



OPEN SKIES PLATFORMS

2ND REVIEW CONFERENCE ON THE TREATY ON OPEN SKIES

VIENNA 7-9 JUNE 2010

LtCol Gábor SZŰCS HU AF



OUTLINE

- ✘ ENTRY INTO FORCE & THE CERTIFICATION PROCESS;
- ✘ GENERAL INFORMATION & TREATY REFERENCES;
- ✘ THE PAST (AGING FLEET);
- ✘ WHERE ARE WE NOW (PLATFORMS IN USE);
- ✘ THE WAY AHED (A SHORT LOOK TO THE NEAR FUTURE).



ENTRY INTO FORCE & THE CERTIFICATION PROCESS (1)



- ✘ At the **OSCC plenary** meeting of **5 November 2001**, the delegations of the depository states informed the delegations of the other states parties that they had received the Russian and Belorussian instruments of ratification;
- ✘ The OSCC, at its plenary meeting of **17 December 2001**, adopted a Decision regarding the provisions for the initial certification period and a Chairperson's Statement on issues related to the certification of observation aircraft and sensors;
- ✘ OSCC began by clarifying the intention of states parties with respect to the certification of their observation aircraft in **2002**, the desirable time and place of such certification, and finally their willingness to conduct *joint certification*.

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ENTRY INTO FORCE & THE CERTIFICATION PROCESS (2)



1 January - 31 July 2002

- A joint certification of Republic of **Hungary, Ukraine** and of the group of states parties formed by the **Republic of Belarus and the Russian Federation** 15-29 April **2002** at the Naval Air Station Nordholz, Germany*;
 - A separate certification of the **US aircraft** from 8-15 May 2002 at Wright-Patterson Air Force Base in the United States;
 - A unique certification of the **Pod Group's** pod-system from 19-26 June 2002 at Orleans Bercy airbase in France;
 - A joint certification of the **United Kingdom and Bulgaria** from 8-16 July 2002 at RAF Brize Norton airbase in the United Kingdom;
 - A joint certification of **Sweden and Turkey** and the certification of the **Russian Tu-154** aircraft in April **2004** at the Naval Air Station Nordholz, Germany;
 - The **Romanian** platform and the **POD group's** configurations with the new degrading filter has been certified 15-19 Sept **2008** in Bucurest, Romania.
- * The certification of the Czech and Romanian aircraft did not materialize at that time.

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GENERAL INFORMATION & TREATY REFERENCES (1)



ARTICLE II : DEFINITIONS

- ✘ Observation aircraft = unarmed, fixed wing aircraft designated to make Observation Flights and equipped with agreed sensors.
- ✘ Sensor = equipment of a category specified in Article IV, installed on Observation Aircraft for use during the conduct of observation flights.

ARTICLE IV : SENSORS CATEGORIES

- Performance limits;
- Aperture covers;
- Data annotation;
- Real-time display;
- Certification;
- Remove, replace or add sensors.

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GENERAL INFORMATION & TREATY REFERENCES (2)



ARTICLE V : AIRCRAFT DESIGNATION

- Designate one or more types or models as Observation Aircraft or add new types or models: - 30 day notification;
- Delete types or models: - 90 day notification;
- Certification: only 1 exemplar of a particular type or model with identical associated sensors;
- Capable of carrying Flt crew and Pers as per Article VI.

ANNEX B: INFORMATION ON SENSORS

- Section I: Technical Information to be provided;
- Section II: Annotation of data.

ANNEX C: INFORMATION ON OBSERVATION AIRCRAFT

- Technical Information to be provided.

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GENERAL INFORMATION & TREATY REFERENCES (3)



ALLOWED SENSORS

- CHOICE BY STATE PARTY;
- COMMERCIALY AVAILABLE TO ALL STATES PART
- FOUR CATEGORIES:
 - Optical Panoramic and Framing cameras;
 - Video cameras;
 - IR line-scanning devices;
 - Sideways-looking Synthetic Aperture Radar (SAR).
- RECORDING MEDIA:
 - Photographic cameras = black & white film;
 - Video cameras = magnetic tape*;
 - IR sensors = black & white film or magnetic tape;
 - Radar = magnetic tape**.



* Video cameras are going digital i.a.w. Revision one of Decision No. 14.

** Magnetic tapes to be replaced by optical disks i.a.w. Revision two of Decision No. 17.

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GENERAL INFORMATION & TREATY REFERENCES (4)



Max Range of Platform

- AN-26 = 1,400 km
- AN-30 = 1,700 km
- C-130 = 2,800 km
- CASA = 2,000 km
- SAAB = 1,400 km
- OC-135B = 6,500 km
- TU-154 = 3,000 km

Max Flight Distances

- Min Europe = 500 km
- Max Europe = 2,100 km
- USA = 4,900 km
- Canada = 6,150 km
- Russia = 7,200 km

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GENERAL INFORMATION & TREATY REFERENCES (5)



Maximum Number of Personnel Allowed:

- AN-30 = 13-24
- An-26 = 23
- Tu-154M = 32
- C-130 = 20-28
- CASA = 16
- SAAB = 19
- OC-135B = 36

Minimum Number of Personnel Needed:

- Observed Party = 5-7
- Observing Party
(w/ 2 or 3 partners) = 7-10
- Aircrew = 6
- Other Observers = 1 + 1
- **Total** **22+**

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THE PAST (AGING FLEET)



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GERMANY'S TU-154 B



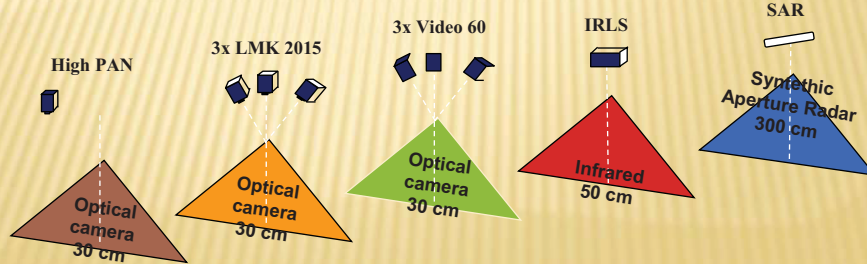
THE UNIC PLATFORM WITH ALL ALLOWED SENZORS

* THE AIRCRAFT HAS BEEN LOST IN A FATAL ACCIDENT

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GERMANY'S TU-154 B



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UNITED KINGDOM'S ANDOVER C.MK1







* THE AIRCRAFT HAS BEEN GROUNDED AND WITHDRAWN FROM THE TREATY

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UNITED KINGDOM'S ANDOVER C.MK1



Platform - General Information

- Certified July 2002
- 1 configuration
- Hmin: 750 m
- Type sensors:
 - ROI Panoramic camera KA-95B with IDF (Image Degrading Filter)
- Film types:
 - KODAK 3404
- A/C Operation speed : 333 Km/h
- A/C operating range : 1300 Km
- POB: 4 - 2 - 13

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WHERE ARE WE NOW (PLATFORMS IN USE)



AN-26 HUNGARIAN OPEN SKIES (1)



The **LEICA RC-30** Aerial Camera System with Forward Motion Compensation is based on a flexible, modular concept that meets all requirements of aerial photography.



The camera can be controlled in all **3 axes** by the combined navigation sight.

Special characteristics of the RC-30 lens are the high resolution, negligible lens distortion and high light intensity.

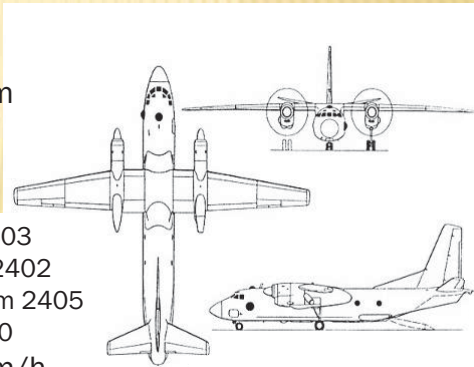


AN-26 HUNGARIAN OPEN SKIES (2)



Platform - General Information

- Certified April 2002
- 2 configurations
+ 2 configurations (Sep 2007)
- Hmin range: 1972 m - 2993 m
- Type sensors:
 - Leica RC-30 (F)
- Film types:
 - KODAK Tri-X Aerographic film 2403
 - KODAK Plus-X Aerographic film 2402
 - KODAK Double-X Aerographic film 2405
 - AGFA Aviphot Pan 400S PE1/PE0
- A/C Operation speed : 380 Km/h
- POB : 5 - 3 - 15



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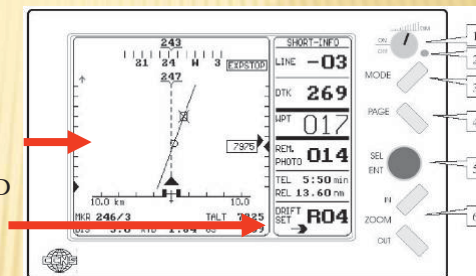


CCNS-4 COMPUTER CONTROLLED NAVIGATION SYSTEM



THE DISPLAY SCREEN IS DIVIDED INTO TWO PARTS:

- **THE LEFT 2/3RDS OF THE DISPLAY CONTAINS:**
 - GUIDANCE INFORMATION AND
- **THE RIGHT 3RD SHOWS:**
 - FLIGHT DATA,
 - SENSOR- AND
 - SYSTEM MANAGEMENT FUNCTIONS.



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AN-30B



STATE PARTIES USING AN-30S

- ✗ ROMANIA;
- ✗ UKRAINE;
- ✗ BULGARIA;
- ✗ RUSSIAN FEDERATION.

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ROMANIAN OPEN SKIES AN-30 (1)



The aircraft can be fitted with one of the following cameras:

- WILD RC 20 with the ASCOT system (OS);
- OMER 33 (RO-HU BILAT);
- WILD RC 8;
- LMK 1000;
- AFA 42



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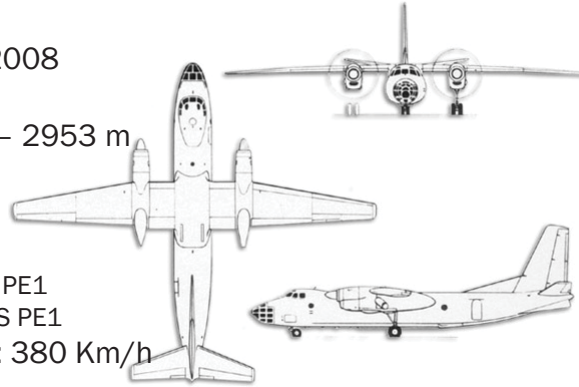


ROMANIAN OPEN SKIES AN-30 (2)



Platform - General Information

- Certified September 2008
- 2 configurations
- Hmin range: 2177 m – 2953 m
- Type sensors:
 - WILD Aviphot RC20
- Film types:
 - AGFA Aviphot Pan 200 PE1
 - AGFA Aviphot Pan 400S PE1
- A/C Operation speed : 380 Km/h
- POB: 5 – 1 - 18



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AN-30B OPEN SKIES UKRAINE (1)



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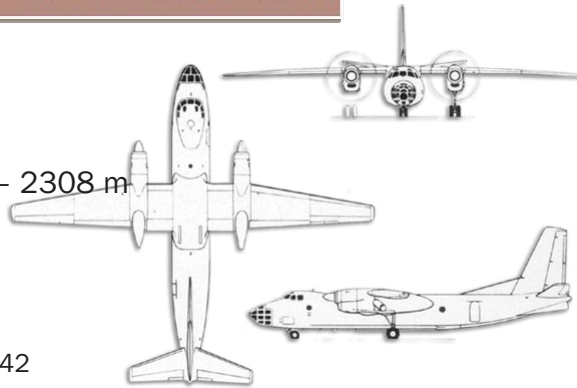


AN-30B OPEN SKIES UKRAINE(1)



Platform - General Information

- Certified April 2002
- 2 configurations
- Hmin range: 1073 m – 2308 m
- Type sensors
 - Framing AFA-41 / 7.5
 - Framing AFA-41 / 10
- Film types
 - Iso-panchromatic type 42
- A/C Operation speed : 385 - 405 Km/h
- POB : 6 - 1 - 8



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BULGARIAN OPEN SKIES AN-30B (1)



*Bulgarian Air Force
Antonov AN30b*



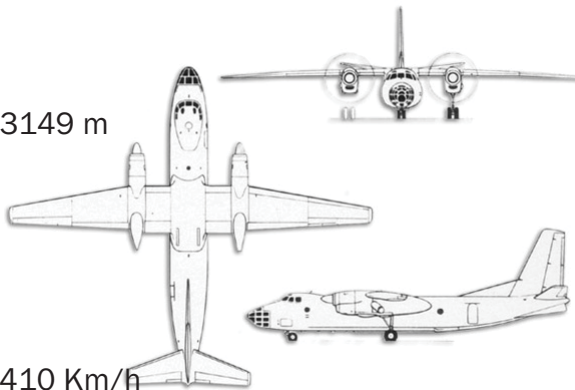
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BULGARIAN OPEN SKIES AN-30B (2)



Platform - General Information

- Certified July 2002
- 3 configurations
- Hmin range: 1174 m - 3149 m
- Type sensors
 - Leica Wild RC-30 (F)
 - Vinten 900B (P)
- Film types
 - AGFA Pan-200
 - KODAK 3404 (2 widths)
- A/C Operation speed : 410 Km/h
- POB : 5 - 2 - 6



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RUSSIAN OPEN SKIES AN-30B (1)



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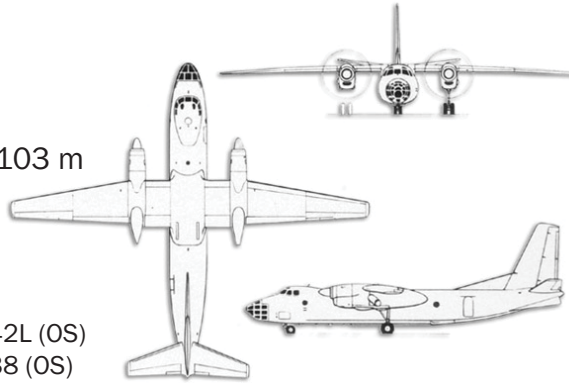


RUSSIAN OPEN SKIES AN-30B (2)



Platform - General Information

- Certified April 2002
- 5 configurations
- Hmin range: 1210 - 3103 m
- Type sensors:
 - Framing AFA-41 / 7.5
 - Framing AFA-41 / 10
- Film types:
 - Iso-panchromatic type 42L (OS)
 - Iso-panchromatic type 38 (OS)
- A/C Operation speed: 370 - 410 Km/h
- POB : 8 -1 - 10



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SWEDISH SAAB 340 / OS100 (1)



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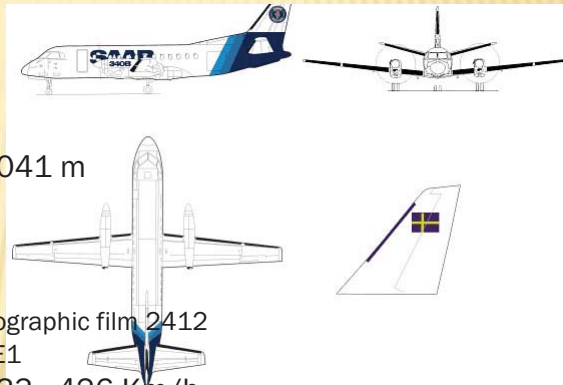


SWEDISH SAAB 340 / OS100 (2)



Platform - General Information

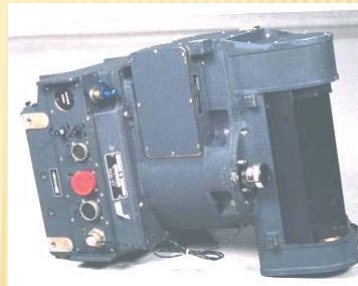
- Certified April 2004
- 10 configuration
- Hmin range: 1215 m - 5041 m
- Type sensors:
 - Zeis RMK TOP 15 (IDF)
- Film types:
 - KODAK Panatomic-X Aerographic film 2412
 - AGFA Aviphot Pan 200 PE1
- A/C Operation speed : 333 - 426 Km/h
- POB: 4 - 1 - 14



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THE TURKISH CASA CN 235 (1)



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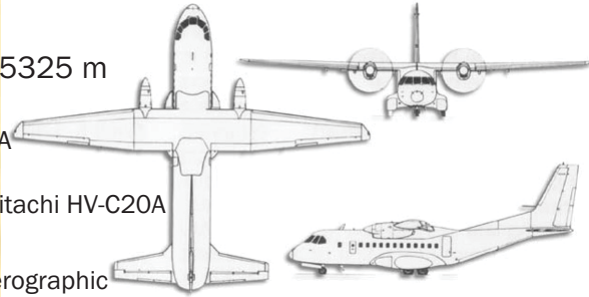


THE TURKISH CASA CN 235 (2)



Platform - General Information

- Certified April 2004
- 6 configurations
- Hmin range: 1199 m - 5325 m
- Type sensors:
 - ROI Panoramic KS-116A
 - ROI Framing KS87B
 - Video Frame imaging Hitachi HV-C20A
- Film types:
 - 2402 KODAK Plus-X Aerographic
 - 3412 KODAK Panatomic-X Aerocon II
 - 3404 KODAK Panatomic-X Aerocon II
- A/C Operation speed : 400 Km/h
- POB: 4 - 2 - 10



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RUSSIAN OPEN SKIES TU-154M (1)



Open Skies



Cosmonaut Training Centre's
Russian Tupolev Tu 154 M



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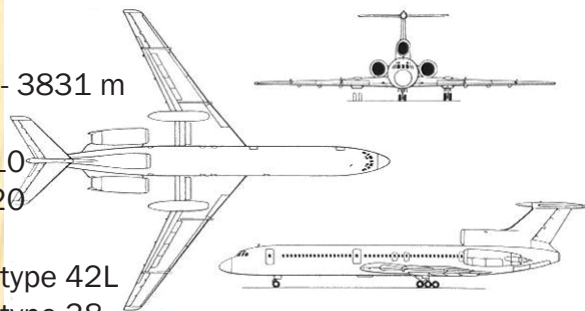


RUSSIAN OPEN SKIES TU-154M (2)



Platform - General Information

- Certified April 2004
- 3 configurations
- Hmin range: 2186 m - 3831 m
- Type sensors:
 - Framing AFA-41/10
 - Framing AFA-41/20
- Film types:
 - Iso-panchromatic type 42L
 - Iso-panchromatic type 38
- A/C Operation speed : 480 - 500 Km/h
- POB: 7 - 4 - 21



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UNITED STATES OC-135B (1)

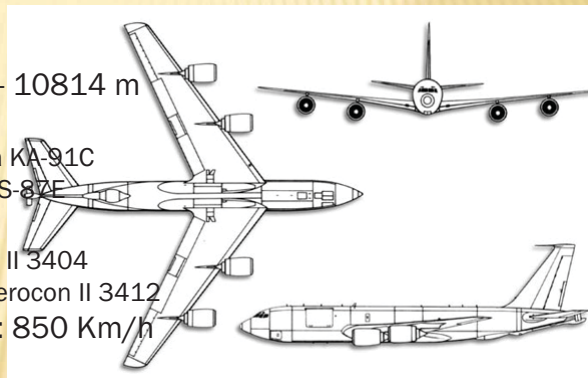


UNITED STATES OC-135B (2)



Platform - General Information

- Certified May 2002
- 11 configurations
- Hmin range: 1440 m - 10814 m
- Type sensors:
 - ROI Panoramic camera KA-91C
 - ROI Framing camera KS-87E
- Film types:
 - KODAK Plus-X Aerocon II 3404
 - KODAK Panatomic-X Aerocon II 3412
- A/C Operation speed : 850 Km/h
- POB: 5 - 2 - 29





C-130 H/E/J & COPS - POD GROUP'S



POD Group - Nations:

**BENELUX,
NO, IT, GR, CA, FR, SP, PT**



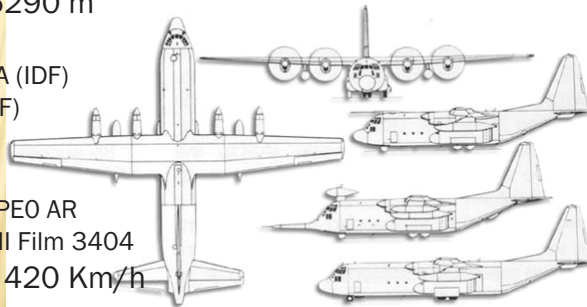
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C-130 H/E/J & COPS - POD GROUP'S



- Certified June 2002 & 2008 with the IDF
- 18 configurations
- Hmin range: 124 m - 5290 m
- Type sensors:
 - ROI Panoramic KS-116A (IDF)
 - ROI Framing KS87B (IDF)
 - Video Sekai RSC-100P
- Film types:
 - AGFA Aviphot Pan 200 PEO AR
 - KODAK Plus-X Aerocon II Film 3404
- A/C Operation speed : 420 Km/h
- POB: 5 - 2 - 20



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THE WAY AHED
(A SHORT LOOK IN TO THE NEAR FUTURE).

Possible Selection of New Aircraft



Tu-214ON
RUSSIAN FEDERATION



Possible Selection of New Aircraft



**SAAB 2000
SWEDEN**

**P-3
NORWAY**



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Possible Selection of New Aircraft



**An-74 TK-300
Ukraine**



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Many safe landings &
thank you for your attention!