Table 1.

Star	A_{O-C} (d)	P_{cycl} (d)	M_{co} $(M_\odot)$	$v \sin i_{co}$ (km/s)	$v \sin i_{RR}$ (km/s)	$a \sin i_{co}$ (AU)	$a \sin i_{RR}$ (AU)	$a \sin i$ (AU)	ΔS
V13 M3	0.03	6250	0.45	6.7	5.0	3.8	2.9	6.7	6.4
TU UMa	0.05	7374	0.65	5.6	6.1	5.8	4.2	10.0	7.6
RR Gem	0.03	2722	0.95	6.9	10.8	1.7	2.7	4.4	3.0
X Ari	0.04	4012	0.93	6.1	9.4	2.2	3.5	5.7	8.5
V363 Cas	0.03	1450	1.92	6.1	19.5	0.8	2.6	3.4	1.0
DX Del	0.02	1275	1.05	8.4	14.8	1.0	1.7	2.7	2.6
W CVn	0.03	2899	0.81	7.2	9.8	1.9	2.6	4.5	7.0

show small amplitude cyclic variations in O–C in the time scale for some years as being binary systems.

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SUGGESTED VARIABILITY TYPES OF SUPERNOVA PROGENITORS

O. A. Tsiopa
Central Astronomical Observatory, Pulkovo, Saint-Petersburg 196140 Russia

ABSTRACT. Recent theoretical computations of the evolutionary tracks of massive stars do not allow to check the presence of variability of the stars just before the outburst. However, the complex inner structure of such stars (stratification of chemical elements, shell sources) allows to create conditions for pulsation instability which may play a role of rigger. Existing long-term radio observations of SN 1979C argues not only for presence of ejected matter, but for periodic ($\approx$ 4000 yr) modulations of the mass loss rate. Early optical spectral observations of SN 1984E, 1983K, 1990M argue for self–consistent interpretation as a shell–like structure of superwind (intensive stellar wind ejected during few years before the outburst). Ellipsoidal distribution of dynamic velocities of the wind shells may be owed to large radial pulsations of the progenitors with amplitudes different at the equator and the poles. Early radio emission of SN 1987A has no single explanation. In a case of plasma mechanism one has to accept a "blobby" wind structure. Inhomogeneities are more significant at large distances. Thus most interesting and informative are the fast variations of absorption profiles formed near and mainly before SN maximum.

Key words: Stars: Supernovae, Progenitors