Tupolev Tu2

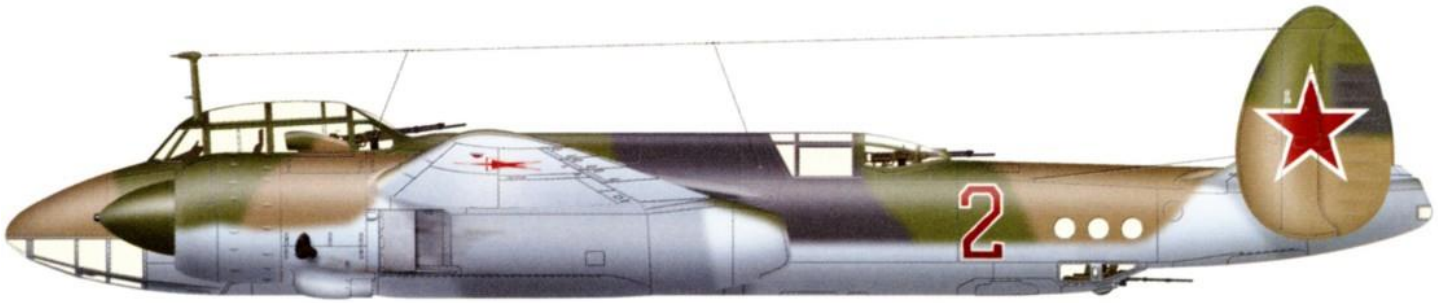
Le Tupolev Tu2 est un bimoteur bombardier rapide de jour soviétique et bombardier de première ligne de la Seconde Guerre mondiale. Le Tu2 a été conçu pour répondre à l'exigence d'un bombardier à haute vitesse ou bombardier en piqué, avec une grande capacité de charges offensives, et une vitesse semblable à celle d'un monoplace de combat. Conçu pour concurrencer le Junker JU88 allemand, le Tu2 lui est comparable, et a été produit en version torpilleur, d'interception, et de reconnaissance.

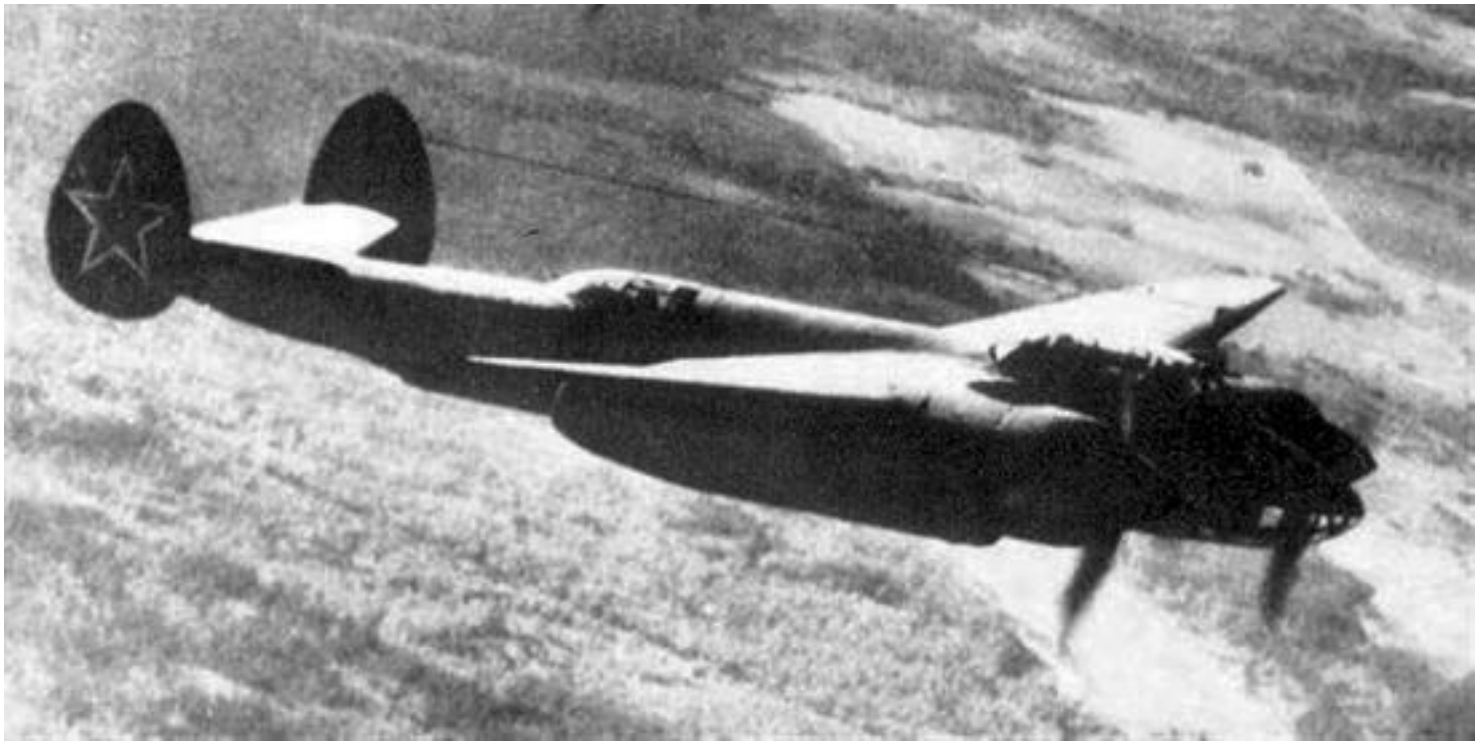
Le premier prototype a été achevé à l'usine N156, et a effectué son premier vol d'essai en Janvier 1941, piloté par Mikhail Nukhtinov. Le moteur AM-37 a été abandonné pour concentrer les efforts sur l'AM-38F conçu pour Il2. Tupolev doit donc revoir la conception des avions pour ce moteur. Un total de 2257 Tu2 a été construit.

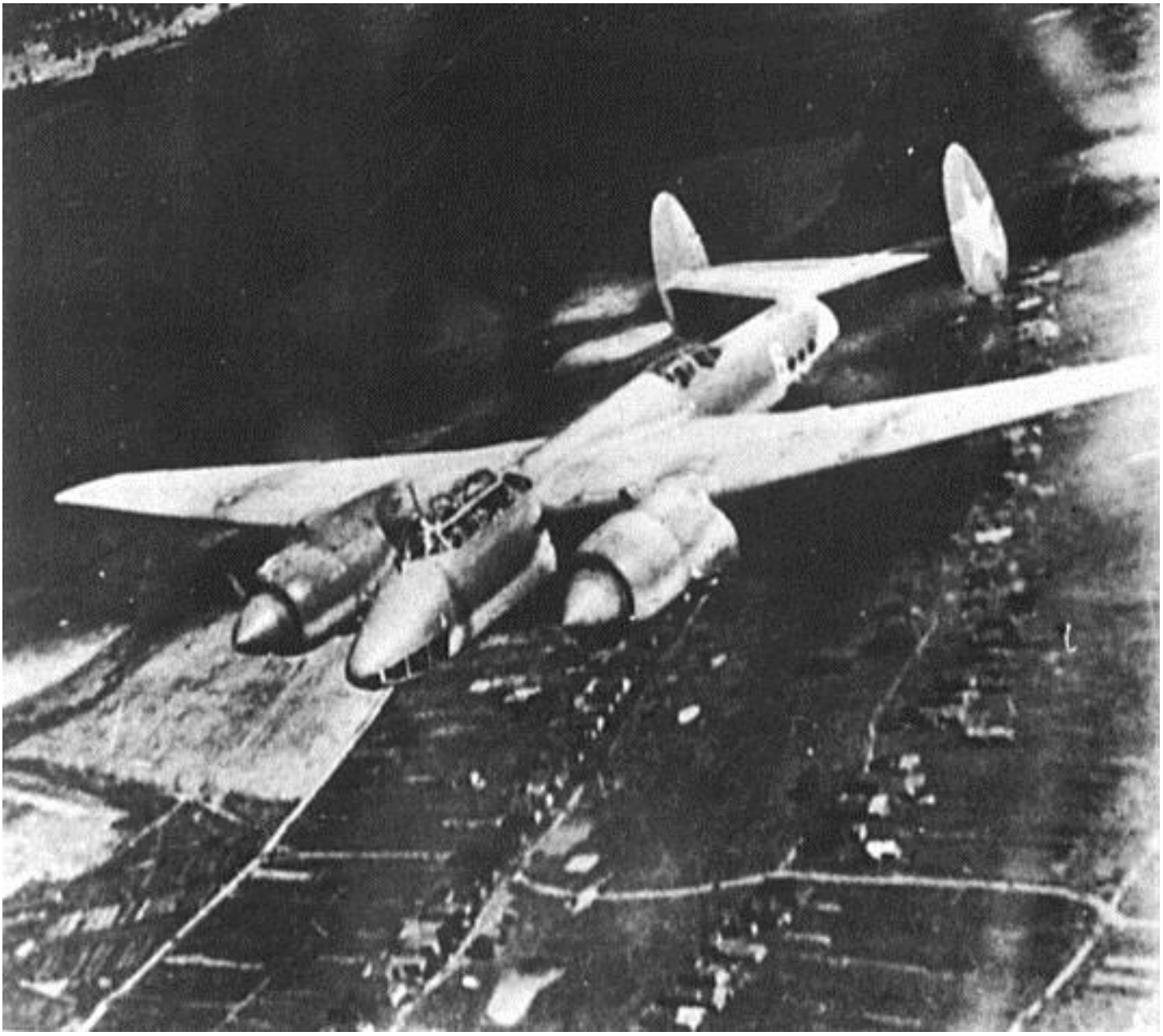
Construit de 1941 à 1948. Le Tu2 a été le deuxième bombardier bimoteur le plus important (le premier étant le Pe2), et a permis a Andrei Tupolev un retour en grâce après une période de détention. Il a été très efficace, plus rapide, plus souple, et transportant une plus grande charge de bombes que la gamme moyenne de presque tous les bombardiers en service pendant la guerre. Le Tu2 est resté en service jusqu'en 1950. Certains Tu2 chinois ont été rencontrés par les aviateurs britanniques et américains pendant la guerre de Corée.

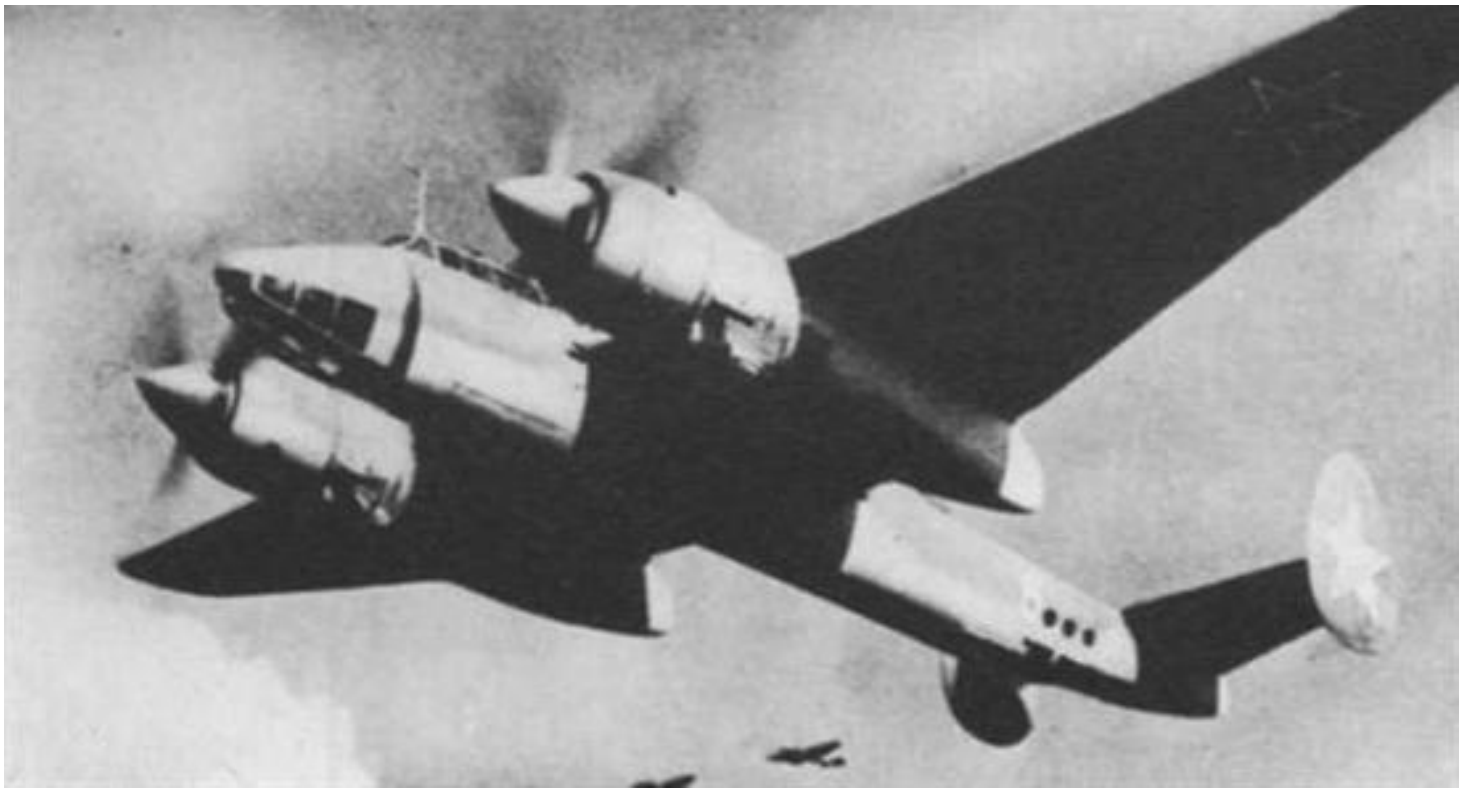
Tupolev Tu2 :

- 2 Moteurs Shvetsov ASH-82
- 2 X 1850 Ch
- 547 Km/h
- 2 Canons 20 mm 3 Mitrailleuses 7.62 mm 3000 Kg de bombes
- 11360 Kg en charge
- 9500 m de plafond pratique
- 2150 Km en distance franchissable
- 4 Equipiers









http://les-avions-de-legende.e-monsite.com/pages/les-avions-d-assaut-sovietique/tupolev-tu2.html

version anglaise

The **Tupolev Tu-2** (development names **ANT-58** and **103**; NATO reporting name **Bat**) was a twin-engine Soviet high-speed daylight and frontline bomber aircraft used during World War II. The Tu-2 was tailored to meet a requirement for a high-speed bomber or dive-bomber, with a large internal bombload, and speed similar to that of a single-seat fighter. Designed to challenge the German Junkers Ju 88, the Tu-2 proved comparable, and was produced in torpedo, interceptor, and reconnaissance versions. The Tu-2 was an effective combat aircraft and it played a key role in the Red Army's final offensives.

Design and development

In 1937, Andrei Tupolev, along with many Soviet designers at the time, was arrested on trumped-up charges of activities against the State. Despite the actions of the Soviet government, he was considered important to the war effort and following his imprisonment, he was placed in charge of a team that was to design military aircraft. Designed as *Samolyot* (Russian: "aircraft") 103, the Tu-2 was based on earlier ANT-58, ANT-59 and ANT-60 light bomber prototypes. Essentially an upscaled and more powerful ANT-60 powered by AM-37 engines, the first prototype was completed at Factory N156, and made its first test flight on 29 January 1941, piloted by Mikhail Nukhtinov.

Mass production began in September 1941, at Omsk Aircraft Factory Number 166, with the first aircraft reaching combat units in March 1942. Modifications were made based on combat experience, and Plant Number 166 built a total of 80 aircraft. The AM-37 engine was abandoned to concentrate efforts on the AM-38F for the Il-2, which required Tupolev to redesign the aircraft for an available engine. Modifications of this bomber to the ASh-82 engine as well as improving the general design for simpler manufacturing took well into 1943 with production restarting in late 1943. Wartime production of the new variant was about 800 aircraft (up to June 1945) with an overall production of 2460 aircraft until 1952, the majority of them built by aircraft factory number 23 in Moscow.

Operational history

Built from 1941 to 1948, the Tu-2 was the USSR's second most important twin-engine bomber after the Petlyakov Pe-2. The design brought Andrei Tupolev back into favour after a period of detention. Crews were universally happy with their Tupolevs. The aircraft was fast and maneuverable like a fighter, and it could survive heavy damage. The first Soviet unit to be equipped with the Tu-2 was the 132nd Bomber Aviation Regiment of the 3rd Air Army. The aircraft had its baptism of fire over Velikiye Luki, where the bomber flew 46 sorties from November to December 1942. On 11 February 1943, 132 BAP was transferred to 17 VA to support the drive toward River Dnepr and it flew another 47 sorties - attacking airfields and rail junctions - until April 13, when the unit was removed from frontline. In that time, only three Tu-2s were lost in action, while seven were damaged. The Tu-2 remained in service in the USSR until 1950.

Some surplus Tu-2s were provided to the Chinese People's Liberation Army Air Force for use in the Chinese Civil War. Some Chinese Tu-2s were shot down by United Nations airmen during the Korean War. In the 1958–1962 'counter-riot actions' in the 1959 Tibetan uprising in Qinghai-Tibet Plateau covering Qinghai, Tibet, southern Gansu, and western Sichuan, Chinese PLAAF Tu-2s took on the roles of ground-attack, reconnaissance and liaison. The Chinese Tu-2s were retired at the end of the 1970s. After World War II, the Tu-2 was used as a testbed aircraft for various powerplants, including the first generation of Soviet jet engines.

Variants

Tupolev Tu-2S at China Aviation Museum, Beijing

Tupolev Tu-2 at the War Eagles Air Museum, NM, USA

"Aircraft 103" (ANT-58)
The initial three-seat version. Top speed 635 km/h (395 mph) at 8,000 m (26,000 ft). Two 1,044 kW (1,400 hp) Mikulin AM-37 (water cooled V-12), 1941.

"Aircraft 103U" (ANT-59)
Redesigned for four-seat crew (influenced by Junkers Ju 88). Top speed dropped to 610 km/h (380 mph). It used the same engines as the ANT-58.

"Aircraft 103V" (ANT-60)
As ANT-59 but powered by air-cooled Shvetsov ASh-82 engines after the AM-37 was cancelled.

"Aircraft 104"
Tu-2S modified for interceptor role.

ANT-64
Long-range four-engine heavy bomber project developed from the Tu-2, cancelled in favor of Tu-4.

ANT-66
52-seat airliner variant of ANT-64.

SDB (ANT-63)
High-speed day bomber prototype.

Tu-1 (ANT-63R)
Prototype three-seat night fighter version.

Tu-2
Two 1,081 kW (1,450 hp) Shvetsov ASh-82 (air cooling) with bigger drag, 1942.

Tu-2D (ANT-62)
Long-range version, it appeared in October 1944. It had an increased span and a crew of five aviators. Powered by two 1,380 kW (1,850 hp) Shvetsov ASh-82FN, 1943

Tu-2D (ANT-67)
Five-seat long-range bomber similar to ANT-62 but powered by Charomskiy ACh-30 BF diesel engines, 1946.

Tu-2DB (ANT-65)
High-altitude reconnaissance bomber version developed from the Tu-2D, powered by two turbo-supercharged Mikulin AM-44TK engines.

Tu-2F
Photo-reconnaissance version.

Tu-2G
High-speed cargo transport version.

Tu-2K
Only two aircraft were built for testing ejection seats.

Tu-2LL
Tu-2's modified as testbeds.

Tu-2M (ANT-61M)
Powered by two 1,417 kW (1,900 hp) ASh-83 radial piston engines.

Tu-2N
Engine testbed, built to test the Rolls-Royce Nene turbojet engine.

Tu-2 Paravan
Two aircraft built to test barrage balloon cable cutters and deflectors.

Tu-2R
Reconnaissance version.

Tu-2RShR
Prototype, armed with 57 mm (2.24 in) cannon in the forward fuselage.

Tu-2S
Powered by two 1,380 kW (1,850 hp) Shvetsov ASh-82FN radial piston engines, 1943.

Tu-2S RLS PNB-4
Secretive night-fighter prototype developed under leadership of the NKVD special section of V. Morgunov and P. Kuksenko. Equipped with the Soviet Gneiss 5 (Гнейс 5) radar. Armed with two NS-45 autocannons. Development presumed to have started in 1943. Precursor of the Tu-1.

Tu-2Sh
Experimental ground-attack version. Two variants were tested in 1944: one with a 76 mm (2.99 in) centerline gun and another with a battery of 88 7.62 mm (0.300 in) PPSh-41 submachine guns fixed in the bomb bay, directed to fire ahead at a 30-degree angle. Another version under this designation was tested in 1946; this one had a frontal armament consisting of two NS-37 and two NS-45 autocannons.

Tu-2T (ANT-62T)
Torpedo-bomber variant based on the Tu-2S, was tested between February and March 1945, and issued to Soviet Naval Aviation units.

Tu-2U
Trainer version.

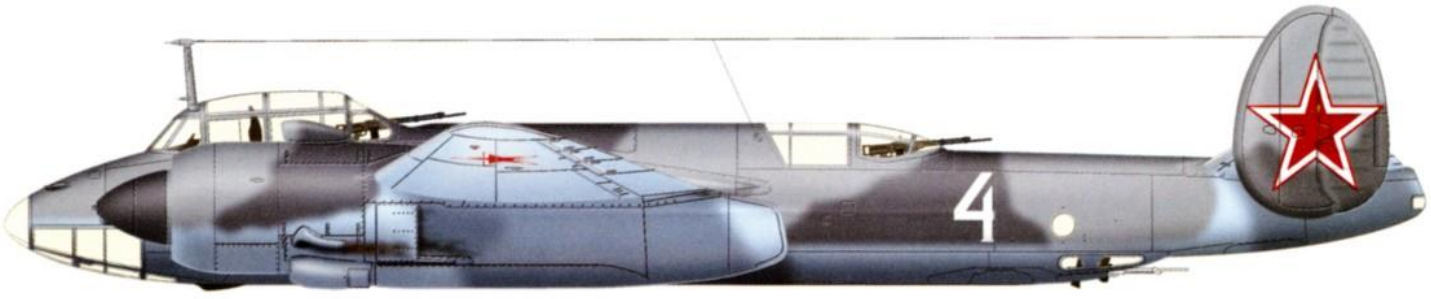
Tu-6
Reconnaissance prototype, 1946.

Tu-8 (ANT-69)
Long-range bomber based on Tu-2D, 1947.

Tu-10 (ANT-68)
It was a high-altitude variant that saw limited service, 1943. Also known as **Tu-4**.

Tu-12
Medium-range jet bomber prototype, 1947.

UTB
Bomber trainer with Shvetsov ASh-21 engines of 515 kW (691 hp) created by the Sukhoi OKB in 1946



source : https://en.wikipedia.org/wiki/Tupolev_Tu-2