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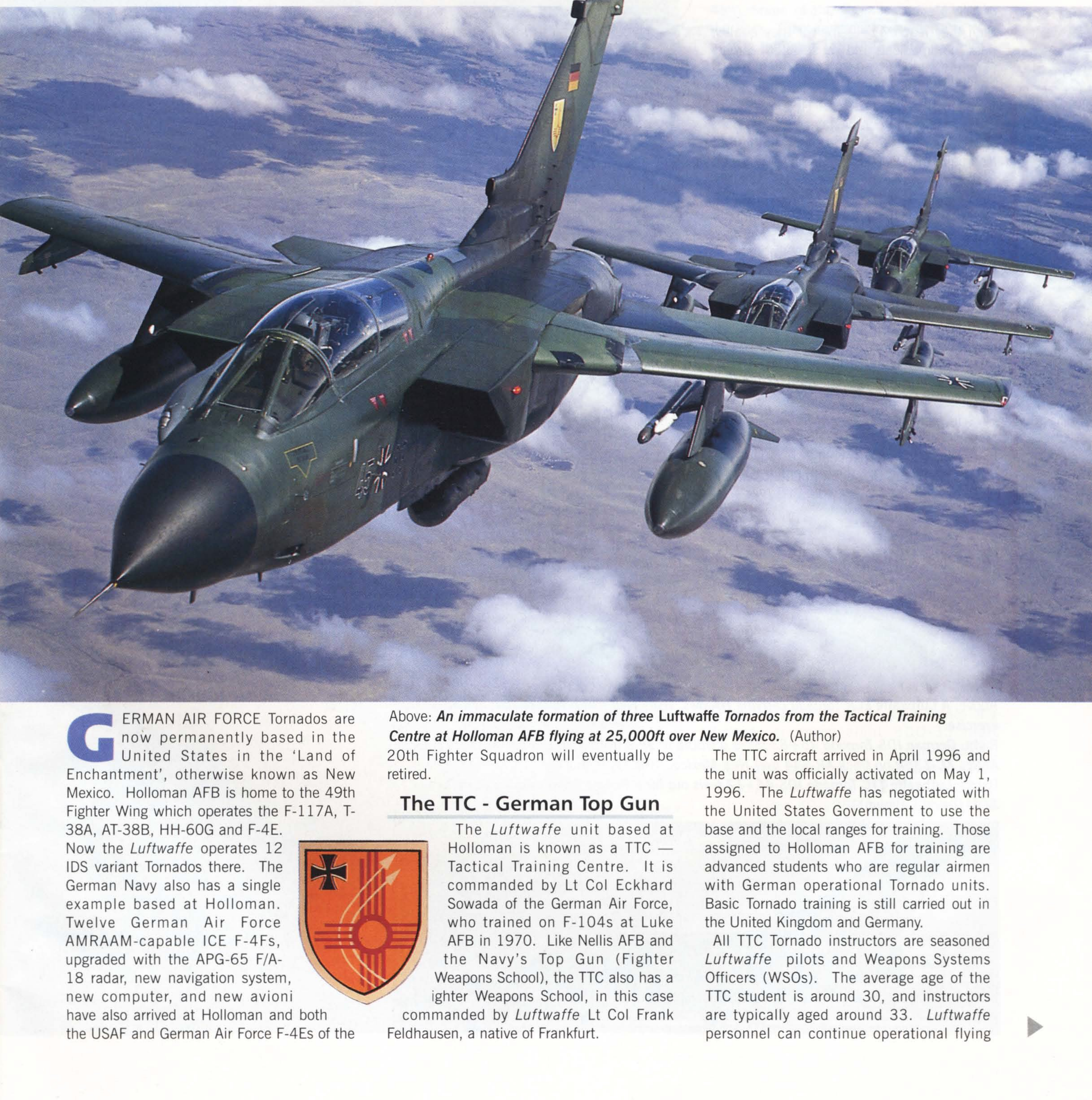
Holloman's Tornados

Ted Carlson reports on the German Tornado's new lair in the Land of Enchantment.



Above: ***An immaculate formation of three* Luftwaffe *Tornados from the Tactical Training Centre at Holloman AFB flying at 25,000ft over New Mexico.*** (Author)

GERMAN AIR FORCE Tornados are now permanently based in the United States in the 'Land of Enchantment', otherwise known as New Mexico. Holloman AFB is home to the 49th Fighter Wing which operates the F-117A, T-38A, AT-38B, HH-60G and F-4E. Now the *Luftwaffe* operates 12 IDS variant Tornados there. The German Navy also has a single example based at Holloman. Twelve German Air Force AMRAAM-capable ICE F-4Fs, upgraded with the APG-65 F/A-18 radar, new navigation system, new computer, and new avioni have also arrived at Holloman and both the USAF and German Air Force F-4Es of the 20th Fighter Squadron will eventually be retired.

The TTC - German Top Gun

The *Luftwaffe* unit based at Holloman is known as a TTC — Tactical Training Centre. It is commanded by Lt Col Eckhard Sowada of the German Air Force, who trained on F-104s at Luke AFB in 1970. Like Nellis AFB and the Navy's Top Gun (Fighter Weapons School), the TTC also has a ighter Weapons School, in this case commanded by *Luftwaffe* Lt Col Frank Feldhausen, a native of Frankfurt.

The TTC aircraft arrived in April 1996 and the unit was officially activated on May 1, 1996. The *Luftwaffe* has negotiated with the United States Government to use the base and the local ranges for training. Those assigned to Holloman AFB for training are advanced students who are regular airmen with German operational Tornado units. Basic Tornado training is still carried out in the United Kingdom and Germany.

All TTC Tornado instructors are seasoned *Luftwaffe* pilots and Weapons Systems Officers (WSOs). The average age of the TTC student is around 30, and instructors are typically aged around 33. *Luftwaffe* personnel can continue operational flying

Above: **Luftwaffe *Tornado 45+83 wearing the TTC badge on its fin, flies over the mountains of New Mexico.***

until they reach 41 — then if they qualify, pass their medicals and get selected, careers can extend into the mid-50s.

In 1999, there will be an additional 29 German Tornados based at Holloman AFB, bringing the total complement to 42 aircraft. From that date, new student training will also be carried out in the USA. To get their wings, *Luftwaffe* students must complete 270 flying hours which takes about 13 months and includes two to three months of fighter lead-in training. The course will also include four weeks of ground school.

Maintenance is undertaken by regular *Luftwaffe* Tornado squadron personnel plus seven German civilians. There are two Tornado programmes for students at Holloman, the advanced weapons training and the FWS. Students engaged on advanced weapons tactical training (usually about six) stay for about three weeks. The FWS is more involved — the syllabus lasts for six months, and there are six students enrolled in the FWS per course.

TTC undertakes two deployments to Fallon each year and training with dissimilar aircraft types includes Navy Strike/Fighter Weapons School F-14 Tomcats and F/A-18 Hornets, New Mexico ANG F-16C/Ds, Holloman-based AT-38Bs, Cannon AFB-based F-16C/Ds and German F-4Es. Much of the dissimilar aircraft involvement occurs during ACM training sorties.

The German Tornados

The Germans have two primary Tornado types. The TTC aircraft are all IDS (Interdiction Strike) variants — the ECR (Electronic Combat Reconnaissance) variants being based in Germany. The IDS variant uses a similar airframe to the RAF's GR.1s, although they have different software, offering enhanced capabilities — the weapons load and hardware are different as well. The *Luftwaffe* IDS examples are painted in a dark green camouflage, while the German Navy Tornado IDS wear a dark grey scheme and can carry both the HARM and the MBB Kormoran anti-ship missile. The ECR variants carry AGM-88B HARM

Above: ***A* Luftwaffe *ECR Tornado carrying HARMs, visits Nellis AFB to take part in a* Red Flag *exercise.***

Right: ***German IDS Tornado 45+83 takes 4,000lb of JP-8 from a 452nd AMW/336th ARS AFRes KC-135R on track AR 644 over New Mexico.*** (Photos Author)

Below: **Luftwaffe *TTC Tornado IDS 44+12 taxis out for a* Roving Sand *mission at Holloman AFB.*** (David F Brown)

anti-radiation missiles, both internal cannons are deleted, and are painted in an overall tactical light grey paint scheme. The ECR variant does not have a camera, but is equipped with other special electronic reconnaissance sensors including FLIR, IR imaging and an emitter location system (ELS). There is also a German Air Force IDS (recce) type that specialises in photo reconnaissance equipped with two Zeiss KS-153 optical cameras.

All Tornados have swing wings and two seats. The wing can sweep from 25° when fully extended forward to 67° when swept fully aft, and there is a half-way position, at 45°. Some of the Tornados have sticks in the back. The operational crew consists of a pilot in the front and WSO in the back seat. The Tornado IDS has a pair of 14,840lb st Turbo-Union RB.199 after-burning engines that can propel the aircraft to a creditable Mach 2.5.

Armament includes two internal 27mm Mauser cannons with 180 rounds per gun, the AIM-9B/L Sidewinder, Mk 82, 83 and 84 bombs, AGM-65 Maverick, the BL-755 CBU, and for self-defence the Bofors BOZ-101 ECM pods. The Tornado IDS has a service ceiling of 50,000ft (15,250m), but typically it does not need to go above 30,000ft (9,150m).

Flying in the USA

Unlike the F-4Es that Germany operates with the 20th Fighter Squadron, the German Tornados — and F-4F Phantoms — will retain their *Luftwaffe Das Eisernekreuz* (Iron Cross) markings.

When asked about flying the Tornado IDS in the USA, Lt Col Frank Feldhausen said, "I like flying the Tornado, it is a fantastic jet. We train with live ordnance on the local ranges for most of the sorties, which offers the crews realistic weapons delivery. Aerial refuelling from the Boeing KC-135 is always a challenging task, and in the European types we usually tank from KC-135s and KC-10s. Although the Tornado can go Mach 2.5, during training in New Mexico we are limited by configuration restrictions to Mach.92."

Feldhausen summed up: "During today's mission we went to the Melrose air-to-ground range and made multiple passes at a target, dropping eight BDU-33 inert bomblets. This was a FWS course mission, the sortie lasted two hours and involved tanking from both a 452nd AMW/336th ARS AFRes KC-135R and a 163rd ARW California ANG KC-135R.

After each Tornado took 4,000lbs of JP-8 jet fuel from the tankers, we made eight separate dives from altitudes between 10,000-20,000ft (3,050-6,100m) with a dive angle of 20°.

Then a post-strike run was made on the target and we returned to base. It's an excellent training area. New Mexico has good weather almost year round, and great air-to-ground ranges in addition to other good training areas." AFM