

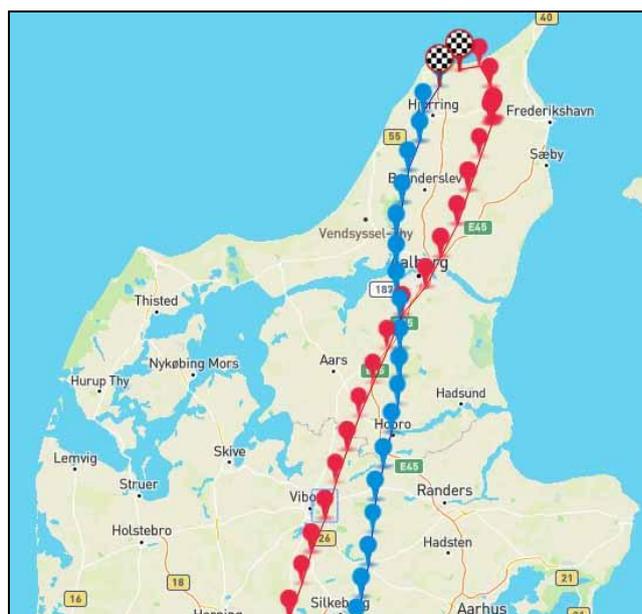
GPS in pigeon racing 2023

Ove Fuglsang Jensen Demark

New setup in article

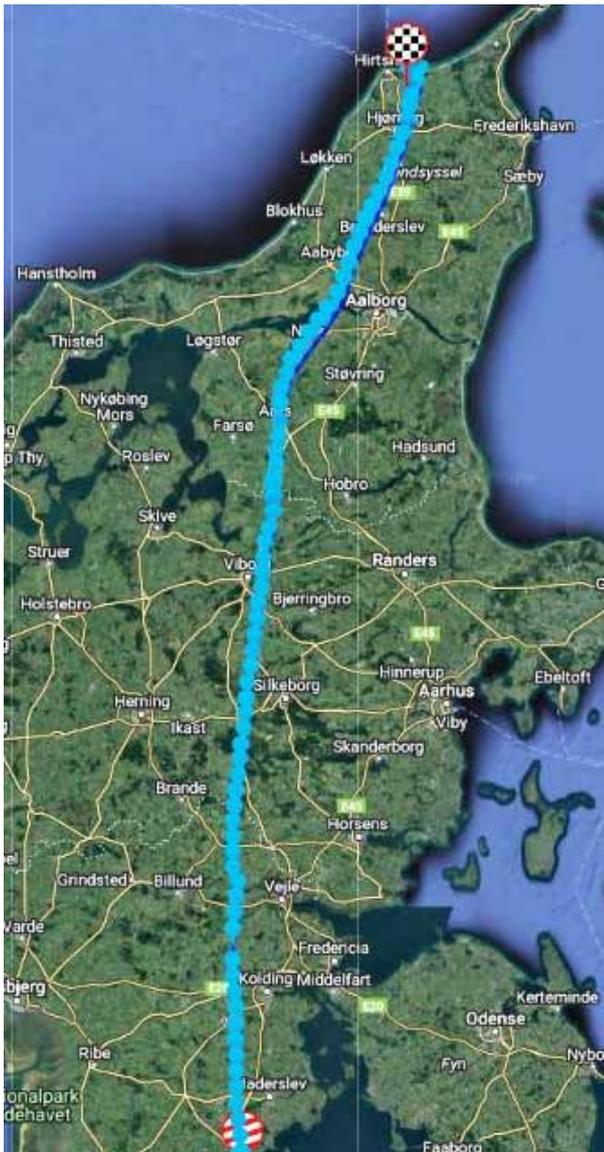
In 2022/23 there has been 2 new setup in showing the routes of the pigeons. If there are 2 pigeons in the same race, one can compare the routes of the two pigeons, and also compare the speed, height and length of the route.

You can here see example of maps with 2 routes and the statistics of the flight of the pigeons.



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
130 A	1451	1799	211	623	511	524
133 U	1493	1992	236	736	511	541

Åbenrå 27. May



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
443 A	1222	1510	121	322	283	288
436 A	1059	1456	71	376	283	290

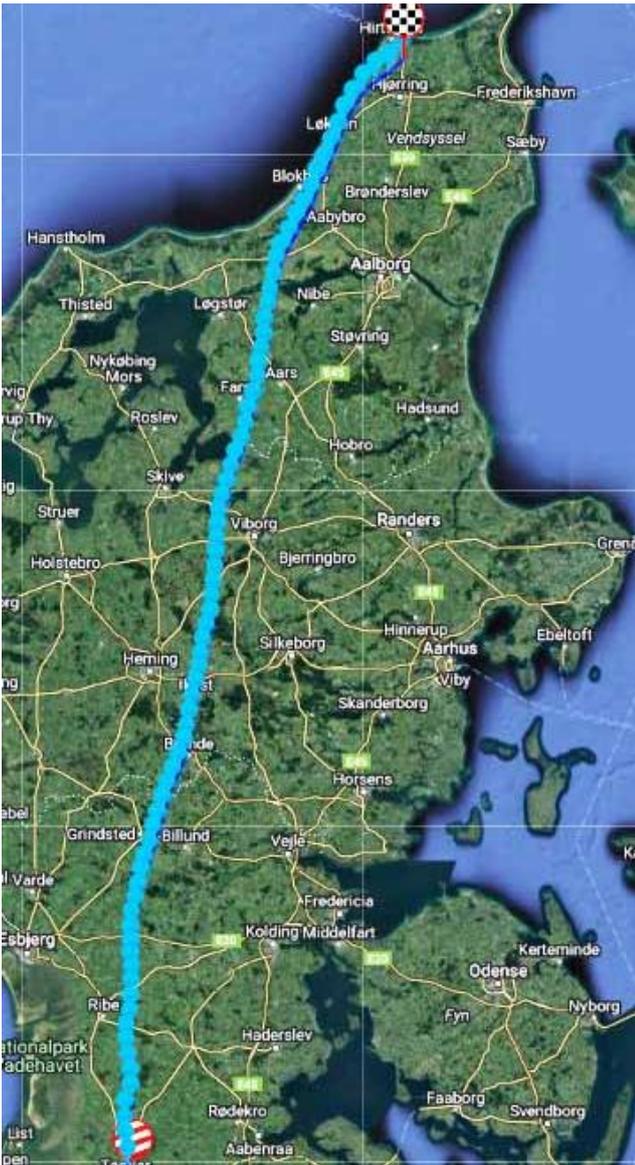
Download Åbenrå 27. maj:

Vinden jævn vest til nordvest

<https://skyleader.com.tw/share/20230611ZVGfVJ>

<https://skyleader.com.tw/share/20230611Ypdup3>

Bøglum 27. May



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
133U	1272	1724	78	328	303	306
146U	1083	1407	95	223	303	322

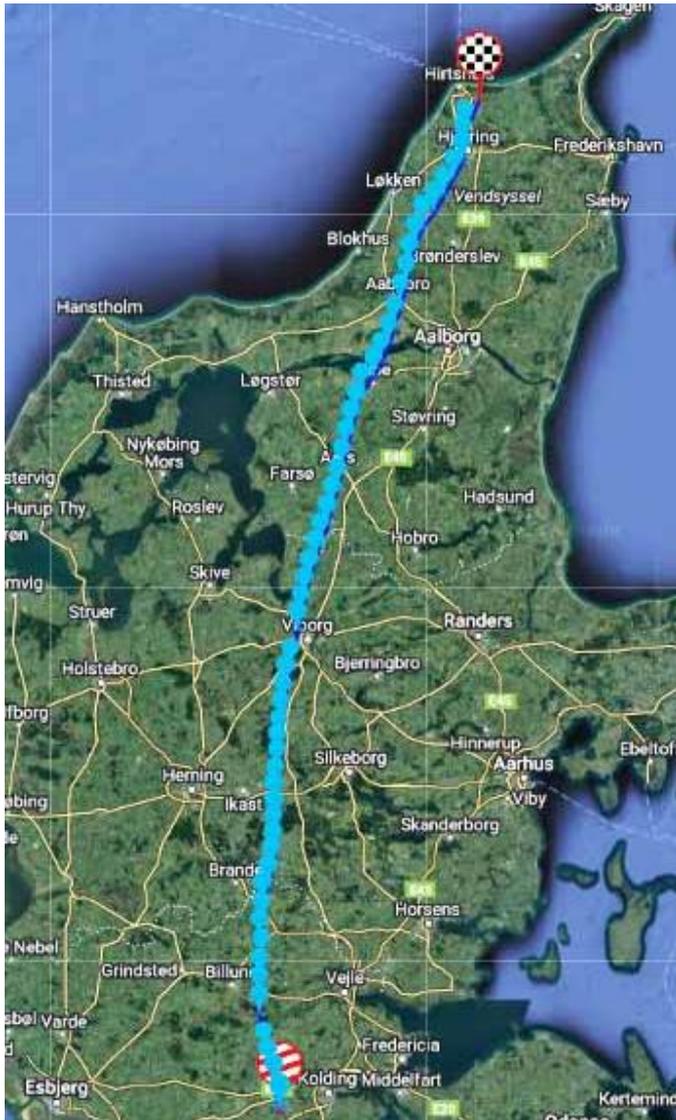
Download Bøglum 27. maj:

Vinden er let til jævn vest til NV

<https://skyleader.com.tw/share/20230611Ks8RRk>

<https://skyleader.com.tw/share/20230611Kgir6V>

Vamdrup 3. June



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
138A	1345	1654	167	388	240	243
146U	1373	1707	118	283	240	248

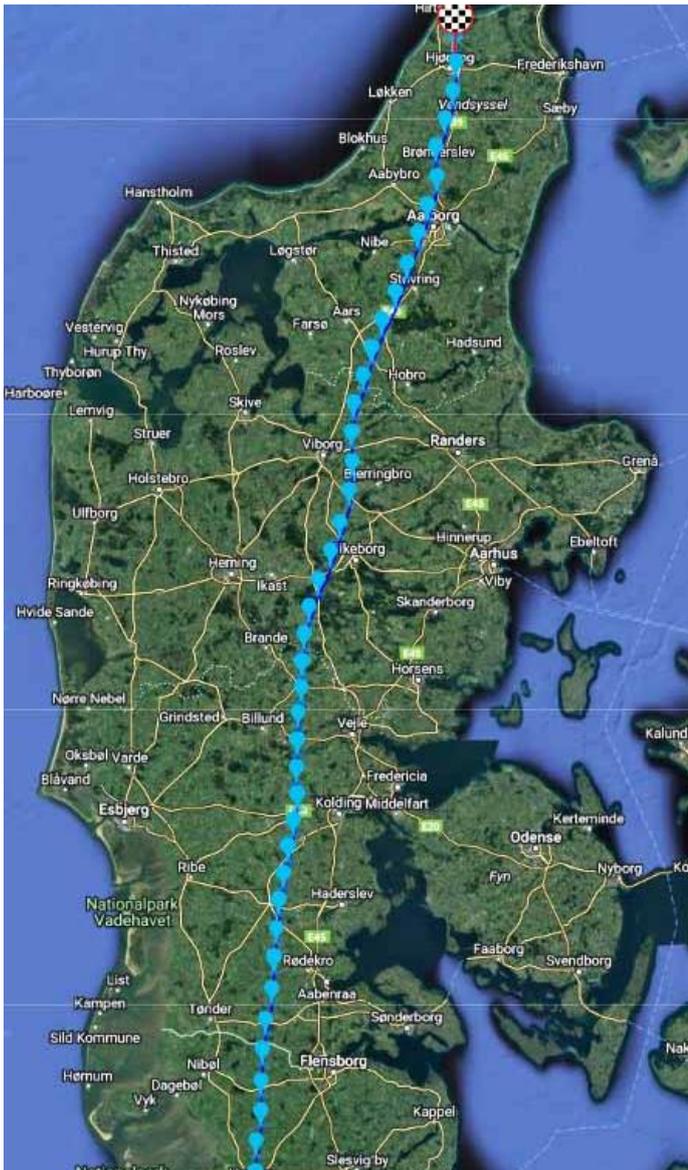
Download Vamdrup 3.juni

Vinden jævn sydvest

<https://skyleader.com.tw/share/20230612wGCx1S>

<https://skyleader.com.tw/share/20230614nH7INZ>

Heide 3. June



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
133U	1264	1731	114	432	383	409
130A	1378	1690	109	249	383	384

Download Heide 3 juni:

Vind opstart vekslende senere jævn sydvest

<https://skyleader.com.tw/share/20230614LvKMiA>

<https://skyleader.com.tw/share/20230612Bgoevg>

Åbenrå 10. June



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
133U	1049	1627	37	442	283	335
146U	961	1854	41	253	283	338

Download Åbenrå 10. juni:

Vinden er let til jævn øst

<https://skyleader.com.tw/share/20230612oMK2p8>

<https://skyleader.com.tw/share/20230615qbQoZI>

Lübeck 10. June



	Average speed	Top speed	Average height	Max height	Distance	Distance flown
130A	969	1706	48	232	412	489
143U	973	1831	65	199	412	480

Download Lübeck 10. juni:

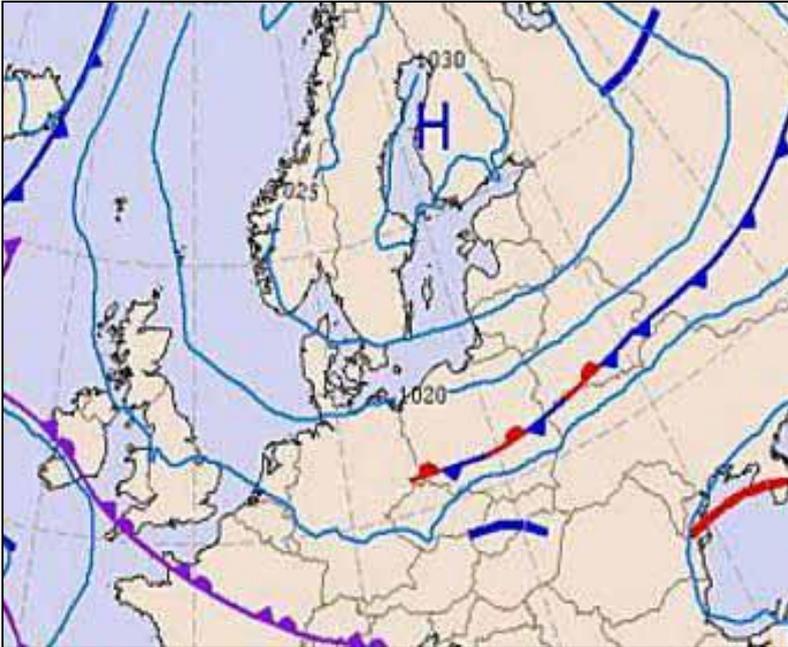
Vind opstart let NØ senere jævn Ø

<https://skyleader.com.tw/share/20230612yyKm6a>

<https://skyleader.com.tw/share/20230615B4eS36>

Analytics of flying routes 10. June

Taking a look on the routes from Åbenrå and Lübeck, we will notice that they are much alike in the way the routes are running in a bow to northwest! The weather this day was fine with a clear blue sky and a good visibility in the release of the pigeons. We must look otherwise why the pigeon make their routes like they do. The answer is in the high pressure lying over Scandinavia.



In the map on the left from 10 June at 06.00, it shows a very powerful high pressure cover the whole of Scandinavia and also reaching the north of Germany. In the whole of this area there are a Subsiding Inversion, and this Inversion will have an influence on the pigeons way of navigating.

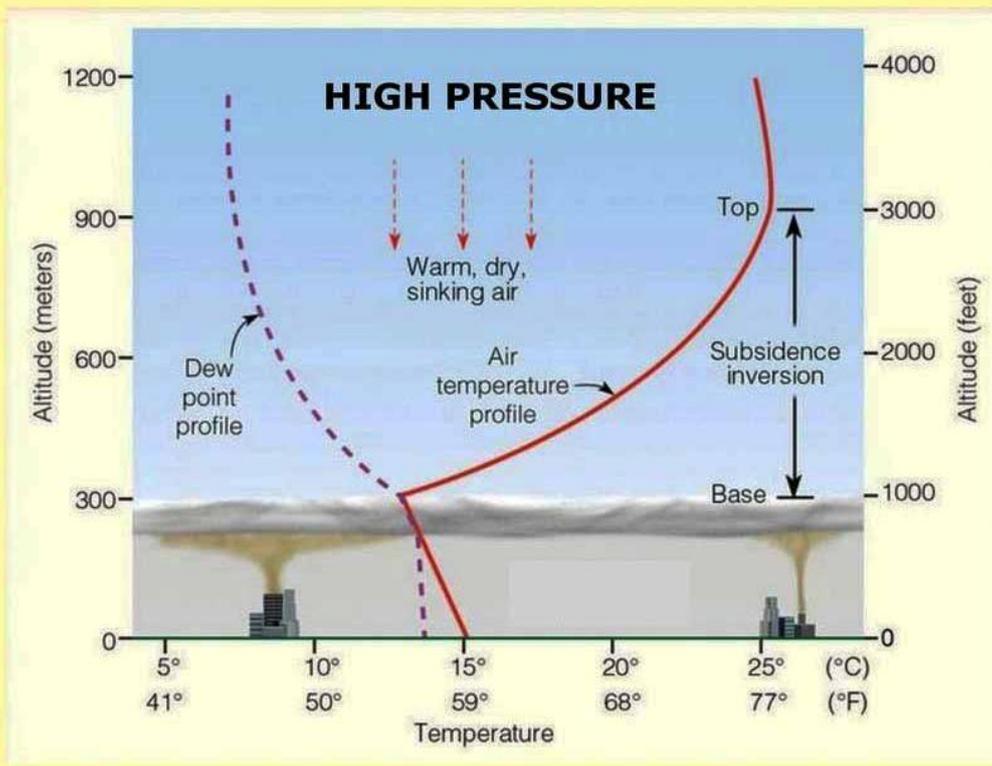
The pigeons reaction on a Subsiding Inversion

It has very clearly been proven, that a subsiding inversion will have a bad influence on the pigeons ability to navigate in a proper way, and that will of course make it difficult for the pigeons to take the right bearing home to the loft. In some cases this subsiding inversion can give loses of pigeons.

In recent years it is obvious that the Earth is having climate change, and one can just look at the News from all over the world showing the effect of climate change. The climate change will also have an effect in racing our pigeons! One of the effects from climate change are the high pressures that can occur in the summertime.

In the next page you can see an illustration of a high pressure with a subsiding inversion. There will be an explanation in what is happen when the pigeons goes into a subsiding inversion.

Subsidence Inversion



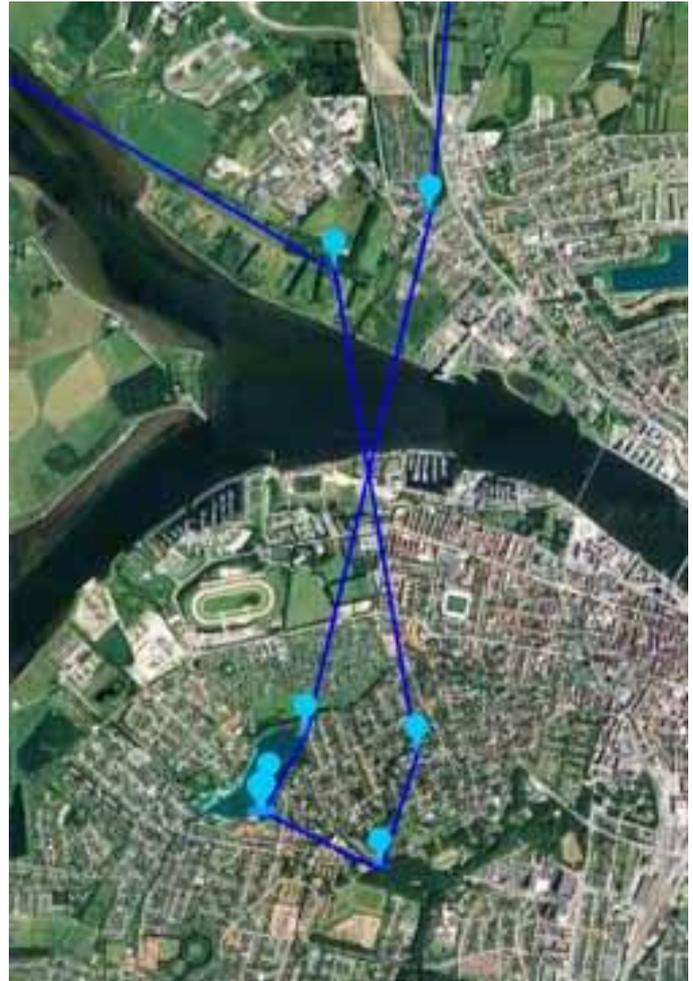
This illustration shows clearly what is happening in a high pressure making a subsiding inversion. As shown the inversion are in position in 300 meters (1000 feet) over ground level.

When the pigeons are released, they feel a drift upwards and when the pigeons reach the inversion in 300 meters height things goes wrong for the navigation of the pigeons. The inversion layer is lifting the oxygen, moisture and infrared rays into the inversion layer and the pigeons use the infrared rays to navigate. In the inversion layer the pigeon will be "caught", and will be disoriented. In this way the pigeons can fly hundreds maybe 1000 km away!



A subsiding inversion are invisible, but the smog show the bottom of the inversion.

Schleswig 17. June



The hen 156 go to Ålborg west and seek water in a lake. Maybe the hen had followed other pigeons for water? It was a very hot day.

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
156U	814	1556	76	306	336	361
133U	1032	1370	92	285	336	363

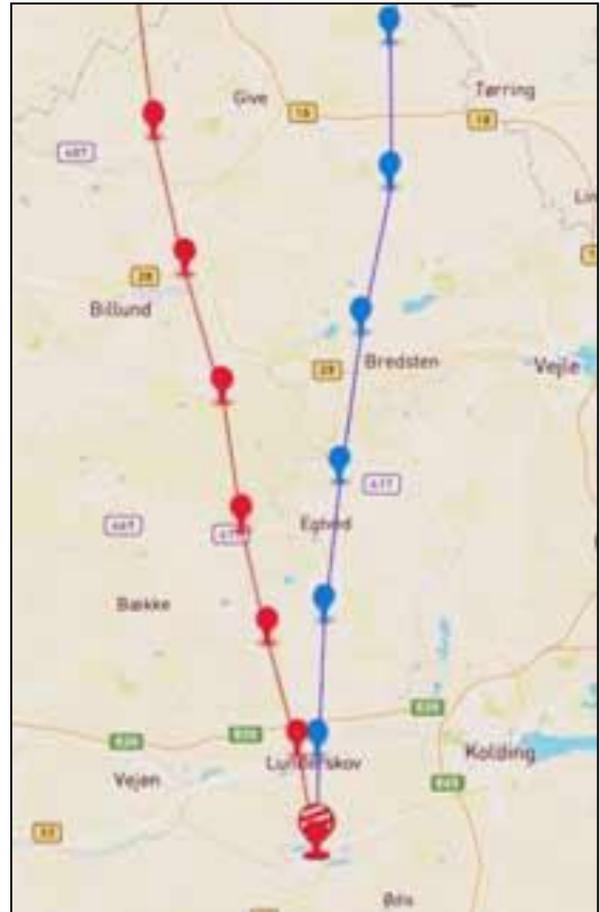
Download Schleswig 17. juni:

Vind svag skiftende Ø/NØ

<https://skyleader.com.tw/share/20230625MDRudr>

<https://skyleader.com.tw/share/202306259rLmXP>

Vamdrup 24. June



In the short races it is very important that the pigeon take right bearing. It is clear that the red pigeon take a longer route and loose time in the race!

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
446A	1268	1744	71	196	240	243
443A	1218	1785	74	145	240	256

Download Vamdrup 24. juni:

Vind jævn/frisk vest

<https://skyleader.com.tw/share/2023062739MI56>

<https://skyleader.com.tw/share/20230627JHEhqi>

Zeven 24June



It is clear that blue pigeon goes with a flock to Frederikshavn, while the red pigeon goes with a flock to Ålborg. However I became second in race!

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
133U	1126	1621	116	494	479	520
462A	952	1511	78	305	479	526

Download Zeven 24. juni:

Vind jævn/frisk vest

<https://skyleader.com.tw/share/20230627EzJeEO>

<https://skyleader.com.tw/share/20230627mA0I6n>

Husum 2. Juli



Weather radar 08.00 and the pigeon are around in middle of radar picture. It seems that the pigeon handle the rainclouds- in a good manner and loose only 3 km!

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
443A	1250	1737	80	238	348	351

Download Husum 2. juli:

Vind jævn/frisk vest

<https://skyleader.com.tw/share/20230706hFAD9Q>

Lüneburg 8. Juli



The routes are somewhat parallel but seen in the upstart the blue pigeon goes right north, while the red pigeon goes west and then north. That means that the blue pigeon goes over the island of Fyn, while the red pigeon goes along the west coast of Lillebælt. The red pigeon will then have a longer route than blue pigeon.

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
446A	1282	1777	249	609	478	497
443A	1138	1790	120	288	478	528

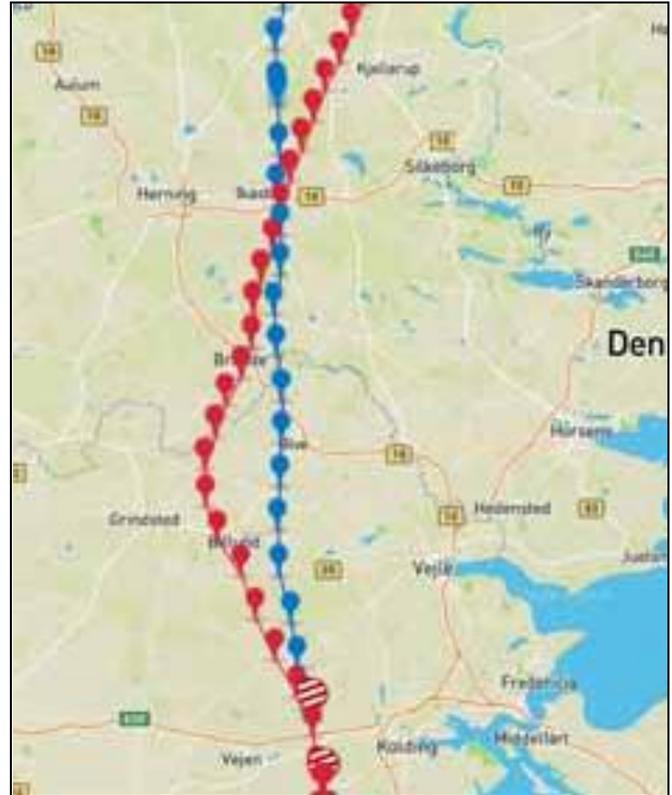
Download Lüneburg 8. juli:

Vind opstart østlig - nord let SV

<https://skyleader.com.tw/share/202307127sZrZZ>

<https://skyleader.com.tw/share/20230712kekBCd>

Vamdrup 15. juli



At this short sprint race we must notice the speed, height and distance flown.

The blue pigeon are making a route only 4 km longer than distance while the red pigeon have 18 km. The blue pigeon are flying somewhat higher than red pigeon and also have a top speed on 2130mpm. which is 128 km/t. Are there too many "bends" on the route it will be longer and take time.

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
1626A	1492	2130	118	371	240	244
1620A	1292	2038	88	340	240	258

Download Vamdrup 15. juli:

Vind opstart jævn syd - nord let SØ

<https://skyleader.com.tw/share/20230718szVdNw>

<https://skyleader.com.tw/share/20230718oBJGn7>

Carlstorf 22. Juli



Both pigeons are making it rather straight for the loft and blue pigeons have only 1 km longer while red pigeons have 18 km. It is obvious that red pigeons take a flock more easterly.

If we look closer on the height of flying, it can go up and down 50-100 meters in few minutes. This is because of the easterly route along the coast with the many hills and fjords

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
133U	1211	1830	157	404	481	482
146U	1239	1520	79	175	481	493

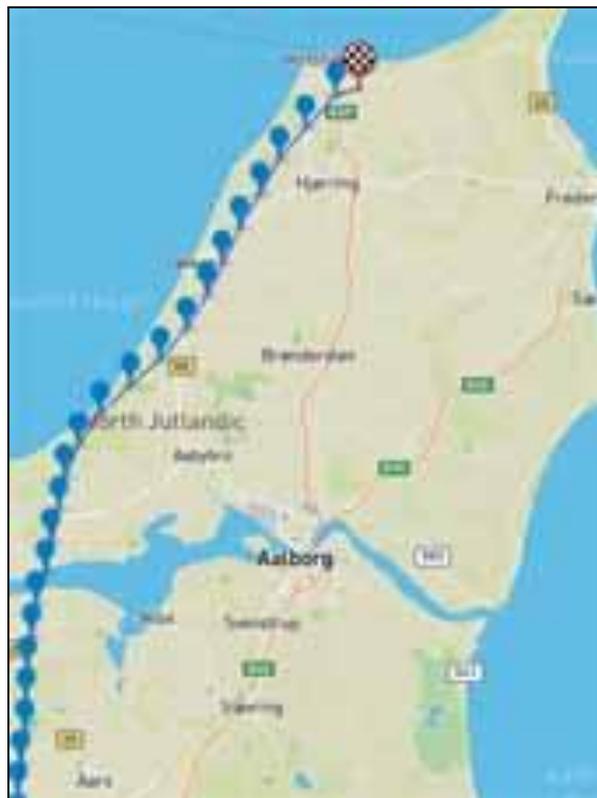
Download Carlstorf 22. juli:

Vind let til jævn fra ves - mod nord SV

<https://skyleader.com.tw/share/202307261Di7oY>

<https://skyleader.com.tw/share/20230726iFHGMd>

Åbenrå 5. August



This one year old cock have in the start of race until west of Vejle general high speed on 1548mpm.

It is a little strange that the route goes in the west also at the very north. It is not only this one year old going this way but most of the pigeon in the race.

This black cock are son of 130 an 150 which have many results in top of section.

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
1626A	1311	1790	66	219	283	299

Download Åbenrå 5. august:

Vind let vest opstart senere jævn vestlig.

<https://skyleader.com.tw/share/20230807ANuRA1>

Altona 5. August



The red pigeon takes a more easterly route than blue pigeon and that is obvious because red pigeons are going together with a flock in the east.

What does that mean in the end of the race? If we take the blue water crossing called Limfjorden, the blue pigeons are 4 minutes faster than red pigeons but in the end red pigeons arrive 15 minutes after blue pigeons because they have to cross from east to west. A pigeon going the straight line to the loft will always be faster even if other pigeons are flying faster but are not taking the straight route to the loft.

	Average speed	Top speed	Average height	Max height	Distance	Distance flown
464A	1289	1572	174	463	437	446
138A	1236	1822	92	309	437	452

Download Altona 5. august:

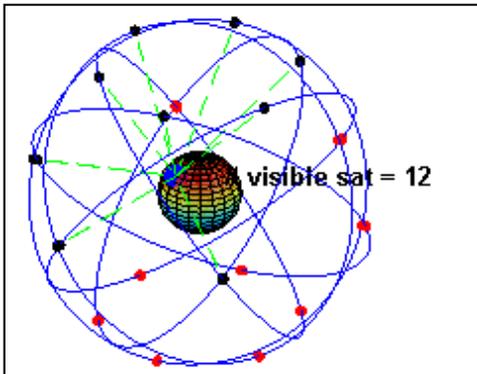
Vind opstart vekslende let - i Jylland jævn vest.

<https://skyleader.com.tw/share/20230807Z0UU7Z>

<https://skyleader.com.tw/share/202308073TssMX>

How it works in GPS ring

GPS works on satellite



The GPS system is working on the contact to satellite US Army have placed in orbit. As seen on the picture there are 12 satellites covering half of the earth and that is 24 cover ring the whole earth. If you have an GPS in your car it takes properly 4 satellites, but other more advanced GPS takes more satellites. The US army are constantly checking the position of the satellites.

GPS ring for pigeons



The GPS ring I use are Skyleader from Taiwan and a ring have a weight of 4 gram. These rings are very easy to use where a loaded battery is fixed on the ring and there after fixed in the computer to start a special day and time. The battery can last 35-40 hours set on 6 minutes plots but 3 minutes plots are less time.

How does the GPS ring work?

The GPS ring is put on the pigeon before it is packed in a basket. Normally I set a ring for 06.00 and normally the pigeons are released between 06.30 to 08.00 in the morning. When the ring starts in the set time it should show where the lorry stands. Sometimes it shows where the lorry stands, but other times the ring starts when the pigeons are released and the GPS ring have contact to the satellite. If the pigeon with a GPS ring are placed in top of the lorry it have contact, but are the pigeon in the bottom the GPS ring cannot reach the satellite. When a pigeon with a GPS ring are released it takes normally 3 to 6 minutes before the ring are active and the pigeon are then some kilometers away from the release site.

How precise are GPS on a pigeon?

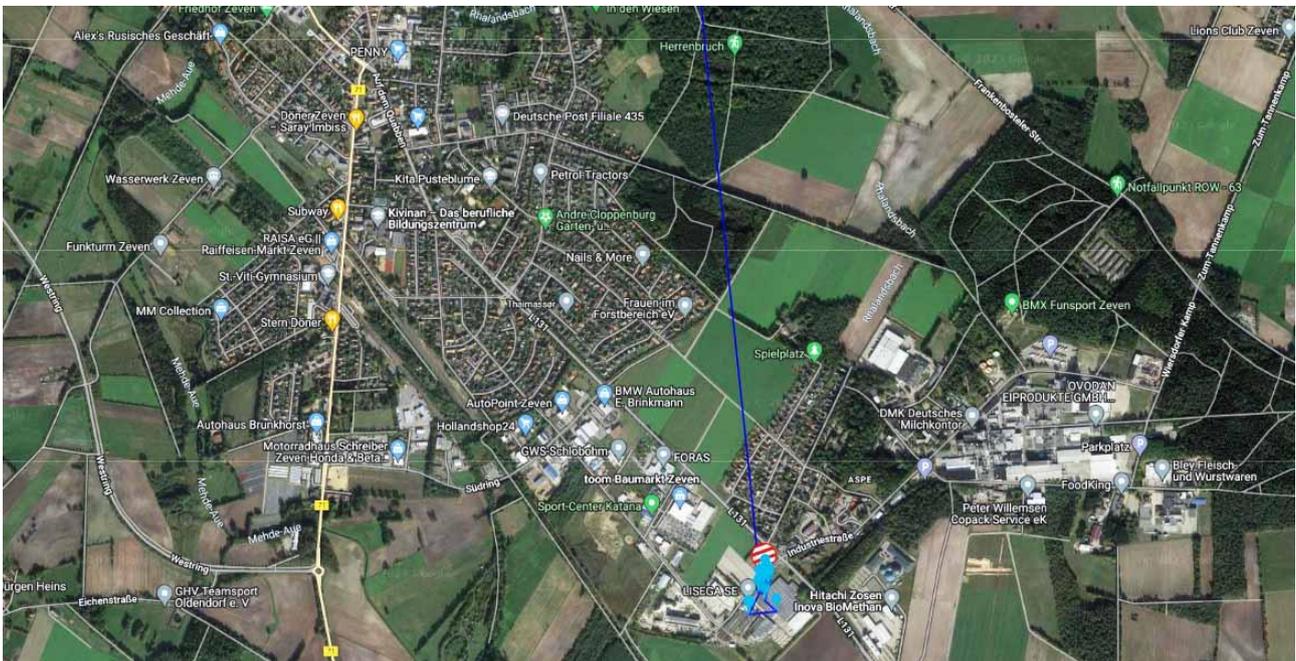
When the pigeons are released they take a route in 50 to 2-300 meters height or more. The precision of the data the GPS ring are showing are very precise and why? In the beginning of Skyleaders GPS rings they show how many satellites they have in contact of the 12 satellites. The GPS ring on a pigeon usually have contact with 6-8 satellites, and this means that the data shown are very precise. Underneath I have pasted a video from YOUTUBE showing the type of rockets lead by GPS and they can hit a target in very high precision. A pigeon flying in the air with a GPS ring are just as precise as a rocket lead by GPS!

<https://www.youtube.com/watch?v=HCZhUanOZ3I>





Release site in Schleswig



Release site in Zeven in south end of town.