

- The following slides were presented at the Philadelphia (PHL) Informal Airspace Meetings
- The purpose of those meetings was to solicit input in support of a study on the effects of modifying the PHL Class B
- No decisions have been made at this time
- Any proposed change to the PHL class B will be based on the information gathered during the study
- Any proposed change will be announced in the Federal Register, via Notice of Proposed Rulemaking
- Written comments are requested, documenting effects of the modified design currently being studied, which is presented in the following slides

## Pilot/Controller Glossary

IFR AIRCRAFT- An aircraft conducting flight in accordance with instrument flight rules.

IFR CONDITIONS- Weather conditions below the minimum for flight under visual flight rules.

VFR AIRCRAFT- An aircraft conducting flight in accordance with visual flight rules.

VFR CONDITIONS- Weather conditions equal to or better than the minimum for flight under visual flight rules.



- First some definitions of basic terms that may not be familiar to non-aviation people
- VFR refers to Visual Flight Rules, which apply to VFR flights
- It also refers to the weather conditions necessary to allow VFR flight
- IFR, Instrument Flight Rules, allow IFR flights to operate in any weather

## Regulatory vs. Delegated airspace

### Regulatory airspace

- Established by rulemaking action
- Published in the Federal Register
- Referred to as Class A, Class B, Class C, etc.
- Defines flight requirements for VFR flight

### Delegated airspace

- Established by agreement between ATC facilities
- Published in ATC facility orders
- Referred to as sectors/positions within an ATC facility
- Defines responsibility for controllers over IFR flights



- The term “airspace” can refer to more than one concept
- “Delegated airspace” is the airspace designation that determines which controller is responsible for which IFR flights
- “Regulatory airspace” defines the weather conditions and other requirements for VFR flights
- Different classes of airspace have different VFR weather requirements, as well as different requirements for aircraft equipment

# FAA Order JO 7400.2 requirements

## 15-1-1. PURPOSE

- a. The primary purpose of a Class B airspace area is to reduce the potential for midair collisions in the airspace surrounding airports with high density air traffic operations.



- Specifically, the airspace being studied at PHL is Class B regulatory airspace
- The main function of Class B airspace is to provide a margin of safety for IFR flights
- One way it accomplishes this is by limiting access of VFR flights

# FAA Order JO 7110.65 requirements

## 7-9-2. VFR AIRCRAFT IN CLASS B AIRSPACE

- a. VFR aircraft must obtain an ATC clearance to operate in Class B airspace.
- b. Approve/deny requests from VFR aircraft to operate in Class B airspace based on workload, operational limitations and traffic conditions.



- VFR aircraft can enter Class B airspace, but only if they call Air Traffic Control and get permission
- Since those VFR flights are talking to ATC while in Class B, controllers can advise them where to fly in order to operate safely away from IFR flights

## FAA Order JO 7110.65 requirements

### 7-9-3. METHODS

- a. To the extent practical, clear large turbine engine-powered airplanes to/from the primary airport using altitudes and routes that avoid VFR corridors and airspace below the Class B airspace floor where VFR aircraft are operating.
- b. Vector aircraft to remain in Class B airspace after entry. Inform the aircraft when leaving and reentering Class B airspace if it becomes necessary to extend the flight path outside Class B airspace for spacing.



- There are 2 requirements a Class B should meet in order to provide safety between IFR flights to PHL and VFR flights in the area:
  1. Once an IFR aircraft enters the airspace it should not exit and then reenter
  2. Once an IFR aircraft enters the airspace it should not descend below the floor and then reenter

# FAA Order JO 7400.2 requirements

## 15-2-3. CONFIGURATION

- a. General Design. Simplification of the Class B airspace area configuration is a prime requisite. Its vertical and lateral limits should be standardized and shall be designed to contain all instrument procedures within Class B airspace...
- b. **1.** The outer limits of the airspace shall not exceed a 30 NM radius from the primary airport...
- c. Vertical Limits. The upper limit of the airspace normally should not exceed 10,000 feet MSL.



- There are several guidelines that apply to the design of a Class B airspace area
- One is simplicity. VFR pilots are expected to remain outside the airspace unless they have permission to enter. They identify the airspace by reading a VFR Sectional chart. The airspace must be readable on that chart
- The lateral limits of the airspace may extend as far out as 30 miles
- The top of the airspace may be as high as 10,000 feet above sea level
- The PHL class B extends to 20 miles, and up to 7,000 feet, much smaller than the standard
- There is no Class B that matches this standard configuration. Each one is customized to fit the local needs of the area where it exists
- The current configuration of the PHL Class B was established years ago when there was less traffic at PHL. At the time it was created it was suitable for the volume at the time
- Increased volume has made it impossible to keep the current traffic volume in the existing airspace
- The purpose of this airspace study is to collect all relevant information in order to customize the PHL Class B to the needs of all current users of the airspace

## Rulemaking process

Required of Federal agencies when creating or modifying requirements.

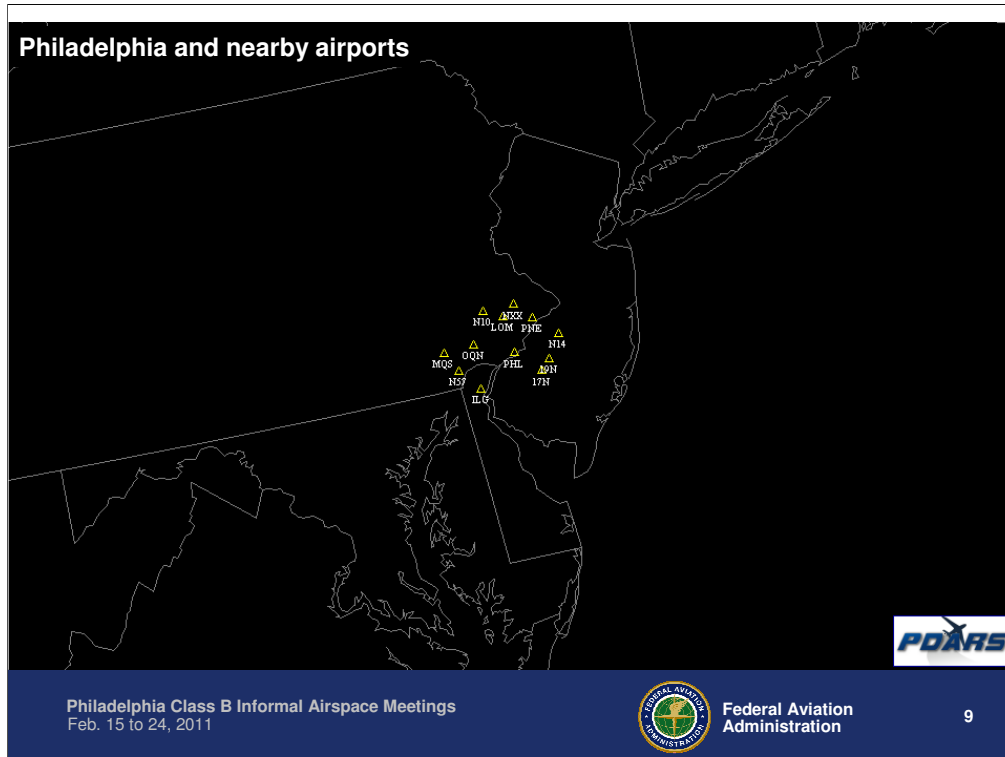
For Regulatory airspace, involves:

- Staff study
- *Ad hoc committee*
- *Informal Airspace Meetings*
- *Notice of Proposed Rulemaking in Federal Register*
- Final Rule in Federal Register



- Before proposing to change a Class B airspace area, we follow a process called rulemaking
- This process can be described in 5 steps
- The first step was to define the problem, and develop a possible solution, a “rough draft” modified class B, to accommodate further study
- The next 3 steps all involve looking outside the FAA for information relevant to airspace design
- An ad hoc committee was held at PHL in 2009
- These meetings are the Informal Airspace Meetings, to collect additional information
- If the study leads to a proposal, it will be published in the Federal Register, with another opportunity for the public to submit comments on the design





- This graphic shows the area being studied, with state boundaries and airports for reference

### Philadelphia and nearby airports

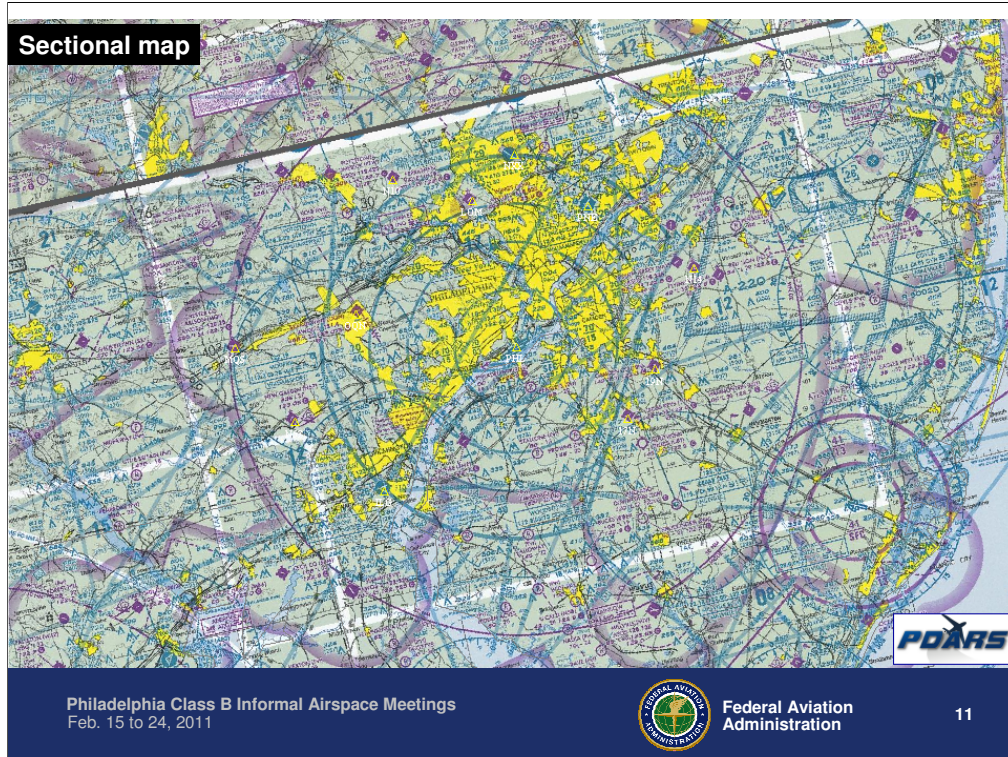
The map displays the Philadelphia Class B Informal Airspace boundaries in white against a black background. Several airports are marked with yellow triangles and labeled with their IATA codes: HIO, NEX, LOM, PHE, N14, OQM, PHL, 19N, 17N, N57, ILG, and MQS. The Delaware River is visible on the right side of the map.

**PDARS**

Philadelphia Class B Informal Airspace Meetings  
Feb. 15 to 24, 2011

Federal Aviation  
Administration

10



- This shows those airports displayed on a sectional map
- This is the map used by VFR pilots to locate the Class B airspace

**Sectional map, southwest**

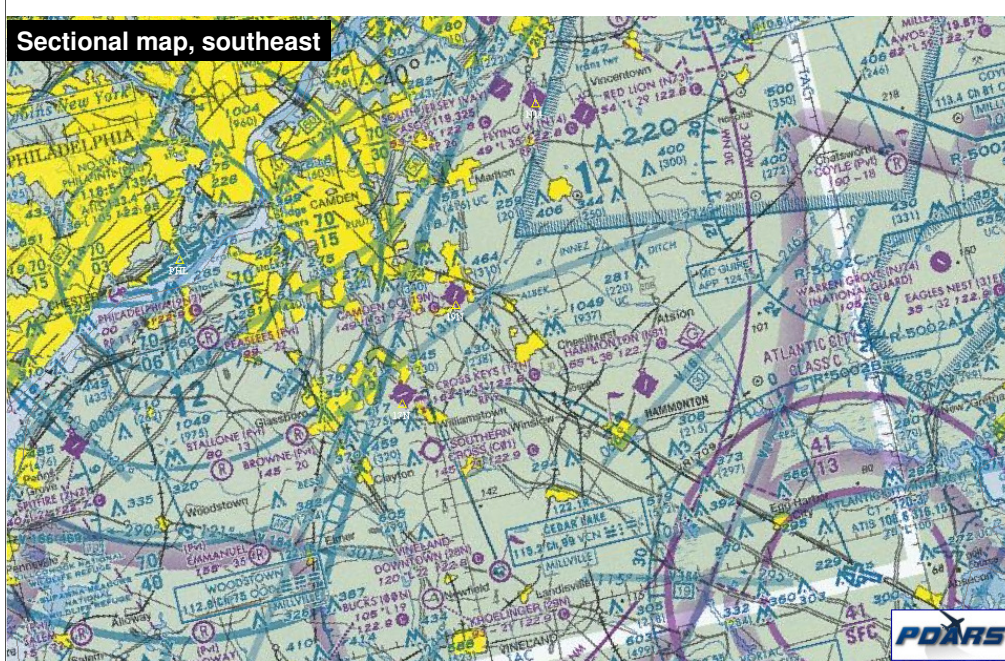


Philadelphia Class B Informal Airspace Meetings  
Feb. 15 to 24, 2011



Federal Aviation  
Administration

Sectional map, southeast

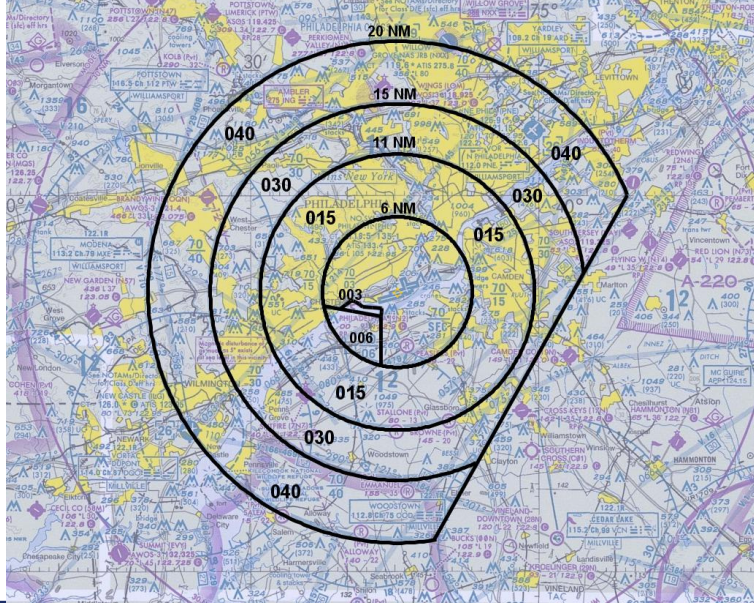


Philadelphia Class B Informal Airspace Meetings  
Feb. 15 to 24, 2011



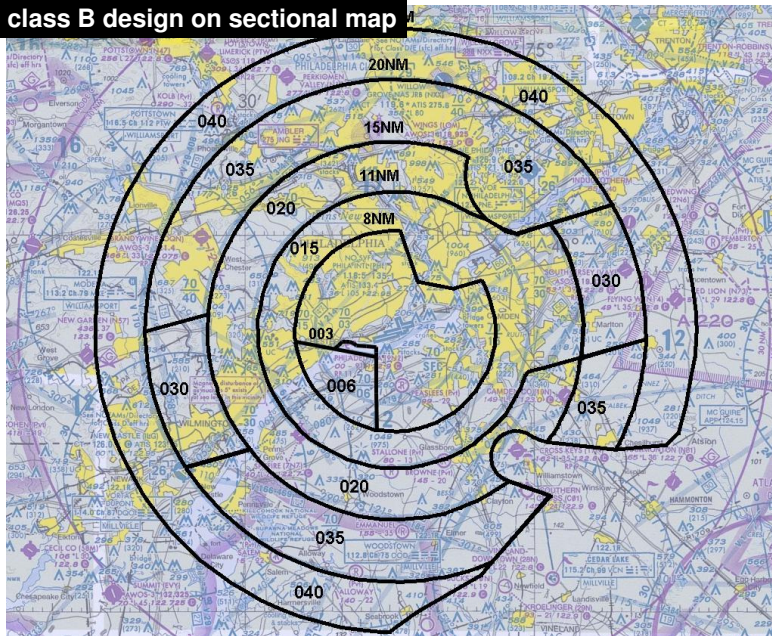
Federal Aviation  
Administration

Existing class B on sectional map



- This view shows the current class B highlighted, with distances and floor altitudes

Revised class B design on sectional map



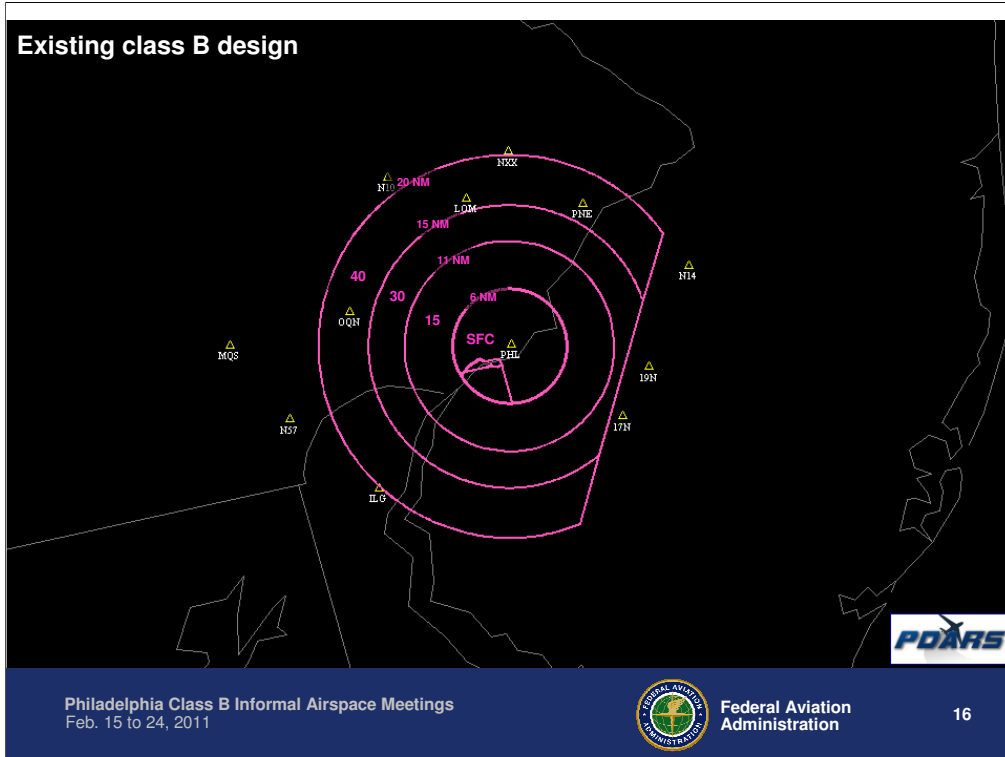
Philadelphia Class B Informal Airspace Meetings  
Feb. 15 to 24, 2011



Federal Aviation  
Administration

15

This view shows the Class B design currently being studied

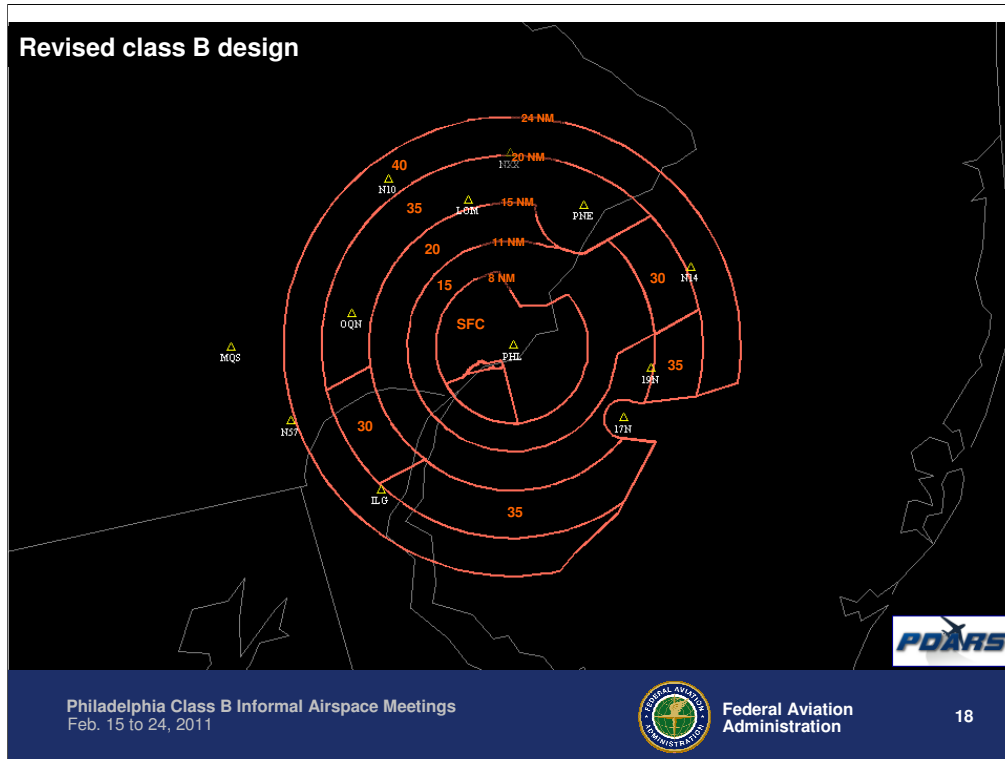


- This is the existing Class B

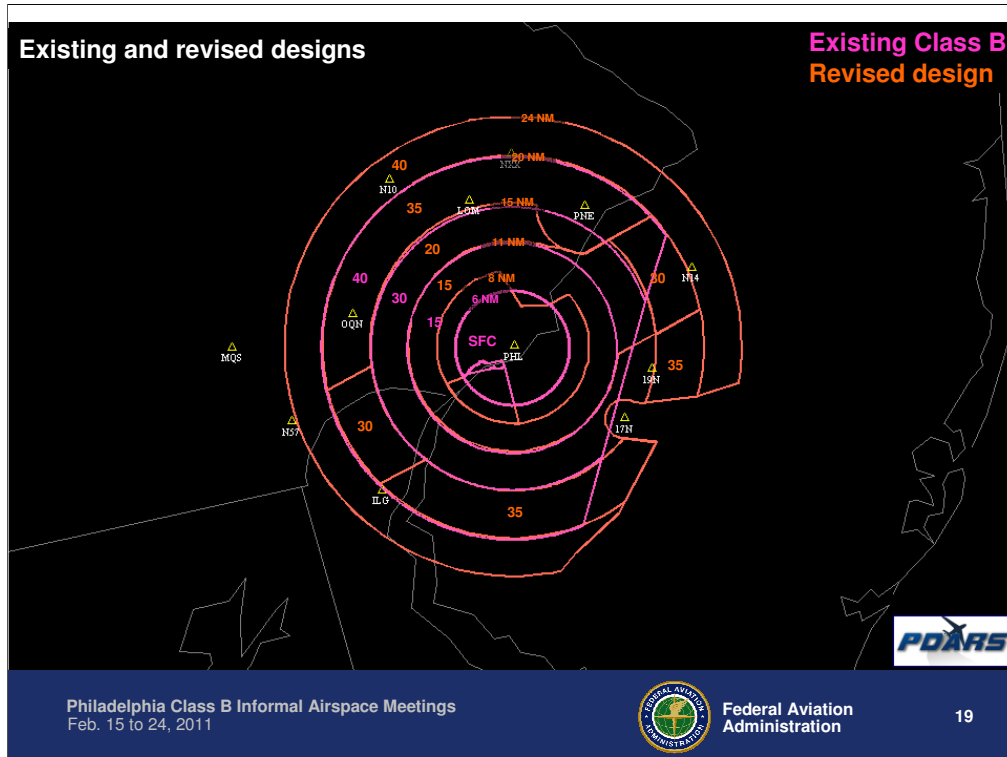




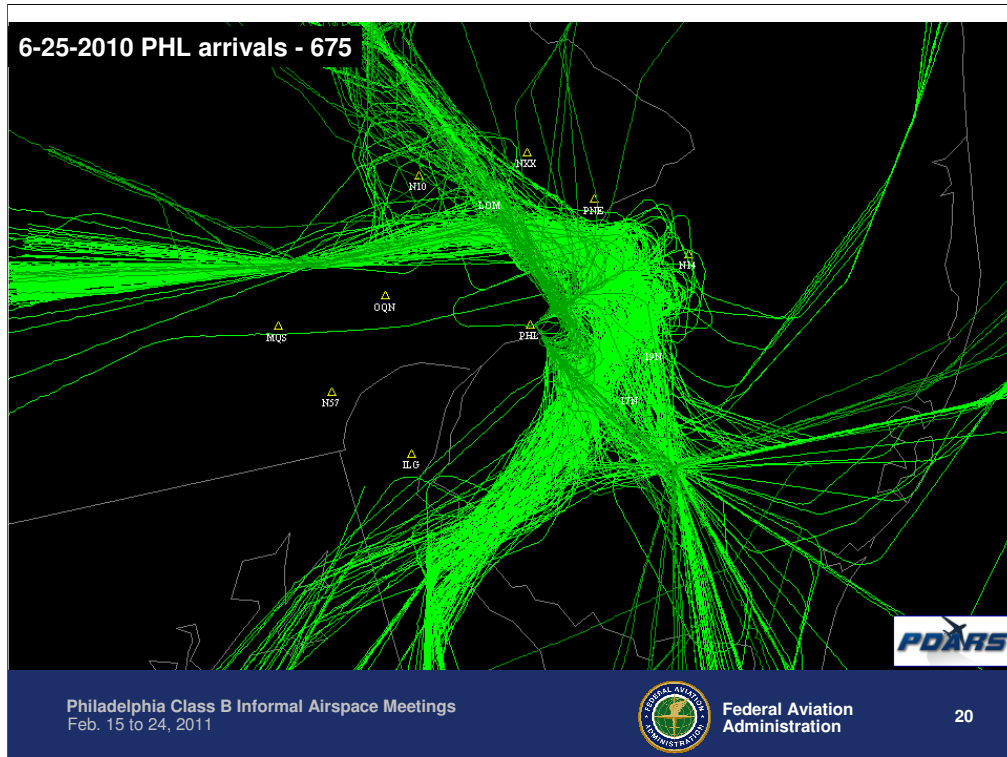
This design was presented to the ad hoc committee



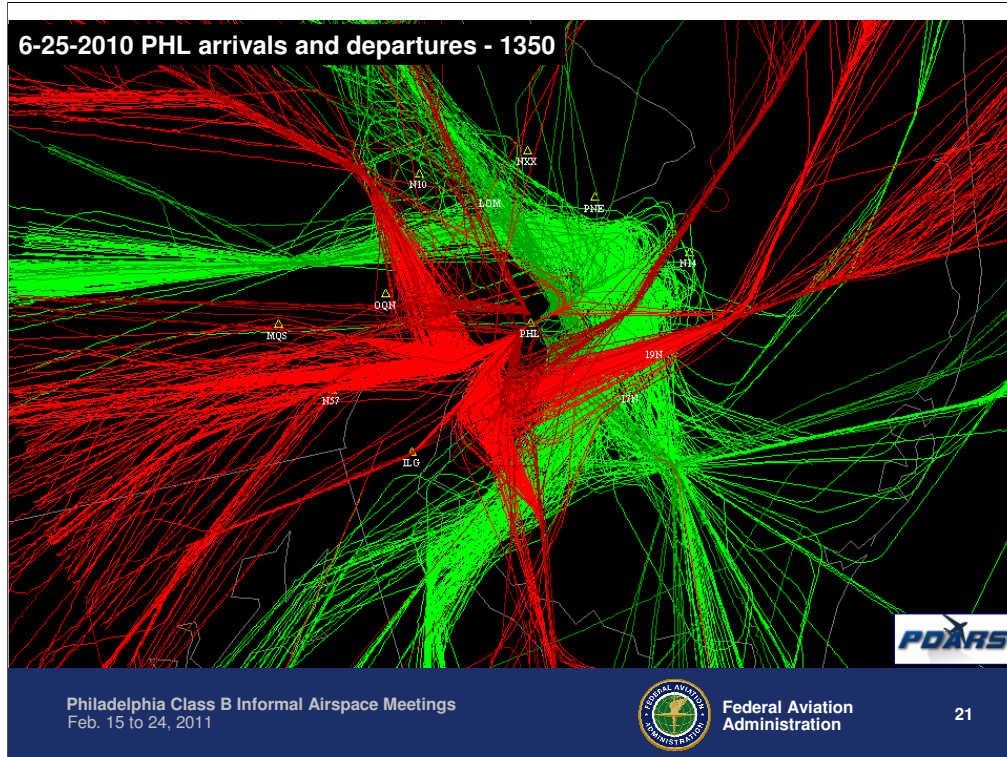
Based on input from the committee some changes were made, resulting in the design we are currently studying



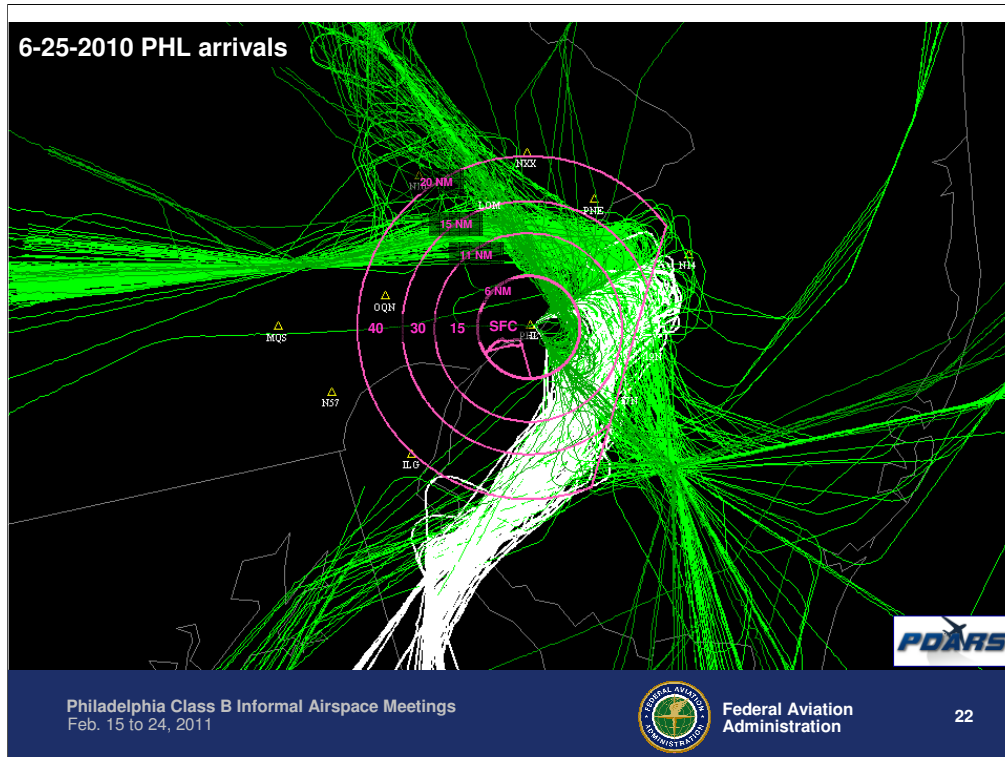
- This view shows both the current design and the design being studied
- You can compare floor altitudes in an area to see what change the revised design would involve



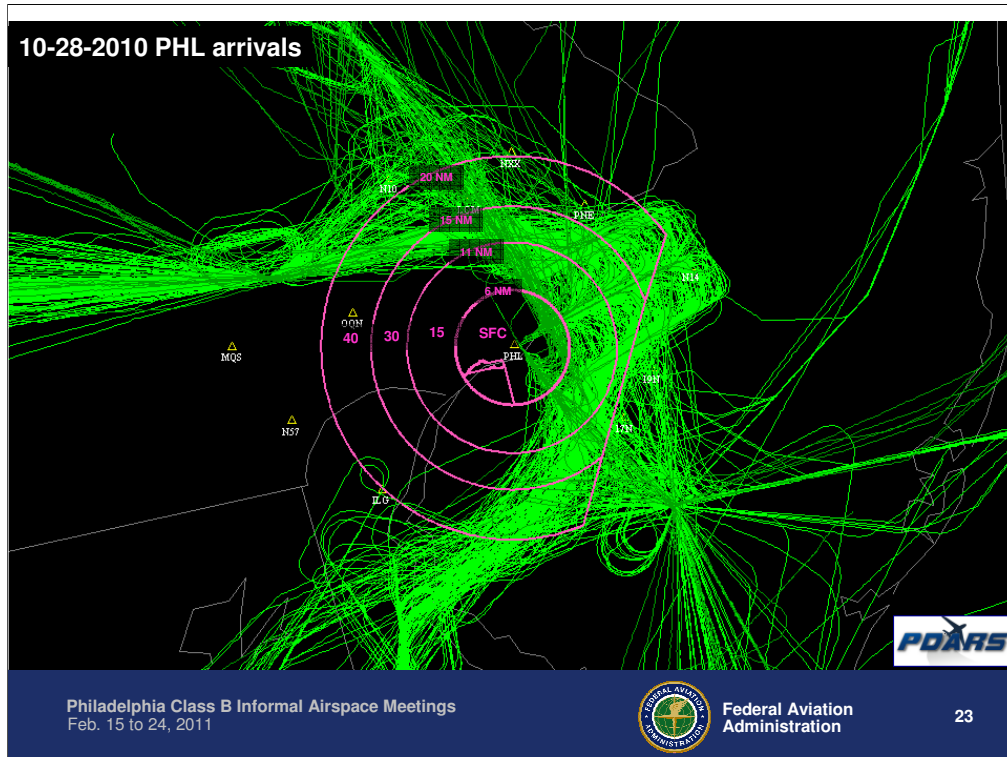
- Each line in this view represents the flight path of an arrival to PHL on 6-25-10



- In this view the arrival paths are green and the departures are shown in red



- This shows just arrivals
- The paths highlighted in white are IFR flights that enter, exit, and then reenter the airspace
- One of the 2 requirements of a class B in order to provide safety to IFR flights was for them to not exit the side of the class B after entering



- This view shows arrivals on another day exiting and reentering the airspace

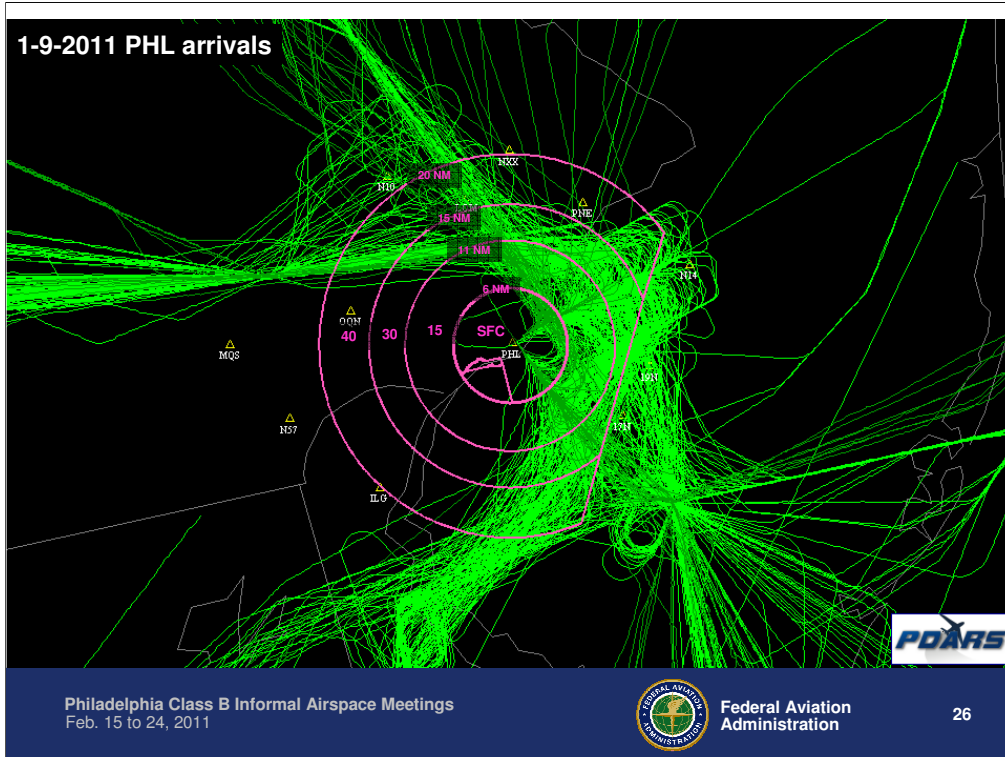


Another view of arrivals exiting and reentering

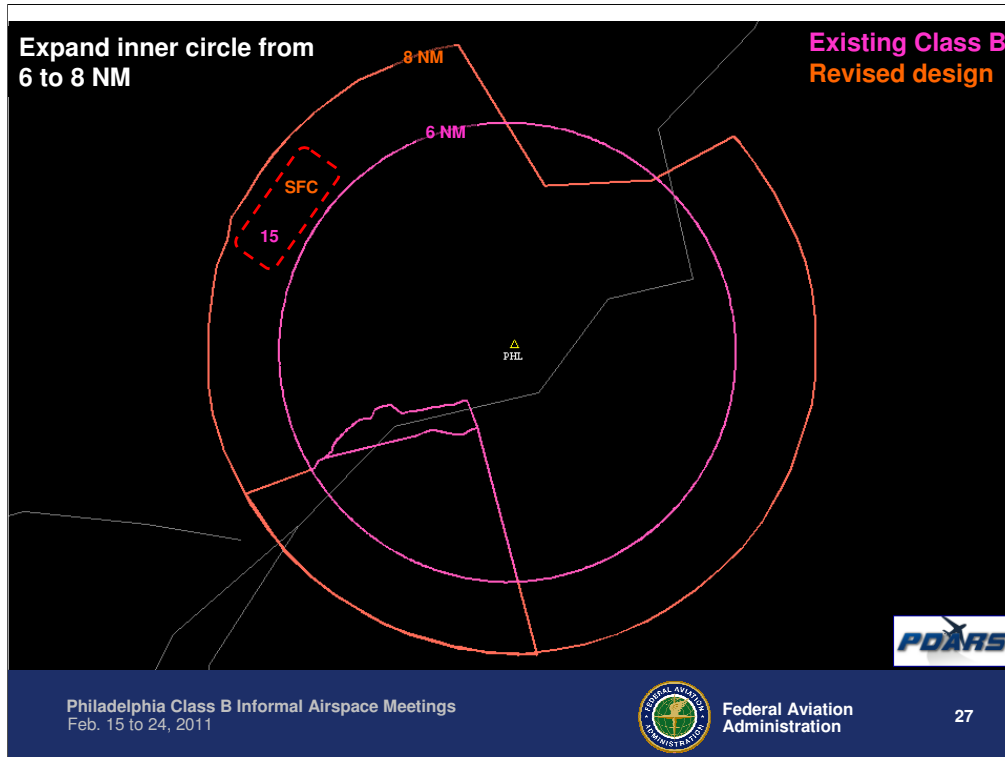




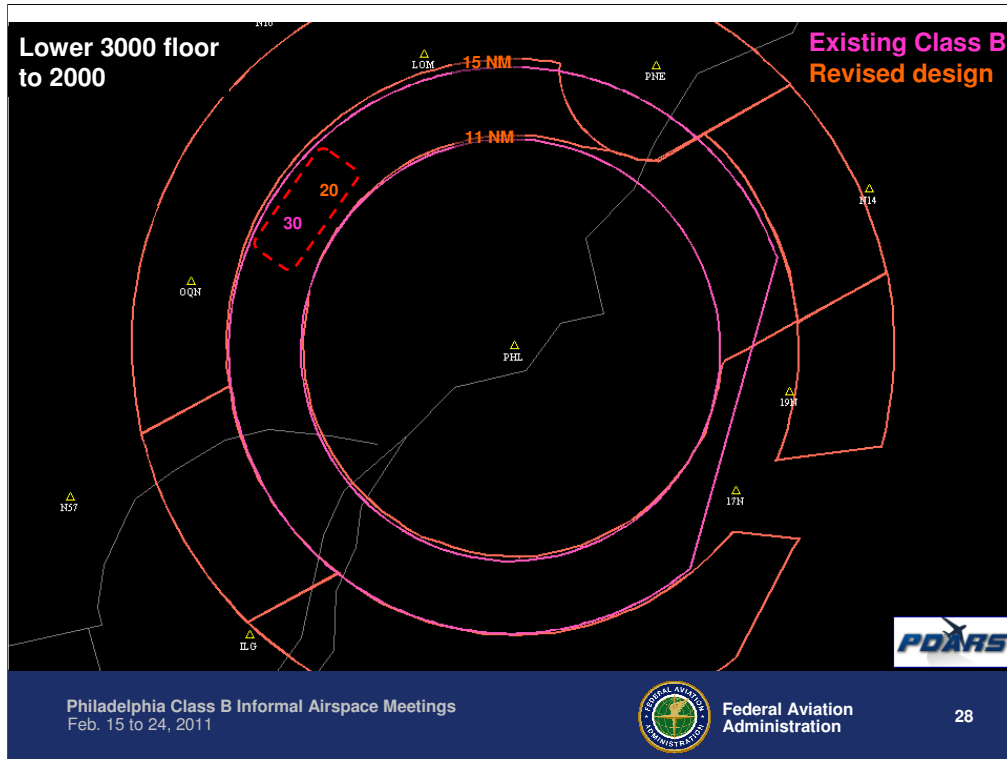
Another view of arrivals exiting and reentering



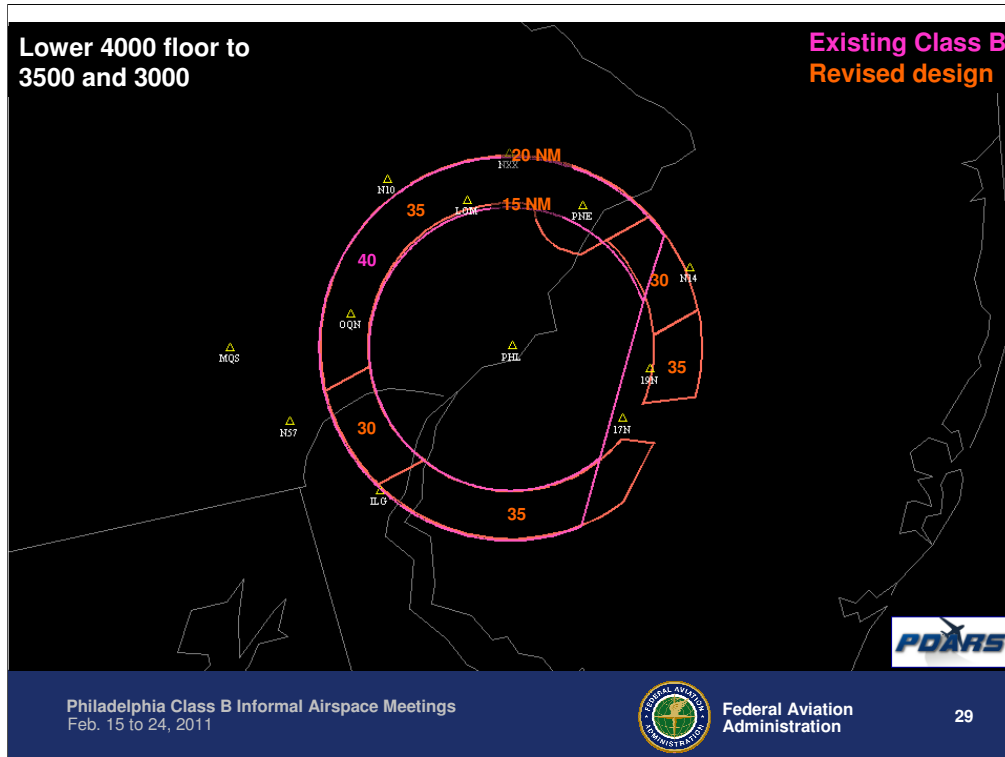
Another view of arrivals exiting and reentering



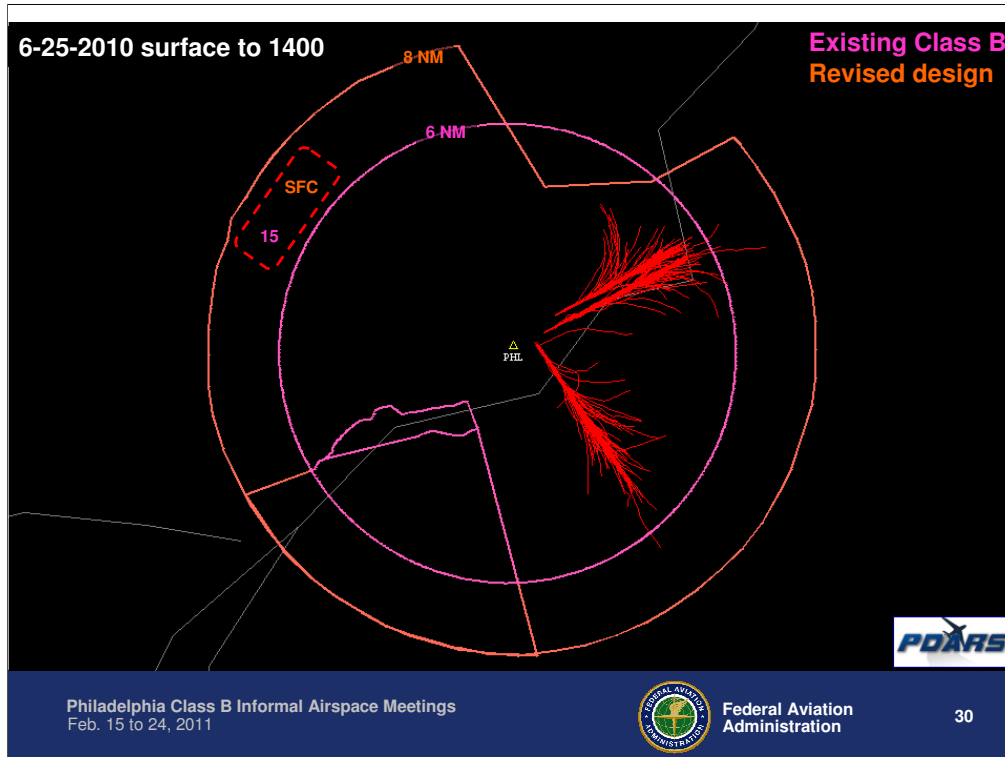
- Now we will look at arrivals descending below the floor of the existing airspace
- There are 3 areas where we are studying lowering the floor
- The first is between 6 and 8 miles, where the floor is currently 1500
- We are studying lowering the floor in that area to the surface, as indicated in the graphic



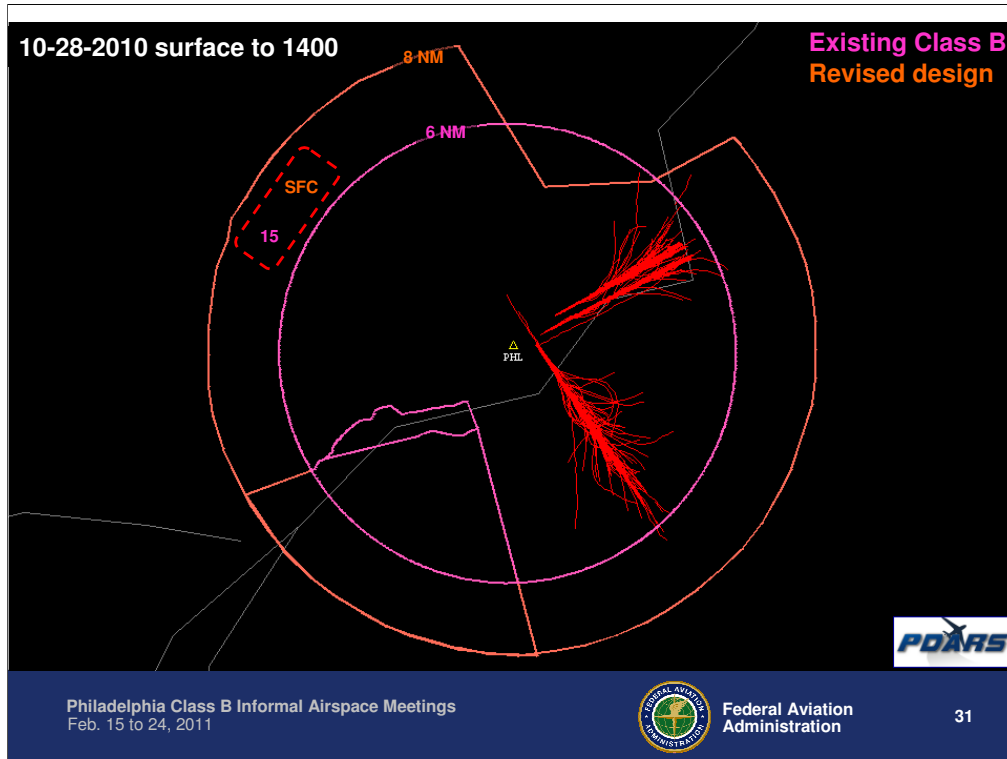
- The second area is between 11 and 15 miles, where the floor is currently 3000 and we are studying lowering it to 2000



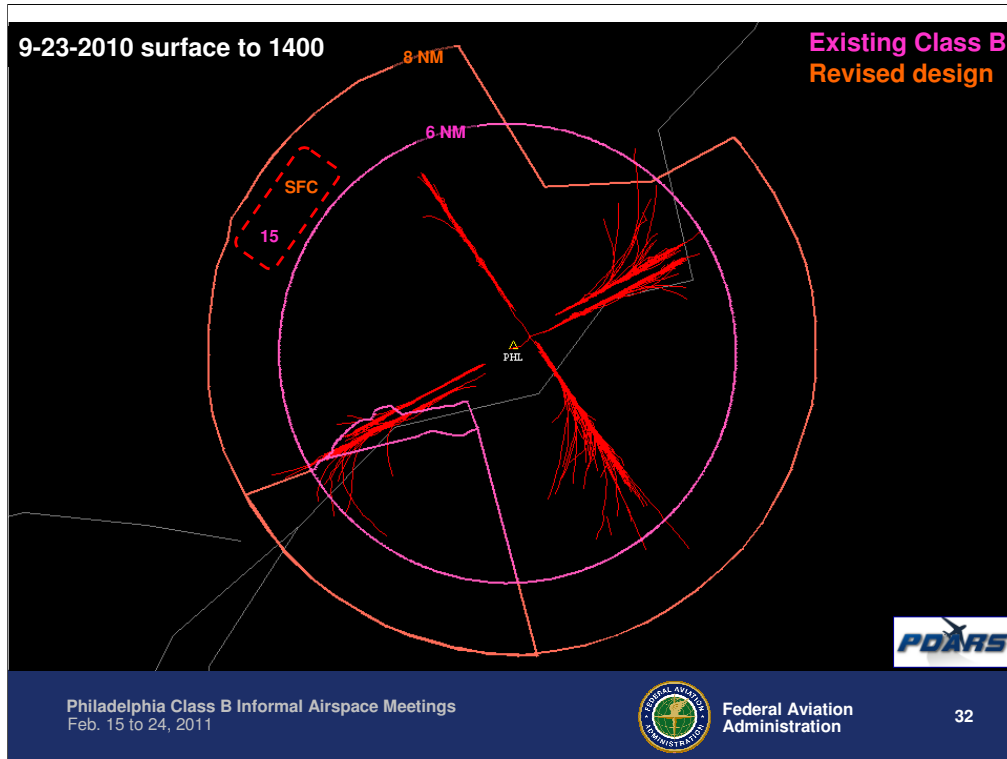
- The third is from 15 to 20 miles, where the floor is currently 4000, and we are studying lowering it to 3500 and 3000, as shown in the graphic



- In this view, the arrival flight paths are shown in red
- Only the portion of the flight that is below 1500 feet is shown
- Any portion of a red line that is outside 6 miles is below the floor of the airspace

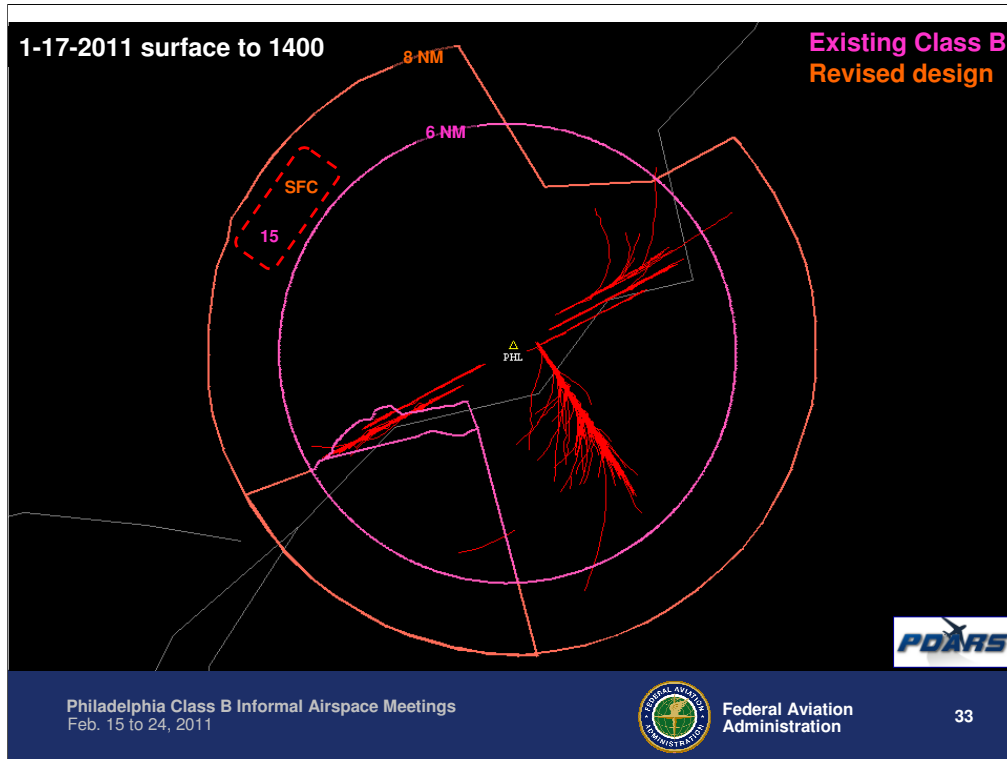


Another view of arrivals below 1500 outside the airspace

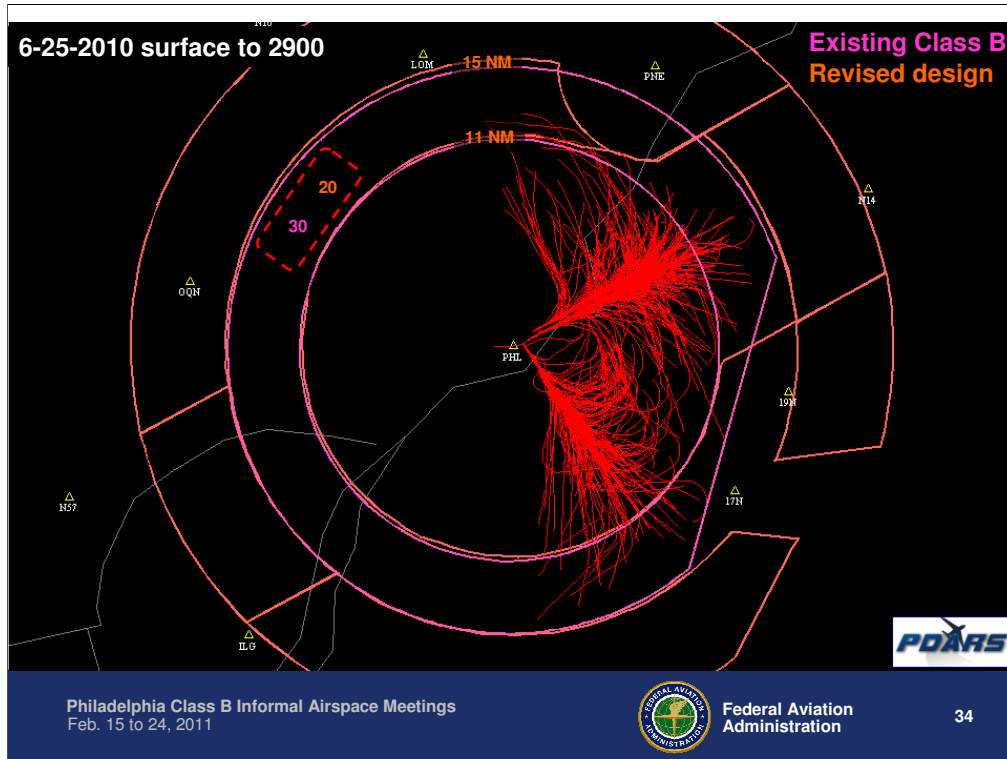


Another view of arrivals below 1500 outside the airspace

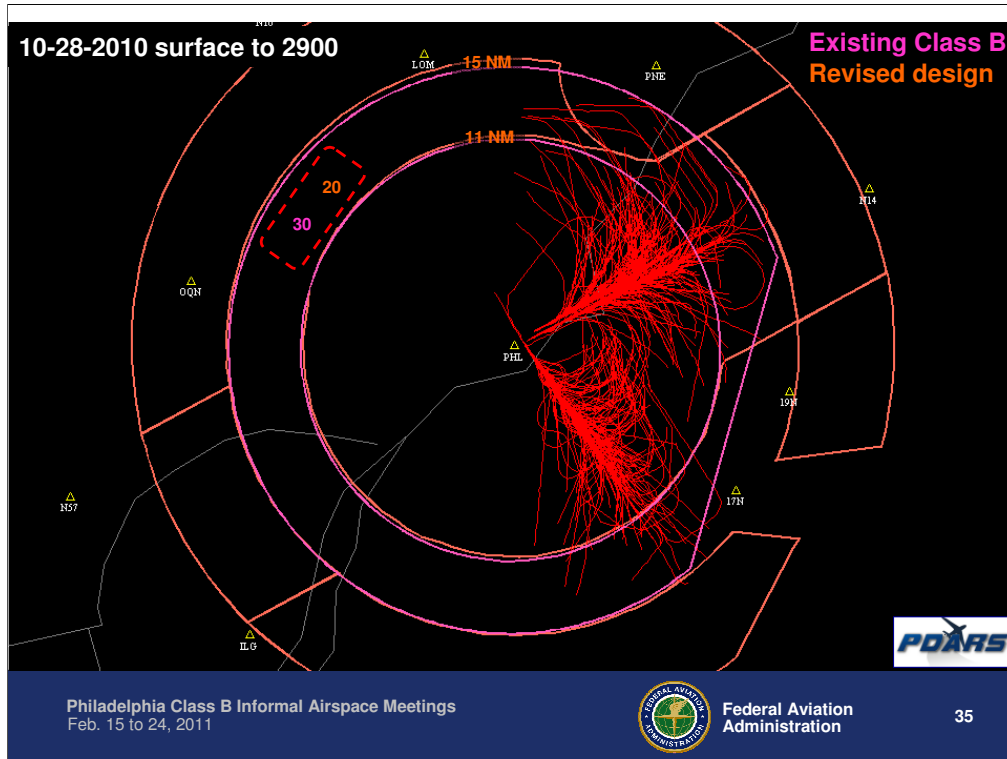




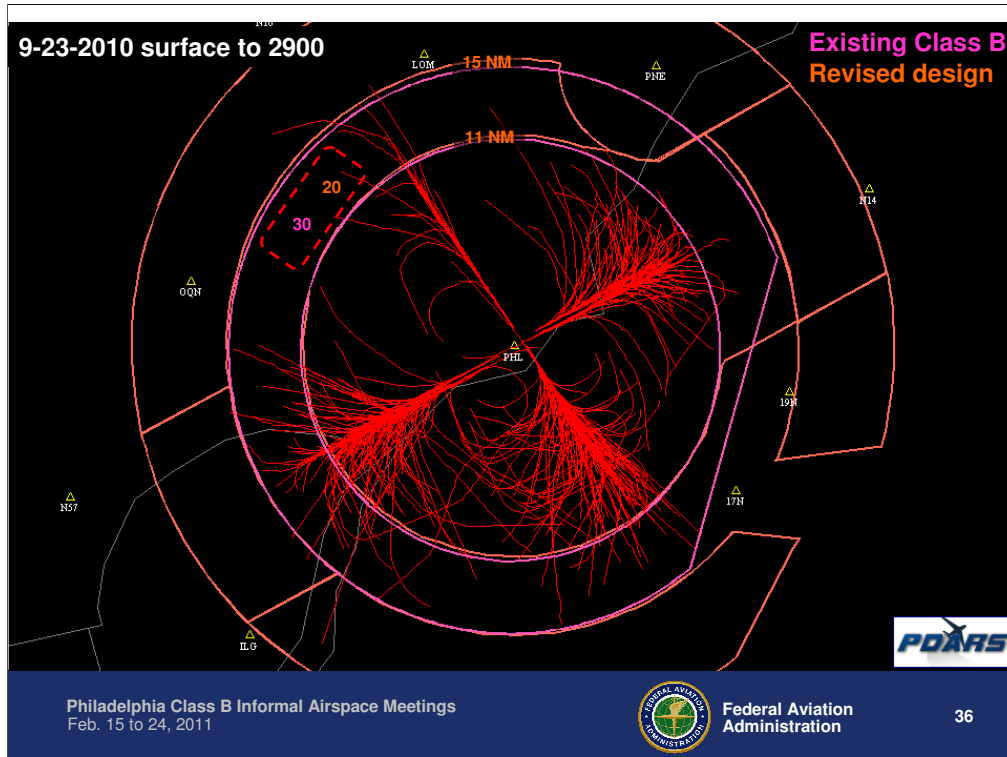
Another view of arrivals below 1500 outside the airspace



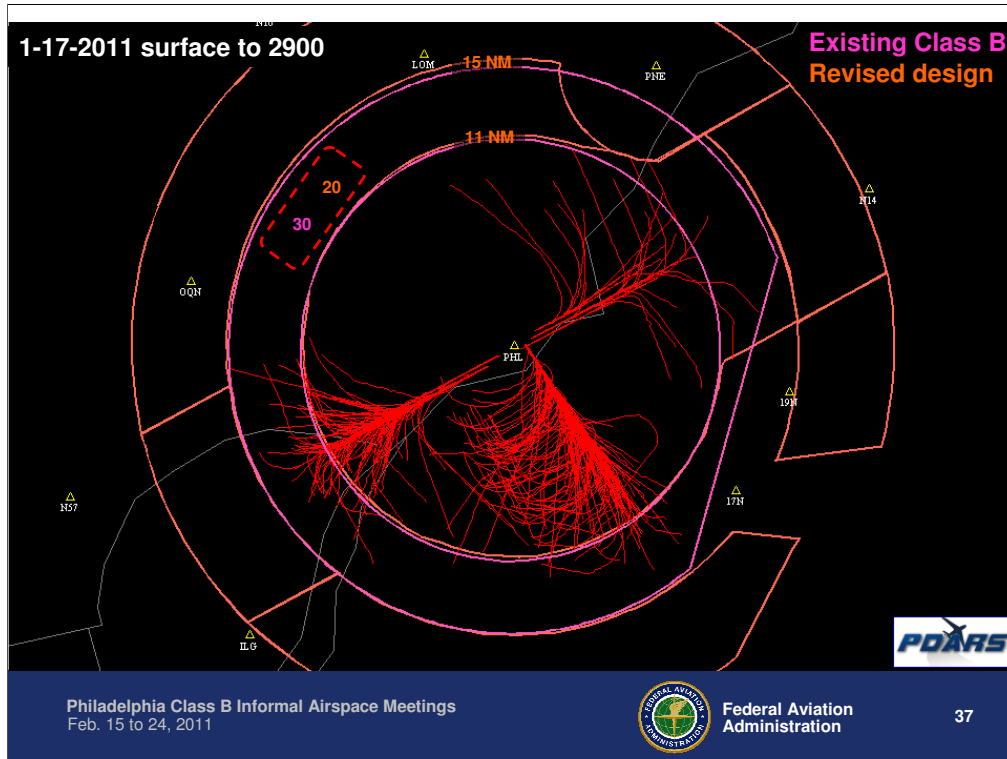
- A view of arrivals below 3000 outside the airspace



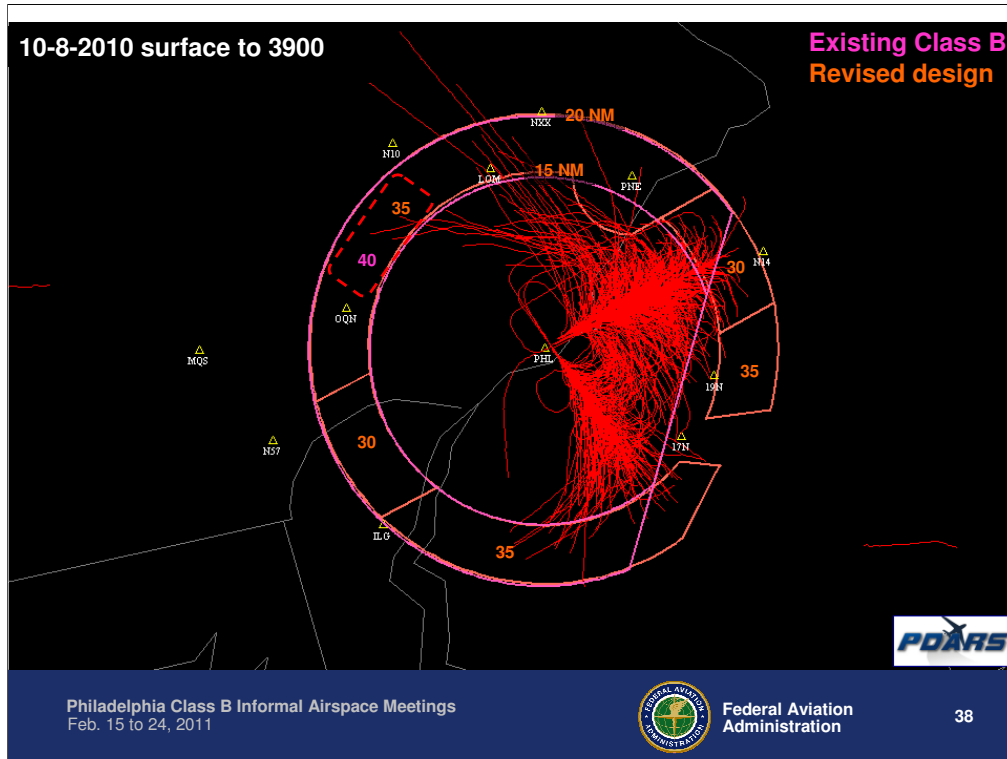
- Another view of arrivals below 3000 outside the airspace



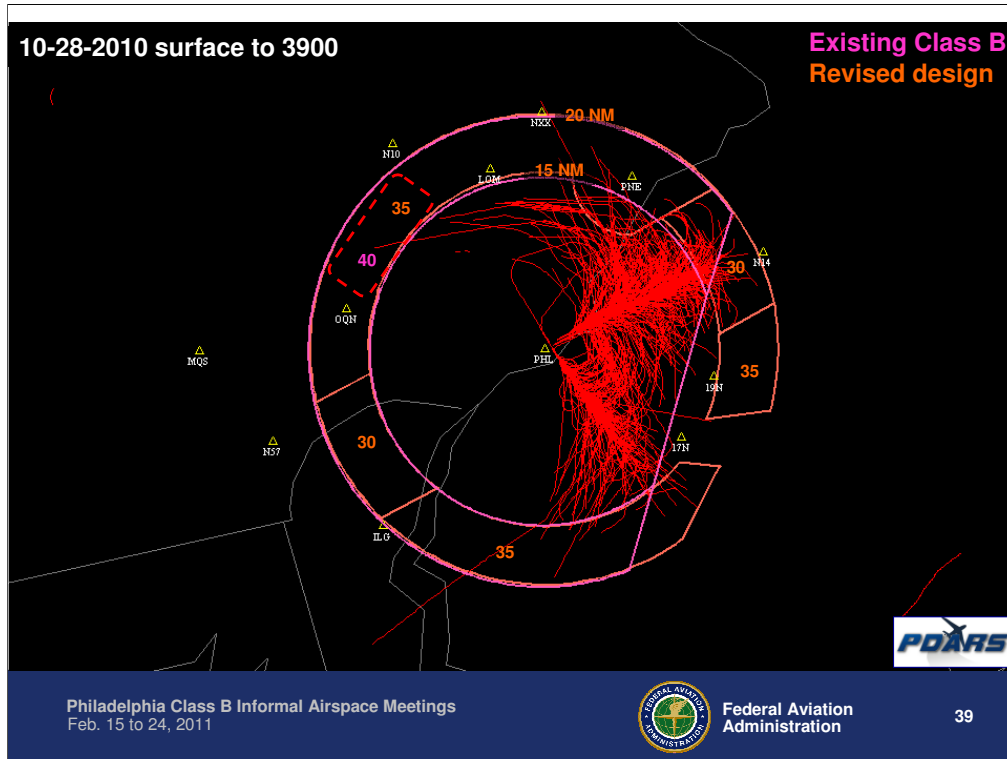
- Another view of arrivals below 3000 outside the airspace



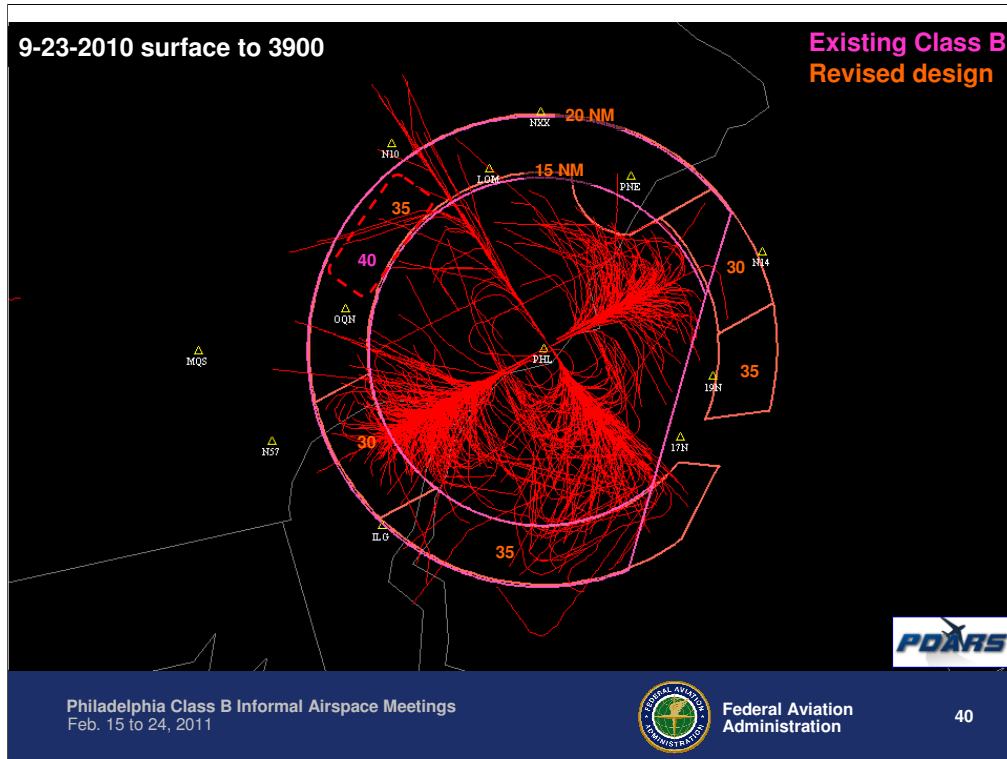
- Another view of arrivals below 3000 outside the airspace



- A view of arrivals below 4000 outside the airspace

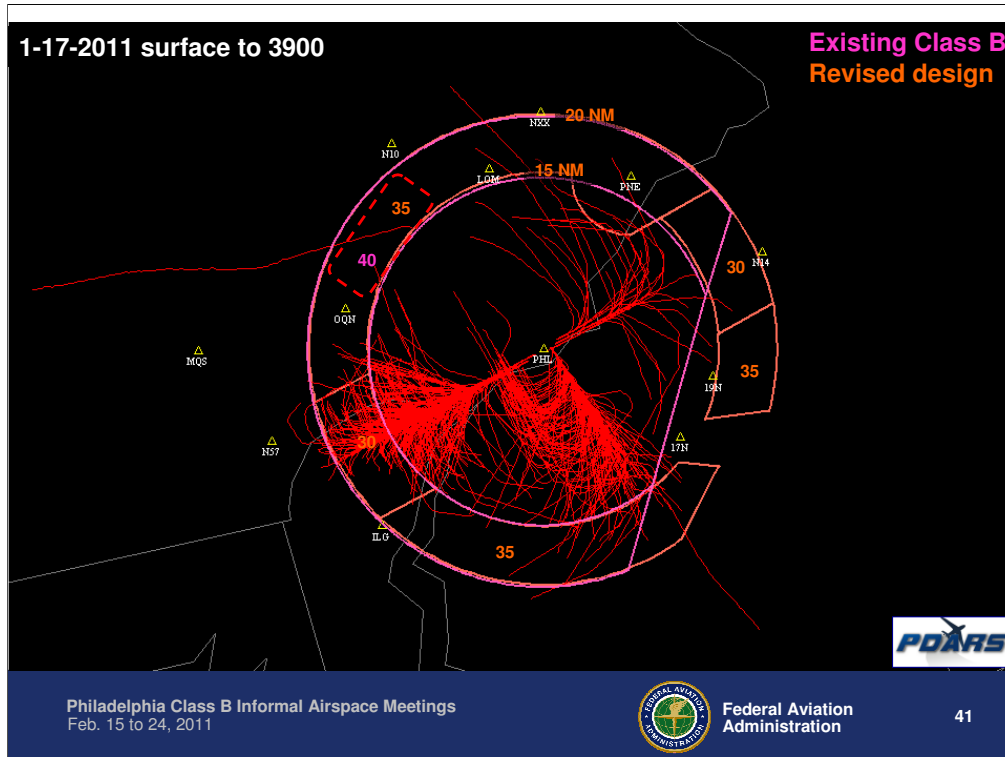


- Another view of arrivals below 4000 outside the airspace

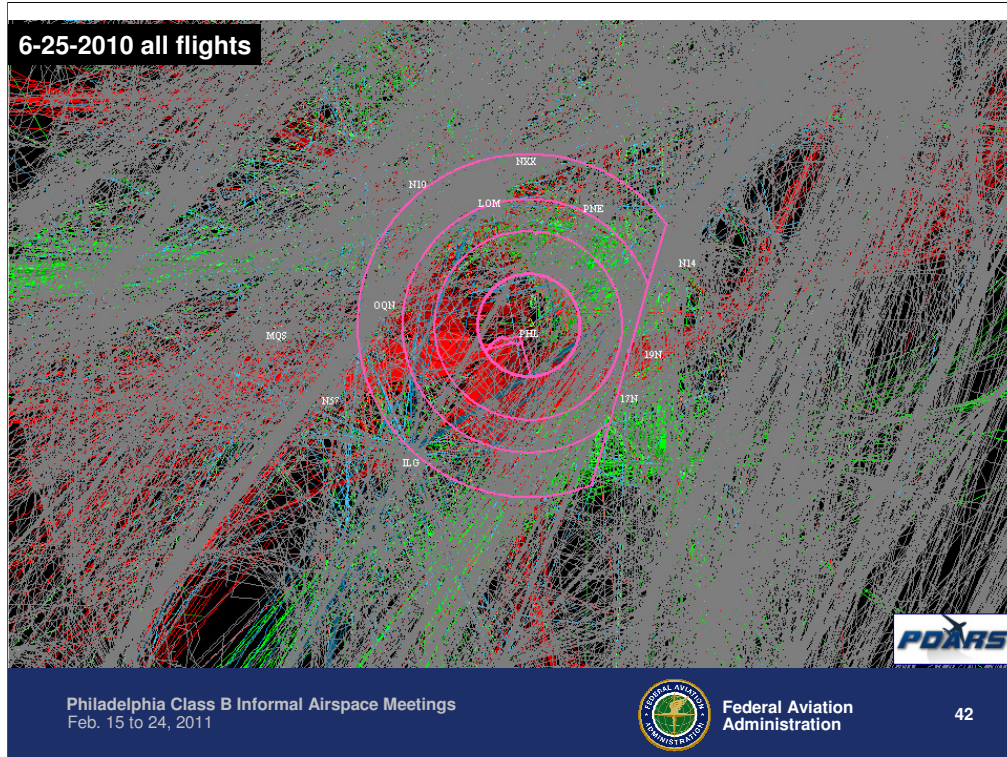


- Another view of arrivals below 4000 outside the airspace

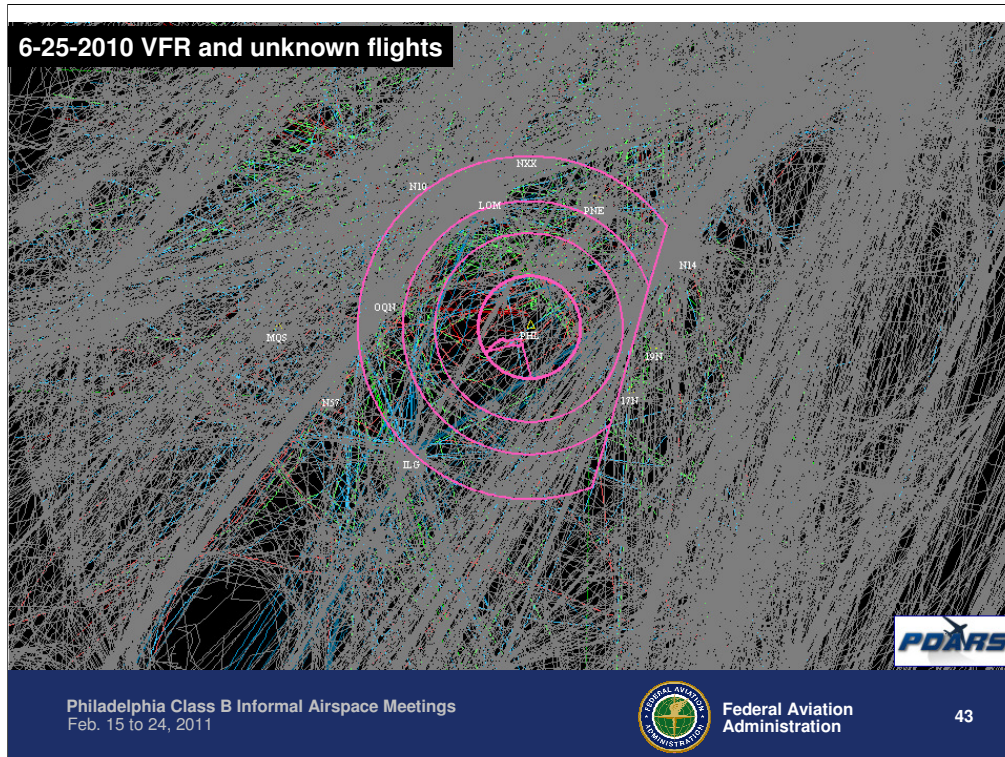




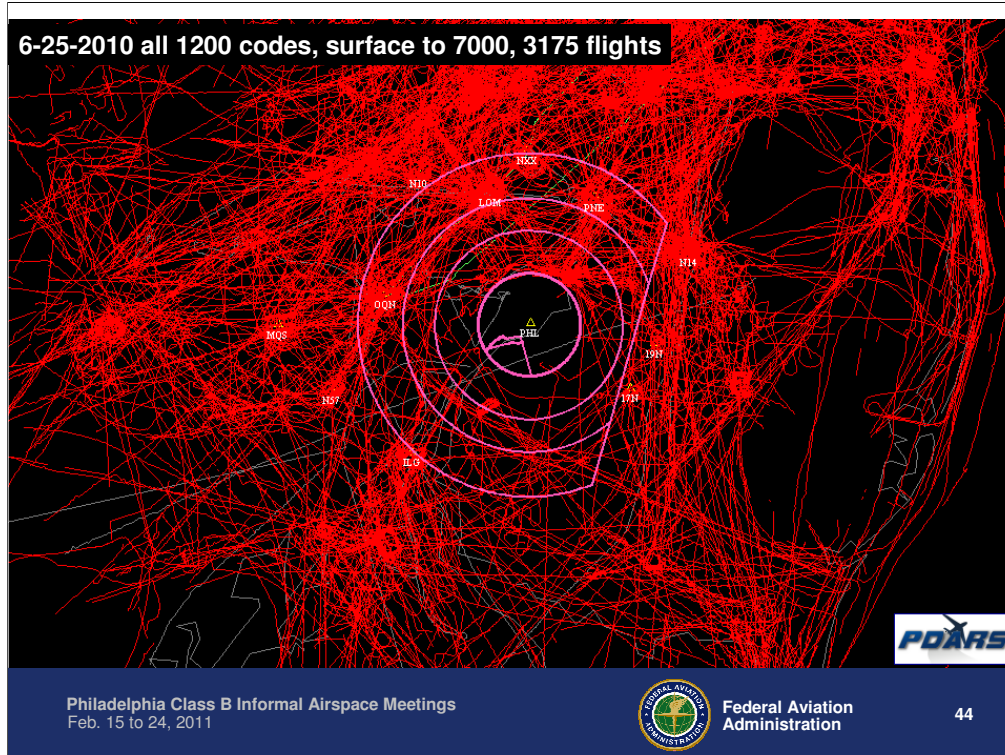
- Another view of arrivals below 4000 outside the airspace
- The previous slides showed IFR operations at PHL
- If the Class B airspace is modified, there will be no change in flight paths or altitudes for those operations
- The purpose of modifying the airspace would not be to allow a change to flight paths, but to protect those flights on the flight paths they fly today
- What about VFR flights? The next few graphics explore possible effects of modifying the airspace on VFR operations



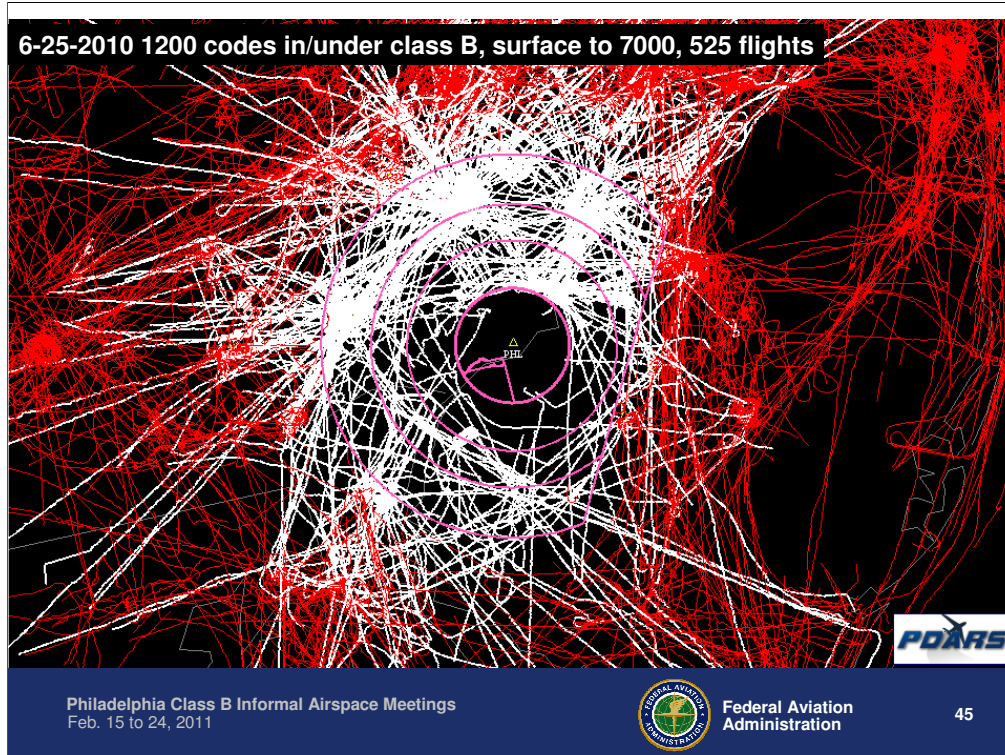
- This graphic shows everything the PHL radar could see for an entire day
- Not very meaningful



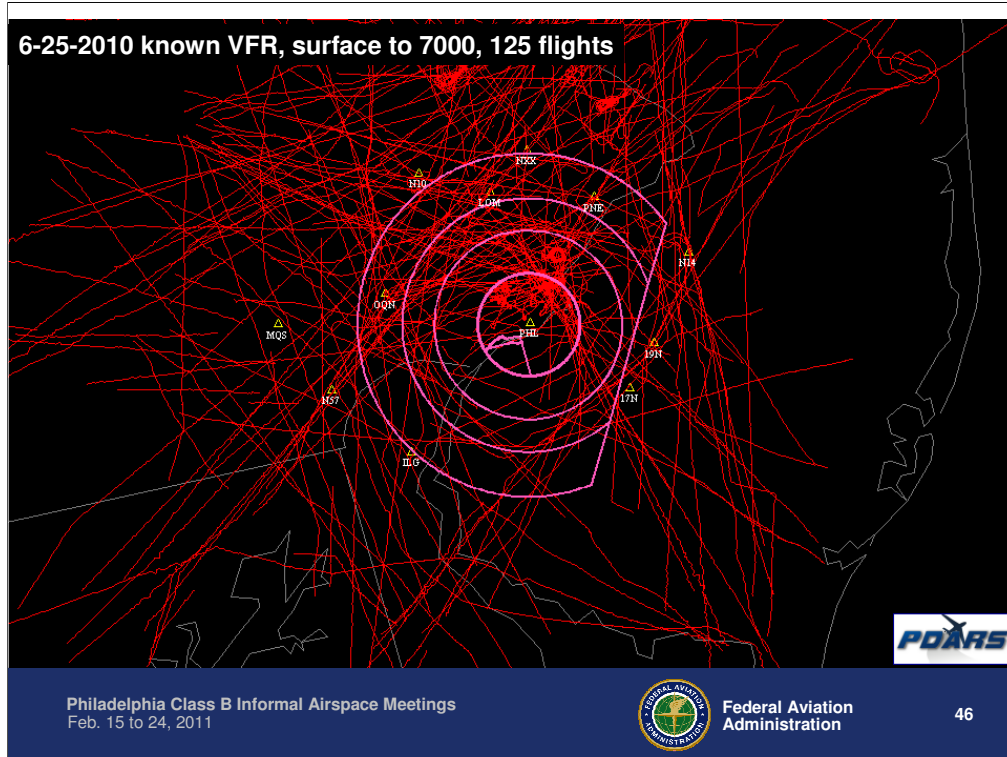
- This view shows everything except the IFR flights
- Still not very meaningful



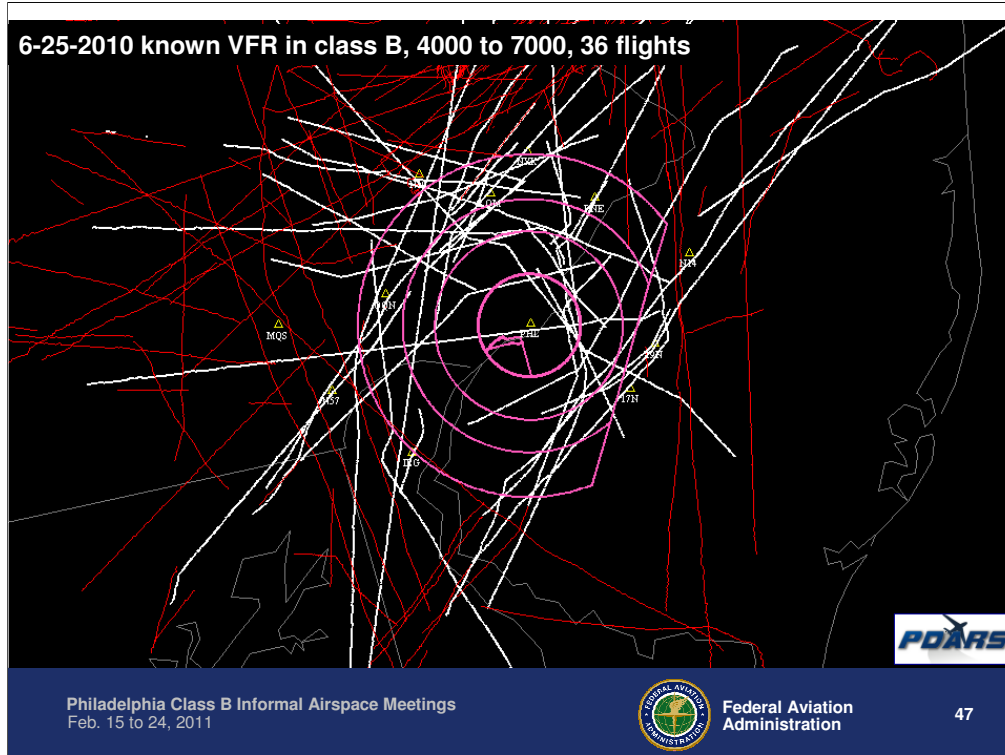
- This view shows all VFR flights not talking to ATC operating at 7000 and below
- These flights would be required to remain outside a modified class B or call ATC for permission to enter



- The selected flights operated at or below 7000 and within the lateral limits of the existing airspace, and are not talking to ATC



- These VFR flights below 7000 are talking to ATC



- These flights are VFR and are within the Class B between 4000 and 7000 feet.
- That means they called ATC and asked to enter the airspace, and were given permission
- What affect would a modified class B have on these flights? Again, none, since they were able to get clearance to enter the class B. For them, no effect.
- For some of the other VFR flights, they would have to fly lower, further out, or call and ask for clearance into the Class B.
- We don't rely on our analysis tools to determine what they would do. We ask them.
- That is why we are at this meeting, to ask you what affect modifying the airspace would have on you
- Please submit you comments to us in writing

## Addresses

Federal Register: [www.regulations.gov](http://www.regulations.gov) or [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys)

Email comments to:

[7-ASO-ESC-OSG-Airspace-Comments@faa.gov](mailto:7-ASO-ESC-OSG-Airspace-Comments@faa.gov)

Mail comments to:

Mark D. Ward, Manager, Operations Support Group  
Air Traffic Organization, Eastern Service Area, FAA  
PO Box 20636  
Atlanta, GA 30320

Fax comments to: 404-305-5572

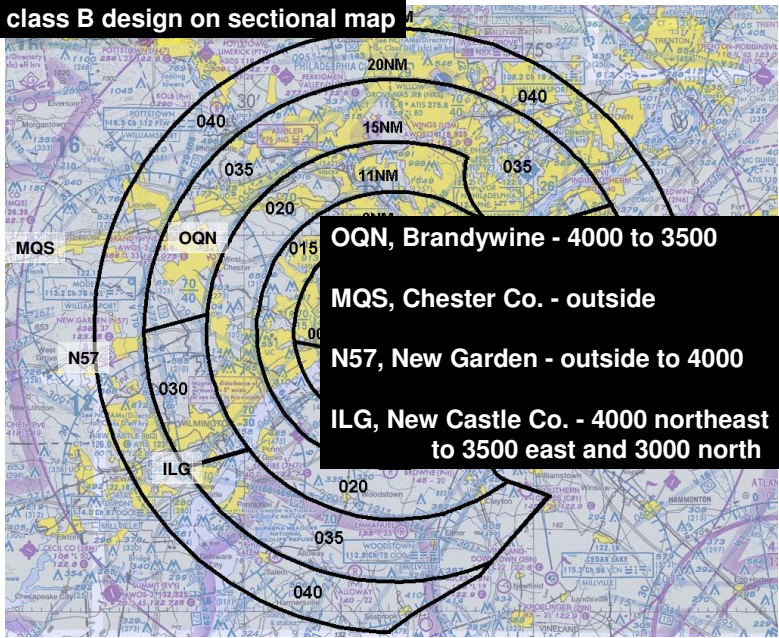
Online announcement: [faasafety.gov/SPANS/event\\_details.aspx?eid=35356&caller=/SPANS/events/ModifyEventList.aspx](http://faasafety.gov/SPANS/event_details.aspx?eid=35356&caller=/SPANS/events/ModifyEventList.aspx)



- You can submit your comments using email, mail or fax
- This presentation will be available as a link from the online meeting announcement
- You can view the Federal Register at either of these websites

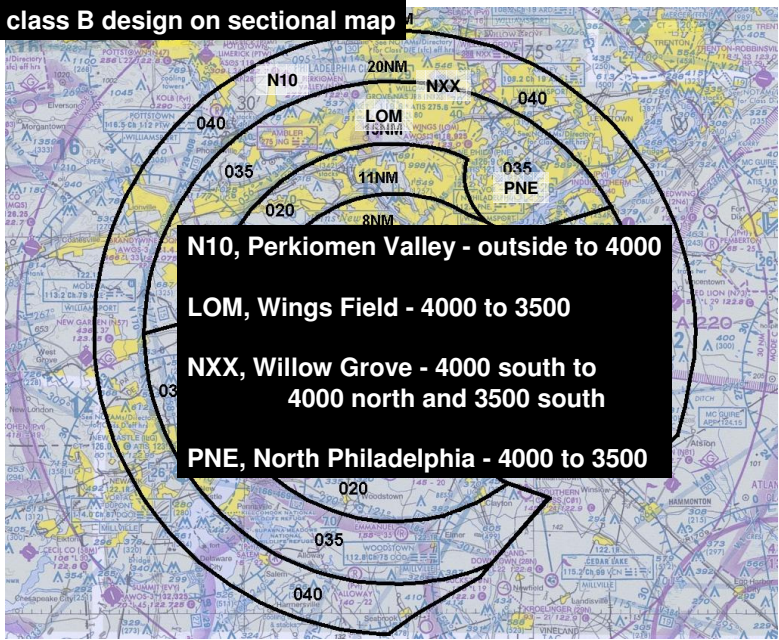


**Revised class B design on sectional map**



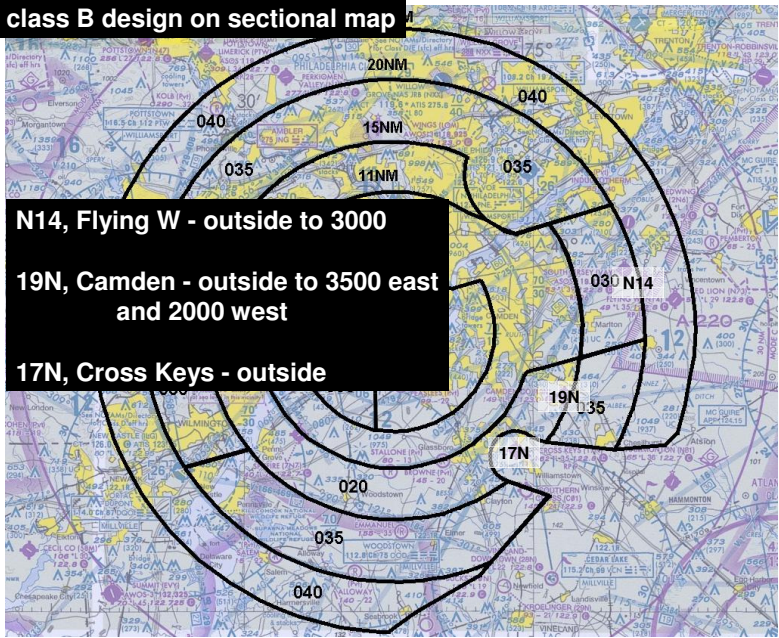
- Here are some of the local airports, showing the floor of the existing airspace compared to the design we are studying

**Revised class B design on sectional map**



- Here are some of the local airports, showing the floor of the existing airspace compared to the design we are studying

**Revised class B design on sectional map**



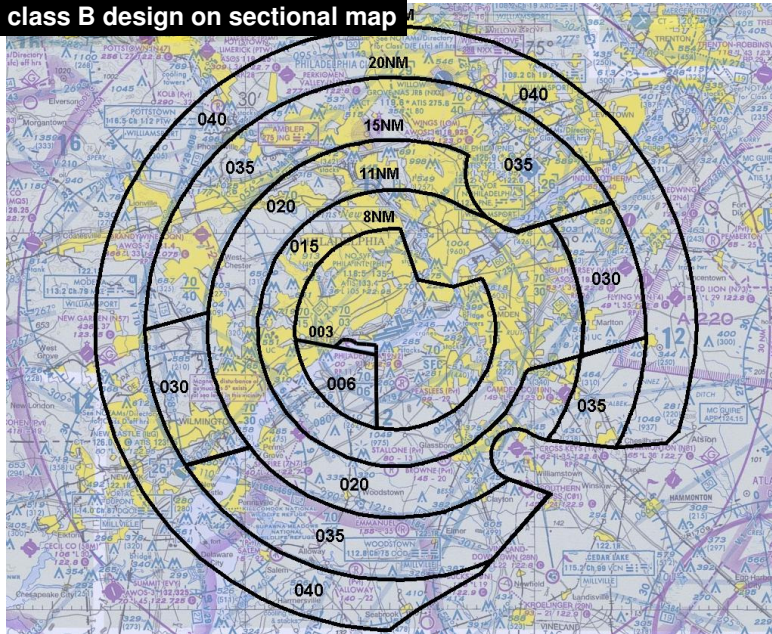
Philadelphia Class B Informal Airspace Meetings  
Feb. 15 to 24, 2011



Federal Aviation  
Administration

- Here are some of the local airports, showing the floor of the existing airspace compared to the design we are studying

**Revised class B design on sectional map**



Philadelphia Class B Informal Airspace Meetings  
Feb. 15 to 24, 2011



Federal Aviation  
Administration

52

- Please write us with your comments and suggestions on this design

**Questions?**

