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in North America, the Gulf and Western Europe. The Antonov design bureau has its own Ruslan, which it operates commercially in Aer-oflot markings and intends to use three more of the type. Air Foyle's agreement includes provision to operate these and Antonov will supply crews and maintenance.
The An-124 was first shown in the West at the 1985 Paris air show. At the time, it was the largest aircraft flying, with a 73.3m wingspan and 405,000kg MTOW. Maximum payload is 1 50,000kg, giving a range of 4,500km. Maximum range is given as 16,500km with full fuel and no payload. The first prototype flew in December 1982, the second prototype, now called Ruslan after a giant Russian folklore hero, was the aircraft shown at Paris.

Similar to the Lockheed C-5 Galaxy, the An-124 has an upward-hingeing nose section and a rear loading ramp, allowing loading from both ends simultaneously.
Advanced technology is evidenced by the titanium floor, substantial use of composites in the structure and fly-by-wire controls.
Programme status: About 20 aircraft built, of which ten are believed to have been delivered to Aeroflot.

Antonov An-225 The heaviest aircraft yet flown, Antonov's An-225 Mriya (Dream) made its maiden flight on 21 December, 1988, following a November rollout.
Designed to carry a 250,000kg payload over 4,500km at 420kt, Mriya took more than three years to develop.
The wing spans 88.4m and carries six engines. It appears to have the An-124 wing/engine assemblies attached to a new centre section which has two further engines attached. The tail section is based upon that of the An-124, but with an increased-span tailplane and twin vertical surfaces at the tips.
Powerplants are the same Lotarev D-18T 230kN thrust-rating turbofans used on the An-124.

The An-225's fuselage is based on that of the An-124, stretched by 8m, using the same cross-section 6.4m wide and 4.4m high. The cargo hold is 43m long and the aircraft has hardpoints on the upper fuselage to carry external loads such as the Soviet space shuttle orbiter, Buran.
Mriya uses the same type of fly-by-wire system and 34 flight-control computers used on An-124. Antonov claims that the An-224 can carry a payload of between 225t and 250t and can operate from a 1,000m runway, one-third of the length required by the An-124.

Ilyushin
(Address: see Aviaexport)

Ilyushin 11-62 New examples of the I1-62MK have been delivered to Cubana, Interflug, Taag-Angola and presumably to Aeroflot, to replace and supplement earlier examples. Aeroflot has re-cently acquired seven ex-lnterflug ll-62Ms.
The initial production version of the- Classic was powered by the 10,500kg-thrust Kuznetsov NK-8-4 turbofan. The prototype flew in January 1963 and production examples entered service in 1967. A major revision of the design led to the I1-62M, which flew in 1971. Powered by the more powerful Soloviev D-30KUs of 11,000kg thrust, the aircraft remained dimensionally unchanged but had an increased take-off weight. The latest version, announced in 1978, is the 11-62MK,

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Ilyushin 11-76

which has a revised cabin as well structural refinements allowing the MTOW to be increased
— from around 165,000kg to 170,000kg plus a new interior and improved avionics.
Programme status: All models — 240 built excluding prototypes. Production is probably set to end when the 11-96 enters service; six are believed to have been built in 1985 and 1986, but between eight and ten may have been built in 1987 and 1988.

Ilyushin 11-76 The 11-76 Candid was designed in the late 1960s as a specialist military/civil freighter capable of transporting 40t over 5,000km. Following a first flight in March 1971, initial production versions were the 11-76T for Aeroflot and the 11-76M for the Soviet air force, although Aeroflot is known to operate the M version, and examples carrying Aeroflot markings have been seen on military manoeuvres. Over 200 freighters are believed to be in service with the air force and 100 with Aeroflot.

A mixture of more than 50 examples of the type is in service with operators in the Middle East, including Iraqi Airways, Jamahirian Air Transport of Libya, and Syrianair. The 11-76 is also in airline service in Afghanistan. More recently, an airborne early warning and control system version, known in the West as Mainstay, and a flight-refuelling tanker, known as Midas, have entered service with the Soviet air force. The latest freighters are designated I1-76-TD for Aeroflot and I1-76-MD for the military. Some Il-76-TDs have been modified for service in the Antarctic. Both the latest 11-76 models are pow-ered by the Soloviev D-30KPl-series turbofan. Programme status: In low-volume production against a continuing military and civil require-ment for freighters, with 200-plus delivered for civil use and 250 in military service. Other military users include India and Iraq. A mixture of 20 to 30 Mainstays and Midas could be in military service. Some analysts believe the above estimates for 11-76 production are far too conservative.

Ilyushin 11-86 The 11-86 was designed for high-density routes, but there are clear signs that its range performance has been unsatisfactory. It appears that there are firm plans to re-engine it with the Soloviev PS90A used on the Tu-204 and 11-96-300. This version should have entered service during 1990. Snecma is also looking at ways of using Soviet currency to finance the re-engining of the 11-86 with CFM International CFM56 engines.
The 11-86 Camber has gross weights similar to

those of early-model DC-lOs and TriStars, but with reduced range capability, largely because of the use of low-bypass-ratio Kuznetsov NK-86 engines.
Some sources suggest that about 100 Il-86s are in Aeroflot service, while others say that only 60 have been produced. The 11-86 first flew in December 1976, with scheduled services begin-ning in December 1980.
Programme status: In production, with 100 ordered, 75 delivered.

Ilyushin 11-96-300 Ilyushin expects to have do-mestic certification of the aircraft by the end of 1991, followed by Aeroflot service. Avionics reliability problems have put the aircraft nine months behind schedule.
A stretched version, the I1-96M, is at the design stage and the P&W PW2337 engines and West-ern avionics for the prototype should be delivered in 1992. A twin-engined variant I1-96MD is also being considered, using the same wing.
Aeroflot has a requirement for a 200-seater with 12,000km range and another twin, the 11-90-200 is being designed, although Ilyushin believes its direct operating costs would be higher than those of the 11-96-300, using the proposed NK-92 or N-18T engines.
The first prototype made its maiden flight in October 1988. The aircraft is the Soviet Union's first fly-by-wire airliner.
Three prototypes are in the flight-test pro-gramme, plus two ground-test articles. At 216t, the 11-96-300 is 8t heavier than the 11-86 fully-loaded, but has a payload 2t lower, at 40t. It has an increased wingspan (57.6m compared with the Il-86's 48.06m), shorter fuselage (55.4m against 59.5m) and a thrust-to-weight ratio of 0.3 (11-86: 0.25).
Range of the 11-96-300 is almost double that of the 11-86, thanks to a lighter structure of new-alloys and composites, combined with aerody-namic improvements including relaxed stability and the addition of winglets.
The aircraft can carry 300 passengers over 9,000km ' compared with the. Il-86's 3,500km range, although the latter carries 50 more passen-gers.
Stretching the aircraft to carry 400 passengers is being considered. The same Soloviev PS-90A engines would be used, giving a full-load range of 7,600km.
Programme status: Firm project destined for
volume production. One prototype flying, two
more should join the programme, plus two
ground-test aircraft. Orders for around 100 are
expected from Eastern Bloc airlines.

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