

# NSA photosequence 31 – discus throw: Jürgen Schult

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by Helmar Hommel

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## Jürgen Schult (GER)

The sequence shows his second and best throw at the IVth IAAF World Championships in Athletics, Stuttgart 1993: 66.12m, which won the bronze medal.

Olympic Champion 1988, 2nd 1922; World Champion 1987, 3rd 1993, 6th 1991; European Champion 1990; World Cup winner 1989.

Born: 11 May 1965  
Height: 1.93m  
Weight: 110kg  
Best mark: 74.08m (1986, World Record)

## Progression:

1978	(18)	51.82m
1979	(19)	57.22m
1980	(20)	61.26m
1981	(21)	61.56m
1982	(22)	63.18m
1983	(23)	66.78m
1984	(24)	68.82m
1985	(25)	69.74m
1986	(26)	74.08m
1987	(27)	69.52m
1988	(28)	70.46m
1989	(29)	68.12m
1990	(30)	67.08m
1991	(31)	67.20m
1992	(32)	69.04m
1993	(33)	66.12m
1994	(34)	66.08m

## Commentary on Photosequence 31

by Mike Winch

*Mike Winch BSc. is a British Athletic Federation Master Coach. He represented Great Britain many times as a shot putter, is a former indoor and outdoor United Kingdom Champion and has coached many British international and Olympic shot putters and discus throwers.*

Jürgen Schult is one of the greatest discus throwers ever and has a reputation as one of the world's best technicians in the event. This sequence photographs of a 66.12m throw, adequately illustrates this point.

### 1 Overall view

The key elements of discus throwing are 1) balance, 2) speed and 3) range of movement. In all three key areas Schult



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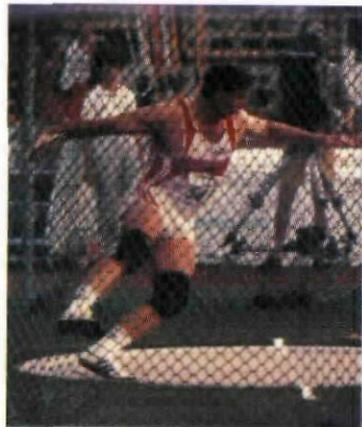


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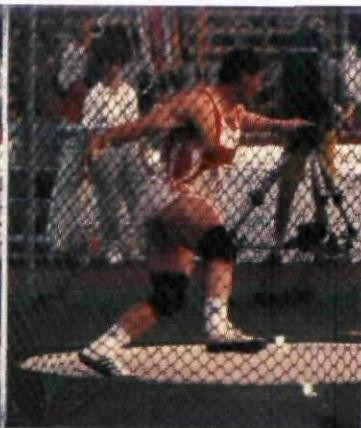
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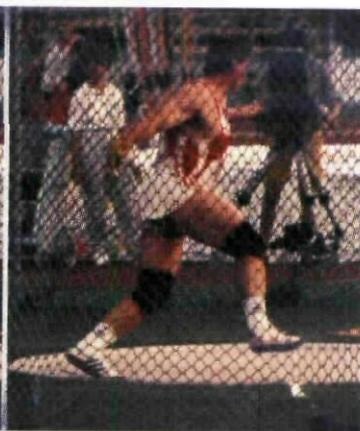
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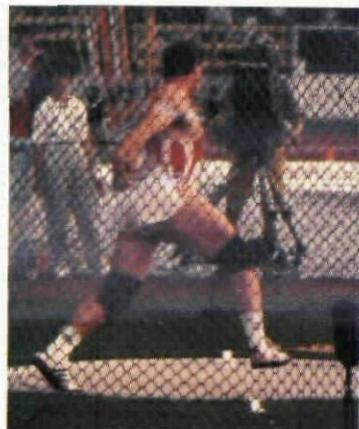
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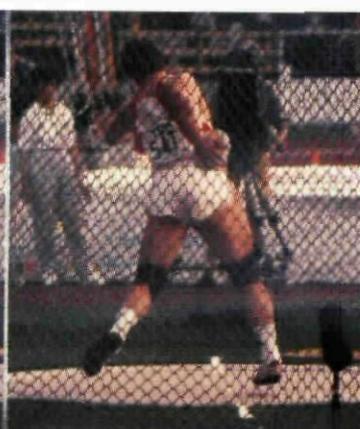
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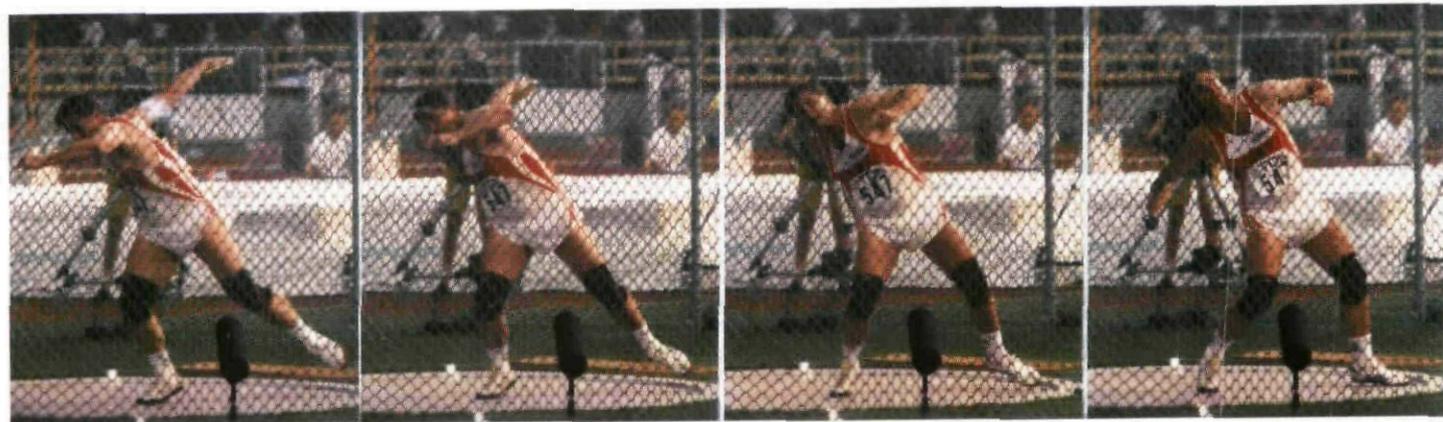


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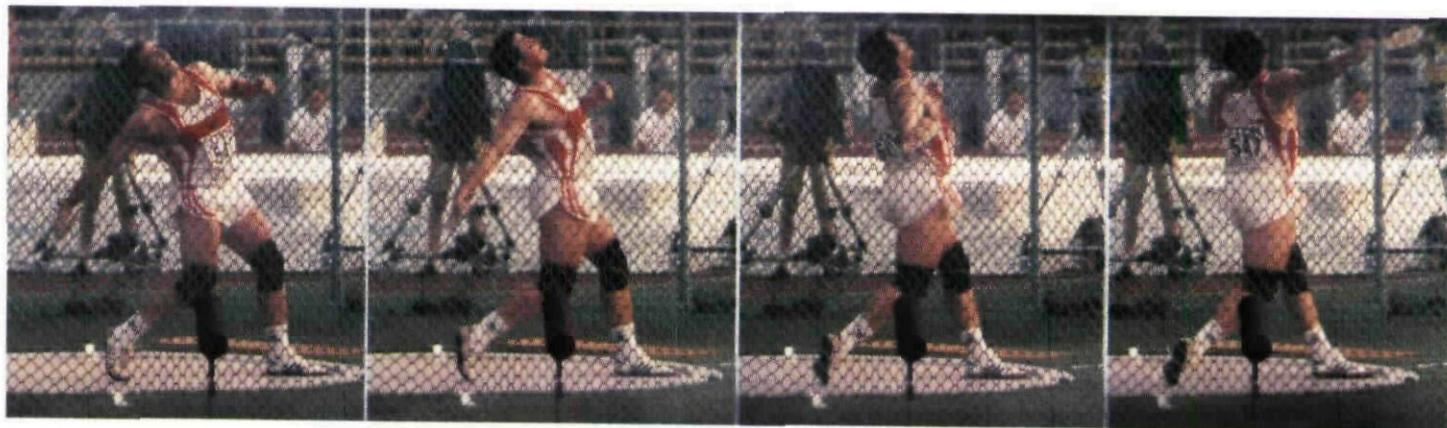


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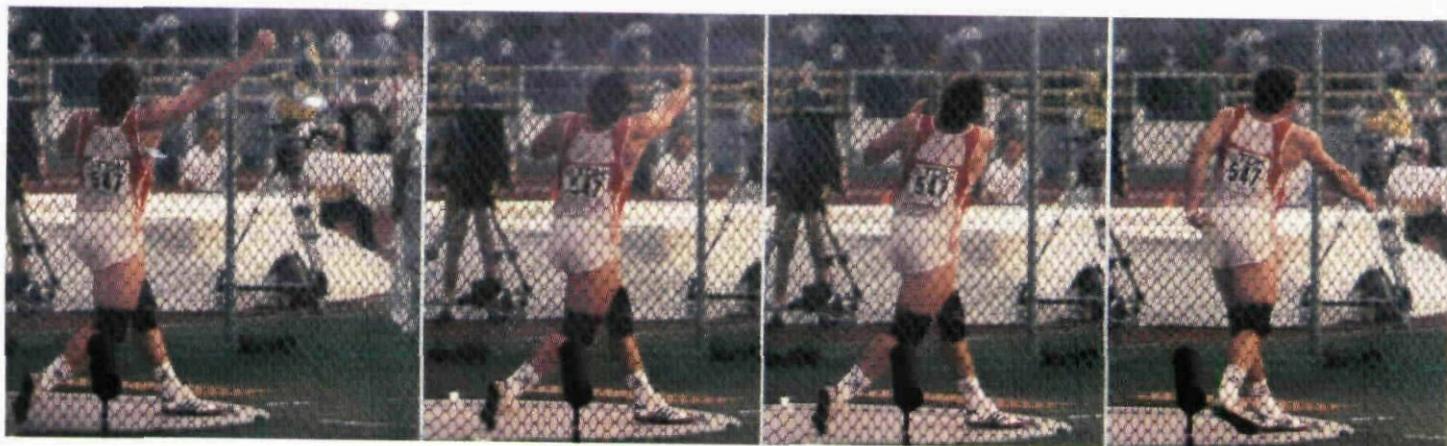


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scores very highly, although there are elements of style rather than technique, which mask the excellence of the basic movement. The turn to the centre is simple and effective, the power position well balanced and the resulting delivery is long and stable. Interestingly the reverse is inessential.

## 2 Detailed analysis

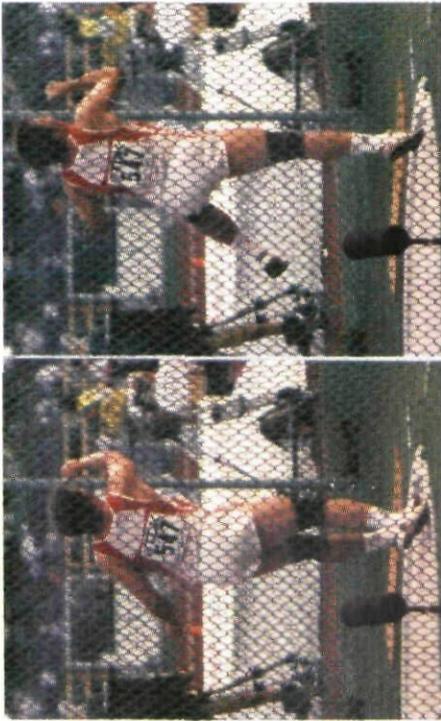
### 2.1 Initial wind-up and entry into the turn

This is perhaps where style over-rides technique. The wide sweep of the discus during the initial wind-up phase (*frames 1 to 6*) does little to increase the range in practical terms, since by the time Jürgen is about to enter the turn, the body has become almost vertical (*frame 8*). This early phase could be simplified by eliminating the stylistic forward lean on wind-up; no reduction in radius during the entry and throw would result. For the less able thrower this movement could cause insurmountable problems during the first phase of the turn. In Schult's case he has adapted the entry to counteract the negative potential of the movement.

This element of style cannot hide the excellent balance of the entry into the turn (*frames 9 to 15*), although the slightly low left arm position and downward looking eyes would, in a less able athlete, lead to a toppling into the centre of the circle, with a subsequent inability to use the right leg effectively in the delivery. Schult's left arm position does actually produce a very slight imperfection at this stage, the results of which can be seen later in the throw.

### 2.2 The turn to the centre of the circle

The pivot around the left foot and subsequent right leg movement to the centre of the circle (*frames 16 to 25*) are excellent from the point of view of the lower body. The right foot is fast and effective, tracing a low arc to its landing point. This really makes the throw, enabling Schult to develop torque and hip lead at the appropriate time.



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The position of the shoulders has, however, been affected by the low left arm and head on entry into the turn (*frames 15 to 16*). The left shoulder and arm continue to drop as the athlete turns and can clearly be seen to have reduced the upper body radius of movement (*frames 18 to 25*). This causes the shoulders to rotate more rapidly than ideal, throwing the position of the high point of the discus too far round into the start of the delivery by the time the left foot lands at the front of the circle (*frame 31*). Ideally the left foot should have landed when the discus is at the position shown in *frame 27*.

The reason why the left foot is slow coming down to the front of the circle is because the position of the shoulders has had to be corrected (*frames 25 to 28*), during which time the left foot is reacting to the upper body adjustment by floating in the air. This is a very common fault among discus throwers and a great deal of time is needed in practising drills to correct it. A direct movement of the left foot from the back to the front of the circle is ideal, but very difficult to obtain while the body is rotating.

### 2.3 The delivery

As a result of the slow left foot, the initial plane of the delivery is slightly off. The low right arm, seen in *frame 34*, clearly shows how he has had to bring the arm into action early because of the slow left foot. However, in common with all great throwers, he manages to correct what is potentially a fatal error by the speed in which he turns his right foot and hip into the delivery. This is one of the exceptional features of Schult's throw (*frames 33 to 36*). Because of the stability of his landing position (*frames 31 and 32*), he is almost instantly able to gain effective control of the delivery by the use of his powerful leg muscles. The final release is well angled and very rangy, with only a hint of incomplete extension of the legs (*frames 36 and 37*).

The excellent release is a credit to the hard technical work that Schult has clearly carried out. In a lesser thrower the late left

foot would have resulted in a much less effective throw but Jürgen Schult has been able automatically to make all the necessary corrections.

### 3 Conclusions

It is very rare for an athlete to achieve the technical expertise shown by Jürgen Schult. The whole movement indicates the value, in honing technique, of extensive throwing. It is clear that Schult is capable of very long throws in the right conditions and, assuming he remains injury free, he will be very hard to beat in the coming years.

