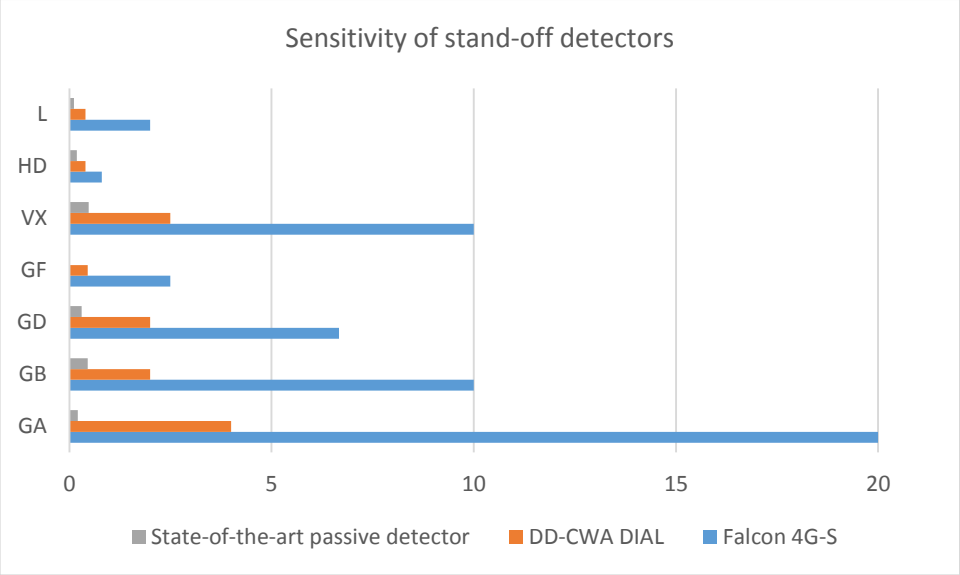
Measurement reports of Falcon 4G-S

Executive summary

Our active stand-off detector Falcon 4G-S is capable of detecting chemical warfare agents and toxic industrial chemical at **distances up to 6 km in real environments**. Such a **detection range is 20-times better than of the best passive detector** available on the market. In this document, we provide an overview of measurements conducted with Falcon 4G-S in various environments, with different substances and at various distances. At the same time **sensitivity of our Falcon 4G-S is on average 30-times better than of the best passive detector** available. Some chemical warfare agents defined by NATO are detectable only with our Falcon 4G-S (e.g. Cyclosarin). Sensitivity of Falcon 4G-S is on average 5-times improved compared to DD-CWA DIAL, which is the Falcon's predecessors in the product line.



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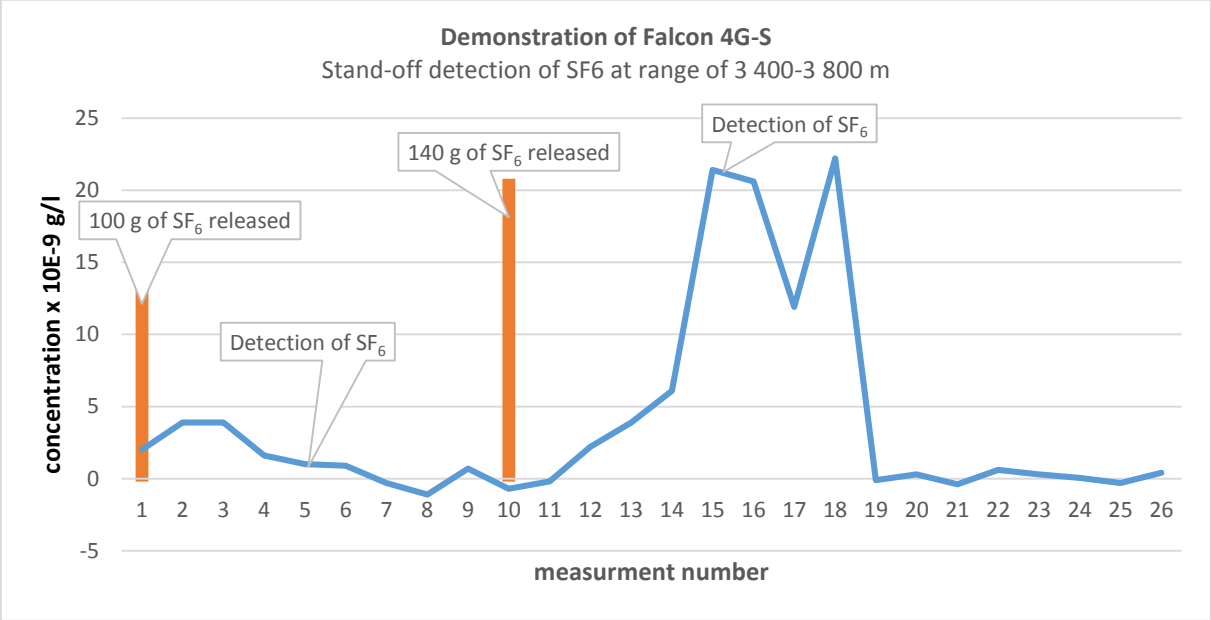
1 Measurements in an open area of SF_6 from 3 800 m



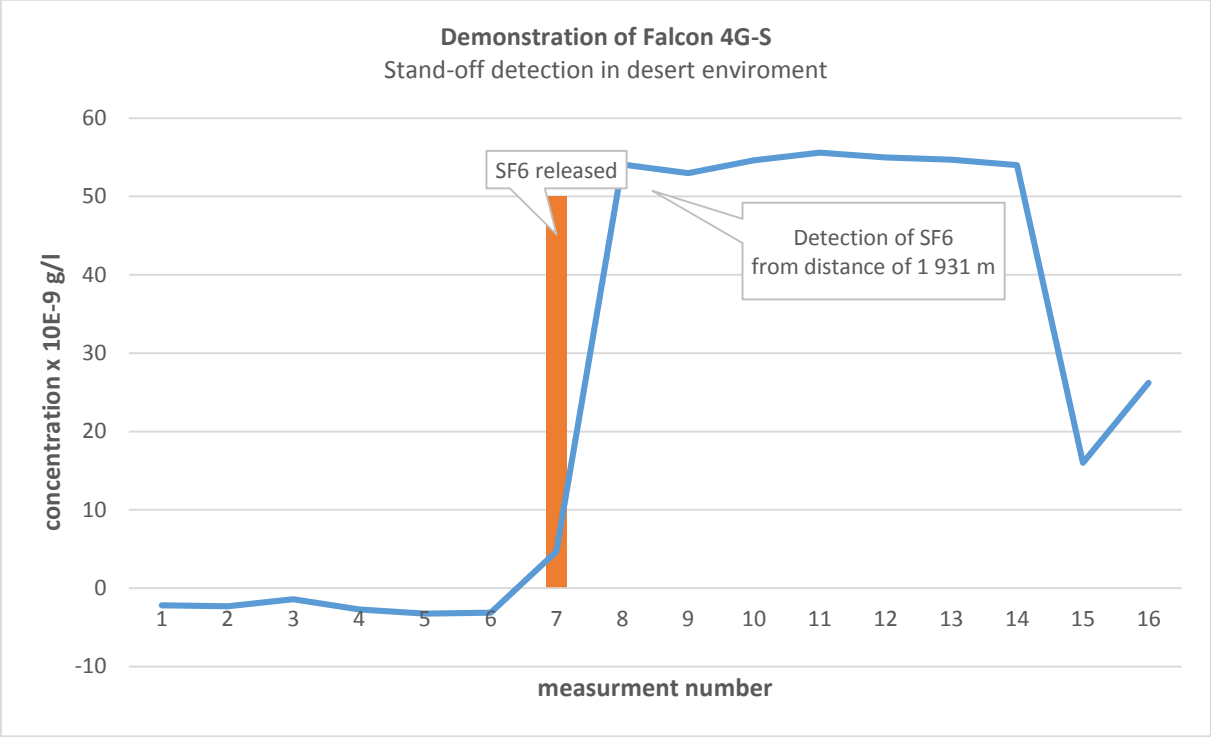
Conditions

Date: 10.12.2015
Air temperature: 8 – 10 °C
Wind speed: na
Wind direction: E
Visibility: 10km+

Methodology

- SF_6 was released from a 2 l pressure bottle into the open area
- SF_6 was released in upper part of the selected area and up the wind, therefore the SF_6 bottle was placed at the East edge of the area
- Measurements were done each 10 sec

2.1 Measurements in a desert environment of SF_6 from 1 931 m



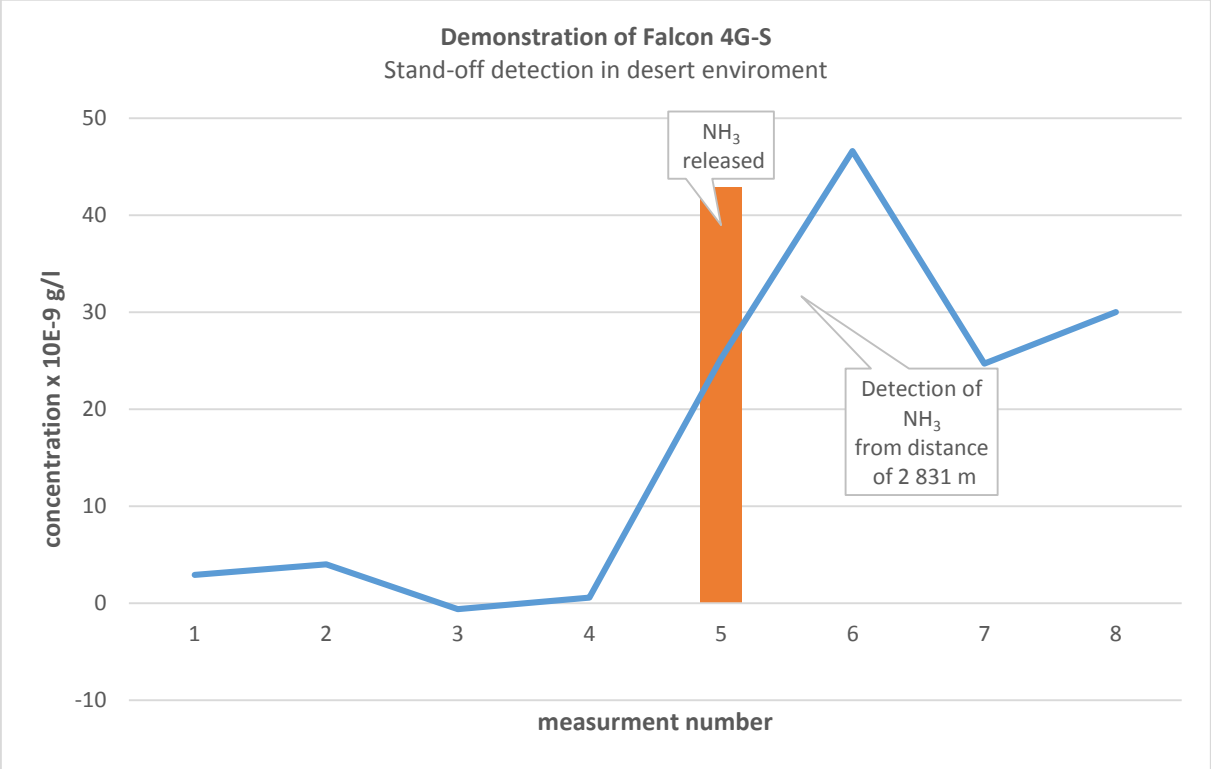
Conditions

Date: 23.03.2016
Air temperature: 27-29°C
Wind speed: 5-7 m/s
Wind direction: NW
Visibility: 10km+

Methodology

- Chemical elements were released in a tent
- Unknown quantity of the chemical was released

2.2 Measurements in a desert environment of ammonia from 2 831 m



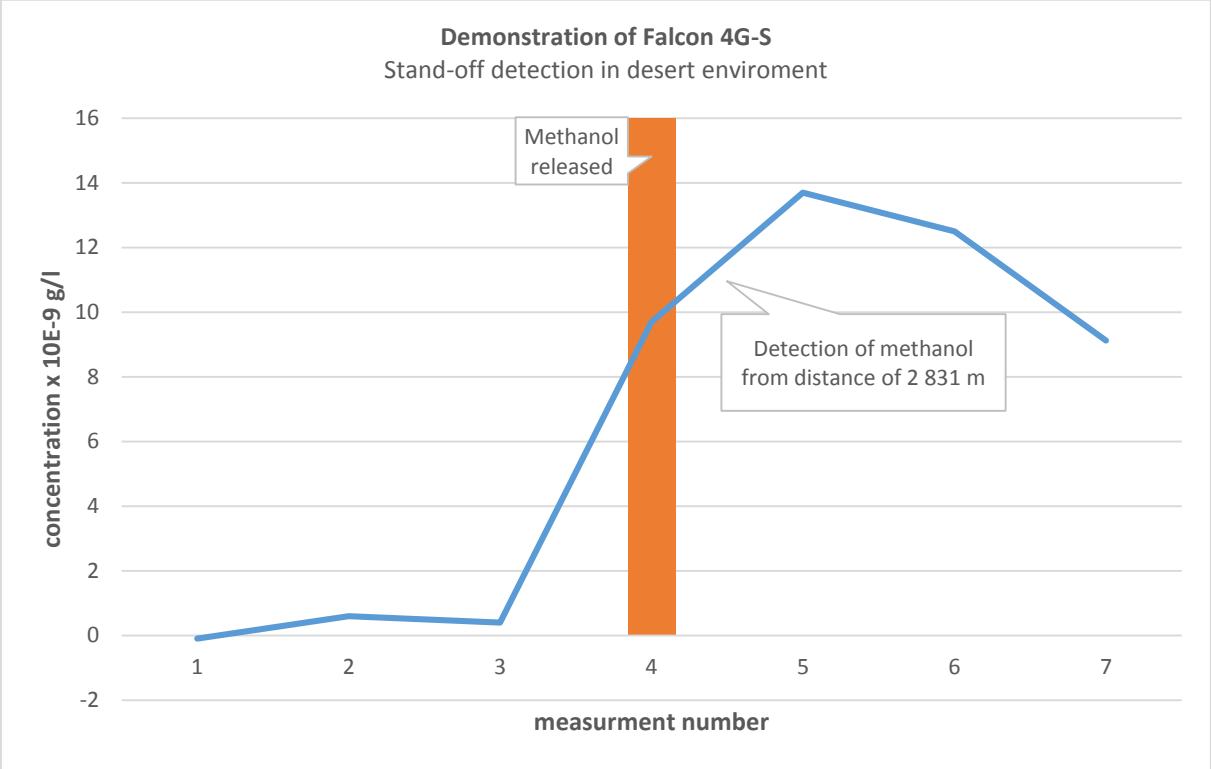
Conditions

Date: 23.03.2016
Air temperature: 27-29°C
Wind speed: 5-7 m/s
Wind direction: NW
Visibility: 10km+

Methodology

- Chemical elements were released in a tent
- Unknown quantity of the chemical was released

2.3 Measurements in a desert environment of methanol from 2 831 m



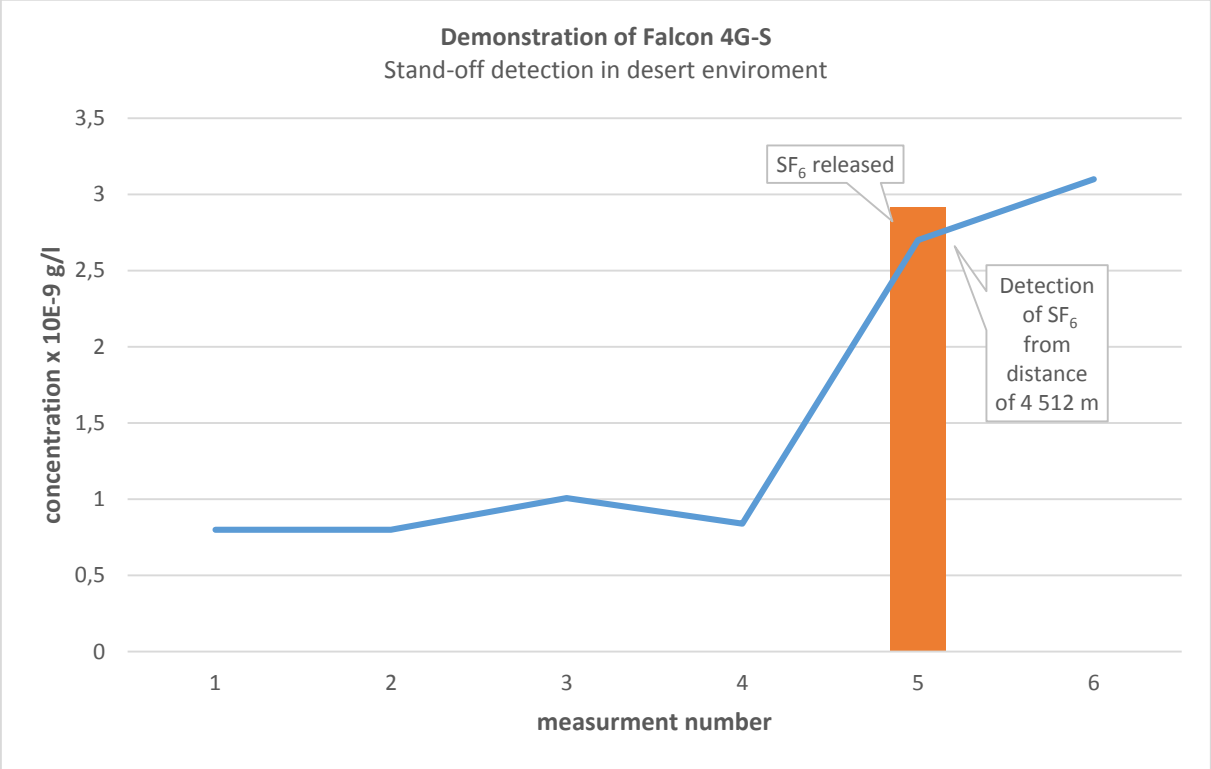
Conditions

Date: 23.03.2016
Air temperature: 27-29°C
Wind speed: 5-7 m/s
Wind direction: NW
Visibility: 10km+

Methodology

- Chemical elements were released in a tent
- Unknown quantity of the chemical was released

2.4 Measurements in a desert environment of SF_6 from 4 512 m



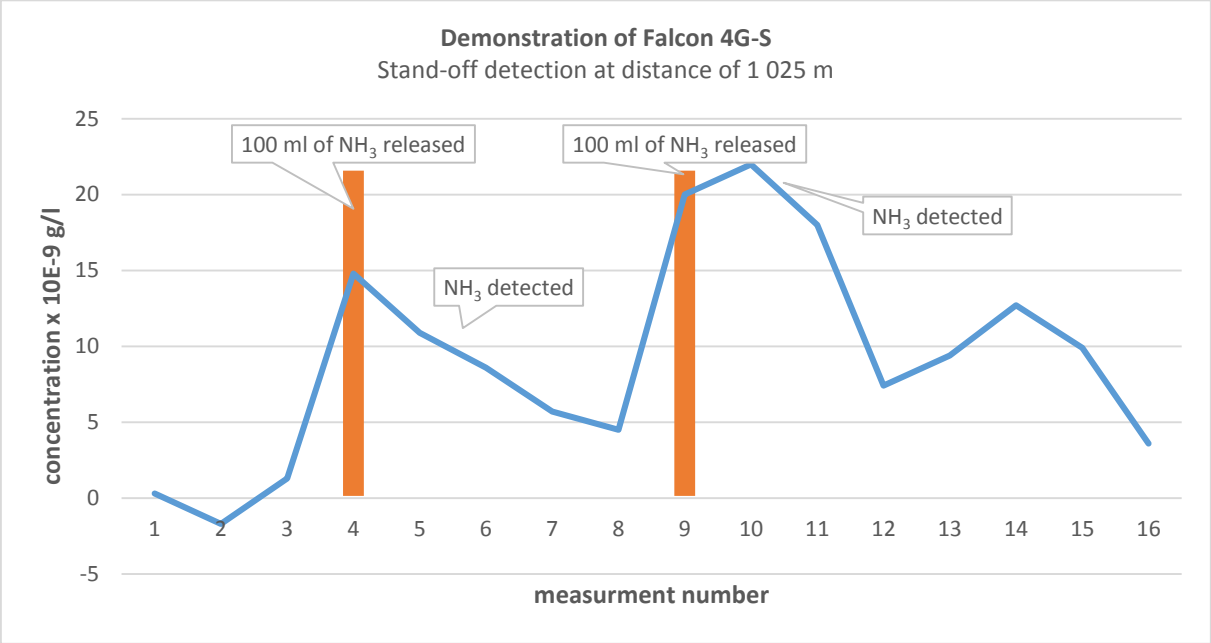
Conditions

Date: 23.03.2016
Air temperature: 27-29°C
Wind speed: 5-7 m/s
Wind direction: NW
Visibility: 10km+

Methodology

- Chemical elements were released in a tent
- Unknown quantity of the chemical was released

3 Measurements in a tent of ammonia from 1 025 m



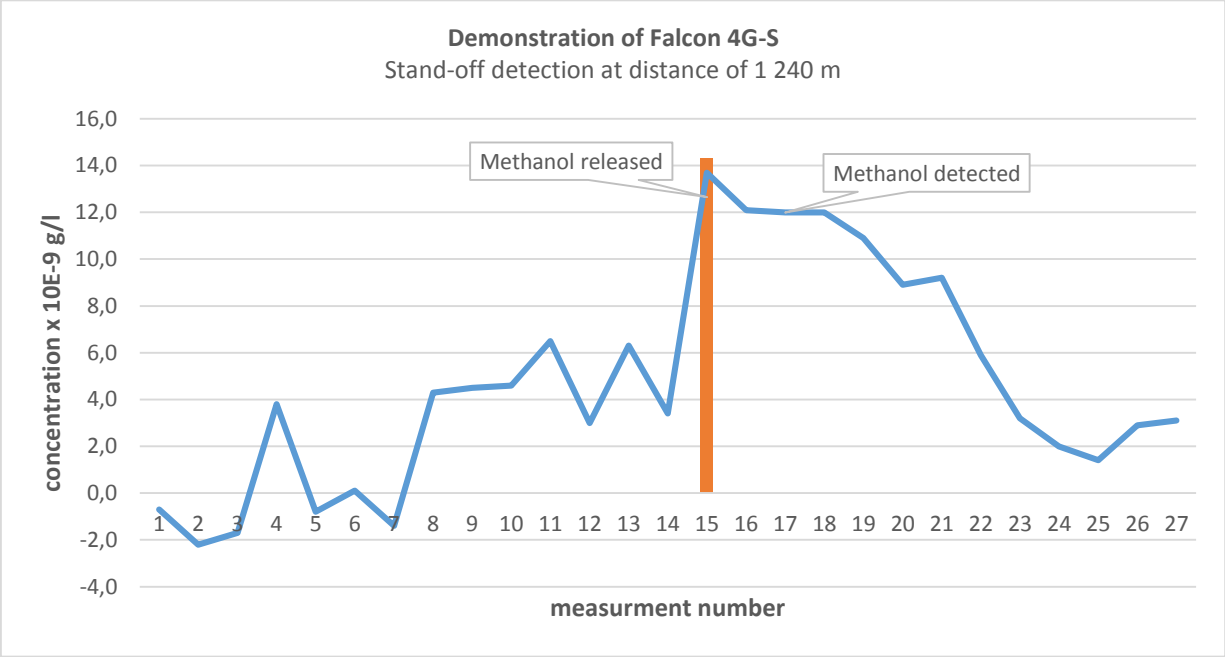
Conditions

Date: 30.06.2015
Air temperature: 26 – 28 °C
Wind speed: na
Wind direction: na
Visibility: 10km+

Methodology

- 100 ml of ammonia was placed on a plate in a tent for the first measurement
- 100 ml of ammonia was spilled on the ground for the second measurement

4 Measurements in a tent of methanol from 1 240 m



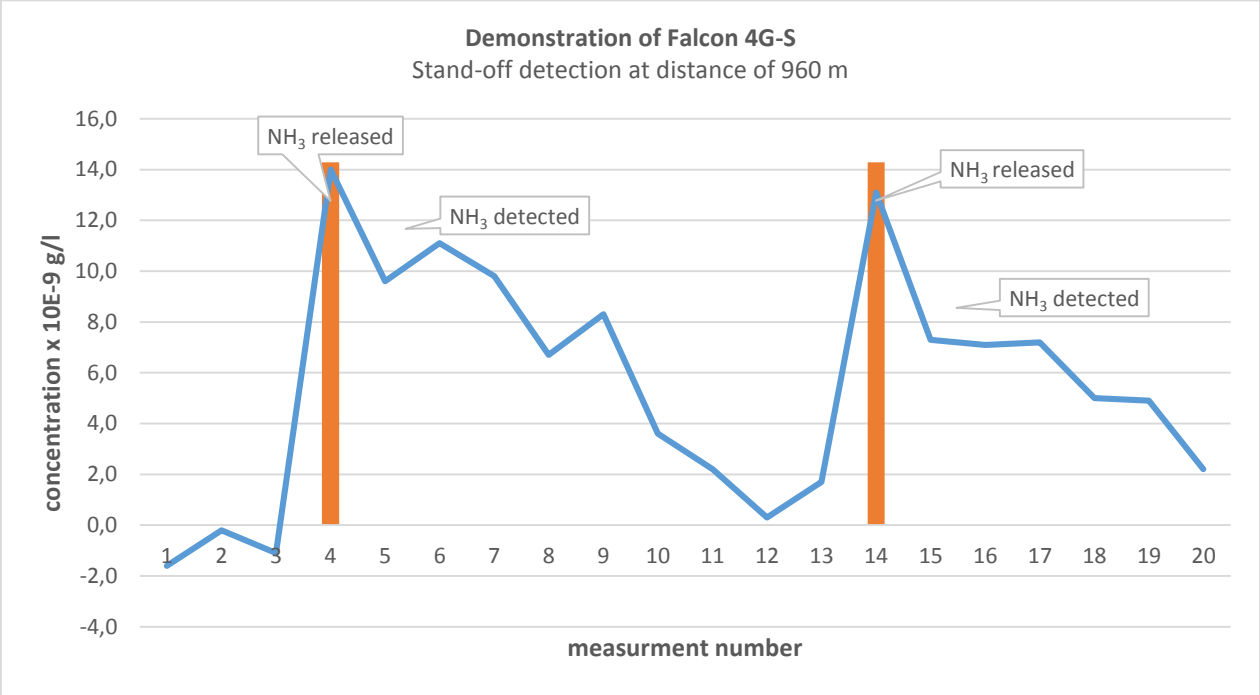
Conditions

Date: 18.06.2015
Air temperature: 20 – 22 °C
Wind speed: na
Wind direction: na
Visibility: 10km+

Methodology

- Methanol was released in a tent

5 Measurements in a tent of ammonia from 960 m



Conditions

Date: 26.06.2015
Air temperature: 22-24 °C
Wind speed: na
Wind direction: na
Visibility: 10km+

Methodology

- 100 ml of ammonia was placed on a plate in a tent for the first measurement
- 100 ml of ammonia was spilled on the ground for the second measurement