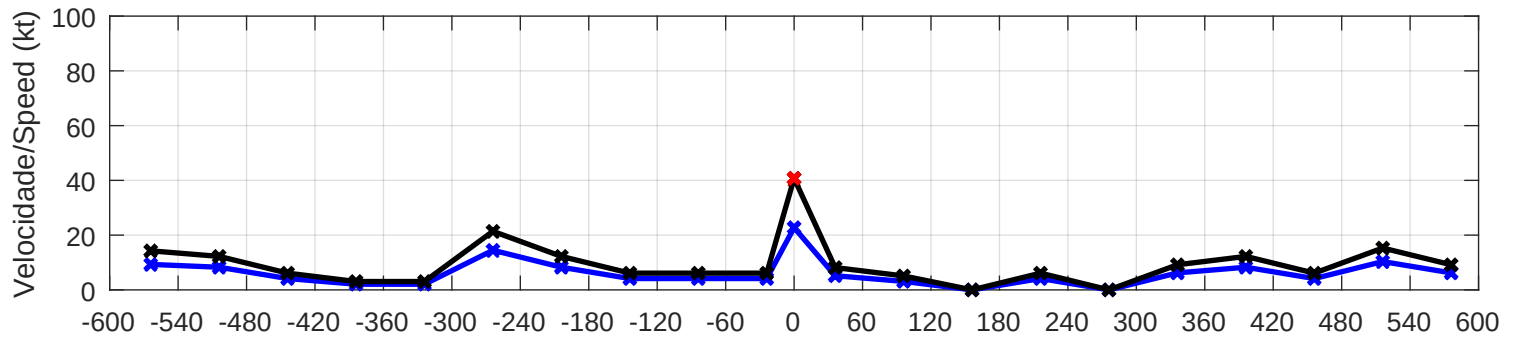
# SANT/87121 EVENTO/EVENT 63 - 23/12/2000, 11:20 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                             | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|--------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 40 \text{ kt}$      | $R_{-6} = 3.7$                | $T_{med,3} = 22.0 \text{ }^{\circ}\text{C}$        | $DIR = 230^{\circ}$                                                | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 22 \text{ kt}$      | $R_{-3} = 2.8$                | $\Delta T_{min,3} = -5.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 40^{\circ}$                                 |                                | NON-SYNOPTIC                    |
| $G_V = 1.8$                    | $R_{+3} = 1.5$                | $\Delta Q_{max,3} = 7.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 0^{\circ}$                                  |                                | (111)                           |
| $G_{cor} = 40.8 \text{ kt}$    | $R_{+6} = 2.0$                | $\Delta \text{ Grupo/Group} = 1$                   | SPECI SANT 231120Z 23022/40KT 2500 RA<br>BKN006 BKN040 23/22 Q1015 |                                |                                 |
| $V_{cor} = 22.7 \text{ kt}$    |                               |                                                    |                                                                    |                                |                                 |



# SANT/87121 EVENTO/EVENT 64 - 06/01/2001, 03:24 UTC (MSS - WUNDERGROUND)

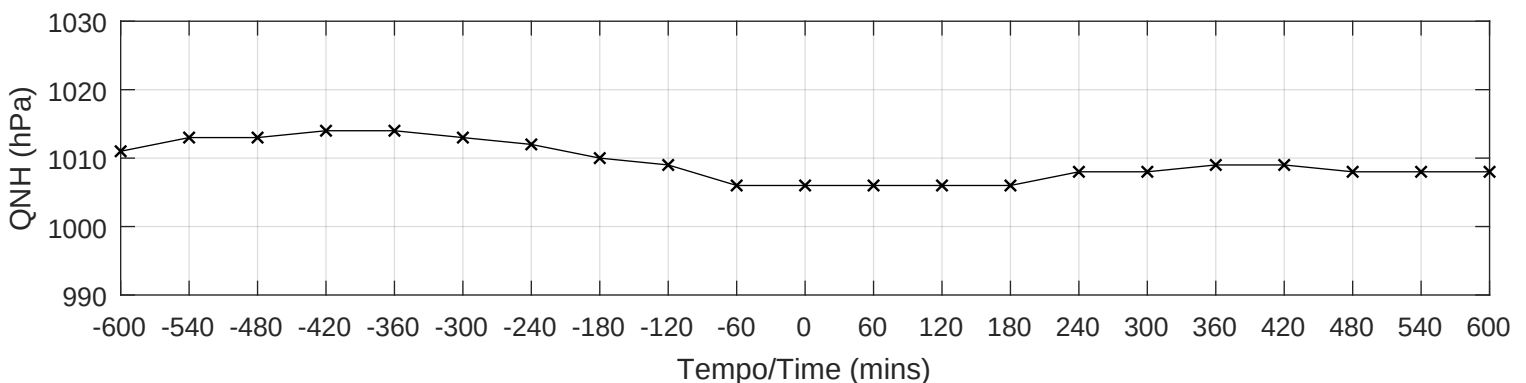
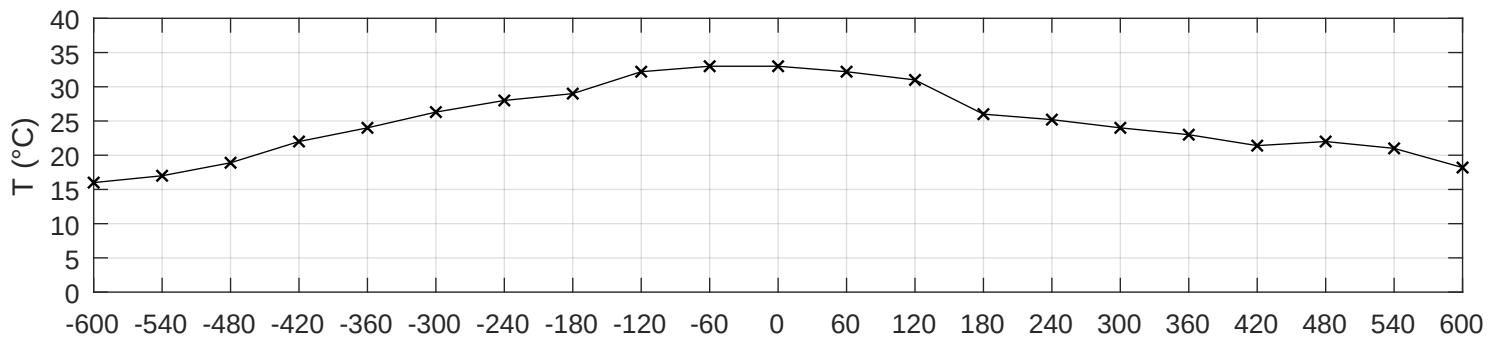
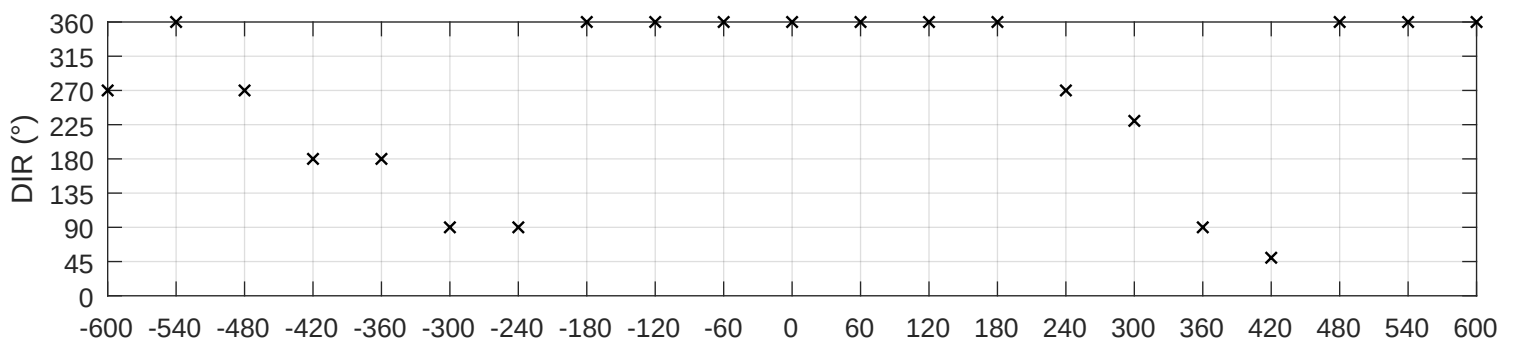
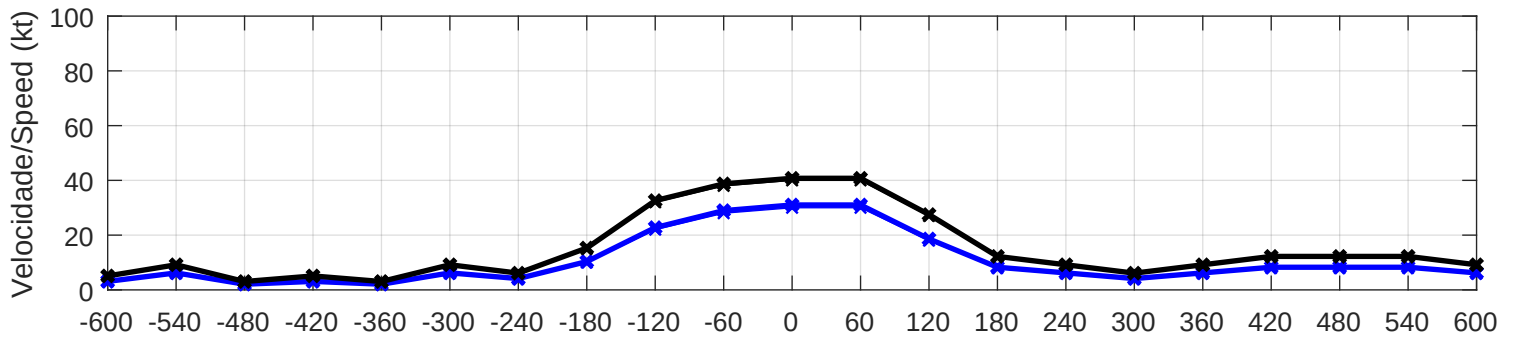
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                                      | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 40 \text{ kt}$      | $R_{-6} = 4.3$                | $T_{med,3} = 26.0 \text{ }^{\circ}\text{C}$        | $DIR = 230^{\circ}$                                                         | NÃO/NO                         | NÃO-SINÓTICO                    |
| $V_{obs} = 22 \text{ kt}$      | $R_{-3} = 6.7$                | $\Delta T_{min,3} = -3.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 130^{\circ}$                                         |                                | NON-SYNOPTIC                    |
| $G_V = 1.8$                    | $R_{+3} = 9.2$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 180^{\circ}$                                         |                                | (117)                           |
| $G_{cor} = 40.8 \text{ kt}$    | $R_{+6} = 8.6$                | $\Delta \text{ Grupo/Group} = 3$                   | SPECI SANT 060324Z 2231120Z 23022/40KT 2500<br>RA BKN006 BKN040 23/22 Q1015 |                                |                                 |
| $V_{cor} = 22.7 \text{ kt}$    |                               |                                                    |                                                                             |                                |                                 |





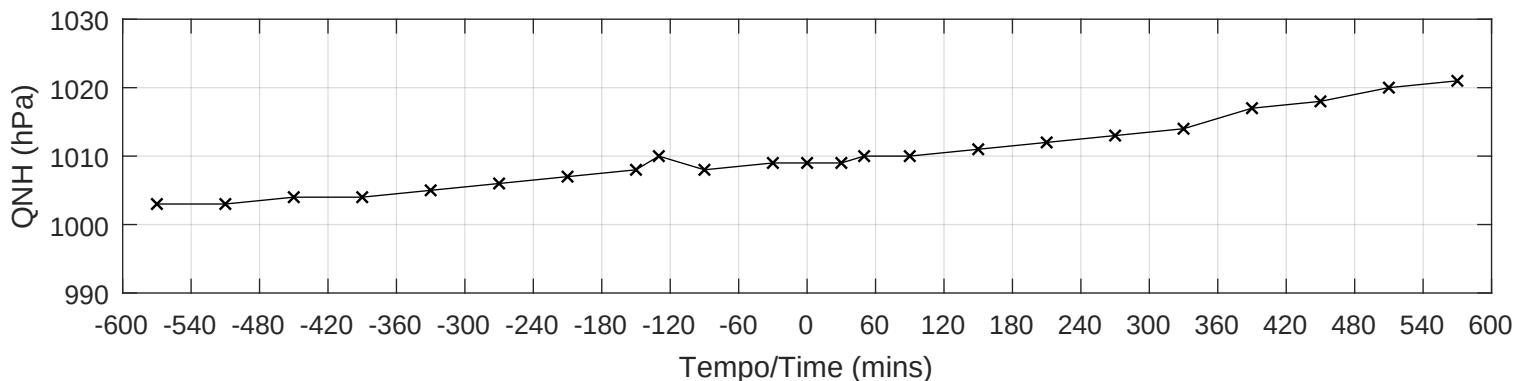
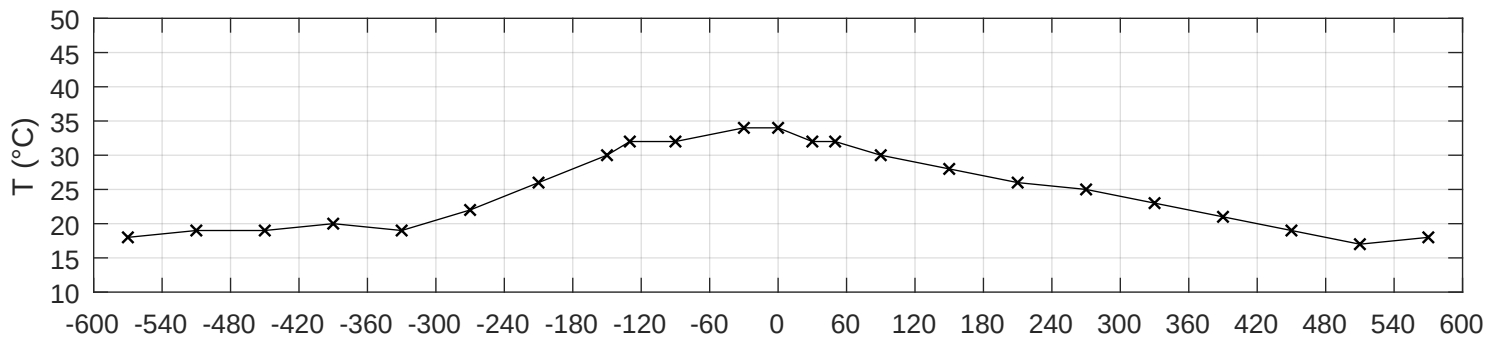
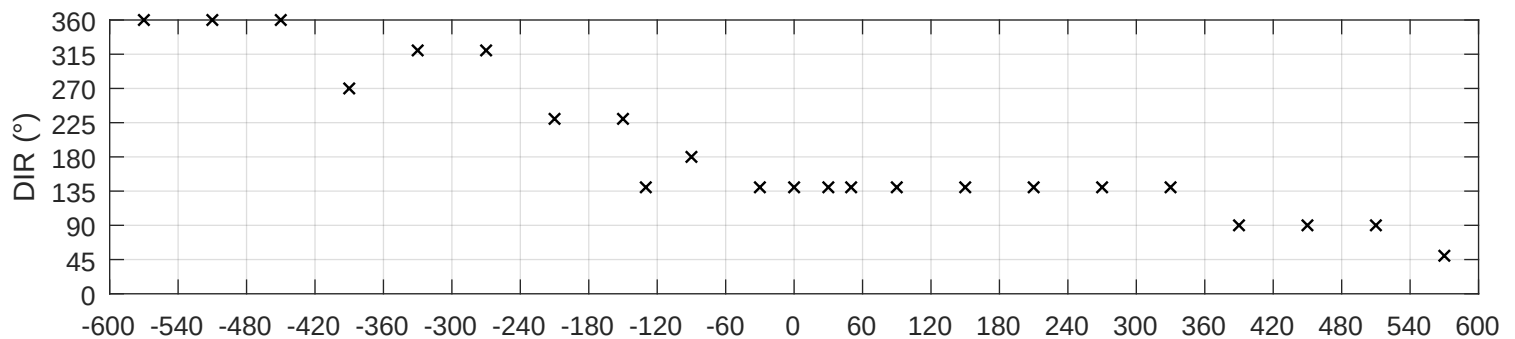
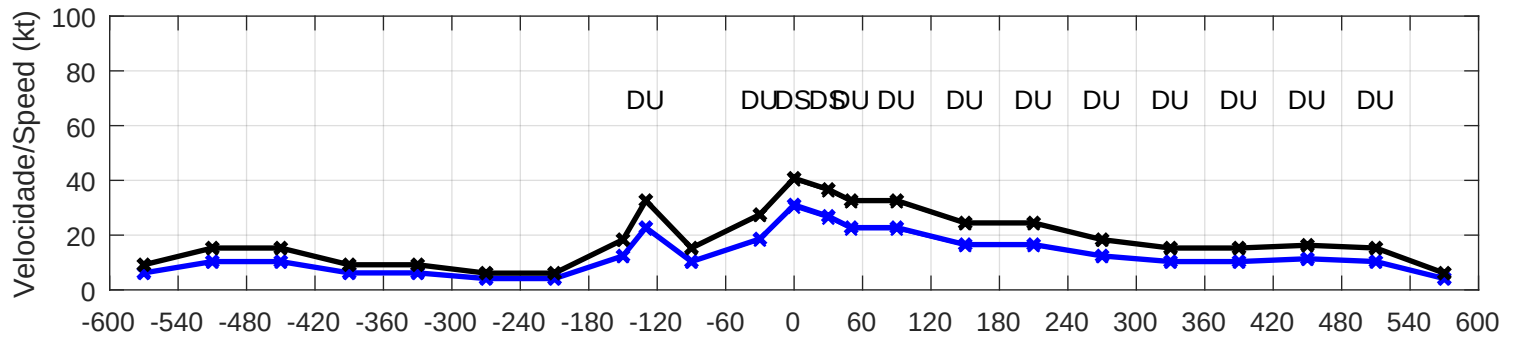
# SANT/87121 EVENTO/EVENT 65 - 22/09/2001, 20:00 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction              | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-----------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 40$ kt                  | $R_{-6} = 2.3$                | $T_{med,3} = 31.4$ °C        | $DIR = 360^\circ$                                   | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30$ kt              | $R_{-3} = 1.4$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 0^\circ$                     |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.5$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                     |                                | (225)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 2.3$                | $\Delta$ Grupo/Group = 3     | SANT 222000Z 36030KT 5000 FU FEW030 33/22<br>Q1006= |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                              |                                                     |                                |                                 |



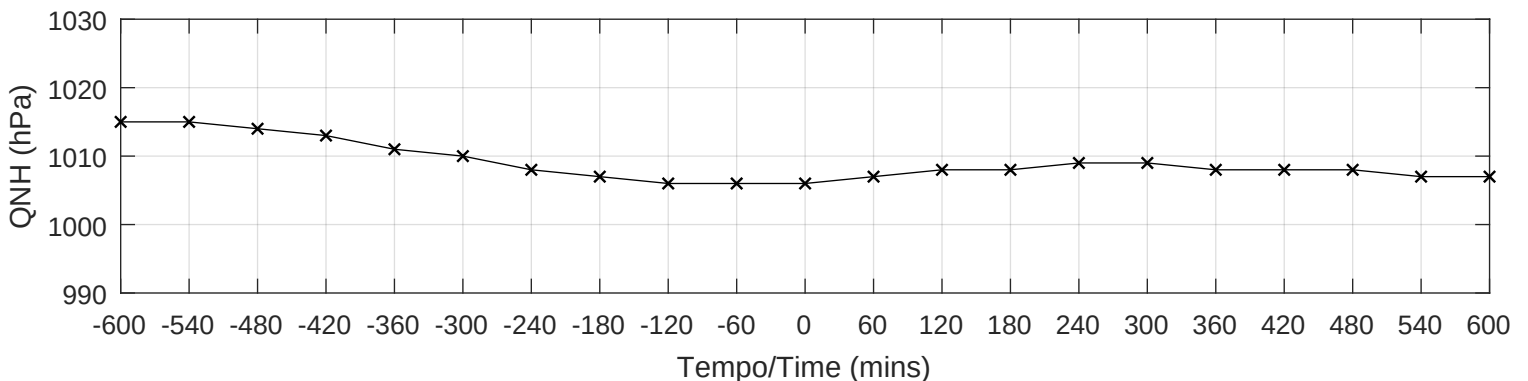
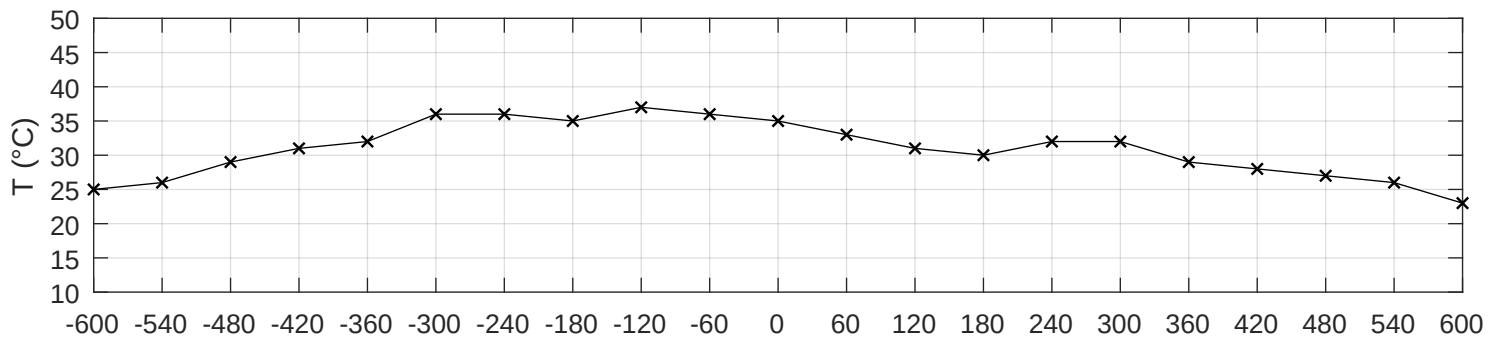
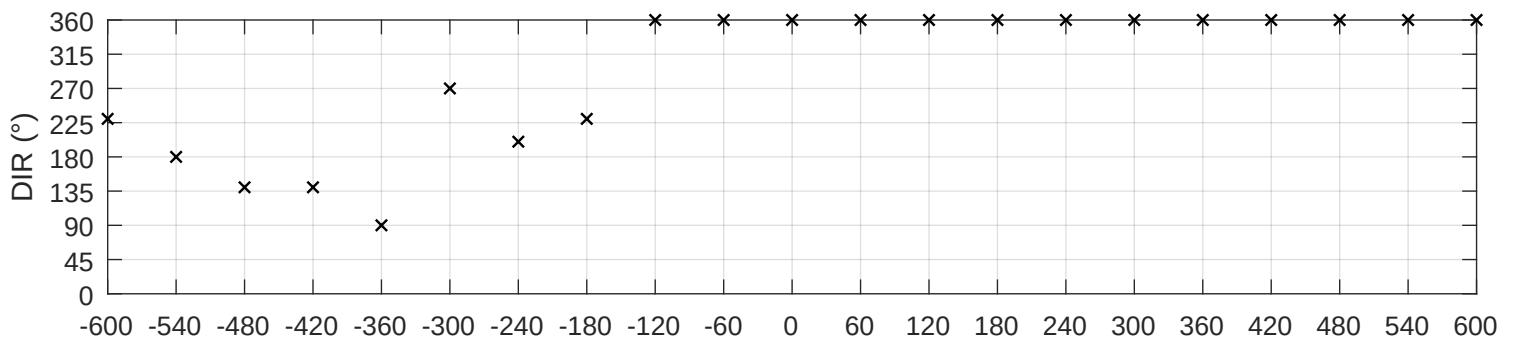
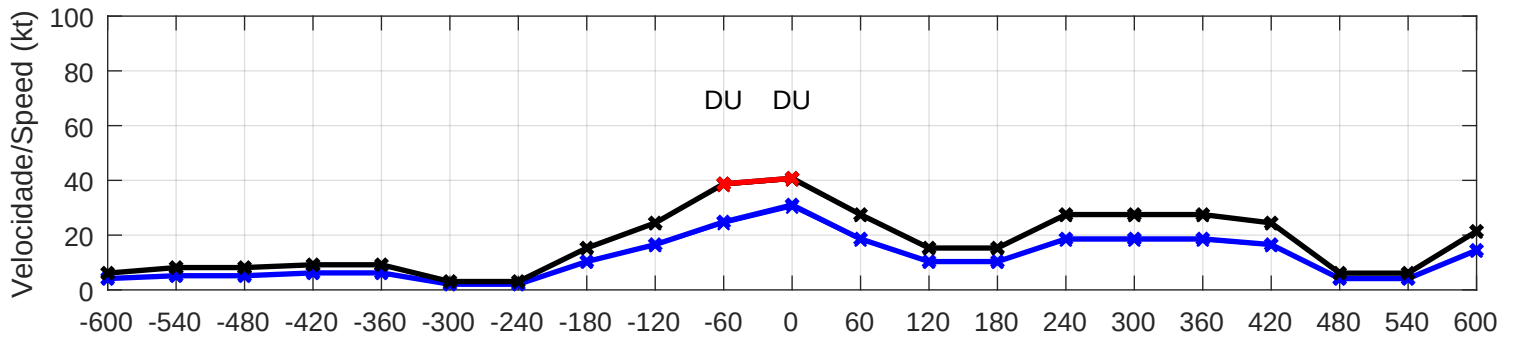
# SANT/87121 EVENTO/EVENT 69 - 19/09/2003, 16:30 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                   | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 40$ kt                  | $R_{-6} = 2.9$                | $T_{med,3} = 31.7$ °C        | $DIR = 140^\circ$                                        | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30$ kt              | $R_{-3} = 1.8$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 90^\circ$                         |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.3$                | $\Delta Q_{max,3} = 2.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                          |                                | (226)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 1.6$                | $\Delta$ Grupo/Group = 3     | SPECI SANT 191630Z 14030KT 5000 DS FEW200<br>34/20 Q1009 |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                              |                                                          |                                |                                 |



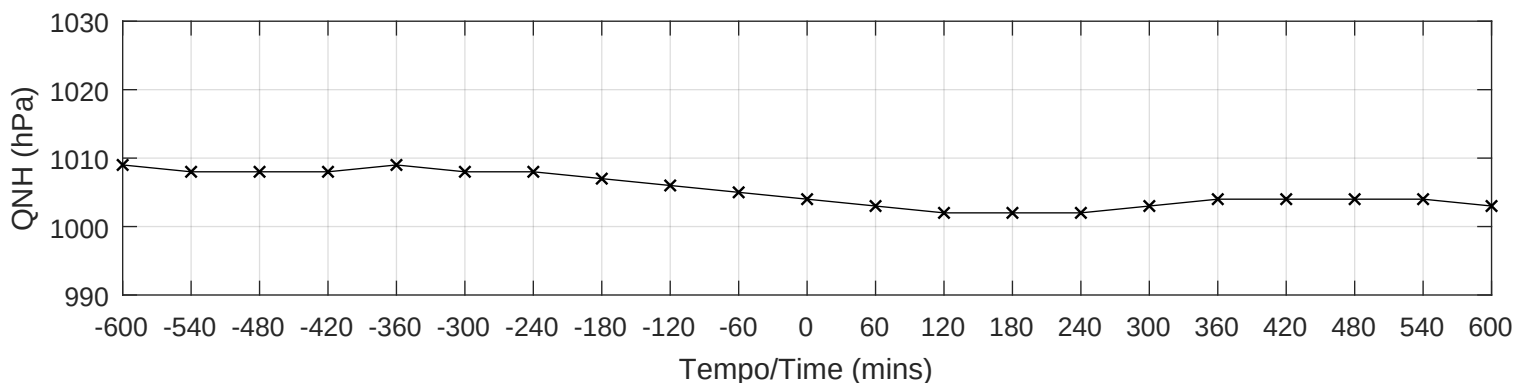
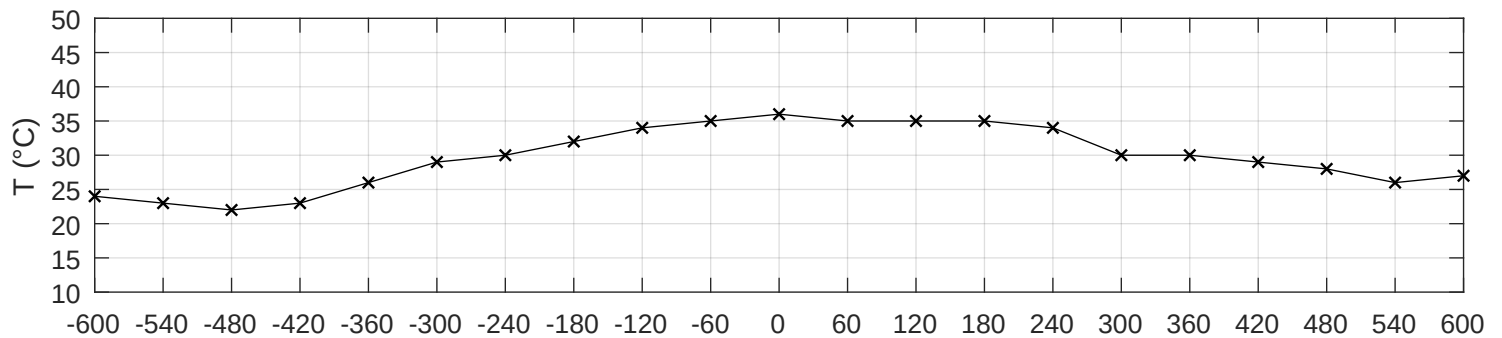
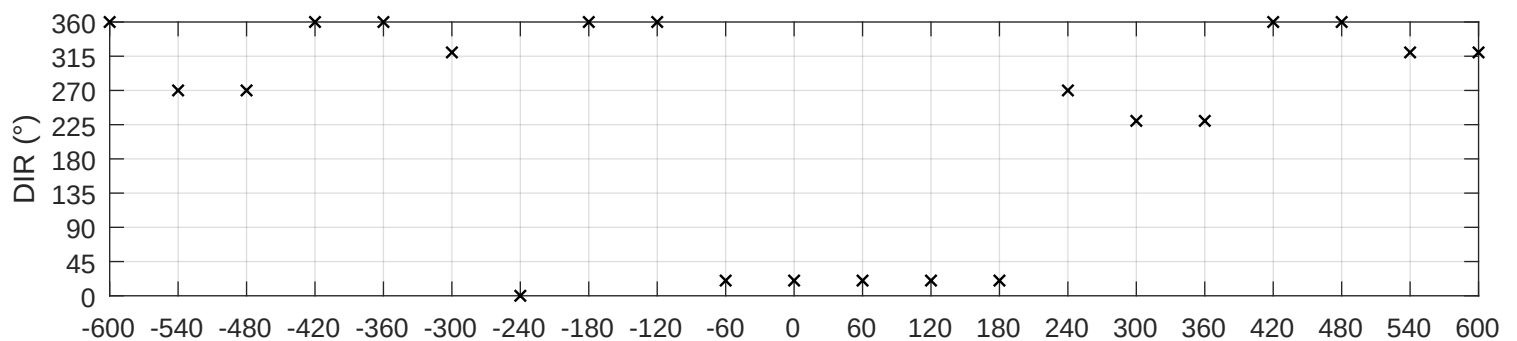
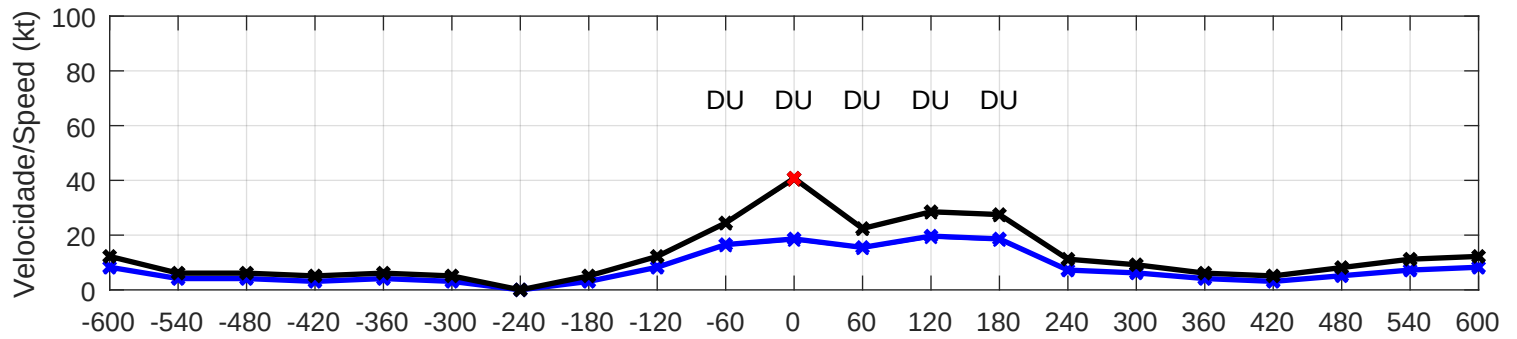
# SANT/87121 EVENTO/EVENT 72 - 06/10/2004, 22:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                        | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|---------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 40 \text{ kt}$      | $R_{-6} = 2.6$                | $T_{med,3} = 36.0 \text{ }^{\circ}\text{C}$        | $DIR = 360^{\circ}$                                           | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 1.6$                | $\Delta T_{min,3} = -4.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 130^{\circ}$                           |                                | SYNOPTIC                        |
| $G_V = 1.3$                    | $R_{+3} = 2.1$                | $\Delta Q_{max,3} = 1.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 0^{\circ}$                             |                                | (211)                           |
| $G_{cor} = 40.8 \text{ kt}$    | $R_{+6} = 1.7$                | $\Delta \text{ Grupo/Group} = 2$                   | SANT 062200Z 36030G40KT 6000 DU FEW100<br>FEW200 35/08 Q1006= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                    |                                                               |                                |                                 |



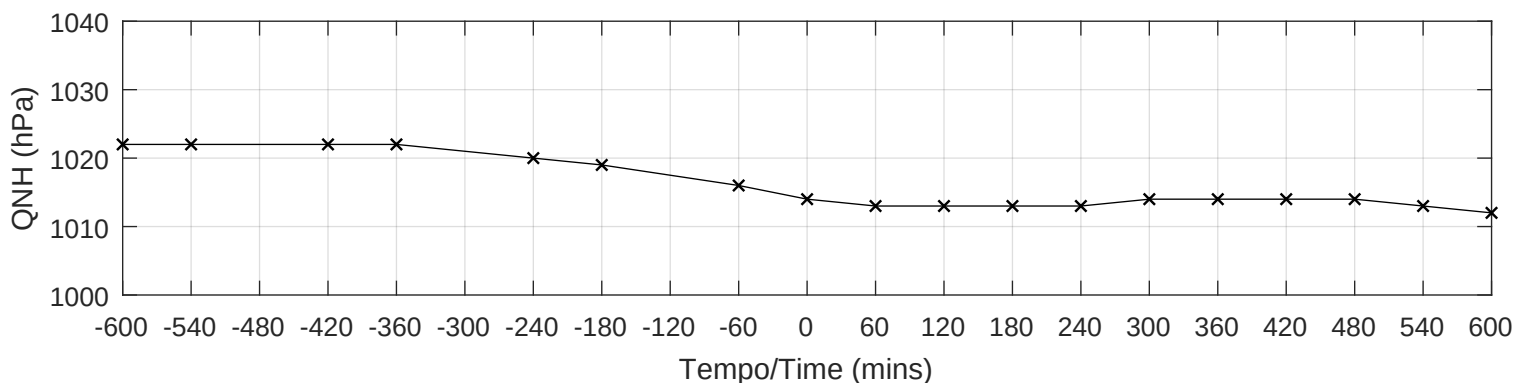
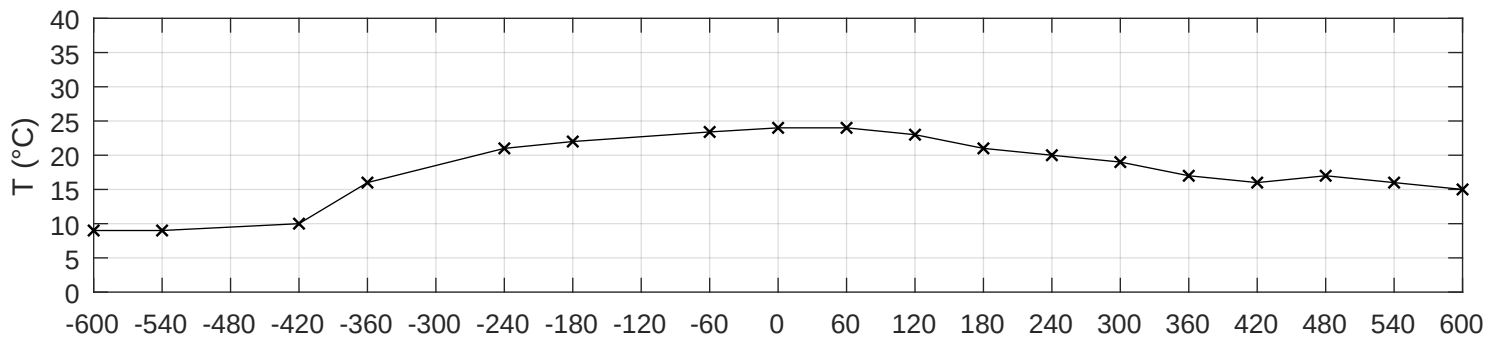
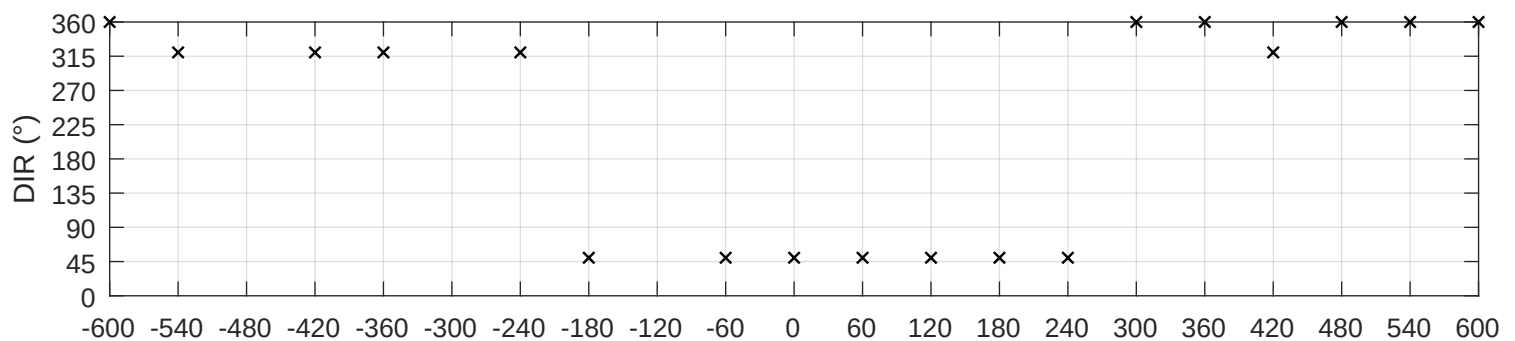
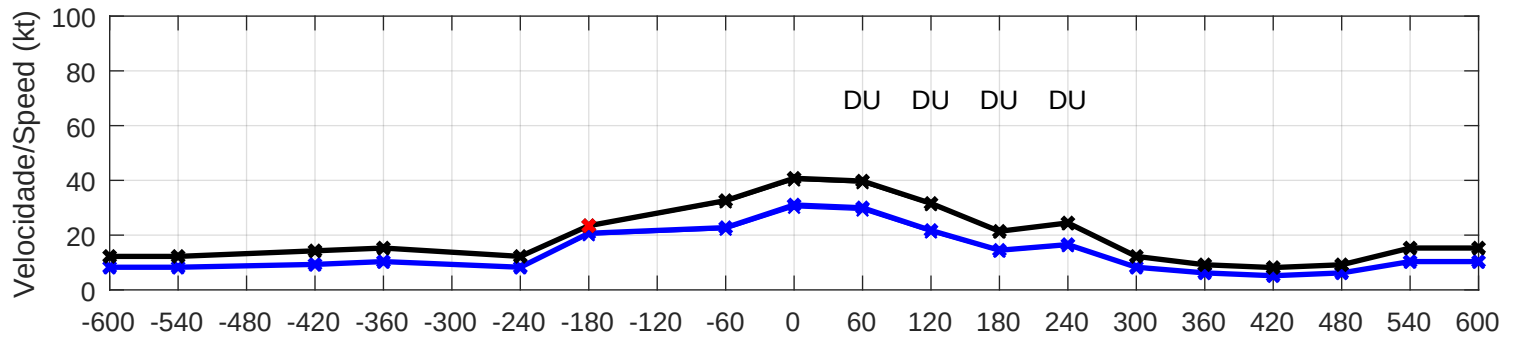
# SANT/87121 EVENTO/EVENT 73 - 06/03/2005, 18:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 40 \text{ kt}$      | $R_{-6} = 4.6$                | $T_{med,3} = 33.7 \text{ }^{\circ}\text{C}$       | $DIR = 20^{\circ}$                                     | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 18 \text{ kt}$      | $R_{-3} = 2.9$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 20^{\circ}$                     |                                | SYNOPTIC                        |
| $G_V = 2.2$                    | $R_{+3} = 1.6$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 0^{\circ}$                      |                                | (214)                           |
| $G_{cor} = 40.8 \text{ kt}$    | $R_{+6} = 2.3$                | $\Delta \text{ Grupo/Group} = 3$                  | SANT 061800Z 02018G40KT 8000 DU FEW040<br>36/19 Q1004= |                                |                                 |
| $V_{cor} = 18.6 \text{ kt}$    |                               |                                                   |                                                        |                                |                                 |



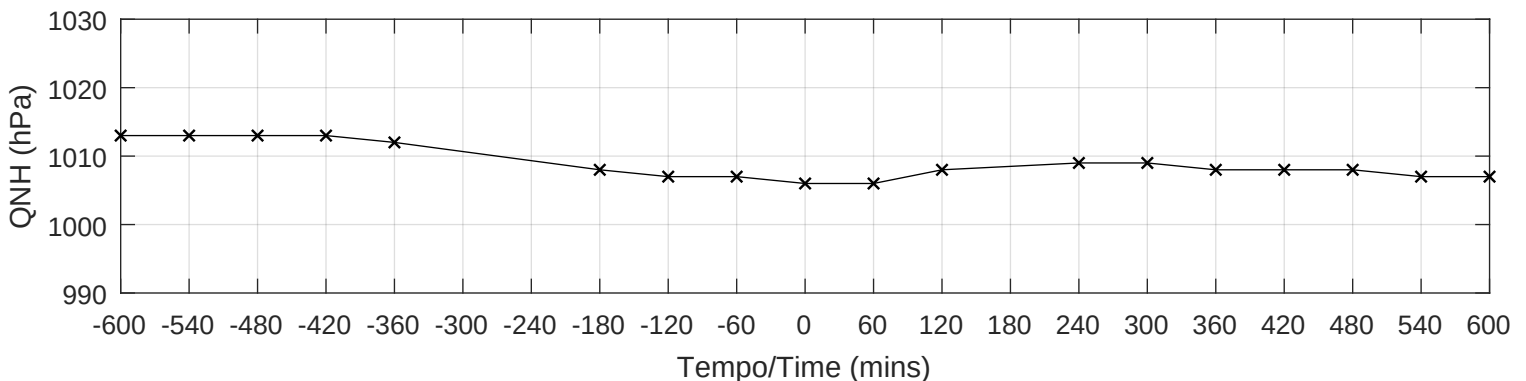
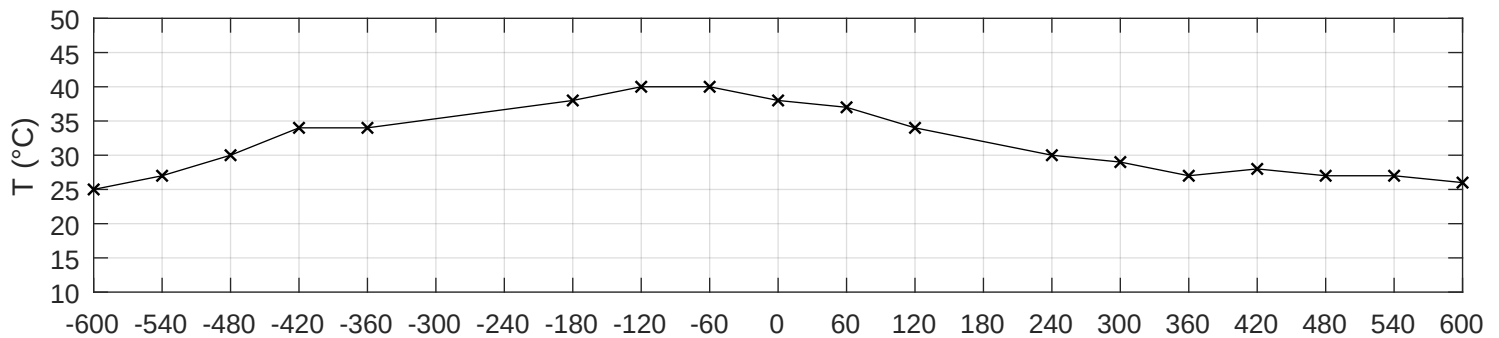
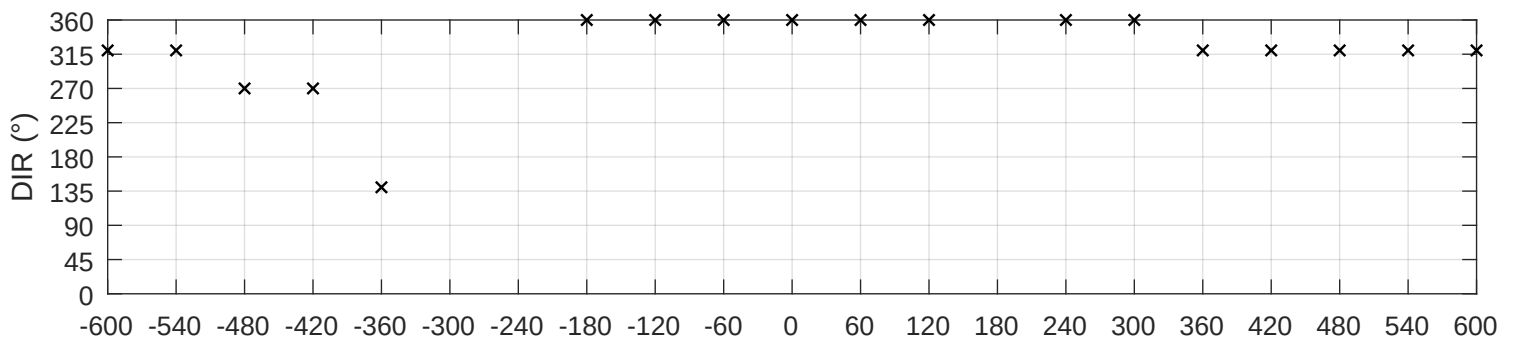
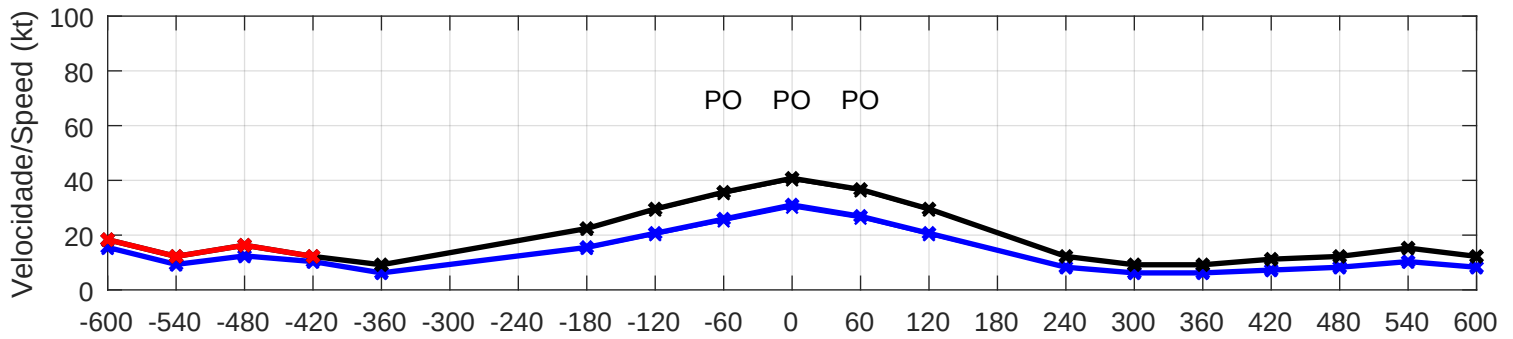
# SANT/87121 EVENTO/EVENT 75 - 29/08/2006, 19:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction            | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|---------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 40$ kt                  | $R_{-6} = 2.0$                | $T_{med,3} = 22.7$ °C        | $DIR = 50^\circ$                                  | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30$ kt              | $R_{-3} = 1.5$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 0^\circ$                   |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.3$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                   |                                | (226)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 1.8$                | $\Delta$ Grupo/Group = 3     | SANT 291900Z 05030KT 4000 PLV FU NSC 24/02 Q1014= |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                              |                                                   |                                |                                 |



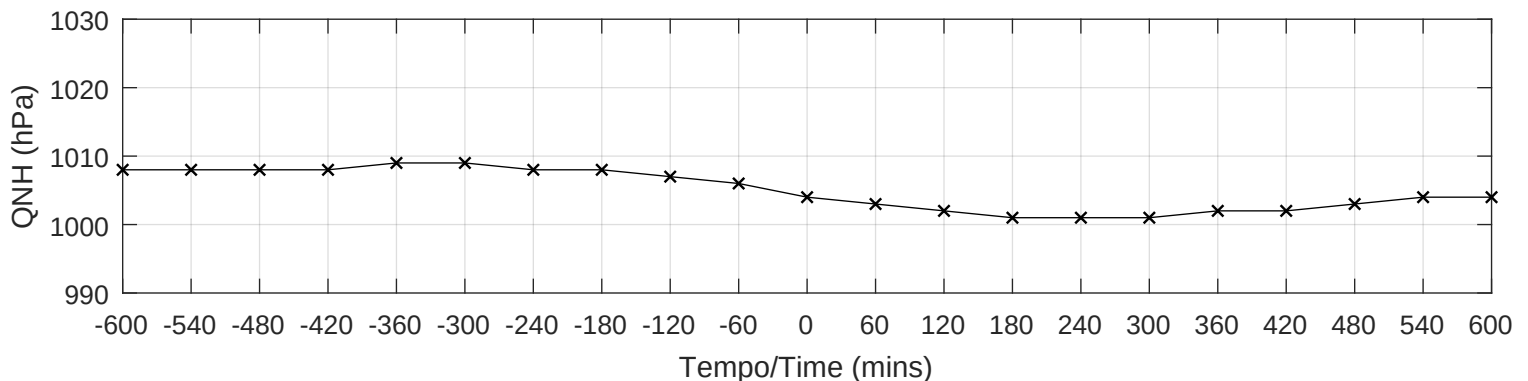
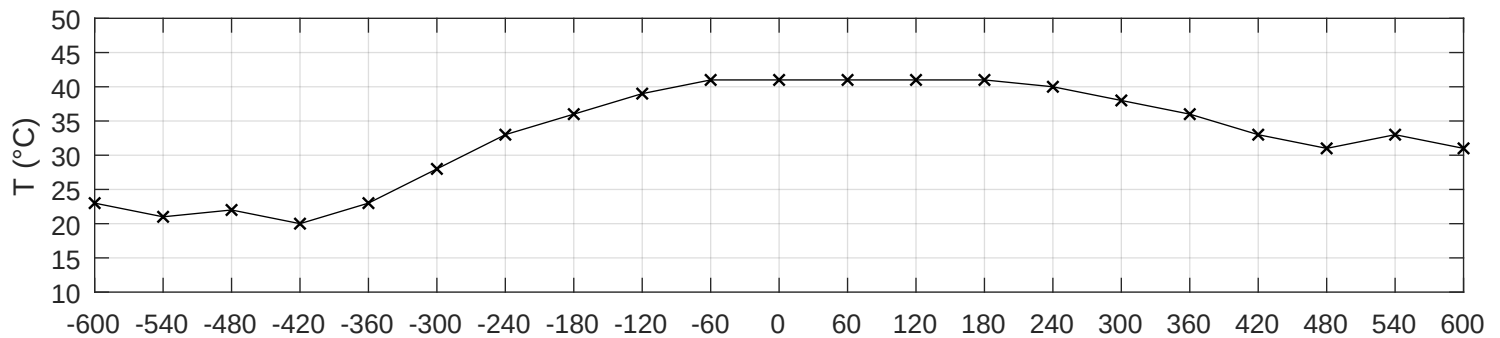
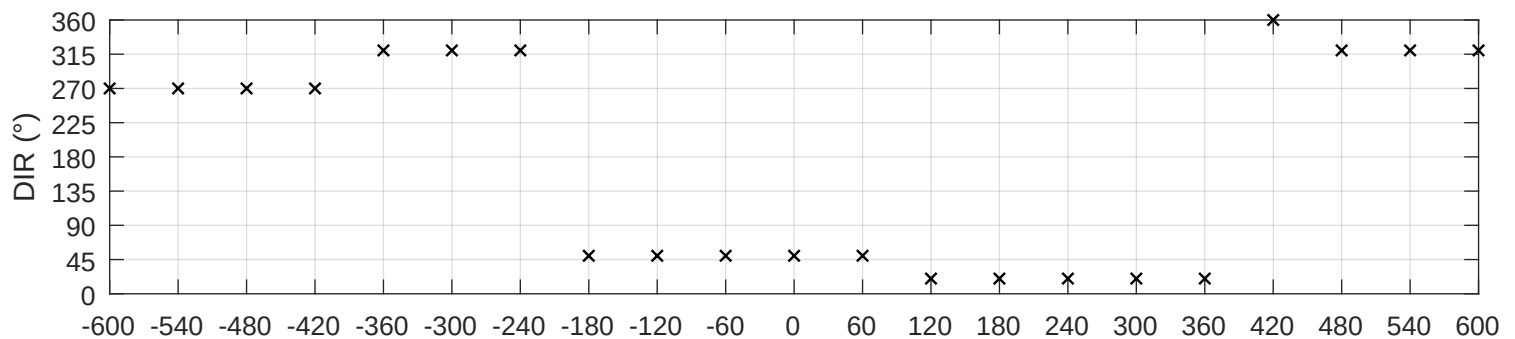
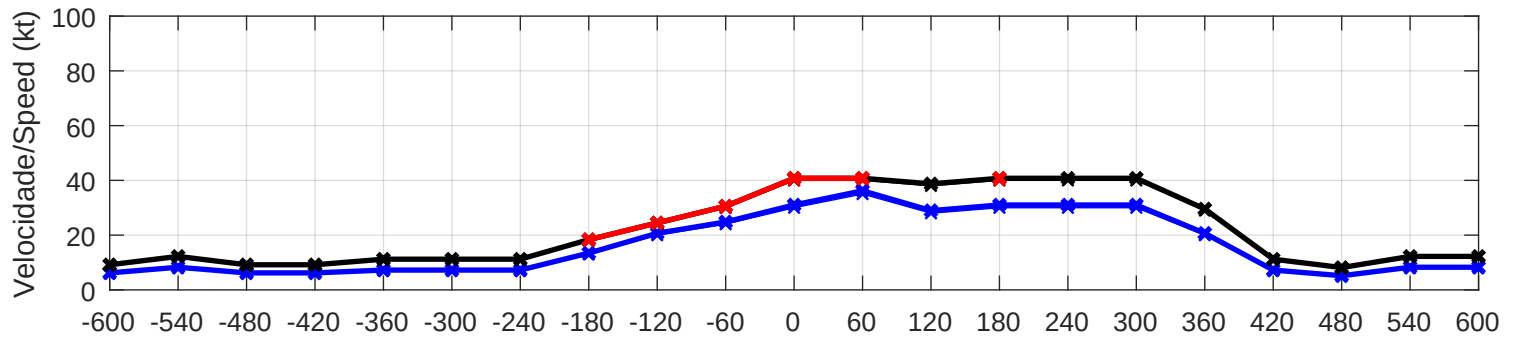
# SANT/87121 EVENTO/EVENT 80 - 09/09/2013, 21:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                  | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|---------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 40$ kt                  | $R_{-6} = 1.7$                | $T_{med,3} = 39.3$ °C        | $DIR = 360^\circ$                                       | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30$ kt              | $R_{-3} = 1.4$                | $\Delta T_{min,3} = -3.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                         |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.2$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                         |                                | (226)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 2.1$                | $\Delta$ Grupo/Group = 3     | METAR SANT 092100Z 36030KT 1000 PO /FU NSC 38/09 Q1006= |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                              |                                                         |                                |                                 |



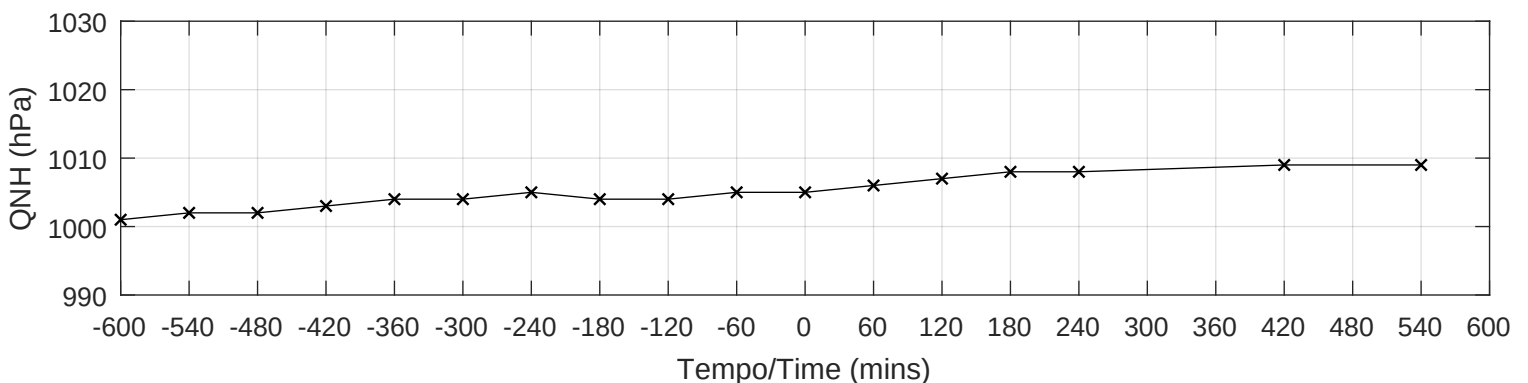
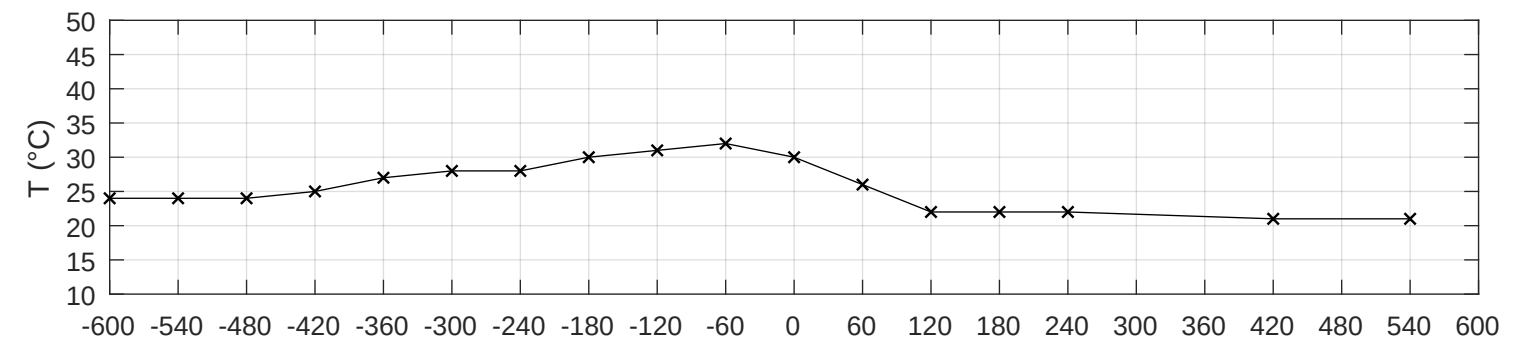
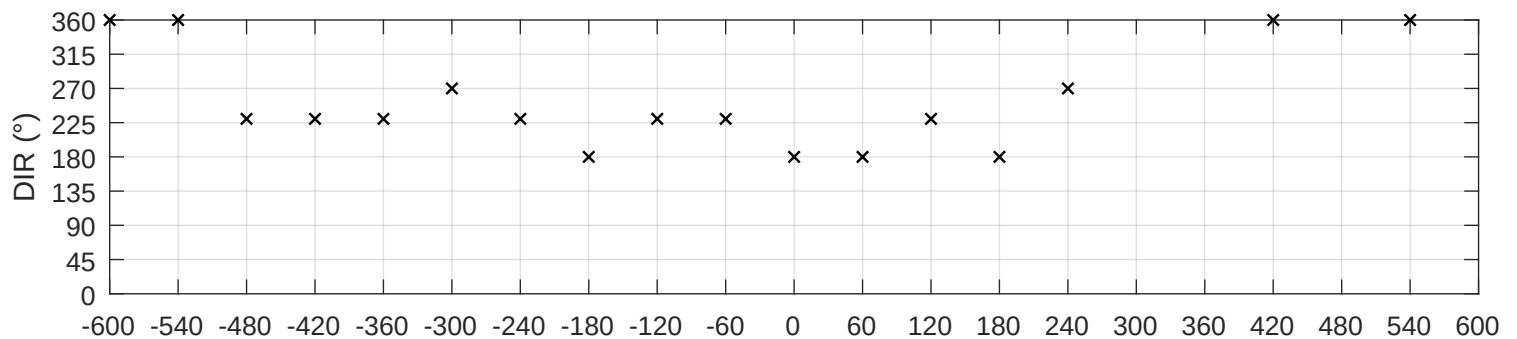
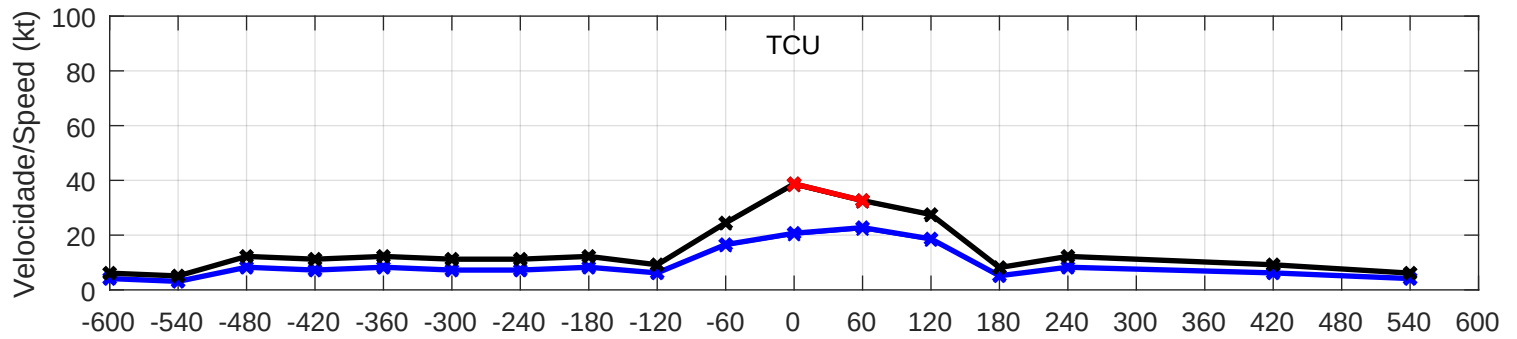
# SANT/87121 EVENTO/EVENT 82 - 26/10/2014, 17:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 40$ kt              | $R_{-6} = 2.3$                | $T_{med,3} = 38.7$ °C        | $DIR = 50^\circ$                                      | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30$ kt              | $R_{-3} = 1.7$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 0^\circ$                       |                                | SYNOPTIC                        |
| $G_V = 1.3$                    | $R_{+3} = 1.0$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 30^\circ$                      |                                | (215)                           |
| $G_{cor} = 40.8$ kt            | $R_{+6} = 1.1$                | $\Delta$ Grupo/Group = 3     | METAR SANT 261700Z 05030G40KT 6000 NSC<br>41/07Q1004= |                                |                                 |
| $V_{cor} = 31.0$ kt            |                               |                              |                                                       |                                |                                 |



# SANT/87121 EVENTO/EVENT 89 - 17/02/1998, 19:00 UTC (MSS - WUNDERGROUND)

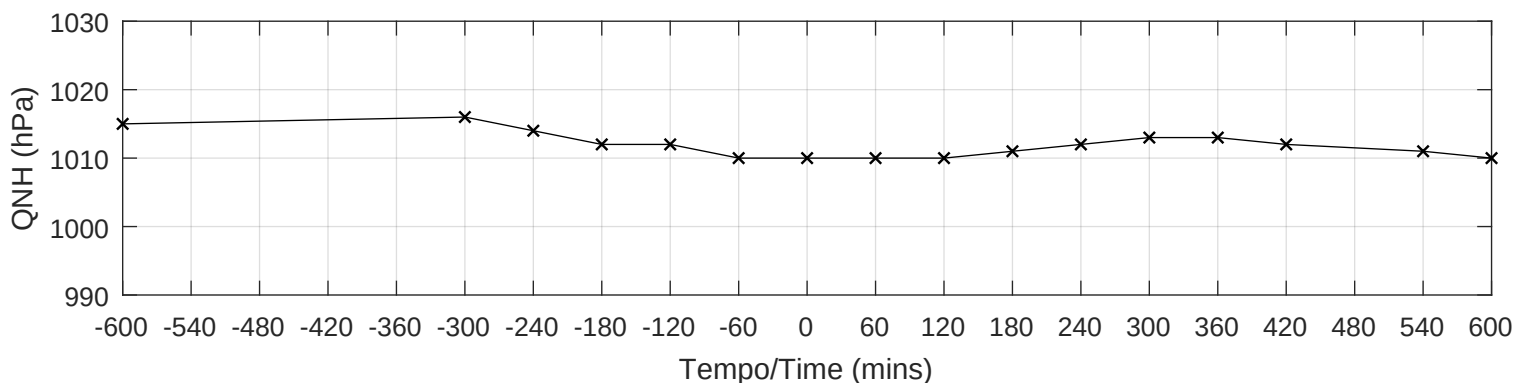
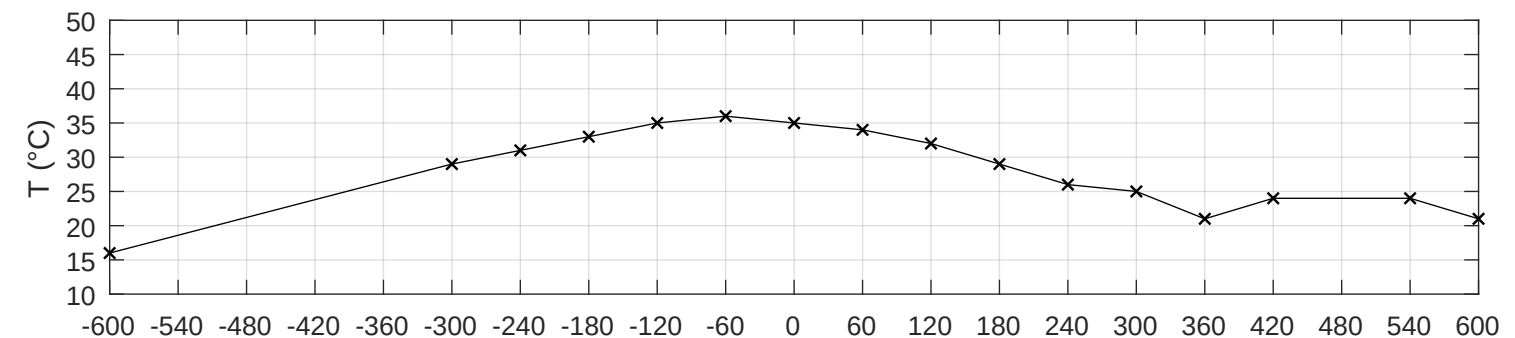
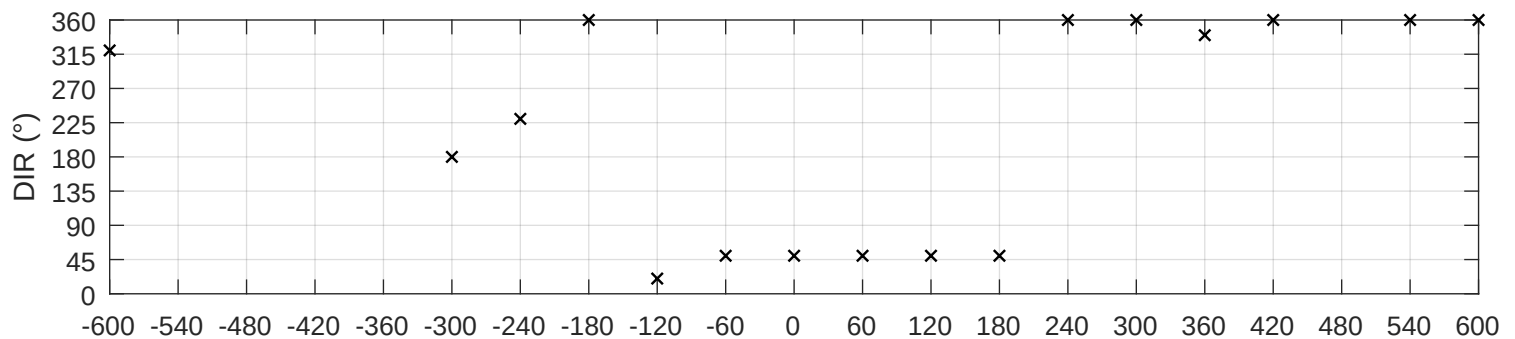
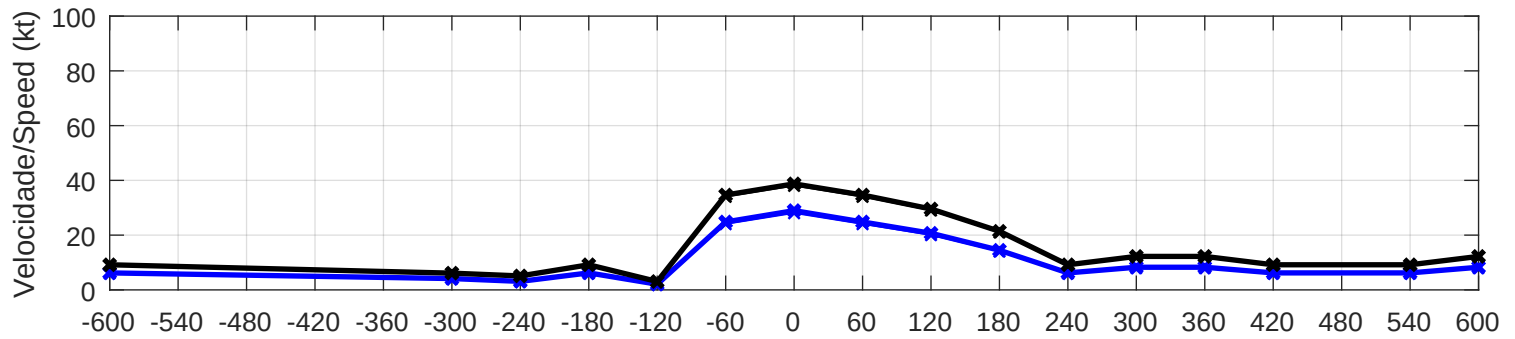
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                                  | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 38 \text{ kt}$      | $R_{-6} = 2.9$                | $T_{med,3} = 31.0 \text{ }^{\circ}\text{C}$        | $DIR = 180^{\circ}$                                                     | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 20 \text{ kt}$      | $R_{-3} = 2.5$                | $\Delta T_{min,3} = -6.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                                      |                                | SYNOPTIC                        |
| $G_V = 1.9$                    | $R_{+3} = 1.7$                | $\Delta Q_{max,3} = 2.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 50^{\circ}$                                      |                                | (211)                           |
| $G_{cor} = 38.7 \text{ kt}$    | $R_{+6} = 1.9$                | $\Delta \text{ Grupo/Group} = 1$                   | METAR SANT 171900Z 18020KT RAF38KT 9999<br>SCT030 FEW035TCU 30/22 Q1005 |                                |                                 |
| $V_{cor} = 20.7 \text{ kt}$    |                               |                                                    |                                                                         |                                |                                 |





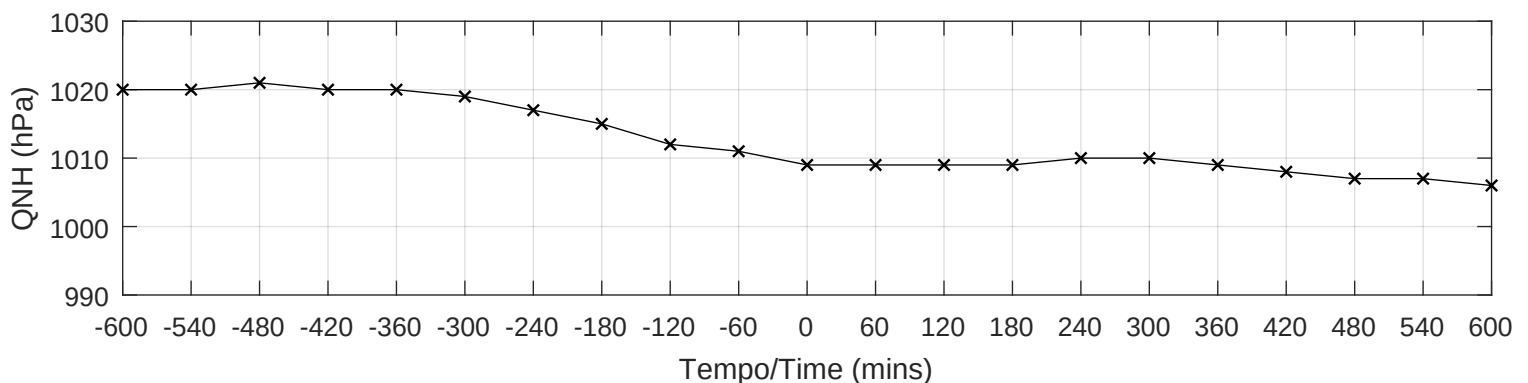
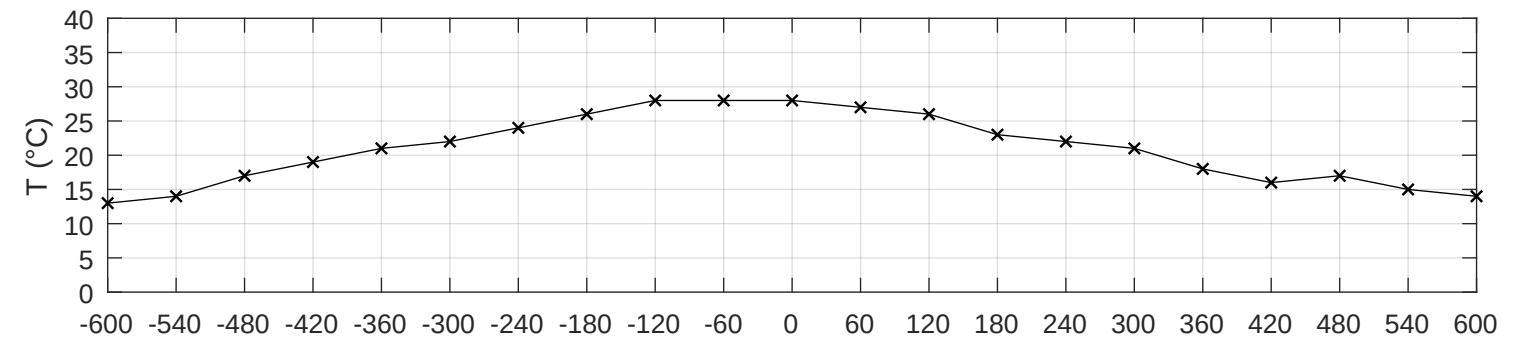
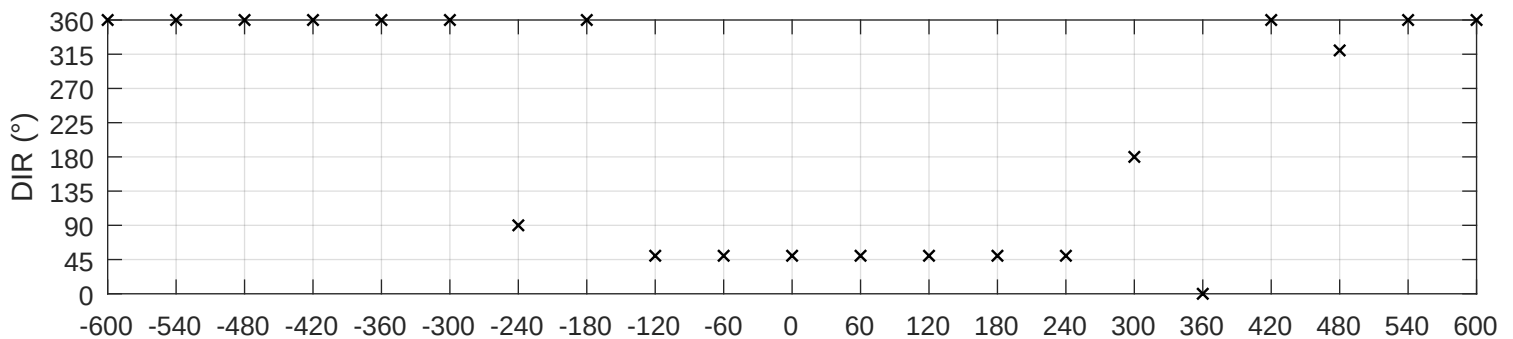
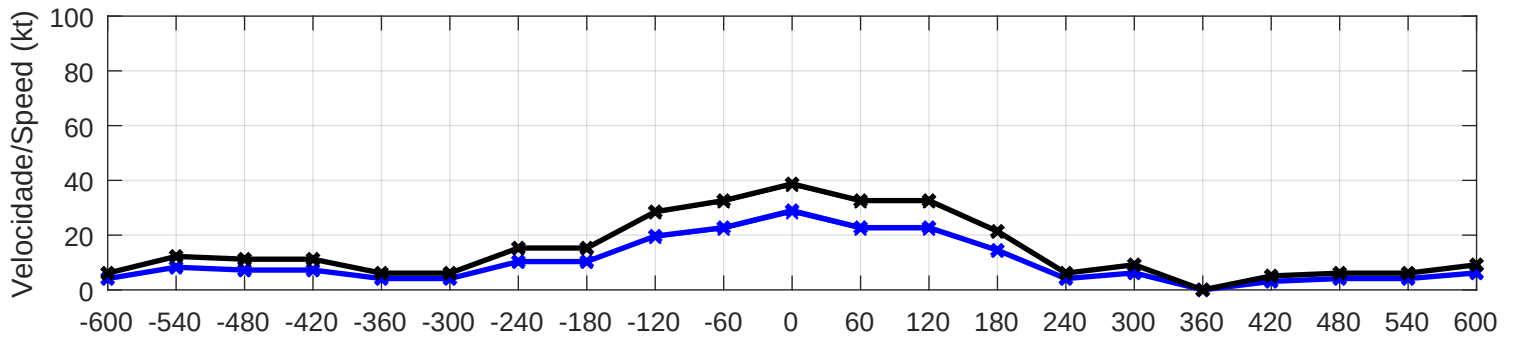
# SANT/87121 EVENTO/EVENT 91 - 19/10/1999, 20:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                       | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 38$ kt                  | $R_{-6} = 3.3$                | $T_{med,3} = 34.7$ °C        | $DIR = 50^\circ$                                             | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 28$ kt              | $R_{-3} = 2.5$                | $\Delta T_{min,3} = -2.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$                             |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.4$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                              |                                | (225)                           |
| $G_{cor} = 38.7$ kt            | $R_{+6} = 1.9$                | $\Delta$ Grupo/Group = 3     | METAR SANT 192000Z 05028KT 9999 FEW100<br>SCT200 35/08 Q1010 |                                |                                 |
| $V_{cor} = 29.0$ kt            |                               |                              |                                                              |                                |                                 |



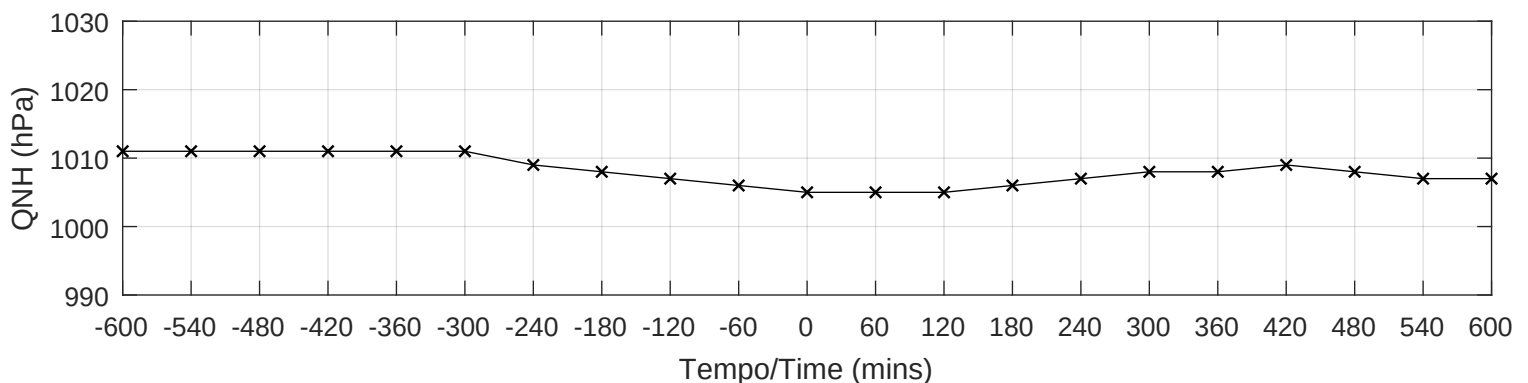
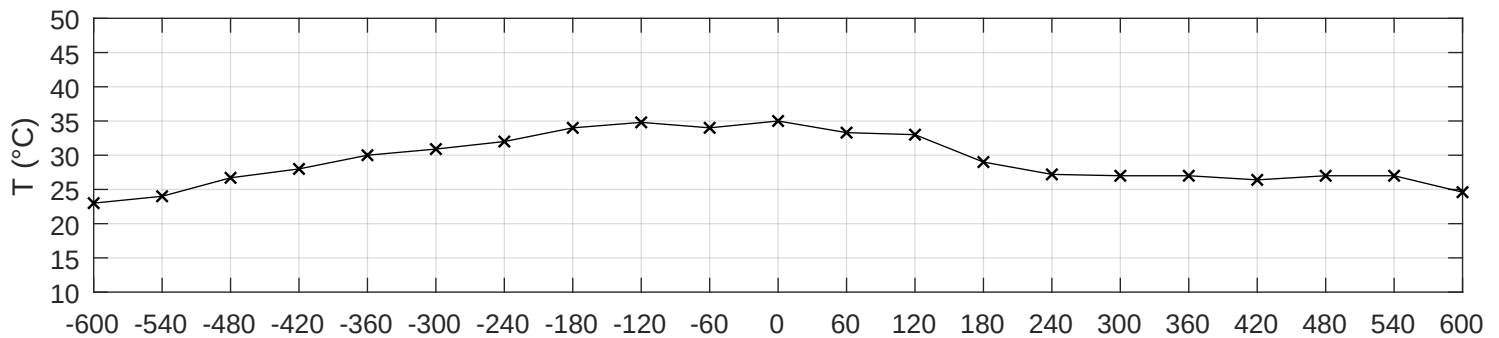
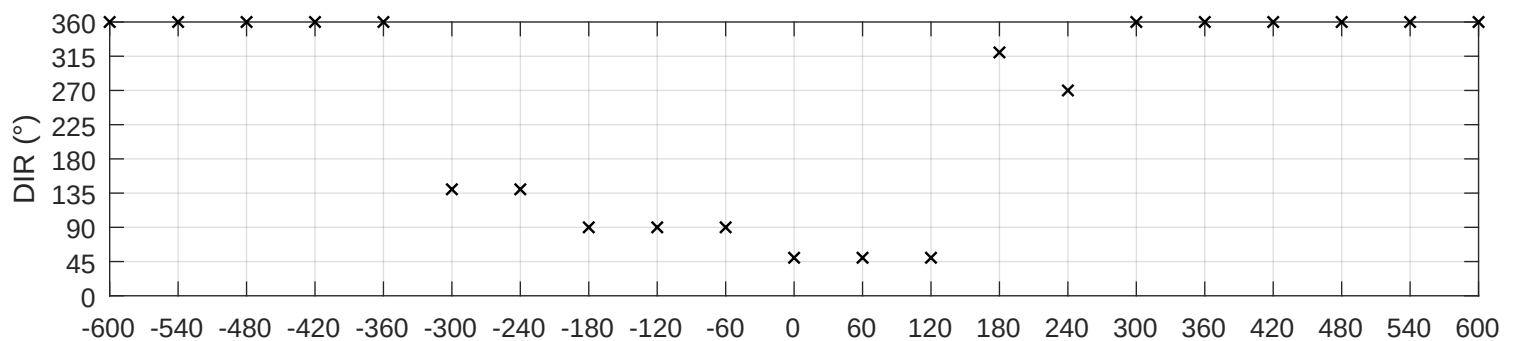
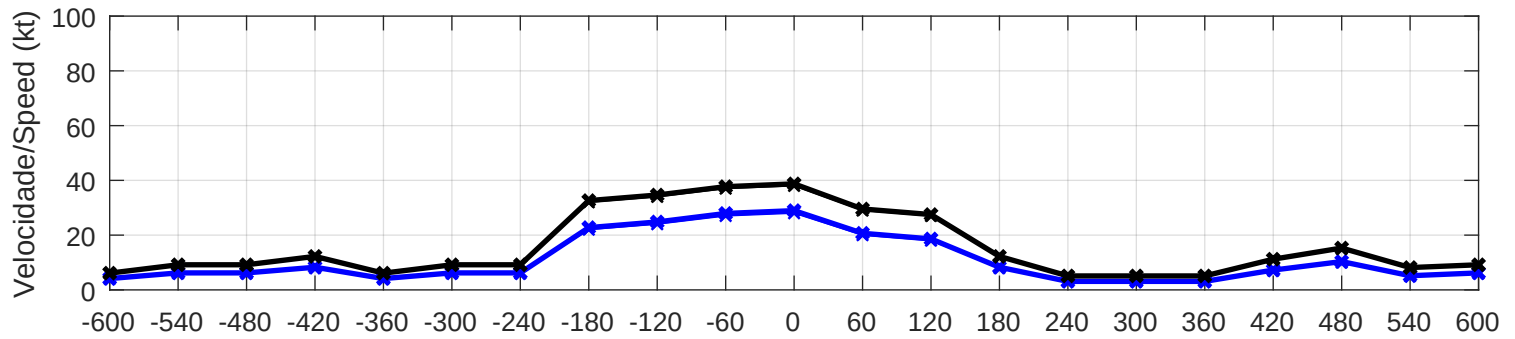
# SANT/87121 EVENTO/EVENT 93 - 22/09/2000, 20:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 38$ kt                  | $R_{-6} = 2.2$                | $T_{med,3} = 27.3$ °C        | $DIR = 50^\circ$                                       | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 28$ kt              | $R_{-3} = 1.5$                | $\Delta T_{min,3} = -1.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$                       |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.3$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                        |                                | (225)                           |
| $G_{cor} = 38.7$ kt            | $R_{+6} = 2.3$                | $\Delta$ Grupo/Group = 3     | METAR SANT 222000Z 05028KT 8000 FU SKC SKC 28/03 Q1009 |                                |                                 |
| $V_{cor} = 29.0$ kt            |                               |                              |                                                        |                                |                                 |



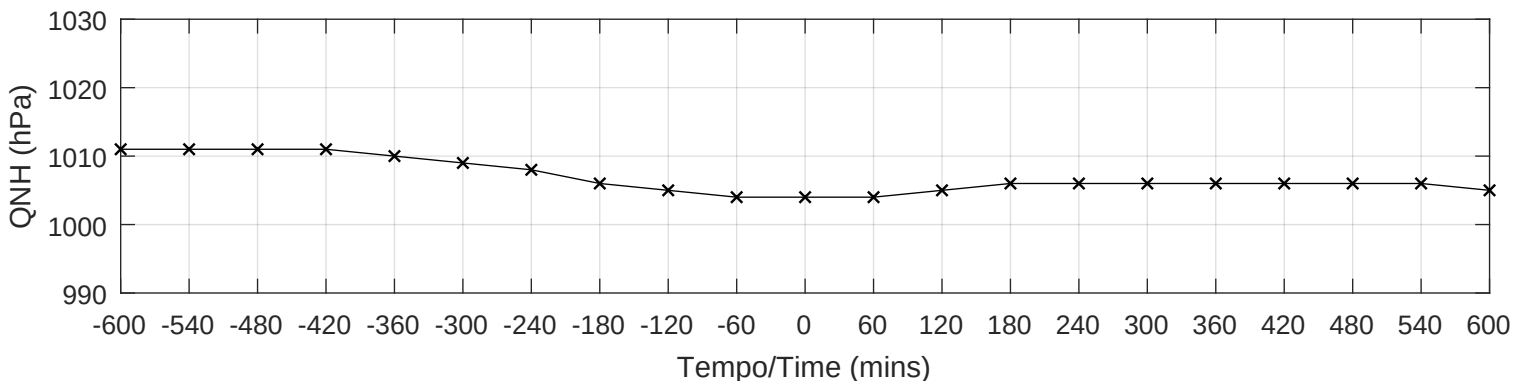
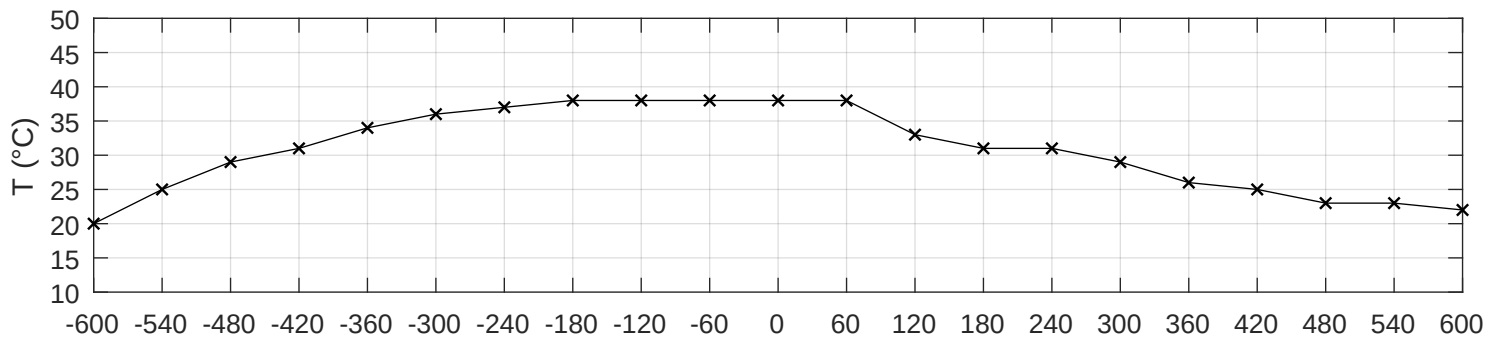
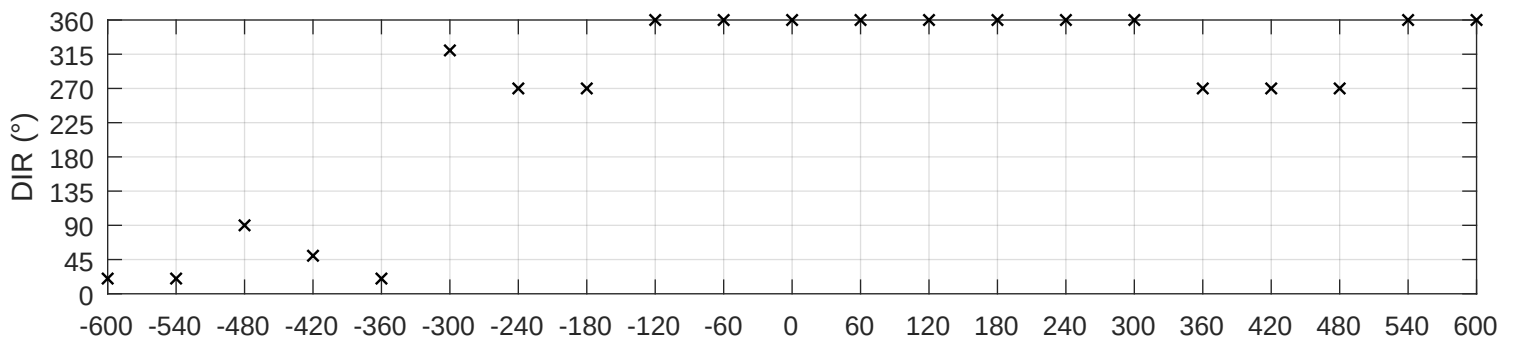
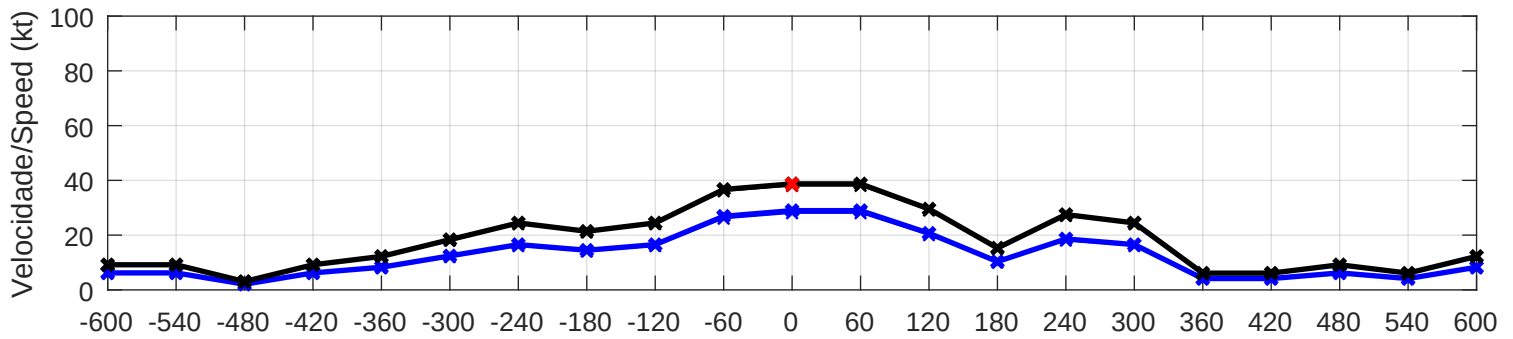
# SANT/87121 EVENTO/EVENT 95 - 28/02/2001, 20:00 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                  | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|---------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 38$ kt                  | $R_{-6} = 1.8$                | $T_{med,3} = 34.3$ °C        | $DIR = 50^\circ$                                        | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 28$ kt              | $R_{-3} = 1.1$                | $\Delta T_{min,3} = -1.7$ °C | $\Delta DIR_{max,-3} = 40^\circ$                        |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.7$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                        |                                | (226)                           |
| $G_{cor} = 38.7$ kt            | $R_{+6} = 2.7$                | $\Delta$ Grupo/Group = 3     | SANT 282000Z 05028KT 9999 FEW030 BKN200<br>35/22 Q1005= |                                |                                 |
| $V_{cor} = 29.0$ kt            |                               |                              |                                                         |                                |                                 |



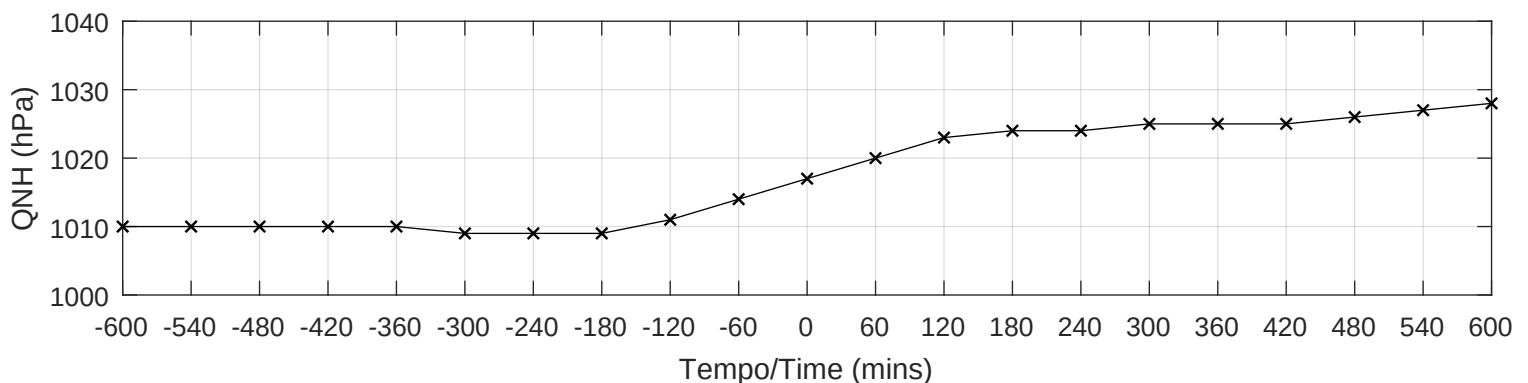
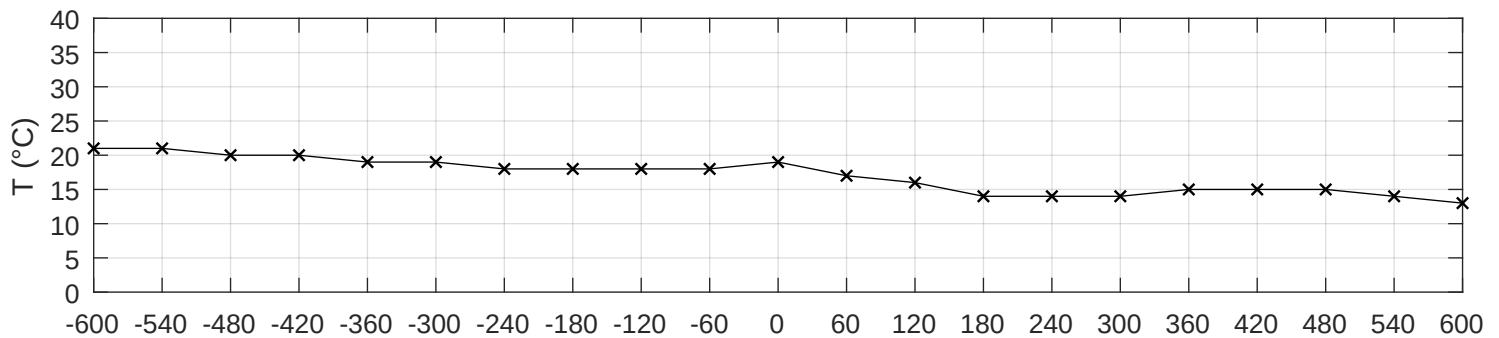
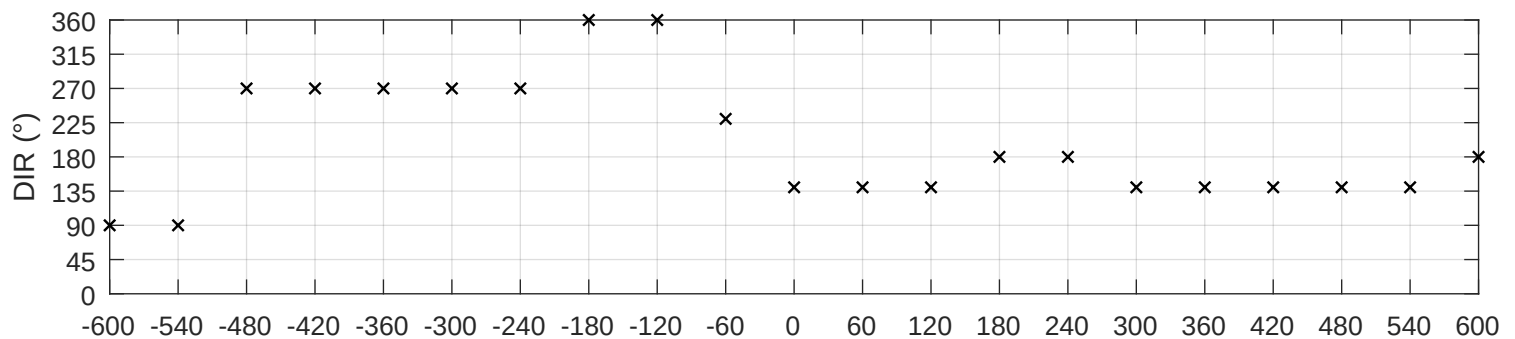
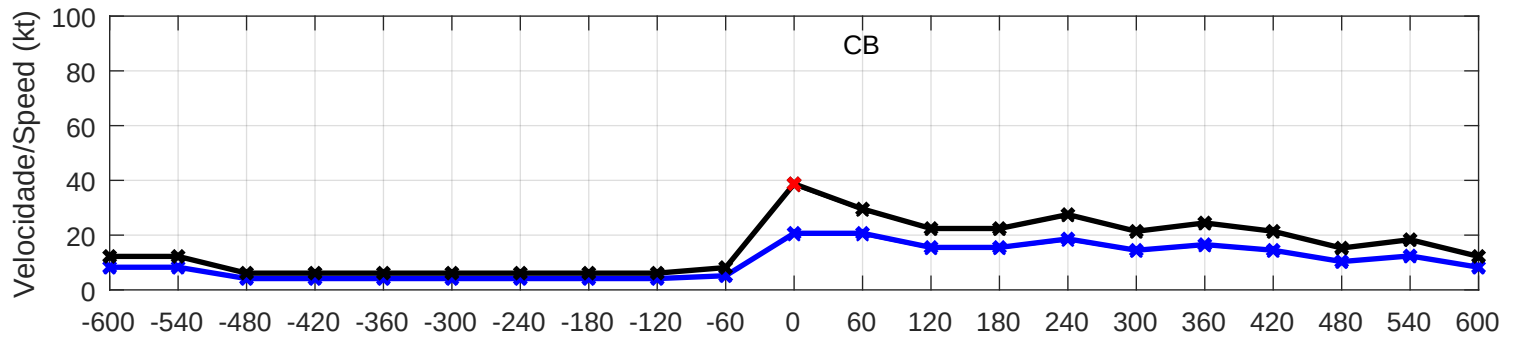
# SANT/87121 EVENTO/EVENT 98 - 15/10/2003, 21:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|-------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 38 \text{ kt}$      | $R_{-6} = 1.7$                | $T_{med,3} = 38.0 \text{ }^{\circ}\text{C}$       | $DIR = 360^{\circ}$                                   | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 28 \text{ kt}$      | $R_{-3} = 1.4$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 90^{\circ}$                    |                                | SYNOPTIC                        |
| $G_V = 1.4$                    | $R_{+3} = 1.4$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 0^{\circ}$                     |                                | (215)                           |
| $G_{cor} = 38.7 \text{ kt}$    | $R_{+6} = 1.6$                | $\Delta \text{ Grupo/Group} = 3$                  | METAR SANT 152100Z 36028/38KT 9999 SKC<br>38/06 Q1004 |                                |                                 |
| $V_{cor} = 29.0 \text{ kt}$    |                               |                                                   |                                                       |                                |                                 |



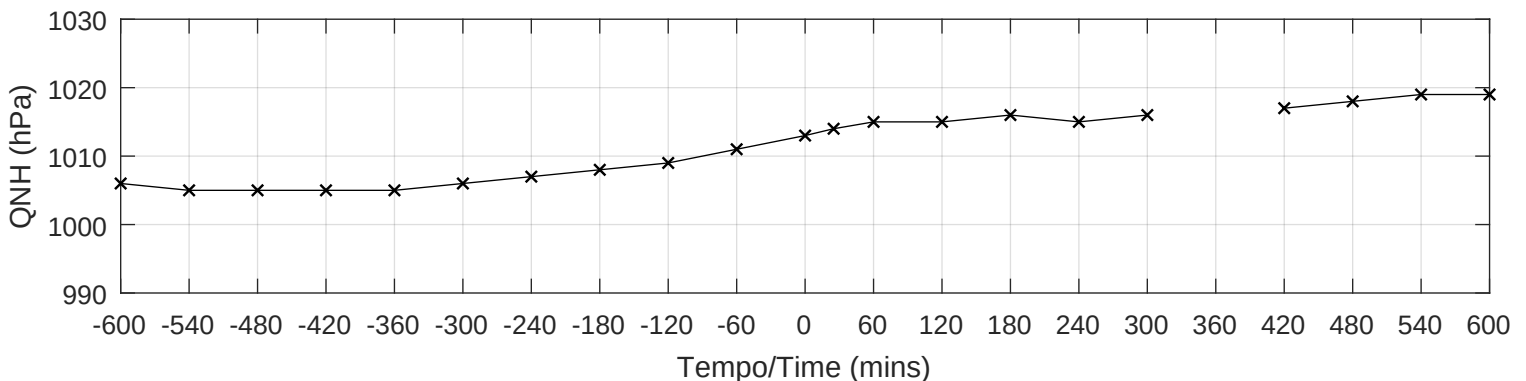
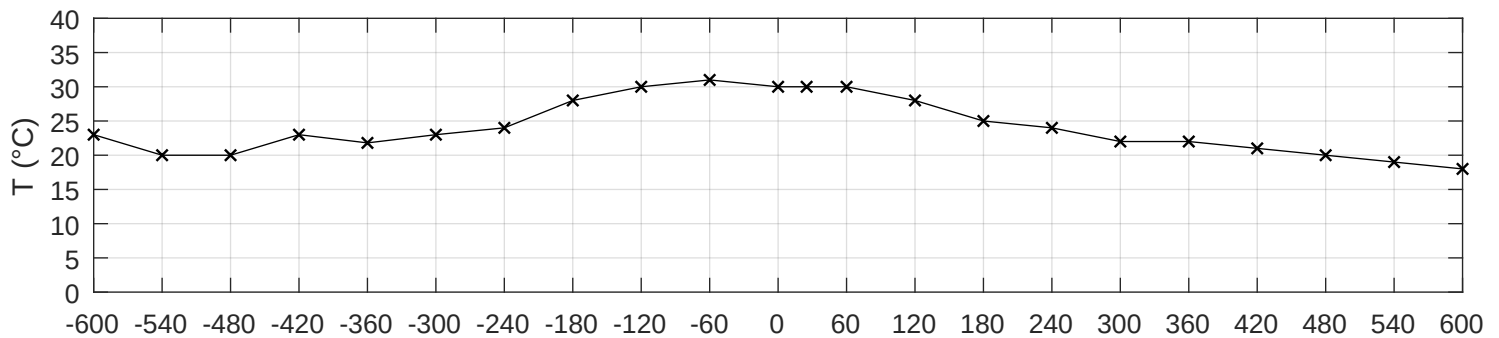
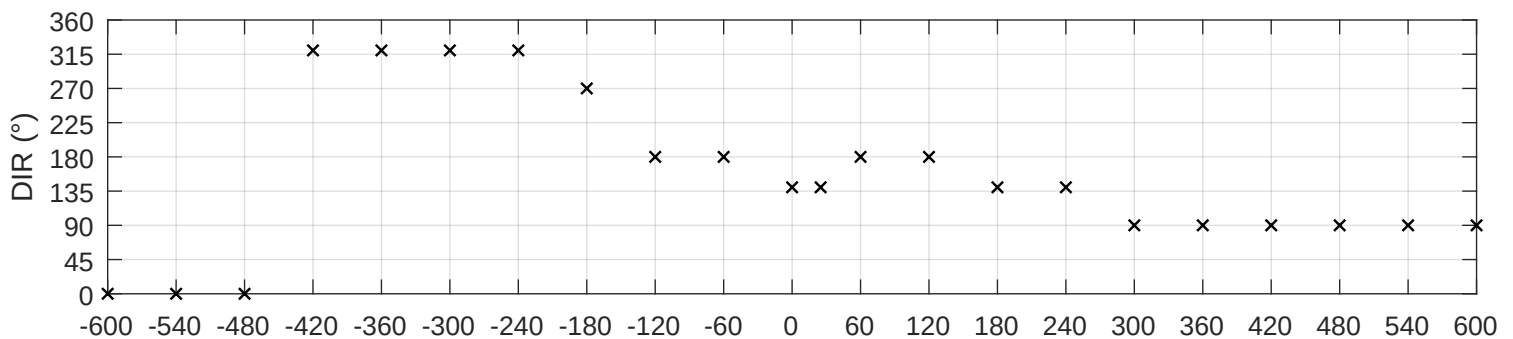
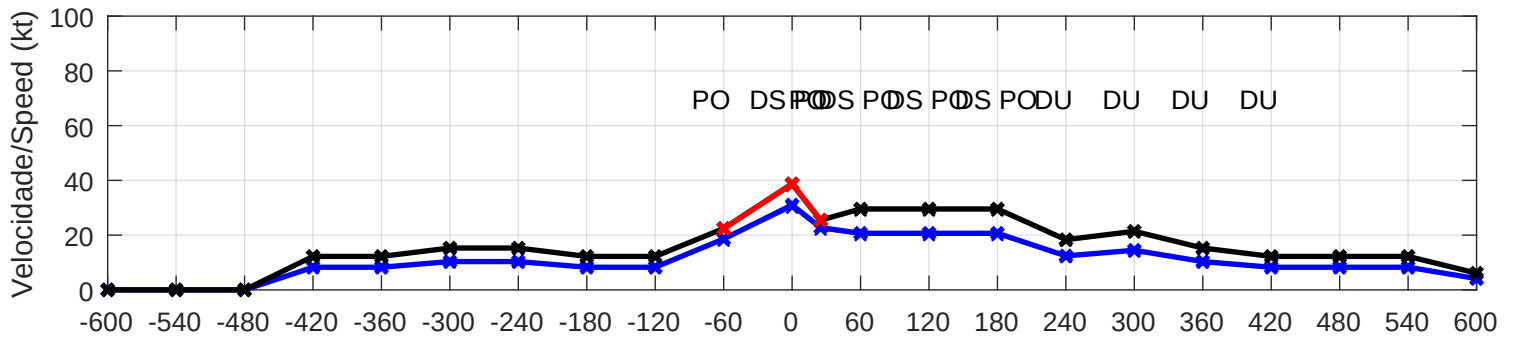
# SANT/87121 EVENTO/EVENT 100 - 24/04/2005, 12:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 38 \text{ kt}$      | $R_{-6} = 6.0$                | $T_{med,3} = 18.0 \text{ }^{\circ}\text{C}$        | $DIR = 140^{\circ}$                                            | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 20 \text{ kt}$      | $R_{-3} = 5.7$                | $\Delta T_{min,3} = -2.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 140^{\circ}$                            |                                | SYNOPTIC                        |
| $G_V = 1.9$                    | $R_{+3} = 1.6$                | $\Delta Q_{max,3} = 9.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 40^{\circ}$                             |                                | (211)                           |
| $G_{cor} = 38.7 \text{ kt}$    | $R_{+6} = 1.6$                | $\Delta \text{ Grupo/Group} = 1$                   | SANT 241200Z 14020G38KT 7000 -DZ BKN015<br>OVC030 19/17 Q1017= |                                |                                 |
| $V_{cor} = 20.7 \text{ kt}$    |                               |                                                    |                                                                |                                |                                 |



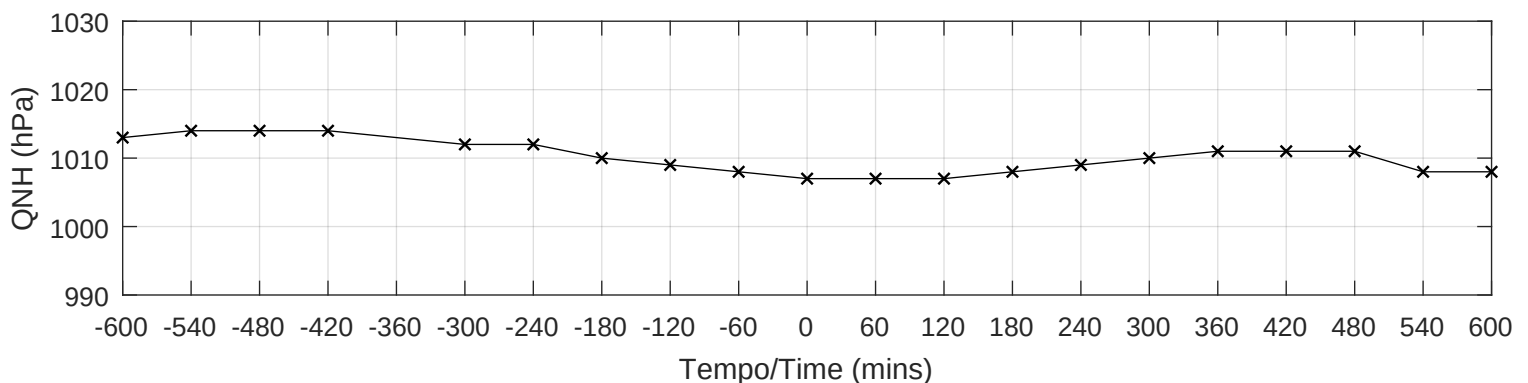
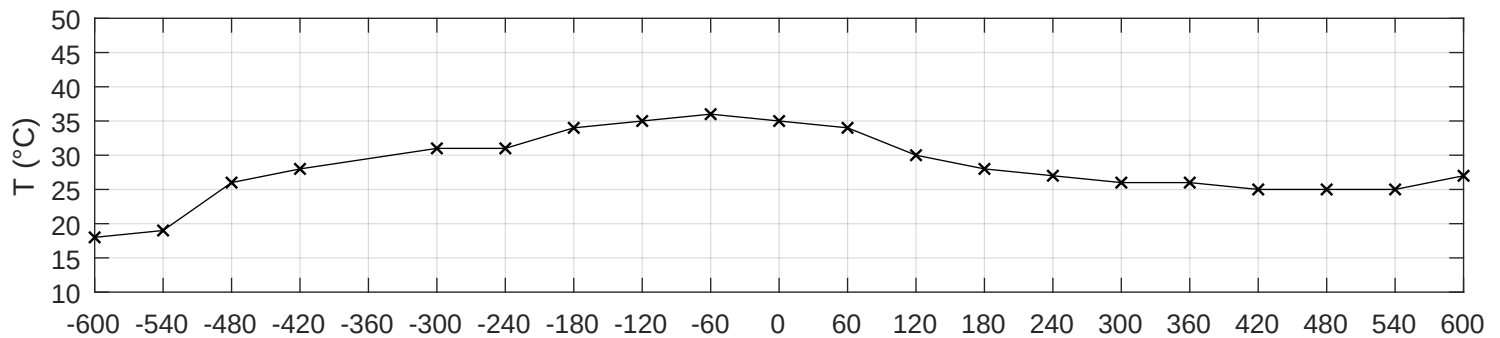
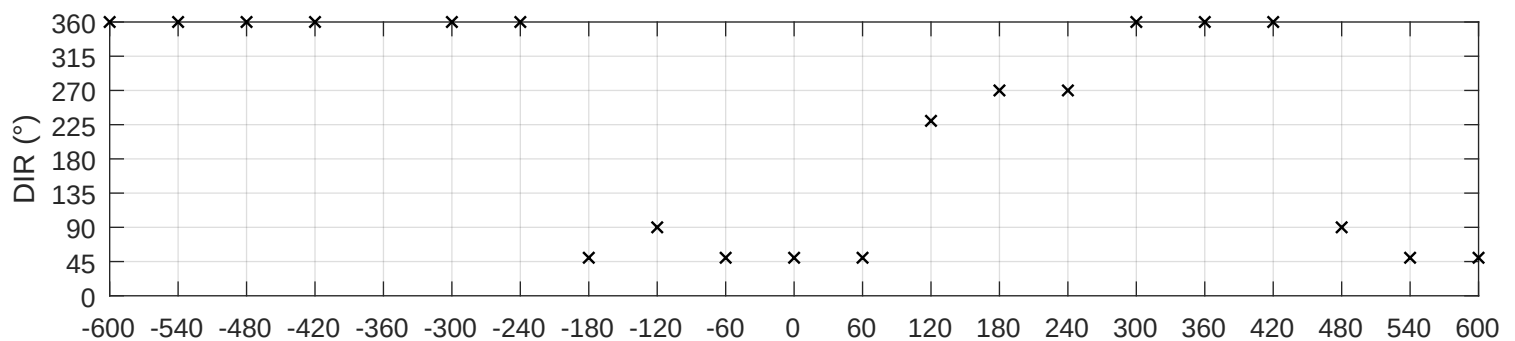
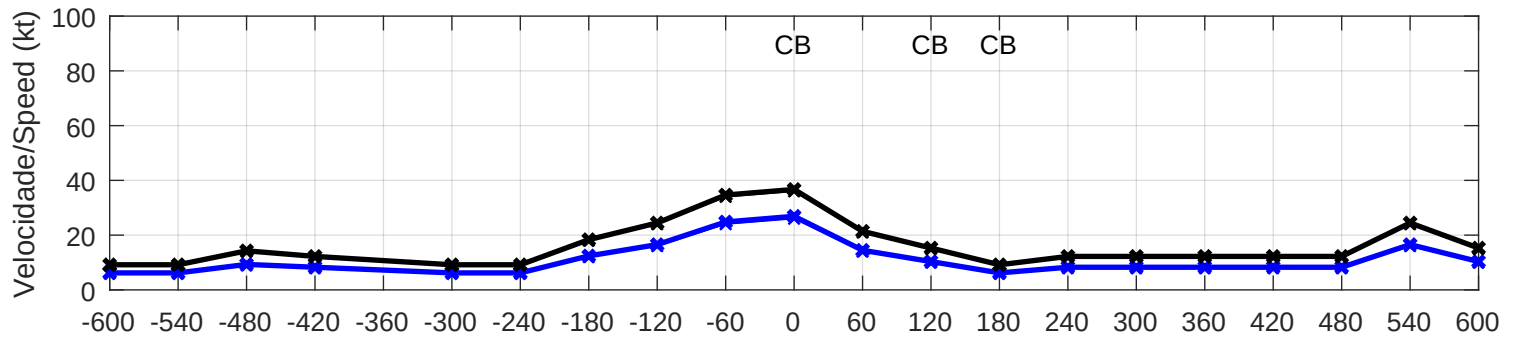
# SANT/87121 EVENTO/EVENT 101 - 04/11/2005, 15:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                 | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 38 \text{ kt}$      | $R_{-6} = 2.6$                | $T_{med,3} = 29.7 \text{ }^{\circ}\text{C}$       | $DIR = 140^{\circ}$                                    | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 2.5$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 130^{\circ}$                    |                                | SYNOPTIC                        |
| $G_V = 1.3$                    | $R_{+3} = 1.3$                | $\Delta Q_{max,3} = 6.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 40^{\circ}$                     |                                | (211)                           |
| $G_{cor} = 38.7 \text{ kt}$    | $R_{+6} = 1.6$                | $\Delta \text{ Grupo/Group} = 1$                  | SANT 041500Z 14030G38KT 1800 DS PO SKC<br>30/10 Q1013= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                   |                                                        |                                |                                 |



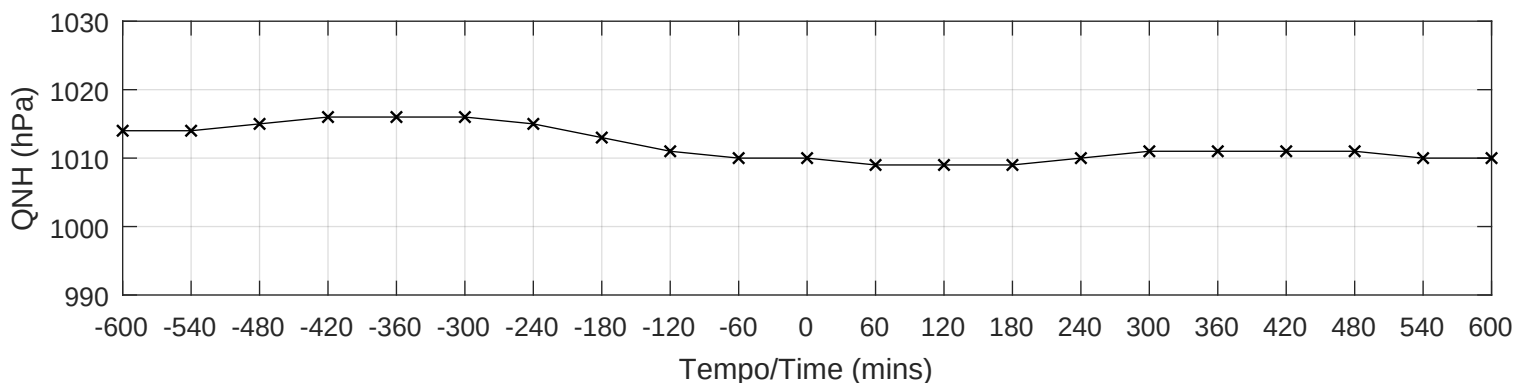
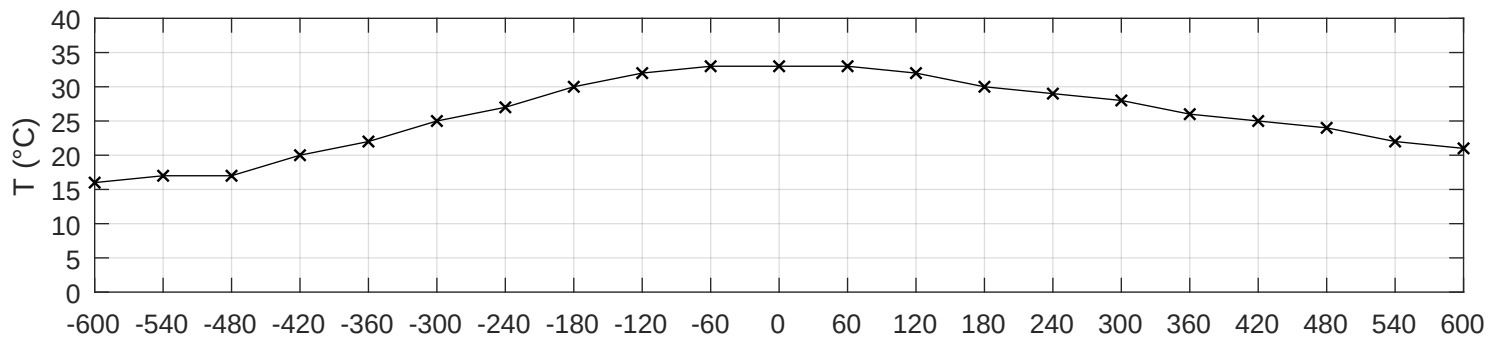
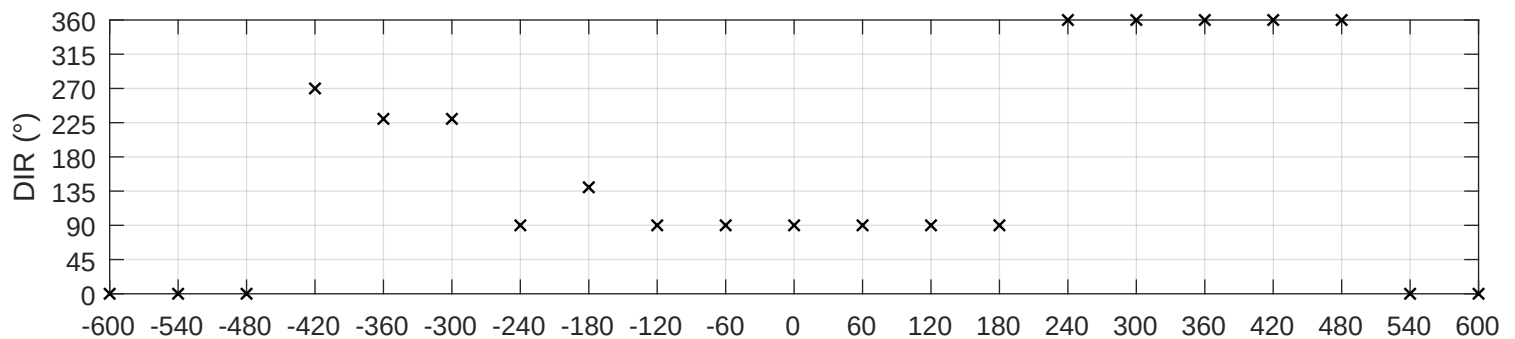
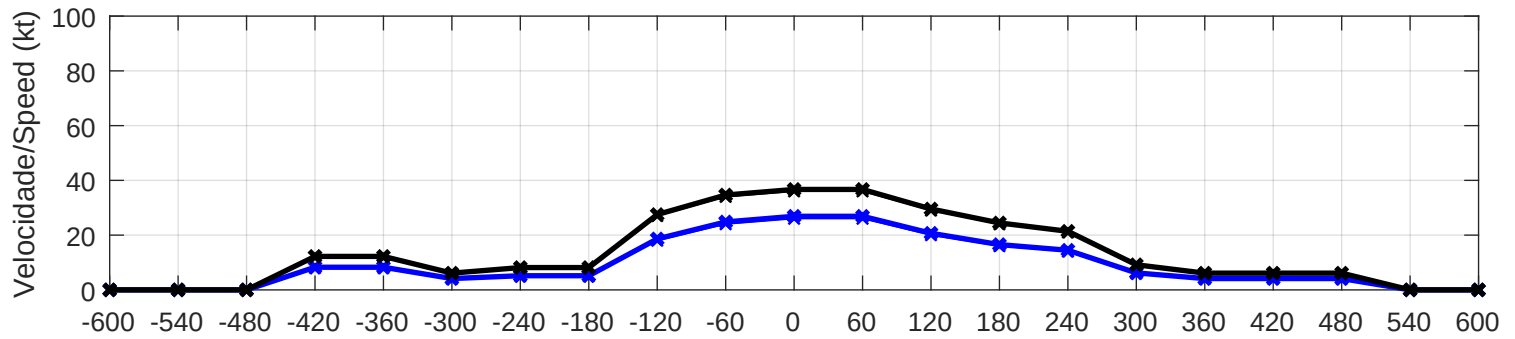
# SANT/87121 EVENTO/EVENT 115 - 14/11/1999, 20:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 36$ kt                  | $R_{-6} = 1.9$                | $T_{med,3} = 35.0$ °C        | $DIR = 50^\circ$                                               | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 26$ kt              | $R_{-3} = 1.4$                | $\Delta T_{min,3} = -2.0$ °C | $\Delta DIR_{max,-3} = 40^\circ$                               |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 2.4$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 180^\circ$                              |                                | (225)                           |
| $G_{cor} = 36.7$ kt            | $R_{+6} = 2.7$                | $\Delta$ Grupo/Group = 3     | METAR SANT 142000Z 05026KT 9999 FEW040<br>FEW050CB 35/11 Q1007 |                                |                                 |
| $V_{cor} = 26.9$ kt            |                               |                              |                                                                |                                |                                 |



# SANT/87121 EVENTO/EVENT 118 - 07/10/2000, 19:00 UTC (MSS - WUNDERGROUND)

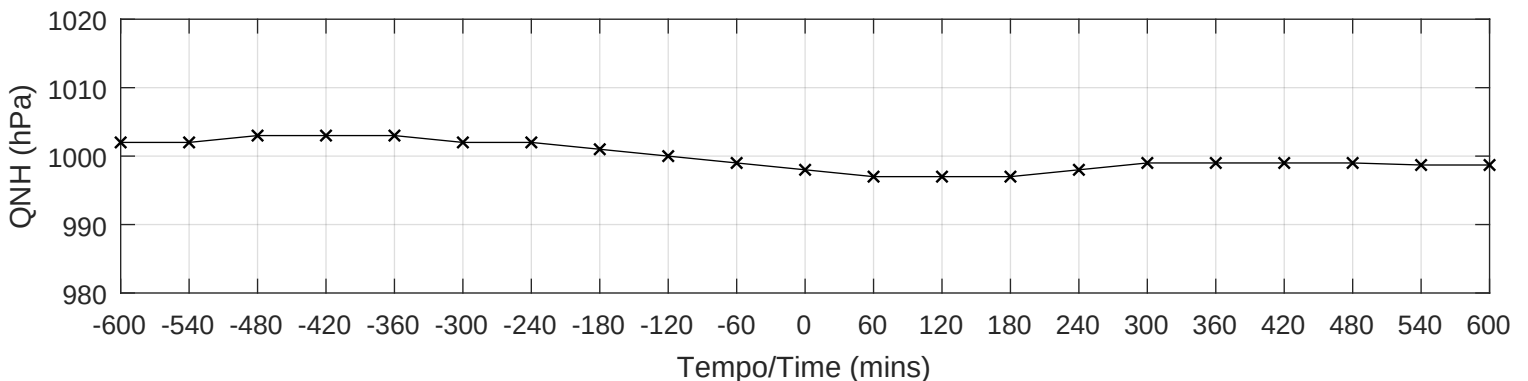
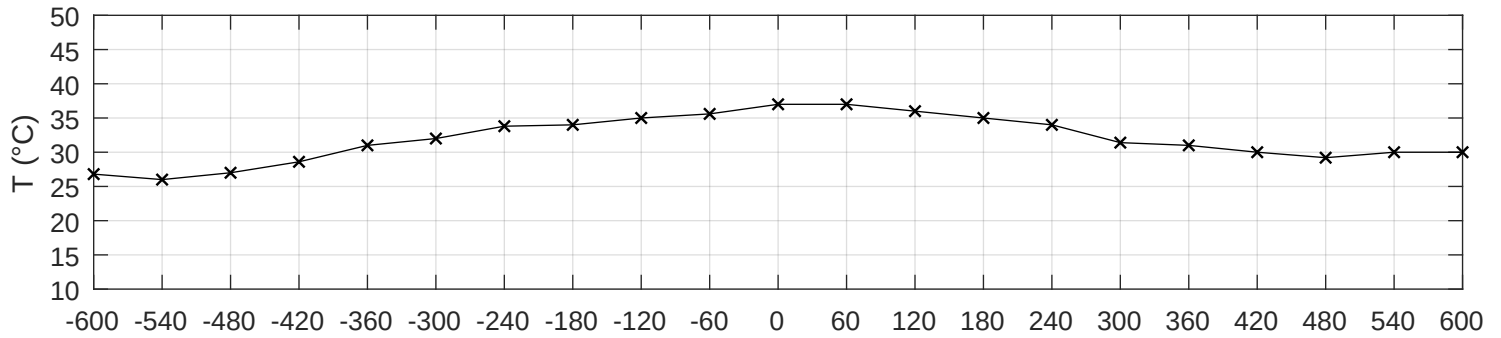
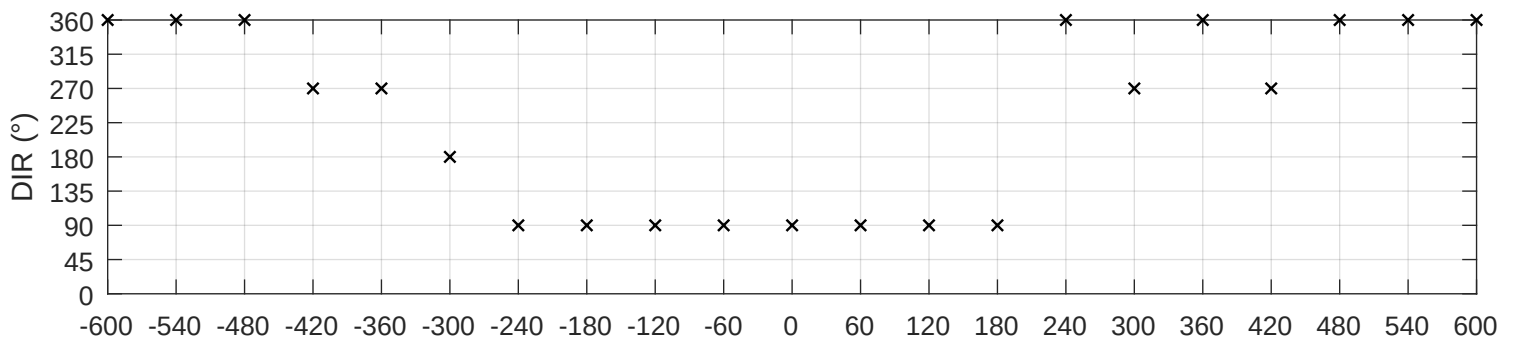
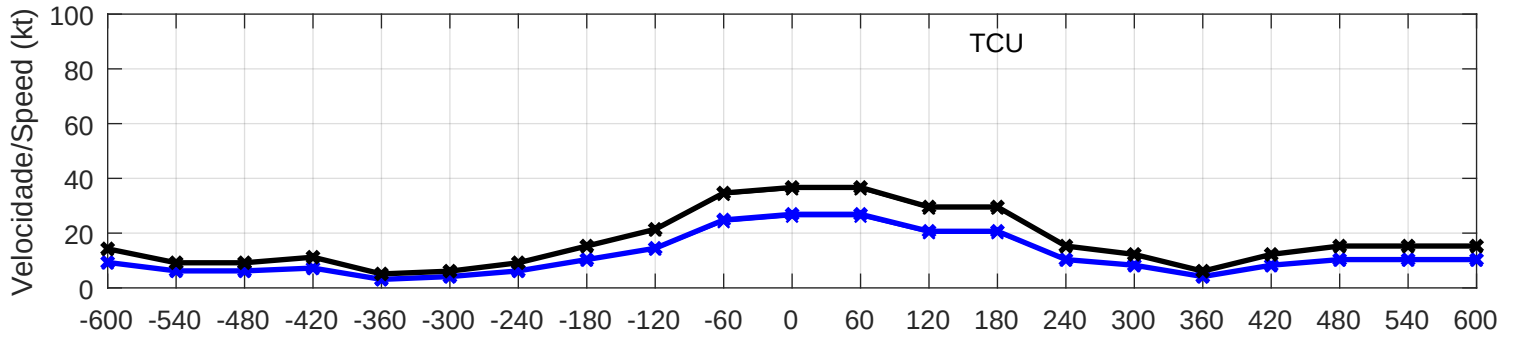
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                       | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|--------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 36$ kt                  | $R_{-6} = 2.3$                | $T_{med,3} = 31.7$ °C        | $DIR = 90^\circ$                                             | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 26$ kt              | $R_{-3} = 1.6$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 50^\circ$                             |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.2$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                              |                                | (226)                           |
| $G_{cor} = 36.7$ kt            | $R_{+6} = 1.7$                | $\Delta$ Grupo/Group = 3     | METAR SANT 071900Z 09026KT 5000 FEW030<br>FEW060 33/12 Q1010 |                                |                                 |
| $V_{cor} = 26.9$ kt            |                               |                              |                                                              |                                |                                 |





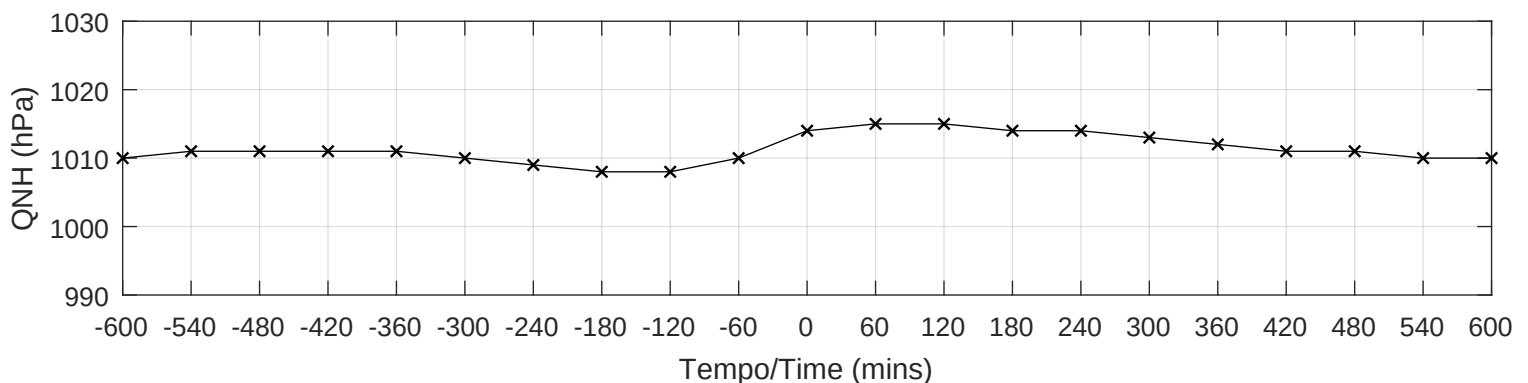
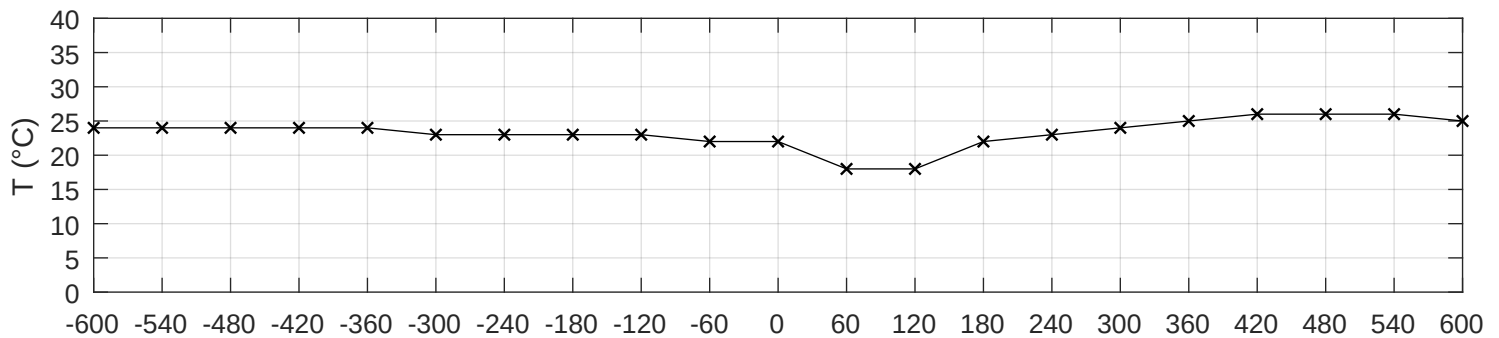
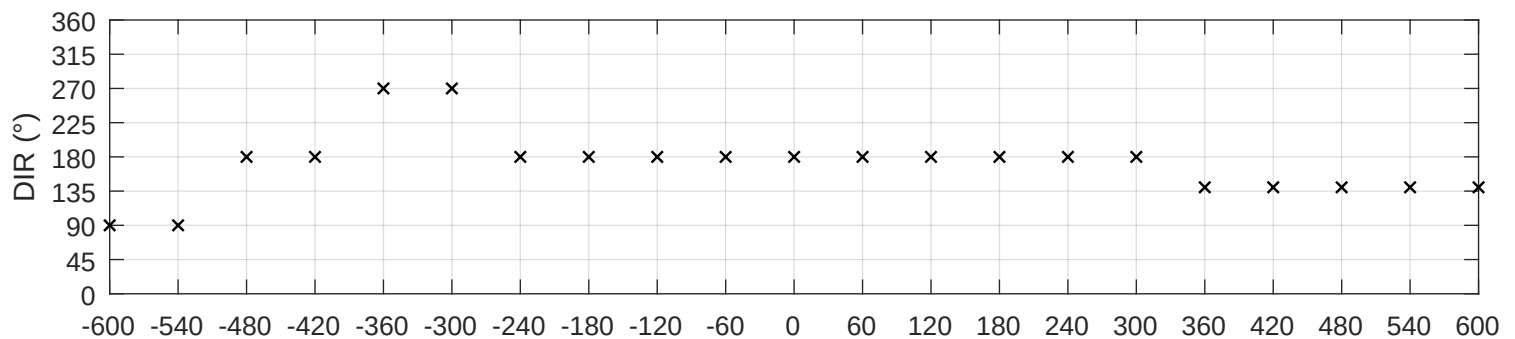
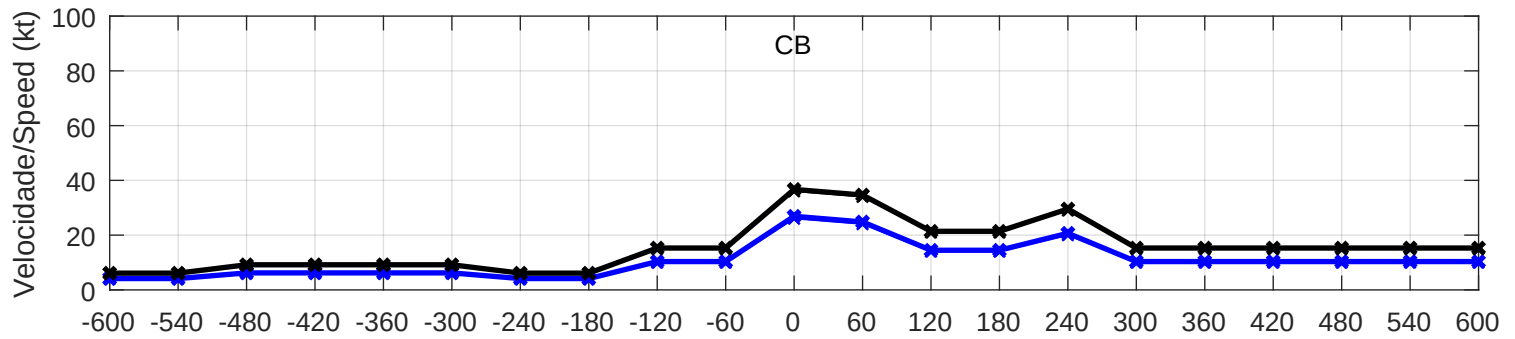
# SANT/87121 EVENTO/EVENT 120 - 09/02/2001, 19:00 UTC (MSS - NCEI/NCDC)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                  | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|---------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 36$ kt                  | $R_{-6} = 2.4$                | $T_{med,3} = 34.9$ °C        | $DIR = 90^\circ$                                        | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 26$ kt              | $R_{-3} = 1.5$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 0^\circ$                         |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.1$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                         |                                | (226)                           |
| $G_{cor} = 36.7$ kt            | $R_{+6} = 1.7$                | $\Delta$ Grupo/Group = 3     | SANT 091900Z 09026KT 9999 FEW035 BKN200<br>37/23 Q1998= |                                |                                 |
| $V_{cor} = 26.9$ kt            |                               |                              |                                                         |                                |                                 |



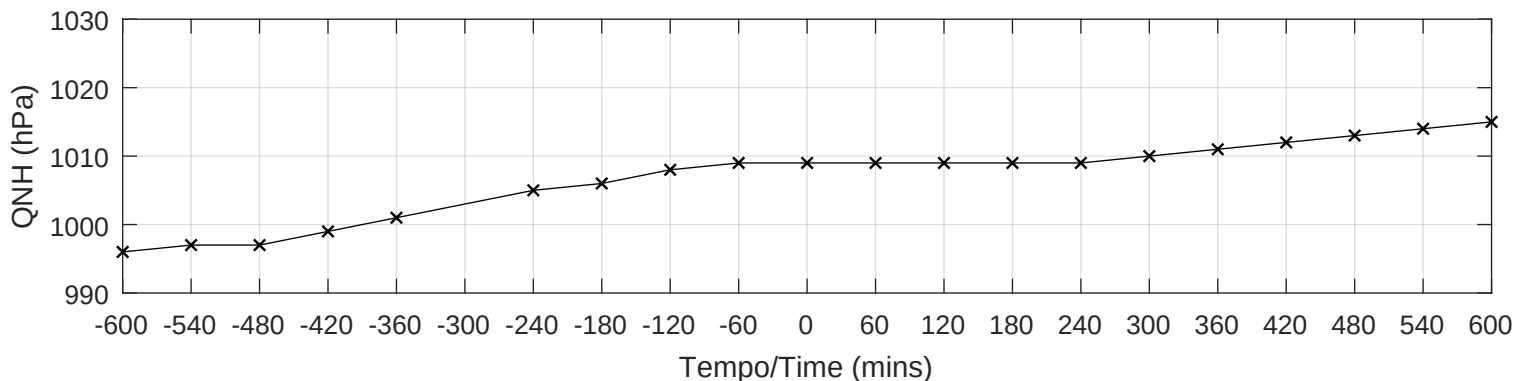
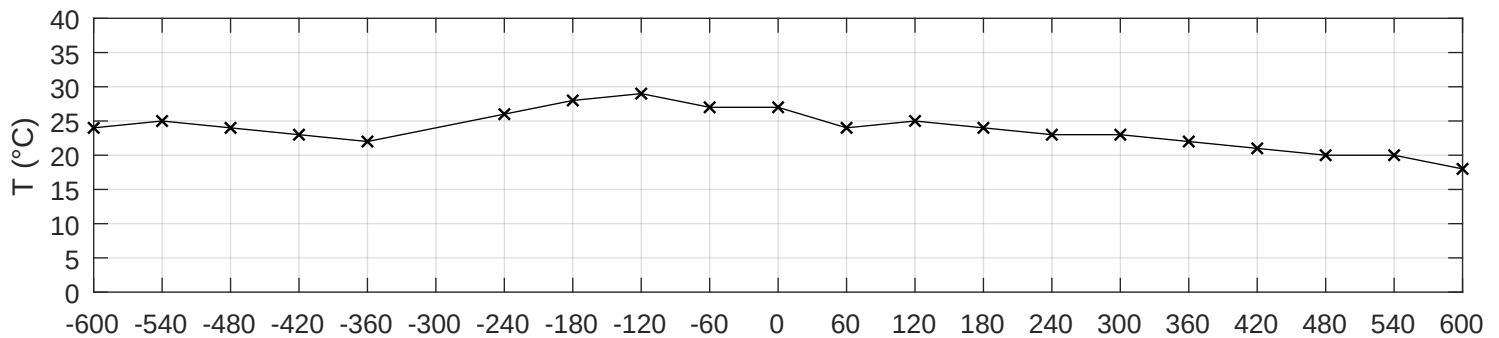
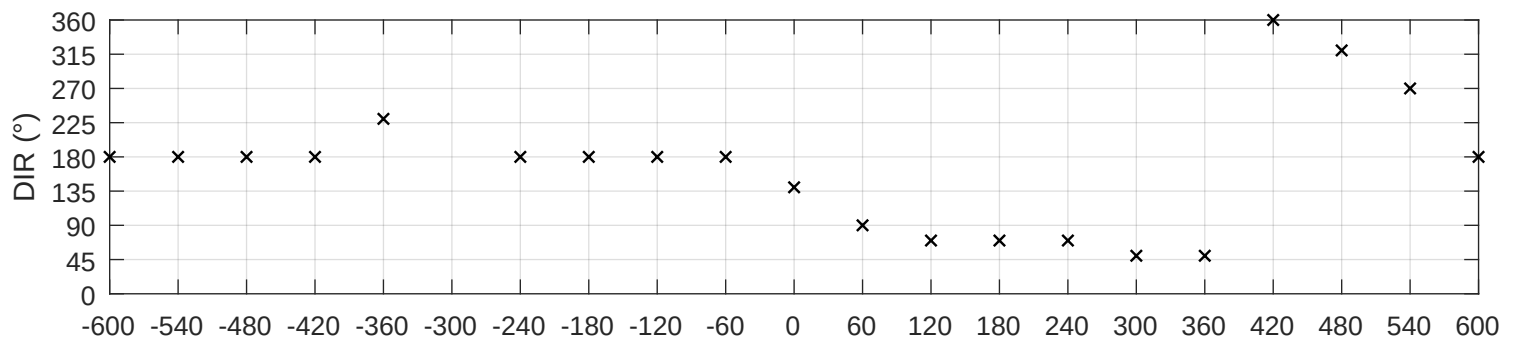
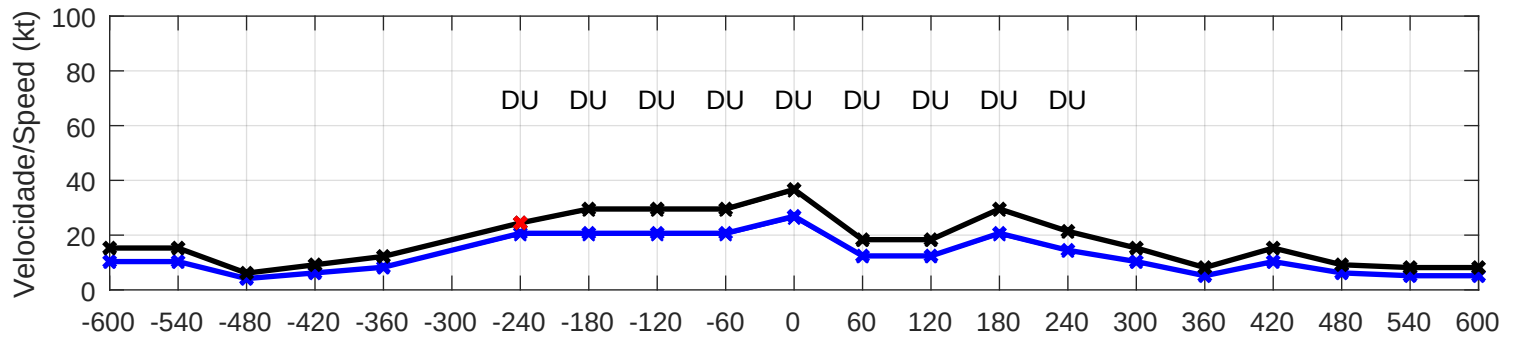
# SANT/87121 EVENTO/EVENT 121 - 02/03/2003, 11:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                            | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 36$ kt                  | $R_{-6} = 3.6$                | $T_{med,3} = 22.7$ °C        | $DIR = 180^\circ$                                                 | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 26$ kt              | $R_{-3} = 3.0$                | $\Delta T_{min,3} = -5.0$ °C | $\Delta DIR_{max,-3} = 0^\circ$                                   |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.4$                | $\Delta Q_{max,3} = 7.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                                   |                                | (221)                           |
| $G_{cor} = 36.7$ kt            | $R_{+6} = 1.6$                | $\Delta$ Grupo/Group = 1     | METAR SANT 021100Z 18026KT 2500 RA BKN003<br>FEW050CB 22/21 Q1014 |                                |                                 |
| $V_{cor} = 26.9$ kt            |                               |                              |                                                                   |                                |                                 |



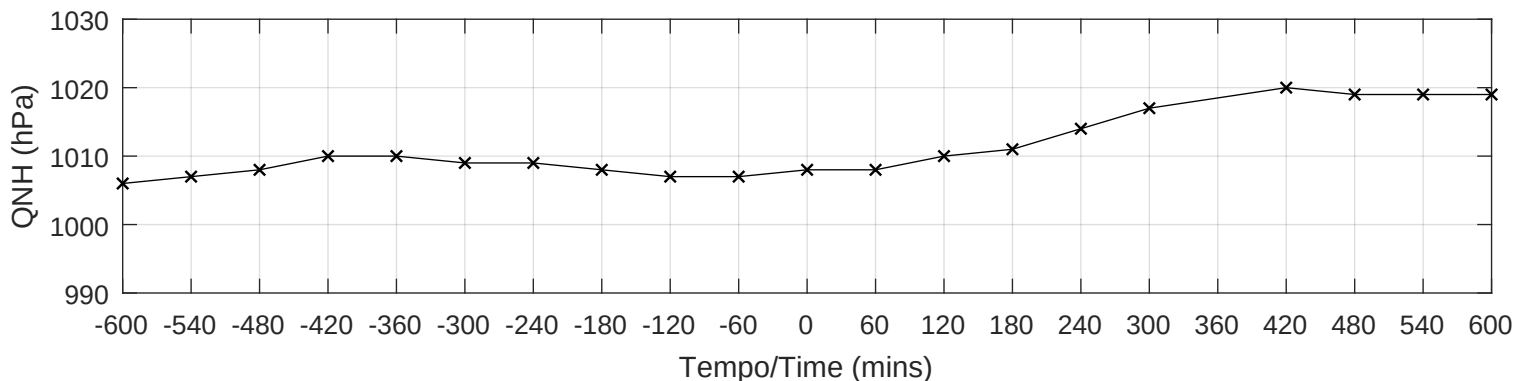
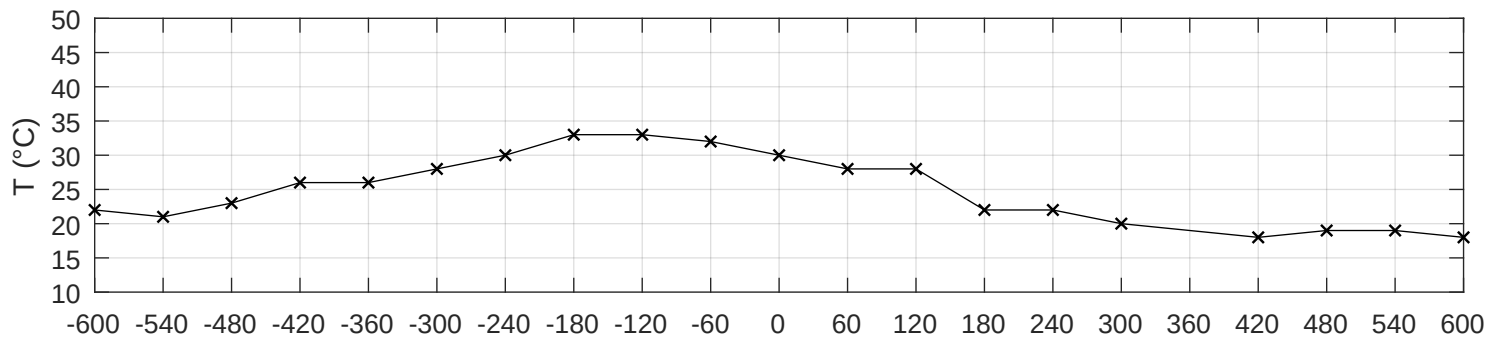
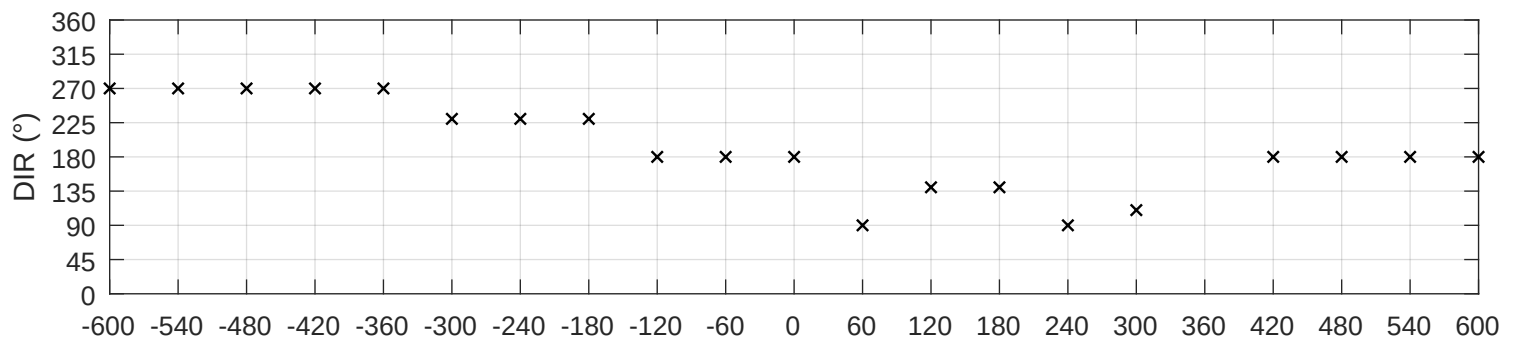
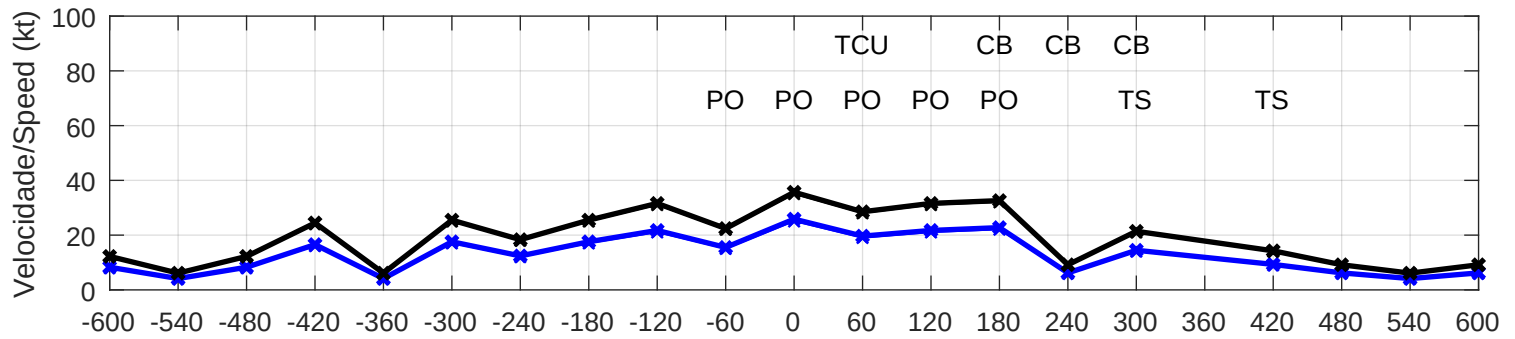
# SANT/87121 EVENTO/EVENT 126 - 14/10/2006, 16:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 36$ kt                  | $R_{-6} = 1.5$                | $T_{med,3} = 28.0$ °C        | $DIR = 140^\circ$                                          | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 26$ kt              | $R_{-3} = 1.2$                | $\Delta T_{min,3} = -5.0$ °C | $\Delta DIR_{max,-3} = 40^\circ$                           |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.7$                | $\Delta Q_{max,3} = 1.0$ hPa | $\Delta DIR_{max,+3} = 70^\circ$                           |                                | (221)                           |
| $G_{cor} = 36.7$ kt            | $R_{+6} = 2.0$                | $\Delta$ Grupo/Group = 2     | SANT 141600Z 14026KT 4000 DU SCT040 FEW042<br>27/15 Q1009= |                                |                                 |
| $V_{cor} = 26.9$ kt            |                               |                              |                                                            |                                |                                 |



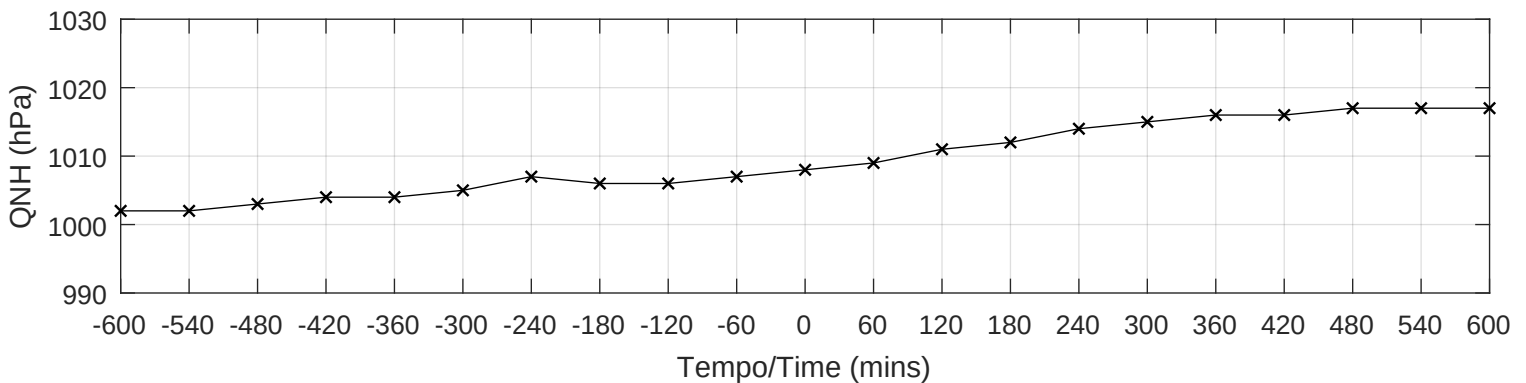
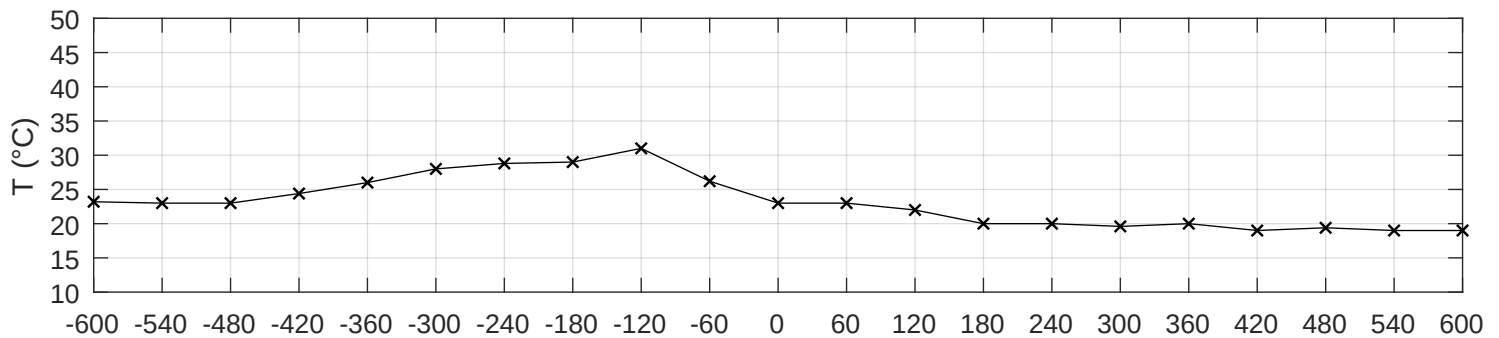
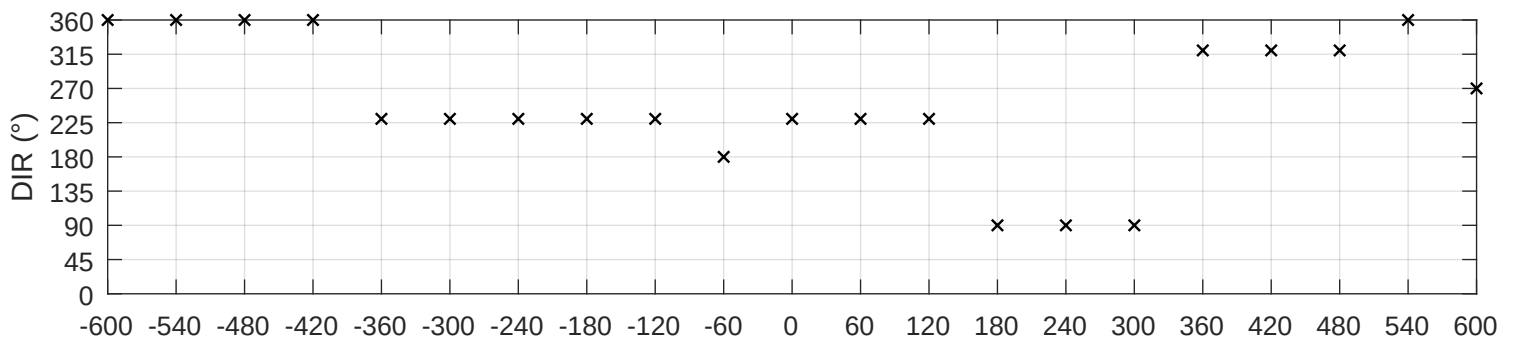
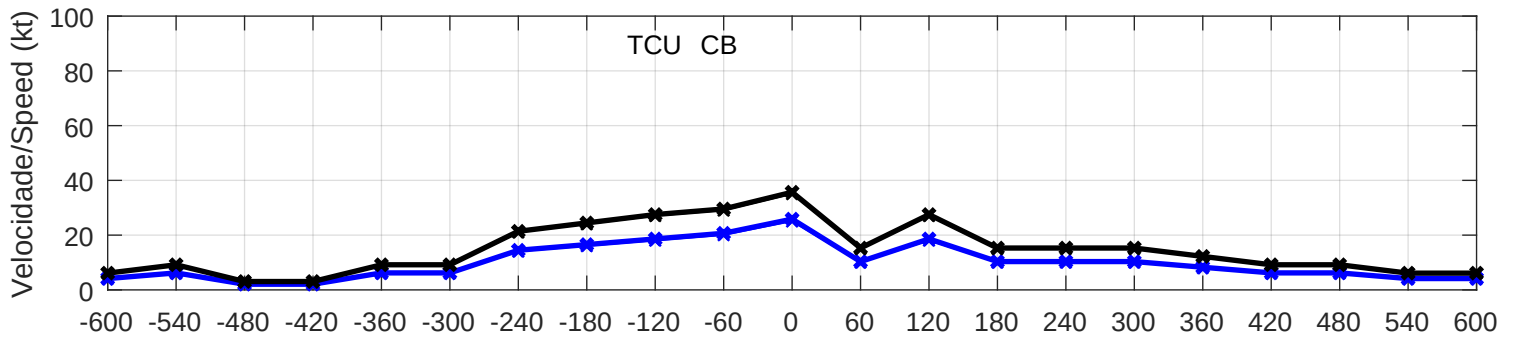
# SANT/87121 EVENTO/EVENT 132 - 21/09/1996, 19:00 UTC (MSS - WUNDERGROUND)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                          | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|-----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 35$ kt                  | $R_{-6} = 1.7$                | $T_{med,3} = 32.7$ °C        | $DIR = 180^\circ$                                               | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 25$ kt              | $R_{-3} = 1.3$                | $\Delta T_{min,3} = -5.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$                                |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.2$                | $\Delta Q_{max,3} = 1.0$ hPa | $\Delta DIR_{max,+3} = 90^\circ$                                |                                | (222)                           |
| $G_{cor} = 35.7$ kt            | $R_{+6} = 1.4$                | $\Delta$ Grupo/Group = 2     | METAR SANT 211900Z 18025KT 5000 PO BKN035<br>FEW080 30/19 Q1008 |                                |                                 |
| $V_{cor} = 25.9$ kt            |                               |                              |                                                                 |                                |                                 |



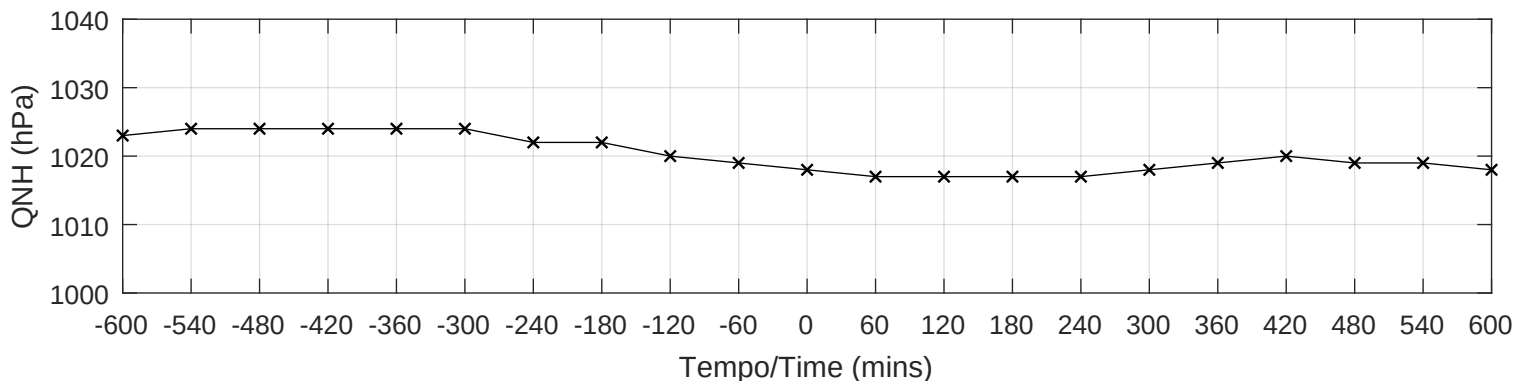
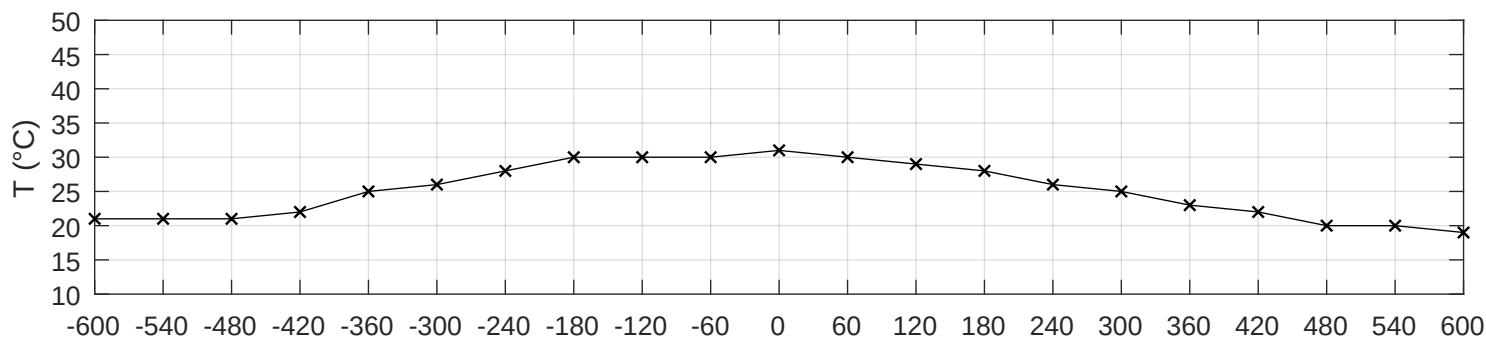
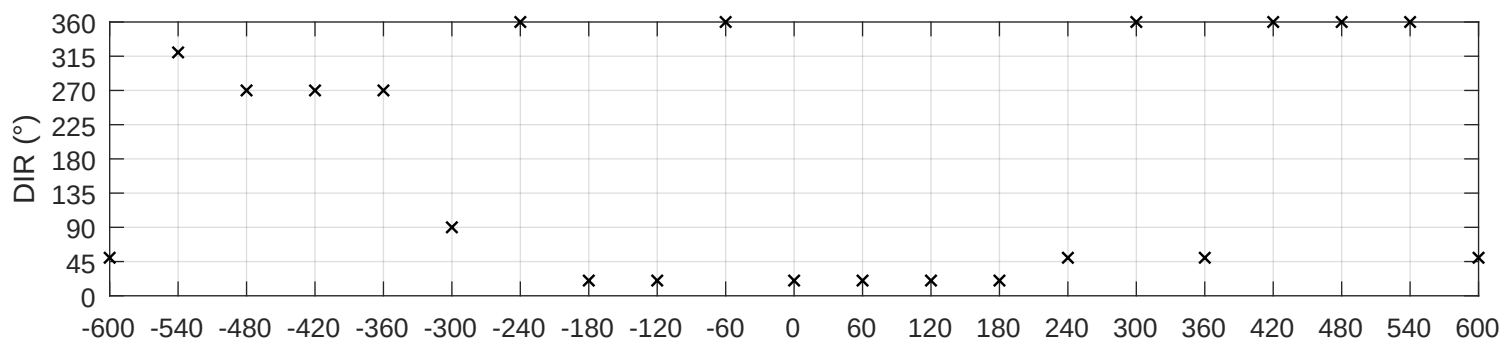
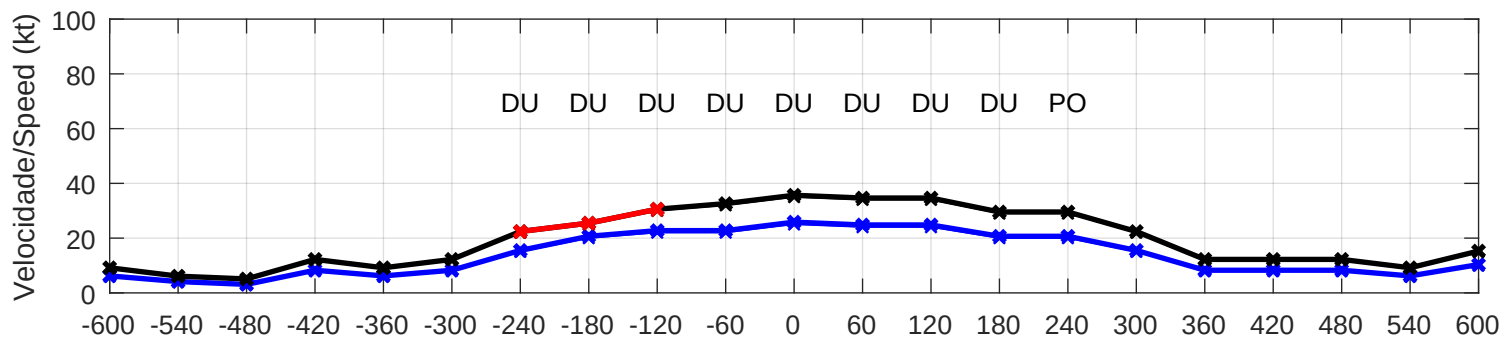
**SANT/87121 EVENTO/EVENT 134 - 27/02/2000, 19:00 UTC (MSS - NCEI/NCDC)**

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 35$ kt                  | $R_{-6} = 1.8$                | $T_{med,3} = 28.7$ °C        | $DIR = 230^\circ$                                              | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 25$ kt              | $R_{-3} = 1.3$                | $\Delta T_{min,3} = -8.0$ °C | $\Delta DIR_{max,-3} = 50^\circ$                               |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.8$                | $\Delta Q_{max,3} = 3.0$ hPa | $\Delta DIR_{max,+3} = 140^\circ$                              |                                | (221)                           |
| $G_{cor} = 35.7$ kt            | $R_{+6} = 2.1$                | $\Delta$ Grupo/Group = 1     | SANT 271900Z 23025KT 9999 SCT012 BKN030<br>FEW035 23/20 Q1008= |                                |                                 |
| $V_{cor} = 25.9$ kt            |                               |                              |                                                                |                                |                                 |



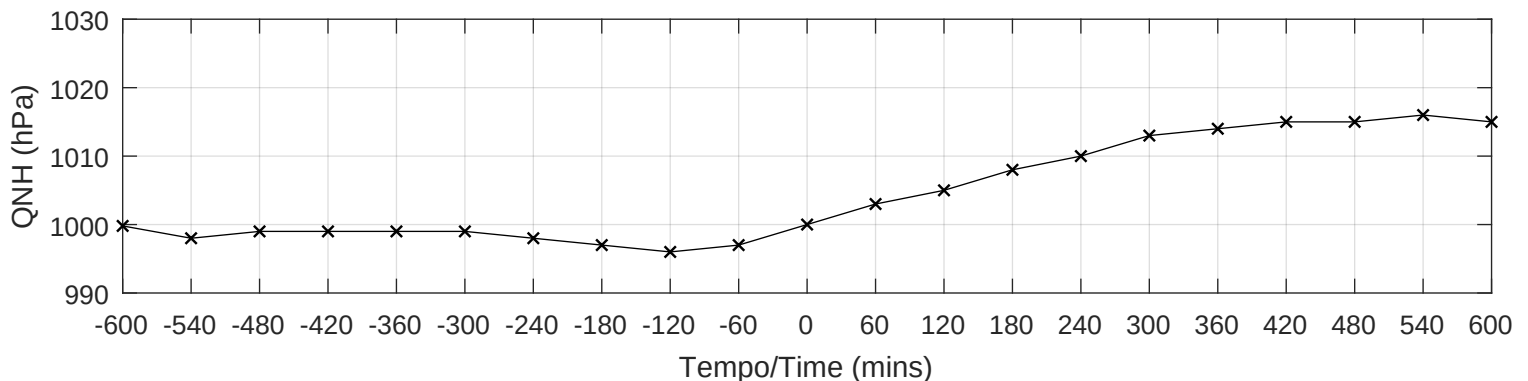
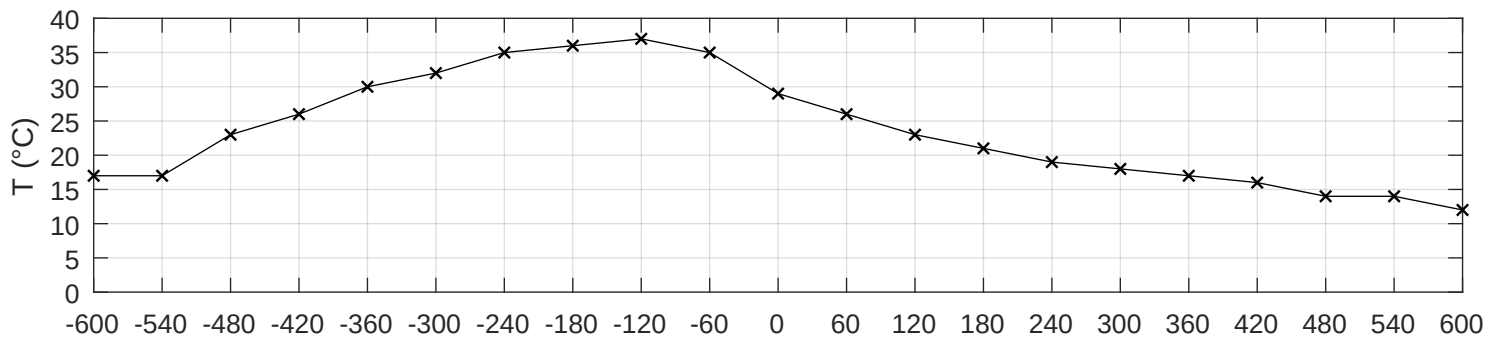
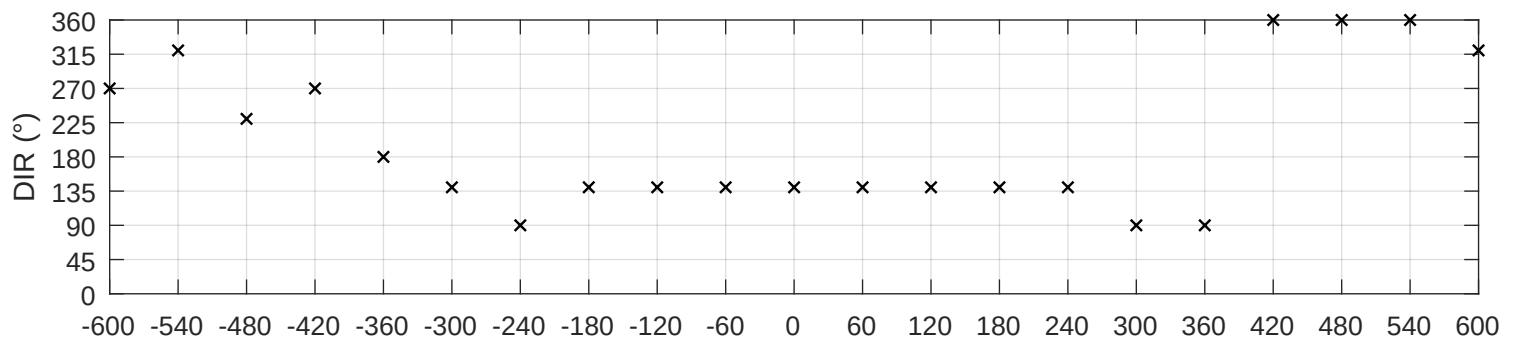
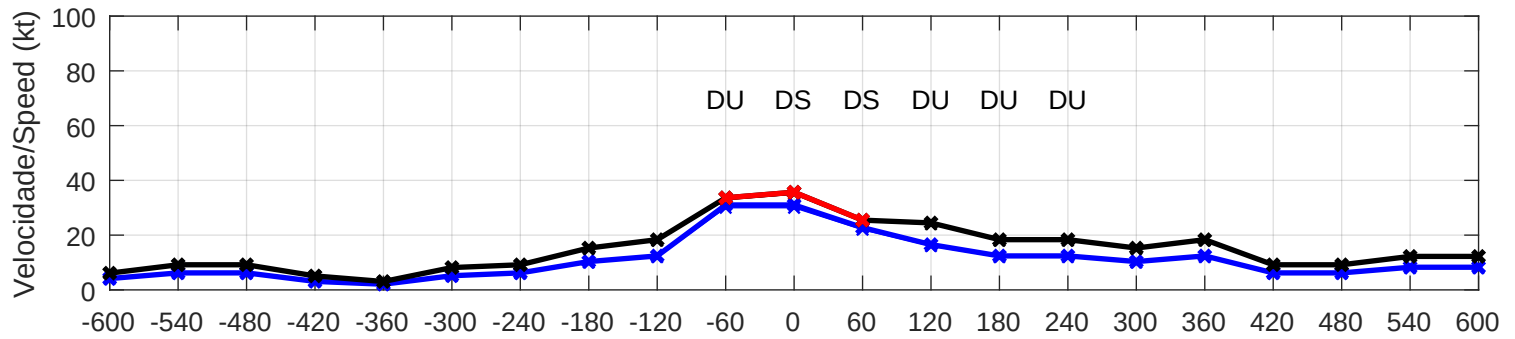
# SANT/87121 EVENTO/EVENT 141 - 08/10/2008, 19:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.      | $\Delta$ Direção<br>$\Delta$ Direction                         | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|------------------------------|----------------------------------------------------------------|--------------------------------|---------------------------------|
| $G^* = 35$ kt                  | $R_{-6} = 1.6$                | $T_{med,3} = 30.0$ °C        | $DIR = 20^\circ$                                               | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 25$ kt              | $R_{-3} = 1.2$                | $\Delta T_{min,3} = 0.0$ °C  | $\Delta DIR_{max,-3} = 20^\circ$                               |                                | SYNOPTIC                        |
| $G_V = []$                     | $R_{+3} = 1.1$                | $\Delta Q_{max,3} = 0.0$ hPa | $\Delta DIR_{max,+3} = 0^\circ$                                |                                | (226)                           |
| $G_{cor} = 35.7$ kt            | $R_{+6} = 1.3$                | $\Delta$ Grupo/Group = 3     | SANT 081900Z 02025KT G35 200N 4000S DU/FU<br>NSC 31/-02 Q1018= |                                |                                 |
| $V_{cor} = 25.9$ kt            |                               |                              |                                                                |                                |                                 |



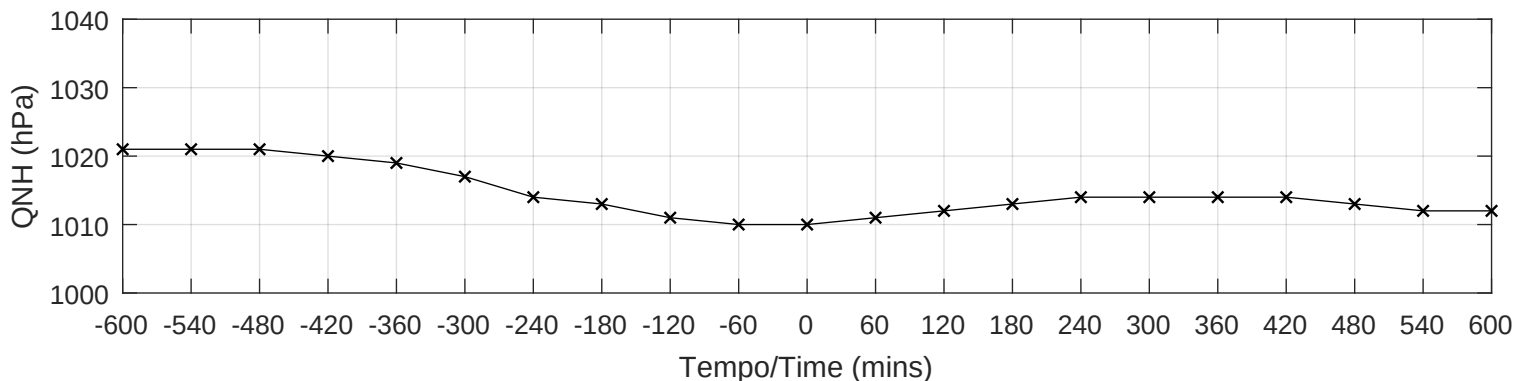
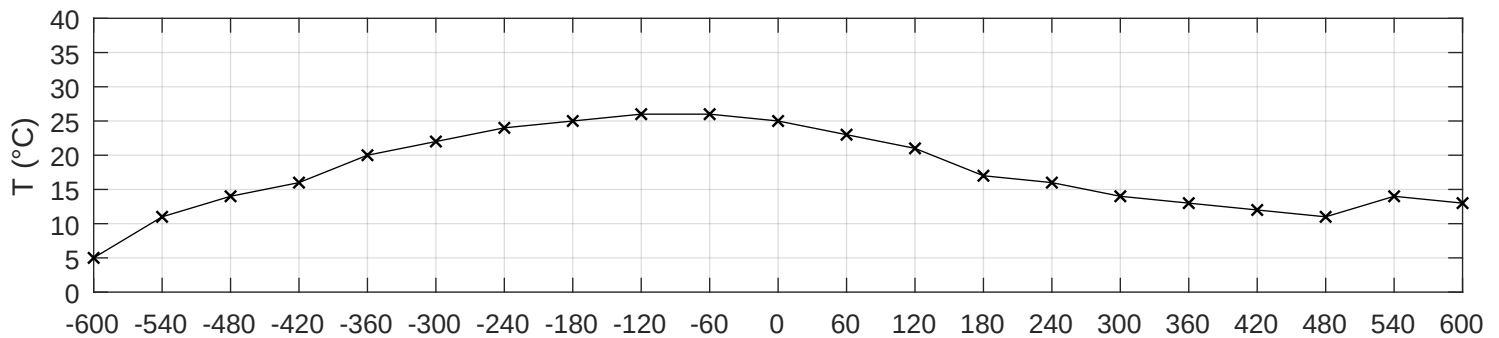
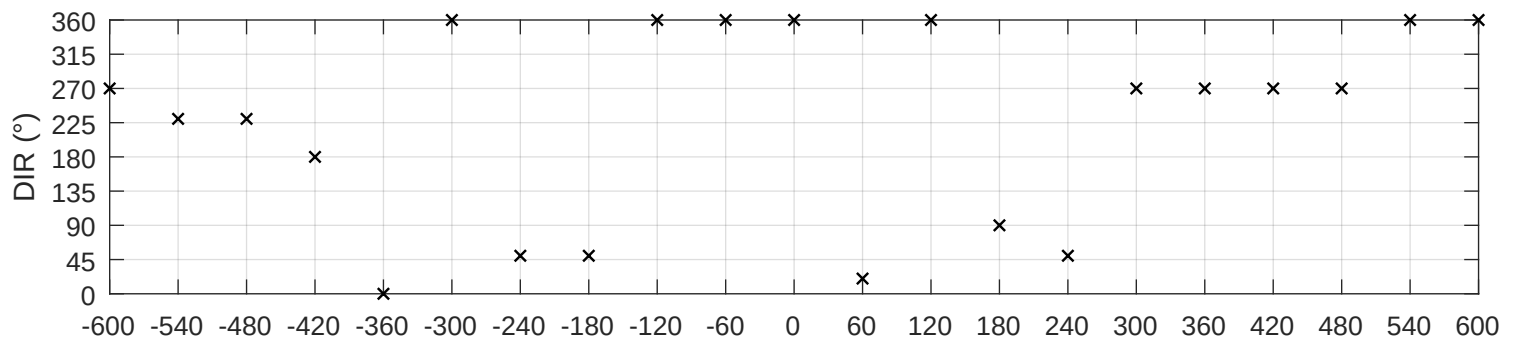
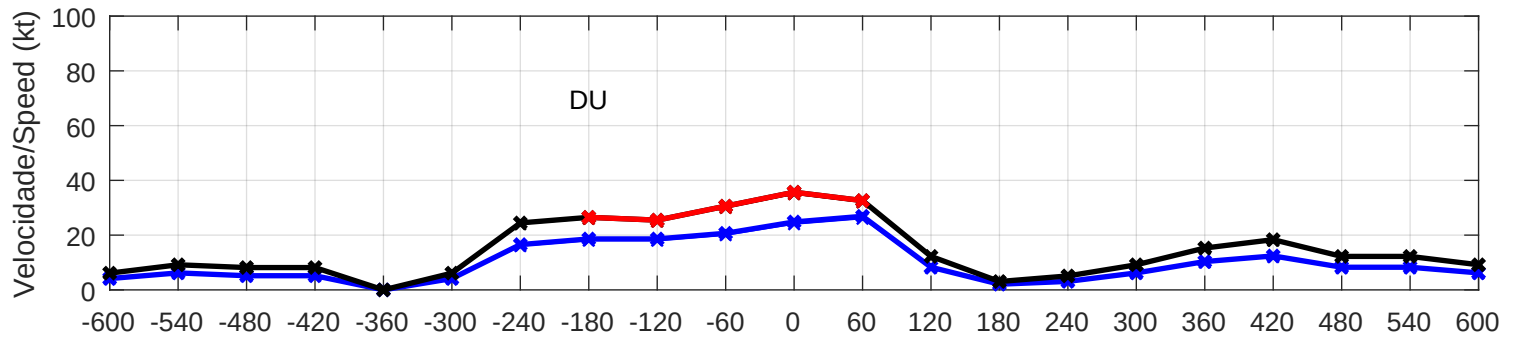
# SANT/87121 EVENTO/EVENT 143 - 29/10/2010, 20:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                             | $\Delta$ Direção<br>$\Delta$ Direction               | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|-----------------------------------------------------|------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 35 \text{ kt}$      | $R_{-6} = 2.4$                | $T_{med,3} = 36.0 \text{ }^{\circ}\text{C}$         | $DIR = 140^{\circ}$                                  | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 1.6$                | $\Delta T_{min,3} = -11.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 0^{\circ}$                    |                                | SYNOPTIC                        |
| $G_V = 1.2$                    | $R_{+3} = 1.6$                | $\Delta Q_{max,3} = 7.0 \text{ hPa}$                | $\Delta DIR_{max,+3} = 0^{\circ}$                    |                                | (212)                           |
| $G_{cor} = 35.7 \text{ kt}$    | $R_{+6} = 1.8$                | $\Delta \text{ Grupo/Group} = 1$                    | SANT 292000Z 14030G35KT 2000DS FEW100<br>29/06Q1000= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                     |                                                      |                                |                                 |



# SANT/87121 EVENTO/EVENT 144 - 27/09/2012, 21:00 UTC (MSS - REDEMET)

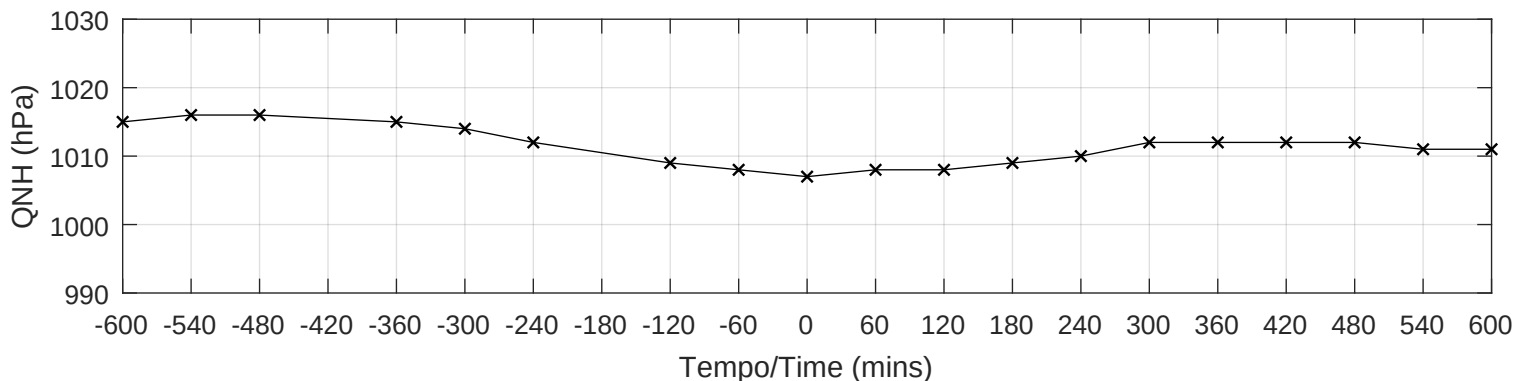
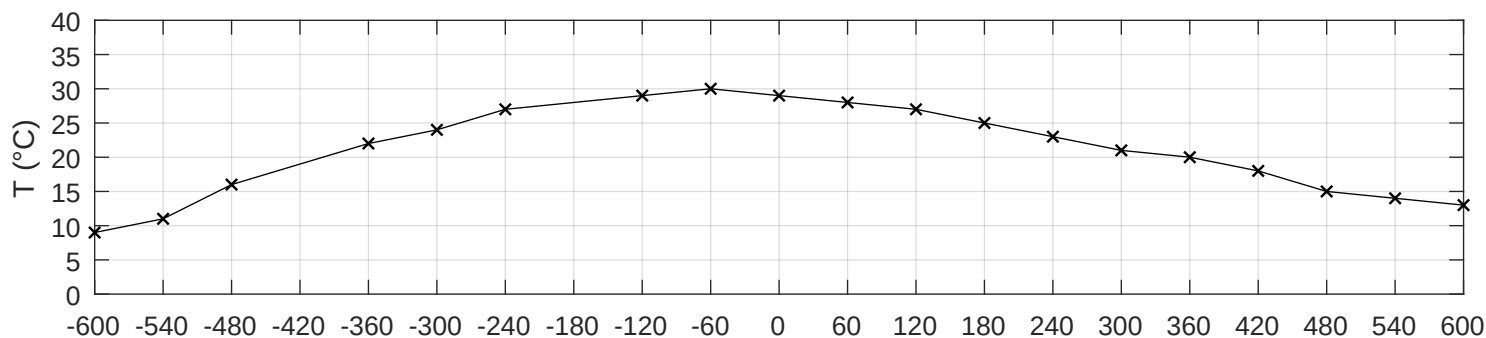
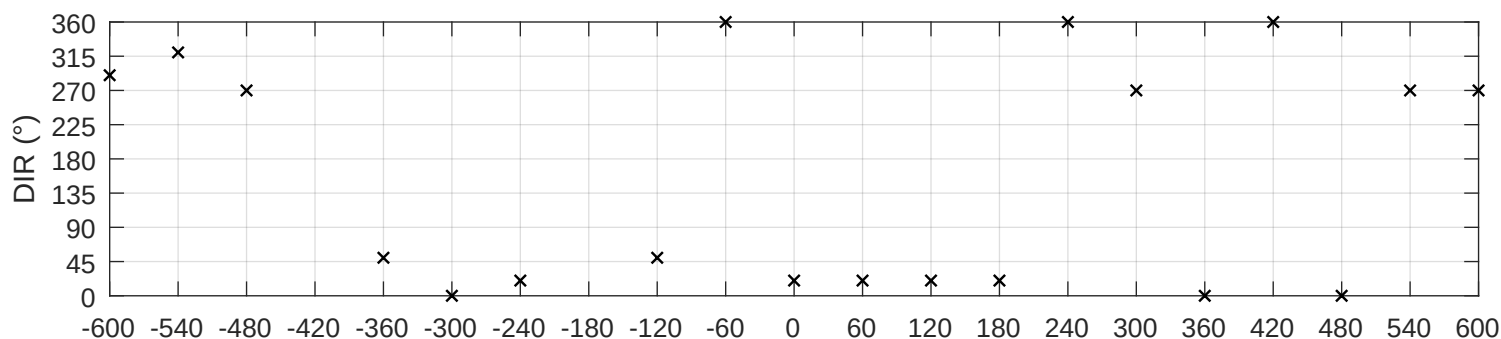
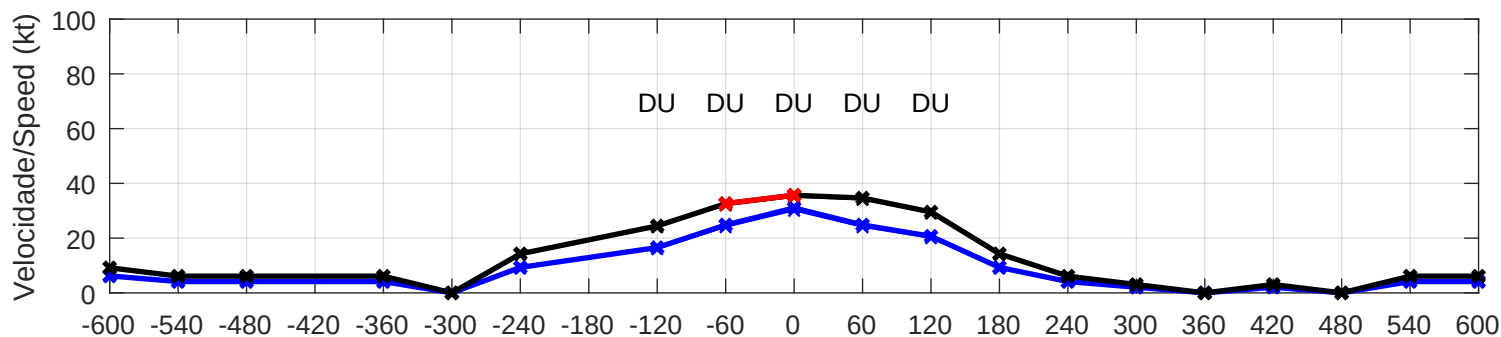
| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                    | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-----------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 35 \text{ kt}$      | $R_{-6} = 1.9$                | $T_{med,3} = 25.7 \text{ }^{\circ}\text{C}$        | $DIR = 360^{\circ}$                                       | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 24 \text{ kt}$      | $R_{-3} = 1.3$                | $\Delta T_{min,3} = -3.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                        |                                | SYNOPTIC                        |
| $G_V = 1.5$                    | $R_{+3} = 2.2$                | $\Delta Q_{max,3} = 1.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 90^{\circ}$                        |                                | (211)                           |
| $G_{cor} = 35.7 \text{ kt}$    | $R_{+6} = 2.8$                | $\Delta \text{ Grupo/Group} = 2$                   | METAR SANT 272100Z 36024G35KT 4000 FU NSC<br>25/M02Q1010= |                                |                                 |
| $V_{cor} = 24.8 \text{ kt}$    |                               |                                                    |                                                           |                                |                                 |





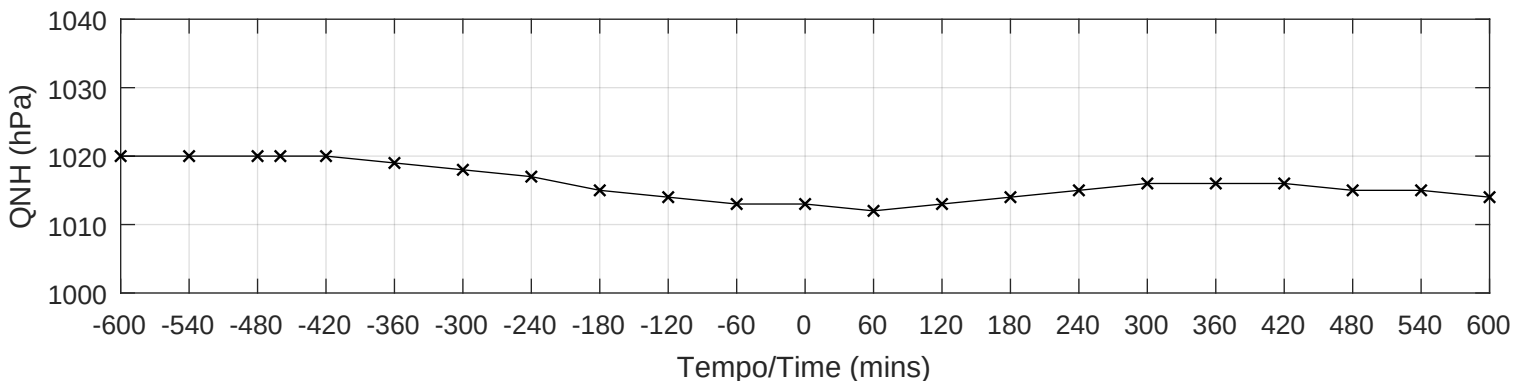
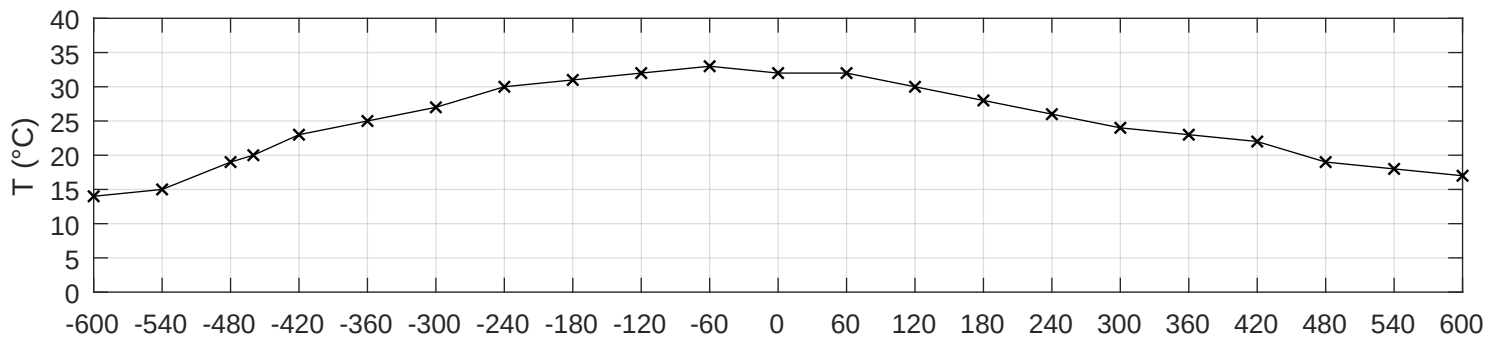
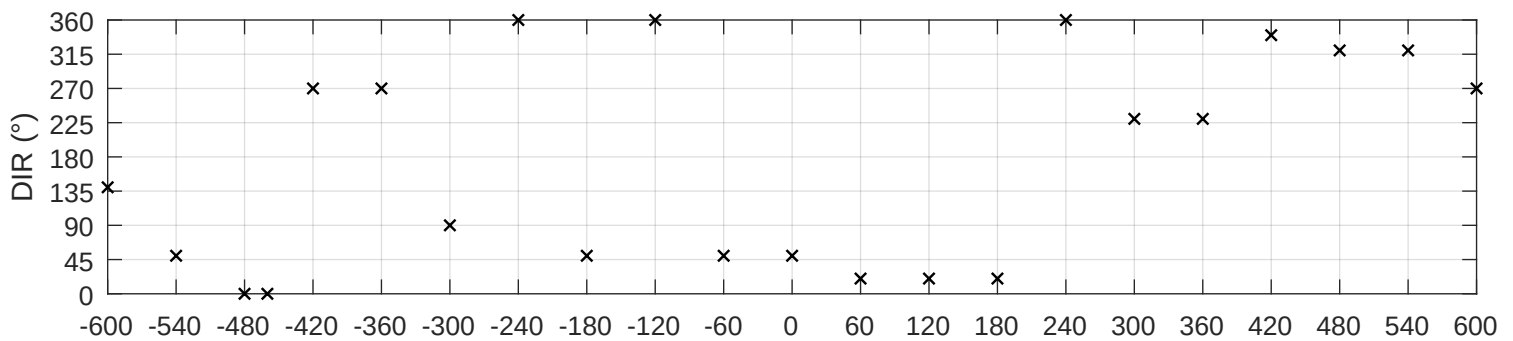
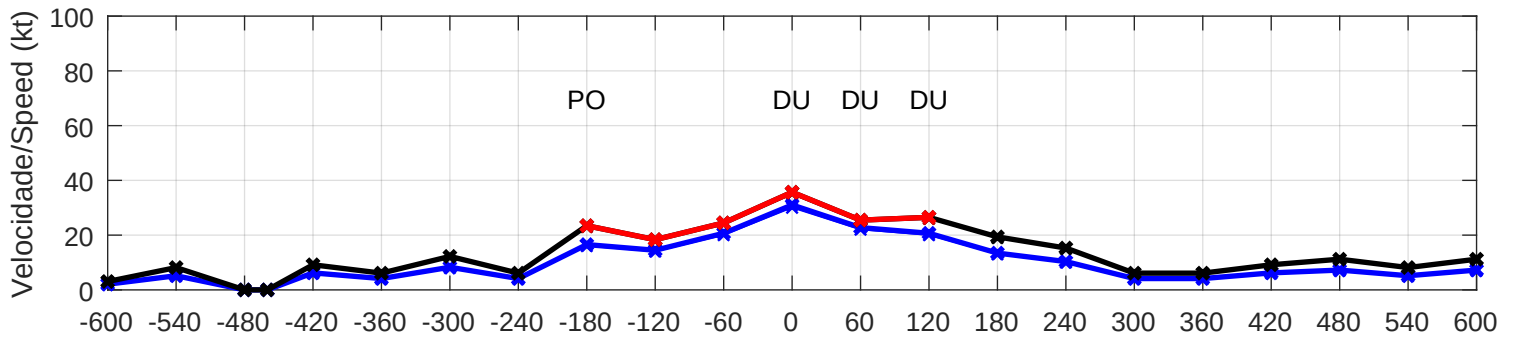
# SANT/87121 EVENTO/EVENT 148 - 02/10/2013, 20:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 35 \text{ kt}$      | $R_{-6} = 2.3$                | $T_{med,3} = 29.5 \text{ }^{\circ}\text{C}$        | $DIR = 20^{\circ}$                                         | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 1.3$                | $\Delta T_{min,3} = -2.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 30^{\circ}$                         |                                | SYNOPTIC                        |
| $G_V = 1.2$                    | $R_{+3} = 1.4$                | $\Delta Q_{max,3} = 1.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 0^{\circ}$                          |                                | (214)                           |
| $G_{cor} = 35.7 \text{ kt}$    | $R_{+6} = 2.4$                | $\Delta \text{ Grupo/Group} = 3$                   | METAR SANT 022000Z 02030G35KT 4000 DUFU<br>NSC29/05 Q1007= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                    |                                                            |                                |                                 |



# SANT/87121 EVENTO/EVENT 149 - 07/10/2013, 20:00 UTC (MSS - REDEMET)

| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                           | $\Delta$ Direção<br>$\Delta$ Direction                     | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|---------------------------------------------------|------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 35 \text{ kt}$      | $R_{-6} = 2.4$                | $T_{med,3} = 32.0 \text{ }^{\circ}\text{C}$       | $DIR = 50^{\circ}$                                         | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 1.6$                | $\Delta T_{min,3} = 0.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                         |                                | SYNOPTIC                        |
| $G_V = 1.2$                    | $R_{+3} = 1.5$                | $\Delta Q_{max,3} = 0.0 \text{ hPa}$              | $\Delta DIR_{max,+3} = 30^{\circ}$                         |                                | (214)                           |
| $G_{cor} = 35.7 \text{ kt}$    | $R_{+6} = 2.2$                | $\Delta \text{ Grupo/Group} = 3$                  | METAR SANT 072000Z 05030G35KT 3000 DUFU<br>NSC32/09 Q1013= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                   |                                                            |                                |                                 |



| Valores de Pico<br>Peak Values | Razões de Pico<br>Peak Ratios | $\Delta$ Temp. & Press.                            | $\Delta$ Direção<br>$\Delta$ Direction                                      | Temp. Elétrica<br>Thunderstorm | Classificação<br>Classification |
|--------------------------------|-------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------|---------------------------------|
| $G_{obs} = 35 \text{ kt}$      | $R_{-6} = 1.9$                | $T_{med,3} = 29.0 \text{ }^{\circ}\text{C}$        | $DIR = 230^{\circ}$                                                         | NÃO/NO                         | SINÓTICO                        |
| $V_{obs} = 30 \text{ kt}$      | $R_{-3} = 1.6$                | $\Delta T_{min,3} = -2.0 \text{ }^{\circ}\text{C}$ | $\Delta DIR_{max,-3} = 50^{\circ}$                                          |                                | SYNOPTIC                        |
| $G_v = 1.2$                    | $R_{+3} = 1.3$                | $\Delta Q_{max,3} = 4.0 \text{ hPa}$               | $\Delta DIR_{max,+3} = 90^{\circ}$                                          |                                | (212)                           |
| $G_{cor} = 35.7 \text{ kt}$    | $R_{+6} = 1.6$                | $\Delta \text{ Grupo/Group} = 1$                   | METAR SANT 041900Z 23030G35KT 5000 BLDU<br>FEW035SCT050 BKN100 28/20 Q1002= |                                |                                 |
| $V_{cor} = 31.0 \text{ kt}$    |                               |                                                    |                                                                             |                                |                                 |

